

Vascular Plants of Williamson County

Monarda citriodora var. *citriodora* – PURPLE HORSEMINT, LEMON BEEBALM [Lamiaceae]

Monarda citriodora Cerv. var. *citriodora*, PURPLE HORSEMINT, LEMON BEEBALM. Annual, taprooted, not rosetted, 1-stemmed at base, with a terminal inflorescence and below that with 1–3 nodes with pairs of ascending lateral branches each with a terminal inflorescence, erect to ascending or decumbent, < 30–75 cm tall; shoots with only cauline leaves, short-hirsute with arching hairs and gland-dotted with sessile glandular hairs having colorless heads at least on foliage sunken in pits, strongly aromatic and citruslike when crushed or handled. **Stems:** 4-sided aging cylindrical at ground level, to 6 mm diameter, short-hirsute with arching and curving-downward hairs and gland-dotted, lower stem eventually forming periderm. **Leaves:** opposite decussate, simple, short-petiolate to petiolate, without stipules; petiole to 20 mm long; blade lanceolate or elliptic-lanceolate or oblong, < 30–60 × 6–14 mm, long-tapered at base, low-serrate and ciliate on margins, acute at tip, pinnately veined with principal raised on lower surface, gland-dotted, upper surface lacking nonglandular hairs, lower surface short-hairy along veins. **Inflorescence:** condensed cymes, axillary in congested, headlike clusters of 2 per node (verticils), with 1–5(–7) widely spaced verticils on erect peduncle, verticils < 25–50 mm diameter (excluding corollas), many-flowered, flowers mostly ascending, bisexual but some neuter, bracteate, short-hirsute to hirsute and glandular-hairy with sessile glandular heads; peduncle stemlike and conspicuously 4-sided, green but often with purplish angles; bracts subtending each verticil many and condensed, forming a brightly colored, dense, leafy cushion of bracts beneath flower cluster, the lowest 2 bracts opposite and leaflike, green and sessile, ovate-lanceolate, at the lowest node to 32 × 11 mm, tapered at base, entire, acute with long, fine point at tip, pinnately veined with veins raised on lower surface, subsequent bracts in whorls of 4 then 6, gradually decreasing inward and upward, upper surface glabrous and often light purple, midbracts oblong, ca. 15 × 3 mm, becoming light purple to midblade on upper surfaces, the innermost bracts oblong decreasing to 2–3 × 4 mm, lower surface puberulent with upward-curved hairs and with sunken glandular heads, often with longer hairs along margins, the innermost leafy bracts subtending axillary, sterile, incompletely developed flowers around perimeter of cyme; bracts subtending branchlets and bractlets subtending fertile flowers of cyme linear and stiff, to 10 mm long, gland-dotted (sunken in pits) and short-hairy but having longer hispid hairs including several at purplish tip; pedicel upright, 0.7–1.3 mm long, white, puberulent and gland-dotted with several hispid hairs next to calyx; pedicels short or flowers subsessile, upright, 0.7–1.3 mm long, white, puberulent + some long hairs and gland-dotted. **Flower:** bisexual, bilateral, ca. 5 mm across; **calyx** finely 5-lobed, 9–18 mm long; tube to above midpoint, shallowly 5-angled, white at pinched base to light green above, 15-veined with veins low-raised, puberulent + glandular hairs between veins; lobes triangular with slender, acuminate tips, with several long, stiff hairs including at tip scabrous, inner surface at orifice with a dense ring of straight stiff hairs 1 mm long concealing throat, inner surface glabrous; **corolla** 2-lipped, ca. 25 mm long (not straightened); tube ± straight stretched around ovary, ca. 9 mm long, whitish to pale lavender, lacking hairs, 10-veined, filled with thin nectar; throat flattened funnel-shaped, 5 mm long, orifice 7–8 mm across; upper lip arched hood and ± keeled, ca. 10 mm long, mottled light rose-purple to orchid, notched at tip, outer surface with regularly

spaced glands and short-hairy on keel and margins; lower lip 3-lobed ovate in outline with a pair of short basal lobes, 3.5–4 mm long, lateral lobes ca. 2 mm long, inner surface with 3 pink-purple nectar lines, short-hairy on lower surface, lacking a beard; **stamens** 2, attached to top of tube on upper side, adherent; filaments arching forward within hood of upper lip of corolla, 10–11 mm long, white, puberulent; anthers dithecal, ca. 2.5 mm long, pink-purple, longitudinally dehiscent; pollen white; **nectary disc** beneath ovary, columnar, 0.7 mm long, pale green, producing copious thin nectar; **pistil** 1; ovary superior, deeply 4-lobed, fingerlike, ca. 0.3 mm long, pale green, each chamber with 1 ovule; style attached to ovary base at center of ovary lobes (gynobasic), arching with upper corolla lip, exerted 3 mm from upper corolla lobe, ca. 26 mm long, unequally 2-forked, whitish, short-hairy to fork, upper branch straight and ca. 1 mm long, lower branch tapered to tip and slightly curved downward, 2 mm long, weakly pigmented with purple line. **Fruit:** nutlets, 4, oblong, 1.3–1.5 × 0.7–0.85 mm, yellow brown to brown, rounded on back and top with 2 flat faces, the back with 3 fine lines forked from near base, with pair of white scars at base.

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