Vascular Plants of Williamson County Glandularia pumila – PINK VERVAIN, LOW VERVAIN [Verbenaceae]

Glandularia pumila (Rydb.) Umber, PINK VERVAIN, LOW VERVAIN. Annual, taprooted but fibrous-rooted on buried, prostrate stems, not rosetted, several-stemmed at base, decumbent or procumbent to spreading or ascending, in range to 19 cm tall, spreading to 25 cm from taproot; shoots \pm 2-dimensional (plagiotrophic) on horizontal shoots with cauline leaves oriented to upper side, not tufted, \pm hirsute with radiating hairs mixed with stalked glandular hairs, young foliage velveteen, glandular hairs to 0.5 mm long with heads often aging reddish. Stems: 4-sided and \pm 4-angled, < 3 mm diameter, mostly green, internodes to 30 mm long. Leaves: opposite decussate, pinnately (palmately) deeply dissected with sublobes, each blade mostly bilaterally symmetric with 3–6 paired lobes reduced upward, petiolate with a pair of weakly defined low ledges across node, without stipules; petiole shallowly channeled, indistinct from blade, to 4 mm long, midvein white, with nonglandular and glandular hairs; blade broadly ovate in outline, < 12–27 mm with length = width, primary segments of larger leaves mostly opposite to subopposite and \pm equal, the lower ones divergent, segments somewhat fan-shaped in outline (the lowest lobes) with 1-2 orders of sublobes grading to the uppermost lobes < 3 mm long and scarcely lobed with obtuse teeth, appearing palmately veined from base with principal veins conspicuously sunken on upper surface and raised on lower surface, upper surface lower surface more densely hairy. Inflorescence: spike, terminal, densely manyflowered, elongate, to 25×12 mm (to 18 mm across = flowers at top), axis not elongating in fruit, flowers strictly opposite decussate, at maturity with 15+ nodes, the lowest nodes sometimes spaced with internodes, bracteate, hirsute with stalked glandular hairs; peduncle stemlike, 16–24 mm long; rachis greenish, pubescent with nonglandular and glandular hairs, lacking purplish red stripes; bractlet subtending flower narrowly triangular, $5-6 \times 1$ mm, slightly < calyx, green with midvein and purple-red approaching tip, upper surface glabrous, lower surface hirsute and stalked glandular hairs, persistent and fused to receptacle. Flower: bisexual, \pm radial, 7–8 mm across, trumpet-shaped with \pm horizontal limb, not fragrant; calvx 5-lobed (toothed); tube \pm pleated and 5-ribbed, $6-6.5 \times 1.2-1.4$ mm, expanding slightly above midpoint, ribs green alternating with membranous furrows (translucent-purple approaching margin), each ridge 1-veined to lobe, with stiff hairs 1-1.5mm long on ribs and margin and short-hairy in furrows; lobes subequal, fingerlike extensions of ribs, ± 1 mm long except 1 lobe much shorter; **corolla** lips obscure, 5-lobed, trumpet-shaped (salverform), > calyx; tube cylindric, $4-5 \times 1$ mm indistinct from lower throat, white (reddish at top) with 5 faint veins, glabrous and without glandular hairs; throat with lower portion somewhat expanded on lower side, upper throat (above orifice) widespreading with limb, lower throat 2–3 mm long, light pink-purple, outer surface shorthirsute, inner surface with abundant colorless hairs (upper tuber + lower throat), orifice 1 mm concealed by a ring of ascending, white, stiff short hairs, upper throat 1-1.5 mm long; limb (including upper throat) 3.5–4 mm long, upper surface glabrous, lower surface sparsely short-hairy, lobes subequal, \pm rectangular 2-notched, on each flower $2.5-3 \times$ 1.7–2 mm with the largest lobe on the lower side, upper surface light purplish pink with white center, lower surface more pale, tips of lobes obtuse-rounded; stamens 4, all fertile, pairs fused to corolla at different levels, 2 stamens with filaments arising 1 mm from

corolla orifice and not visible and 2 sessile stamens at base of throat; filaments ca. 1 mm long (upper stamens), white; anthers basifixed, dithecal, having equal sacs but obliquely positioned or unequal and having a subterminal appendage (upper stamens) and equal or subequal sacs lacking appendage (lower stamens), ca. 0.5 mm long, light yellow, longitudinally and inwardly dehiscent; pollen pale yellow; nectary disc below ovary, 0.25 mm long, pale green; **pistil** 1, ca. 6.5 mm long, slightly > calyx; ovary superior, 4-lobed, \pm 0.6 mm long, green, glabrous, 4-chambered, each chamber with 1 ovule; style attached to top of ovary, included within corolla tube-throat, typically 5–5.5 mm long, pale green but reddish approaching stigma, compressed side-to-side approaching minutely 2-forked tip, with stigma in crotch, the longer fork ca. 0.3 mm long and slightly surpassing stigma, the shorter fork triangular and < stigma; stigma at same level as upper anthers, \pm hemispheroid, green, papillate. Fruits: schizocarp (microbasarium), of 4 dry, 1-seeded mericarps (nutlets), nutlets oblong and sausage-like, $\pm 2.5 \times 0.7$ mm, brown on outer faces, angled with fine, warty growths (muricate) on inner faces, longitudinally 4-veined on outer face but with cross veins and appearing shallowly pitted above midpoint; persistent calyx with purple teeth before drying.

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