

Vascular Plants of Williamson County

Modiola caroliniana – CAROLINA BRISTLE MALLOW [Malvaceae]

Modiola caroliniana (L.) G. Don, CAROLINA BRISTLE MALLOW. Perennial herb, taprooted (rooting at basal nodes), prostrate to decumbent, to 28 cm tall, 15–90 cm long; shoots somewhat soft-hairy, stiff-pilose and with shorter stellate hairs and inconspicuous, slender erect hairs, the long hairs to 2.5 mm long and with conspicuously swollen and persistent bases. **Stems:** cylindric, to 4 mm in diameter, tough, green, bearing scattered single hairs and often inconspicuous, short-stellate hairs. **Leaves:** helically alternate, palmately dissected into 3 or 5(7) lobes and toothed, petiolate, with stipules; stipules 2, fused to stem at node, broadly ovate to triangular, 4–6 mm long, sparsely pubescent, late-deciduous; petiole channeled, several–50+ mm long; blade broadly ovate to round in outline, 15–55 mm long, slightly longer than wide, lobes obovate with broad teeth above midpoint, odd-palmately veined with principal veins raised on both surfaces. **Inflorescence:** flowers solitary, axillary, on slender stalk, bracteate; pedicel at anthesis 10–12 mm long increasing 2× in fruit, green turning reddish brown, flexible aging stiff, pubescent with spreading long hairs; bracteoles subtending calyx 3 (epicalyx), appearing whorled, oblanceolate and appearing petiolate, at anthesis ascending and 4–5 mm long increasing and spreading in fruit. **Flower:** bisexual, radial, 7–10 mm across, dish-shaped; **calyx** 5-lobed, green, with scattered long hairs having conspicuous, swollen bases; tube cup-shaped, at anthesis 2–3 mm long increasing in fruit, 10-veined, bumpy from stout hair bases; lobes spreading (when fully open), triangular-ovate, 3–4 mm long increasing in fruit, acute but abruptly tapered at tip, with a conspicuous midvein and covered with stout hair bases, lower surface with long hairs, internally (upper surface) with short-stellate soft hairs; **petals** 5, fused to expanded base of staminal tube, obovate with thick base, in range 3–4.5 mm long, ± glossy light yellowish green at base, limb dull deep yellowish pink to reddish orange, with veins of same colors radiating from base, short-ciliate on margins of base; **stamens** ca. 20, monadelphous (fused into column) with dome (fused portion) covering ovary + a cylindric tube; tube ca. 1 mm long, dome and tube pale green at base, free filaments ca. 1 mm long, pale yellowish green; anthers dorsifixed, monotheical, < 0.5 mm long, orange-yellow, longitudinally dehiscent; pollen orange-yellow; **nectary** on outside of staminal dome alternate with petal bases, nectar produced as 5 beads of liquid; **pistil** 1, 4 mm long; ovary superior, hidden beneath staminal column, shallowly 14–22-lobed (= ovary segments), tirelike with depressed center, 1 × 2 mm, green, densely covered above midpoint and around depression with ascending, stiff unbranched hairs and sessile glandular hairs, each ovary segment 2-chambered and with 2 incipient beaks, the chambers separated by a partition and each chamber with 1 ovule; style arising from depressed center as a column ca. 1.5 mm long, where covered with white hairs, exposed style strong red, branches = ovary segments, free, exposed portion curved among filaments, to 1.2 mm long, extending just above the longest stamens; stigmas capitate, dark red (darker than style), papillate. **Fruit:** schizocarpic capsule, septicidally breaking into segments (mericarps), each mericarp loculicidal and 1–2-seeded, outer rim with 2 spreading, outward-pointing, bristlelike horns per mericarp, mericarps sickle-shaped, black, with stiff hairs along edges, and wrinkles on side, horns 1.1–1.5 mm long. **Seed:** lopsided heart-shaped to squarish

with depression at hilum, ca. 1.5 mm long, dull frosted dark brown, with hairs near hilum or both ends.

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