NPDN
NATIONAL PLANT DIAGNOSTIC NETWORK

IMPACT ON PROTECTING MAINE FORESTS

ISSUE - A NEW TREE DISEASE:

- Beech leaf disease (BLD) was identified in the U.S. in 2012.
- In 2021, it was found in Maine.
  BLD threatens Maine's more than 1.2 billion beech trees, and degradation or loss of this ecologically important tree would significantly alter ecosystem functioning and productivity.
- Beech is an important food source and habitat to many wildlife species, such as Maine's iconic black bear and a rare butterfly that feeds on beech tree nuts.
- Beech is an essential component of Maine's hardwood stands and is among the region's most common stands.

Photo by Bruce deGraaf

A dying beech tree in Maine from BLF infection, just two years from the first detection in the state.
Photo by Dr. Bergdahl, Maine Forest Pathologist

APPROACH:

The Maine Forest Service (MFS), Forest Health & Monitoring program is performing research to understand the disease distribution better. Due to the specificity of testing and the lack of testing in the state, the Maine Forest Service asked the UMaine Plant Disease Diagnostic Lab (PDDL) to start testing for BLD.

- In 2023, the PDDL successfully implemented the specialized test.
- PDDL is now the confirmatory lab for the MFS when a suspected tree is found in a new county.

RESULTS:

In 2023, the PDDL tested and confirmed BLD in five new counties in Maine, indicating the vast spread of the disease.

February 9, 2024

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IMPACTS:

Photo by Dr. Bergdahl, Maine Forest Pathologist

The UMaine Plant Disease Diagnostic Lab is one of 72 labs across the country a part of the National Plant Diagnostic Network (NPDN) and the lab serves as the regional center for the northeast.

"The supplemental funding that I receive from the NPDN allowed me to cover all the 2023 costs for testing these samples to support the work the Maine Department of Agriculture, Conservation and Forestry Service carried out to determine the impact this disease has on our state forest." Dr. Smart, Director of the UMaine Plant Disease Lab.

"The National Plant Diagnostic Network provided me access to data from diagnostic labs who test for Beech leaf disease that I used to update a Beech leaf disease county map." Dr. Martin, U.S. Forest Service

"The National Plant Diagnostic Network provided me access to the expertise needed to diagnose this disease by another lab sharing their protocol so I could perform this test for Maine woodland owners." Dr. Shea, diagnostician, UMaine Plant Disease Diagnostic Lab.