University of Idaho
College of Agriculture
Cooperative Extension Service
Agricultural Experiment Station

Current Information Series No. 324
February 1976

LIBRARY
DEC 14 1976
UNIVERSITY OF IDAHO

Juniper Twig Blight

H. S. Fenwick
Extension Plant Pathologist

Juniper twig blight, a fungus disease more specifically referred to as *Phomopsis blight*, is widespread in Idaho. It usually affects young plants or the new growth on older plants. Species and varieties within the species vary in their susceptibility to the fungus.

Symptoms and Effects

Young needles are susceptible to infection throughout the growing season. When the causal fungus penetrates these needles, small yellow spots appear 3 to 5 days after invasion. The fungus advances throughout the needles and grows into young stem tissues. Terminals and branches begin to fade in color, then become reddish-brown and finally ashen gray.

Lesions on older stems frequently develop into cankers. Stems 1 to 2 years old are often girdled. Stems over 1/3 inch in diameter usually are not girdled. Extensive girdling of small stems in individual shrubs causes an unsightly appearance because of numerous dead branch tips.

The disease may be confused with drought damage because in both cases the tips of the branches may be killed. The easiest way to differentiate between juniper blight and drought damage is to observe the demarcation between the healthy and dead stem tissue. In juniper blight a sharp demarcation exists between green and dead tissue. In tips affected by drought, the transition is gradual.

Juniper blight might also be confused with winter injury or winter drought. However, winter injury is likely to affect most or all of the branches on one side of the shrub, particularly if the shrub has a south or southwest exposure.

Cause

Juniper blight is incited by the fungus *Phomopsis juniperovera*. This fungus is active throughout the growing season, especially during moist weather. It survives as specialized, flask-shaped fruiting bodies (called *pycnidia*) on dead, infected plant tissue. These bodies are black and extremely small. They can be seen only with the aid of a hand lens or magnifying glass. They are most commonly found on tissues which have turned ashen gray.

The fungus spreads when spores produced in the pycnidia are extruded from an opening at the top. The spores are splashed to healthy needles and stems of the shrub or adjacent shrubs. In the presence of moisture, the spores germinate and penetrate the host. Germination of the spores and subsequent infection occurs best when the temperature is around 75°F with moisture supplied by rain or sprinklers.

The pycnidia develop within 3 to 4 weeks after infection but usually are not well developed until the infected tissues have dried considerably. Therefore, symptoms of the disease may not become visible to the homeowner until June or July, or even August, depending on the area of the state.

