

# FPL 12 – Larch Sawfly

The information accessed from this screen is based on the publication: Erickson, R.D. 1984. Larch Sawfly. Forestry Canada, Forest Insect and Disease Survey, Forest Pest Leaflet No. 12 4p.

## Introduction

The larch sawfly, *Pristiphora erichsonii* (Hartig) (Hymenoptera: Tenthredinidae), was first noted in British Columbia north of Fernie in 1930. Since that time, it has been observed over the range of western larch in the southeastern portion of the province. It was first seen on eastern larch west of Fort Nelson in 1952.

This sawfly was epidemic on western larch during the 1940s and again became epidemic on the same host in 1964 (Fig). Annually during 1965 to 1967, 130 000 to 150 000 ha of western larch in southeastern B.C. were moderately to severely defoliated. Light to moderate infestations were observed in eastern larch in Prince George Region during 1962 to 1965.

In 1976 a new outbreak developed in the Nelson Region, when 4 ha near Sparwood were lightly defoliated. This expanded to 800 ha in the Elk River Valley in 1977 and to 4 600 ha of light to severe defoliation in 1978. By 1981 only localized areas of light defoliation occurred, but in 1982 a new outbreak severely defoliated western larch stands totalling 12 000 ha from the Elk River Valley to Dutch Creek.

## Hosts

Western larch, *Larix occidentalis* Nutt. (Fig) and eastern larch, *Larix laricina* (Du Roi) K. Koch trees of all ages. Ornamental larch trees also are subject to attack.

## Description

Stages of development are adult, egg, feeding larva, larva in cocoon, and pupa in cocoon.

Egg: Capsule-shaped, translucent, partially hidden from view in slit cut in twig. The egg swells as the embryo develops.

Larva: Attains a length of 20 mm; the head and legs are shiny black; the body is whitish green beneath the greyish green along the back. The abdomen is often held curved back over the thorax (Fig).

Cocoon: About 10 mm long and 3 mm in diameter. It is capsule-shaped with a brown parchment-like wall constructed of silk.

Pupa: Glossy white, somewhat resembles the adult in shape.

Adult: Two pairs of wings with fairly prominent net veins; the fore wing has a black spot on

the leading edge; wingspan is about 20 mm. The body is about 7 mm long, black with a broad orange band around the centre of the female's abdomen. The threadlike antennae are bicolored on the male and monocolored on the female.

## **Life History**

The eggs are deposited in May, June, and July in pockets cut into one side of the terminal shoots of larch, commonly 30 to 50 eggs per shoot. Often this damage along one side of the shoot causes it to curve or curl. The eggs hatch in 7 to 11 days and the larvae feed on the adjacent needles, then move to the old growth where they feed in clusters. Larvae attain full growth between the latter half of June and some time in September, and drop to the forest floor to spin cocoons in the moss or duff.

Pupation occurs within the cocoons on the following April to June excepting some that may remain in larval diapause through a second or possibly a third winter.

## **Damage**

The larvae feed in colonies, at first eating only the edges of the needles, which turn brown ([Fig](#)). Later larval instars consume the whole needle. When numerous, the sawflies often almost denude the tree, resulting in a loss of annual wood increment ([Fig](#)).

Larch trees in eastern North America have been killed by repeated defoliation but there has been no tree mortality in British Columbia attributable to larch sawfly depredations.

## **Control - Natural Factors**

Adverse weather, parasites, predators and disease are important factors in keeping the larch sawfly in control.

Two larval parasites, a native Pteromalid, *Tritneptis klugii*, and an introduced Ichneumonid, *Mesoleius tenthredinis*, have contributed to a reduction in the larch sawfly population in British Columbia. A total of 57 male and 465 female *Olesicampe benefactor*, an introduced Ichneumonid, reared from sawfly population in Manitoba, were released in sawfly defoliated stands near Sparwood in 1978 and 1980.

Two native larval parasites *Bessa harveyii*, a Tachinid, and *Eclytus ornatus*, an Ichneumonid, have been collected from overwintering sawfly cocoons, but were less numerous than the other parasites.

## **Control - Chemical**

Control is seldom necessary on ornamentals; nevertheless, any formulation suitable for defoliators on conifers would be satisfactory if label instructions were followed. If improperly used insecticides may be harmful to fish and wildlife, as well as dangerous to humans.

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## Figures

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Figure 239-0013. Larch sawfly defoliated stand.

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Figure 239-0014. Larch sawfly defoliated trees.

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Figure 239-0017. Larch sawfly larva.

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Figure 239-0016. Larch plantation defoliated by sawfly.

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Figure 239-0015. Young colony of larch sawfly larvae.