



## What You Can Do To Help

- Examine your hemlock for the presence of the tell-tale white, cottony masses on the underside of the branches where the needles attach. If you suspect HWA on your hemlock, please contact the nearest Michigan Department of Agriculture regional office: [www.michigan.gov/mda-offices](http://www.michigan.gov/mda-offices).
- Michigan law strictly regulates the movement of hemlock into the state. If you are in the nursery or landscape business, never accept hemlock from an out-of-state business without proper certification stating all of the following:
  - It originates from a county where HWA is not known to occur based on an official survey conducted in XXXX (year of survey – must be within three years of present).*
  - HWA is not known to occur in counties immediately adjacent to*

*the county of origin based on an official survey conducted in XXXX (year of survey – must be within three years of present).*

- The hemlock has not been held in a county known to be infested with HWA.*
- The hemlock have not been held or stored in the proximity of products from a regulated area.*
- If you are a homeowner purchasing hemlock, insist that the nursery provide you copies of the above certification. Better yet, insist on Michigan-grown hemlock.



Photo approx. 30x actual size

## Michigan Department of Agriculture

Pesticide & Plant Pest Management Division  
P.O. Box 30017  
Lansing, MI 48909

[www.michigan.gov/mda](http://www.michigan.gov/mda)

For Regional Offices: [www.michigan.gov/mda-offices](http://www.michigan.gov/mda-offices)



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# Hemlock Woolly Adelgid



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## Alert Information

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[www.michigan.gov/mda](http://www.michigan.gov/mda)



## Hemlock Woolly Adelgid

Hemlock woolly adelgid (HWA) is an insect pest native to Japan and China. It was first discovered in Virginia in 1951, and has since spread to Georgia and Maine, decimating hemlock stands across half the tree's native range in the eastern United States. This pest presents a critical threat to the future health of Michigan's forests.

### Biology And Damage

HWA is a small insect that feeds on hemlock branches and twigs by using its long, siphon-like mouth parts to extract sap, weakening the tree.



Photo by J. E. Zablotny, USDA, APHIS, PPQ

The tree takes on a grayish cast and, in the absence of control measures, can die in just a few years.



During the winter, HWA secretes a white, waxy covering over its body, making it look more like a tiny cotton ball than an insect. By

late winter, HWA begin laying eggs inside this woolly mass. Some HWA hatching from these eggs will be wingless and never leave the tree;

others will have wings and fly in search of spruce trees, an alternate host for HWA. Fortunately, HWA cannot survive on North American spruce trees.

### Identifying Hemlock Woolly Adelgid

Hemlock woolly adelgid are best identified by the white, cottony masses produced in the winter. HWA can be distinguished from other insects and spider egg cases because it will *always* be found

on a branch or twig at the base of a needle. It will *never* be found on the



Photo by J.E. Zablotny, USDA, APHIS, PPQ

needle itself. The insect is more difficult to detect in the summer because it appears as a tiny black speck with a white halo around its body requiring a hand lens or magnifying glass to find it.

### Hemlock And Its Importance

In North America, HWA can only survive on hemlock trees. Hemlock trees are distinguished from other Michigan conifers by their flattened rows of short, flat needles arising from the sides of the branches. The needles are rounded at the end, soft to the touch, the undersides are whitish in color, and Hemlock cones are small – an inch long or less.



Michigan's hemlock trees, a majestic component of our northern forests, number more than 100 million. Across millions of forested acres, the

trees provide crucial habitat for birds, mammals, and even fish (trout thrive in the cool streams draining hemlock forests). These giants can live 800 years, and as one of the most shade tolerant tree species, they rejuvenate the darkest corners of the forest.

Michigan's dense, dark hemlock forests are part of the beauty and lure of the state's North Woods.

*"This is the forest primeval.  
The murmuring pines and  
the hemlocks, bearded  
with moss, and in garments  
green, indistinct in  
the twilight..."*

- Longfellow

