

Vascular Plants of Williamson County

Cephalanthus occidentalis – COMMON BUTTONBUSH, HONEY-BALLS [Rubiaceae]

Cephalanthus occidentalis L., COMMON BUTTONBUSH, HONEY-BALLS. Shrub, winter-deciduous, many-stemmed at base, branches usually opposite or in whorls of 3, in range to 400 cm tall; shoots leafing out in April, initially pubescent with hairs < 0.5 mm long.

Stems: cylindric, short-hairy mixed with minute hairs. **Leaves:** whorled with 3 or 4 per node and opposite, simple, petiolate, with stipules; stipules 2 or 3(4) per node, across node between adjacent petioles, acuminate-triangular, ca. 3 × 3 mm, purple-red, serrate and teeth having glands at tips; petiole with 2 low ridges on upper side, < 15 mm long, aging colorless on margins approaching base of blade; blade lanceolate to narrowly ovate, (85–)110–175 × (15–)35–75 mm, tapered at base, entire, acute to acuminate at tip, pinnately veined with midrib raised on upper surface and principal veins strongly raised on lower surface, upper surface aging glabrescent and glossy, lower surface with hairs along veins. **Inflorescence:** headlike spike, spheric, terminal and axillary, often 3 per node on long peduncles, head many-flowered, flowers densely packed, with projecting, exerted styles, bracteate; peduncle cylindric, 50–75 × 2 mm, tough, with longitudinal lenticels 0.8–1 mm long, often with sheathing stipule at midpoint and 1 bract, bract narrowly elliptic and sessile, to 12 mm long; bractlet and 2 lateral bracteoles subtending ovary and ovary surrounded by stiff, straight bristles to 2 mm long, bractlet threadlike with enlarged, light green tip, 3–3.5 mm long, axis 0.1 mm diameter, colorless with ascending hairs. **Flower:** bisexual, radial, ca. 2 mm across, pleasantly fragrant; hypanthium on top of ovary thick-walled (0.25 mm), cup-shaped, ca. 0.5 mm long; **calyx** 4(–5)-lobed, to 1.5 mm long, yellow-green with whitish margin, ca. 1.6 mm wide at orifice; lobes obtuse semicircular, 0.4–1 mm long, somewhat fleshy, with deep purple glands soon aging black from sinuses and often minutely ciliate on lobes, densely short-hairy on inner surface; gland ± deltate ca. 0.25 mm; **corolla** 4(–5)-lobed, narrowly funnel-shaped, mostly 7.8–8.4 mm long, white on outside and glabrous, tube + throat 6.7–7 mm long, 0.5 mm wide at base to 1.8–2.2 mm wide at orifice, inner surface with scattered, shaggy short hairs; lobes suberect, overlapping and yellowish in bud, oval or obtuse to ovate and somewhat cupped, 1.6–1.8 × 1.2–1.4 mm, white with inconspicuous veins but a line of hairs on the upper surface along midvein, with a glossy black gland erect from each sinus, gland oblong to triangular, 0.2–0.25 mm long; **stamens** 4(–5), fused to corolla tube below sinuses, at pollination included and scarcely exerted later by only half the anther; filaments erect, 1.2–1.4 mm long, white, glabrous; anthers dorsifixed, dithecal, < corolla lobes, light yellow with red connective, longitudinally and inwardly dehiscent; pollen shed before style elongation, light yellow; **nectary disc** lobed on top of ovary surrounding base of style, ca. 5 erect lobes compressed front-to-back concealed by dense tuft of hair on top of hypanthium, producing copious nectar; **pistil** 1; ovary inferior, wedge-shaped and ± 3-sided, 1–1.2 × 0.7 mm, with some appressed straight hairs, 2-chambered or 4-chambered, each chamber with 1 ovule; style long-exserted, straight, 12–14 × 0.2 mm, white, glabrous; stigma terminal, obovoid, 0.7–0.8 mm long, light green to pale greenish yellow. **Fruits:** schizocarps, in dense, spheric head, fruiting head 22–25 mm across, with core to 10 × 12 mm; schizocarp initially club-shaped to narrowly club-shaped, ca. 5 × 4 mm + a persistent, blackened calyx and hypanthium < 2 mm long, fruit body often several-angled and with

low ribs but faces often not drying flat, glabrous to glabrescent, occasionally with bractlet \pm persistent and as long as fruit body; splitting lengthwise into 4 dry mericarps, each mericarp potentially 1-seeded.

A. C. Gibson