

Vascular Plants of Williamson County
Stachys agraria – SHADE BETONY [Lamiaceae]

Stachys agraria Raf., SHADE BETONY. Annual, taprooted, not rosetted, several-stemmed at base, decumbent and spreading to ascending, in range 8–40 cm tall; shoots with widely spaced pairs of cauline leaves, hirsute-pilose and short-pilose and with short-stalked glandular hairs, pleasantly aromatic. **Stems:** 4-sided, to 3 mm diameter, green, internodes to 85 mm long, not woody. **Leaves:** opposite decussate, simple, petiolate and fused across node, without stipules; petiole channeled, to 35 mm long (lower cauline leaves) decreasing upward (bracts \pm sessile), at midpoint < 1 mm diameter; blade \pm ovate, 10–35 \times 10–26 mm, subtruncate to subcordate at base, crenate to low crenate-serrate on margins, the teeth with callus point, obtuse at tip, pinnately veined having 3 major veins at base and principal veins slightly sunken on upper surface and raised on lower surface, hairs mostly straight and < 0.5 mm long and shorter hairs with colorless glandular heads. **Inflorescence:** paired axillary cymes (verticils) at every node of canopy, each cyme often 3-flowered, center flower anthesis before anthesis of lateral flowers, bracteate, glandular-hairy with stalked hairs to 0.2 mm long; bracts paired at node, bract subsessile with enlarged base at stem, fused across node; blade spreading later reflexed, elliptic or obovate to ovate, bract $<$ the uppermost cauline leaves decreasing upward, green, low-serrate to entire on margins; bractlets 2 subtending pedicel, \pm linear, to 1.9 mm long, mostly $<$ pedicel, greenish, with swollen base; pedicel cylindrical, ± 1.5 mm long increasing some in fruit, green or tinged purple-red (especially hair bases), short-hirsute. **Flower:** bisexual, \pm radial, ca. 2 mm across; **calyx** 5-lobed, 4–5.2 mm long increasing some in fruit, with awnlike tips; tube narrowly funnel-shaped, 2.5–2.8 mm long, 1.5–1.8 mm wide at orifice, 10-veined, rounded at base, densely pubescent with stalked glandular hairs; lobes \pm equal, acuminate-triangular aging with purplish, needlelike tip 0.5–0.8 mm long, margins sometimes purple-red, inner surface glabrous, calyx fine-veined on inner surface; **corolla** 2-lipped and bilateral, 4-lobed, 4–7 mm long, white to lavender; tube cylindrical to throat slightly funnel-shaped, 0.8 mm wide at base and enlarged around ovary, on outside short-hairy on upper side with backward-pointing hairs; upper lip 1-lobed, 0.8–0.9 \times 0.8–0.9 mm, rounded at tip or minutely notched, especially short-hairy on outer (lower) surface; lower lip 3-lobed, 1–2.5 mm long, 1.3–1.5 mm wide at base, center lobe obovate, with smaller, spreading lateral lobes at base; **stamens** 4 in 2 pairs, attached 1.5 mm from base of corolla at same level, filaments ca. 0.7 mm long, white; anthers dorsifixed, dithecal, positioned below level of stigma on upper side of flower, 0.25–0.3 mm long, \pm purple; pollen whitish; **pistil** 1, ca. 3.2 mm long; ovary deeply 4-lobed, lobes 0.3–0.35 mm, pale green, glabrous; style arising in center from base of ovary (gynobasic), white, with 2 spreading stigmatic branches, the branches exerted above corolla but not to level of purple points of the calyx, wedge-shaped, ca. 0.45 mm long, wet. **Fruit:** nutlets 4, ovoid and 3-sided, 1.2 \times 1 mm, glossy dark brown, with rounded back and to 2 flat faces, back minutely bumpy (tuberculate).

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