

Vascular Plants of Williamson County
Houstonia parviflora – GREENMAN BLUETS [Rubiaceae]

Houstonia parviflora Holz ex Greenman, GREENMAN BLUETS. Annual, fine-taprooted, tiny-rosetted, several-stemmed at base, with spreading principal branches, forming canopy with repeatedly forked axes, in range < 5–15 cm tall; shoots with several basal leaves and several nodes of lower cauline leaves, glabrous. **Stems:** 4-sided and 4-ridged, 2 faces flat (descending from leaf) alternating with channeled faces, 1 mm diameter (thicker next to root), aging with reddish pigmentation, internodes < 25 mm long, minutely bumpy along ridges. **Leaves:** opposite decussate, simple, short-petiolate (basal leaves) and subsessile (cauline leaves), with stipules; stipules 2 per node (1 stipule of each leaf fused across node; 2 interpetiolar stipules), membranous, ± deltate, 1–2 mm long, aging papery and intact or torn; petiole hemicylindric, < 2 mm long, indistinct from blade; blade narrowly lanceolate or narrowly elliptic to oblong, to 12 × 3 mm, tapered at base, entire, acute at tip, pinnately veined with midrib raised on lower surface, upper surface and margins minutely bumpy. **Inflorescence:** cyme, unequally dichasial forked at each node, terminal, at each node having a pair of equal bracts (1 bract + 1 bractlet) and commonly forming from the pair of axillary buds a pedicellate flower (determinate) and the continuing cyme axis (indeterminate), flowers chasmogamous and cleistogamous on same plant, glabrous; bractlets leaflike, narrowly lanceolate to linear, < 10 × 1 mm, green; pedicel straight, to 25 mm long. **Chasmogamous flower:** bisexual, radial, ± 1.5 mm across, to 3.5 mm long; **calyx** 4-lobed, fused at base to top rim of ovary, green, glabrous; lobes suberect, subequal, acute-triangular and tonguelike, to 1 mm long, 1 pair flat and 1 pair somewhat folded with midvein slightly raised on outer (lower) surface; **corolla** 4-lobed, 1.4–2.5 mm long, white or pinkish approaching top; tube + throat to 0.7 mm long; lobes spreading-ascending, triangular-ovate, 0.5–1.5 mm long, blunt at tip; **stamens** 4, fused to top of corolla tube, included; filaments short, whitish; anthers dorsifixed, dithecal, ca. 0.25 mm long, pinkish, longitudinally and inwardly dehiscent; pollen colorless; **pistil** 1; ovary inferior, ± cup-shaped somewhat compressed and 4-ribbed, ca. 1 × 1.3 × 1 mm, green, minutely bumpy, 2-chambered, each chamber with ca. 10 ovules; style erect, 0.4–0.5 mm, white, stigma terminal and 2-lobed. **Cleistogamous flower:** bisexual, radial, ± 1.5 mm across, to 2 mm long; **calyx** 4-lobed, fused at base to top rim of ovary, green, glabrous; lobes suberect, subequal, acute-triangular and tonguelike, to 1 mm long, 1 pair flat and 1 pair somewhat folded with midvein slightly raised on outer (lower) surface; **corolla** caplike, 0.8–1 mm long, white or pinkish approaching top; **stamens** 4, fused to corolla ca. 0.5 mm from base, included; filaments short, whitish; anthers dorsifixed, dithecal, ca. 0.25 mm long, pinkish, longitudinally and inwardly dehiscent; pollen colorless; **pistil** 1; ovary inferior, ± cup-shaped somewhat compressed and 4-ribbed, ca. 1 × 1.3 × 1 mm, green, minutely bumpy, 2-chambered, each chamber with ca. 10 ovules; style erect, 0.4–0.5 mm (= level of anther), white, stigma terminal and 2-lobed. **Fruit:** capsule, loculicidal, dehiscent across exposed top of ovary, to 20-seeded, purselike and strongly 4-ribbed, ± 4 × 4.5 × 2 mm, with 2 bulging chambers at top; calyx lobes 4, triangular, 2–2.5 × 1.2–1.4 mm, pair of long side erect, pair of edges ascending to spreading. **Seed:** hemi-ellipsoid, 1–1.3 × 0.5–0.7 mm, glossy black, surface regularly shallow-pitted (netlike on surface), underside with a moatlike cavity with longitudinal central ridge.

A. C. Gibson