

Vascular Plants of Williamson County
Physostegia intermedia – FALSE DRAGONHEAD [Lamiaceae]

Physostegia intermedia (Nutt.) Engelm. & A. Gray, FALSE DRAGONHEAD. Aquatic perennial herb, clonal, rhizomatous in shallow water and on wet banks, fibrous-rooted, not rosetted, 1-stemmed at base arising from rhizome nodes, foliage and stems mostly lacking hairs, not aromatic when crushed; rhizomes 4-sided with adventitious roots at nodes.

Stems: 4-sided and 4-ridged, to 7 mm diameter (square), with 2 ridges descending from each leaf but not from midrib, sometimes with a fainter midvein or median furrow on a face, ridges rounded and whitish, low ledges across nodes with short hairs; old principal stem with wide, hollow center. **Leaves:** opposite decussate, simple and sessile with \pm clasping basal lobes and with a pair of low ledges across each node, without stipules; blade acuminate-triangular to acuminate-narrowly triangular-ovate or oblong-linear, (6–)20–140 \times (2.3–)5–18 mm, basal lobes ear-shaped, to 1.5 mm long, entire or subentire to having several inconspicuous to low teeth, pinnately veined with only the midrib sunken on the upper surface and raised on the lower surface, speckled (= abundant crystals in leaf tissue), glabrous or the uppermost blades in canopy puberulent on lower surface. **Inflorescence:** raceme or panicle with a pair of shorter racemes arising near base, terminal raceme erect and basal racemes ascending, many-flowered, flowers opposite decussate mostly spaced 5–10 mm apart, with radiating short hairs and minute glandular hairs; peduncle and rachis stemlike, 4-ridged with 4 distinct furrows, glandular hairs mostly in furrows; ractlet subtending pedicel cupped acuminate-ovate, 2–3 mm long, green, at anthesis widely spreading becoming ascending in young fruit, with small basal lobes almost clasping, outer surface puberulent; pedicel ascending, 1–1.5 mm long, green aging white, puberulent.

Flower: bisexual, bilateral, \pm 7 mm across; **calyx** 5-lobed, 4–4.5 mm long slightly increasing in fruit, green, outer surface puberulent, inner surface glabrous; tube at anthesis funnel-shaped and in fruit bell-shaped; lobes subequal, triangular, 1–1.3 mm long, the lower 2 somewhat longer, acute to obtuse at tip with apex a minute purple spot; **corolla** 2-lipped, 5-lobed; tube 1 mm long, white, stretched by development of ovary, glabrous; throat funnel-shaped, 8–9 \times 7 mm, light pink-purple, venation inconspicuous, inside with darker spots on lower side leading to lower lip, short-hairy on outer surface of throat and lips, inner surface glabrous; upper lip somewhat hoodlike and 2-lobed, ca. 3.5 mm long, appearing heart-shaped with semicircular lobes, light pink-purple with the darkest at outer margin, lower lip 3-lobed, ca. 5 mm long, the lobes with slight notch at middle, central lobe ca. 4 \times 4 mm having white floor with pink-purple spots and light pink-purple on margins, lateral lobes diverging and set back slightly, ca. 2 \times 2.5 mm, light pink-purple; **stamens** 4, of 2 lengths, long pair arising at top of corolla tube, lower portion decurrent, free portion arising 4 mm from base of corolla parallel with upper lip, short pair arising near top of corolla throat; filaments free portion 7 mm long (long stamens) and 3.5 mm long (short stamens), light to pale pink-purple, one of each type paired beneath each lobe of upper corolla and coherent by shaggy hairs along facing sides; anthers dorsifixed, dithecal, 0.7–0.8 mm long, purple drying white to pale pink, of long stamens slightly exerted in bud outside corolla, longitudinally dehiscent; pollen white; nectary disc beneath ovary, weakly 4-lobed, 0.2 mm long, green; **pistil** 1; ovary superior, deeply 4-lobed, lobe 3-sided with rounded back and 2 flattish inner sides, 0.4–0.45 mm, green, glabrous, each lobe with 1 ovule; style attached in center of ovary lobes at base (gynobasic), arching along

upper lip, ca. 12 mm long (= length of upper lip, not exerted), white but faintly pink approaching tip, 2-branched only at tip, the stigmatic branches equal, 0.8 mm long and divergent. **Fruit:** nutlets, 1–4, strongly 3 angled (trigonous), $\pm 2 \times 2$ mm, light brown to brown, outer face often wider and convex, glabrous.

A. C. Gibson