

Vascular Plants of Williamson County

Ibervillea lindheimeri – LINDHEIMER GLOBEBERRY, TEXAS BALSAM-APPLE, BALSAM GOURD [Cucurbitaceae]

Ibervillea lindheimeri (A. Gray) Greene, LINDHEIMER GLOBEBERRY, TEXAS BALSAM-APPLE, BALSAM GOURD. Perennial herbaceous vine, tendril-bearing, with a broad, fleshy caudex, not rosetted, 1–several-stemmed at base, principal stems prostrate to spreading and climbing on neighboring shrubs or small trees; dioecious; shoots with only widely spaced cauline leaves, at each node with leaf, tendril, and potentially both an axillary inflorescence and a new shoot, foliage appearing glabrous initially with some ephemeral short hairs having broad, multicellular base; tendril next to base of petiole and base of inflorescence at axil, unbranched, slender, to 160 mm long, to 0.3 mm diameter above conic base, upper portion shallowly channeled on upper side, forming 6–15 short coils around support.

Stems: initially 5-ridged, to 4 mm diameter, internodes mostly 55–90 mm long with 1 ridge descending from each leaf, zigzagged, glabrous. **Leaves:** helically alternate, 3-lobed or 5-lobed (unlobed), petiolate, without stipules; petiole cylindric, 6–35 mm long, glabrous or glabrate with several ephemeral, nonglandular hairs; blade inverted heart-shaped in outline, 45–100 × 45–100 mm, length = width, with obovate principal lobes often having 2–3 sublobes above midpoint, cordate at base, entire or with a few broad, coarse teeth and pimplelike bases of hairs, broadly acute with short point at tips of lobes and sublobes, palmately veined with a principal vein or lateral to each sublobe or tooth, principal veins slightly raised on both surfaces, especially margins and lower surface dotted with scattered glandlike, pimplelike bases of hairs missing the minute terminal cell, sometimes with short hairs persistent on upper surface between principal veins at base. **Inflorescences:** racemes, unisexual, axillary, 3–20+-flowered (staminate) condensed at top of peduncle and 1-flowered (pistillate), axes with glandular hairs having colorless heads; peduncle of staminate inflorescence mostly spreading, cylindric at base to several-angled above midpoint 30–55 mm long (staminate) and cylindric and 7–25 mm long (pistillate); bractlet subtending pedicel inconspicuous, < 1–1.5 mm long, acuminate-terete, green, with several glandular hairs; pedicel ascending, cylindric, to 10 mm long, green, with glandular hairs especially approaching flower, with a bracteole subtending abscission zone approaching top of pedicel, bracteole awl-shaped, 0.5–1 mm long, green, with enlarged base.

Staminate flower: radial, 7–12 mm across, 8.5–10 mm long; hypanthium tube appearing bell-shaped and cylindric above vestigial ovary, 4.5–6 × 3–3.5 mm long, green-yellow to green, outer surface with scattered glandular hairs, inner surface with nonglandular hairs above midpoint; **calyx** 5(–6)-lobed, at top of hypanthium, fused only at base; lobes deltate to semicircular or broadly ovate, 1–2 mm long, green, with glandular hairs on outer (lower) surface; **corolla** 5(–6)-lobed, fused only at base; lobes spreading, triangular to ovate, 3.5–5 × 1.3–2.8 mm, yellowish with green veins, with longer curly hairs on upper surface, lower surface with glandular hairs; **stamens** 3, at top of hypanthium; subsessile or with short filament flattened side-to-side, to 1 mm long, greenish; anthers dorsifixed, dithecal, 1.3–3.3 mm long, light yellow-orange with fleshy green connective projecting lower than sacs, the connective minutely papillate and upper portion with special hairs filled with yellow-orange liquid, longitudinally dehiscent; pollen light yellow-orange; **pistil** vestigial; ovary inferior but highly reduced and concave, 1 mm thick, dark green, = **nectary**

producing thin nectar. **Pistillate flower:** radial, ca. 6 mm across, 10 mm long; hypanthium tube bell-shaped above ovary, ca. 3.5 × 3.5 mm, green, thick-walled, with weak glandular hairs on outer surface and on inner surface having abundant white hairs above midpoint; **nectary disc** thick at base of hypanthium (above ovary) surrounding lower portion of style, 0.7 × 1.5 mm, fleshy, green, producing thin nectar; **calyx** 5-lobed, at top of hypanthium, fused ca. 0.4 mm at base; lobes unequal, triangular, 1.5–2.3 × 0.6–1.3 mm, green, with glandular hairs on outer (lower) surface, inner (upper) surface glossy green and glabrous; **corolla** 5-lobed, fused only at base; lobes spreading, obovate, 2–3.5 × 1.2–2.2 mm, green, with longer, curly, orange-yellow hairs on upper surface, lower surface with glandular hairs; **stamens** absent; **pistil** 1; ovary inferior, ellipsoid, 5 × 3.5 mm with beaklike extension at top 1.5 × 1.5 mm, green, with sparse to scattered weak hairs, 3-chambered, each chamber with several ovules attached in 2 rows to outer side (parietal); style cylindric, 5.5–8 mm long, lower portion cylindric, 0.8 mm diameter, green, 3-branched forming fleshy, lobed stigmatic top 2 mm across, each branch with spreading, fleshy, hemicylindric axis and spreading, fan-shaped lobes 1.5–2.5 mm wide, with green, densely papillate-glandular and sticky sublobes. **Fruit:** berrylike (pepo), several–many-seeded, spheroid, when ripe mostly 20–30+ mm, orange-red to orange. **Seed:** covered with thin, papery yellowish to brownish layers, subspheroid, ca. 6 × 5 × 4 mm, brown, having a pair of ridges descending from attachment at hilum end, 2 domed faces outlined by circular rim, surfaces mostly dull and not smooth, near top with several cavities having dense brown hairs.

A. C. Gibson