

Vascular Plants of Williamson County
Salvia engelmannii – ENGELMANN SAGE [Lamiaceae]

Salvia engelmannii A. Gray, ENGELMANN SAGE. Perennial herb, several–many-stemmed at base, principal branches ascending to suberect from base of plant, to 40 cm tall; shoots with only cauline leaves, pilose, puberulent, and with tack-shaped, subsessile glandular hairs on most green tissue, strongly aromatic. **Stems:** cylindrical, to 4 mm diameter, internodes to 30 mm long, pilose hairs scattered but puberulent hairs in a pair of broad vertical lines descending from the midpoint of fused leaves. **Leaves:** opposite decussate, simple, petiolate to sessile with pair fused across node forming a short sheath, without stipules; petiole < 10 mm long decreasing base to inflorescence, paired forming a tight-fitting sheath and gradually tapered to blade, indistinct from blade, puberulent-ciliate across node and long-ciliate on edges, sheath 1–2 mm long; blade ± linear, 30–60 × 3–5 mm, entire, acute with short point at tip, 1-veined with midrib sunken on upper surface and conspicuously raised on lower surface, upper surface appearing glabrate and with numerous glandular hairs, lower surface also with pilose hairs along midrib and scattered. **Inflorescence:** 3-flowered axillary cymes 2 per node (verticils), produced as a terminal flowering axis to 110 mm long, of 10+ closely spaced nodes on erect peduncle, verticil 35–40 mm across, bracteate, with nonglandular and glandular hairs like shoots, strongly aromatic, not viscid; bract subtending cyme sessile, leaflike, and green, 2 fused across node, linear, to 30 × 2.5 mm decreasing upward, lower surface with raised midvein; bractlet subtending each lateral pedicel, bractlets not fused across node, leaflike, long-acuminate, to 12 mm long; bractlet present on outer side subtending an undeveloped flower, to 7 mm long; pedicels cylindrical, 4–5.5 mm long, central > laterals, densely short-hairy with some long hairs and minutely glandular-hairy (not like tack-shaped glandular hairs). **Flower:** bisexual, strongly bilateral, 8–9 mm wide, ca. 15 mm long; **calyx** 2-lipped, bilateral but not compressed, 10–11 mm long, 5-lobed with short awns at tips of lobes (0.5 mm long), green, strongly 10-ridged, pilose and with conspicuous, tack-shaped glandular hairs on exposed surfaces; tube vase-shaped, 5 × 4 mm, inside at top of tube with a dense curtain of stiff white hairs 1.6–1.8 mm long concealing developing fruits, within tube short-strigose with upward-pointing hairs along 5 veins; upper lip 3-lobed, 5–6 mm long, lobes from midpoint of lip arching upward with strongly ridged midvein, inner surface of lobes with some short hairs and glandular hairs; lower lip 2-lobed, 5 × 2 mm, lobes deltate, ciliate on margins, inner surface with glandular hairs; **corolla** 2-lipped, 5-lobed, 18–22 mm long, blue-violet (blue) and white; tube bell-shaped, 1.5 mm long, 1.2 mm at base to 2 mm wide at top, white, glabrous on outer surface, with an interrupted curtain of straight white hairs at top of tube 1.2–1.8 mm long concealing nectar and ovary; throat gradually expanded, violet to violet-blue, outer surface pubescent with some short hairs; upper lip spreading and hoodlike and cupping stamens and style, shallowly 2-lobed or notched, ca. 12 mm long, blue-violet, glabrous and lacking glandular hairs on inner surface; lower lip 3-lobed, lip 9.5–10 mm long, pubescent on lower surface, floor white with conspicuous violet lines bordered with long hairs, central lobe to 8 mm wide, notched with 2 violet and veiny sublobes, lateral lobes spreading, rounded, ca. 2 × 3 mm, glabrous or sometimes minutely pubescent on lower surface near margin, central lobe descending to reflexed, cupped-oblate, 5–7 × 7–10 mm, broadly clawed for 1 mm and notched on outer

margin; **stamens** 4, upper 2 short staminodes and the lower 2 stamens exerted and fertile, fertile stamens attached to corolla throat ca. 3 mm from base of corolla and above level of dense hairs, staminodes arising slightly closer to corolla tube; filaments of fertile stamens curved upward from floor of corolla throat, curved and ca. 3×0.7 mm to hinge, fleshy, hinge near midpoint of axis (attachment to elongated connective of anthers), glabrous; anther with 2 sacs widely separated by filamentlike connective, 1 connective arching into hood of upper lip of corolla but lower connective ca. 2 mm long and violet projecting \perp where filament hinged, upper connective white, fertile sacs 3–3.2 mm long, pale violet and white, longitudinally dehiscent; pollen white; staminodes narrowly fan-shaped and compressed, to 2 mm long, pale violet and white; **nectary disc** beneath ovary base enlarged on lower side, green; **pistil** 1, situated to upper side of nectary, ca. 14 mm long; ovary superior, strongly 4-lobed with style attached in center at base (gynobasic), lobes hemispheroid, 0.45–0.5 mm long, green, glabrous, 2-chambered, each lobe with 1 ovule; style attached to ovary base at center of ovary lobes (gynobasic), curved upward into upper lip of corolla then curved downward to center of flower, 13–14 mm long, unequally 2-branched, white changing to violet approaching stigmatic branches, the lower branch descending and the upper branch curved, branches. **Fruit:** nutlets, mostly 2–4, obovoid and \pm 3-sided, 2.7–3 mm long, brown, mostly rounded but somewhat flattened on 2 lateral faces.

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