

Vascular Plants of Williamson County

Matelea reticulata – NET-VEIN MILKVINE, GREEN MILKWEEDVINE, PEARL MILKWEED
[Apocynaceae/Asclepiadaceae]

Matelea reticulata (A. Gray) Woods., NET-VEIN MILKVINE, GREEN MILKWEEDVINE, PEARL MILKWEED. Perennial vine, twining and climbing on neighboring plants, occasionally with lateral branches but only 1 branch per node; shoots with only cauline leaves, ± 2-dimensional (plagiotropic), foliage initially velveteen, somewhat odorous; latex milky. **Stems:** cylindric, to 3 mm diameter, tough, green, internodes long, to 230+ mm long, conspicuously pilose and densely short glandular-hairy, pilose hairs to 3 mm long and yellowish; pith hollow. **Leaves:** opposite decussate, simple, petiolate, without stipules; petiole ± cylindric, to 75 mm long, to 2 mm diameter but enlarged at base, not straight, with faint ridges on upper side, tough, purple-red on upper side; blade inversely heart-shaped (broadly ovate in outline), < 45–145 × < 25–103 mm, deeply cordate at base with inward-projecting, rounded basal lobes and semicircular to 35 mm long, the basal lobes nearly touching to slightly overlapping, entire and often wavy on margins, acute to acuminate at tip, pinnately veined having 3 or 5 veins at base and with principal veins slightly sunken on upper surface and raised on lower surface, upper surface with pilose hairs along veins, lower surface at maturity with pilose hairs, nonglandular short-pilose hairs, and glandular hairs with colorless hairs aging crimson heads (mostly along principal veins), with purple to black spots along veins, the pilose hairs with swollen bases (initially colorless). **Inflorescence:** cyme, appearing axillary (interpetiolar) and terminal with lateral cymes, typically 1 cyme per node, mostly several–12-flowered, flowers opposite decussate or alternate, typically with only 1 flower open per cyme, bracteate; peduncle ≥ petiole, sometimes twining, the lowest internode < 40 mm long, densely pilose and purple, stalked glandular hairs, peduncle forked at top; bractlet subtending pedicel, ascending to spreading, linear flared at base, 2–4 × 0.3–0.45 mm, outer (lower) surface purple-puberulent with some pilose hairs, inner (upper) surface glabrous with inconspicuous, colorless glandular hairs and sometimes several long hairs; pedicel cylindric 10–21 × 0.8–1 mm increasing 2× in fruit; glandular-puberulent with radiating pilose hairs. **Flower:** bisexual, radial, 12–17 mm across, star-shaped and platelike (rotate); **calyx** 5(–7)-lobed; tube dishlike, short–1 mm long; lobes widely spreading (rotate) acuminate-lanceolate to narrowly ovate or oblong, 3–3.8 × 1–1.3 mm, green, overlapping at base, outer (lower) surface with pilose hairs and short hairs but not purple, inner (upper) surface glabrous; **corolla** 5-lobed, lacking corona and hoods; tube dishlike, ca. 0.7–1.5 mm wide, whitish background with radiating, parallel green veins, continuous with filament column above, upper surface glabrous; lobes widely spreading, rounded-ovate or subtruncate-ovate to rhombate-ovate, 4.6–6.5 × 3.5–5.5 mm, slightly overlapping at membranous base, upper surface with an elaborate, netlike pattern of dark green veins and light green to pale green and narrowly white on margins, minutely scabrous on margins, acute to obtuse at tip or scarcely notched, with 7 principal parallel veins entering each lobe and vein Y at each sinus, having intricate network, only 1 vein to tip, upper surface pilose and glandular-hairy, lower (outer) surface with veins light green and pale green, pilose and short-pilose and with some short-stalked glandular hairs; **stamens** 5, fused into staminal column with filament surrounding but free from lower pistils and anthers fused to enlarged stigmatic head (stigma + anthers – gynostegium), lacking a whorl or curtain of elaborate appendages

(corona) from upper filament column; remnant of corona a circular plate, ca. 3.5 mm across, light green; filament ca. 1.5 mm long, column 2 mm wide at base somewhat constricted around yellow midpoint, 5-ribbed, greenish, reflective, and round on top; pollen united into pollinia, each pollinium flattened and teardrop-shaped, 0.25–0.35 mm long, glossy yellowish to greenish, united by short translator arms to a purple corpusculum; **pistils** 2, together touching within gynostegium, 1.6–1.8 mm long; ovaries superior, \pm hemi-cylindric, ca. $1 \times 1 \times 0.8$ mm, white, flat surface smooth, outer side rounded with scattered warts (tuberculate), with low midridge to stigma; style 0.2 mm diameter, white, with truncate, deltate greenish stigma. **Fruit:** follicle (typically 1), on recurved pedicel, before dehiscing lanceoloid, ca. $75\text{--}90 \times 15$ mm, after dehiscing cupped-ovate, to 48 mm wide, light brown, outer surface finely ridged (shrinkage) having conspicuous, scattered, pricklelike projections and fine ridges with very short prickles, large projections radiating, flattened side-to-side, to 3 mm long, blunt at tip, broad to 4.5 mm wide at base; peduncle from leaf axil straight, cylindric, to 15 mm long, covered with light brown periderm, having a recurved, cylindric pedicel to 10 mm long, with light brown periderm. Seed: body winged-obovate strongly flattened, $8\text{--}9.3 \times 5.2\text{--}6$ mm, brown, wing 1–1.6 mm wide around obovate embryo chamber, truncate at base, wavy and somewhat toothed on margins, surfaces veiny and somewhat wrinkled, with fine silken white hairs attached to truncate base, spreading, mostly 40–50 mm long, scarcely fused at base.

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