

## Vascular Plants of Williamson County

*Vitex agnus-castus* – COMMON CHASTE TREE, BLUE CHASTE TREE [Verbenaceae]

*Vitex agnus-castus* L., COMMON CHASTE TREE, BLUE CHASTE TREE. Shrub, winter-deciduous, several-stemmed at base, with mostly ascending and some spreading branches, in range (wild individuals) to 450 cm tall; shoots with only cauline leaves, puberulent and short-hairy and having sessile glandular hairs with colorless heads, foliage aromatic when crushed. **Stems:** 4-sided, initially with pair of opposing sides convex faces and a pair of shorter faces flat, aging cylindric, often reddish aging with brown periderm, internodes to 75 mm long and enlarged just below each node, initially with nonglandular and glandular hairs aging glabrescent on woody twigs with periderm; axillary bud positioned ca. 1 mm above axil; bark on long branches brown to orangish brown, with wavy, lengthwise stripes and ridges, at plant base old individual with flaking bark. **Leaves:** opposite decussate, palmately compound mostly with 4–7 leaflets, petiolate without pulvinus, without stipules; petiole ± flat on upper side or scarcely channeled, mostly 25–75 mm long (scaling with blade size), tough; petiolules channeled (lacking pulvinus), < 0.5–11 mm long, the shortest on the small basal leaflets and the lowest on the central leaflet; blades of leaflets lanceolate, 24–110(–145) × 4–17(–27) mm, tapered at base, entire, acuminate at tip, pinnately veined with midrib slightly sunken on upper surface and strongly raised on lower surface, upper surface dull green inconspicuously puberulent and with comparatively few glandular hairs, lower surface gray-green and densely puberulent with scattered short hairs and glandular hairs. **Inflorescence:** condensed dichasial cymes along terminal and axillary interrupted axes, axes < 50–210 mm long, at each node with a pair of cymes (verticils), each verticil 15–30 mm across + exerted stamens and to 32 mm across in fruit, each cyme 5–many-flowered but approaching tip of axis 1-flowered or 3-flowered with aborted buds, bracteate, puberulent and with sessile glandular hairs having colorless heads; peduncle often absent and subtended by a pair of cauline leaves, to stemlike and 35 mm long; axis somewhat 4-sided, internodes 1.5–10(–35) mm long; bract subtending each cyme narrowly triangular, ± 1.5 mm long, upper surface purple and glabrate, lower surface densely short-tomentose, early-deciduous (before anthesis); cyme axis with to 5 nodes with short internodes; bractlet subtending pedicel deltate, < 0.5 mm, densely short-hairy, early-deciduous; pedicel < 1 mm long. **Flower:** bisexual, bilateral, 7–8 mm across (vertical) and 4.5–5 mm across (horizontal); **calyx** 5-lobed, ± 2.5 mm long, densely puberulent on outer surface and glabrous on inner surface; tube somewhat bell-shaped in fruit aging funnel-shaped, 1.5 mm wide at orifice, blushed purplish beneath grayish pubescence, 10-veined to lobes and sinuses but veins not evenly spaced, on inner surface mostly green with veins red-purple; lobes subequal, dentate, 0.3–0.4 mm, ± red-purple; **corolla** 2-lipped (not clearly defined), conspicuously 5-lobed; tube cylindric, ca. 2 × 1.5 mm, white, glabrous; throat narrowly funnel-shaped expanded more to lower side, 4–4.5 mm long, 2 × 4 mm wide at orifice, pale violet but concealed beneath grayish pubescent (puberulent), inner surface tomentose to midpoint framing filaments and with 10 darker veins to lobes and sinuses; lips deep blue-violet to deep violet or violet, minutely papillate, and glabrous on upper surface and pale violet and puberulent on lower surface; upper lip 2-lobed, lobes ascending from horizontal, obtuse, ca. 1.5 × 1.5 mm; lower lip 3-lobed, lateral lobes spreading, obtuse to rounded, 1.5

× 1.8 mm, lower lobe descending and aging with margins reflexed, broadly ovate and rounded at tip, 3.5–4 × 3 mm; **stamens** 4, arising at same level from top of corolla tube; filaments exerted, cylindric, ± 6.5 mm long, red-purple (fading), tomentose at base; anthers dorsifixed, dithecal, horseshoe-shaped, 1.2–1.6 mm long with unequal sacs, purple, longitudinally dehiscent; pollen white; **nectary chamber** at base of ovary, 0.3–0.4 mm long, reddish; **pistil** 1, exerted with stigma at level of anthers; ovary superior, obovoid top-shaped), 1 × 0.8 mm, green but reddish on top, short-hairy above midpoint, 2-chambered, each chamber with 2 ovules; style ca. 10 × 0.25 mm, red-purple, glabrous, 2-branched, the branches stigmatic, diverging, 0.6–1 mm long. **Fruit:** drupe, very hard (not fleshy), 1-stoned, to 4-seeded, obovoid to spheroid, 3–4.5 × 3–3.5 mm, green or purple-red when immature above midpoint drying brown, glabrescent with inconspicuous short hairs above midpoint.

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