

# EXTENSION NOTES



## CEDAR LEAFMINERS

Cedar leafminers are insects that feed inside the leaves of cedar trees when they are in the caterpillar stage, causing the leaves to wither and turn brown. Most cedar trees survive, but they can die if they are infested for a few years in a row. This Extension Note tells you how to recognize a cedar leafminer infestation and what you can do to help your trees survive.

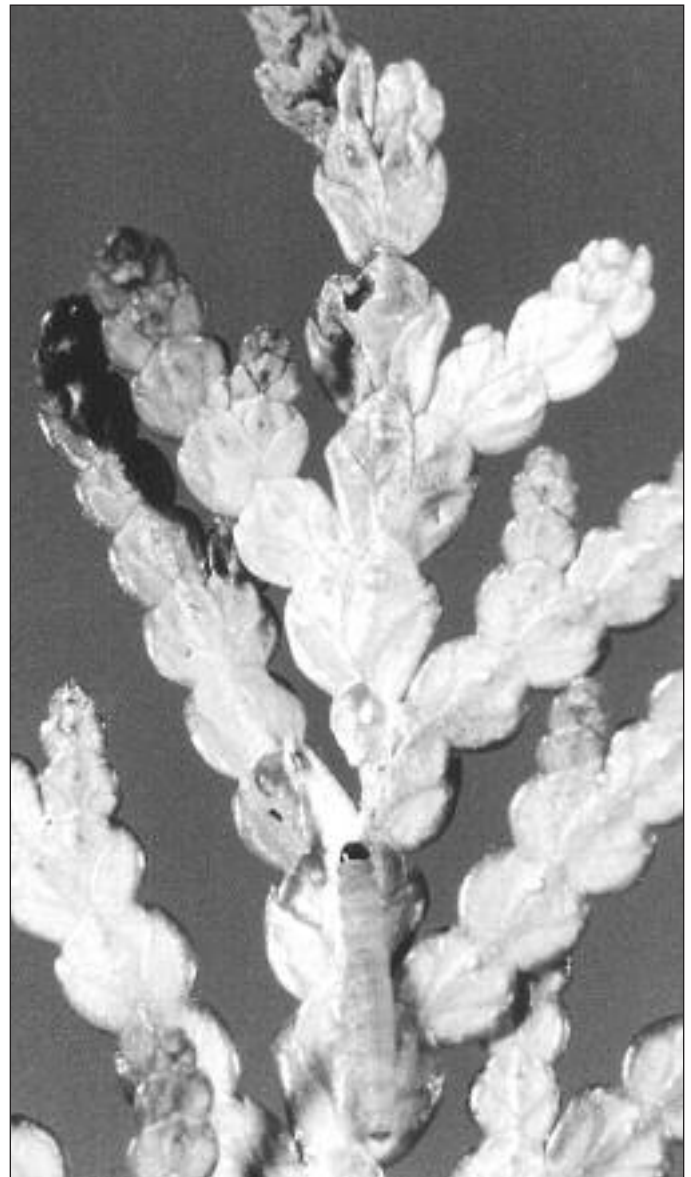
### LIFE HISTORY

Five leafminer species infest cedars in southern Ontario: *Argyresthia thuiella*, *A. freyella*, *A. aureoargentella*, *A. canadensis* and *Pulicalvaria thujaella*. The species differ in color and size.

Cedar leafminer moths emerge in May to early July. After mating, the female moths lay eggs on the ends of cedar branches. When the eggs hatch a few weeks later, the tiny caterpillars feed within the leaves. As they feed, they create tunnels in the leaves. The caterpillars live in the tunnels through the winter and start feeding again in the spring. When they caterpillars are full grown, they enter the pupa stage. During this immobile stage they change from caterpillars into moths. Some leafminer species spend the pupa stage inside the tunnels. Others build silken cocoons that they attach to the outside of the leaves.

