

Monardella breweri A. Gray subsp. *lanceolata* (A. Gray) A. C. Sanders & Elvin,
MUSTANG MINT. Annual, taprooted, 1–3-stemmed at base, laterally branched in pairs at 1–7 successive nodes, lateral branches spreading to ascending, typically each branch with a terminal headlike inflorescence, sometimes laterally branched again, 15–55 cm tall; shoots with sparsely spaced, ± drooping or spreading cauline leaves, puberulent and glandular-hairy, the glandular hairs with sessile to subsessile, spheric, colorless heads aging amber to orange, strongly aromatic. **Stems:** cylindric, to 3 mm diameter, at plant base purple aging brown, internodes 40–120 mm long, nodes thickened beneath lateral branches, ± densely short-strigose to canescent with short, downward-pointing hairs. **Leaves:** opposite decussate, simple, petiolate, without stipules; petiole narrowly channeled, 3–12 mm long, grading into blade, with short, upward-pointing hairs; blade lanceolate or narrowly elliptic to oblanceolate, 12–45 × 3–10 mm, long-tapered at base, entire, acute at tip, pinnately veined with midrib raised on lower surface, green but sometimes becoming purplish along midrib and on margins of lower surface, puberulent and glandular-hairy, the glands spheroid and often partially sunken. **Inflorescence:** headlike and racemelike in leafy cymelike arrays (dichasia), terminal (sometimes appearing axillary), headlike cluster 7–30 mm across, with 14–100+ stalked flowers, bracteate, puberulent and glandular-hairy; axes of reproductive branches stemlike, with a pair of leaflike bracts above midpoint approaching head (potentially subtending future lateral peduncles); bracts subtending peduncle 2 and opposite, petiolate, leaflike; peduncle 4-sided, short–25 mm long, 4(6)-ridged, green approaching involucre; **involucre** of 8 or 10 free bracts surrounding cluster of flowers, the lowest 2 opposite, narrowly ovate and short-petiolate, 10–11 × 4.5–5.5 mm increasing in fruit, mostly green but pale green with darker green, netlike-veined at base, on both surfaces puberulent and glandular-hairy; the next 2 bracts opposite, broader ovate, < outer bracts, conspicuously palmately veined at base, becoming pinnately veined and net-veined in midsection, somewhat glossy, with green approaching tip and having veins and margins becoming purplish above midpoint, with scattered glandular hairs only above midblade on lower surface; inner bracts in a whorl of 4 (sometimes 6), 4 bracts broadly lanceolate and similar to middle bracts, if 6 bracts then 2 bracts oblanceolate, 4–4.5 × 1–1.2 mm; receptacle of headlike cluster low-convex, densely short-hirsute, with tiny, undeveloped, stalked flower buds around periphery; pedicel stout, inversely conic, 0.5–1.3 mm long, white, short-villous. **Flower:** bisexual, bilateral, 3 × 4 mm across; **calyx** 5-toothed, 13-veined, puberulent and sparsely to moderately glandular-hairy on exposed green surfaces; tube ± banana-shaped, 4.5–6 × 1.2–1.7 mm, whitish or pale green at base becoming green above with olive green veins; lobes erect and appressed to corolla throat, in fruit touching at center, toothlike and triangular, 0.9–1.1 mm long, red-purple in bud aging paler purple or darker in fruit, especially densely hairy on margins; **corolla** distinctly 2-lipped, 5-lobed, in range 11–15.5 mm long; tube cylindric, = calyx, white, glabrous, finely 15-veined; throat expanded approaching tip, 4–4.5 mm long, reddish purple, conspicuously ribbed and grooved below lower lip, only slightly grooved below upper lip, externally with backward-pointing hairs, the hairs 2-colored (dark reddish purple at base and colorless at top) or uniformly colored (translucent purple or whitish), internally with a band of white hairs < 2 mm wide at transition from tube to throat; upper lip 2-lobed, erect, 3.5–4.5 × 1.5–2.5 mm, sinus ca. 2 mm between lobes; lower lip 3-lobed, ascending, 4.3–5.5 × 3–4 mm, sinuses 3–5 mm between lobes, lobes oblong, violet with dark red-purple

spots, constricted below tip and forming an inverted cup (lower side facing) at tips, the cup yellowish, internally with 2–4 resinous, amber, dropletlike glands, glabrous at base to puberulent with pale violet hairs above; **stamens** 4, fused to corolla 0.5–1 mm from top of throat, dimorphic; filaments exerted, straight, from lower lip 5–6.5 mm long (lower stamens) and from upper lip 3–4 mm long (upper stamens), white to lavender, glabrous; anthers dorsifixed, dithecal with widely divergent sacs on a triangular connective, sacs ellipsoid, 0.4–0.5 × 0.3–0.4 mm, deep reddish purple to purple, longitudinally dehiscent; pollen white; **nectary disc** beneath pistil, barrel-shaped, < 0.4 mm long, red-orange, producing copious nectar; **pistil** 1; ovary superior, strongly 4-lobed, lobes ovoid, ± 0.4 mm long, whitish to light green, 2-chambered, each lobe with 1 ovule; style exerted at anthesis and abscised after fertilization, attached to ovary base at center of ovary lobes (gynobasic), 13–16 mm long, whitish to light lavender, 2-branched, the branches 0.2–0.3 mm long, dark reddish purple, rounded at tip, stigmatic but smooth on flat inner face. **Fruits:** nutlets, 2–4, oblong, 1.2–1.4 × 0.6–0.7 mm, mottled black and grayish brown, ± broadly tapered at base with 2 flat faces and 1 convex face, glabrous, with light gray to whitish attachment scar on flat faces at base. Early May–Mid-June.

Native. Annual known to date from a few localities in range but not collected recently. *Monardella breweri* subsp. *lanceolata*, formerly known as *M. lanceolata*, has strongly aromatic, opposite decussate leaves separated by long internodes. The plant may either be treated as having terminal and axillary inflorescences, or instead treating the entire canopy equaling a dichasial cymelike array in which the leaves are instead interpreted as bracts. It is possible that *M. breweri* subsp. *breweri* may also occur in range.
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