

Vascular Plants of Williamson County

Verbena scabra – SANDPAPER VERVAIN [Verbenaceae]

Verbena scabra Vahl, SANDPAPER VERVAIN. Aquatic perennial herb, taprooted and fibrous-rooted, not rosetted, 1-stemmed at base, in canopy forming widely spreading lateral branches from the axillary buds at each node with a pad on the upper side at the base of each branch, suberect to ascending or with inflorescences spreading, in range 40–150 cm tall; shoots with only cauline leaves, scabrous with axes and foliage covered with short hispid hairs having enlarged bases to 0.15 mm long and angled or arched upward; adventitious roots formed in rings from submersed lower nodes. **Stems:** 4(6)-sided, aging cylindrical at base of robust plant, to 7 mm diameter, tough, green with patches of tannish periderm forming on lower, woody stems, internodes to 110 mm long, with ledges across each node connecting petioles and having a furrow descending from each ledge, each ledge scabrous and finely ribbed. **Leaves:** opposite decussate to whorled with 3 leaves per node, simple, petiolate (long-tapered lower blade also appearing to be part of petiole), without stipules; petiole hemi-cylindric, strictly defined 2–11 mm long (lacking blade wings), whitish, scabrous; blade ovate, (25–)60–145 × (8–)26–75 mm, appearing broadly tapered but then narrowly tapered (petiolelike) at base, coarsely crenate to crenate-serrate on margins (the smallest canopy leaves sometimes entire), acute to blunt acute at tip, pinnately veined with most principal and some minor veins sunken on upper surface and strongly raised on lower surface, upper surface scabrous with short-hispid hairs across the surface and also denser hairs along veins, lower surface with short hairs only along veins. **Inflorescence:** panicle of spikes or solitary unbranched spike terminal + axillary unbranched spikes, panicle 3-branched at top of peduncle, each spike slender, to 260 × 5–6 mm after flowering, the longest with 100+ short-stalked flowers, flowers alternate or occasionally appearing subopposite near peduncle of a principal spike, strongly overlapping in bud aging with internodes to 4 mm long, exposed axes and green surfaces scabrous with upward-arched short-hispid hairs with enlarged bases, having short-stalked, often minute glandular hairs with colorless heads along axes; peduncle stemlike and ± 4-sided, to 20 mm long, having a pair of flattish faces and a pair of indented faces, if a panicle a pair of subopposite lateral branches arising from flattish faces; bract subtending lateral branch acuminate awl-shaped, 4–6 mm long, yellow-green, scabrous on lower (outer) surface and glabrate to obscurely puberulent on upper surface, decreasing upward; peduncle of lateral branch << peduncle of principal spike; rachis of spike 4-sided and ridged, often red-purple, scabrous along ridges descending from bractlets, with mixed, minute glandular hairs; bractlet subtending subsessile flower appressed to calyx, widely fused to rachis, acuminate-ovate and somewhat keeled, 1.5–2 × 0.8–1 mm, yellow-green, 1-veined to tip, scabrous-ciliate on margins with upward arching short-hispid hairs having colorless bases, with ephemeral subsessile glandular hairs near base; pedicel stout, < 0.35 mm long, purplish, with minute subsessile glandular hairs. **Flower:** bisexual, ± radial, 2 mm across (corolla); **calyx** (4–)5-lobed, scabrous on green tissue; tube with a green, low rib to each lobe alternating with narrow whitish tissue, 1.8–2.1 × 1 mm, rib with hairs having purple-red bases, whitish tissue minutely ciliate on upper margin, other hairs inconspicuous; lobes appearing subterminal and erect, 0.25–0.4 mm long, green; **corolla** 5-lobed, the lobes widely spreading; tube + throat (weakly 5-sided) = calyx tube, tube to midpoint and white, throat above midpoint light pink-purple, sometimes with several

minute hairs approaching top, inner surface of throat with white, short straight hairs and a conspicuous ring of longer white hairs at orifice concealing nectar, stamens, and pistil; lobes \pm semicircular, ca. 0.6×0.6 mm, in range pale pink to pale lavender, with short hairs on upper surface; **stamens** 4 in 2 pairs attached at different levels to corolla throat, included, sessile; filaments 0.2 mm long, colorless; anthers dorsifixed, dithecal, 0.25 mm long, light yellow, longitudinally dehiscent; pollen yellowish; **nectary disc** beneath ovary, 0.2 mm long, greenish; **pistil** 1, ca. 1.2 mm long, included; ovary superior, broadly ellipsoid and shallowly 4-lobed, 0.5×0.4 mm, light green, glabrous, 4-chambered, each chamber with 1 ovule; style erect, pale green, at top with a \perp pair of sterile branches 0.2 mm long often tinged pinkish and in the center having a domelike green stigma. Fruit: schizocarp (microbasarium), of 4 dry, 1-seeded mericarps (nutlets), nutlets 3-sided oblong, ca. 1.5 mm long, brown, angled, with fine whitish warty growths (muricate) on 2 inner faces and several longitudinal veins on out face, attachment scar at base of inner faces white.

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