



Ornamentals

Conifer Sawflies

Pest Fact Sheet **40**

Introduction

A number of sawfly species are important defoliating pests of ornamental trees in New Hampshire. The damage is done by the larvae which are caterpillar-like, resembling moth or butterfly (lepidopterous) larvae. The way to tell the difference is to count the number of pairs of prolegs on the abdomen. Sawfly larvae have six or more pairs while lepidopterous larvae have five or less pairs which bear small hooks called crochets. Another distinguishing characteristic is the number of eyes on the side of the head capsule. Sawfly larvae have one on each side while lepidopterous larvae usually have six on each side. Sawfly larvae often feed in groups (are gregarious) and strip one branch of needles or leaves before moving on to another branch. Most sawflies prefer old needles but some species will also feed on new growth. Severe defoliation can cause the trees to die.

When mature, the larvae spin tough capsule-like cocoons on the ground, in the litter, or on the tree. The wasp-like adults emerge from the cocoons and lay eggs singly in slits cut in the needles. These slits are cut by a saw-like ovipositor, from which sawflies get their name.

The following species of sawflies are important pests in New Hampshire:

Red-Headed Pine Sawfly (*Neodiprion lecontei* Fitch). This sawfly is one of the most destructive of the native species of sawflies attacking pine. Pines having needles in clusters of two to three are preferred, such as red, Scotch, mugho, jack, pitch, lodgepole, slash, Japanese red, and Virginia pines. Occasionally Eastern white pine may be attacked.

Fully grown larvae are yellowish-white with six rows of conspicuous black spots and the head is reddish. The winter is spent as a prepupa in a capsule-like cocoon in the ground. After pupation the emerged female lays eggs in the previous year's needles. The newly hatched larvae feed in groups on new and old needles defoliating the branches. They become full grown in 25-31 days. When ready to pupate, they drop to the ground and spin a reddish-brown cocoon. There can be more than one generation per year. Most feeding takes place in May and June.

European pine sawfly (*Neodiprion sertifer* Geoff). This species was introduced in the U.S. in 1925 and is now established throughout New England. It prefers red and Scotch pine and also attacks mugho, jack, Japanese, red and Swiss mountain pine. Trees stripped in successive years may die. Full grown larvae are grayish-green and about 7/8" long. There is a lighter longitudinal stripe down the middle with two whitish lines on the sides which border a greenish or blackish stripe which can be broken into a series of spots. The head and thoracic legs are black.

The winter is spent in the egg stage in the old needles. The eggs hatch in April to mid-May. The larvae feed gregariously on older needles and do not injure new growth. Pupation occurs in late August or early September and lay eggs in the current needles. There is one generation per year.

Yellow-headed spruce sawfly (*Pikonema alaskensis* Rohiver). This sawfly feeds on all spruces. Larvae are light green with a brown or reddish yellow head and a green stripe on each side of the body. This insect spends

the winter as a prepupal larva in a cocoon. Adults appear in early June and lay eggs in needles. Larvae feed on new growth from mid June to mid July. There is only one generation per year.

Balsam fir sawfly (*Neodiprion abietis* Harris). This species prefers balsam fir but will also feed on spruce. The larvae are dark green with six black stripes. The head is black. The overwintering egg hatches in May and feeds for a month. Pupation occurs in cocoons on the tree or ground. Adults appear in August and oviposit in the needles.

Balsam shootboring sawfly (*Pleroneura brunneicornis* Rohuer). Mature larvae spend the winter in cocoons on the ground. Adults lay eggs in the expanding buds of balsam fir in early May. The larvae feed in tunnels excavated in the center of new shoots. Mined shoots die and turn reddish brown, resembling frost damage.

Introduced pine sawfly (*Diprion simile* Htg.) This species was introduced from Europe in 1914 and is now present throughout the northeast. It prefers white pine but also feeds on Scotch, red, jack and mugho pines. When full grown, the larva is about one inch long with a black head and greenish-yellow body with a double brown or blackish stripe the entire length of the back. The sides of the body are dark brown mottled with yellow and black.

The winter is spent as a prepupa with adults appearing from May to mid-June. The eggs are deposited in the edge of older needles. Young larvae feed gregariously while older larvae feed singly. There can be two and a partial third generation per year.

Control

Conifer sawflies may be controlled with a single application of an appropriate pesticide. Consult your county Extension Educator (see county office telephone listing below) for specific pesticide recommendations.

UNH Cooperative Extension County Office Telephone Numbers

| | | | | |
|--|------------------------------------|---|------------------------------------|-----------------------------------|
| Belknap (603) 527-5475 | Carroll (603) 539-3331 | Cheshire (603) 352-4550 | Coos (603) 788-4961 | Grafton (603) 787-6944 |
| Hillsborough Goffstown (603) 641-6060 | Merrimack (603) 796-2151 | Rockingham Brentwood, NH 03833 (603) 679-5616 | Strafford (603) 749-4445 | Sullivan (603) 863-9200 |

Stop! It is always the pesticide applicator's responsibility, by law, to read and follow all current label directions for the specific pesticide being used. If unsure of registration status of a particular pesticide product, contact the NH Division of Pesticide Control at (603) 271-3550. Store pesticides in their original containers in a locked cabinet or shed away from food. Dispose of unused pesticides or empty containers safely, according to NH regulations. If you suspect pesticide poisoning, call the New Hampshire Poison Control Center at 1-800-562-8236.



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