

Vascular Plants of Williamson County

Ipomoea coccinea – RED MORNING GLORY [Convolvulaceae]

Ipomoea coccinea L., RED MORNING GLORY. Annual vine, twining, taprooted, not rosetted, several-stemmed at base, low-climbing with axes twining on itself; shoots with only widely spaced cauline leaves, axes glabrescent having hairs limited to a sector above nodes (initially next to axillary bud), the hairs with swollen bases (pustulate), foliage easily wilted, mostly glabrous with some pustulate hairs at the junction of the petiole and blade, with cloudy latex. **Stems:** 4-ridged, to 2 mm diameter, with 2 ridges descending from each leaf, internode commonly twisted 720°+ and to 120 mm long. **Leaves:** helically alternate, simple and unlobed to inconspicuously 3-lobed or with 3 or 5 toothlike lobes but in range lacking deep sinuses, petiolate, without stipules; petiole distinctly channeled base-to-tip, to 90 mm long, edges of channel sometimes with reddish stripes, at top of petiole having short pustulate hairs on both sides on and adjacent principal veins; blade inversely heart-shaped to ovate when lobed, < 40–105 × 30–85 mm, cordate at base with curved basal lobes (many leaves entire) but when present lobes lower portion of blade somewhat angular with broad triangular-dentate to deltate teeth, ± acuminate at tip but on large blades with point extending from midrib, palmately 5-veined at base but lateral veins often not defining a lobe and midrib pinnately veined, principal veins raised on surfaces often appearing papillate but having pustulate hairs near base of blade, upper surface dull.

Inflorescence: cyme, axillary, > petiole on long peduncle, commonly 2-forked with 2–5 flowers on each half, flowers not crowded, bracteate; peduncle ridged, to 120 mm long; bract paired at fork subtending each branchlet, appressed, narrowly winged to midpoint and fingerlike above midpoint, 3–4 mm long, wing membranous, to 0.3 mm long lobelike at top (auriculate), green, projection with inconspicuous reddish specks; bractlets subtending pedicel 2 and subopposite, similar to bracts but only to 2 mm long; pedicel ascending, at anthesis to 5 mm long increasing 2× and often strongly recurved in fruit, with expanded receptacle at top. **Flower:** bisexual, radial, 12–17 mm across (corolla limb); **sepals** 5, alternate, overlapping, with an appressed, clasping portion broadly oblong having winglike margins and a subterminal, spreading, fingerlike projection, at maturity 8–9 mm long base-to-tip, outer 2 sepals slightly < inner sepals, lower portion often forming somewhat raised midvein on thickened tissue, pale green having fine whitish stripes and with colorless to pale salmon margins, subterminal projection (“awn”) with conic base, green, flexible and lacking a sharp point and barbs; **corolla** inconspicuously broadly 5-lobed, trumpet-shaped (salverform), in bud ± 28 mm long, pleated but not strongly twisted; tube short-cylindric, 2.2–2.5 mm long, whitish, with decurrent bases of filaments inside tube, outer surface glabrous, throat in range scarlet to light scarlet (not yellow), lower portion tapered from orifice 3 mm across to tube, lacking hairs, upper throat + lobes = spreading limb, in bud concealed by 5 scarlet, narrowly triangular patches 6 × 1.5 mm touching at orangish yellow tips, thickened patches at anthesis spreading as deltate scarlet tissue ca. 4 mm wide on margin (of other phenotypes having other shades of red), after pollination limb withering along thickened patches closing orifice; **stamens** 5; filaments fused to corolla from base (decurrent) and free ca. 2.5 mm from base, free portions subequal, lower portion ca. 4 mm long appearing papillate, upper portion more slender and smooth, 12–15 mm long, pinkish; anthers exerted from corolla orifice, basifixed, dithecal, 1.2–1.4 mm long, yellowish white, longitudinally dehiscent; pollen translucent; **nectary disc** surrounding base of ovary,

0.3 mm long, white, inconspicuously scalloped on margin, producing nectar; **pistil** 1, in range 21–24 mm long; ovary superior, broadly conic, ca. 1.2×1.5 mm, pale green, glabrous, 4-chambered, each chamber with 1 ovule attached to center at base; style included, lower portion (beak) greenish, upper portion more slender (arising from intercalary meristem at top of beak) and white, glabrous; stigma surrounded by anthers, capitate, inconspicuously 4-lobed, ellipsoid, ca. 1.2×1 mm, translucent with stubby radiating papillae. **Fruit:** capsule, during development hidden by sepals having fingerlike projections, 4-valved, to 4-seeded, broadly ovoid, in range $7\text{--}7.5 \times 6.7\text{--}7.7$ mm + beak (persistent lower style), valves thin and glabrous before drying light brown to somewhat apricot-colored, the beak narrowly conic to ovoid, $2.5\text{--}3.2 \times 1\text{--}1.2$ mm, tapered to short-truncate tip; sepals persistent, drying crumpled with projections spreading drying gnarled, in range 5–6 mm long; seeds when dry ca. half-filling chambers attached at base. **Seed:** 3-sided, in range ca. $4.3\text{--}4.7 \times 3.1\text{--}3.8$ mm, light brown or mottled with brown patches, \pm rounded on back with 2 concave faces, when immature appearing glabrous, maturing and drying smaller and densely puberulent; hilum near base on inner side.

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