

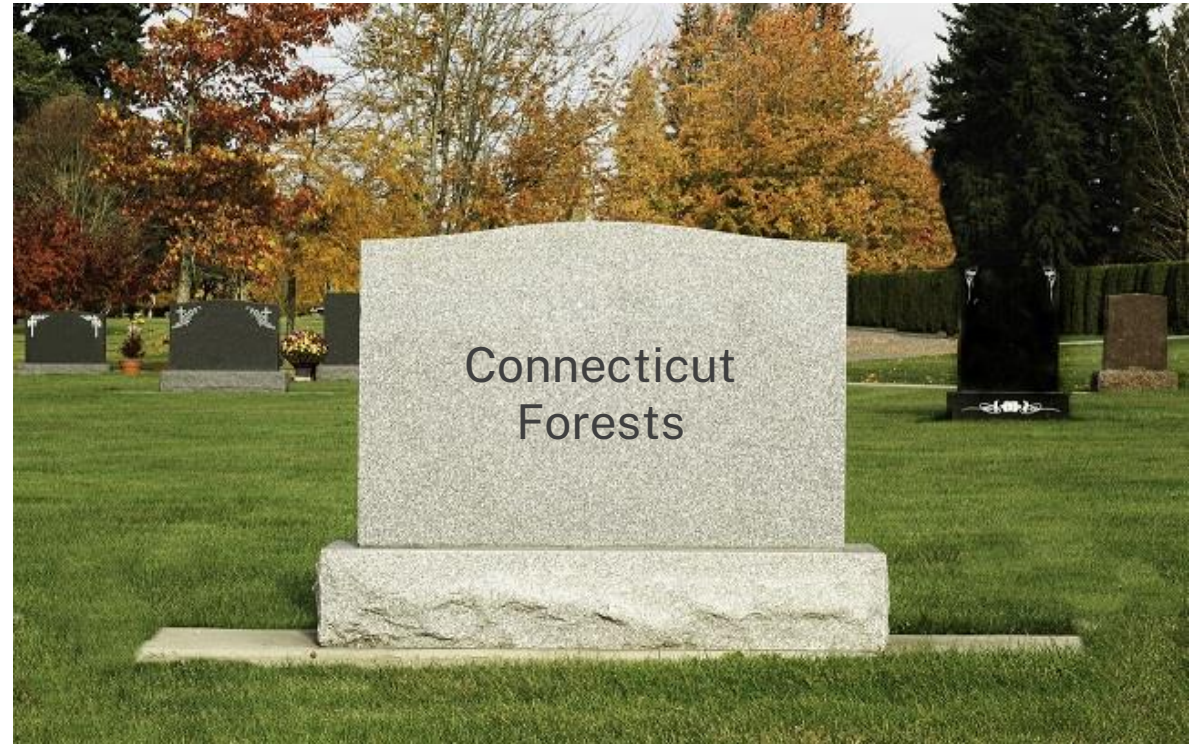


CT TREES: PESTS & PATHOGENS

Presented by: Frank Cervo, Service Forester
Division of Forestry

OVERVIEW

- Just the highlights
- Exotic invasives only
- 5 pests/pathogens
 - Brief history
 - Description
 - Treatment
 - Management
 - Climate change



<https://centennialinc.com/finding-purpose-begins-at-the-end-the-tombstone-principle/>

