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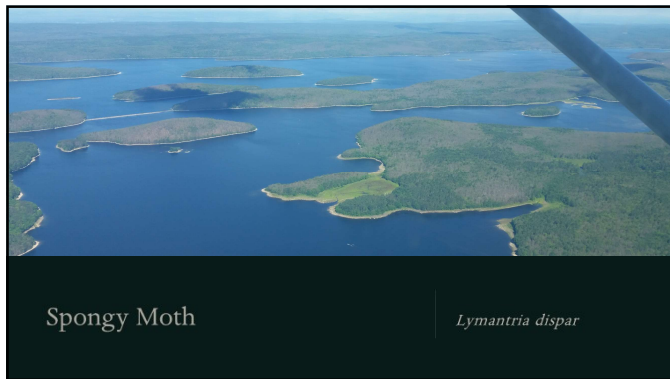
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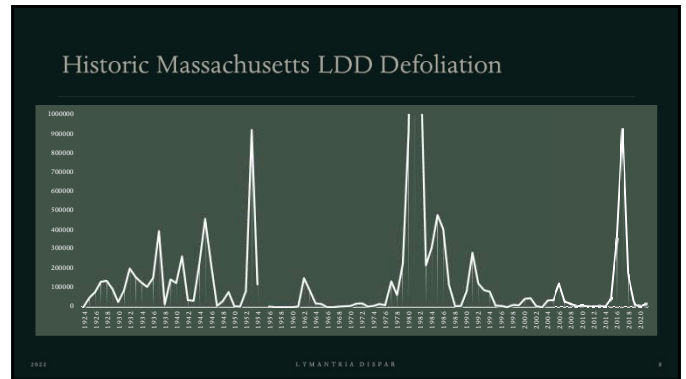
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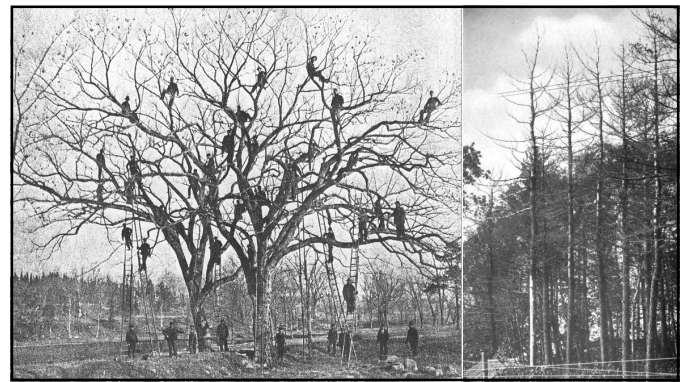
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### Spongy Moth Recent Impact

	LDD Defoliation	Oak Mortality
2015	38,175	545
2016	349,866	6,536
2017	923,186	122
2018	159,705	23,602
2019	9,955	57,912
2020	140	-
2021	11,455	-
2022	30,895	-



2023 LYMANTRIA DISPAR 13

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### Oak Mortality Event



2024 LYMANTRIA DISPAR 14

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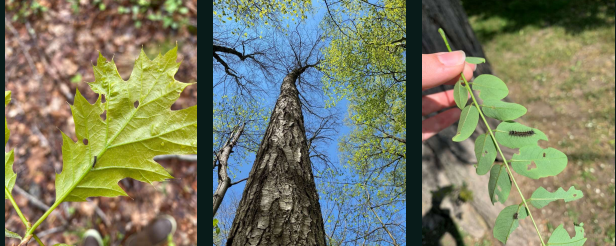
### Oak Mortality Event



2024 LYMANTRIA DISPAR 15


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### 2024 Population



2023 LYMANTRIA DISPAR 16

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2023 LYMANTRIA DISPAR 17

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### Precipitation and temperature changes will influence moth population dynamics and impact

