

Forest Pest Handbook

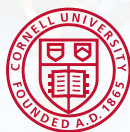
Basic information on disease and insect pests of forest trees



New York State
Integrated Pest Management
Program



**Agriculture
and Markets**



Cornell Cooperative Extension

Forest Pest Handbook

Basic information on disease and insect pests of forest trees

Compiled by Jennifer Stengle Lerner.

Edited by Elizabeth Lamb, with the assistance of Lori Brewer, Kristina Ferrare, Laurel Gailor, Emily Staychock, and Linda Svoboda.

Produced by the New York State Integrated Pest Management Program, with support from the New York State Department of Agriculture and Markets, and Cornell Cooperative Extension.

These materials were compiled as part of a grant from the NYS Department of Agriculture and Markets. Information changes over time. This information was accurate at the time of printing. If you find newer or more accurate information, please contact Elizabeth Lamb, eml38@cornell.edu.

New York State Law includes Article 14 covering the prevention and control of injurious insects, noxious weeds, and plant diseases. <https://www.agriculture.ny.gov/PI/article14.htm>

This binder includes information on:

Asian gypsy moth	Pine shoot beetle
Asian longhorned beetle	Rhizosphaera needlecast disease
Bacterial leaf scorch	Sirex woodwasp
Balsam woolly adelgid	Southern pine beetle
Brown spruce longhorned beetle	Spotted lanternfly
Dogwood anthracnose	Spotted wing drosophila
Elongate hemlock scale	Sudden oak death
Emerald ash borer	Thousand cankers disease
European gypsy moth	Velvet longhorned beetle
Hemlock woolly adelgid	Viburnum leaf beetle
Jumping worms	White pine needle damage
Norway spruce shoot gall midge	Winter moth
Oak wilt	

New York State Regulations on the Moving of Firewood

New York State Resources

Partnerships for Regional Invasive Species Management

Abbreviations used:

Ag and Markets: New York State Department of Agriculture and Markets, Division of Plant Industry

DEC: New York State Department of Environmental Conservation

Cover photo: Eastern white pine, *Pinus strobus*, Lal Beral; https://c2.staticflickr.com/6/5824/24115271545_49d20619b0_b.jpg; CC BY-NC 2.0. Altered by Karen English, NYS IPM Program.



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July 2017

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- New York State Regulations on the Moving of Firewood
- New York State Resources
- Partnerships for Regional Invasive Species Management



Asian gypsy moth

Quarantine status: Under active survey in some states

Also called: AGM

Scientific name: AGM is a group of species - *Lymantria dispar asiatica*, *Lymantria dispar japonica*, *Lymantria albescens*, *Lymantria umbrosa*, and *Lymantria postalba*

Type of pest: insect

This insect is not yet found in NYS

How was this pest introduced to North America, US, Northeast or New York?

AGM was first identified in North America in late 1991 near the Port of Vancouver in British Columbia, Canada. Since 1991, there have been 20 detections of the pest in the US that have all been eradicated. In 2015, AGM moths were caught in survey traps in Washington State, Oregon, South Carolina and Georgia.

AGM infestations spread in several ways. Unlike European gypsy moths, female AGM moths can fly long distances. Newly hatched AGM caterpillars may climb to tree crowns, where the wind picks up their silken threads and carries them to other areas. In addition, people can inadvertently transport egg masses on nursery stock or non-plant material like pallets or lawn furniture.

Characteristics for pest ID:

Asian and European gypsy moths are morphologically identical. Egg masses may be found on trees, rocks and other surfaces. They are light tan, and the eggs inside are black and pellet like. The larval stage (caterpillar) is hairy, and a mature larva is 2-2.5 inches (50-65 mm) long with a yellow and black head. Behind the head on the thorax and abdomen are five pairs of blue spots (tubercles) followed by six pairs of brick red spots. The pupal stage is dark reddish-brown and is held in place to some object by small strands of silk. Male moths are dark buff and females are white with black, wavy markings.

Which species does this pest damage?

Wide host range (over 500 species) including: Larch (<i>Larix</i>) Oak (<i>Quercus</i>) Poplar (<i>Populus</i>)	Alder (<i>Alnus</i>) Willow (<i>Salix</i>) Conifers
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If evidence of pest or damage is found, who should be told?

In NYS, if you suspect an invasive insect or pathogen, contact DEC Forest Health. You may wish to take a picture and email the NYS DEC Forest Health office at foresthealth@dec.ny.gov or call 1-866-640-0652. Invasive forest pests can also be reported through NY iMap Invasives with the help of your educator or coordinator. If you collect a sample that needs to be sent to a lab for verification, please carefully follow the lab's protocol for packaging and shipping. You may also

call your local Cornell Cooperative Extension office they will help you take the appropriate steps.

Select resources:

USDA Pest Alert: Asian Gypsy Moth

https://www.aphis.usda.gov/publications/plant_health/content/printable_version/fs_phasiangm.pdf

Cooperative Agricultural Pest Survey – New York :

<https://www.agriculture.ny.gov/CAPS/pdf/Asian%20Gypsy%20Moth%20Pest%20Alert.pdf>

Where has the pest been found? AGM moths were caught in survey traps in Washington State, Oregon, South Carolina and Georgia but the populations were eradicated. It is not considered to be present in the US at this time.



Asian gypsy moth adult
(*Lymantria dispar asiatica*)
Photo: John Ghent, John
Ghent,Bugwood.org



Asian gypsy moth larva
(*Lymantria dispar asiatica*)
Photo: John Ghent, John
Ghent,Bugwood.org



Asian longhorned beetle

Quarantine status: Currently, 137 square miles of New York City and Long Island are under quarantine (see map). There are also quarantine zones in Massachusetts and Ohio.

Also called: ALB

Scientific name: *Anoplophora glabripennis*

Type of pest: Insect

How was this pest introduced to North America, US, Northeast or New York?

It is believed that ALB spread from Asia in solid wood packaging material and was first identified in the U.S. in 1996 in Brooklyn, NY. Adult beetles can fly for 400 yards or more. In closed, dense canopies beetles may spread rapidly. In isolated urban settings, they may stay close to the tree from which they emerged. Firewood should not be moved from quarantined areas.

Characteristics for pest ID:

Adult beetles are large, distinctive-looking insects measuring 1 to 1.5 inches in length with long antennae. Their bodies are black with small white spots, and their antennae are banded in black and white.

Symptoms on trees:

- **Exit holes** – In the warmer months the adult beetles chew their way out of the tree leaving, ¼ inch or larger, perfectly round exit holes (large enough to admit a standard pencil).
- **Egg sites** – These look like little wounds on the tree, and you can sometimes see the chew marks on the edges.
- **Frass** – Sawdust-like material or excrement on the ground or on the tree branches.
- **Tunneling** – Larva tunnels into woody tree tissue.

Additional symptoms include weeping sap from wounds or egg sites, unseasonable yellowing of leaves – suggesting tree is under stress or branches dropping or dying.

Which species does this pest damage?

Ash (<i>Fraxinus</i>)	Horsechestnut/buckeye (<i>Aesculus</i>)
Birch (<i>Betula</i>)	Katsura (<i>Cercidiphyllum</i>)
Elm (<i>Ulmus</i>)	Mountain ash (<i>Sorbus</i>)
Golden raintree (<i>Koelreuteria</i>)	Poplar (<i>Populus</i>)
Maple (<i>Acer</i>)	Willow (<i>Salix</i>)

If evidence of pest or damage is found, who should be told?

In NYS: If you think you have an ALB, take a picture and email it to the DEC Forest Health office or call 1-866-640-0652. Keep the suspect beetle in a container in your freezer in case it is ALB. It will need to be sent to a lab for verification. You may also call local Cooperative Extension office

Select resources:

USDA APHIS:

ALB page - <https://www.aphis.usda.gov/aphis/resources/pests-diseases/asian-longhorned-beetle/About-ALB>

Asian Long Horned Beetle: An Invasive Tree Pest

https://www.aphis.usda.gov/publications/plant_health/2016/book-alb.pdf

Maps - https://www.aphis.usda.gov/aphis/ourfocus/planthealth/plant-pest-and-disease-programs/pests-and-diseases/asian-longhorned-beetle/ct_alb_maps

Where has the pest been found?

Infestations have been found in three States: New York, Massachusetts and Ohio (map for NY below).



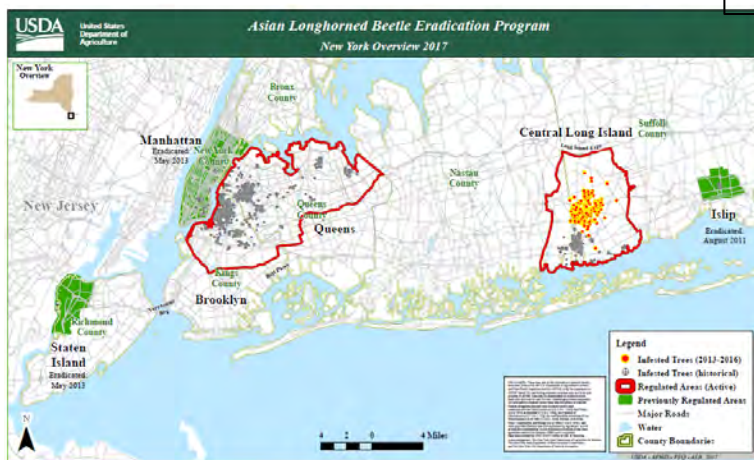
Adults

USDA APHIS PPQ, USDA APHIS
PPQ, Bugwood.org



Exit holes and egg sites

Photo: Dennis Haugen, USDA Forest
Service, Bugwood.org



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This content was updated June 2017



Bacterial leaf scorch

Quarantine status: No quarantine in NYS at this time

Also called: BLS

Scientific name: *Xylella fastidiosa*

Type of pest: disease

List any known vectors (organisms that transmit the disease): Sharpshooter leafhoppers and (less likely) spittle bugs

How was this pest introduced to North America, US, Northeast or New York?

There is little information on when BLS arrived in the US or if it developed here. It is one of a group of diseases caused by the xylem-limited bacterium – *Xylella fastidiosa*. While it is not new, it is appearing more frequently in landscape trees.

Characteristics for pest ID:

Leaves on diseased trees begin to scorch in an irregular pattern along leaf margins in summer and fall. During early stages of the disease, leaves on one or more branches are symptomatic. As the disease progresses, the canopy thins and branches die. Affected oaks may enter a long period of decline during which branches that pose a hazard must be removed. Other shade trees, such as elm, may be killed outright.

Which species does this pest damage?

Oak (<i>Quercus</i>)	Alfalfa (<i>Medicago sativa</i>)
Sycamore (<i>Platanus occidentalis</i>)	Citrus (<i>Citrus</i>)
London plane (<i>Platanus x acerifolia</i>)	Coffee (<i>Coffea</i>)
Sweetgum (<i>Liquidambar styraciflua</i>)	Grape (<i>Vitis vinifera</i>)
Elm (<i>Ulmus</i>)	Peach (<i>Prunus persica</i>)
Mulberry (<i>Morus</i>)	Plum (<i>Prunus spp.</i>)
Maple (<i>Acer</i>)	

If evidence of pest or damage is found, who should be told?

In NYS this pest is being tracked through NYS Ag and Markets Cooperative Agricultural Pest Survey (CAPS). If you suspect this pest, fill out the online form at:

<https://www.agriculture.ny.gov/capsreport.html>

You may also call your local Cornell Cooperative Extension office. They will help you take the appropriate steps.

Select resources:

CAPS – New York - Bacterial Leaf Scorch Pest Alert

<https://agriculture.ny.gov/caps/pdf/Bacterial%20Leaf%20Scorch%20Pest%20Alert.pdf>

US National Arboretum Floral and Nursery Crops Research Unit – Bacterial Leaf Scorch of Shade Trees

www.usna.usda.gov/Research/BacterialLeafScorch.html

USDA Forest Service Pest Alert – Bacterial leaf scorch affects NJ state tree

https://www.na.fs.fed.us/spfo/pubs/pest_al/leaf/leaf.pdf

Poster - “Alert!” - Pdf Format, NYS Agriculture & Markets, CAPS Plant Industry:

<https://agriculture.ny.gov/caps/pdf/Bacterial%20Leaf%20Scorch%20Poster.pdf>

Where has the pest been found? It has been found in coastal US states from New York to Texas, as well as in California, Indiana, Kentucky, Nebraska and Ohio.



