

Invasive Plants in Pennsylvania

Japanese angelica-tree

Aralia elata



Kelly Stich, DCNR-BOF

Background:

Japanese angelica-tree is native to Japan, Korea, Manchuria and far eastern Russia. It was first introduced in 1830 as an ornamental species, but has begun to spread to natural areas through dispersal by birds.

Range:

This is a relatively new invasive species in Pennsylvania that is generating more attention as it's being found in the natural environment. Currently, it is known to occur in southern PA, as well as several northern counties. Due to its striking similarity to our native *Aralia spinosa*, it may often be overlooked.

Description:

This is an upright deciduous shrub or tree that can reach heights of 40 feet, with a spreading, multi-stemmed form. Thick stems and the trunk have sharp prickles and spines. The leaves are bi- or tri-pinnately compound with pubescence underneath. Cream white flowers in large panicles appear in late summer and ripen into small purplish-black fruits.

Habitat:

Japanese angelica-tree may be found in wood edges, open areas, thickets and disturbed grounds, especially near urban areas. It is common in the Philadelphia, New York City and Long Island areas, and becoming increasingly frequent in the Piedmont region of northern Delaware.

Ecological Threat:

Where observed, this species acts more aggressively than the native *A. spinosa*, replacing other native vegetation and reducing biodiversity. In places, this species is displacing *A. spinosa* and hybridization between the two species may also be occurring.



John M. Randall, The Nature Conservancy,

Biology and Spread:

Records of the North American native *Aralia spinosa* in Maryland and Delaware are now thought to have really been *Aralia elata*.

Japanese angelica-tree acts aggressively by sprouting from root sprouts, forming large competitive thickets. It spreads into uninvaded areas through bird dispersal of the berries.

How to Control this Species:

Because this species is not widely spread throughout the United States, very little treatment information is available.

According to the New Jersey Invasive Species Strike Team, Japanese angelica tree is best treated with herbicide, as it will prolifically sprout from only using mechanical treatments. Late season applications with glyphosate on the foliage or triclopyr ester on cut stumps is recommended for best control.

Brett Pifer, DCNR - BOF





Native *Aralia spinosa*

Chris Evans, River to River CWMA



Native *Aralia spinosa*

Chris Evans, River to River CWMA

Look-A-Likes:

The non-native Japanese angelica-tree can be very difficult to distinguish from the native *A. spinosa* (devil's walking stick). Both species have spines covering most of the plant, compound leaves, white flowers, black berries, and can grow to 40 feet tall.

The structure of the inflorescence is the most obvious distinguishing characteristic between the two. On Japanese angelica-tree, the flower is shorter, branching and with no central axis. On *A. spinosa*, the flower is longer with a distinct central axis.



Above: *Aralia elata* leaf underside

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Below: *Aralia elata* close-up of leaf underside

