White Pine Blister Rust

What you can do to slow the spread

What is white pine blister rust?

White pine blister rust is an exotic, invasive disease of 5-needle white pines. The disease causes cankers which usually kill the stem above the canker and often lead to tree mortality.

White pine blister rust requires an alternate host (currants and gooseberries) to complete its life cycle. Pines are infected by spores produced on the alternate host.

White pine blister rust is present throughout Wyoming. The disease was thought to be only in the northern part of Colorado until recently. Isolated infestations were discovered in the Sangre de Cristo and Wet Mountains of southern Colorado in 2003. At this time, the disease was discovered for the first time ever on Rocky Mountain bristlecone pine.

Signs and symptoms of white pine blister rust are not always present or evident on infected plants and are often difficult to distinguish from other causes. Because of this, it is crucial that 5-needle pines and currants and gooseberries are not moved because they may be infected.

What can you do to help?

- Learn to identify 5-needle pines and currants and gooseberries and DO NOT move plants from the forest.
- DO NOT plant commercial nursery stock unless it is certified disease-free.
- Report blister rust sightings to Forest Health Management!

How does white pine blister rust spread into our forests?

- By the transport of infected plants including currants and gooseberries, and 5-needle pines.
- By airborne spores traveling long distances in the wind.

Damage to currants and gooseberries includes leaf spotting and premature defoliation.

Stem cankers are often resinous. They usually kill the portion of the tree above the canker.

Branch flagging (death) is a common symptom of the disease.

Cankers may produce orange pustules of spores in the spring that infect the alternate host.

Cankers swell and become roughened as a result of past fruiting.

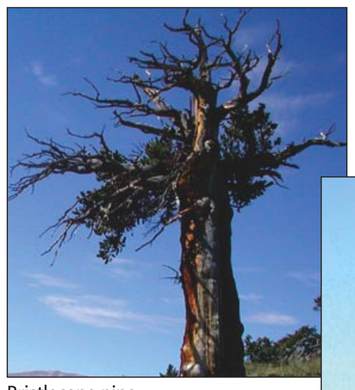
Rodents often gnaw the bark off around cankers.

Currants and Gooseberries

The currants and gooseberries are low growing, usually small, deciduous shrubs. They have simple, alternate leaves that are palmately lobed (like maple leaves). Fruits are smooth or glandular berries produced in the fall. Stems are smooth or armed with nodal spines and internodal bristles. Generally, most gooseberries have spines and bristles and most currants are unarmed.

Identifying Susceptible Pines

White pines are easy to identify because they have 5 needles per bundle as opposed to lodgepole pine or ponderosa pine which have 2 and 3 needles per bundle, respectively. Suceptible species present in the central Rocky Mountains include limber pine, whitebark pine, southwestern white pine, and bristlecone pine. The 5-needle white pines are relatively short with upward-reaching or spreading branches. They often grow in clumps and are usually found on dry, rocky ridges at high elevations. These pines are long-lived, and often have a weathered appearance.



Bristlecone pine

Limber pine

For more information call USDA Forest Service, Region 2, Forest Health Management:

Kelly Sullivan
Lakewood Service Center
(303) 236-8006
kfsullivan@fs.fed.us

Jim Blodgett
Rapid City Service Center
(605) 394-6191
jblodgett@fs.fed.us

Jim Worrall
Gunnison Service Center
(970) 642-1166
jworrall@fs.fed.us

or visit our website:
http://www.fs.fed.us/r2/resources/fhm