Bacterial leaf scorch *Xylella fastidiosa* on oak
Photo: Nancy Gregory, University of Delaware,
Bugwood.org



Xylella fastidiosa on oak
Photo: Randy Cyr, Greentree, Bugwood.org



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Balsam woolly adelgid

Quarantine status: No quarantine in NYS at this time

Also called: BWA

Scientific name: *Adelges piceae*

Type of pest: insect

How was this pest introduced to North America, US, Northeast or New York?

The balsam woolly adelgid (BWA) is a tiny sucking insect introduced into North America from Europe. It probably first entered the Northeastern United States and Southeastern Canada around 1900. It can be transported on infested nursery stock, Christmas trees, cut boughs and decorations. First instar crawlers can also be blown long distances. As is frequent with adelgids, BWA are all females, reproducing asexually.

Characteristics for pest ID:

The adelgid is very small, about 1/32 inch (1mm) or less in length. They feed during the summer on the phloem tissue of stems and branches producing white, waxy wool on the dorsal surface of their bodies. They can rapidly kill trees when they feed on the main stems. BWA can also persist in the upper crown of trees feeding on twigs for many years causing the canopy to thin out in the lower half of the upper third of the tree. When BWA feeds on twigs it frequently causes stunting of the terminal growth and distinct swelling of the nodes and terminal referred to as “gouting”.

Which species does this pest damage?

Firs (<i>Abies</i> sp.) especially <i>Abies balsamea</i>	
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If evidence of pest or damage is found, who should be told?

In NYS, if you suspect an invasive insect or pathogen, contact DEC Forest Health. You may wish to take a picture and email the NYS DEC Forest Health office at foresthealth@dec.ny.gov or call 1-866-640-0652. Invasive forest pests can also be reported through NY iMap Invasives with the help of your educator or coordinator. If you collect a sample that needs to be sent to a lab for verification, please carefully follow the lab's protocol for packaging and shipping. You may also call your local Cornell Cooperative Extension office; they will help you take the appropriate steps.

Select resources:

USDA Forest Service - Forest Insect & Disease Leaflet 118 -

<https://www.na.fs.fed.us/pubs/fidls/bwa.pdf>

Virginia Cooperative Extension Balsam Woolly Adelgid

http://pubs.ext.vt.edu/3006/3006-1452/3006-1452_pdf.pdf

Where has the pest been found? Throughout NY where balsam fir are present



Adelgids on bark
Photo: Mark Whitmore,
Cornell Univ.



"Gouting" on twigs
Photo: Mark Whitmore, Cornell
Univ.



Canopy thinning on balsam fir in the
Adirondacks.
Photo: Mark Whitmore, Cornell Univ.



Brown spruce longhorned beetle

Quarantine status: In Canada, where it occurs

Scientific name: *Tetropium fuscum*

Type of pest: insect

This insect is not yet found in the US.

How was this pest introduced to North America, US, Northeast or New York?

Native to Europe and Asia, the Brown Spruce Longhorned Beetle was first discovered in Nova Scotia, Canada in 1990 near a container port, probably coming in on wood packing material. It has also been found in New Brunswick. It is considered of high invasive risk to the US.

Characteristics for pest ID:

Adults have a black or dark-brown head covered with long hairs and thin, reddish-brown antennae (visibly segmented). The beetle ranges in size from 1/3-3/4 of an inch (8-19 mm) long, with an elongated, flattened body. Larvae feed on the inner bark and sapwood along the entire stem. However, the lower portions of the trunk are the most heavily infested.

Symptoms of attack include resin oozing on trunk, and 1/5 inch (4mm) oval or round exit holes.

Which species does this pest damage?

Spruce (<i>Picea</i>) (primary host)	Pine (<i>Pinus</i>)
Fir (<i>Abies</i>)	Larch (<i>Larix</i>)

If evidence of pest or damage is found, who should be told?

In NYS, if you suspect an invasive insect or pathogen, contact DEC Forest Health. You may wish to take a picture and email the NYS DEC Forest Health office at foresthealth@dec.ny.gov or call 1-866-640-0652. Invasive forest pests can also be reported through NY iMap Invasives with the help of your educator or coordinator. If you collect a sample that needs to be sent to a lab for verification, please carefully follow the lab's protocol for packaging and shipping. You may also call your local Cornell Cooperative Extension office; they will help you take the appropriate steps

Select resources:

Natural Resources Canada - Brown spruce longhorn beetle

<http://www.nrcan.gc.ca/forests/fire-insects-disturbances/top-insects/13373>

Michigan State University - Brown spruce longhorned beetle -

http://www.ipm.msu.edu/uploads/files/Forecasting_invasion_risks/brnSpruceLonghornBeetle.pdf

Where has the pest been found? Nova Scotia and New Brunswick



Adult beetle
Photo: Nathan Lord,
Longicorn ID, USDA APHIS
ITP, Bugwood.org



Resin oozing
Photo: Jon Sweeney, Natural
Resources Canada, Bugwood.org



Dogwood anthracnose

Quarantine status: No quarantine in NYS at this time

Scientific name: *Discula destructiva*

Type of pest: disease

List any known vectors (organisms that transmit the disease): none

How was this pest introduced to North America, US, Northeast or New York?

Dogwood anthracnose was first reported in the US in 1978, although the origin of the pathogen is unknown.

Fungal spores overwinter in cankers, infected twigs and debris. These are dispersed by rain or air currents and colonize new growth during cool, wet periods in spring. Drought and other stresses predispose trees to dogwood anthracnose but extended rainy periods in cooler months promote its development and spread. Trees in sunny open sites with ample air circulation are less susceptible than those in dense, shady plantings.

Characteristics for pest ID:

Early symptoms include leaf spots and brown or reddish spots on foliage. Infected leaves will persist on the tree through fall and winter. As the disease progresses, tan sunken cankers form on twigs and, in severe cases, larger branches. If left untreated, they will girdle the stems and cause dieback. Epicormic shoots may form on infected branches and trunks.

There is another anthracnose that affects dogwood – spot anthracnose, caused by *Elsinoe corni*. Leaf symptoms can be similar to the anthracnose caused by *Discula*, but the disease is usually not as severe.

Which species does this pest damage?

Flowering dogwood (<i>Cornus florida</i>) Korean dogwood (<i>Cornus kousa</i>) (less susceptible)	Pacific dogwood (<i>Cornus nuttallii</i>) uncommon in eastern U.S.
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If evidence of pest or damage is found, who should be told?

This disease is now widespread on the East Coast (and Pacific Northwest). It is considered endemic and does not need to be reported.

Select resources:

Horticulture Diagnostic Laboratory, Cornell - Anthracnose of Flowering Dogwood

<https://s3.amazonaws.com/assets.cce.cornell.edu/attachments/2169/Anthracnose-of-Flowering-Dogwood.pdf?1408632519>

The Connecticut Agricultural Experiment Station – Dogwood Anthracnose

<http://www.ct.gov/caes/cwp/view.asp?A=2815&Q=376910>

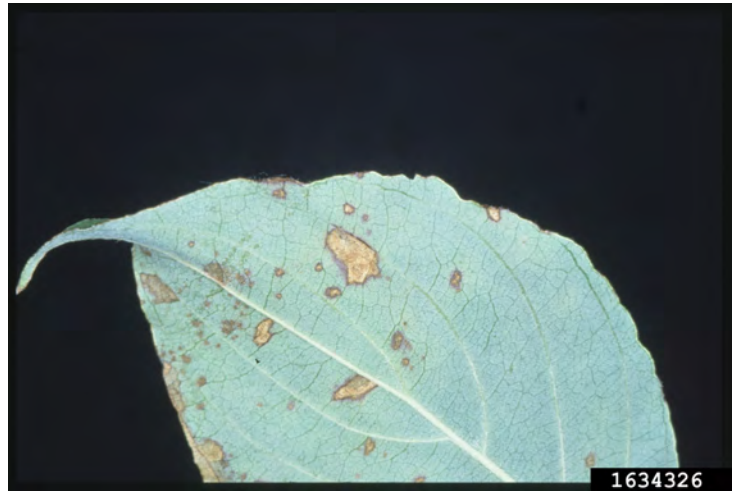
Where has the pest been found? Endemic throughout Northeastern U.S., Southeast and some Midwestern states.

<https://www.fs.fed.us/nrs/tools/afpe/maps/pdf/DWA.pdf>



Symptoms on bracts

Photo: Clemson University - USDA
Cooperative Extension Slide Series,
Bugwood.org



Leaf lesions

Photo: Penn State Department of Plant
Pathology & Environmental Microbiology
Archives, Penn State University,
Bugwood.org



Canker symptoms (bark peeled
away)

Photo: Robert L. Anderson,
USDA Forest Service,
Bugwood.org



Elongate hemlock scale

Quarantine status: No quarantine in NYS at this time

Also called: EHS

Scientific name: *Fiorinia externa*

Type of pest: insect

How was this pest introduced to North America, US, Northeast or New York?

It is believed that this armored scale insect was unintentionally introduced into the United States from Japan. It was first observed in Queens, New York in 1908. This pest occurs in Connecticut, Maryland, Massachusetts, New Jersey, New York, Ohio, Rhode Island, and Virginia. It can be transported on nursery stock (see host list below).

The elongate hemlock scale, sometimes known as the fiorinia scale, is an armored scale insect (it has a waxy protective coating) and is a pest primarily of hemlock trees, *Tsuga* spp., in both managed landscape, Christmas tree plantations and forests. Frequently, this key pest is found on the same hemlock tree with hemlock woolly adelgid, *Adelges tsugae*.

Characteristics for pest ID:

The adult female scale is flattened, elongate, about 1/16 inch (1.5mm) long and covered with a light yellow brown to brownish orange waxy cover. Adult males may look like tiny wasps as they crawl across the needles.

Scales injure host plants by inserting their threadlike, piercing-sucking mouthparts into needles and withdraw nutrients necessary for plant growth. This injury causes needles to turn yellow and drop prematurely making the tree's crown look "thin." As this pest can be found on the same trees as hemlock woolly adelgid, it is important to accurately identify which pest species is present.

Which species does this pest damage?

Primary Hosts: Eastern hemlock (<i>Tsuga canadensis</i>) Northern Japanese hemlock (<i>T. diversifolia</i>) Carolina hemlock (<i>T. caroliniana</i>) Fir (<i>Abies</i> spp) Spruce (<i>Picea</i> spp)	Secondary Hosts: Cedar (<i>Cedrus</i> spp.) Douglas-fir (<i>Pseudotsuga menziesii</i>) Pine (<i>Pinus</i> spp.) Yew (<i>Taxus</i> spp.)
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If evidence of pest or damage is found, who should be told?

This species is listed in the NY iMap Invasives database. It may be widespread, and may be underreported. In NYS, if you suspect an invasive insect or pathogen, contact DEC Forest Health. You may wish to take a picture and email the NYS DEC Forest Health office at foresthealth@dec.ny.gov or call 1-866-640-0652. If you collect a sample that needs to be sent to a lab for verification, please carefully follow the lab's protocol for packaging and shipping.

