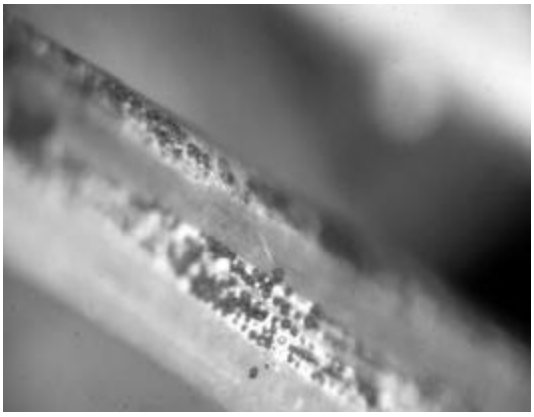
BARTLETT TREE RESEARCH LABORATORIES
CHARLOTTE, NC
Technical Report

# *Needlecast of Conifers*

**N**eedlecast is a term applied to a variety of foliage disorders of many coniferous species. Needlecast diseases are usually more severe on young trees or on trees growing outside of their natural range. Disease severity and corresponding defoliation vary from year to year depending on climatic conditions. Although few trees die as a result of defoliation, needlecast is a serious disease of shade trees because of the unsightly condition and loss of vigor of affected trees.



**Needlecast fruiting bodies on pine needles.**

## CAUSE

At least forty different species of fungi are known to cause this disease, but only six genera are of major importance. These are Rhabdocline in **Douglas fir** and Bifusella, Elytroderma, Hypoderma, Hypodermella, and Lophodermium on other conifers including **pine, spruce, fir, larch and juniper**.

## SYMPTOMS

One- and two-year old needles of infected conifers (except larch) develop spots and become yellowish-brown to red by early spring. Discoloration symptoms rarely involve an entire needle. By early to mid-summer most of the infected needles are dropped or cast, leaving only the current season needles. On spruce and larch, however, the diseased needles remain attached beyond the normal time.

## SIGNS

After the needle is cast form the tree (sometimes before), small, black elongate fruiting bodies of the causal fungus erupt through the surface of the infected needle area. During moist weather, the mature fruiting bodies discharge spores, which may be carried to nearby unaffected needles.

## CONTROL

Needlecast can be controlled by making protective applications of a properly registered fungicide when the needles are half-grown and again when fully developed.