

*Acer negundo* L., BOX ELDER, CALIFORNIA BOX ELDER. Tree, winter-deciduous, with several–many trunks at base, in range to 15 m tall; dioecious; shoots typically downy to velveteen when young, 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 becoming cylindrical, straight often with long internodes, somewhat flexible, canescent throughout or with hairs only approaching each node, aging glossy green to tinged red and grayish when hairy; 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(5) leaflets, sometimes appearing palmately compound, petiolate, without stipules; petiole hemi-cylindric 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, puberulent; 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 often 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, 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, hairy; bracts subtending raceme 2, opposite with pair often fused across node, lower bracts on a raceme oblanceolate to oblong or narrowly lanceolate, 4.5–10 mm long, tomentose, typically tannish with 3 or 5 green veins, upper bracts minute; raceme axis with lower internodes very short and upper internodes longer, short-hirsute; bractlet subtending and fused to pedicel at node, hairy at tip; pedicel threadlike, 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-lobed, bell-shaped, ± 1.5 mm long; lobes unequal, teethlike, < tube, inrolled, hirsute; **corolla** absent; **stamens** (3–)4(–6), free, anthers fully exerted; filaments 1 mm > calyx, whitish, erect and cylindrical below midpoint, lax and threadlike above midpoint, anthers basifixed, dithecal, 2–3.5 mm long, green or yellow with red, acute at tip, sometimes with scattered hairs, longitudinally dehiscent; pollen whitish; **nectary** absent; **pistil** absent. **Pistillate inflorescence:** racemelike with solitary to pseudowhorled flowers at nodes, terminal on leafy spring growth appearing later than the first staminate inflorescences, lax and pendent, 12–16-flowered, bracteate, white-tomentose; axis 40–60 mm long increasing in fruit; bractlet subtending pedicel awl-shaped to acuminate, 1–2 mm long, green, densely hairy; pedicel 14–20 mm, very thin, flexible aging straight and stiff. **Pistillate flower:** **calyx** 4-lobed, fused at base; lobes oblanceolate to elliptic, 1.5–2 mm long, green; **corolla** absent; **stamens** absent; **pistil** 1; ovary superior, with 2 conspicuous 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 exerted, 4–6 mm long, 2-branched above short base, the branches wide-spreading and initially straight, light green; stigmas 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  $< 90^\circ$  with pendent pair often appearing V-shaped; mericarps in range 25–30 mm long, inconspicuously puberulent with tawny hairs; seed body oblong to ellipsoid, 11–14  $\times$  3–4 mm, veins conspicuous; wing asymmetrically narrowly obovate, 12–17  $\times$  6–8(–9) mm, with conspicuous dendritic veins diverging from thick vein along straight edges; seed free within seed body. **Seed:** obovoid, 4–4.5  $\times$  2.5 mm. Mid-March–mid-April.

Naturalized native. Deciduous tree occasionally found along roadsides and near permanent streams, and in some places cultivated in parks and escaped; naturalized but perhaps not native in our range. *Acer negundo* is a wind-pollinated, dioecious species and does not in range appear to produce many viable seeds; hence it shows no tendency for becoming invasive. If recognized, our plants would be called variety *californicum* (Torrey & A. Gray) Sarg.

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