

## Vascular Plants of Williamson County

*Oenothera sinuosa* – WAVY-LEAVED GAURA, SINUATE-LEAVED GAURA [Onagraceae]

*Oenothera sinuosa* W. L. Wagner & Hoch (syn. *Gaura sinuata*), WAVY-LEAVED GAURA, SINUATE-LEAVED GAURA. Perennial herb, forming clonal mats, rhizomatous, taprooted, 1–several-stemmed at base, to 60 cm tall; shoots with basal leaves and cauline leaves, in range villous on foliage and short-hairy with arching hairs (not truly short-strigose) on axes (glabrous or glabrate). **Stems:** ridged, to 5 mm diameter, with ridge descending from each leaf, if short-hairy tending to have spreading straight hairs to 2.2 mm long but only in the zone of the lower canopy branches. **Leaves:** helically alternate, simple with basal leaves somewhat pinnately lobed, petiolate (lower leaves) and subsessile (upper cauline leaves), without stipules; petiole winged, where shorter hemi-cylindric and indistinct from blade; blade lanceolate or ovate to elliptic to narrowly oblanceolate (nearly linear), 10–60(–80) × (1.5–)3–25 mm long, if lobed only below midblade, serrate to remotely toothed (subentire) and sometimes wavy on margins, teeth often with blunt red point, acute (obtuse) at tip, pinnately veined with midrib raised on upper surface and principal veins raised on lower surface, villous but hairs more appressed upward along principal veins. **Inflorescence:** raceme (panicle with several racemes), terminal, with many helically alternate flowers and buds tightly spaced at tip, flowers at anthesis subsessile increasing somewhat in fruit, spreading, bracteate, often short-hairy; peduncle to 200 mm long; axis whiplike, 1–2 mm diameter; bractlet subtending pedicel awl-shaped, (2–)4–4.5 × ca. 2 mm long, appressed to flower axis, green but often reddish approaching tip, mostly short-strigose with upward-pointing hairs, early-deciduous but with persistent, whitish ledge subtending pedicel, deciduous during fruit development; pedicel ascending, at anthesis mostly < 1 mm long increasing at least to 2 mm long, cylindrical, and glabrous in fruit. **Flower:** bisexual, bilateral by secondary orientation with petals spreading to upper side and stamens on lower side, ca. 12 mm across; hypanthium above ovary, funnel-shaped, (2.5–)4–7 mm long, thick-walled, short-strigose with upward-pointing hairs, internally with 4 ridges and pubescent above midpoint and conspicuously so at orifice, **nectary** at base of hypanthium surrounding style base, producing thin nectar; **sepals** 4, separate and at anthesis strongly reflexed, narrowly lanceolate, in range 7–10 mm long, short-strigose on outer (lower) surface; **petals** 4, spreading, clawed, broadly spatulate, in range 7–11 mm long (including claw), white fading rose-red and drying darker; **stamens** 8 in 1 set, free, arising from hypanthium rim, monomorphic, each with a toothlike appendage (scale) at base on inner side, appendages together nearly closing orifice of hypanthium; filaments ascending, somewhat narrowly club-shaped but fine at tip, in range 5.5–8 mm long, white (pale yellow), somewhat channeled on back, hairy at base; anthers exserted, dorsifixed, dithecal, linear to linear-oblong, 3.5–5.5 × 0.5–0.8 mm, red with yellowish green connective and on back having a white ridge, longitudinally dehiscent; pollen white and sterile pollen with pale yellow poles, pollen grains 3-pointed, held in a mass by minute threads (viscin threads); **pistil** 1; ovary inferior, ascending, somewhat 4-sided, short-strigose with upward-pointing hairs, 4-chambered, each chamber with 1 pendulous ovule, having membranous septum between chambers becoming 1-chambered in fruit; style exserted above anthers, cylindrical, in range 12.5–17 mm long, light green at base and mostly white (pale orange-pink) above, short-hairy within hypanthium, at top with thin

disc ca. 1.5 mm across below stigma lobes; stigma conspicuously 4-lobed, lobes initially erect later spreading, fingerlike, ca. 1 mm long, light yellow. **Fruit:** capsule, (1-)2-4-seeded, erect, 8-15 mm long + slender sterile tip (stipe) several mm long. **Seed:** ellipsoid, 2-3 mm long, light brown to reddish brown.

A. C. Gibson