You may also call your local Cornell Cooperative Extension office; they will help you take the appropriate steps

Select resources:

Penn State Elongate Hemlock Scale fact sheet -

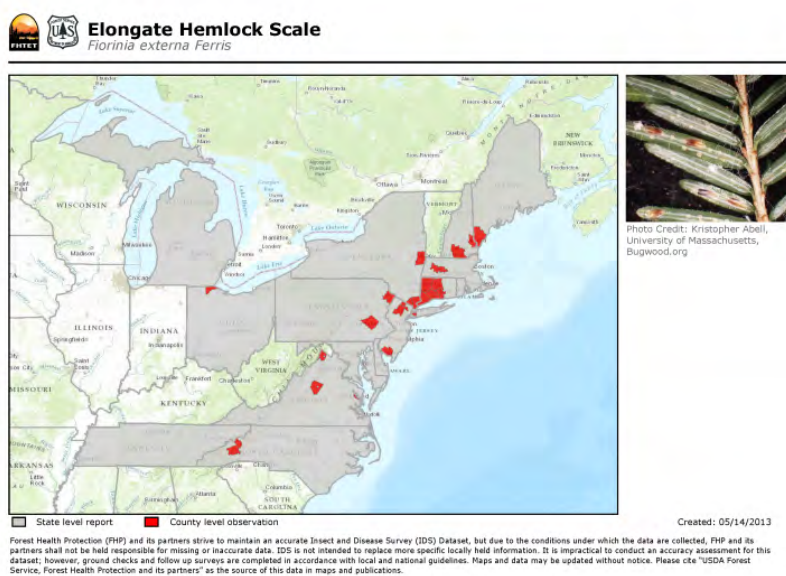
<http://ento.psu.edu/extension/factsheets/elongate-hemlock-scale>

USDA Pest Alert

https://www.na.fs.fed.us/spfo/pubs/pest_al/ehscale/ehscale.htm

Where has the pest been found?

(EHS is more widespread in NYS than this map suggests)



Adult female scale insects below midrib. Earlier instars above midrib.

Photo: Richard Cowles, Conn.

Agric. Expt. Station,
Bugwood.org



Elongate hemlock scale insects on the undersurface of hemlock needles.

Photo: Eric R. Day, Virginia Polytechnic
Institute and State University, Bugwood.org



Emerald ash borer

Quarantine status: Yes, see: <http://www.dec.ny.gov/animals/47761.html>

Also called: EAB

Scientific name: *Agrilus planipennis*

Type of pest: insect

How was this pest introduced to North America, US, Northeast or New York?

Emerald ash borer (*Agrilus planipennis*) was first discovered in the U.S. in 2002 in southeastern Michigan. It was also found in Windsor, Ontario the same year. It was most likely imported from Asia in solid wood packing material where larvae or pupae were present. This insect is a strong flier, but its rapid long-distance spread can be attributed to the movement of firewood, wood packing materials, and nursery stock.

Characteristics for pest ID:

Adult EAB are a bright metallic emerald green color and can be found from late May to mid-August. The dorsal side (back) of the abdomen, which can be seen when the wings are spread, is a metallic purplish red. Adult EAB average 3/8 inch to 3/4 inch (10 mm to 20 mm) long and 1/6 inch (4 mm) wide (males are slightly smaller than females).

Symptoms may take years to present. Be on the lookout for

1. Wood-pecker damage to ash trees (not cavity building but bark thinning (blonding))
2. Vertical splits in bark: caused by feeding of larvae beneath bark and subsequent tree growth
3. Epicormic shoots (aka sucker sprouts) on trunk as larvae disrupt nutrient/water flow and canopy fails
4. "D" shaped exit holes in bark where adults have emerged (may be hard to see)
5. "S" shaped galleries and larvae present beneath bark
6. Canopy thinning as EAB population builds up

Which species does this pest damage?

Black ash (<i>Fraxinus nigra</i>)	White ash (<i>F. americana</i>)
Green ash (<i>F. pennsylvanica</i>)	Fringe Tree (<i>Chionanthus virginicus</i>)
Blue ash (<i>F. quadrangulata</i>)	

For ash identification: http://www.nyis.info/index.php?action=eab_ash_tree_identification

If evidence of pest or damage is found, who should be told?

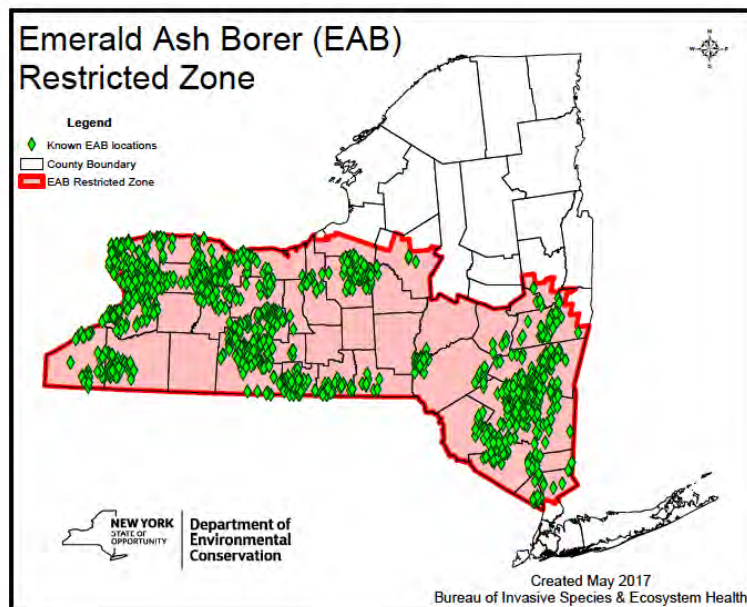
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help of your educator or coordinator. If you collect a sample that needs to be sent to a lab for verification, please carefully follow the lab's protocol for packaging and shipping. You may also call your local Cornell Cooperative Extension office; they will help you take the appropriate steps.

Select resources:

NYS DEC webpage: <http://www.dec.ny.gov/animals/7253.html>

NY invasive species clearing house, EAB: <http://www.nyis.info/index.php?action=eab>



Where has the pest been found?



Epicormic shoots on trunk
Photo: Joseph O'Brien,
USDA Forest Service
Bugwood.org



Adult beetle
Photo: Leah Bauer,
USDA Forest Service
Northern Research
Station Bugwood.org



D-shaped exit holes with
adults emerging
Photo: Debbie Miller, USDA
Forest Service,
Bugwood.org



European gypsy moth

Quarantine status: No quarantine in NYS at this time

Also called: Gypsy moth

Scientific name: *Lymantria dispar dispar*

Type of pest: insect

How was this pest introduced to North America, US, Northeast or New York?

The gypsy moth was accidentally introduced into Massachusetts in 1869. By 1902 this pest was widespread in the New England states, eastern New York, and regions of New Jersey. Female will lay egg masses on bark, firewood, exterior of campers and outdoor equipment and be easily transported.

The gypsy moth is an important insect pest of forest and shade trees in the eastern United States. Heavy defoliation by the larval stage of this pest causes stress to infested host plants. Young larvae feed on foliage and remain on host plants night and day. In late May when about half-grown, larvae change their behavior and usually feed in the trees at night, and move down to seek shelter in bark crevices or other protected sites during the day.

Characteristics for pest ID:

Egg masses may be found on trees, rocks and other surfaces. They are light tan, and the eggs inside are black and pellet like. Each mass may contain 400-600 eggs. The larval stage (caterpillar) is hairy, and a mature larva is 2-2.5 inches (50-65 mm) long with a yellow and black head. Behind the head on the thorax and abdomen are five pairs of blue spots (tubercles) followed by six pairs of brick red spots. The pupal stage is dark reddish-brown and is held in place to some object by small strands of silk. Male moths are dark buff and fly readily during the day. Females are white with black, wavy markings, have robust abdomens, wingspans up to 2 inches (50 mm) but do not fly. Look for defoliation of host trees. You may also hear frass dropping from trees, but that may come from other species of caterpillars feeding as well. Caterpillars may move down into bark crevices during daytime and return to canopy feed at night.

Which species does this pest damage?

Alder (<i>Alnus spp.</i>)	Lombardy poplar (<i>Populus nigra</i>)
Aspen (<i>Populus spp.</i>)	Willows (<i>Salix spp.</i>)
Gray birch (<i>Betula populifolia</i>)	Witch-hazel (<i>Hamamelis spp.</i>)
White birch (<i>B. papyrifera</i>)	Beech (<i>Fagus spp.</i>)
Hawthorn (<i>Crateagus spp.</i>)	Red cedar (<i>Juniperus spp.</i>)
Larch (<i>Larix spp.</i>)	Chestnut (<i>Castanea spp.</i>)
Linden (<i>Tilia spp.</i>)	Hemlock (<i>Tsuga spp.</i>)
Mountain ash (<i>Sorbus spp.</i>)	Plum (<i>Prunus spp.</i>)
Oaks (<i>Quercus spp.</i>)	Pine (<i>Pinus spp.</i>)

If evidence of pest or damage is found, who should be told?

In NYS, if you suspect an invasive insect or pathogen, contact DEC Forest Health. You may wish to take a picture and email the NYS DEC Forest Health office at foresthealth@dec.ny.gov or call 1-866-640-0652. Invasive forest pests can also be reported through NY iMap Invasives with the help of your educator or coordinator. If you collect a sample that needs to be sent to a lab for verification, please carefully follow the lab's protocol for packaging and shipping. You may also call your local Cornell Cooperative Extension office; they will help you take the appropriate steps

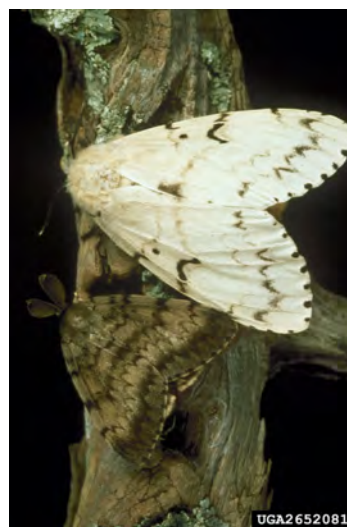
Select resources:

Penn State College of Agricultural Sciences Department of Entomology Gregory A. Hoover, Sr., December 2000, <http://ento.psu.edu/extension/factsheets/gypsy-moth>

Where has the pest been found? Throughout the northeastern United States. Most active in oak forests of PA and Hudson Valley.



Gypsy moth caterpillar on leaf *Lymantria dispar* (Linnaeus)
Photo: J.H. Ghent - USDA Forest Service;
UGA0488026b, Bugwood.org



Male (darker) and Female (lighter)
Gypsy Moth
Photo: USDA APHIS PPQ, USDA
APHIS PPQ, Bugwood.org



Gypsy moth egg mass
Photo: Pennsylvania Department of
Conservation and Natural _Resources -
Forestry, Bugwood.org



Hemlock woolly adelgid

Quarantine status: No quarantine in NYA at this time

Also called: HWA

Scientific name: *Adelges tsugae*

Type of pest: insect

How was this pest introduced to North America, US, Northeast or New York?

HWA is native to the Pacific Northwest. It was detected on the east coast near Richmond, Virginia in 1951 and in New York State in 1985. It was probably imported to the east coast on nursery stock from Japan in the early 1900's. This insect can be spread by wind, birds and other wildlife, and on nursery stock.

Characteristics for pest ID:

HWA is a serious pest of hemlocks in the eastern US. It is a tiny aphid-like insect that produces white, waxy wool on the back (dorsal) surface of its body to protect it during cold weather as it is active in winter. It looks like a tiny ball of cotton where needles attach on twigs of hemlock trees. There are two generations a year, the first growing through winter and into spring and the second completing development in early June. In North America there only females are produced so one individual can start an infestation. During summer and early fall it is in a state of inactivity (aestivation), remaining very tiny, without the waxy fluff. It will begin to grow and produce waxy fibers in October. The best time for HWA detection is between January and May, but remnants of the white waxy wool can be found at all times of year. You can find it by looking at the undersides of hemlock branches.

You may also be able to spot the small, ovoid, orange eggs (using a hand lens) in April or June.

Which species does this pest damage?

