

Vascular Plants of Williamson County

Liatris punctata var. *mucronata* – DOTTED GAYFEATHER, PLAINS GAYFEATHER, BLAZING STAR [Asteraceae]

Liatris punctata Hooker var. *mucronata* (DC.) B. L. Turner, DOTTED GAYFEATHER, PLAINS GAYFEATHER, BLAZING STAR. Perennial herb, corm-bearing, fibrous-rooted, (several–)many-stemmed at base, principal stems spreading and ascending to suberect and unbranched below canopy, in flower 25–60 cm tall; shoots with basal leaves and closely spaced cauline leaves but longer basal leaves absent at flowering, cauline leaves \pm stiff and closely spaced, lower cauline leaves spreading to upper cauline leaves ascending, foliage gland-dotted on lower surfaces and young leaves with some fine hairs including on margins; corm oblate-spheroid to subspheroid, old corm \pm 40 \times 55 mm, covered with weathered, fibrous leaf bases dull gray (exposed) and brown (covered). **Stems:** \pm cylindrical, to 4 mm diameter, with 2 weak ridges decurrent from each leaf, internodes short–13 mm long, aging orange-red to purplish, glabrous or sometimes with fine, long hairs and inconspicuously gland-dotted with sunken glands. **Leaves:** helically alternate (subopposite), simple and \pm sessile, without stipules; petiole $<$ 1 mm long, indistinct from blade; blade linear, $<$ 30–85 \times 1.5–2 mm, slightly lobed at base, entire, acute at tip, 3-veined at base but laterals not visible at midblade with conspicuous double midrib (channeled) raised on both surfaces, gland-dotted with sessile heads sunken on both surface, young leaves sometimes with some fine hairs near base. **Inflorescence:** heads, in unbranched, terminal, spikelike array of many ascending, sessile heads, 70–320 \times 30–40 mm, 1 axillary head per leaflike bract, head discoid, 10–15 mm across (+ spreading style branches), in range 3–5-flowered, bracteate, exposed green tissues gland-dotted, sometimes with fine hairs near the bases of heads; axis visible or hidden, stemlike with short internodes, weakly ridged, with short-stalked glandular hairs and sometime with fine, soft hairs; bract subtending head leaflike, ascending, of lower array \geq head and approaching tip \leq head, to 2.5 mm wide, 1-veined, acute at tip, gland-dotted; **involucre** cylindrical, 9–12 \times 3 mm, exposed surfaces green and gland-dotted, phyllaries 14–18 in 4–5 series, unequal, basal phyllary cupped and \pm keeled with raised midvein, acuminate-ovate, ca. 2.5 mm long, green with colorless margins, outer 5 phyllaries acuminate-ovate and cupped, 3–4 mm long increasing upward, finely parallel-veined from base, middle phyllaries broadly oblong with folded acuminate tip, 5 \times 3 mm increasing upward, inner 5 phyllaries obovate-oblong, to 12 \times 3–4.3 mm, short-ciliate on membranous margins, margins of inner phyllaries pale purple, tip narrowly conic and purplish, midvein sometimes purplish to pinkish; receptacle extremely narrow, without bractlets (paleae), each ovary in pit surrounded by a fleshy rim ca. 0.25 mm long, glabrous; pedicel beneath ovary tough, short, white. **Flower:** bisexual, radial, ca. 4 mm across (+ spreading style branches); **calyx (pappus)** feathery capillary bristles (short-plumose), in range ca. 40 in 2 series, subequal, 4.2–8 mm long, axis often purple-red and somewhat wavy to midpoint and firmly attached, branches (barbels) fine, $<$ 0.5–1.2 mm long; **corolla** 5-lobed; tube barrel-shaped, 1.5–2 mm long, white, not gland-dotted; throat narrowly funnel-shaped, 5–6 mm long, white to pale purple, 1.5 mm wide at orifice, 5-veined to sinuses, gland-dotted, inner surface short-pilose; lobes ascending to spreading, narrowly triangular, 3.2–5 \times 1 mm, light to bright purple, lower surface gland-dotted; **stamens** 5, attached to top of

corolla tube; filaments 2–4 mm long, short-hairy base-to-tip; anthers fused into cylinder surrounding style, included to half-inserted, 4–4.5 mm long including appendages and tails, sacs and tails red, tails slender, 1 mm long, appendages ovate, 0.6–0.7 mm long, pinkish, longitudinally dehiscent; pollen white to pinkish; **pistil** 1; ovary inferior, narrowly inversely pyramidal and 3-sided, 4.5–7 × ca. 1 mm, greenish, 9–11-ribbed, with ascending short hairs along raised ribs and denser hairs at top, furrows gland-dotted, 1-chambered with 1 ovule; **nectary disc** surrounding style base, ca. 0.3 mm long, reddish; style long-exserted, 2-branched, ca. 6 mm long and white to fork, the branches straplike, 10+ mm long, lower portion pale pink and red-purple with glands on upper side, upper portion crooked and purple. **Fruits:** cypsela (achenes), in set of 3–5 per head but often seedless, with persistent, firmly attached pappus; fruit body inversely narrowly prismatic (obpyramidal) and ± 3-sided, in range 4.5–7.2 × ± 1.5 mm (fertile), 9–11-ribbed, brown with paler ribs but dark green with purplish red ribs when immature, ribs short-hirsute with ascending hairs, faces especially above midpoint with minute stalked glandular hairs having yellowish heads before drying; pappus capillary bristles in range ca. 40 in 2 series, ascending to spreading, conspicuously feathery (short-plumose), 5.5–8.8 mm long, white to tawny (main axis purplish when immature), fine branches (barbels) ascending-spreading, < 0.5–1.2 mm long.

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