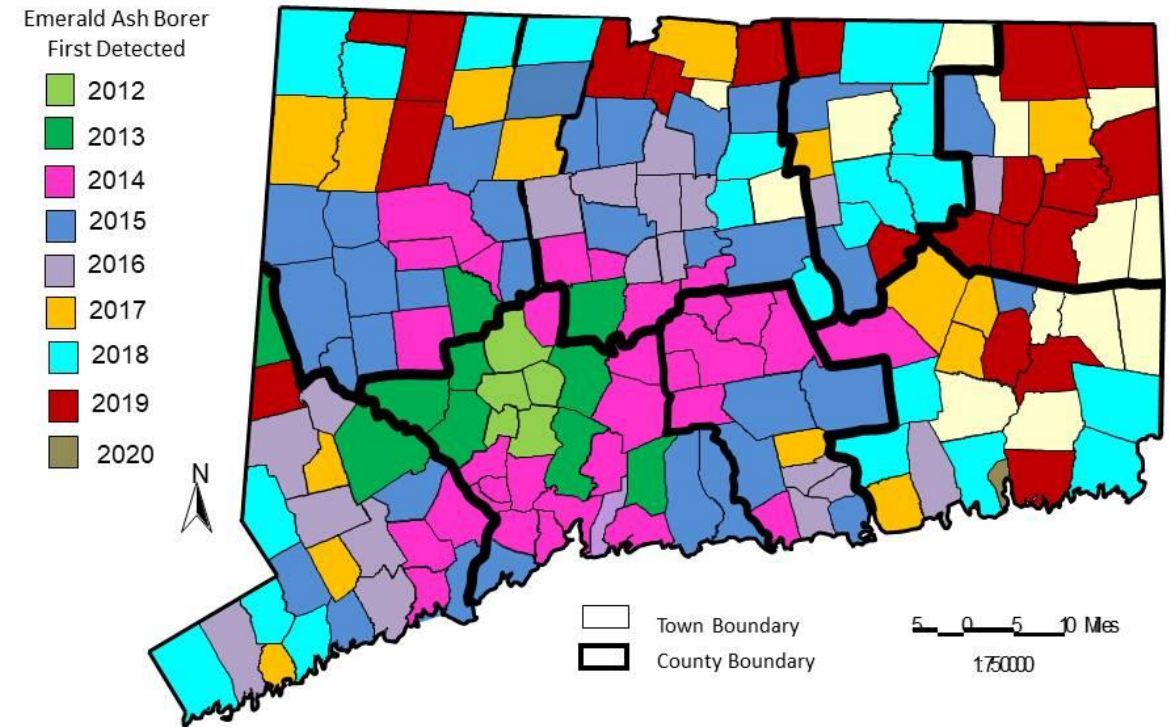
A stylized landscape illustration. The top right corner features a bright yellow sun. Below it is a large green hill with a dark blue outline. To the left of the green hill is a smaller, light green hill. The bottom of the image is a light blue area representing water, also outlined in dark blue. The text "Here We Go!" is centered on the green hill.

Here We Go!

EMERALD ASH BORER

History

- Identified in Detroit in 2002
- First seen in CT in 2012



Updated 1-9-2020



https://portal.ct.gov/-/media/CAES/IMAGES/EAB/EAB-Status-2020-Map.jpg?sc_lang=en&hash=436C6129F7EB7D827DEC98B25A27FD86

EMERALD ASH BORER

Description

- Jewel beetle
 - *Agrilus planipennis*
- Wood borer
- Full mortality



<https://www.insectimages.org/browse/subthumb.cfm?sub=7171&order=39>

EMERALD ASH BORER

Treatment

- Systemic insecticides
- Biocontrol



SPATHIUS GALINAE



SPATHIUS AGRILI



OObIUS AGRILI



TETRASTICHUS PLANIPENNISI

https://www.aphis.usda.gov/publications/plant_health/faq_eab_biocontrol.pdf



<https://www.insectimages.org/browse/subthumb.cfm?sub=7171&order=39>

EMERALD ASH BORER

Management

- **Protect individual specimen trees**
- **Evaluate ash component**
 - Intermediate vs. regeneration
- **Other factors**
 - Hazard
 - Value
 - Access/operability



EMERALD ASH BORER

Climate Change

- **Dispersal**
 - Storms
- **Biocontrol**
 - Increase survival?
- **Wetlands**



A stylized landscape illustration. The top right corner features a bright yellow sun. Below it, a large green hill with a dark blue outline dominates the center. To the left, a smaller, lighter green hill is partially visible. The bottom of the image shows a light blue area representing water, also outlined in dark blue. The text "Life's a beech and then you die" is centered on the green hill in white.

