

**Vascular Plants of Williamson County**  
*Quercus shumardii* – SHUMARD'S OAK [Fagaceae]

*Quercus shumardii* Buckley, SHUMARD'S OAK. Tree, winter-deciduous, 1-trunked, in range < 10 m tall; monoecious; shoots with only cauline leaves, initially short-stellate; terminal winter buds obtuse-ovoid to nearly rounded at tip, 3–5 mm long, ± brown with pale scales, scales short-fringed on margin and scale surfaces glabrous or nearly so; trunk with bark tight, to 40 mm thick, gray, shallowly furrowed with horizontal cracks. **Stems:** on emerging shoots initially broadly ridged with dense short-stellate hairs and minute glandular hairs soon becoming glabrate with sparsely pubescent or at maturity glabrous or with a ring of hairs at node; twigs initially green with light gray cuticle with green aging light brown, with scattered lenticels circular spitting vertically, to 0.3 mm across. **Leaves:** helically alternate, deeply pinnately lobed with 5–9 principal lobes, petiolate, with stipules; stipules 2, scarious and slender, linear, < 5–8 × 0.25–0.3 mm, 1-veined, irregularly twisted, compressed front-to-back below midpoint with minute glandular hairs on margins, somewhat wider approaching tip fringed and with nonglandular hairs, early-deciduous while leaf still growing; petiole pulvinuslike at base and subcylindric above (not channeled), 22–40(–60) mm long, initially green and stellate-pubescent with minute glandular hairs aging glabrescent; blade broadly elliptic to obovate in outline, (50–)80–130(–200) × (45–)80–110(–150) mm, broadly tapered (subtruncate) at base, lateral lobes subopposite with U-shaped sinuses (to 5 mm from midrib), each lateral lobe having 2–4 acute sublobes and teeth with bristlelike tips 2–5.5 mm long, the bristles pale green aging yellowish, subtruncate at base, pinnately veined with principal veins slightly raised on upper surface and raised on lower surface, initially densely stellate-tomentose (red) with 8 arms fading to white and mostly deciduous, when fully mature young surfaces satiny, mature foliage with upper surface without hairs, lower surface with conspicuous, persistent tufts of whitish hairs in angles of principal veins with midrib. **Staminate inflorescence:** catkin (ament), spikelike, unbranched, pendent and lax, in range 60–80 × 5–6 mm, 15–25+-flowered, flowers alternate but irregularly spaced, subsessile (to 0.25 mm long), bracteate, short stellate-hairy; peduncle 10–20 mm long, light green drying reddish, stellate-hairy; rachis ca. 0.25–0.35 mm diameter (nodes), flexible, short stellate-hairy; pedicel to 0.25 mm long, light green, with hairs. **Staminate flower:** ± radial, ca. 2 mm across, hairy on receptacle (between filaments); **calyx** unequally 2–6-lobed, papery with reddish cell walls drying light brown, ± 1 mm across; tube cup-shaped, to 1 mm long; lobes and teeth < tube with irregular sinuses, obtuse to acute, splitting downward, glabrous; **petals** absent; **stamens** 3–5, free; filaments ascending, < 1–1.7 mm long, white aging pinkish, 1-veined, glabrous; anthers dorsifixed, dithecal, exserted, 1.2–1.7 mm long, pale light yellow or blushed reddish, glabrous, longitudinally dehiscent; pollen pale yellow; **nectary** absent; **pistil** absent. **Pistillate inflorescence:** spikelike, axillary on leafy spring shoots on 1–several successive nodes above staminate aments (after abscising), (1–)2(–3)-flowered, at anthesis each flower subtended by several bracts + numerous bract primordial, flowers sessile, bracteate; axis 2–6 mm and thick green, having 1–2 lateral flowers and a terminal flower (or aborted), bract subtending peduncle slender; peduncle short, hairy; rachis absent (1-flowered) or very short and stout; **involucre** (cupule) bracts 10+, helically alternate, overlapping, broadly ovate, at anthesis to 1–1.5 × 1–1.5 mm, scale scarious and

short-ciliate and short-fringed on colorless margin around central scale dark brown with domelike, thicker green base, having some short hairs on brown tissue, wall green, at anthesis ca. 0.4 mm thick, minutely stellate-hairy with 1–few tannish arms. **Pistillate flower:** ± radial, ca. 1.5 mm across (ascending styles); **calyx** 5–6-lobed, free from ovary; tube ca. 1 mm long; lobes ovate to obovate, 0.4–0.7 mm long, greenish often reddish, short-ciliate margins and short-hairy; **petals** absent; **stamens** absent; **pistil** 1, 3–3.5 mm long; ovary inferior, tightly enclosed by involucre, carrot-shaped truncate at top, ca. 1.3 × 0.6 mm, green, glabrous, 3-chambered, each chamber with 2 ovules; styles 3, lower portion in cylindric space above ovary 0.5 mm long, exerted portion ascending-spreading 1.5–1.8 mm long (partially hidden by calyx), green with flared reddish stigma 0.4–0.5 mm across becoming recurved. **Fruit:** acorn (glans), maturing and deciduous in second year, appearing sessile on lateral shoot to 6 mm long having 1–3 mature acorns; involucre (cup) covering ca. basal 1/4–1/3 of fruit (near the widest fruit diameter), shallow bowl-like to cup-shaped, in range 8–15 × (15–)17–26(–30) mm, width > depth, rigid, brown and golden-brown (hairs), scales tightly appressed, helically alternate, ± triangular, 3–5 mm long, ± flat (not bumpy or tuberculate), obtuse at tip, with obtuse tips, outer surface short-strigose with upward-pointing hairs within glabrous brown boundary, inner surface of involucre with appressed straight hairs within 3.5 mm of nut scar; nut broadly ellipsoid to ovoid, in range 14–30 × 10–20 mm, brown often with stripes, rounded with hard point at tip ca. 2 mm long and brown, the basal scar circular, in range mostly 5.5–13.5 mm, ± orange, convex, appearing ciliate around edge (hairs from inner surface of involucre); shell of nut soft stellate-pubescent often persistent, inner surface of shell in range densely and thickly appressed-tomentose with tannish hairs, shell 0.8–1.2 mm thick.

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