

Vascular Plants of Williamson County

Agalinis edwardsiana – PLATEAU GERARDIA [Orobanchaceae/Scrophulariaceae]

Agalinis edwardsiana Penn., PLATEAU GERARDIA. Annual, hemiparasite, taprooted, 1-stemmed at base, highly branched with open canopy of ascending to spreading branches, to 70 cm tall; shoots with only cauline leaves, nearly glabrous. **Stems:** 6-ridged, to 6 mm diameter, with 3 ridges descending from each leaf, tough, internodes < 25 mm long, photosynthetic stems flexible becoming woody and some individuals with aging axes dark purple. **Leaves:** opposite decussate, simple and sessile, without stipules; blades ascending, linear-narrowly elliptic to oblanceolate-linear, 6–29 × 0.8–1.9 mm, long-tapered at base, entire to minutely serrate on margins, acuminate at tip, 1-veined with midrib sunken on upper surface and raised on lower surface. **Inflorescence:** panicle of leafy racemes, terminal, open, having lateral branchlets with 1–2 flowers per node, bracteate, with minute, upward-pointing hairs; bract subtending lateral branch leaflike, > calyx; rachis low-ridged with upward-pointing minute hairs along ridges; bractlet subtending pedicel linear, to 15 × 1 mm, decurrent on rachis to middle of internode, minutely serrate on margins, acuminate with point at tip, 1-veined with vein sunken on upper surface and raised on lower surface, inconspicuously puberulent having hairs with swollen bases; pedicel slender and inconspicuously ridged, 16+ mm long and > bractlet, wiry, green, with minute hairs. **Flower:** bisexual, bilateral, 20–28 mm across; pleasantly fragrant; **calyx** 5-lobed, in range 5.5–6 mm long; tube ± funnel-shaped and 5-sided, 4–4.5 × 4–4.5 mm, yellow-green, low 5-ribbed with rib to each lobe, 10-veined, sinuses with membranous margin and often short-ciliate; lobes mostly spreading, acute-triangular, ± 1.5 mm long, green or purplish, thickened, puberulent on outer (lower) surface; **corolla** 5-lobed, with overlapping lobes in bud and at anthesis, ± bell-shaped, in range ca. 25 mm long; tube funnel-shaped, 2.5–3 mm long, white; throat bell-shaped, white but pinkish on upper side, with dark rose to pink-purple or red-purple spots, floor white with 2 yellowish strips to sinuses of lower, central lobe, outer surface with raised white veins, glabrous except villous with white hairs near sinuses; lobes 2 upper arching and 3 lower spreading, broadly ovate to obovate or semicircular and overlapping (lateral 2 lobes outside center lobe and upper 2 lobes), 8–9.5 mm long, length < width, light pink-purple to purple, long-ciliate on margins having hairs same color as lobe; **stamens** 4, fused as 2 pairs at approximately same level at top of corolla tube, the longer pair on corolla floor, the shorter pair on upper side attached slightly lower on corolla; filaments sigmoid, of longer stamens 8–9 mm long, of shorter stamens 5–6 mm long, white, with long-pilose hairs; anthers dorsifixed, dithecal with sacs separate, 3–3.5 mm long, cream-colored, long-pilose, with long stamens somewhat connected via hairs, longitudinally dehiscent; pollen white; **nectary disc** surrounding base of ovary, 0.5 mm long, glossy green; **pistil** 1, 14–16 mm long; ovary superior, broadly ellipsoid somewhat compressed side-to-side, ca. 2.5 × 2 × 1.5 mm, yellow-green, glabrous, 2-chambered, each chamber with 40+ ovules attached to center; style cylindrical and nearly straight, to 12 mm long, white but greenish at base, 0.3 mm diameter at base increasing upward, strongly curved above midpoint and oriented to lower side of flower, stigmatic lobes tongue-like, light lime-green, papillate. **Fruit:** capsule, loculicidal, dehiscent by 2 valves, many-seeded, obovoid to subspheroid, ca. 6 × 5 × 4 mm with short beak (style) at top before splitting, glossy brown; persistent calyx tube

to midpoint of capsule, 10-veined, appressed and stretched. **Seed:** wedge-shaped to 5–6-sided polyhedral, 0.55–0.7 mm long and wide, dark brown, honeycombed.
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