Eastern hemlock (<i>Tsuga canadensis</i>)	Carolina hemlock (<i>Tsuga caroliniana</i>)
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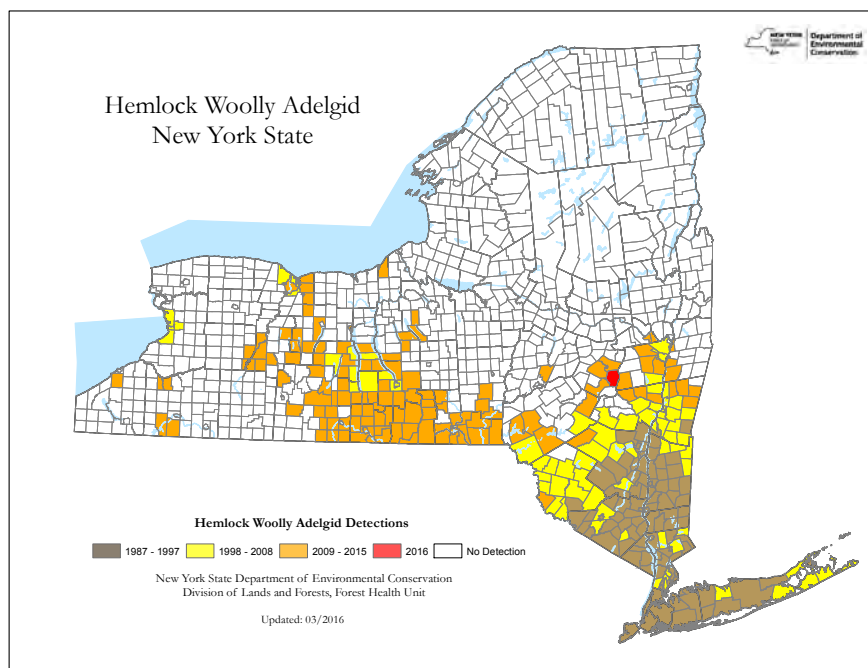
If evidence of pest or damage is found, who should be told?

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Select resources:

NYS DEC Hemlock Woolly Adelgid <http://www.dec.ny.gov/animals/7250.html>

NYS Hemlock Initiative: <https://blogs.cornell.edu/nyshemlockinitiative/>



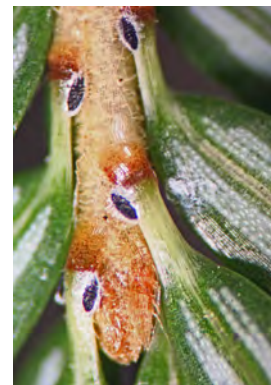
Where has the pest
been found?



Adelgids with woolly
covering
Photo: Mark Whitmore,
Cornell University



Eggs
Photo: Shimat Joseph,
University of Georgia,
Bugwood.org



Aestivating first instars
Photo: Mark Whitmore, Cornell
University



**Agriculture
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Jumping worms

Quarantine status: No quarantine in NYS at this time but all *Amyntas* spp. (Asian earthworms) are listed as a prohibited invasive animal (cannot be sold, transported, purchased).

Also called: crazy worms, snake worms, Alabama jumpers

Scientific name: *Amyntas agrestis*

Type of pest: annelid worm

How was this pest introduced to North America, US, Northeast or New York?

Introduced from Asia, these worms are spread into new locations as live worms or worm cocoons in soil, compost, containerized plants and transplanted trees. They may also be spread in soil on tires, hiking boots, and garden tools. Although it is prohibited, they may sometimes be sold as fishing worms. Jumping worms reproduce asexually – only one worm is needed to start a new infestation.

Characteristics for pest ID:

Jumping worms look similar to other earthworms, but they do have some features that assist with identification. The brown to dark brown skin is smoother and shinier than that of European earthworm species commonly found in New York State. The clitellum (band-like segment) of jumping worms is gray, smooth and completely circles the body, unlike the raised, saddle-shaped clitellum of other common earthworms.

Jumping worm behavior, as the name implies, can also help with identification. When disturbed or handled they actively thrash and flip, slither snake-like, and may shed their tails.

Which species does this pest damage?

Jumping worms don't directly damage any species. Instead they infest forests, grasslands, agricultural/horticulture fields and home landscapes. Their presence can lead to the rapid decay of forest leaf litter and organic mulches used on agricultural and horticultural plants. Copious amounts of worm casts are produced, resulting in a grainy soil that can hinder seed germination and lead to increased erosion and nutrient runoff.

If evidence of pest or damage is found, who should be told?

Report this species at NY iMap Invasives at <http://www.nyimainvasives.org/>. Researchers interested in this species have alerts set up that will inform them of new reports. This species is most likely underreported so please report if you suspect *Amyntas agrestis*.

Select resources:

- NYS Invasive Species Research Institute webinar "Invasive Earthworms: Impacts & Management" https://www.youtube.com/watch?v=2pyuPTP6Z_M
- Cornell's Master Naturalist webpage: https://blogs.cornell.edu/cerp/files/2017/11/JumpingWorms_FactSheet-11_15_17-2026fwf.pdf NYS Prohibited and Regulated Invasive Animals, 2014,
- http://www.dec.ny.gov/docs/lands_forests_pdf/isprohibitedanimals.pdf Wisconsin Department of Natural Resources - Jumping worm <http://dnr.wi.gov/topic/invasives/documents/JumpingWormFactSheet.pdf> <http://dnr.wi.gov/topic/invasives/fact/jumpingWorm/index.html>
- Adirondack Almanack (Paul Hetzler article) <http://www.adirondackalmanack.com/2015/05/crazy-worms-fish-bait-and-forest-pest.html>
- Amyntas agrestis: The Crazy Snake Worm blog. <http://blog.uvm.edu/jgorres/amynthas/>

Where has the pest been found? Jumping worms have been widely reported in New York, New England, and the mid-west, mid-Atlantic and Southeastern states. iMaps Invasives lists only 4 reports in NYS (3 Tompkins County, 1 Rensselaer County).



Photos: Bernadette Williams, Wisconsin DNR

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This content was updated March 2018



**Agriculture
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Norway spruce shoot gall midge

Quarantine status: No quarantine in NYS at this time

Also called: NSSGM

Scientific name: *Piceacecis abietiperda* (previously *Dasineura abietiperda*)

Type of pest: insect

How was this pest introduced to North America, US, Northeast or New York?

The Norway spruce bud midge is native to Europe and was first detected in Connecticut in 1983. We do not yet understand its lifecycle so the pathway of introduction is unclear.

Characteristics for pest ID:

Symptoms include slightly deformed or bent shoots, swellings in nodes and premature needle shedding on terminals (last year's growth). Bare twigs may be the first indication of an infestation. Look for slightly swollen buds at the base of this year's shoot. The bud may house 1-3 small pupal chambers visible upon dissection. Pupae are yellow (like egg yolks).

Once the chambers are vacated, you may be able to find the "exit holes" where adults emerge after completing their life cycle. Using a hand lens or magnifying glass, check at the base of last year's stems.

Adults are small midges visible flying around Norway spruce on favorable days (probably 55–60° F (13-16 C) or higher) from early April to mid-May. The reddish abdomens and fringed wings are distinctive.

Which species does this pest damage?

Norway spruce, *Picea abies*

(May be confused with a similar species *Piceacecis tsugae* (= *P. piceae*), which prefers white spruce (*Picea glauca*).)

If evidence of pest or damage is found, who should be told?

There is no current protocol for reporting. You may call your local Cornell Cooperative Extension office to help you take the appropriate steps.

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This content was updated March 2018

Select resources:

- Norway Spruce Gall Midge fact sheet, D. Gilrein and J. Lerner, https://s3.amazonaws.com/assets.cce.cornell.edu/attachments/27212/Norway_spruce_shoot_gall_midge_12-2017.pdf?1512590678
- Article in Entomological Reviews, 2016, Description of new species, <http://www.bladmineerders.nl/gallen/diptera/piceacecis/abietiperda/abietiperda.htm>
- Gagné, R. J and L. Graney. 2014. Piceacecic (Diptera: Cecidomyiidae), a new genus for a non-native pest of Norway spruce from Europe and its North American relative. Proc. Ent. Soc. Wash. 116(4): 378-393.

Where has the pest been found?

NSSGM been found (so far) in Syracuse, the Hudson Valley region, Long Island, VT, NJ, MD, CT and western MA primarily in landscape plants.



Pupa in gall
Photo: Jen Stengle, Putnam
CCE



Vacated gall
Photo: used by permission from Stéphane
Claerebout



Oak wilt

Quarantine status: Yes, see: <http://www.dec.ny.gov/lands/46919.html> for protective zones

Scientific name: *Ceratocystis fagacearum*

Type of pest: disease

List any known vectors (organisms that transmit the disease): sap (nitidulid) beetles

How was this pest introduced to North America, US, Northeast or New York?

Oak wilt may have been introduced to North America from some other part of the world or it may have evolved in the US as a variant of some closely related fungus growing on another plant.

Oak wilt can be spread between trees through root grafts (primary method) and through spores carried from mycelial mats to fresh wounds on healthy trees.

Characteristics for pest ID:

C. fagacearum grows in the water-conducting vessels of host trees and as it does, it causes the vessels to produce gummy plugs that prevent water transport, eventually causing tree death. Movement of the pathogen in these trees is so rapid that it may kill trees in as little as three weeks.

Brown coloration develops on leaves starting at the outer edge and progressing inward toward the mid-vein of the leaf. Branch dieback starts at the top of the tree's canopy and progresses downward. Leaves suddenly wilt in the spring and summer and may fall while there is still some green on them. Fungal spore mats may develop under the bark of infected trees and cause bark splits. They produce a noticeable fruity/yeasty odor.

Which species does this pest damage?

Oaks	Oaks in Red oak group (pointed leaf tips) die faster than oaks in White oak group
------	---

If evidence of pest or damage is found, who should be told?

In NYS, if you suspect an invasive insect or pathogen, contact DEC Forest Health. You may wish to take a picture and email the NYS DEC Forest Health office at foresthealth@dec.ny.gov or call 1-866-640-0652. Invasive forest pests can also be reported through NY iMap Invasives with the help of your educator or coordinator. If you collect a sample that needs to be sent to a lab for verification, please carefully follow the lab's protocol for packaging and shipping. You may also call your local Cornell Cooperative Extension office; they will help you take the appropriate steps to report.

Select resources:

Cornell University Plant Disease Diagnostic Clinic fact sheet:

<http://plantclinic.cornell.edu/oaktwilt/oakwiltassessment.pdf>

Cornell University Plant Disease Diagnostic Clinic poster:

<http://plantclinic.cornell.edu/oaktwilt/poster.pdf>

Cornell University – Dr. George Hudler video:

<http://www.youtube.com/watch?v=XVUZsvyZfVE>

NYS DEC Oak Wilt fact sheet:

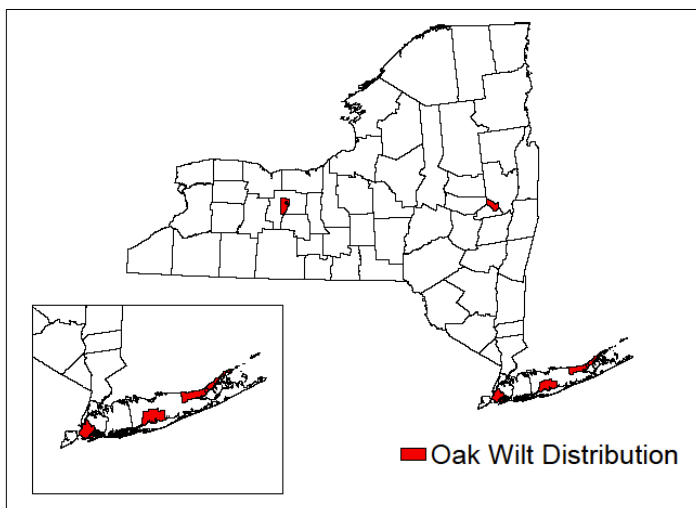
http://www.dec.ny.gov/docs/lands_forests_pdf/oakwiltfs.pdf

NYS DEC Oak Wilt video: <https://www.youtube.com/watch?v=Kpm6-XEKubs>

US Forest Service – How To Identify, Prevent, and Control Oak Wilt:

https://www.na.fs.fed.us/pubs/howtos/ht_oaktwilt/identify_prevent_and_control_oak_wilt_print.pdf

Where has the pest been found?



Leaf symptoms

Photo: Paul A. Mistretta, USDA
Forest Service, Bugwood.org



Tree symptoms

Photo: William M. Ciesla, Forest
Health Management International,
Bugwood.org



**Agriculture
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Pine shoot beetle

Quarantine status: Federal quarantine in 20 states, including all of NYS

Also called: Larger pine shoot beetle, common pine shoot beetle

Scientific name: *Tomicus piniperda*

Type of pest: insect

How was this pest introduction to North America, US, Northeast or New York?