### SYMPTOMS OF CEDAR LEAFMINER INFESTATION

Cedar leafminers feed on the leaves, beginning on the outer most branches of the tree and working their way toward the trunk. Feeding causes the leaves to turn yellow and later brown. Damaged leaves fall off during the next growing season. Leaf loss is especially noticeable in the



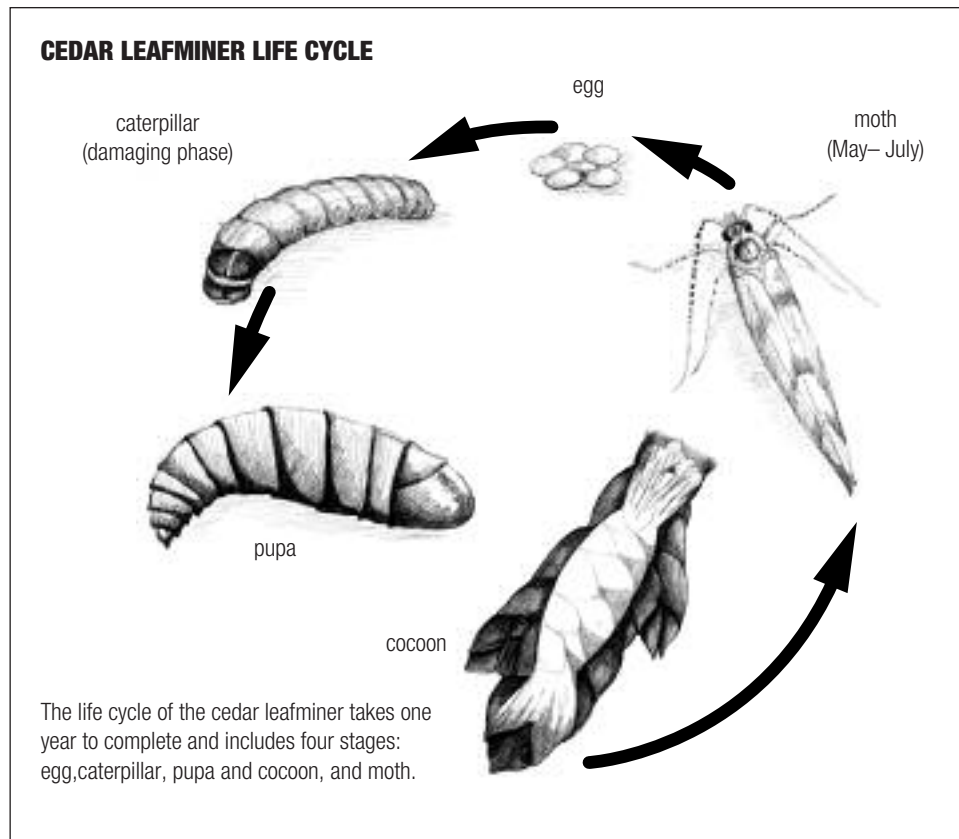
A cedar leafminer larvae with leaf damage.

spring. Most trees infested with leafminers recover. Trees can lose up to 80 per cent of their leaves to leafminers and survive. But repeated infestations can kill trees.

Browning, withering and loss of leaves can be caused by other factors:

- drought
- heavy cone production
- rapid changes in temperature in late winter or early spring
- normal withering and loss of older leaves

To check for leafminers, hold a leaflet up to the light. If your trees are infested with cedar leafminers, you will likely see hollow areas inside the leaf and tiny caterpillars in feeding tunnels.



## PREVENTION AND CONTROL

### PREVENTION

The best way to prevent damage by cedar leafminer or other stresses is to water, fertilize and prune your trees. Protecting roadside cedars by wrapping them in burlap is another good idea, especially where salt is used to clear snow from roads.

### NATURAL CONTROL

There is no need to control cedar leafminers unless a tree is severely infested, has suffered repeated infestations over a few years and/or is stressed by drought. Natural controls, such as parasites, will eventually reduce the leafminer population.

### MANUAL TREATMENT

You can reduce the damage caused by leafminer infestations by destroying the caterpillars in the spring. Check trees in March and April. Prune any infested twigs from the tree and burn them.

Further reading:

- Ontario Ministry of Natural Resources. 1991. *Common Pests of Trees in Ontario*. Queen's Printer

For more information contact:

#### LandOwner Resource Centre

P.O. Box 599, 5524 Dickinson Street  
Manotick, Ontario K4M 1A5  
Tel 613 692 2390 or 1 800 387 5304  
Fax 613 692 2806  
Product Ordering: 1-888-571-INFO (4636)

E-mail: [info@lrconline.com](mailto:info@lrconline.com)  
Internet: <http://www.lrconline.com>

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