Life's a beech and then you die

BEECH

Beech Bark Disease

- Introduced in 1890
 - Nova Scotia
- Disease complex
 - Beech scale (*Cryptococcus fagisuga*)
 - Fungi (*Neonectria faginata*, *Neonectria ditissima*, and *Bionectria ochroleuca*)
- Treatment
 - Insecticides/fungicides

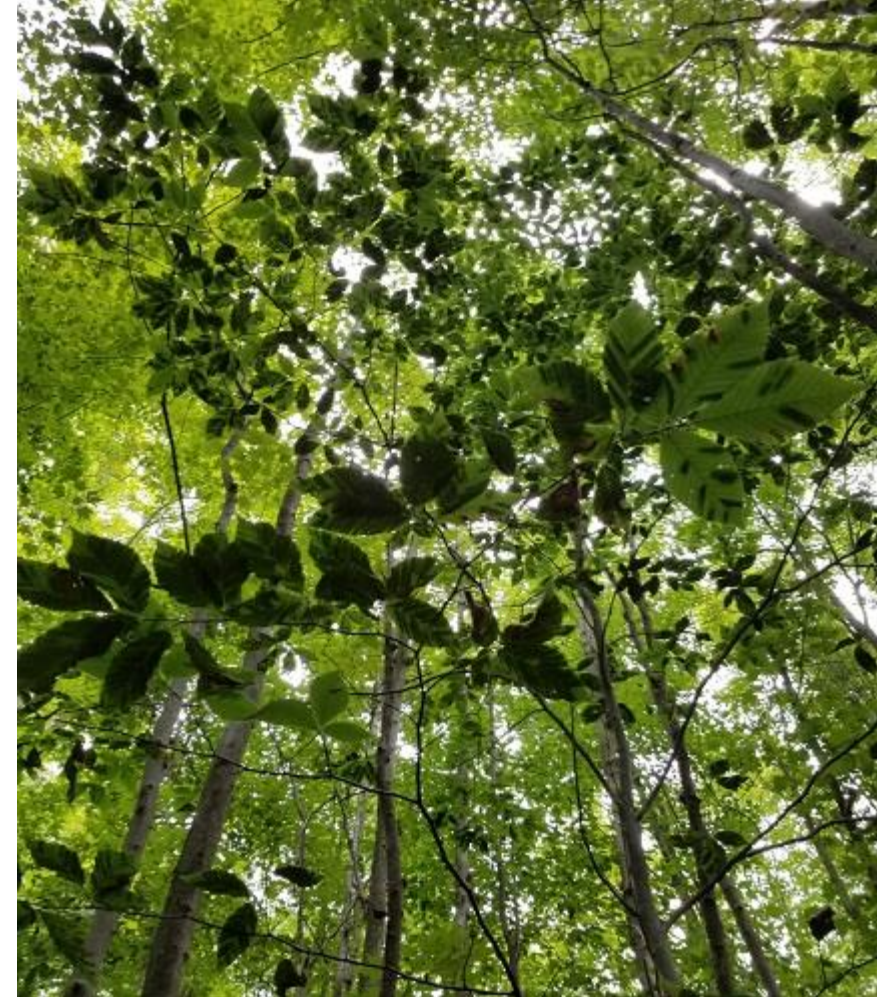


<https://blogs.northcountrypublicradio.org/allin/files/2018/03/beechforest.jpg>

BEECH

Beech Leaf Disease

- **Discovered in 2012 in Ohio**
 - First detected in CT in 2019
- **Nematode**
 - *Litylenchus crenatae*
- **Treatment?**



<https://www.dec.ny.gov/lands/120589.html>

BEECH

Management

- **Root suckering**
 - Beech thickets
- **Eradicate beech**
 - Allow other trees to establish



https://www.uvm.edu/nesl/webform/new_case_study/submissions/28

BEECH

Climate Change

- Rain vs. drought
- Accelerated overstory mortality



https://www.uvm.edu/nsl/webform/new_case_study/submissions/14



Who Lives In A Pineapple Under The Sea?

