

Malva nicaeensis All., BULL MALLOW, MALLOW OF NICE. Annual, taprooted, several-many-stemmed at base, branches decumbent and ascending to erect, 20–60 cm tall; shoots with basal leaves and cauline leaves, with suntracking blades, villous-hirsute and pilose, the hairs unbranched or some forked and stellate, colorless, and with persistent, bulbous bases. **Stems:** ridged, to 12 mm diameter, with low and broad ridges descending from each leaf, tough, green, villous-hirsute. **Leaves:** helically alternate, palmately 5-lobed or 7-lobed, long-petiolate, with stipules; stipules 2, broadly attached to stem at node, \pm ovate, 5–7.5 mm long, short-dentate with a hair terminating each tooth, odd-palmately 5–11-veined, glabrous; petiole \pm cylindrical but slightly channeled, 20–300 mm long, hairy like stem but pilose in channel; blade \pm kidney-shaped to \pm roundish and shallowly lobed, 20–130 \times 20–140 mm, lobes broad with shallow sinuses, cordate at base, crenate to dentate and often wavy on margins, palmately veined with principal veins conspicuously raised on lower surface, upper surface pilose to glabrous, lower surface pilose. **Inflorescence:** condensed cyme, axillary, 2–6-flowered, bracteate, villous-hirsute; peduncle absent; bractlet subtending pedicel absent; pedicel at anthesis ascending, 3–6.5 mm long, often reflexed and increasing 2–5 \times in fruit; bracteoles (2–)3, fused to calyx tube at base (= epicalyx), ovate to deltate, at anthesis 3.5–4.5 \times 2.5–3.2 mm increasing slightly and spreading in fruit, broadly tapered at base, short-dentate on margins with a hair terminating each tooth, acute at tip, palmately veined, upper surface somewhat glossy, the hairs on margins to 1.2 mm long. **Flower:** bisexual, radial, 13–15 mm across; protandrous; **calyx** 5-lobed, pleated in bud, hirsute with mostly unbranched hairs but having some forked or stellate hairs, persistent and enveloping fruit; tube deep cup-shaped, 2.5–4 mm long; lobes ascending, shallowly deltate to ovate, 2.3–3 \times 3–3.7 mm increasing and overarching in fruit, broadly acuminate at tip, reddish on margins and tip; **petals** 5, \pm free but fused to expanded base of staminal tube, obovate, 10–12 \times 4–6 mm, always noticeably $>$ calyx, lavender to purplish pink fading with white at thick and stiff base (drying bluish), concave-notched at tip, with 3 deep rose to deep purplish pink veins appearing above base and forking above (at least the central vein), glabrous; **stamens** 18–20, monadelphous (all fused fused for part of length) forming a column and an erect array, 4–4.5 mm tall, pubescent; column 2.5–3 mm long, white aging lavender, flaring at base, most of column densely covered with colorless, downward-pointing hairs, glabrous at expanded base and at top; filament free portions unequal, 0.7–1.5 mm long, some forked, forming a short, conic mass, white at base to rose-lavender above; anthers dorsifixed, monothechal, oblongish, 0.5–0.7 mm long, ivory white, longitudinally dehiscent, shedding pollen before anthesis; pollen whitish, sticky; **pistil** 1, 5.5–7.5 mm long; ovary superior, hidden beneath base of staminal column, subspheroid compressed top-to-bottom, ca. 1 \times 1.5–2.5 mm, green, glabrous or minutely powdery (farinose), 7–9-chambered, each chamber with 1 ovule; styles = number of chambers, fused at or below midpoint, greenish but becoming paler or whitish approaching tip, free tips tentaclelike, 2–2.5 mm long, dark pink to purplish pink, ascending above stamens and arching downward, stigmatic and pubescent along inner side. **Fruit:** schizocarp, breaking into 7–9 dry, 1-seeded, indehiscent segments (mericarps), partially concealed by an overarching, dry, veiny calyx, when intact tire-shaped, 7–8 mm across, glabrous or short-hairy; mericarps = D-shaped wedges, ca. 3 \times 2.7 \times 3 mm, dark orangey brown, outer (curved) surface deeply netlike (reticulations sometimes elongated), acute to narrowly winged along edge, lateral (radial) faces with a tannish central area and a

dark orangey brown outer band, central area notched on inner edge, with ± 10 radiating, slightly wavy and sometimes forked veins, outer band divided by ± 14 radiating ridges. **Seed:** comma-shaped, ca. $2.2 \times 1.7 \times 2.2$ mm, fitting tightly within chamber, cinnamon brown, sometimes slightly frosted, finely wrinkled. Early February–early July.

Naturalized. Annual weed inhabiting disturbed habitats, where it was uncommon in the 1980s but now is widespread in ruderal habitats, where it can grow in tall, dense stands. *Malva nicaeensis* in vegetative condition is too similar to *M. parviflora* to be properly identified, although it can be recognized using types of hairs, if the observer is careful. Flowers of *M nicaeensis* are more showy, with much longer petals that have conspicuous nectar lines, and the staminal column is densely hairy. The species can also be properly identified using fine structure of the mericarps, and there are fewer mericarps per fruit as compared with *M. parviflora*.

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