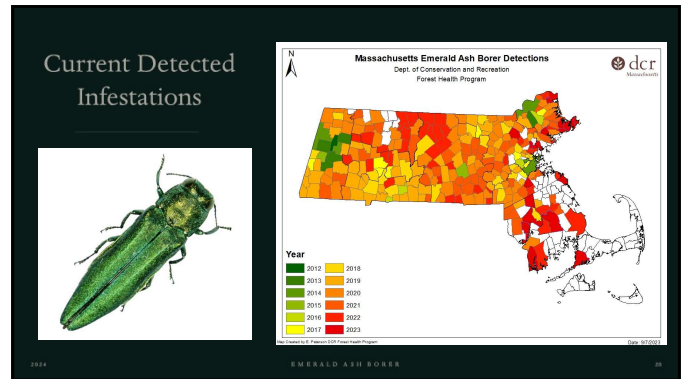


2023 LYMANTRIA DISPAR 18

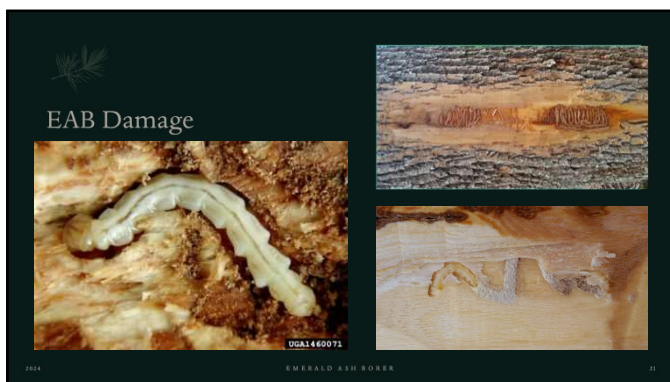
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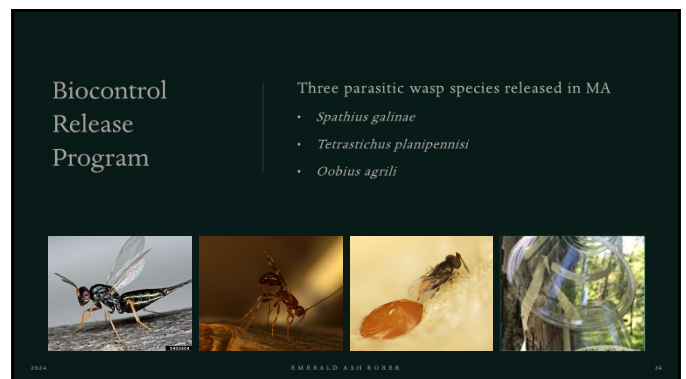
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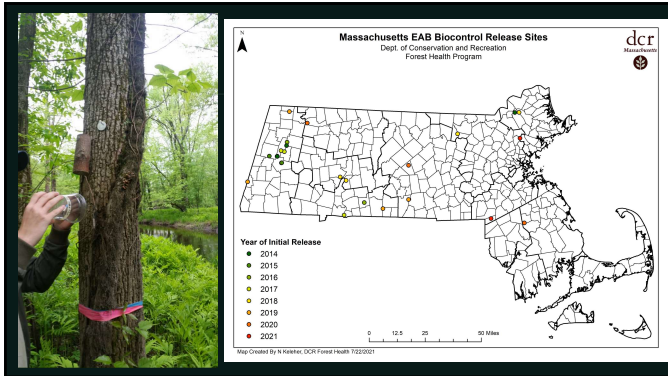