Control

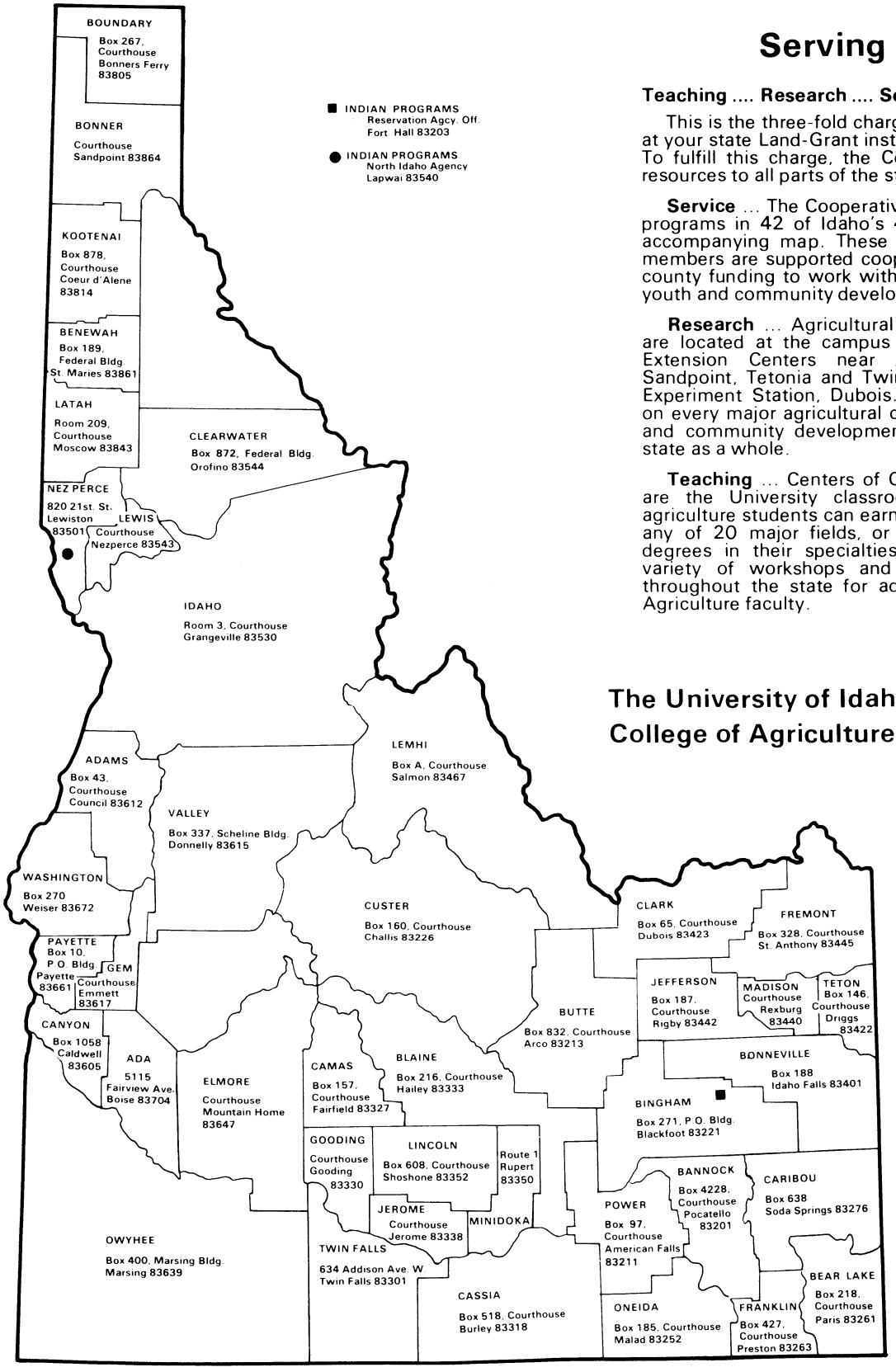
Prune out and destroy affected twigs because the fungus lives over on these structures.

Avoid the use of overhead sprinklers as a means of applying water. The foliage can remain wet several hours after the sprinklers are turned off. This is particularly true if overhead irrigation is applied in the evening.

Spray with a copper-containing compound such as an 8-8-100 Bordeaux mixture or tri-basic copper (fixed copper).* Apply the first spray as new growth starts in the spring. Repeat the spray at 2-week intervals until dry weather prevails.

*The toxicity of pesticides listed here is relatively low. Trade names are used only to identify the chemicals as they are known in the marketplace. No endorsement by the University is intended, nor is discrimination implied against products not listed.

University of Idaho College of Agriculture



Serving the State

Teaching .... Research .... Service

This is the three-fold charge of the College of Agriculture at your state Land-Grant institution, the University of Idaho. To fulfill this charge, the College extends its faculty and resources to all parts of the state.

Service ... The Cooperative Extension Service has active programs in 42 of Idaho's 44 counties as shown on the accompanying map. These College of Agriculture faculty members are supported cooperatively by federal, state and county funding to work with agriculture, home economics, youth and community development.

Research ... Agricultural Experiment Station scientists are located at the campus in Moscow, at Research and Extension Centers near Aberdeen, Caldwell, Parma, Sandpoint, Tetonia and Twin Falls and at the U.S. Sheep Experiment Station, Dubois. Their work includes research on every major agricultural crop in Idaho and on economic and community development activities that apply to the state as a whole.

Teaching ... Centers of College of Agriculture teaching are the University classrooms and laboratories where agriculture students can earn bachelor of science degrees in any of 20 major fields, or work for master's and Ph.D. degrees in their specialties. And beyond these are the variety of workshops and training sessions developed throughout the state for adults and youth by College of Agriculture faculty.

The University of Idaho College of Agriculture

Issued in furtherance of cooperative extension work in agriculture and home economics. Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, James L. Graves, Director of Cooperative Extension Service, University of Idaho, Moscow, Idaho 83843. We offer our programs and facilities to all people without regard to race, creed, color, sex, or national origin.

5M 2-76