

Vascular Plants of Williamson County

Salvia azurea var. *grandiflora* – BLUE SAGE, AZURE SAGE [Lamiaceae]

Salvia azurea Lam. var. *grandiflora* Benth., BLUE SAGE, AZURE SAGE. Perennial herb, from thick, woody rootstock, not rosetted, 1–several- stemmed at base, at first flowering with paired, unexpanded axillary shoots along primary axis, ascending with erect inflorescence, in range < 100 cm tall; shoots with only cauline leaves, axes and foliage puberulent and short-hairy with scattered nonglandular hairs and subsessile to sessile glandular hairs with spheric heads, strongly aromatic when crushed. **Stems:** ± 4-sided, to 6 mm diameter, each internode with a pair of slightly convex faces (descending from leaves) and a pair of low-furrowed faces, tough, internodes to 40 mm long decreasing upward, nodes often purplish and short-hairy; woody lower stem covered by dark periderm with downward-pointing, strigose hairs, bark cracked. **Leaves:** opposite decussate, simple, petiolate + petiolelike base of blade, without stipules; petiole thick hemicylindric, to 5 mm long, flat and puberulent on upper side; blade linear-lanceolate or linear-ob lanceolate and often ± folded upward from midrib, in range < 30–80 × 4–8 mm, narrowly long-tapered at base, in range entire to subentire, acute at tip, pinnately veined with midrib raised on lower surface. **Inflorescence:** interrupted panicle of paired axillary cymes (verticils), terminal, lower portion somewhat leafy, many-flowered, often 200+ mm long with many nodes, often 2 flowers open per node (1 per cyme), axillary cymes with 6+ flowers, flower at anthesis horizontal, bracteate, pubescent with short nonglandular hairs and glandular hairs with spheric heads; peduncle and rachis 4-sided and stemlike with rounded edges having a furrow below each bract, green; bracts at each node 2, each subtending cyme, decussate at successive nodes, leaflike and sessile, lanceolate-linear to linear, at the lowest node to 20 × 2 mm decreasing upward, green, 1-veined with midvein sunken on upper surface and raised on lower surface, short-ciliate on margins; bractlet subtending pedicel absent; pedicel ascending, cylindric, to 5 mm long increasing in fruit, short-hairy and with sessile glandular hairs. **Flower:** bisexual, bilateral, ca. 15 mm across (lower lip flattened); **calyx** 2-lipped, 3-lobed, in bud ± club-shaped at anthesis bell-shaped, ca. 8 × 5–5.5 mm, green, with sinuses ca. 2 mm deep, ca. 15-ribbed, outer surface short – villous especially along ribs and abundant, short-stalked glandular hairs especially between the ribs, inner surface short-villous above midpoint; tube lacking a ring of hairs at top, inside lower portion somewhat fleshy between veins; upper lip rounded, typically 9-veined with 5 principal veins converging at top; lower lip 2-lobed with notch to 1 mm deep, lobes ca. 2 mm long with acute tip and a raised vein to tip, margins densely short-hairy; **corolla** conspicuously 2-lipped, to 25 mm long, upper lip hoodlike (galea) and unlobed, lower lip 3-lobed with a pair of lateral lobes and a broad, notched central lobe; tube + throat at anthesis somewhat compressed side-to-side; tube < tube, 3 mm wide at base to 2 mm wide at top, white and lacking hairs; throat expanding + somewhat saclike on lower side, ca. 9 × 4.5 mm and 3 mm at orifice, sides inconspicuously ribbed, in bud densely short-villous with mostly light violet-blue hairs + glandular hairs with translucent heads at anthesis hairs more widely spaced and tissue pale blue; upper lip cupping stamens and style, ca. 6.5 mm long, light blue to blue, outer surface with hairs like throat; lower lip ± flat, 7–8 mm long, lateral lobes ear-shaped, ca. 5 × 2 mm, central lobe ca. 10 mm across with a pair of semicircular sublobes ± 3 × 5 mm, in bud violet aging blue with surfaces of domed cells, with a pair of broad whitish stripes above each stamen but lacking sharp lines or dots and

streaks for nectar guides, short-villous and glandular hairs on lower surface; **stamens** 2, fused to upper throat, attached 9 mm from base of corolla, included in hood of corolla upper lip; filaments looped, cylindric, 3–3.3 mm long, translucent, hingelike at top, attached just below midpoint of anther apparatus, having a pair of arms with downward-pointing straight coherent via interlocked, light blue short hairs, upward-pointing arms free ca. 2 mm long; anthers 2 with only 1 sac on connective (monotheical), \pm 2.8 mm long, in bud orangish with violet dots (cell tips) aging violet to black, with a row of glandular hairs along sac-connective border, longitudinally dehiscent; pollen orangish yellow to bright yellow; **nectary disc** beneath ovary with long back on lower side of ovary, chairlike (next to lower lip), 2 mm long and creamy white, base with scalloped margin, ca. 0.5 long and greenish, producing thin nectar; **pistil** 1; ovary superior, strongly 4-lobed, lobes ellipsoid and often unequal, $0.8\text{--}1.3 \times 0.8$ mm, pale green surface covered with colorless bladderlike hairs (cobblestonelike), 2-chambered, each lobe with 1 ovule; style in range exerted ca. 3 mm from upper corolla lip, attached to ovary base at center of ovary lobes (gynobasic), somewhat straight, ca. 20 mm long, mostly white changing to pale violet approaching tip, above midpoint with 4 mm long of short-villous hairs, unequally 2-branched above the longest hairs, the branches exerted, the shorter (lower) branch straight and ca. 0.8 mm long, the upper branch curved upward and ca. 3 mm long. **Fruits:** nutlets, typically 1, ellipsoid slightly compressed (almond-shaped), in range ca. $4 \times 2.2 \times 1.5$ mm, brown, before abraded having numerous glandular hairs with spheric heads (minutely pebbled).

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