

# How Widespread are White Pine Health Problems in Vermont?

## How the Evaluation was Done:

- “Mature Stands” of white pine were located on randomly selected aerial photos (Figure 3) from a statewide coverage obtained in 2000.
- In summer 2001, 21 stands were surveyed (Figure 4). Trees were evaluated on four 1/24th acre subplots in each stand. Symptoms, signs, and site conditions were also rated.
- In addition, 10 young pines were evaluated in “Regenerating Stands” near each mature stand.

## Why we were concerned:

- Unexplained Mortality
- Scattered Heavy Caliciopsis Canker (Figure 1)
- Heavy Cone Production (Figure 2)
- Widespread Needlecast
- Interest in *Ribes* Cultivation
- Similar Observations in Nearby States

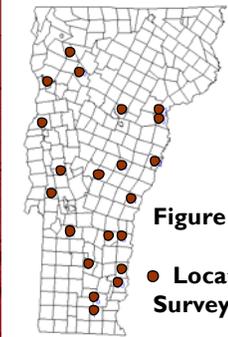
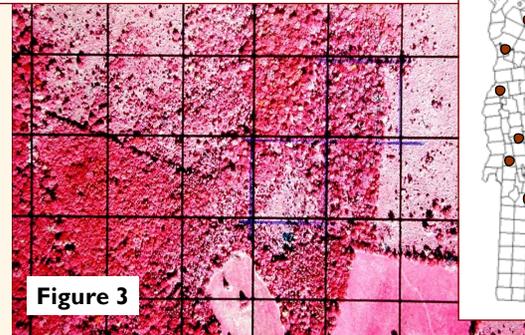


Figure 4:  
● Location of Survey Plots

Figure 3

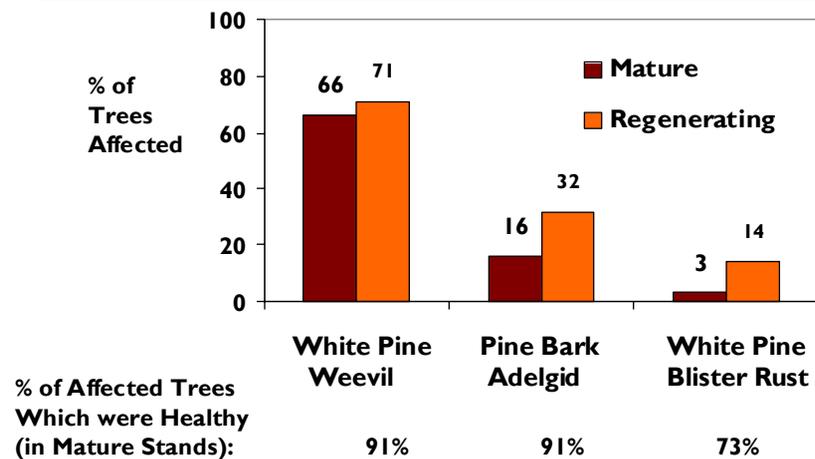


Figure 1



Figure 2

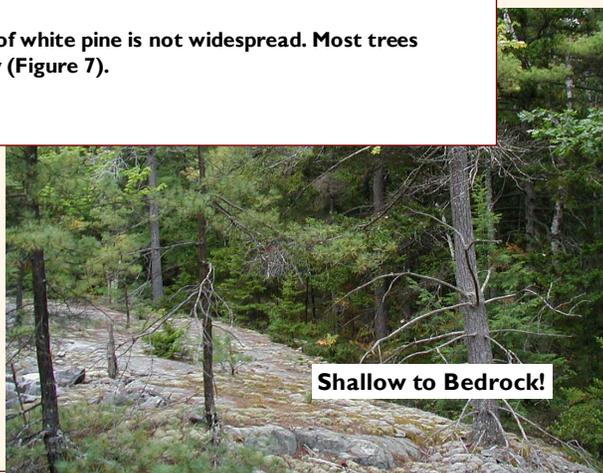
## Figure 5 Biotic Agents on Living White Pine



White Pine Blister Rust

## Conclusions :

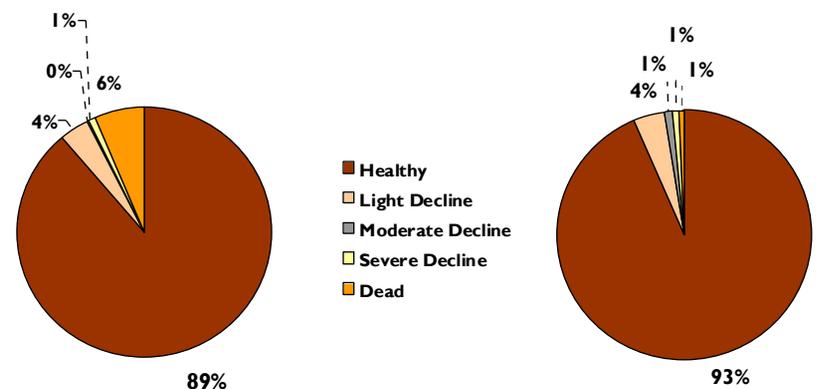
- The most common biotic agents on white pine were not associated with tree health (Figure 5).
- Where pines were unhealthy, difficult site conditions or recent disturbance were usually present (Figure 6).
- Decline of white pine is not widespread. Most trees are healthy (Figure 7).



Shallow to Bedrock!

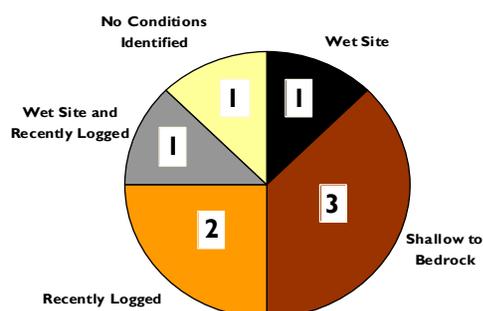
## Figure 7 Crown Condition of White Pine

Overstory Trees in Mature Stands      Young Trees in Regenerating Stands



## Figure 6 Site Conditions in Unhealthy Pine Stands\*

Number indicates the number of surveyed Stands with the identified Site Condition



\*Unhealthy Stands had at least 3 overstory white pine not rated as Healthy

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