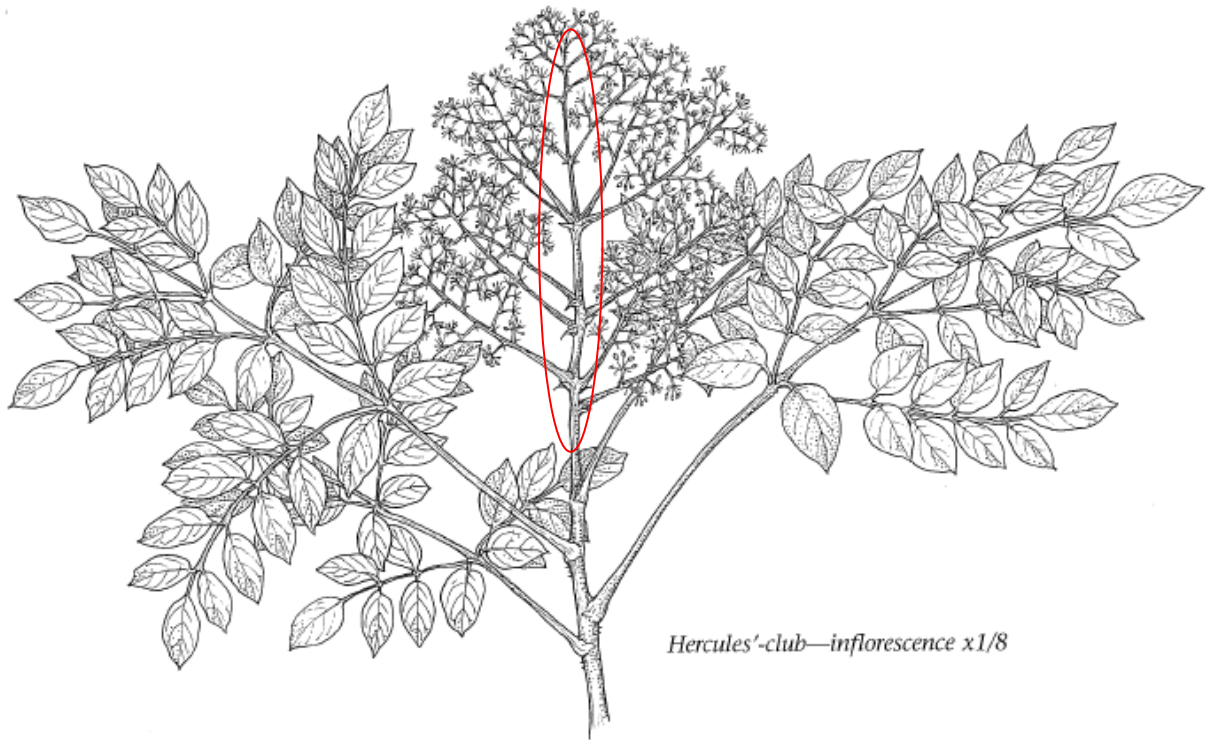


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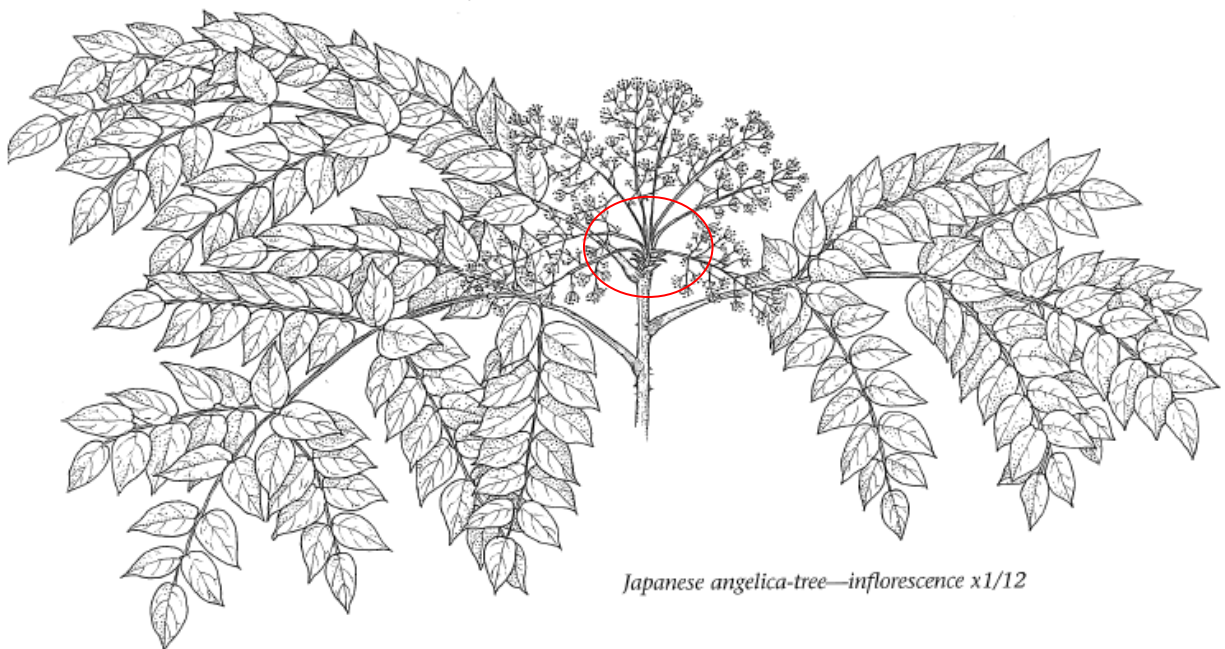
Aralia elata stem



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These two species are most easily identified when in flower and fruit. As demonstrated by these drawings from *Trees of Pennsylvania* by Ann Rhoads and Tim Block, the inflorescence of Hercules' club (above) is generated from an erect, central stem. However, the inflorescence of Japanese angelica-tree (below) radiate out from a central location and hang down on top of the leaves, but there is no central stem.



Japanese angelica-tree (*Aralia elata*)



angelica-tree in flower (August) – note the fountain-shaped flowering pattern with no central stem.



Long, black spines at leaf axis present early in growing season

Japanese angelica-tree (*Aralia elata*)



Devil's walkingstick in flower (August) – note the upright flowering pattern and central stem.

Japanese Angelica Tree Treatment Guidance

Angelica tree can only be certainly differentiated from devil's walkingstick during the flowering season (August).

If one or two small stems are found, these seedlings can be hand-pulled or dug; however, care must be taken to remove all root material or root suckers are likely. In any location where seedlings are pulled, monitor the site for new seedlings or re-sprouts from missed root fragments.

Both basal and foliar treatments for Angelica tree have been successful. Foliar applications should take place late July or August. A mix of 5% roundup with Oust at 0.2 oz per gallon can be applied. Care must be taken to achieve complete coverage. Angelica tree can be treated by basal bark application of triclopyr (garlon) and oil (pre-mixed sold as Pathfinder II). Each seedling/stem should be treated individually.

If the population is found late in the season, consider removing the flower/fruits from the stems if the population is small.