SPONGY MOTH

History

- Introduced into Massachusetts in 1869
- Formerly known as gypsy moth



https://en.wikipedia.org/wiki/Lymantria_dispar_dispar#/media/File:Lymantria_dispar_8-8-2006_19-20-14.JPG

Description

- Lepidopterid moth
 - *Lymantria dispar*
- Defoliater
 - Primarily oaks



<https://www.adirondackalmanack.com/2022/04/how-to-scrape-spongy-moth-eggs.html>

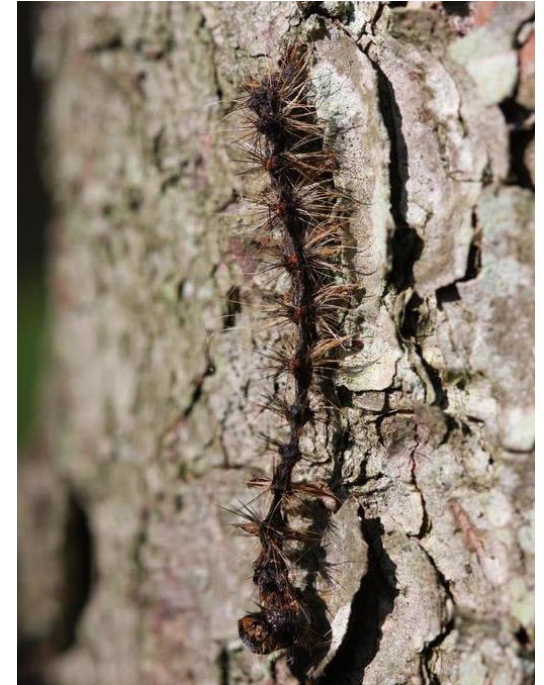


<https://www.reconnectwithnature.org/news-events/the-buzz/what-need-know-invasive-spongy-moths/>

SPONGY MOTH

Treatment

- Soil borne fungus & virus
- Mechanical removal
- Chemical treatment
- Insecticide
- Sticky barrier



<https://www.canr.msu.edu/resources/a-virus-and-a-fungal-disease-cause-spongy-moth-outbreaks-to-collapse>



<https://www.canr.msu.edu/resources/using-bands-to-protect-shade-trees-from-spongy-moth>

SPONGY MOTH

Management

- Depends upon
 - Oak component
 - Percent mortality
 - Midstory conditions
 - Understory conditions



SPONGY MOTH

Climate Change

- Rain vs. drought
- Fire
- More stressed trees





Pull The Wool Over Your Eyes

HEMLOCK WOOLY ADELGID

History

- Introduced into Virginia in the 1950s
 - Nursery stock



Description

- Small aphid-like insect
 - *Adelgis tsugae*
- Sap sucker



<https://www.dec.ny.gov/animals/7250.html>

HEMLOCK WOOLY ADELGID

Treatment

- Insecticides
- Horticultural oil
- Biocontrol
 - *Sasajiscymnus tsugae*



Cheah 1994

https://www.researchgate.net/figure/Adult-Sasajiscymnus-tsugae-feeding-on-hemlock-woolly-adelgid-eggs_fig3_330883199

Management

- Decrease competition
- Consider site
- Diversification



HEMLOCK WOOLY ADELGID

Climate Change

- Cold winters



<https://www.woodstockvt.com/events/working-woodlands-workshop-hemlock-woolly-adelgid-monitoring>

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See Spot Run

SPOTTED LANTERNFLY

History

- First discovered in 2014
 - Pennsylvania



Description

- Sap-feeding planthopper
 - *Lycorma delicatula*
- Excretions form black sooty mold





Thank You!

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