

## Vascular Plants of Williamson County

*Ziziphus obtusifolia* var. *obtusifolia* – TOTEBUSH, GUMDROP TREE [Rhamnaceae]

*Ziziphus obtusifolia* (Torrey & A. Gray) A. Gray var. *obtusifolia*, TOTEBUSH, GUMDROP TREE. Shrub, rigidly spinescent on some to many branches, deciduous, several-stemmed at base, not rosetted, principal branches with determinate, spine-tipped long shoots, shorter axillary shoots, or short shoots, having a dense canopy, in range to 300 cm tall; shoots with only cauline leaves formed, shoot spine to 80 mm long having a ridgeless tip to 4 mm long on determinate shoot, most springtime leaves produced on short shoot and < 25 mm long, the short shoots formed from axillary buds along shoot spine (axillary branches).

**Stems:** strongly angled and ridged with 3 prominent, green ridges descending from each leaf, young stems conspicuously white-dotted,  $\pm$  elliptic in  $\times$ -section, principal shoots zigzagged with primary leaves, forming leaf buttresses, glabrous. **Leaves:** helically alternate, simple, petiolate, with stipules; stipules 2, attached at nodded, tail-like (caudate), 1–1.3 mm long, reddish, early-deciduous; petiole shallowly channeled, < 3–7 mm long, puberulent to short-hairy; blade ovate (elliptic), 15–35  $\times$  (4–)5–23 mm, tapered at base, low-crenate initially with glandular point at tip on margins, obtuse at tip, 3-veined at base with those most veins sunken on the upper surface and principal veins raised on lower surface, upper surface dull and short-hairy persisting on the midrib and at base.

**Inflorescence:** cluster of several flowers, axillary from base of shoot spine, 1–2 flowers open per day, bracteate; peduncle 1–3 mm long at top having several close nodes, glaucous with thick, whitish, epicuticular wax covering, with stipules ca. 1 mm long aging black, flower-bearing axes forked from peduncle, somewhat zigzagged, < 3 mm long; bractlet short-lived, acuminate and scalelike, triangular, to 0.5 mm long, red aging dark crimson, with raised midvein, short-ciliate on margins and puberulent on lower surface; pedicel ca. 3 mm long, puberulent. **Flower:** bisexual, radial,  $\pm$  4 mm across; receptacle short-hairy on lower side, forming a 5-sided disc 2–2.5 mm across, lower side glaucous light green; **sepals** (4–)5, widely spreading to reflexed, triangular-ovate to deltate, 1.2–1.3 mm, light green, thickish, with midvein and netlike minor veins, short-hairy in bud on lower (outer) surface; **petals** (4–) 5, clawed, arched beneath filament, ladel-shaped, the claw tapered from top-to-base, 0.8–0.9 mm long, pale light green-yellow; limb cup-shaped, 0.4–0.5 mm long, in bud holding anther; shallowly scalloped on margin; **stamens** (4–)5, free, opposite and coupled with petals; filament deflexed, 0.9 mm long, light green, flared and often minutely 2-lobed at top; anthers dorsifixed, dithecal, ca. 0.3–0.35 mm long, width > length, light yellow-green aging reddish, longitudinally dehiscent over the end of sacs; pollen whitish; **nectary disc** around lower 1/3 of ovary, (4–)5-angled, 1.6–1.8 mm across and 0.4–0.6 mm wide tall, green, secreting thin nectar; **pistil** 1, 0.5–0.7 mm long; ovary superior, conic-ovoid somewhat compressed side-to-side, ca. 0.5 mm diameter, green, glabrous, 2-chambered, each chamber with 1 ovule; style stout, 0.8–1  $\times$  0.25 mm; stigmas 2, spreading, ovate, 0.2–0.3 mm long. **Fruit:** drupe, with 2-seeded stone, spheric to spheroid, 8–10 mm, blackish purple and conspicuously glaucous with bluish waxy bloom, smooth; pulp (mesocarp) watery and translucent when immature, at maturity 2–2.5 mm thick, white but not watery; stone hard, ovoid, 6.5–7  $\times$  5 mm + persistent styles at top (within pulp), reddish or orangish before drying; 5-angled nectary disc persistent at base of

drupe ca.  $1 \times 2.5$  mm, gray, puberulent. **Seed:** hemi-ellipsoid,  $5-6 \times 4.5-5 \times 1.5$  mm, beige (locked within stone).  
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