

## Vascular Plants of Williamson County

*Eustoma russellianum* – TEXAS BLUEBELLS, BLUEBELL GENTIAN, SHOWY PRAIRIE GENTIAN  
[Gentianaceae]

*Eustoma russellianum* (Hooker) G. Don, TEXAS BLUEBELLS, BLUEBELL GENTIAN, SHOWY PRAIRIE GENTIAN. Annual (short-lived perennial herb), taprooted,  $\pm$  rosetted, 1–2-stemmed at base, erect to suberect, in range 30–83 cm tall; shoots with 1–2 pairs of basal leaves and to 12 pairs of cauline leaves, cauline leaves sessile and fused across node, foliage ascending especially above midplant, blades somewhat bluish green, glabrous and lacking glandular hairs, glaucous. **Stems:** cylindrical, to 4.5 mm diameter, tough often with a woody cylinder, light yellow-green and glaucous, internodes to 75 mm long, mostly < blade; lower internodes sometimes hollow. **Leaves:** opposite decussate, simple and sessile with bases fused across node (connate-perfoliate), without stipules; oblanceolate (basal leaves) or oblong-elliptic to elliptic, broadly lanceolate, or narrowly ovate, in range < 30–95  $\times$  7–22 mm, base slightly lobed (auriculate) and fused to stem node and narrowly to base of other blade, entire, broadly acute at tip, 3-veined at base with midrib sunken on upper surface and raised on lower surface. **Inflorescence:** monochasial cyme, 1 or 2 unequal cymes terminal on erect shoot, cyme several-flowered, if 2 cymes the lateral cyme younger, shorter, and with narrower axes, ; bracts (bract + bractlet) subtending peduncles 2, opposite, spreading-ascending, leaflike, acute-ovate to broadly lanceolate, to 60  $\times$  18 mm, green and often glaucous, with raised midvein on lower surface; peduncles (when paired) cylindrical, mostly 70–80 mm long, green, at top having a pair of bracts (bract + bractlet), often acuminate-lanceolate, 25–40  $\times$  5.5–7 mm, fused or not across node, at next node or on single, terminal cyme bract + bractlet linear, to 10 mm long (decreasing upward), not fused and connected by inconspicuous ledge; pedicel erect, cylindrical (ridged at top), at anthesis 35–60 mm long increasing to 100 mm long in fruit, glabrous, glaucous. **Flower:** bisexual, radial, 55–65 mm across; lacking fragrance; **calyx** 5-lobed, in range 16–25 mm long; tube overall bell-shaped conspicuously 5-keeled, 6–6.5 mm long, the keels to 1.5 mm high and green, connected from midpoint with membranous tissue, sinuses V-shaped, the keels unequal at base of flower; lobes ascending, linear, lower portion with membranous wings, the wing margins sometimes with inconspicuous teeth, the lobe axes ca. 0.5 mm diameter, in bud curved to hooked outward at tips; **corolla** 5-lobed, 38–52 mm long, lobes twisted in bud; tube funnel-shaped, 3–4.5 mm long, white; throat to 8 mm long, in range purple-red or yellowish behind filaments; lobes overlapping at base, obovate rounded at tip, in range 28–44  $\times$  23–25 mm, light violet at base either with a pair of purple-red blotches 5–6 mm long or those continuous, above blotches to midpoint pale violet or whitish, lower surface light violet; **nectary** (difficult to detect) on inner surface of corolla tube, producing viscid nectar; **stamens** 5, attached at top of corolla tube; filaments ascending, (7–)10.5–12 mm long, in bud green aging greenish to whitish with minute purple dots opposite corolla throat; anthers dorsifixed, dithecal, 7.5–8 mm long, crimson and bright yellow or aging mostly crimson, longitudinally dehiscent; pollen yellow to yellow-orange; **pistil** 1, 21–33 mm long; ovary superior, ellipsoid to obovoid somewhat 4-sided, ca. 11  $\times$  4–5 mm, green with a median narrow groove on opposite faces along sutures descending from style, glabrous, 1-chambered with many tiny ovules attached to each of 4 partitions intruding from the outer wall (parietal); style erect, straight, light green

or aging yellowish, 2-branched, the stigmatic branches erect, to 6 mm long, green, bulky stigmas spade-shaped with margins partially inrolled to upper side (inward), 3–5 mm across, wet and papillate on inner (upper) surface. **Fruit:** capsule, loculicidal at top, 2-valved, many-seeded, ellipsoid-obovoid and somewhat 4-sided, ca. 20 × 8.5–9 mm, striped, with furrow on each face; mostly concealed within calyx. **Seed:** irregular (sandgrainlike), 0.3–0.4 mm long, dull light orangish pink aging dark reddish or brownish, cells collapsing forming pitted and honeycombed surface.

A. C. Gibson