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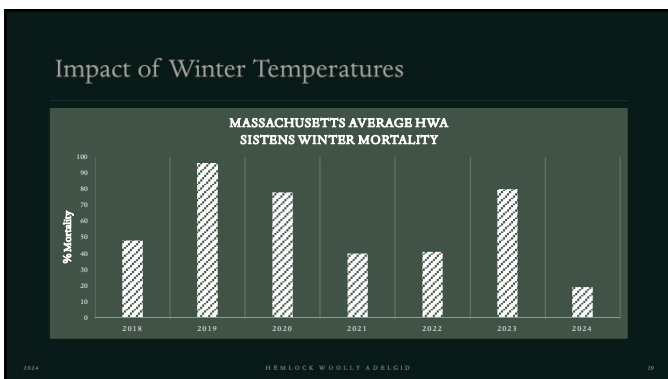
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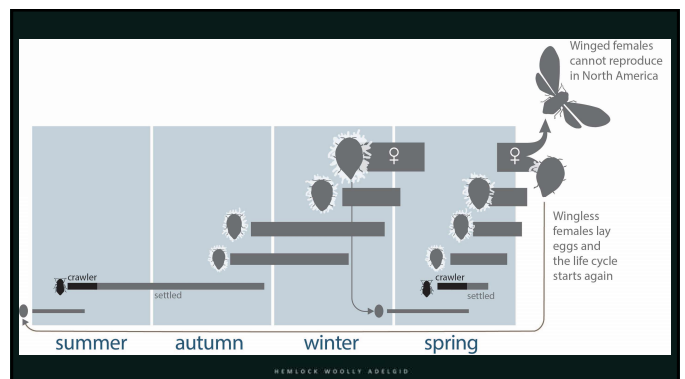
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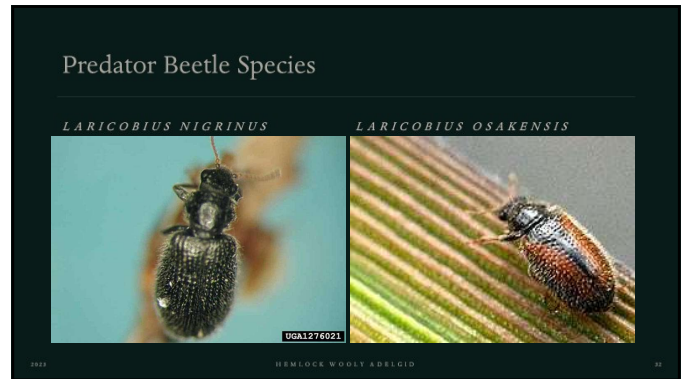
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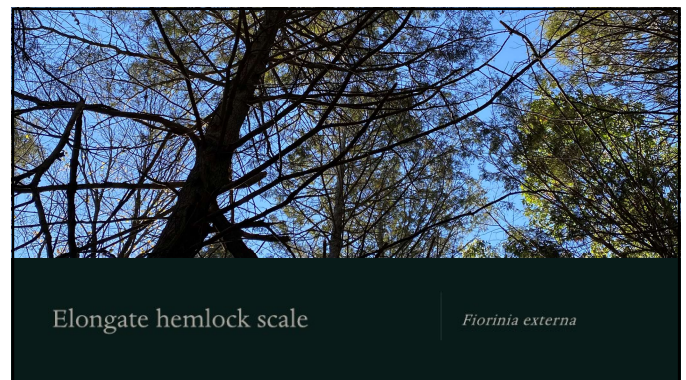
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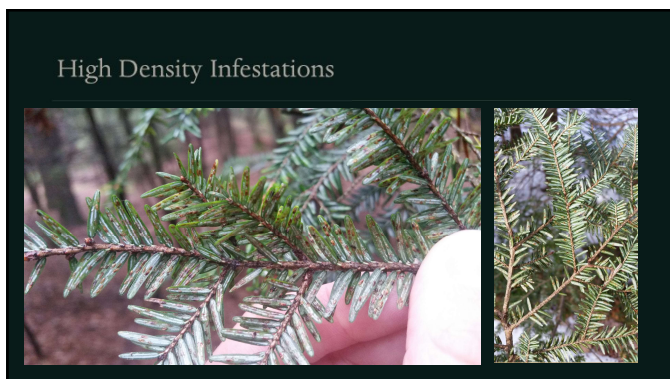
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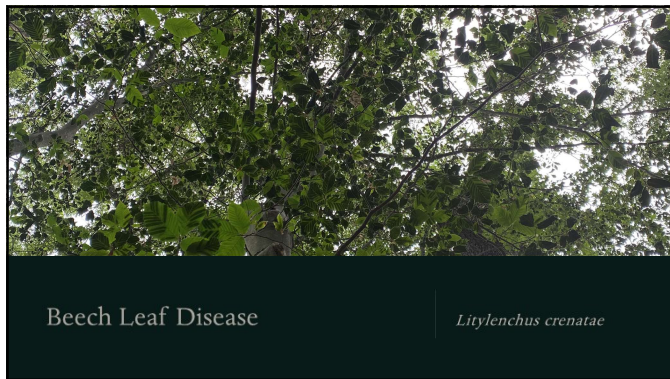


