



Redheaded Pine Sawfly

There are several species of sawflies that attack pines in Ohio, but the redheaded pine sawfly, can be especially troublesome. Because it has two generations per year, all the needles on a pine can be eaten in a single season. The spring generation can strip trees of their older needles and the summer generation can strip off the current year's needles. This total defoliation can result in death of the pine. This sawfly is found from Southeastern Canada through the eastern United States.



Plants Attacked

Redheaded pine sawflies prefer two and three needled pines including: Scotch, jack, shortleaf, loblolly, slash, red, Mugho. It has also been rarely found feeding on white pine, Norway spruce, Deodar cedar and larch, especially if near its preferred pine hosts.

Damage

The first instars (newly hatched) larvae strip the needle surface leaving straw-like remains. Larger larvae eat the entire needle down to the sheath. The larvae are strongly gregarious, feeding in groups of 100 or more. Usually one year old foliage is eaten but all foliage may be eaten on heavily infested plants. If a tree is entirely defoliated before the larvae are mature, they will migrate to the nearest conifer. This is when they may attack non-preferred hosts. Severe defoliation may kill plants while light defoliation will result in unsightly trees.

Description and Life Cycle

This pest over winters as a pre-pupa (fully mature larva), in a cocoon in the duff under host trees. When spring arrives, the pupa is formed and the wasp-like adults emerge in a few weeks. Some pre-pupae have been known to remain dormant for two to three seasons before pupating. Females find preferred pines and deposit over 100 eggs in rows of slits along the edges of needles. Unmated females can still lay eggs but the offspring will all be males. Only fertilized females can produce more females.

The eggs hatch in about a month into caterpillar-like larvae. The young larvae only eat the surface of needles resulting in thin straw-like brown remains. Older larvae strip all the foliage down to the branch and can even gnaw on the branches if nothing else is available. The larvae take about one month to mature into one inch long, yellow bodied insects with black spots and orange-red heads. Mature larvae drop to the duff and pupate. From New York north, this insect has only one generation. South of this line, there are usually two generations and south of South Carolina, three generations are found.

Control Hints

Best control is obtained when the larvae are still small, so look for the needles with rows of spots which indicate egg laying, or look for the straw-like needles left by the young larvae feeding. Remember that some pre-pupae remain dormant for two seasons so elimination of active larvae in one season does not guarantee that the larvae will not be back for a second generation or the next year.

Strategy 1: Natural Controls - Several parasites, birds and viral diseases kill the larvae. Rodents often feed on the pre-

pupae and pupae in the duff. These agents are sufficient in natural stands of pines but are not adequate in most urban areas.

Strategy 2: Cultural/Mechanical Control - Colonies of larvae can be easily removed by clipping off the infested branch. Place these branches in a plastic bag and destroy. Colonies can also be knocked off by sharply striking the infested branch. Crush the larvae or knock into a pail of soapy water. If few colonies are present, they can be controlled using these methods but large infestations are better controlled by general spraying.

Strategy 3: Chemical Control - Spot Sprays of Insecticides - Many aerosol or hose end sprayable insecticides are available for spraying of colonies. This is usually adequate for most home landscapes.

Strategy 4: Chemical Control - General Insecticide Spraying - This sawfly rarely infests large acreages unless controls have not been used for several seasons. General sprays may be warranted if more than 25% of the trees are infested.

Information obtained through the Ohio State Extension Factsheet HYG-2054-95



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