

Vascular Plants of Williamson County

Quercus stellata – POST OAK [Fagaceae]

Quercus stellata Wangenh., POST OAK. Tree, winter-deciduous, 1-trunked, in range to 13 m tall; monoecious; shoots with only cauline leaves, when growing foliage densely stellate-hairy mostly with 3–9 arms, initially suedelike later more coarse. **Stems:** cylindrical, densely stellate-hairy; bark intermediate gray; buds obovoid obtuse to rounded at top, weakly 5-sided; bark rough, thick, tightly attached, irregularly furrowed, dull gray. **Leaves:** helically alternate, pinnately lobed with 1–3 subopposite pairs of broad lobes, petiolate, with stipules; stipules 2, attached at node, oblanceolate or trowel-shaped to narrowly oblanceolate or linear, ca. 6 × 1–2 mm, orangish and brown, lower portion often petiolelike, to midpoint with radiating fine hairs, strigose with upward-pointing hairs especially on outer (lower) surface, early-deciduous; petiole cylindrical but with dimple at axillary bud, mostly 2.5–9 mm long, densely stellate-hairy; blade obovate in outline, in range 40–155 × 23–105 mm, ± tough, cordate or subcordate to rounded or broadly tapered at base, the 2 principal lobes broad and at but generally above midblade, often with a sinus ± ⊥ (crosslike) defining upper edge of lobe, lateral and terminal lobes mostly rounded to obtuse, the terminal lobe < 50 mm long, broad to semicircular, and often shallowly notched, above midblade often wavy on margins and lacking sublobes and teeth, pinnately veined with principal veins somewhat raised on upper surface and all veins raised on lower surface, upper surface initially densely stellate-hairy maturing with widely spaced stellate hairs (1+ mm apart) and initially with minute glandular hairs aging with red heads later absent, lower surface densely hairy with overlapping spreading and ascending arms of stellate hairs (arms mostly appressed along midrib), the hairs with 3–9 arms of lower surface > upper surface, upper surface green tissue glossy to satiny dark green at maturity. **Staminate inflorescence:** catkin (ament), of 18–40 flowers, several catkins arising from winter buds at the lowest axils of new spring growth, when releasing pollen mostly 55–65 4.5–6 mm long increasing with age (to 82 mm long), flowers sessile and unevenly spaced, 5–8 flowers/10 mm; peduncle to 12 × 1 mm, light green, densely stellate-hairy and with unbranched hairs having shaggy arms; rachis like peduncle; bractlet subtending flower cupped and appressed to flower bud, acute-obovate, ca. 2 × 1 mm, pale brownish aging papery, ciliate on margins and with long hairs at tip, outer (lower) surface with unbranched hairs. **Staminate flower:** irregular, ca. 4 mm across (anthers); receptacle pubescent; **calyx** (4–)5–7-lobed, fused only at base, 2–2.5 mm across; lobes unequal, obtuse to rounded, the longest ca. 1 mm long, pale reddish brown aging papery, pubescent with wavy hairs on lower surface; **stamens** (4–)5–8(–15), free (rarely 2 stamens fused) and some stamens diminutive; filaments spreading, 0.6–1.5 mm long, whitish; anthers dorsifixed, dithecal, 0.9–1.7 mm long, light greenish yellow, short-hairy, longitudinally dehiscent; pollen pale yellow; **pistil** absent. **Pistillate inflorescence:** axillary cluster of 2–4 flowers, flowers sessile to subsessile, densely pubescent on scales of involucre (cupule) concealing ovary; **involucre** of helically alternate and overlapping bractlets, at anthesis several increasing to many in fruit, at anthesis concealed by dense hairs. **Pistillate flower:** ca. 1.5 mm across; **calyx** inconspicuous; **petals** absent; **stamens** absent; **pistil** 1; ovary inferior, 1.5–2 × 1.5–2 mm, concealed by dense pubescence, 3-chambered with 1 functioning ovule; styles 3(–4), widespreading, < 1–1.3 mm long, fleshy, green purple-red at flared tip, shallowly grooved

on upper side, pubescent to above midpoint. **Fruit:** acorn (glans), sessile, maturing and deciduous in late summer; involucre in range covering basal 1/4–1/2 of nut, saucer-shaped to cup-shaped, 10–14 mm diameter and 6–8 mm deep, scales strongly appressed, 2.5–3 mm long with short-ciliate acute tip, outer surface tannish tomentose, inner surface with appressed hairs; nut ovoid, in range 11–17 × 10–12 mm + hard, pubescent point at tip, light brown, basal scar 4–5 mm across and convex with darker perimeter, inner shell densely matted tomentose.

A. C. Gibson