

# Sooty Canker

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9/98

## *Plant Disease Management: Horticultural Crops*

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### Pathogen

Fungus, *Hendersonula toruloidea*

### Host

Ash, citrus, mulberry, walnut, fig, oleander, wisteria, sycamore, apple, apricot, chinaberry, poplar and other smooth or thin bark trees

### Symptoms/signs

Sooty canker is also called branch wilt or limb wilt. It causes cankers, wilting and dieback in tree branches. Leaves on affected branches are often small and wilt and die during the summer. Brownish, moist areas appear on limbs during the first stages of disease, then the bark in these areas cracks or peels away revealing black masses of fungal spores. The bark and sapwood around the spore mass is stained dark brown or black, and sapwood under and around the canker is killed.

### Environmental conditions

At lower desert areas in Arizona, infections may take place at any time when there is sufficient humidity for the fungal spores to germinate and penetrate wound sites. At higher elevations, spores probably grow into new wound sites during spring or summer rainy periods. Disease progresses in stressed trees during hot summer weather.

### Disease

The pathogen, *Hendersonula toruloidea*, infects the host only through cracks in the bark or wound sites such as those created by heat stress, sunburn, pruning or freezing. Trees with smooth bark that is easily wounded are particularly susceptible. Infection is thought to take place during mild wet weather in the winter months. Fungal spores easily move from one infection site to another by wind and rain, and

infect new wound sites. The fungus grows into the bark where it becomes established and produces masses of spores for which the disease is named. It is well adapted to hot, dry weather, and once established, grows best at 91° F to 97° F.

### Prevention/control

Disease can be prevented by maintaining tree vigor and avoiding unnecessary pruning or wounding. Since sunburned bark is the most common place that the fungus enters, careful pruning techniques should be used so that limbs that shade the trunk and scaffold branches are not removed.

When infections are found in upper branches, remove infected limbs by cutting at least six inches below infection sites. If severe pruning is needed, be sure to remove limbs in the fall or early spring when the remaining tree will not be sunburned as a result of pruning. Treatment of wounds with pruning paint or compound is no longer recommended, and the best assurance of preventing re-entry of the fungus is to prune during cool, dry periods when the wound will seal quickly. Rinsing pruning tools in a 20% bleach solution between cuts will prevent spreading the fungus with tools.

### *At a Glance*

- Sooty Canker causes cankers and dieback in tree branches. A black mass of spores is revealed when the bark is removed from infected areas.
- The pathogen enters tree branches through wounds and cracks, especially sunburned areas.
- Disease is prevented by avoiding damage to trees by sunburn, freezing, poor pruning or other physical damage.

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Issued in furtherance of Cooperative Extension work acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, James A. Christenson, Director, Cooperative Extension, College of Agriculture, The University of Arizona.

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