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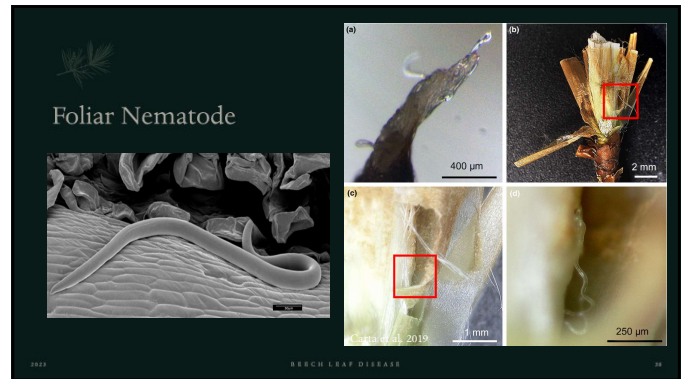


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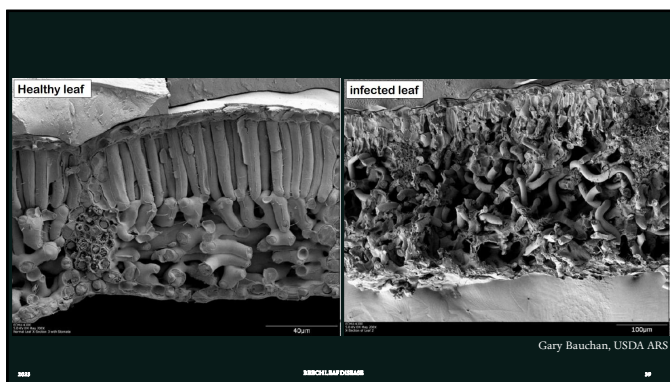




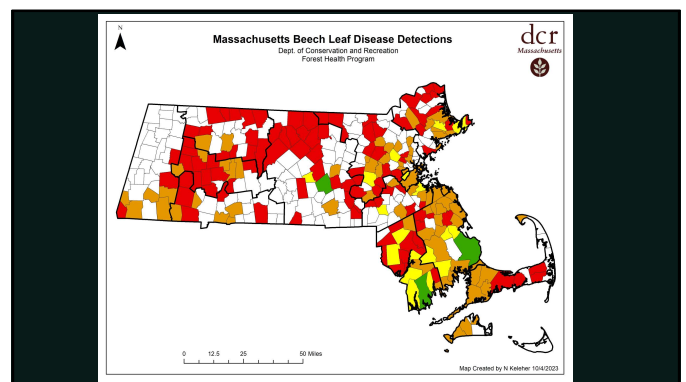
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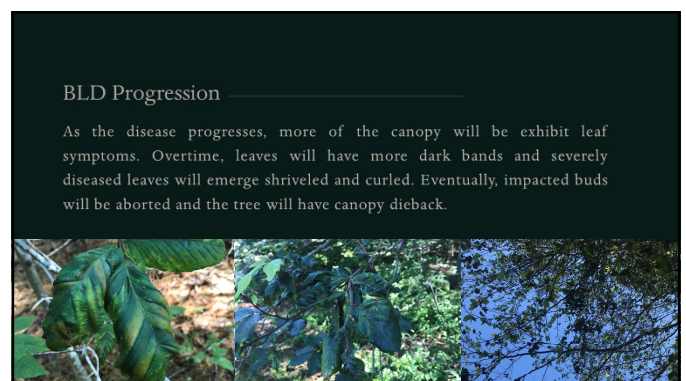
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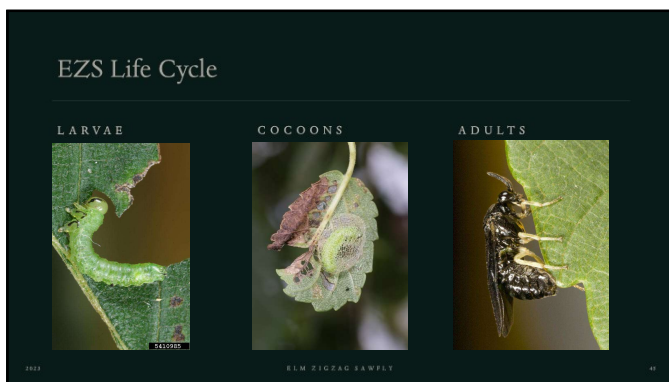
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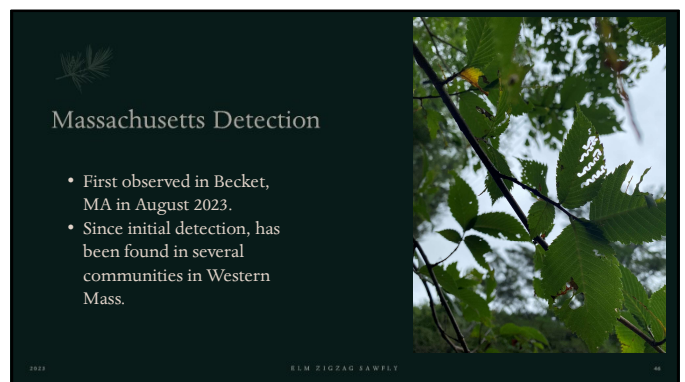
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### Needlecast disease complex

