

Vascular Plants of Williamson County
Morus rubra – RED MULBERRY [Moraceae]

Morus rubra L., RED MULBERRY. Tree, winter-deciduous, in range to 13 m tall; monoecious; shoots with large cauline leaves; latex cloudy. **Stems:** ± cylindric with ridges descending from each leaf, initially green, somewhat zigzagged, glabrate when young, 2-year twigs orange-brown with a flaky outer layer, with thick leaf scar. **Leaves:** helically alternate, simple and unlobed or less commonly with 1–2 deep sinuses, petiolate, with stipules; stipules 2, subequal, boat-shaped with prowlike tip, 8.3–11 mm long, 1 shorter and wider, somewhat thick-walled at base, rounded on back and inrolling, short-hairy on back (lower surface); petiole cylindric, < 15–46 mm long, tough, puberulent; blade ovate to lobed and ovate in outline and asymmetric having 1 side significantly wider than the other, < 60–290 × < 40–205 mm, on vigorous shoots sometimes with 3 principal lobes, having a large broadly ovate central lobe to 160 mm long and shorter and narrower lateral lobes to below midblade with deep, rounded sinuses to within 25 mm of midrib, subtruncate or broadly tapered often somewhat asymmetric at base, regularly serrate on margins with teeth overlapping, conspicuously acuminate at tip, with 3 principal veins at base and pinnately veined with pale principal veins somewhat sunken on upper surface and raised and pale green on lower surface, with conspicuous minor network, upper surface ± cobblestonelike, somewhat dull, short-hairy aging glabrescent, lower surface uniformly tomentose and short-tomentose, lacking domatia along midrib, at base with scattered minute projections. **Inflorescences:** unisexual, on short shoot axillary to leaf, bracteate. **Staminate inflorescence:** spikelike raceme, of 40+ clustered, subsessile flowers, ± pendent, 30–50 × 4.5–5 mm (8 mm across with anthers), flowers alternate; peduncle and rachis 0.7 mm diameter, light green aging whitish, soft-hairy, in fruit 8+ mm long; bract subtending raceme oblanceolate or elliptic to lanceolate and ± cupped, 8–12 × 1.5–4 mm, with miniature stipules, white with green midvein with purplish margin at top, lower surface pubescent; bract or bractlet subtending cluster of flowers (or absent), several per raceme, ± ovate to obovate, to 2 mm long; pedicel short (flowers subsessile). **Staminate flower:** ± radial, ca. 3 mm across; **calyx** deeply 4-lobed, 2.2–2.6 mm long; tube 0.4–0.5 mm long, green aging pale tannish; lobes in opposite decussate pairs, subequal, broadly ovate and cupped around each filament and anther before anthesis, 1.5–2 × 1–1.8 mm, green but reddish purple above midpoint, pubescent on lower surface and especially above midpoint on margins; **corolla** absent; **stamens** 4, opposite and cupped by calyx lobes; filaments strongly bent in bud (whiplike), exerted above calyx, erect to ascending, 2.5–3 mm long, incurved, green maturing white, glabrous; anthers basifixed, strongly dithecal, 0.8–1 mm long, in bud pale yellow aging whitish, longitudinally dehiscent; pollen white; **nectary** absent; **pistil** often pistillode, to 1 mm long, white. **Pistillate inflorescence:** spike, axillary on emerging shoot, of 50+ flowers often touching but not uniformly so, appearing in ca. 5 vertical files, spreading to somewhat drooping, 9–20 × ca. 4 mm; peduncle and rachis 0.7 mm diameter, light green aging whitish, soft-hairy; bract subtending raceme oblanceolate or elliptic to lanceolate and ± cupped, 8–12 × 1.5–4 mm, with miniature stipules, white with green midvein with purplish margin at top, lower surface pubescent; bract or bractlet subtending cluster of flowers (or absent), several per raceme, ± ovate to obovate, to 2 mm long. **Pistillate flower:** bilateral, corn kernel-like, in

top view width > length, 1.3–1.5 mm across; **calyx** deeply 4-lobed, with pair of lobes on edges overlapping lobes opposite faces, 1.3–1.5 mm long, green; lobes in opposite decussate pairs, tightly appressed to ovary, on edges scooplike, on faces broadly ovate and flattened against ovary, meeting on top of ovary short-ciliate at top, tips and exposed margins often reddish purple, persistent and becoming fleshy in fruit; **corolla** absent; **stamens** absent; **pistil** 1; ovary superior, discus-shaped, ca. 1 × 0.3 mm, green, oriented ⊥ rachis, glabrous, 1-chambered with 1 ovule; style 1 deeply 2-branched nearly to base, the stigmatic branches spreading laterally, subequal, narrowly oblong, 1.1–2 × 0.35–0.4 mm, green axis the widest at base but not reaching tip with whitish, papillate wings. **Fruits:** multiple fruit of berries in cylindric cluster, cluster 15–20 × 9–10.5 mm, with 100+ tightly appressed berries (aggregate fruit), berry 0–1-seeded, compressed obovoid, 3–4 × 2.5–3 × 1.3–2 mm, scarlet (paler) to red-purple, with juicy pulp; bractlet sometimes visible, strongly cupped and fleshy below midpoint, = berry, pubescent on exposed tip and margins appressed to berry. **Seed:** ovoid compressed side-to-side, 2.2–2.4 × 1.5–1.6 × 1.2 mm, ± butterscotch-colored, smooth, with white hilum at tip.

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