

Return of Larch Casebearer

By Douglas C. Allen

As I prowled the Adirondacks and northern reaches of the Green Mountains this spring and early summer, I noticed for the first time in several years that larch foliage appeared "scorched" in many areas. When larch needles turn brown in early summer, this is often a tell tale sign of an insect known as larch casebearer. I thought it worthwhile to introduce forest owners to the insect and its damage before someone attributes the malady to acid rain!

Another Exotic

This moth was introduced from Europe into Massachusetts during the mid-1880s and since then has spread throughout the

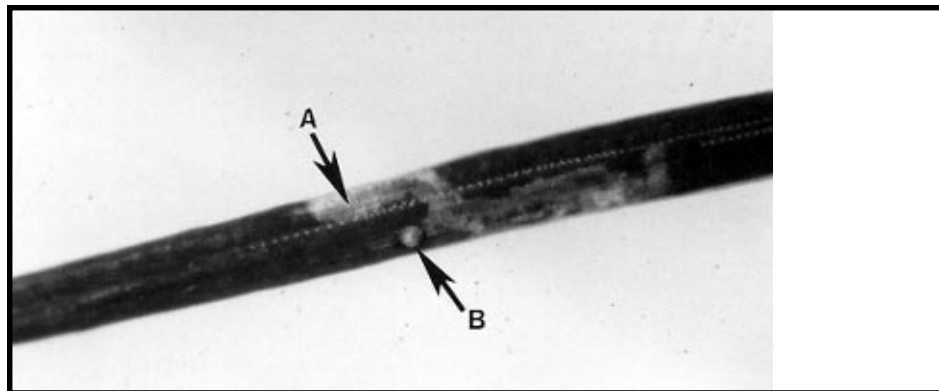


Fig. 2.: Larch needle damaged by an early stage of larch casebearer: A, leaf mine; B, egg.



Fig. 1. Scorched or frosted appearance of larch foliage mined by larch casebearer caterpillars.

Severe casebearer defoliation in the east rarely kills larch. It may, however, reduce height and diameter growth by 90% or more and cause branch mortality. The most significant impact in our region is aesthetic. People who travel through rural areas in the summer find brown needles and sparse foliage unattractive (Fig. 1). Larch often occurs in small, nearly pure natural stands or in plantations, which tends to make this damage more obvious. Most of the damage occurs in spring when full grown caterpillars emerge from hibernation and feed on the new foliage. Mined needles drop prematurely.

Description and Life History

The silvery to grayish adults are very small, with a wingspan of only 5/16". They

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range of larch in North America. It feeds on both native and exotic species of *Larix*.

The Damage

Outbreaks of larch casebearer in the eastern United States early in this century through the 1950s were more prolonged and severe compared to episodes that have appeared during the past 30 years. Now outbreaks in our region are of shorter duration and more localized. Though eastern larch (tamarack) has limited commercial use people value this conifer because it serves as a source of food for wildlife, it adds diversity to our landscape and its foliage is very attractive in the fall.



Fig. 3 Cluster of overwintering cases on larch twig. Each case contains a caterpillar.

6 are active in early summer at which time females deposit tiny eggs singly on foliage. Upon emerging from the egg, each caterpillar bores directly into the needle and spends its life as a leafminer (Fig. 2). The next time you pass a larch, take a look at its foliage to get an idea of just how small this insect must be in order to live within a larch needle! Individual caterpillars mine several needles during the summer. Late in the season, each one lines a hollowed piece of needle with silk and clips this section off to form a case, within which it lives. Because the caterpillar continues to grow, new cases are formed as needed to accommodate its larger size.

As winter approaches, larvae move to outer branches and attach their cases to a twig. Overwintering cases are grayish-brown, approximately 1/4" long and often occur in clusters (Fig. 3). Caterpillars feed for a while in early spring and then transform from caterpillar to moth (pupate) within their cases. Moths emerge from late May through June and the cycle is repeated.

Biological Control

The principle reason that larch casebearer outbreaks are now less widespread and of shorter duration is due largely to the collective action of introduced parasites. The primary players in this biological control are two wasp species which were in-

roduced into Canada during the late 1930s and early 1940s. Indeed, this is a classic example of the successful biological control of a forest insect. The limited commercial value of eastern larch combined with effective biological control in eastern North America have eliminated the need for chemical control. ▲

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