

Vascular Plants of Williamson County
Acer negundo – BOX ELDER [Sapindaceae]

Acer negundo L., BOX ELDER. Tree, winter-deciduous, with several trunks at base, in range to 20 m tall; dioecious; shoots typically downy to velveteen when young, white short-hairy to tomentose; sap clear; bark on old trunk typically brown, furrowed and cracked along axis with hard, scaly ridges, younger bark more gray and shallowly furrowed. **Stems:** young stems initially 6-sided soon becoming cylindrical, straight often with long internodes (to 90 mm long), somewhat flexible, conspicuously hairy aging grayish; leaf scars narrowly crescent-shaped, with pairs touching or nearly so at node; dormant lateral buds hidden, bud scales abscising and leaving a condensed zone of circular scars on stem. **Leaves:** opposite decussate (rarely whorled at a particular node), odd-1-pinnately compound with 3 or 5 leaflets, sometimes appearing palmately compound, petiolate, without stipules; petiole hemi-cylindrical with winglike or crescent-shaped base, 14–95 mm long, densely hairy at base next to axillary bud and across stem node; petiolules of lateral leaflets 3–10 mm long, for terminal leaflet 10–25 mm long, 3-ridged on upper side; blades of leaflets lanceolate or broadly ovate to elliptic or rhombic (some terminal leaflets), 45–110 × 25–70(–100) mm, pinnately lobed or unlobed, the lateral leaflets sometimes asymmetric with 1 lobe on outer side, the terminal leaflet ± symmetric with 0 or 2 lobes, broadly serrate on margins, acute at tip, pinnately veined with midrib raised on both surfaces and principal veins also raised on lower surface, especially lower surface densely hairy when immature, mature veins velutinous; prophylls sheathlike with minute leaflets. **Staminate inflorescence:** panicle of pendent racemes with long pedicels, appearing densely clustered before leaves emerge, arising from winter buds at 1–several of the lowest nodes on a lateral shoot, many-flowered, each raceme typically 4–8-flowered, bracteate, short-hairy; bracts subtending raceme 2, opposite with pair fused across node forming tube to ca. 1/3, bracts 4.5–8+ mm long, lower bracts on a raceme lanceolate to oblong or narrowly ovate, short-hairy, typically tannish with 3 or 5 green veins, upper bracts minute; raceme axis with lower internodes very short and upper internodes longer, short-hairy; bractlet subtending and fused to pedicel at node, hairy at tip; pedicel 20–35 mm long, green to reddish, flexible and delicate, short-hirsute to short-pilose. **Staminate flower:** in bud ca. 3 mm across; **calyx** 5–6-lobed; tube bell-shaped, ca. 1 × 1.5 mm, green; lobes unequal, teethlike, < tube, 1 larger than others and trowel-shaped, inrolled to keeled, sparsely short-hairy; **corolla** absent; **stamens** 3–5(–6), free, anthers fully exerted; filaments ca. 2.5 mm long (1 mm > calyx), in bud ca. 0.2 mm diameter becoming threadlike above, greenish aging whitish, erect and cylindrical below midpoint, lax and threadlike above midpoint, anthers basifixed, dithecal, 2.5–4.3 mm long, green or yellow with red, acute at tip, sparsely short-hairy, longitudinally dehiscent; pollen whitish; **nectary** absent; **pistil** absent. **Pistillate inflorescence:** racemelike with solitary and subopposite paired flowers at nodes, terminal on leafy spring growth appearing later than the first staminate inflorescences, lax and pendent, (7–)9–12-flowered, bracteate, white short-hairy; axis 40–60 mm long increasing in fruit; bractlet subtending pedicel awl-shaped, 1–1.5 mm long, green, short-hairy; pedicel 5–6 mm long increasing in fruit, flexible aging straight and stiff. **Pistillate flower:** **calyx** (4–)5-lobed, fused at base, if 4 then 2 fused; lobes oblanceolate to elliptic (fan-shaped), 1–1.7 mm long, green, some

somewhat cupped, some lobes inconspicuously toothed approaching tip, short-hairy; **corolla** absent; **stamens** absent; **pistil** 1; ovary superior, with 2 conspicuous crescent-shaped wings spreading at ca 45°, the wings green, ovary proper and lower wings densely short-strigose with whitish hairs, 2-chambered, each chamber with 1 ovule; style exserted, 5.5–7.8 mm long, 2-branched above short base, the branches ascending and initially straight, light green; stigmas grooved on outer side, puberulent-papillate. **Fruit:** schizocarp, of 2 dry, 1-seeded, winged, samaralike fruitlets (mericarps) attached at seed chambers, light brown, with scarious wings oriented downward and spreading < 90° with pendent pair often appearing V-shaped; mericarps in range 25–30 mm long, inconspicuously puberulent with tawny hairs; seed body oblong (ellipsoid), 15–18.5 × 3.5–4.5 mm, veins conspicuous; wing asymmetrically obovate, 16–20 × 8.5–12 mm, with conspicuous dendritic veins diverging from thick vein along straight edges; seed free within seed body, often not formed in mature fruits. **Seed:** obovoid, 4–4.5 × 2.5 mm.

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