

Vascular Plants of Williamson County
Monarda clinopodioides – BASIL BEEBALM [Lamiaceae]

Monarda clinopodioides A. Gray, BASIL BEEBALM. Annual, taprooted or fibrous-rooted along creeping basal stem, not rosetted, 1(–2)-stemmed at base, sometimes with unexpanded axillary shoots or larger individuals with ascending lateral branches forming inflorescence, erect to ascending, in range < 20–30 cm tall; shoots with only cauline leaves, hirsute and short-hirsute with hairs having swollen bases, foliage with sessile glandular hairs sunken in pits, not noticeably aromatic when crushed; adventitious roots not nodal. **Stems:** 4-sided aging cylindrical at ground level, to 3 mm diameter, short-hirsute and hirsute with arching and curving-downward hairs. **Leaves:** opposite decussate, simple, short-petiolate, without stipules; petiole < 5 mm long; blade ovate, 12–35 × 5–14 mm, tapered at base, serrate on margins, acute at tip, pinnately veined with principal veins sunken on upper surface and raised on lower surface, upper surface sparsely short-hirsute, lower surface more densely hairy and mixed with longer hairs. **Inflorescence:** condensed cymes, axillary in congested, headlike clusters of 2 per node (verticils), with 1–3 spaced verticils on erect peduncle, verticils 18–32 mm diameter (excluding corollas), many-flowered, bracteate, short-hirsute to hirsute and glandular-hairy with sessile glandular heads; peduncle stemlike and 4-sided, to 25 mm long, hirsute with hairs having red-purple bases; bracts subtending the lowest verticil leaflike with short, flattened petiole, ovate to lanceolate, 10–20 × 5–7 mm, less leaflike for other verticils, serrate and hirsute short-ciliate on margins, acute at tip, pinnately veined with principal veins slightly raised on lower surface, having glandular heads sunken in pits, lower surface short-hirsute with hairs arching toward tip; second set of bracts per verticil 8 in whorl, elliptic to obovate, shorter than first bract and still green with sharp purple point at tip and purple on margins, short-hairy but with long hairs on margins; third set of bracts per verticil to 10 mm long and narrower (< 2.5 mm wide), 3-veined at base, purplish above midblade, hirsute-hispid and with conspicuously sharp point at tip; fourth set of bracts slender, stiff-ciliate with hairs to 1.5 mm long and short upward-curved teeth on margins; bractlet subtending subsessile flower slender, green with upper portion purple, stiff-ciliate. **Flower:** bisexual, bilateral, 4 mm across; **calyx** 5-lobed, 10–11 mm long; tube narrowly funnel-shaped, ca. 7 mm long, whitish at base to green then purple above midpoint, strongly 15-ribbed with 3 veins to each lobe (sunken on inner surface), hirsute along ribs, with sunken glandular hairs in furrows, at orifice with a dense ring of white hirsute hairs concealing tube, the hairs ascending to spreading short and ca. 1 mm long, with sessile orange glandular heads; lobes ascending, acuminate and pointed, equal, triangular, ca. 3 × 1 mm, hirsute-ciliate on margins, glabrous on surfaces, with stiff point; **corolla** 2-lipped, 5-lobed, ca. 20 mm long (not straightened), white with purple lines and some dots on lower lip floor with some pink-purple, at anthesis with solid dark rose-red lines later fading; tube cylindrical but expanded around ovary, ca. 9 mm long, off-white with 10 red veins around ovary, above ovary 6 × 0.5 mm, inner tube with papillae; throat expanded more on lower side of corolla ca. 7 mm long; lips 8–9.5 mm long; upper lip arching back to plane of corolla tube, hoodlike and keeled, 2-lobed at tip, lobes deltate, 1 mm, short-ciliate on margins, longer hairs along keel, outer surface with orange sessile glandular heads and scattered short hairs; lower lip rhombic in outline when flattened, 3-lobed, the central lobe obovate, ca. 3 × 2 mm, light pink-purple at margins, lateral lobes 1.5 × 1 mm, pale pink-purple, purple on lip

floor not entering lobes, nonglandular and glandular hairs as on upper lip, floor lacking a beard; **stamens** 2, attached to top of tube on upper side, 11–12 mm long; filaments arching forward with upper lip of corolla, colorless, each 2 sacs in line (diverging at 180°), white, puberulent approaching anther; anther each sac 1–1.4 mm long, white aging with deep rose, longitudinally dehiscent; pollen white; **nectary disc** beneath ovary, columnar, 1 mm long, white; **pistil** 1; ovary superior, deeply 4-lobed and columnar, ca. 0.7–0.8 × 0.35–0.4 mm, each chamber with 1 ovule; style attached to ovary base at center of ovary lobes (gynobasic), arching with upper corolla lip and coiled downward (not exerted beyond corolla lip), ca. 18 mm long, lower style colorless and pale purple and short-hairy above midpoint, unequally 2-branched approaching top with short branch on upper side above coiling longer stigmatic branch 1.5–1.8 mm long. **Fruit:** nutlets, 4, oblong, ca. 1.5 mm long, yellow brown to brown, with short, nipplelike point at top.

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