Tree-Of-Heaven, *Ailanthus altissima*

**Overview**

*Overview of Ailanthus altissima, Tree-Of-Heaven*

Short description of *Ailanthus altissima*, Tree-Of-Heaven

With large pinnate leaves, it resembles an ash, sumac or walnut. Less hairy than sumac, it has larger, more pinnate leaves than ash or walnut, with 11-25 pairs of leaflets, each 7-12 cm long. Unlike ash and walnut, it produces abundant sprouts from the roots. Broken twigs have a distinctive unpleasant smell.

**Description of Ailanthus altissima, Tree-Of-Heaven status in GB**

Tree-of-heaven is widely planted by streets and in parks. It escapes in SE England and is invasive in the London area.

**Habitat summary: Ailanthus altissima, Tree-Of-Heaven**

Mainly in urban areas, especially near parks and gardens, and in London along railways. It is also planted in the grounds and parks of country houses.

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**Invasion history: Ailanthus altissima, Tree-Of-Heaven**

**Origin**

Tree-of-heaven is native to China and north Vietnam.

**First Record**

It was introduced into cultivation in 1751, but not recorded from the wild until 1935.

**Pathway and Method**

Widely planted for ornament in SE GB during the 19th and early 20th centuries. It is tolerant of pollution and poor soils.

**Species Status**

At present, most English populations are confined to urban habitats of low conservation value. Tree-of-heaven is globally recognized as an invasive species, and listed by DAISIE as one of the 100 worst invasive species in Europe. It forms dense thickets by suckering, and suppresses other plant species via allelopathic effects. It has been reported to increase soil fertility.
Ecology & Habitat: *Ailanthus altissima*, Tree-Of-Heaven

**Dispersal Mechanisms**

Its winged seeds are dispersed up to 100 m by wind. Once established, it forms large clonal thickets by suckering from the roots. Suckers may appear up to 15 m from existing stems. It is sometimes sold by plant nurseries (25 entries in the RHS Plant Finder, 2010), and amateur gardeners are probably an still agent for transporting it over longer distances.

**Reproduction**

It is a dioecious species, with male and female flowers found on separate plants. Seed production in SE England and especially in London may be very large in warm summers, but may be low in N England and Scotland.

**Known Predators/Herbivores**

It is not significantly affected by insects in GB, or in much of its introduced range.

**Resistant Stages**

Seeds do not normally survive for more than a year, but have high viability in the spring following their production.

**Habitat Occupied in GB**

Its GB habitat is mainly urban, being abundant along railway lines in parts of London, and forming thickets elsewhere in parks, gardens and urban waste land. It is also planted in parkland in the countryside.

**Distribution: *Ailanthus altissima*, Tree-Of-Heaven**

Well established in the London area. Although signified as established in Scotland by Stace et al. (2003), it probably persists there by clonal growth rather than reproduction from seed.

**Impacts: *Ailanthus altissima*, Tree-Of-Heaven**

**Environmental Impact**

Its impact in GB is still relatively small, because it spreads mainly in man-made habitats of low conservation value. However, if the climate becomes warmer, it will increase rapidly in woods and parks. In warmer climates of southern Europe, it is highly invasive, excluding native vegetation by forming dense stands in woods and former grasslands. It maintains dominance by allelopathic exudates.

**Health and Social Impact**

The plant is mildly toxic; contact with the sap can produce dermatitis. More serious effects are rare. Tree-of-heaven is used extensively in Chinese traditional medicine.

**Economic Impact**

It is valued as a street tree in some London boroughs, which spend money on shaping individual specimens. There are as yet few if any reports of economic damage in GB. In southern Europe and N America its roots damage sewers, pavements, archaeological remains and the foundations of buildings. Because of its strongly suckering habit, it is costly to eradicate.

**References & Links: *Ailanthus altissima*, Tree-Of-Heaven**

**Identification**


**Biology, ecology, spread, vectors**


**Management and impact**


**General**
The best general reference is the Wikipedia article
http://en.wikipedia.org/wiki/Ailanthus_altissima

A detailed but rather technical account is the EPPO draft factsheet
http://www.eppo.org/QUARANTINE/ias_plants.htm

http://www.europe-aliens.org/speciesFactsheet.do?speciesId=16970

catalogue of the vascular plants of Great Britain, the Isle of Man and the Channel