

Vascular Plants of Williamson County
Quercus marilandica – BLACKJACK OAK [Fagaceae]

Quercus marilandica Münchh., BLACKJACK OAK. Tree, winter-deciduous, in range to 12 m tall; monoecious; shoots with only cauline leaves, initially velveteen, leaves soon aging bright green on upper surface and densely tan-tomentose with short stellate hairs on lower surface; terminal buds on dormant twigs ovoid and \pm 5-angled, 5–10 \times 4 mm, tomentose with appressed tannish hairs; bark fissured into blocks, blackish. **Stems:** initially 5-ridged with a broad, rounded ridge descending from each leaf, densely stellate-hairy with tannish hairs and inconspicuous, minute glandular hairs; twigs with semicircular leaf scars (leaf bases slightly raised), young periderm grayish brown with abundant lenticels. **Leaves:** helically alternate, simple and usually widely 3-lobed above midblade, petiolate, with stipules; stipule 2, attached at node, pale brown and drying papery, oblanceolate or linear-narrowly spatulate to narrowly ovate, 6–14 \times (1–)3–4 mm, the longest petiolelike to above midpoint, densely tan-ciliate above the widest to tip, strigose with upward-pointing hairs on (outer) lower surface and on petiolelike portion of upper surface; petiole \pm flattish on upper side, in range < 5 mm long, densely tan-pubescent with dendritic hairs as on stem and concerned short stellate hairs; blade obovate to trowel-shaped mostly rounded on lobes, (35–)70–135 \times (35–)70–137 mm, short-cordate to subcordate at base, entire, with broad, low terminal lobe to essentially truncate and 2-lobed, on suckers sometimes with 2–3 pairs of lobes having deep rounded sinuses with to 4 awned, pointed teeth, pinnately veined with most veins raised on both surfaces, early in development densely covered with tannish hairs, upper surface maturing mostly glossy bright green with widely scattered stellate hairs having ca. 8 ascending short arms, lower surface having appressed shaggy hairs but also conspicuous tufts of white (aging tan), long, dendritic hairs in axils of principal veins. **Staminate inflorescence:** catkin (ament), spikelike, pendent, 1–4 catkins arising from winter bus at the lowest axils on new spring growth, of 40–60 unevenly spaced with (3–)5–8 flowers/10 mm, subsessile flowers, 55–125 \times 3.5–4 mm, axes stellate-hairy; peduncle slender, 15–30 \times 0.7 mm, light green, pubescent with unbranched and stellate hairs; rachis like peduncle; bractlet absent. **Staminate flower:** \pm radial, 1.5–2.5 mm across; **calyx** 2–2.5 mm long, to 5-lobed or splitting as stamens expand into 2–3 lobes, papery and reddish; **petals** absent; **stamens** 4–5, free; filaments threadlike, 0.5–0.7 mm long, whitish; anthers 0.8–1 mm long, reddish, longitudinally dehiscent; pollen pale yellow; **pistil** absent. **Pistillate inflorescence:** dwarf axillary shoot on new growth with 1–3 subsessile pistillate flowers. **Pistillate flower:** ca. 2.5 mm across; **calyx** several-lobed, the lobes unequal, to 0.5 mm long, short-hairy on outer (lower) surface with hairs to 0.4 mm long; **petals** absent; **stamens** absent; **pistil** 1; ovary ovoid at base covered by overlapping scales, ca. 2 \times 2 mm, densely stellate-hairy; styles 2(–3), ascending with flared stigma somewhat recurved, 1.2–1.6 mm long, whitish. **Fruit:** acorn (glans), maturing in fall of year 2; involucre bowl-shaped covering basal 1/3 of nut, in range mostly 6–7 \times 13–15 mm, brown, scales tightly appressed, golden brown covered with a mat of short, tannish hairs, neither keeled nor warty and not ciliate, inner surface with a dense cover of straight, appressed hairs; nut ovoid, in range 12–17 \times 10–14 mm, light brown often with lighter stripes, densely puberulent from above cup, in range basal scar circular

5–7 mm across, wall ca. 0.5 mm thick, inner surface hidden by a dense, light tan tomentum of fine hairs; embryo surface irregular with ridges and pits and bearing fine hairs.
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