Native to Europe, this beetle was introduced on pine packing material, and first discovered in the United States in July 1992, at a Christmas tree plantation in Ohio.

It could move via moving firewood, nursery stock, or unregulated shipping of pine logs.

Characteristics for pest ID:

Adult insects are roughly cylindrical and 3-5 mm long with shiny black heads and wing covers ranging from reddish brown to black. There are many similar beetles. To be sure of identification, send a sample to the Insect Diagnostic Laboratory. (See high-resolution diagnostic photos listed below under “Select resources”).

Adults enter the shoot 6 inches or less from the shoot tip and then bore for 1-4 inches inside the shoot towards the tip. On Scots pine, infested shoots become discolored, and may die as early as late June, though often remaining attached to the tree. On Austrian pine, infested shoots remain alive and green much longer.

Which species does this pest damage?

Austrian pine (<i>P. nigra</i>)	Eastern white pine (<i>Pinus strobus</i>)
Scots pine (<i>P. sylvestris</i>)	(occasionally)

If evidence of pest or damage is found, who should be told? In NYS, if you suspect an invasive insect or pathogen, contact DEC Forest Health. You may wish to take a picture and email the NYS DEC Forest Health office at foresthealth@dec.ny.gov or call 1-866-640-0652. Invasive forest pests can also be reported through NY iMap Invasives with the help of your educator or coordinator. If you collect a sample that needs to be sent to a lab for verification, please carefully follow the lab's protocol for packaging and shipping. You may also call your local Cornell Cooperative Extension office; they will help you take the appropriate steps

Select resources:

USDA Forest Service Pest Alert:

https://www.na.fs.fed.us/spfo/pubs/pest_al/shootbeetle/shootbeetle.htm

PSU Fact Sheet

<http://extension.psu.edu/pests/ipm/agriculture/christmas-tree/pest-fact-sheets/shoot-and-branch-injury/pine-shoot-beetle.pdf>

Pine Shoot Beetle Pictures

<http://www.invasive.org/browse/subthumb.cfm?sub=980>

Where has the pest been found?

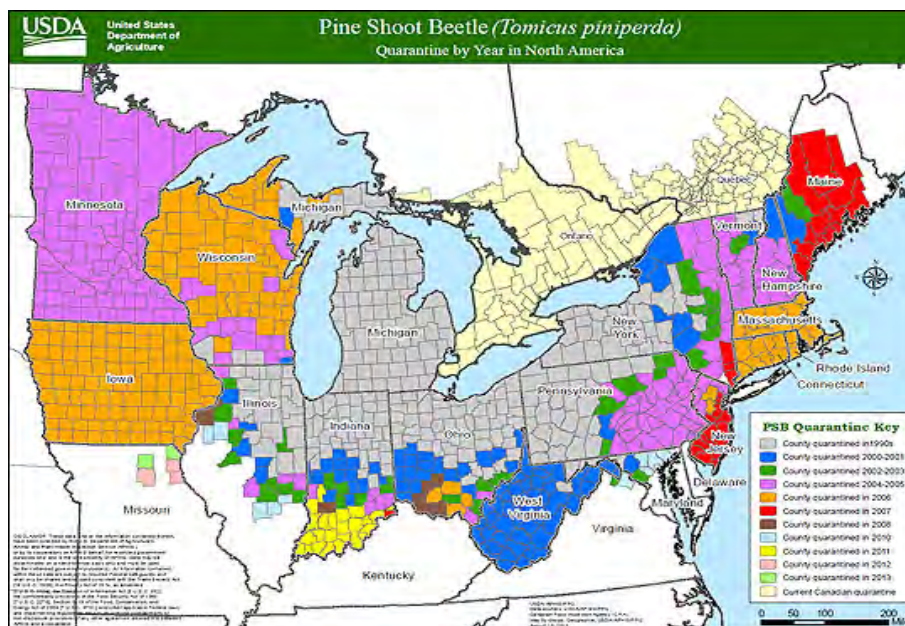
Throughout the Northeast and Midwest.



Adult
Photo: Pest and Diseases
Image Library, Bugwood.org



Adult feeding damage
Photo: Gyorgy Csoka, Hungary Forest
Research Institute, Bugwood.org





**Agriculture
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Rhizosphaera needlecast disease

Quarantine status: No quarantine in NYS at this time

Also called: Spruce needlecast disease, Blue spruce needlecast disease

Scientific name: *Rhizosphaera kalkhoffii*

Type of pest: disease

List any known vectors (organisms that transmit the disease): none

How was this pest introduced to North America, US, Northeast or New York?

Rhizosphaera is not an introduced pest. It overwinters in infected needles. At bud break, fruiting bodies appear on the previous year's needles and spores are released if conditions are moist enough. Spores move by wind or rain splash to new growth. One year after infection the needles turn yellow to dark brown/purple in summer and most infected needles fall off in autumn.

Characteristics for pest ID:

Not all spruce trees that are losing needles from their lower and inner branches have *Rhizosphaera*. Look at healthy appearing needles in early spring before bud break to identify small black fruiting bodies on underside of needles in parallel lines (coming from stomates).

Which species does this pest damage?

Colorado blue spruce (<i>Picea pungens</i>) – very susceptible	Norway spruce (<i>Picea abies</i>) – relatively resistant
Engelmann spruce (<i>Picea engelmannii</i>)	White spruce (<i>Picea glauca</i>) – intermediate in susceptibility

If evidence of pest or damage is found, who should be told?

Not an invasive pest. Common in landscape plantings especially where spruce trees are stressed or crowded, or where humidity is high.

Select resources:

Penn State Christmas tree pest fact sheets

<http://extension.psu.edu/pests/ipm/agriculture/christmas-tree/pest-fact-sheets/needle-discoloration-and-injury/rhizosphaera-needle-cast.pdf>

Iowa State University – Managing *Rhizosphaera* Needlecast

<https://hortnews.extension.iastate.edu/2016/05-06/rhizosphaera.htm>

Where has the pest been found? Present throughout the state and region.



Thinning of lower and inner branches
Photo: Joseph OBrian, USDA Forest
Service, Bugwood.org



Fruiting bodies
Photo: Joseph OBrian, USDA Forest
Service, Bugwood.org



**Agriculture
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Sirex woodwasp

Quarantine status: No quarantine in NYS at this time

Also called: European Woodwasp, European Horntail

Scientific name: *Sirex noctilio*

Type of pest: insect

How was this pest introduced to North America, US, Northeast or New York?

Sirex woodwasp is native to Europe, Asia and North Africa. It was first discovered in North America in 2004 in a trap in Fulton, NY (Oswego County). Sirex woodwasp has been the most common species of exotic woodwasp detected at United States ports-of-entry associated with solid wood packing materials.

Characteristics for pest ID:

Sirex woodwasps are large, robust insects, usually 1.0 to 1.5 inches long. Adults have a spear-shaped plate (cornus) at the tail end and females have a long ovipositor under this plate. All adults are dark metallic blue or black with black antennae. Females have a black body with orange legs; males have an orange segment of the abdomen and black legs.

Larvae are creamy white, legless, and have a distinctive dark spine at the rear of the abdomen. More than a dozen species of native horntails occur in North America. No keys to identify woodwasp larvae to the species level have been developed.

Native woodwasps feed on dead and dying trees, but the sirex woodwasp can attack healthy trees. Foliage of infested trees initially wilts, and then changes color from dark green to light green, to yellow, and finally to rusty-red, during the 3-6 months following attack. Infested trees may have resin beads or dribbles at the egg laying sites, which are more common at the mid-bole level. Larval galleries are tightly packed with very fine sawdust. As adults emerge, they chew round exit holes that vary from 1/8 to 3/8 inch in diameter. The insect introduces a symbiotic fungus and toxic mucus into the tree at egg laying which weakens, and may kill, the tree.

Which species does this pest damage?

Scots pines (<i>P. sylvestris</i>) Austrian pines (<i>P. nigra</i>) Maritime pines (<i>P. pinaster</i>) Red pine (<i>P. resinosa</i>) Loblolly pine (<i>P. taeda</i>) Slash pine (<i>P. ellotti</i>)	Ponderosa pine (<i>P. ponderosa</i>) Lodgepole pine (<i>P. contorta</i>) Monterey pine (<i>P. radiata</i>) White pine (<i>P. strobus</i>) is also attacked but is less preferred.
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Pines 6" and larger are susceptible; stressed, suppressed and crowded pines seem to be favored.

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This content was updated on June 2017

If evidence of pest or damage is found, who should be told?

In NYS, if you suspect an invasive insect or pathogen, contact DEC Forest Health. You may wish to take a picture and email the NYS DEC Forest Health office at foresthealth@dec.ny.gov or call 1-866-640-0652. Invasive forest pests can also be reported through NY iMap Invasives with the help of your educator or coordinator. If you collect a sample that needs to be sent to a lab for verification, please carefully follow the lab's protocol for packaging and shipping. You may also call your local Cornell Cooperative Extension office; they will help you take the appropriate steps

Select resources:

NY Invasive Species Information Sirex wood wasp:

http://www.nyis.info/index.php?action=invasive_detail&id=47

NYS DEC sirex wood wasp:

<http://www.dec.ny.gov/animals/7248.html>

USDA Forest Service Pest Alert

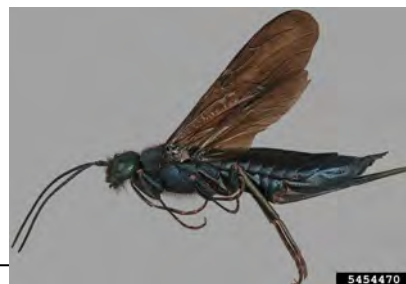
https://www.na.fs.fed.us/spfo/pubs/pest_al/sirex_woodwasp/sirex_woodwasp.htm

Where has the pest been found?

By 2011, sirex woodwasp had been found in 28 NYS counties, primarily in western NY. It is thought that it can spread approximately 25 miles per year, so it is likely to be present in other areas of the state now.



Male
Photo: Steven Valley, Oregon
Department of Agriculture,



Female
Photo: Steven Valley, Oregon
Department of Agriculture,



Gallery and pupal chamber
Photo: William M. Ciesla, Forest Health
Management International, Bugwood.org

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**Agriculture
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Southern pine beetle

Quarantine status: Monitored but not quarantined in NYS

Scientific name: *Dendroctonus frontalis*

Type of pest: insect

How was this pest introduced to North America, US, Northeast or New York?

The southern pine beetle is native to the southeastern US. Warmer winter temperatures have allowed it to expand its territory up the eastern seaboard. This beetle can be moved in untreated, infested firewood and sawlogs.

Characteristics for pest ID:

The beetle is small, only 2-4 mm in length, about the size of a grain of rice, and is red-brown to black in color. They are hard to identify, as there are many similar beetles.

There are two unmistakable signs for SPB. The adult beetle enters the tree through crevices in the bark and then creates S-shaped tunnels in the cambium tissue, just beneath the bark. This disrupts the flow of nutrients, killing the tree in typically 2-4 months. Pitch is extruded from the entrance holes, creating pitch tubes, popcorn shaped clumps of resin, on the outside of the bark.

Which species does this pest damage?

Pitch pine (<i>Pinus rigida</i>) Red pine (<i>Pinus resinosa</i>) White pine (<i>Pinus strobus</i>)	In highly infested areas: Hemlocks (<i>Tsuga</i>) Spruce (<i>Picea</i>)
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If evidence of pest or damage is found, who should be told?

If you suspect you have found southern pine beetle, contact DEC Forest Health by calling toll-free 1-866-640-0652 or emailing foresthealth@dec.ny.gov. Sending pictures of suspect pine trees with something included for scale will help in identifying potential problems.

Select resources:

NYS Department of Environmental Conservation –

<http://www.dec.ny.gov/animals/99331.html> (has links for current maps)

Southern Pine Beetle Fact Sheet NYC DEC

http://www.dec.ny.gov/docs/lands_forests_pdf/spbactsheet.pdf

Where has the pest been found?

SPB is widespread throughout Suffolk County, but the largest infestations are located in Wertheim National Wildlife Refuge, Connetquot River State Park, Hubbard County Park, and in East Quogue, NY. SPB has also been found in traps in Bear Mountain State Park in Orange and Rockland Counties, Schunnemunk State Park in Orange County, Roosa Gap State Forest in Sullivan County, and in Minnewaska State Park in Ulster County.



