

## Vascular Plants of Williamson County

*Agalinis strictifolia* – STIFFLEAF GERARDIA [Orobanchaceae/Scrophulariaceae]

*Agalinis strictifolia* (Benth.) Penn., STIFFLEAF GERARDIA. Annual, hemiparasite, taprooted, 1-stemmed at base, highly branched with open canopy of ascending to spreading branches, in range to 50 cm tall; shoots with only cauline leaves, appearing sparsely leafy with many leaves appressed to axes, axes and blades somewhat scabrous and glabrous. **Stems:** somewhat 4-sided, 4-ridged, to 8 mm diameter, with a pair of wide decurrent leaf bases along internode descending from each leaf, tough and narrowly woody, internodes > leaves, green to purple aging blackish, after blade abscised top of decurrent portion somewhat stubby. **Leaves:** opposite decussate, simple and sessile, without stipules; blades ascending to appressed to stem (spreading on divergent lateral axes), linear, in range 6– × 0.8–1.2 mm, often purple above midblade, entire and minutely serrate on margins, acute to acuminate with minute colorless callous at tip, 1-veined with midrib sunken on upper surface and raised on lower surface, inconspicuously minutely scabrous on upper surface. **Inflorescence:** raceme, terminal on each canopy branch, mostly with only 1(2) flower per node, bracteate, glabrous; bractlet subtending pedicel mostly appressed to pedicel axis, linear, < 1 × < 1 mm, often ± purple, decurrent on rachis to middle of internode, minutely serrate on margins, acuminate with point minute colorless callous at tip, 1-veined with vein sunken on upper surface and raised on lower surface, upper surface sometimes inconspicuously short-scabrous; pedicel spreading, slender, in range 12–18 × 0.3 mm and >> bractlet, wiry, with small axillary pulvinus also enlarged and flared approaching top, green, glabrous. **Flower:** bisexual, bilateral, 11–14 mm across, 20–25 mm long; **calyx** 5-lobed, in range 5–6 mm long, outer surface glabrous; tube ± bell-shaped somewhat flared not 5-sided, ca. 4 × 4 mm, green and red-purple, low 5-ribbed with rib to each lobe, 10-veined, rounded sinuses without membranous margin and short-ciliate; lobes erect, mostly acuminate-triangular (acute), 1–2 mm long, mostly purple, thickened, margins short-ciliate, inner surface glandular-puberulent on lobes and upper tube; **corolla** 2-lipped, 5-lobed, upper lip < lower lip, with cupped, overlapping, conspicuously ciliate lobes in bud, ± funnel-shaped curving upward, in range 20–25 mm long; tube nearly cylindrical, to 3 mm long, whitish; throat funnel-shaped, outer surface light pink-purple, inner surface floor pale with many dark rose spots and inconspicuously lines (fine veins); upper lip arising ca. 7 mm from base, 2-lobed, lobes ascending to spreading forward, somewhat roundish to elliptic subtruncate at top, ca. 6–7 × 4–7 mm, light pink-purple with ciliate hairs white to light pink-purple; lower lip arising ca. 12 mm from base, 3-lobed, lobes ascending from upward-curved throat, somewhat roundish to elliptic subtruncate at top, ca. 6–7 × 4–7 mm, light pink-purple with ciliate hairs light pink-purple, inner surface of lip tissue typically glabrous; **stamens** 4, fused as 2 pairs of different lengths (didynamous) at approximately same level at top of corolla tube, with filaments decurrent to base of corolla, the shorter pair on upper side attached slightly lower on corolla; filaments somewhat 3-edged, 5–7 mm long (outer pair) and 8–10 mm long (inner pair) aging somewhat curved or twisted, white, edges with long, curly hair; anthers dorsifixed, dithecal with sacs separate to midpoint, arrow-shaped, ca. 4 mm × 1.5–1.8 mm + slender tail on each sac ca. 0.5 mm long, white, outer side with domed, watery cells, inward-facing side densely long hairy curly to twisted (long-tomentose) and connecting anthers around styles, longitudinally

dehiscent, aging brownish; pollen white; **nectary disc** surrounding and hugging base of ovary, thin, ca. 0.5 mm long, thin nectar present; **pistil** 1, 13–18 mm long; ovary superior, broadly oblong-ellipsoid somewhat compressed side-to-side,  $2.5\text{--}3 \times 2 \times 1.5$  mm, glossy green to midpoint grading to greenish at top, glabrous, 1-chambered (2 locules), with 2 clusters of many ovules attached to center; style cylindric or somewhat angled to midpoint and slightly curved upward, 10–15 mm long, white, stigmatic portion slightly flared 4–5.5 mm at tip with opposite edges densely papillate-hairy. **Fruit:** capsule, loculicidal, dehiscent by 2 valves, many-seeded, oblong-obovoid, ca.  $6 \times 4 \times 4$  mm with short beak (basal portion of style) at top before splitting, glossy brown; persistent calyx = fruit, 10-veined, appressed and stretched. **Seed:** wedge-shaped to 5–6-sided polyhedral,  $0.8\text{--}0.9 \times 0.4\text{--}0.5$  mm, brown, honeycombed.

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