Cause by multiple fungal pathogens including:

- *Lecanosticta acicola*
- *Septorioides strobi*
- *Bifusella linearis*
- *Hendersonia pinicola*
- *Lophodermium* sp.

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### Needlecast Symptoms

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### *Caliciopsis pinea*

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### Canker Formation

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## Pine Decline and Mortality

Stress from fungal pathogens weakens trees and leaves them vulnerable to other insects and diseases. While WPND does not directly kill pines, we have seen decline and mortality caused by secondary invaders. Drought and other impacts of climate change can further expedite this process.

2024 WHITE PINE 56

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## White Pine Blister Rust

Cause by the introduced pathogen *Cronartium ribicola* WPBR infects 5 needle pines. Requires an alternate, *Ribes* sp. Eradication efforts in the 20<sup>th</sup> century limited the impact of this disease

2024

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THE UNIVERSITY OF MAINE  
Maine Agricultural and Forest Experiment Station  
Miscellaneous Publication 764  
June 2019 • ISSN: 1070-1588

### Field Manual for Managing Eastern White Pine Health in New England

William H. Livingston, Isabel Murtek, Kyle Lombard, Jennifer Wheeler, Aaron Berglund, Laura S. Kereff, Barbara Schultz, Robert S. Seymour

College of Natural Sciences, Forestry, and Agriculture

Figure 1. Needle Discoloration

White Pine Weevil	White Pine Shoot Borer	Pine Shoot Scale/Calyptus Canker	White Pine Needle Damage

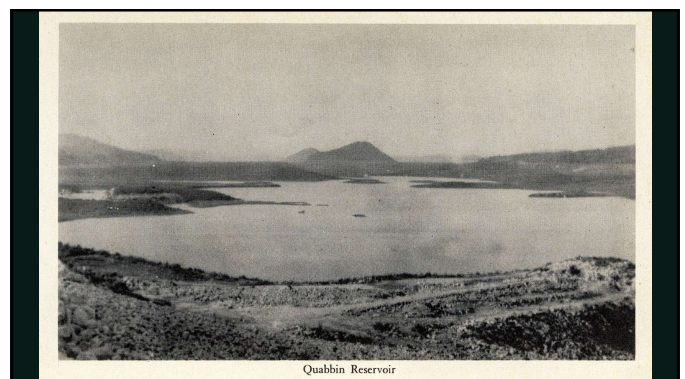
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## What does the future hold?

New invaders  
Altered impact of establish invasive species  
Altered impact of native pest species  
Additional stresses to compound pest issues

2023 DCF FOREST HEALTH PROGRAM 59

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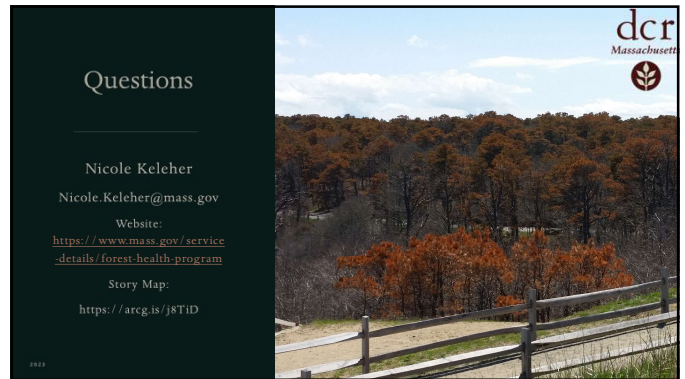


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