Pitch tubes

Photo: Erich G. Vallery, USDA Forest Service
- SRS-4552, Bugwood.org



Adult

Photo: Below: Pest and Diseases Image
Library, Bugwood.org



Galleries

Photo: Southern Forest Insect Work Conference,
Southern Forest Insect Work Conference,



Spotted lanternfly

Quarantine status: Quarantine for movement of plant, wood and stone products in 6 counties in Pennsylvania

Scientific name: *Lycorma delicatula*

Type of pest: insect

How was this pest introduced to North America, US, Northeast or New York?

This insect is native to China, India, and Vietnam, and was first found in Pennsylvania in 2014. Eggs are laid on smooth surfaces, including wood, stones, structures and moveable items like trailers, campers, outdoor furniture, firewood, and yard debris. This habit is likely to hasten its spread!

It is reported that spotted lanternfly cannot complete its life cycle if *Ailanthus* is not available as an adult food source, although this is not certain. Research is on-going.

Characteristics for pest ID:

The Spotted Lanternfly is an insect in the leaf-hopper family, often found in clusters. The adult is approximately 1 inch (2.5 mm) long and ½ inch (1.3 mm) wide. The front half of the forewing is light with distinct black spots and the forewing ends have tiny black rectangles outlined by grey. The under-wings have contrasting patches and spots of red and black with a white band. Immature stages are black with white spots, and develop red patches with white spots as they grow. In late fall, spotted lantern fly adults lay egg masses on smooth surfaces. Newly laid egg masses have a grey mud-like covering, which can take on a dry cracked appearance over time. Old egg masses (after the mud-like covering wears off) appear as rows of 30-50 brownish seed-like deposits in 4-7 columns, roughly an inch long.

Both adults and nymphs feed on plant sap, sometimes causing weeping wounds. They also produce large amounts of honeydew. The sap and honeydew will attract wasps, ants and other insects, and promote the growth of sooty mold.

Which species does this pest damage?

Tree of Heaven (<i>Ailanthus altissima</i>) Wide host range of tree species as food source for nymphs Maple (<i>Acer</i>) Willow (<i>Salix</i>)	Grapes (<i>Vitis vinifera</i>) Apples (<i>Malus</i>) Stone fruits (<i>Prunus</i>)
--	---

If evidence of pest or damage is found, who should be told?

In NYS, if you suspect an invasive insect or plant pathogen, contact the Department of Agriculture and Markets-Division of Plant Industry or the Department of Environmental Conservation Forest Health. Ag

and Markets – Plant Industry can be reached via email at plants@agriculture.ny.gov or by phone at 518 457-2087. You can email the DEC Forest Health office at foresthealth@dec.ny.gov or call 1-866-640-0652. Including pictures with the email may be helpful. Invasive forest pests can also be reported through NY iMap Invasives with the help of your local Cornell Cooperative Extension office. If you collect a sample that needs to be sent to a lab for verification, please carefully follow the lab's protocol for packaging and shipping.

Select resources:

Penn State Spotted Lanternfly resources: <http://extension.psu.edu/pests/spotted-lanternfly>

PA Dept of Ag:

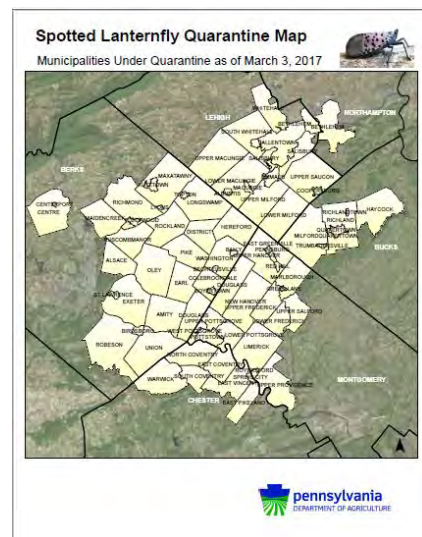
http://www.agriculture.pa.gov/Plants_Land_Water/PlantIndustry/Entomology/spotted_lanternfly/Pages/default.aspx

USDA Animal and Plant Health Inspection Service - Spotted Lanternfly Pest Alert:

https://www.aphis.usda.gov/publications/plant_health/2014/alert_spotted_lanternfly.pdf

Where has the pest been found?

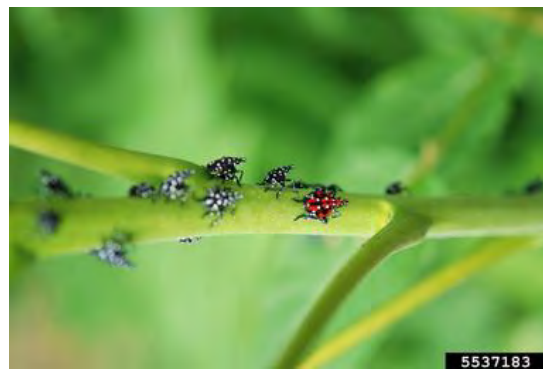
Berks, Bucks, Chester, Lehigh, Northampton, and Montgomery Counties in Pennsylvania. One dead adult in NYS.



Adult
Photo: Lawrence
Barringer, Pennsylvania
Department of



Egg mass partially
exposed
Photo: Emelie
Swackhamer, Penn
State University,
Bugwood.org



Nymphs
Photo: Lawrence Barringer, Pennsylvania
Department of Agriculture, Bugwood.org



**Agriculture
and Markets**



Cornell University
Cooperative Extension

Spotted wing drosophila

Quarantine status: None

Also called: SWD

Scientific name: *Drosophila suzukii*

Type of pest: insect

How was this pest introduced to North America, US, Northeast or New York?

The spotted wing drosophila is native to Southeast Asia. It showed up in California in 2008 and in Pennsylvania in 2011. It has since been reported in most states as well as parts of Canada. SWD can be transported and spread in infested fruit.

Characteristics for pest ID:

SWD appear similar to other vinegar flies. Adult flies are 2-3 mm in length, with red eyes and a tan-colored body with darker bands on the abdomen. Males have characteristic single spots at the leading edge of the tip of the wing and two dark spots on their front legs. Females lack wing spots and leg spots, but are distinguished by a robust, saw-toothed ovipositor (visible under magnification).

Fruit will start to break down within a few days. There may be a drop of juice present on the fruit from the breathing holes for the larvae. Larvae are present within the fruit.

Which species does this pest damage?

Many fruits and berries, including: Raspberries (<i>Rubus idaeus</i>) Blackberries (<i>Rubus</i>)	Blueberries (<i>Cyanococcus</i>) Cherries and peaches (<i>Prunus</i>) Tomato (<i>Lycopersicon</i>)
---	--

Complete list: <http://www.fruit.cornell.edu/spottedwing/cropshosts.html>

If evidence of pest or damage is found, who should be told?

There is a trap network run by Extension personnel across New York State which monitors SWD in fruit plantings. See <http://blogs.cornell.edu/swd1/>

Select resources:

SWD Distribution Map

<http://www.fruit.cornell.edu/spottedwing/dist.html>

SWD Monitoring and Online Resources:

http://www.hort.cornell.edu/grower/nybga/swd/pdfs/SWD%20Monitoring%20Network%20%20Online%20Resources_Albany.pdf

NY Invasive Species Information

http://www.nyis.info/index.php?action=invasive_detail&id=59

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Where has the pest been found?

SWD is assumed to be present throughout NYS. Annual confirmed trap catches for the Northeast can be viewed at <http://fruit.cornell.edu/spottedwing/distribution/>.



Male on left and female on right
Photo: Wisconsin Horticulture



Larva in raspberry fruit
Photo: University of Maine



Sudden oak death

Quarantine status: Quarantine covers counties in California and Oregon. Monitoring of nursery stock is done by NYS Department of Ag and Markets Division of Plant Industry inspectors.

Also called: Ramorum Leafblight, Ramorum Dieback

Scientific name: *Phytophthora ramorum*

Type of pest: disease

List any known vectors (organisms that transmit the disease): none

How was this pest introduced to North America, US, Northeast or New York?

Phytophthora ramorum was first identified in California in 1995. Nursery stock is considered the most likely method for spread so federal quarantines exist in California and Oregon and there are active nursery certification programs in California, Oregon and Washington State. A positive sample was identified and destroyed at a Long Island nursery.

Characteristics for pest ID:

On oaks, the disease causes cankers to form on the trunks, which often bleed black or red ooze staining the trunk. Damage to the vascular system leads to crown dieback and tree death. The symptoms of *Phytophthora ramorum* are similar to those of other oak diseases and require lab identification to confirm the cause.

Other shrub hosts get a foliar blight or stem lesions from the pathogen. This is unsightly and may affect the quality of the plants, but the more dangerous effect is that the disease can spread from these plants to oaks and result in tree death.

Which species does this pest damage?

Wide host range	
Many Oak species (<i>Quercus</i> sp.)	<i>Viburnum</i> sp.
Mountain laurel (<i>Kalmia</i> sp.)	<i>Camellia</i> sp.
Andromeda (<i>Pieris</i> sp.)	<i>Rhododendron</i> sp.

If evidence of pest or damage is found, who should be told?

In NYS, if you suspect an invasive insect or pathogen, contact DEC Forest Health. You may wish to take a picture and email the NYS DEC Forest Health office at foresthealth@dec.ny.gov or call 1-866-640-0652. Invasive forest pests can also be reported through NY iMap Invasives with the help of your educator or coordinator. If you collect a sample that needs to be sent to a lab for verification, please carefully follow the lab's protocol for packaging and shipping. You may also call your local Cornell Cooperative Extension office; they will help you take the appropriate steps.

Select resources:

New York State Integrated Pest Management Pest Alert

<https://nysipm.cornell.edu/agriculture/ornamental-crops/pest-alerts/sudden-oak-death-phytophthora-ramorum>

USDA Animal and Plant Health Inspection Service – *Phytophthora ramorum*

<https://www.aphis.usda.gov/aphis/ourfocus/planthealth/plant-pest-and-disease-programs/pests-and-diseases/phytophthora-ramorum> USDA Forestry Service Pest Alert – includes comparison to oak issues present in the East

https://www.na.fs.fed.us/spfo/pubs/pest_al/sodeast/sodeast.htm

Where has the pest been found? California and Oregon. Nationwide monitoring is currently underway. A positive sample was collected from a Long Island nursery but the disease is not present in NYS.



Bleeding canker
Photo: Joseph OBrien, USDA Forest Service,
Bugwood.org



Leaf symptoms
Photo: Joseph OBrien, USDA Forest Service,
Bugwood.org



**Agriculture
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Thousand cankers disease

Quarantine status: Quarantine in eastern and midwestern states where it has been found or is expected to spread. No quarantine in NYS as it has not yet been detected here.

Scientific name: *Geosmythia morbida*

Type of pest: disease

List any known vectors (organisms that transmit the disease): Walnut twig beetle
(*Pityophthorus juglandis*).

How was this pest introduced to North America, US, Northeast or New York?

The actual method of transfer from native hosts in the western US is unknown but could have been by human transfer (plant material, wood products or firewood) or weather assisted movement east.

The walnut twig beetle moves the disease from tree to tree. Adult walnut twig beetles carry fungal spores on their bodies and in their frass and infect the tree as they excavate galleries.

Characteristics for pest ID:

The walnut twig beetle is similar to other bark beetles. Characteristics are its small size, reddish brown color, and concentric ridges on the pronotum behind the head. Disease progression requires multiple infections so it is usually associated with high populations of beetles. Numerous small entrance and exit holes may be visible on dead and dying branches..

The fungus causes distinctive circular to oblong cankers (areas of darkened, dead tissue) under the bark, interrupting the flow of nutrients. Cankers caused by *G. morbida* are small, but multiple wounds by the walnut twig beetle lead to numerous introductions of the fungus all over the same tree. The earliest symptom of the disease is yellowing foliage that progresses rapidly to brown wilted foliage, then finally branch mortality when the cankers coalesce and girdle branches. The bark surface may have no symptoms, or a dark amber to black stain or cracking of the bark may occur directly above a canker. Death can be rapid: 1-2 years

Which species does this pest damage?

