

Vascular Plants of Williamson County

Castilleja purpurea var. *lindheimeri* – LINDHEIMER PAINTBRUSH
[Orobanchaceae/Scrophulariaceae]

Castilleja purpurea (Nutt.) G. Don var. *lindheimeri* (A. Gray) Skinners (= *C. lindheimeri* A. Gray), LINDHEIMER PAINTBRUSH. Perennial herb, hemiparasitic, several-stemmed at base, to 40 cm tall; shoots with only cauline leaves, short-villous and villous, not viscid. **Stems:** ridged, to 3 mm diameter, with 2 fine ridges descending from each leaf. **Leaves:** helically alternate, unlobed (lower leaves) and 2–3-lobed (upper cauline leaves), sessile and not clasping, without stipules; blade narrowly lanceolate to linear, 35–70 × 3–6.5 mm, entire or with slender lateral lobe or lobes from ca. midblade, lateral lobe < terminal lobe, acuminate at tip, (1)3(5)-veined at base with principal veins sunken on upper surface and conspicuously raised on lower surface, surfaces mostly short-villous. **Inflorescence:** spike, terminal, 10+-flowered, flowers ± erect, bracteate, glandular-hairy; rachis ridged, with 2 reddish ridges with 2 descending from each bractlet; bractlet subtending flower, leaflike, 3-lobed ± from midpoint, to 35 × ca. 10 mm, 5-veined with veins raised on outer surface, lower portion cupping flower and fruit green, lobes orange-red to light scarlet, lobes oblong to obovate to oblanceolate, lateral lobes 6–10.5 × 2–2.5 mm, terminal lobe ca. 13 × 6 mm, acute at tips. **Flower:** bisexual, bilateral, 5 mm across; **calyx** 2-lipped, 4-lobed, ± 17 mm long, membranous with green veins, yellowish but certain lobes blushed orange-red, aging papery, mostly having stalked glandular hairs and occasional nonglandular long hairs along veins ± 1 mm long; tube ridged, ± 3 mm diameter, sinuses lateral, inner surface membranous, glabrous; lips ± equal, each 2-lobed, lobes oblong to obovate-oblong, ca. 5 × 2.1–2.6 mm, acute at tip, 1-veined; **corolla** 2-lipped, 4-lobed, ca. 23 mm long; tube + throat ± cylindric, ca. 14 mm long, colorless, slightly inflated at top; upper lobe pleated and inrolled, resembling narrow bird beak, ± 7.5 mm long, whitish at base to green at top and sometimes orange-red, glandular-hairy on outer side; lower lip 3-lobed, lobes cupped, lateral lobes lanceolate and center lobe ovate and shorter, ± green, glandular-hairy; **stamens** 4, arising 7–8 mm from corolla base; filaments 10–11 mm long, white, glabrous; anthers dorsifixed, dithecal, ca. 2.5 mm long, light orange, the sacs offset, longitudinally dehiscent; pollen light orange; **pistil** 1, to 30 mm long; ovary superior, ovoid compressed side-to-side, ca. 5 × 1.5–1.6 mm, green, slightly keeled, with several scattered of short hairs, 2-chambered, each chamber with many ovules; style slender, white becoming green approaching stigma, green portion exerted 3–5 mm from tip of flower, stigma 2-lobed top-shaped, 0.6–0.7 × 0.6–0.7 mm. **Fruit:** capsule, loculicidal, 2-valved, many-seeded, ovoid, 9–12 × 5.5–7 mm, dark brown. **Seed:** spheroid to broadly ellipsoid, 1–1.7 mm long, honeycombed with blackish walls and membranous pits.

A. C. Gibson