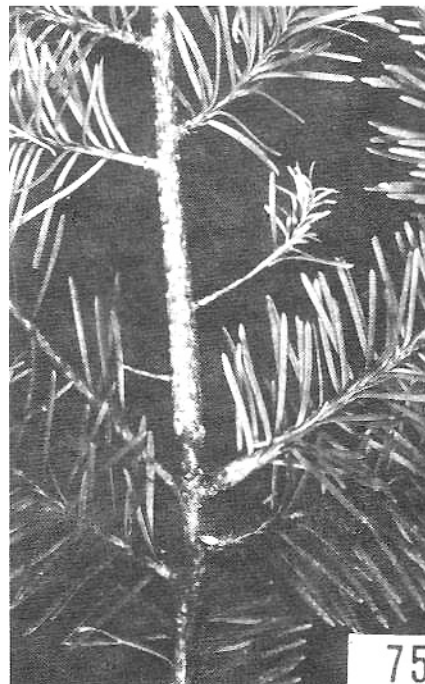


GROVESIELLA ABIETICOLA - ASSOCIATED WITH A CANKER DISEASE OF TRUE FIRS

Grovesiella canker, caused by the fungus *Grovesiella abieticola* (Zell. & Good.) Morelet and Gremmen, has been reported sporadically on true fir in conifer forests from northern California to British Columbia but has not been considered to be a significant problem. However, during a survey of Noble fir Christmas tree plantations in western Oregon and Washington in 1984, Grovesiella canker was the most prevalent canker disease observed. This disease was associated with branch dieback and tree mortality in 10% of the plantations examined **and in one of the plantations, 14% of the randomly selected trees had Grovesiella canker disease.**

Typical symptoms of *Grovesiella abieticola* infections are prominent cankers with overgrowths (Figures 1 and 2).

FIGURE 1:
Grovesiella
canker, caused
by the fungus
*Grovesiella
abieticola*, may
ultimately
girdle and kill
the branch or
tree. Browning
of the needles
beyond the
canker location
is a typical
symptom.



Frequently small (about 1/16"), grey-black, fruiting bodies of the fungus, called apothecia, are present on these cankers (Figure 3). As these cankers develop they ultimately girdle and kill the branch or stem of the tree. Branches in the lower portion of the tree generally show symptoms first. When cankers occur on the main stem, the entire tree can be killed. During our survey of Noble fir Christmas tree plantations, we also observed this disease on Shasta fir, Grand fir and White fir.

Within the Northwest Christmas tree industry Grovesiella canker has in the past been commonly referred to as Scleroderris canker. **However, Grovesiella canker is now considered to be distinctly different from Scleroderris canker.** Scleroderris canker is a disease on pines caused



FIGURE 2:
Swelling above the canker is a typical symptom. When cankers occur on the main stem, the entire tree can be killed. The greyblack bodies present in the cankered area are apothecia.

by *Gremmeniella abietina* (Lagerb.) Morelet (*Scleroderris lagerbergii* Gremmen). Although extensive studies have been done on Scleroderris canker of pine, **little information, even experimental evidence of the pathogenicity of *G. abieticola*, is available regarding Grovesiella canker. Information on the biology and pathogenicity of *G. abieticola*, sources of inoculum (spores, periods of inoculum availability and periods of host susceptibility are needed to develop effective control treatments for Grovesiella canker.**

Our observations to date, the experience of some growers, and the history of similar diseases suggest that *G. abieticola* may be present on seedlings coming from nurseries

Another source of inoculum may be diseased native firs adjacent to plantations. Initial studies on inoculum availability have shown that fruiting bodies of *G. abieticola* associated with cankers are able to release spores during most of the year.

To determine the host range of this pathogen and periods of host susceptibility, we have established a planting of conifers including species used for Christmas trees, timber, and landscaping. Information from these studies will be used to develop a control program.

FIGURE 3:
Apothecia, the small, grey-black, fruiting bodies of the *Grovesiella abieticola* fungus, apparently release spores during most of the year.



Until additional information is available, we would recommend that growers who think they have trees with this disease send a sample to their local Cooperative Extension agent for positive identification.

If the trees have Grovesiella canker, pruning out and destroying all cankered portions of the tree should help reduce its spread. If infected branches are left in the field, fruiting bodies associated with the cankers will probably continue to produce spores to spread the disease.

Portions of the funding we have obtained from the Northwest Christmas Tree Association will be used to support the above-mentioned studies during 1985-1986.

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