Primarily affects Eastern black walnut *Juglans nigra*. Some indication it can infect butternut (*J. cinerea*).

If evidence of pest or damage is found, who should be told?

If you suspect you have found thousand cankers disease, contact the NYS DEC Forest Health office at foresthealth@dec.ny.gov or call 1-866-640-0652.

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Select resources:

National Pest alert thousand cankers disease:

http://www.thousandcankers.com/media/docs/NIFA_Factsheet.pdf

Pest Alert Thousand Cankers:

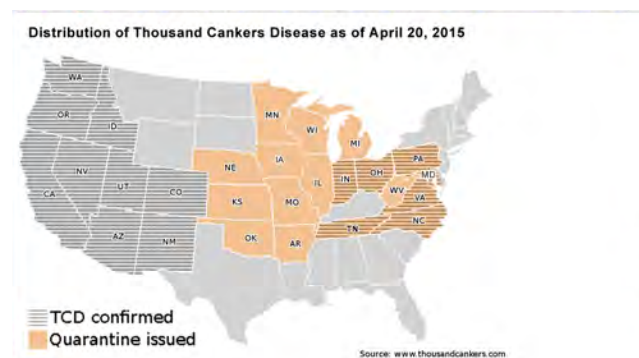
http://www.thousandcankers.com/media/docs/USDA_TCD_Factsheet_2_2013.pdf

Thousand Cankers Disease Symptoms Field Guide:

http://www.thousandcankers.com/media/docs/WC_TCD_Field_ID_Guide_11_2009.pdf

Video: <http://www.sentinelplantnetwork.org/thousand-cankers>

Where has the pest been found? Pennsylvania, Maryland, Ohio, Indiana, North Carolina, Virginia, Tennessee, and nine other states in the western US.



Exit holes

Photo: Whitney Cranshaw, Colorado State University, Bugwood.org

Adult walnut twig beetle

Photo: Steven Valley, Oregon Department of Agriculture, Bugwood.org



Cankers under the bark

Photo: Elizabeth Bush, Virginia Polytechnic Institute and State University, Bugwood.org



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**Agriculture
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Velvet longhorned beetle

Quarantine status: No quarantine in NYS at this time

Scientific name: *Trichoferus campestris*

Type of pest: insect

How was this pest introduced to North America, US, Northeast or New York?

Velvet longhorned beetle is native to Asia and portions of Eastern Europe. It was first detected in Utah in 2010 and a single adult was found in Westchester County, NY in 2014. Additional insects have been trapped but no active populations have been detected.

The velvet longhorned beetle can develop in very dry wood, so it can be transported as larvae in solid wood packing material and other imported wood products. It has been detected at several ports of entry in the United States over the last decade. The adults are also capable of flight.

Characteristics for pest ID:

There are many related species that infest the same host trees so identification can be difficult. The beetle is 1/2 to 3/4 of an inch long, dark brown to brownish-orange in color, with the legs and antennae often lighter colored than the body. The body is covered with fine hairs, hence the name “velvet.” The antennae are not as long as the body. The larvae are up to an inch long, yellowish white in color with a brownish head and short, poorly developed legs.

The characteristic symptoms of infestation by *T. campestris* are similar to other wood boring insects: large entrance and emergence holes in tree trunks; waste from borings at the base of infested trees; peeling bark; tunnels made by large larvae, and epicormic shoots. The leaves often show yellowing and wilting.

Which species does this pest damage?

Velvet longhorned beetle has a potentially large host range, although the actual host range for the US is not known.

Apple and crabapple (<i>Malus</i> spp.)	Cherry and peach (<i>Prunus</i> spp.)
Mulberry (<i>Morus</i> spp.)	Mountain-ash (<i>Sorbus</i> spp.)
Birch (<i>Betula</i> spp.)	Willow (<i>Salix</i> spp.)
Paper mulberry (<i>Broussonetia</i> spp.);	Honey locust (<i>Gleditsia</i> spp.)

If evidence of pest or damage is found, who should be told?

Report suspect infestations to the Department of Ag and Markets. There is a form for reporting at <https://www.agriculture.ny.gov/capsreport.html>. Invasive forest pests can also be reported through NY iMap Invasives with the help of your educator or coordinator. If you collect a

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sample that needs to be sent to a lab for verification, please carefully follow the lab's protocol for packaging and shipping. You may also call your local Cornell Cooperative Extension office; they will help you take the appropriate steps.

Select resources:

Utah department of Agriculture Velvet Longhorned beetle fact sheet

<http://www.agri.idaho.gov/AGRI/Categories/PlantsInsects/RegulatedAndInvasiveInsects/Documents/2015%20Velvet%20Longhorn%20Beetle.pdf>

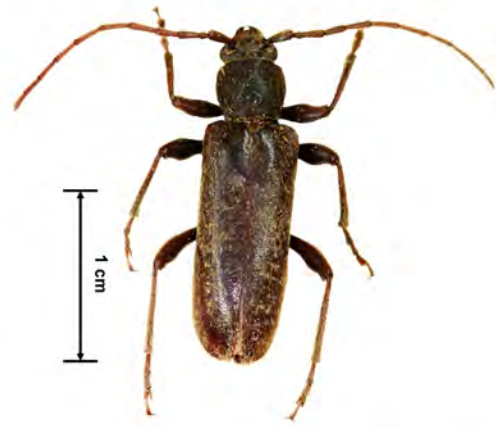
<https://utahpests.usu.edu/caps/featured-pests>

Where has the pest been found? In NYS, adults, although not active populations, have been found in Westchester County.



Yellowish hairs

Photo: Steven Valley, Oregon Department of Agriculture, Bugwood.org



Adult

Photo: Christopher Pierce, USDA APHIS PPQ, Bugwood.org



**Agriculture
and Markets**



Cornell University
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Viburnum leaf beetle

Quarantine status: No quarantine in NYS at this time

Also called: VLB

Scientific name: *Pyrrhalta viburni*

Type of pest: insect

How was this pest introduced to North America, US, Northeast or New York?

The viburnum leaf beetle was first found in North America in 1947 in Ontario, Canada and in NYS in 1996.

Characteristics for pest ID:

Viburnum leaf beetle adults are unremarkable: about ¼ inch in length, oblong, brown with golden overtones. They chew irregular circular or elliptical holes in the leaves.

Viburnum leaf beetle larvae are elongate, up to approximately ¾ inches long. Hatchlings are greenish yellow. These become yellowish-brown with dark spots at maturity. Larvae feed in groups on viburnum foliage and often skeletonize the leaves.

The most distinctive stage may be the egg masses. Eggs are laid in cavities in a straight row on the underside of terminal twigs and are capped with a protective covering.

Which species does this pest damage?

(for more information on viburnum species susceptible to viburnum leaf beetle, see <http://www.hort.cornell.edu/vlb/suscept.html>)

Arrowwood viburnum (<i>Viburnum dentatum</i>)	Downy Arrowwood viburnum (<i>V.</i>
Smooth Witherod viburnum (<i>V. nudum</i>)	<i>rafinesquianum</i>)
European cranberrybush viburnum (<i>V. opulus</i>)	American cranberrybush viburnum (<i>V. opulus</i> var <i>americana</i>)

If evidence of pest or damage is found, who should be told?

This species can be reported in NY iMap Invasives. It is widespread in NY and nearby states but its range may be underreported.

Select resources:

Cornell University

<http://www.hort.cornell.edu/vlb/> (many of the external links are broken)

<http://idl.entomology.cornell.edu/files/2013/11/Viburnum-Leaf-Beetle-12g0ctu.pdf>

NYS Dept. of Ag and Markets – Cooperative Agriculture Pest Survey

<https://agriculture.ny.gov/caps/pdf/VLB%20Pest%20Alert%2008.pdf>

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Where has the pest been found? Throughout New York and nearby states.



Larvae and feeding damage
Photo: Milan Zubrik, Forest Research
Institute - Slovakia, Bugwood.org

Egg-laying sites
Photo: Bruce Watt, University of Maine,



Adult beetle
Photo: Paul Weston, Cornell University,
Bugwood.org



White pine needle damage

Quarantine status: No quarantine in NYS at this time

Also called: WPND, white pine decline

Scientific name: Associated with a complex of fungi – *Lecanosticta acicula* (formerly *Mycosphaerella dearnessii*, *Lophophacidium dooksii* (formerly *Canavirgella banfieldii*), *Bifusella linearis*, *Septorioides strobi*

Type of pest: disease

List any known vectors (organisms that transmit the disease): none

How was this pest introduced to North America, US, Northeast or New York?

These diseases are not introduced pests. Changes in weather patterns, including above average precipitation and above normal temperatures seem to be associated with this issue.

Lecanosticta was most consistently associated with yellowing and needle loss in early July in a 2011 Forest Service study and in subsequent studies in 2014/2015. On samples sent to UMass, 2015, the most common pathogen was *Septorioides strobi*.

Characteristics for pest ID:

Yellow and brown discoloration on 1-year-old needles. Symptoms include yellowing needle tips, while bases remain green. The fruiting bodies of *Lophophacidium* are dark elongated structures along the center of the underside of the needle. The fruiting structures of *Lecanosticta* are small and black as are those of *Septorioides*.

One characteristic that helps differentiate these diseases from other causes of needle yellowing in pine - damage to needles in the same fascicle (bundle of needles) may vary, including some that are not infected.

Which species does this pest damage?

<i>Lophophacidium dooksii</i> confined to White Pine	<i>Lecanosticta acicola</i> affects many pine species
--	---

If evidence of pest or damage is found, who should be told?

Not an invasive pest. No need to report

Select resources:

USDA Pest Alert – Eastern White Pine Needle Damage

https://www.na.fs.fed.us/pubs/palerts/white_pine/eastern_white_pine.pdf

Cornell Plant Diagnostic Lab, 2013

<http://plantclinic.cornell.edu/features/2013/mar2013.html>

UMass Extension Plant Diagnostics Laboratory

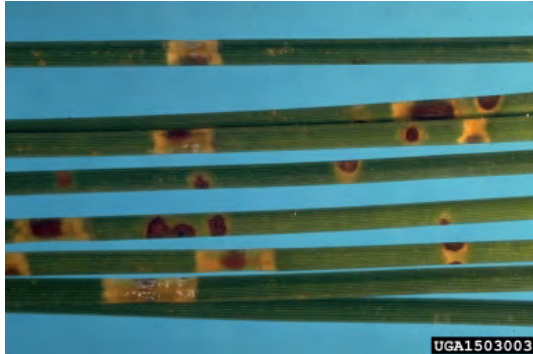
https://ag.umass.edu/sites/ag.umass.edu/files/content-files/alerts-messages/2016_white_pine_update.pdf

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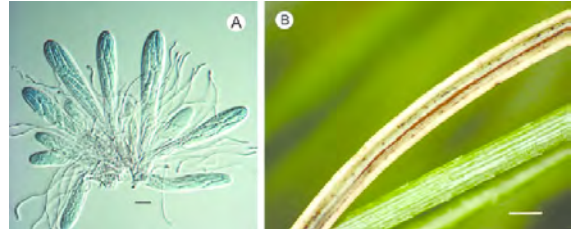
Where has the pest been found?

Throughout New England



Fruiting bodies of *Mycosphaerella dearnessii*

Photo: USDA Forest Service Region 8,
USDA Forest Service, Bugwood.org



Fruiting bodies of
Lophophacidium dooksii



Photos: Jen Stengle, Cornell
Cooperative Extension,
Putnam County



**Agriculture
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Cornell University
Cooperative Extension

Winter moth

Quarantine status: No quarantine in NYS at this time

Scientific name: *Operophtera brumata*

Type of pest: insect

How was this pest introduction to North America, US, Northeast or New York?

Winter moth was introduced to Nova Scotia from Europe in the 1950's and was detected in Massachusetts in the 1990's.

Characteristics for pest ID:

The adult male winter moth is tan to brown with fringed forewings that have bands of black hatch marks. The female moth is gray to black with very vestigial wings. Winter moth larvae are lime green with faint white to creamy-yellow stripes running lengthwise along each side of the body, and approximately 1 inch long at maturity.

