

Vascular Plants of Williamson County

Aesculus pavia var. *pavia* – RED BUCKEYE, SCARLET BUCKEYE
[Sapindaceae/Hippocastanaceae]

Aesculus pavia L. var. *pavia*, RED BUCKEYE, SCARLET BUCKEYE. Shrub (small tree), deciduous, not rosetted, with diverging, paired branches and branchlets, in range to 300 cm tall; shoots with only cauline leaves, short-tomentose. **Stems:** cylindrical, soon forming periderm; twigs with paired, large, shield-shaped leaf scars. **Leaves:** opposite decussate, 1-palmately compound 5-foliolate, petiolate with sessile leaflets, without stipules; petiole pulvinus absent, \pm cylindrical, 70–145 mm long, tough, indented on upper side only at bud; petiolule of leaflet symmetric (central leaflet) and oblique (other leaflets), to 3 mm long, short-tomentose; blades of leaflets obovate or ovate (only the smallest basal leaflets), $< 45\text{--}155 \times 20\text{--}67$ mm, tapered at base (margin ascending), serrate with unequal blunt teeth to doubly serrate on margins, acuminate-acute at tip, pinnately veined with parallel, somewhat sunken, evenly spaced lateral veins on upper surface and principal veins raised on lower surface, upper surface initially low-cobblestonelike and inconspicuously short-hairy including sessile glandular hairs especially along midrib aging with hairs only along veins, lower surface conspicuously cobblestonelike and short-tomentose and having some glandular hairs along midrib. **Inflorescence:** panicle terminal on new growth, with alternate, cymelike primary branchlets, branchlet, to 150 mm long, branchlets < 14 , typically to 5-flowered, and spaced < 25 mm apart along rachis, overall red (incl. axes) appearing light crimson, flowers bisexual and staminate in same inflorescence, at pollination horizontal, bracteate; peduncle cylindrical, axes sparsely short-tomentose with some hairs pigmented rose to red; bract subtending branchlet to 3 mm wide decreasing upward, early-deciduous; branchlet axis < 10 mm long below the lowest pedicel; bractlet subtending petiole oblong rounded at tip, to 1 mm wide, 1-veined, truncate at base, thin, papery, glandular-ciliate on margins, early-deciduous; pedicel cylindrical, < 15 mm long increasing in fruit. **Flower:** bisexual, bilateral, 10–12 mm across, oriented \pm horizontal, to 34 mm long (exserted style and exserted upper petal), lacking fragrance; **calyx** 5-lobed, (8–)13–17 mm long, light crimson; tube bell-shaped somewhat asymmetric at base (not inflated) and tightly appressed to corolla, $11\text{--}13 \times 5.5\text{--}7$ mm, faintly striped with many parallel veins, short-hairy, inner surface off-white with pale rose veins; lobes subequal, obtuse or rounded to nearly truncate, $3\text{--}4 \times 3.5\text{--}4$ mm and the deepest sinus to 5 mm, with thick-stalked glandular hairs on margins; **petals** 4 of 2 types, erect (in horizontal flower), to 30 mm long, clawed, the claws mostly 5–6 mm long, slightly compressed front-to-back, white, glabrate or sparsely pubescent; limbs outer pair lateral, to 23 mm long, having limbs nested in bud, spoon-shaped (spatulate) to somewhat fiddle-shaped (pandurate), lower portion slightly wider than claw and broadly channeled, pale and light yellow, densely white-tomentose outside channel, expanded upper portion cupped and having wavy margins, ca. $10\text{--}12 \times 10$ mm, transitioning from light yellow axis to light yellowish orange and then rose-red approaching margin, surfaces and margins with rose-colored, thick-based glandular hairs, pinnately veined with 5 principal veins radiating into upper portion; upper petals somewhat ascending from horizontal flower and $>$ lateral petals, limbs of inner pair narrowly spatulate, lower portion with 2 broad channels, light yellow transitioning to yellow-orange, upper portion cupped-rounded, 5–6 mm, yellow-orange transitioning to rose-red with raised radiating ridges and pigmented glandular hairs; **nectary** mound lopsided

beneath ovary and outside stamens on upper side of horizontal flower, 2 mm high, greenish, producing copious thin nectar; **stamens** 7 in a ring, free, unequal, partially exerted; filaments long-tapered base-to-tip and straight, within a flower ca. 20–26 mm long (longer stamens on lower side of horizontal flower), white and glabrous at base transitioning to white and loosely tomentose to yellowish and tomentose to light yellow and glabrous approaching top; anther dorsifixed-versatile, dithecal, 2.6–3 mm long, light orange, sometimes with sparse short hairs above midpoint, longitudinally dehiscent; pollen light orange; **pistil** 1, to 34 mm long, in staminate flowers vestigial, < 6 mm long; ovary superior, fusiform and 7-ribbed, ca. 4 × 2.5–2.7 mm, white with rose-pink ribs, densely white villous-tomentose, 3-chambered, each chamber with 1 ovule; style straight and long-tapered to stigmatic tip, white, hairy at base to glabrate at tip, at pollination with 3 triangular stigma lobes or when not reception appearing tapered with 3 fine lines converging at tip. **Fruit:** capsule, leathery-coated, dehiscent by up to 3 valves splitting by enlargement of seeds, 1–2-seeded, obovoid to inverted pear-shaped or subspheroid (shape dependent on seed number), 38–50+ mm long, valves 2–2.5 mm thick, outer surface corky, tannish network defining shallow pits initially having orangish, papery patches with persistent hairs; stalk to 7 mm thick and woody, mostly with a couple nodes with bractlet scars. **Seed:** solitary seed subspheroid, of 1-seeded capsule seed tight fitting before dehiscence, bright red with a wide, circular, pale, grayish hilum, of 2-seeded capsule with space in chamber above and below seeds.

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