UofA UNIVERSITY OF ARKANSAS DIVISION OF AGRICULTURE
Cooperative Extension Service

Agriculture and Natural Resources

FSA7536

# Branch Canker and Dieback of Leyland Cypress

Stephen Vann
Assistant Professor
Extension Urban Plant Pathologist

## Introduction

In Arkansas, Leyland cypress (x *Cupressocyparis leylandii*) is a common, fast-growing ornamental evergreen that is suitable for screens, groupings or as an isolated landscape tree. In some areas of the state, it is also grown as a Christmas tree. These trees can easily grow 3 feet per year and reach heights upwards of 40 feet. In Arkansas, this tree is particularly susceptible to a branch canker or branch dieback. This disease may be actually caused by two fungi, *Seiridium unicorne* or *Botryosphaeria dothidea*. Seiridium canker is perhaps the most significant and damaging disease on Leyland cypress. This fungus is commonly associated with both twig cankers and twig dieback. Left unchecked, the fungus can move into the main trunk killing the entire tree. Botryosphaeria canker produces symptoms similar to Seiridium canker. This canker disease affects many woody ornamentals.

## Damage

Both disease organisms attack plants that are stressed by environmental factors, such as wounds, drought and freezing. The most obvious indication of the disease is the browning and subsequent dieback of a leader or major side branch (Figures 1 and 2). Sunken, dark brown cankers or patches develop on the affected branches near the transition area of healthy and diseased tissues.

**Figure 1. Random branch dieback of container Leyland cypress**

**Figure 2. Branch dieback of landscape Leyland cypress** *(courtesy J. Robbins)*

*Arkansas Is Our Campus*

Visit our web site at:
http://www.uaex.edu

Small, black fruiting bodies (Figure 3) of both fungal organisms can often be seen within these areas. Affected branch tips turn yellow or brown. The affected branches are usually randomly distributed on the tree. This random distribution of branch dieback is useful in disease diagnosis. Underlying woody tissue in the cankered areas is often gray or brown. Extensive resin ooze or "bleeding" on diseased branches may also occur. This symptom resembles sap flow or gummosis-type symptoms. When branches are wet from rainfall or overhead irrigation, the fungus advances rapidly, killing tissue in its wake. Entire trees may be killed if the fungi are allowed to advance into larger branches and stems.

**Figure 3. Reproductive bodies of Seiridium within stem lesion**

## Disease Cycle

Both canker-producing fungi are able to survive the winter and other adverse environmental conditions in infected plant tissues. Infection typically takes place during wet weather. Microscopic spores produced by both of these fungal organisms are disseminated primarily by splashing from overhead water. Infection occurs primarily through tree wounds; however, one species of Seiridium can penetrate intact young green leaves and shoots. Spores may lodge in bark crevices. Insects and pruning tools may also serve to disseminate spores. These canker diseases can kill large sections of the plant during the spring and summer during periods of frequent rainfall or high humidity.

## Management

Cultural practices are important in disease management. All infected branches should be pruned about 3 to 4 inches below the cankered area and destroyed as soon as symptoms are observed. As an added precaution, disinfect pruning blades after each cut with either 10 percent household bleach or 70 percent alcohol. Since these two canker diseases are often associated with environmental and cultural stresses, plants should be irrigated properly during lengthy drought periods. Field observations suggest that trees grown in shady conditions are more prone to develop these canker diseases. If the plants are irrigated by overhead means, this should be done during the early morning hours. By minimizing overhead water, the level of disease spread can be reduced. In nursery situations, container-grown trees should be protected from prolonged periods of subfreezing temperatures, which may create wounds on the stems. Do not take and propagate cuttings from infected plants. If Leyland cypress is to be grown as a screen, be sure to have a minimum of 12 to 15 feet between plants. Currently, fungicides are not effective for controlling this disease.

Early detection and identification are important for effective disease management strategies. For further information about Seiridium canker and other diseases of Leyland cypress, contact your local county Extension office.

Printed by University of Arkansas Cooperative Extension Service Printing Services.

**DR. STEPHEN VANN** is an assistant professor and Extension urban plant pathologist with the University of Arkansas Division of Agriculture, Cooperative Extension Service, Little Rock.

FSA7536-PD-5-06N