

# TREE OF HEAVEN

(*Ailanthus*)

*Ailanthus altissima*

Status in Maine: localized



**Description:** Deciduous, fast-growing, pollution-tolerant tree. Reaches 50-90' tall, but is usually shorter. Short-lived species (30-50 years). Clonal growth can be extensive. Also known as "stink tree," as crushed leaves and pith smell like rancid peanut butter. **Leaves:** Large (1-4'), alternate, pinnately compound (10-41 leaflets). Leaflet margins are smooth with only a couple of glandular teeth at the base. **Flowers/seeds:** Dioecious; large terminal clusters of small yellow-green flowers. Females produce huge numbers of flat winged fruit (samaras) that are wind dispersed. **Bark:** Stems pale gray and smooth, twigs are medium brown.

**Native range:** China. **How arrived in U.S.:** As an ornamental.

**Reproduction:** A prodigious seed producer. According to one study, a single tree can produce over 300,000 seeds per year! Seed germination and establishment rates vary and soil seed bank longevity is not long. Asexual reproduction is also robust; clonal growth via root sprouting can quickly colonize a large area.

**Habitat:** Although best described as an early successional tree of forest ecosystems, Tree of heaven has proven itself rugged and opportunistic and able to grow most anywhere. While commonplace in cities and post-industrial wilds, it is invading high priority conservation forests in other states.

**Similar native species:** Butternut (*Juglans cinerea*) and staghorn sumac (*Rhus hirta*) have similar elongate, pinnately compound leaves, but differ by having leaflets that are finely serrate. Staghorn sumac also has leaf petioles and stems



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covered with dense fine hairs. Ash (*Fraxinus* spp.) leaves are opposite. Hickories (*Carya* spp.) tend to have fewer leaflets and are toothed.

**Similar non-native species:** Amur cork tree (*Phellodendron amurense*, see entry in this guide) has opposite, pinnately compound leaves and generally has fewer leaflets, corky bark, and berries.

**Control methods:** Seedlings can be pulled up; saplings can be pulled with a weed lever or cut, but re-sprouting will occur so follow-up will be necessary. Prioritize eradication of female trees. Larger trees can be cut, but will also re-sprout unless the cut stump is immediately treated with concentrated herbicide (glyphosate or triclopyr). Repeated follow-up cutting can control re-sprouting from cut stumps. Foliar spray can also be effective for seedlings, short saplings, or re-sprouts (glyphosate or triclopyr), as long as you can reach the top of the plant. For stems up to about 4-6" diameter, basal bark treatment can be effective any time of year (spray lower 18-24" of trunk with triclopyr in penetrating bark oil). Sap can cause dermatitis and more severe reactions. Wear gloves.



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