Young caterpillars feed within both flower and foliar buds. Older larvae feed in expanding leaf clusters and are capable of defoliating trees and shrubs.

Which species does this pest damage?

Apple (<i>Malus</i>)	Crabapples (<i>Malus</i>)
Ash (<i>Fraxinus</i>)	Oak (<i>Quercus</i>)
Maple (<i>Acer</i>)	Cherry (<i>Prunus avium</i>)
Basswood (<i>Tilia</i>)	Blueberry (<i>Cyanococcus</i>)

If evidence of pest or damage is found, who should be told?

If you suspect an invasive insect or pathogen, contact DEC Forest Health. You may wish to take a picture and email the NYS DEC Forest Health office at foresthealth@dec.ny.gov or call 1-866-640-0652. Invasive forest pests can also be reported through NY iMap Invasives with the help of your educator or coordinator. If you collect a sample that needs to be sent to a lab for verification, please carefully follow the lab's protocol for packaging and shipping. You may also call your local Cornell Cooperative Extension office; they will help you take the appropriate steps.

Select resources:

NYS Ag and Markets Cooperative Agricultural Pest Survey (CAPS) - Winter Moth Pest Alert

<https://www.agriculture.ny.gov/CAPS/pdf/Winter%20Moth%20Pest%20Alert.pdf>

UMass Center for Food, Agriculture and the Environment, Winter Moth Identification and Management

<https://ag.umass.edu/landscape/fact-sheets/winter-moth-identification-management>

Where has the pest been found?

Winter moth is now established in Massachusetts, Rhode Island, Oregon and Washington and has been trapped in New Hampshire, Maine, Connecticut and on Long Island.



Female

Photo: Daniel Adam, Office National
des Forêts, Bugwood.org



Male

Photo: Hannes Lemme, Bavarian
State Research Center for Agriculture,
Bugwood.org



Larva

Photo: Louis-Michel Nageleisen,
Département de la Santé des Forêts,
Bugwood.org



New York State Regulations on the Moving of Firewood

Types of firewood

Untreated firewood

Any wood intended for use as firewood

Wood that has been air dried, 'seasoned' or any other process less than that described below is still considered untreated.

Treated firewood

Wood intended for use as firewood heated to 160F (71C) (core temperature) for 75 minutes

Treated firewood must bear a label that says 'NYS approved heat treated firewood/pest free'

*Kiln dried firewood can be considered treated firewood only if it meets the specifications for treated firewood

Regulations

- It is illegal to bring untreated firewood into NYS
- It is illegal to transport untreated firewood more than 50 miles (as the crow flies) from its source
- There may be additional quarantines that further restrict the movement of untreated firewood in certain areas of the state (as of May 2017)
 - No untreated ash firewood movement out of restricted zone (Emerald ash borer) http://www.dec.ny.gov/docs/lands_forests_pdf/eabquarmaps.pdf
 - No untreated hardwood firewood movement out of restricted areas of Brooklyn, Queens, Nassau County and Suffolk Counties (Asian longhorned beetle) https://www.aphis.usda.gov/plant_health/plant_pest_info/asian_lhb/downloads/albmaps/NYOverviewMap.pdf
 - No untreated oak logs or branches or any wood pieces less than 29 inches long can be moved outside of restricted zones (oak wilt) http://www.dec.ny.gov/docs/lands_forests_pdf/owmaps.pdf
- If transporting untreated firewood even within the 50 miles, you need proof of source (receipt from vendor), origin (DEC certificate) or treatment (label).
 - Source is a village, town or city and all wood from that source must be produced within 50 miles of that location
 - Dealers of untreated firewood are required to provide documentation to purchasers
- DEC certificate to move untreated firewood for your own use – you must have a Self Issued Certificate of Origin http://www.dec.ny.gov/docs/lands_forests_pdf/selfisscert.pdf

Resources

Frequently Asked Questions for Firewood Regulation (DEC) -

<http://www.dec.ny.gov/animals/44008.html>

Firewood Restriction Area Maps (DEC) – 50 mile radius around all DEC campgrounds

<http://www.dec.ny.gov/outdoor/63460.html>

Don't Move Firewood website with toolbox tools, and sections for kids and professionals

<http://www.dec.ny.gov/animals/44008.html>

The Nature Conservancy – 'Buy it where you burn it'

<https://www.nature.org/ourinitiatives/habitats/forests/explore/firewood-buy-it-where-you-burn-it.xml>

New York State Resources

Plant/insect/disease diagnostic and regulatory agencies

State: Insect/pathogen Diagnostic Labs

NYS DEC Forest Health: Diagnostic Lab is committed to helping the citizens of New York resolve their troubles with insects and plants. They are available year-round to identify your insects, plants, and plant and tree diseases. If you need something identified you can e-mail a digital image, foresthealth@dec.ny.gov bring or mail your specimen to the lab. Please note: the lab does not process human or human-related samples (i.e. scotch tape samples from people's skin, hair, or any other tissue samples). It has to be a visible insect or arthropod that can be placed in a collecting jar or vial.

Send your specimens to:

- NYSDEC Forest Health Diagnostic Laboratory
- Attn: Jessica Cancelliere
- 108 Game Farm Road
- Delmar, NY 12054

Helpful forms

- Insect submission form and handling instructions (PDF, 110 KB)
http://www.dec.ny.gov/docs/lands_forests_pdf/insectdiagnostics.pdf
- Plant submission form and handling instructions (PDF, 80 KB)
http://www.dec.ny.gov/docs/lands_forests_pdf/plantdiagnostic.pdf

Cornell Plant Disease Diagnostic Clinic (For plant pathogens)

For information on sending in specimens, go to: <http://plantclinic.cornell.edu/services.html>

Plant Disease Diagnostic Clinic, Cornell University

334 Plant Science Building, Tower Road

Ithaca, NY 14853

Cornell Insect Diagnostic Lab

For information on sending in specimens, go to: <http://idl.entomology.cornell.edu/insectid/sample-directions/>

Cornell University Dept. of Entomology

2144 Comstock Hall, Ithaca, NY 14853-2601

Local: Insect/pathogen Diagnostic Labs

Cornell Cooperative Extension County Offices

Most offices have a diagnostic lab (fees vary by county)

To find a local Cornell Cooperative Extension office, go to: <http://cce.cornell.edu/localoffices>

Agencies: State

NYS Department of Environmental Conservation

Nuisance and Invasive species: <http://www.dec.ny.gov/animals/265.htm>

Firewood Regulations: <http://www.dec.ny.gov/animals/28722.html>

Quarantines: <http://www.dec.ny.gov/animals/47761.html>

Forest Health Unit: <http://www.dec.ny.gov/lands/4969.html>

NYS Agriculture and Markets

NYS Ag and Markets, Regional plant health inspectors can be found here:

Regional inspectors: https://www.agriculture.ny.gov/PI/regional_inspectors.html

State Plant Regulatory Official, NYS Ag and Markets

Logue, Christopher 518-457-2087

Serves on the National Plant Board, oversees state pest detection and regulatory activities and coordinates survey activities between government agencies, public and private organizations.

Coordinates the state's initial emergency response if an exotic pest is detected.

State Survey Coordinator, NYS Ag and Markets

Cappy, Paul (518) 457-2087 paul.cappy@agriculture.ny.org

Coordinates CAPS survey planning, execution and reporting as well as community outreach activities.

Agencies: Federal

USDA APHIS Animal and Plant Health Inspection Service

State Plant Health Director, APHIS

Weldon, Mafalda (585) 388-2702 mafalda.weldon@aphis.usda.gov

Directs federal APHIS-PPQ pest detection and regulatory activities in cooperation with state officials, and coordinate the initial PPQ emergency response if an exotic pest is detected in the state.

Pest Survey Specialist, APHIS

Jewett, Darryl 518-281-6372 aryl.k.jewett@aphis.usda.gov

Provides technical support in planning, executing and reporting annual surveys and coordinates pest detection activities with neighboring states.

PARTNERSHIPS FOR REGIONAL INVASIVE SPECIES MANAGEMENT

New York State PRISMs

Invasive species are organisms that are not native to an area and harm human health, the economy, or the environment.

What are PRISMs?

Partnerships for Regional Invasive Species Management (PRISMs), comprising diverse stakeholder groups, were created to address threats posed by invasive species across New York State. PRISMs are key to New York's integrated approach to invasive species management. Partners include federal and state agencies, resource managers, non-governmental organizations, industry, recreationists, and interested citizens. The New York State Department of Environmental Conservation provides financial support, via the Environmental Protection Fund, to the host organizations that coordinate each of the eight PRISMs, resulting in statewide coverage.

What Do PRISMs Do?

- Plan regional invasive species management activities
- Implement invasive species prevention programs
- Conduct surveillance and mapping of invasive species infestations
- Detect new infestations early and respond rapidly
- Implement control projects
- Implement habitat restoration and monitoring
- Educate stakeholders on invasive species and their impacts
- Coordinate PRISM partners
- Recruit and train volunteers
- Support research through citizen science in collaboration with the Invasive Species Research Institute <http://www.nyisri.org/>
- Report observations to iMapInvasives <http://www.nyimainvasives.org/>
- Act as regional communication hubs



If you are interested in helping NY “stop the invasion,” PRISMs are a great way to get involved by volunteering for monitoring, outreach, or management projects. All are welcome to participate in statewide PRISM monthly conference calls to receive updates, hear excellent presentations and learn about upcoming events. Contact a PRISM leader for more information, or visit WWW.NYIS.INFO

STOP THE INVASION – PROTECT NEW YORK FROM INVASIVE SPECIES

Regional PRISM Contacts			
PRISM	Host	Contact	Listserve & Websites
APIPP Adirondack Park Invasive Plant Program	The Nature Conservancy	Brendan Quirion 518-576-2082 bquirion@tnc.org	• cce-apipp-l-request@cornell.edu • http://adkinvasives.com/
Capital Mohawk	Cornell Cooperative Extension of Saratoga County	Laurel Gailor 518-885-8995 lrg6@cornell.edu	• cce-capitalprism-l-request@cornell.edu • http://ccesaratoga.org/environment/partnerships-for-regional-invasive-species-management-prisms
CRISP Catskill Regional Invasive Species Partnership	Catskill Center for Conservation and Development	John Thompson 845-586-2611 jthompson@catskillcenter.org	• cce-crisp-l-request@cornell.edu • http://catskillinvasives.com/
Finger Lakes	Hobart and William Smith Colleges	Hilary Mosher 315-781-4385 mosher@hws.edu	• cce-flprism-l-request@cornell.edu • http://fingerlakesinvasives.org/
LIISMA Long Island Invasive Species Management Area	Long Island Native Plant Initiative	Polly Weigand 631-560-9945 info@linpi.org	• cce-liisma-l-request@cornell.edu • http://www.liisma.org/
Lower Hudson	New York - New Jersey Trail Conference	Linda Rohleder 201-512-9348 lrohleder@nynjtc.org	• cce-hudsonprism-l-request@cornell.edu • http://lhprism.org/
SLELO Saint Lawrence and Eastern Lake Ontario	The Nature Conservancy	Rob Williams 315-387-3600 rwilliams@tnc.org	• cce-slelo-l-request@cornell.edu • http://www.sleloinvasives.org/
Western New York	Buffalo State	Andrea Locke 716-878-4708 lockeas@buffalostate.edu	• cce-westernprism-l-request@cornell.edu • http://www.wnyprism.org/

How Do I Join a PRISM?

For more information on PRISM meetings and activities and how you can become involved, visit the website of the PRISM in which you are interested, or contact the coordinator listed above for the PRISM.

To improve communication within and among PRISMs, e-mail listserves, managed by the Cornell Cooperative Extension Invasive Species Program, have been established for each of the eight PRISMs. To subscribe to a PRISM listserve, e-mail the appropriate listserve address in the table above. In the subject line, type the single word “join” (without the quotes). Leave the body of the message blank; do not include a signature block or any other text in the body of the e-mail.

CONTACT INFORMATION

Invasive Species Coordination Unit

Division of Lands and Forests

New York State Department of Environmental Conservation

625 Broadway, Floor 5, Albany, New York 12233-4250

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