

Fraxinus velutina Torrey, VELVET ASH. Tree, winter-deciduous, in range to 10 m tall; dioecious; shoots velveteen when young being densely short-tomentose and tomentose with mixed white hairs of different lengths but some individuals glabrous or essentially so, before expanding new leaves with scattered, reddish, scalelike hairs (lepidote). **Stems:** cylindric, initially 3 mm diameter, compressed approaching node, internodes to 60 mm long; young branches brownish gray and short-hairy, with crescent-shaped leaf scars, the hairy surface flaking off to reveal brown periderm with circular, tan-gray lenticels; bark furrowed and splitting, not flaking, brown. **Leaves:** opposite decussate, odd-1-pinnately compound with 2–3 opposite to subopposite pairs of lateral leaflets, petiolate, without stipules; petiole hemi-cylindric and broadly channeled, 30–95 mm long, somewhat pulvinuslike at base; rachis low 2-ridged but overall cylindric, to 150 mm long, sometimes with several other inconspicuous ridges, between pairs of lateral leaflets to 70 mm long with either the first or second segment longer; petiolules of lateral leaflets channeled, indistinct from tapered and channeled base of leaflet blade; blades of leaflets narrowly ovate to elliptic, (23–)60–140 × (17–)23–50 mm (the lowest leaflets never the largest), tapered and channeled at base or long-tapered (terminal leaflet), entire, acute to acuminate at tip, pinnately veined with principal veins slightly sunken on upper surface and raised on lower surface, dull, short-hairy with scattered hairs (glabrous or glabrate), lower surface densely white-tomentose along principal veins or less so when blade glabrate.

Inflorescences: panicles of racemelike cymes, unisexual (pistillate inflorescences with some staminate or bisexual flowers near base), arising on dormant branch from paired, scale-covered axillary buds, apparently several per axillary bud but actually sessile with 1 or 2 pairs of branches at base, many-flowered, bracteate; lateral branches narrower than main axis, white-hirsute; bract subtending each branch (2 per node), the lower bracts (= inner bud scales) cupped-lanceolate to cupped-ovate, 3–7 mm long, decreasing and thinner upward, light greenish yellow and densely brown-tomentose (lepidote), reduced narrower and thinner upward and sparsely hairs having mostly brownish, villous-woolly hairs at tip, early-deciduous. **Staminate inflorescence:** panicle condensed, subspheric from paired axils at successive nodes forming 2 tight, ball-like clusters encircling stem (verticil-like), emerging prior to leaves, bracteate; peduncle absent, branched ca. 3 times before emerging from axil with opposite branching, branching along axis of lateral branches mostly alternate, branch rachis to 4.5 mm long; branchlet tufted (fasciclelike), on axes < 1.5 mm long and mostly 3–8-flowered; pedicel 0.3–0.7 mm long, light yellowish green to light green, glabrous. **Staminate flower:** without scent; **calyx** 4–6-toothed, eccentrically attached to pedicel and irregular, 0.7–1.2 × 0.6–1.1 mm, light green, teeth variously sized, glabrous; **petals** absent; **stamens** 2(–3, rarely 4), free; filaments typically absent; anthers basifixed, dithecal, oblong, 1.7–2.6 × 0.8–1.3 mm, greenish yellow becoming brownish, longitudinally dehiscent; pollen light yellow; **pistil** absent. **Pistillate inflorescence:** panicles somewhat open and lax, at anthesis 30–80 mm long, with opposite decussate cyme branchlets ascending to suberect, emerging at the same time as leaves starting to grow from branch tip, the central axis in \times -section \pm square, thicker than branches; peduncle 0–4 mm long; branchlet flattened, typically 3-flowered; pedicel 1.5–5 mm long increasing in fruit. **Pistillate flower (bisexual): calyx** 4(6)-toothed, appressed to ovary, 0.7–1.5 mm long, green; tube somewhat bell-shaped, commonly glabrous (sometimes scattered short hairs on pubescent individuals); teeth unequal, commonly with several

brownish, villous hairs mostly at tip; **petals** absent; **stamens** 0 or 1–2 (in the occasional bisexual flower; 1 anther often sterile), free; filaments erect, 1 mm long; anthers basifixed, dithecal, 2.5–3 mm long, green and rose, longitudinally dehiscent; pollen light yellow; **pistil** 1, 2.5–3.2 mm long; ovary superior, ovoid compressed side-to-side, green, with colorless or white to pale amber, umbellalike hairs (peltate), 2-chambered, each chamber with 2 pendent ovules; style club-shaped and somewhat 4-sided, 1.2–1.7 mm long, yellowish green, bearing stigmatic zones on opposite faces 0.2–0.5 mm from base, papillate in a narrow V shape and continuous across the top, slightly 2-lobed at tip. **Fruit:** 1-seeded samara (“winged achene”), pendent on drooping or spreading, thin, wiry axes; samara oblanceolate, 25–40 × 4–8 mm (fertile), with 2(–3) wings almost base to tip; seed body subcylindric, = 1/3 fruit, tapered at base to sharp point, containing 0–1(–2) seed in upper chamber; wing stiff-papery, light brown, with diverging venation, entire, notched at tip or minutely toothed from persistent style base. **Seed:** fusiform, 6.5–12.5 × 1.3–2 mm (fertile), irregularly, light golden brown, longitudinally wrinkled, with linear hilum along length, often having short tip at end. Early March–early April.

Native. Small deciduous tree occurring in gaps of southern oak woodland or in riparian woodland. *Fraxinus velutina* typically has velveteen leaves; when the leaves are emerging their hairiness is easy to observe, and those individuals continue to be soft-hairy (“velvet ash”) with dense hairs remaining at least along lower veins, but within a given population an individual may be glabrous or nearly so.

B. A. Prigge & A. C. Gibson