

Vascular Plants of Williamson County

Eupatorium serotinum – LATE-FLOWERING THROUGHWORT, FALL BONESET, LATE
EUPATORIUM [Asteraceae]

Eupatorium serotinum Michx., LATE-FLOWERING THROUGHWORT, FALL BONESET, LATE EUPATORIUM. Perennial herb, rhizomatous, fibrous-rooted, not rosetted, arising 1-stemmed at base from rhizome, erect with opposite pairs of ascending principal branches, in range 80–150+ mm long; shoots with \pm horizontal cauline leaves, young foliage somewhat velveteen, having soft short hairs mixed with inconspicuous glandular hairs and blades gland-dotted, mildly scented. **Stems:** cylindric, to 7 mm diameter, tough soon woody and rigid, conspicuously swollen at shoot nodes, with distinct pair of ledges across each node, short hairs arching upward. **Leaves:** opposite decussate (leaflike bracts of inflorescence helically alternate), simple, petiolate, without stipules; petiole widely flared at base connecting to ledges and narrowly channeled above, 10–30 mm long; blade lanceolate to narrowly ovate, $< 50\text{--}90 \times < 15\text{--}40$ mm (leaflike bract subtending axillary inflorescence smaller), tapered to broadly tapered at base, conspicuously serrate and minutely toothed on margins, acute to acuminate at tip, pinnately veined with 3(5) principal veins at base with principal veins sunken on upper surface and raised on lower surface, short-hairy, upper surface with irregular glandular patches, lower surface with some inconspicuous glandular hairs. **Inflorescence:** heads in terminal, compound, cymelike arrays (corymblike), appearing flat-topped but each principal unit somewhat funnel-shaped with depressed central flower having 2–3 principal clusters of 10+ heads, the entire inflorescence including flat-topped arrays axillary from leaflike bracts below the terminal array, head \pm subsessile, disciform, 3.5–4.5 mm across, 9–15-flowered, flowers bisexual with styles exerted 2–2.5 mm, bracteate, soft-pubescent; axes with mostly upward-pointing hairs with the terminal cell rounded; bract subtending major branch leaflike with petiole, < 30 mm long decreasing upward; axes velveteen with short hairs and glandular hairs; bract subtending branchlet awl-shaped and appressed to axis; bract subtending peduncle of head awl-shaped, to 2 mm long, margins white and short-ciliate; peduncle < 1 mm long; **involucre** \pm bell-shaped aging funnel-shaped, in range $4.5\text{--}5 \times \text{ca. } 2.5$ mm, densely pubescent with short white hairs, phyllaries ca. 15, outer phyllaries ovate and ca. 1.3 mm long, phyllaries mostly \pm oblong, convex, and ca. $3 \times 0.8\text{--}1$ mm, green, 3-veined, with rounded tips and appearing densely hairy along membranous margins, 3 inner phyllaries jammed between outer disc flowers, folded outward (keel to the inner side) and narrowly wedge-shaped, ca. $3 \times 0.5\text{--}0.6$ mm; receptacle slightly convex, without bractlets (paleae), with each ovary in a shallow cup, glabrous. **Disc flower:** bisexual, radial, 1 mm across, white but sometimes appearing pink due to violet color of anthers; **calyx (pappus)** of 25–30 capillary bristle in 1 whorl, when young appressed to corolla and reaching midpoint of corolla lobes (ca. 0.25 mm from tips), white; **corolla** 5-lobed, 2.6–2.9 mm long, white; tube cylindric slightly expanded at base, $1.4\text{--}1.5 \times 0.35$ mm, throat narrowly funnel-shaped; lobes spreading, acute, 0.6–0.7 mm long, lobes and throat with colorless, sessile glandular hairs; **stamens** 5, fused to corolla at base of throat, included; filaments ca. 0.5 mm long, white; anthers fused into cylinder surrounding style, basifixed, dithecal, 1.2 mm long (including terminal appendages), violet with colorless, ovate appendages 0.2–0.25 mm long, longitudinally dehiscent; pollen white; **pistil** 1, ovary inferior, narrowly wedge-

shaped, 0.8–1 mm long, green, glabrous, 1-chambered with 1 ovule; style 2-branched at or just below midpoint, 4–4.5 mm long, greenish at base and white from just below and also above fork, swollen at base (**nectary**) producing nectar around style base, branches arising within anther column, erect to ascending, hemi-cylindric with flat inner side. **Fruit:** cypselae, with pappus of capillary bristles, narrowly wedge-shaped, $1.8\text{--}2 \times 0.5$, glossy dark brown, 5-sided with 5 ribs, smooth, glabrous; pappus bristles ca. 25–30, spreading, straight, 2–2.5 mm long, white.

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