



# *Cytospora Canker of Spruce*

*Bruce R. Fraedrich, Ph. D., Plant Pathologist*

**Cytospora** (Valsa) canker, caused by the fungus Cytospora kunzei, is the most destructive disease of spruce. This stem disease is most common on Colorado blue spruce and Norway spruce, but will also attack Koster's blue spruce. As the disease progresses from lower to higher branches, affected trees become unsightly and lose their ornamental value. Cytospora canker is most common on trees over fifteen years old, but occasionally affects younger trees as well.



Figure 1 Encrusted resin deposit that typically occurs with Cytospora canker.

## **SYMPTOMS AND SIGNS**

The first noticeable symptoms of Cytospora canker are the browning of needles and dying of lower branches. A heavy resin exudation usually occurs at the cankered area leaving white, encrusted deposits or resin on the bark. (Figure 1). If the thin outer layer of bark in the infected area is carefully removed, very small, black fruiting bodies of the fungus (Figure 1) may be found.

These fruiting bodies contain minute spores that ooze out onto the bark surface during wet weather. These spores can be spread by rain, wind, or pruning tools and cause new infections.

## **CONTROL**

Infected branches should be removed at the trunk and the pruning tool should be sterilized after each cut. Pruning should be done only when the branches and foliage are dry to reduce the chance of spreading spores.

Since weakened trees are considered to be more susceptible to Cytospora canker, fertilizing to promote vigorous growth is recommended. Heavy mulching around spruce to conserve moisture may also be beneficial.