



PAUL R. LEPAGE
GOVERNOR

STATE OF MAINE
DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY
MAINE FOREST SERVICE
168 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0168

WALTER E. WHITCOMB
COMMISSIONER

Pest Alert

Red Pine Scale (*Matsucoccus matsumurae*) Detected in Hancock County, ME



Figure 1. Cyst stage of red pine scale, *Matsucoccus matsumurae*, on red pine sample submitted to the Lab (arrows). Photo: Maine Forest Service.

The invasive red pine scale (*Matsucoccus matsumurae*, formerly *M. resinosa*), also known as Japanese pine bast scale was detected in Mount Desert, Hancock County, Maine earlier this month. The original sample was submitted to the Lab by a gardener who had observed and was concerned about the die-off of more than 100 red pines (*Pinus resinosa*) along Sargeant Drive in Mount Desert. She had noted that the intermixed pitch pine were unaffected. In a follow-up visit to a forested stand in Northeast Harbor, the scale was readily detected once live red pines were encountered.

Red pine scale is native to Japan. In the United States, it was first detected in 1946 in Easton, CT. It is considered a serious pest in its introduced range in China, Korea, Europe and the United States. Where it is found in the United States, it is one of the most significant pests of red pine. It does not affect other pine species native to Maine.

Little is yet known about red pine scale occurrence in Maine. It appears the insect is well established in the area around Northeast Harbor in Mount Desert and it has contributed to significant red pine mortality there. MFS staff have been responding to concerns regarding red pine decline and mortality in that area for a number of years. This is the first time the insect has been encountered on submitted or gathered samples and in field visits. However, it is not likely that this is a new introduction.

Red pine scale seems to be relatively intolerant of cold winter temperatures, evidenced by its slow northward expansion and results of a single study on cold-tolerance in the 1950's. It is possible the insect is established elsewhere in Maine, especially in warm, coastal regions (likely Plant Hardiness Zone 5b and warmer <http://planthardiness.ars.usda.gov/PHZMWeb/Images/300dpi/ME.jpg>).



Figure 2. White floculence associated with male pupae and adult female red pine scale detected on declining red pine in Mount Desert. Photo: William Helprin, Maine Coast Heritage Trust

DOUGLAS P. DENICO
DIRECTOR

18 ELKINS LANE, HARLOW BUILDING
AUGUSTA, ME 04330
www.maine.gov/dacf

PHONE: 207-287-2431
OR: 800-367-0223
FAX: 207-287-2432

The insect is known to spread on wind. Scales may also hitchhike on birds and mammals, similarly to hemlock woolly adelgid. There is a low risk of spread during winter months, when scale is settled on the host. Longer dead material also does not pose a risk of spread. During the spring through fall when eggs and mobile nymphs and adults are present there is some risk of picking up the insect on clothing and machinery when working in infested stands or trees as well as moving the insect on cut material. Live host material is the highest risk product for transport of the insect. When possible, work in infested trees should take place in the winter, when the red pine scale is attached to the host.



Figure 3. Red pine scale has contributed to red pine decline and mortality in Mount Desert (Hancock County, ME). Photos: Maine Forest Service.

Significant disease symptoms are also observed in red pine in Mount Desert and throughout Maine. Principal agents are two shoot blights, *Sirococcus conigenus* and *Diplodia pinea*. These do not have the same climatic limitations to their distribution that red pine scale appears to have, and are found in hosts from the coast, northward. They are favored by wet conditions in spring and early summer and are of increasing concern in the state.

If you suspect you have found damage from red pine scale outside of Northeast Harbor, please report it to the Maine Forest Service Insect and Disease Lab.

More information on red pine scale can be found at: www.maine.gov/forestpests#rps.

More information on *Sirococcus* shoot blight can be found at:

http://www.maine.gov/dacf/mfs/forest_health/diseases/sirococcus_shoot_blight.htm

Pest Alert: Red Pine Scale. Sept. 2014. Maine Department of Agriculture Conservation and Forestry, Maine Forest Service
Red Pine Scale Contact: Allison Kanoti, allison.m.kanoti@maine.gov or (207) 287-3147
Shoot Blight Contact: William Ostrofsky, bill.ostrofsky@maine.gov or (207) 287-3008