



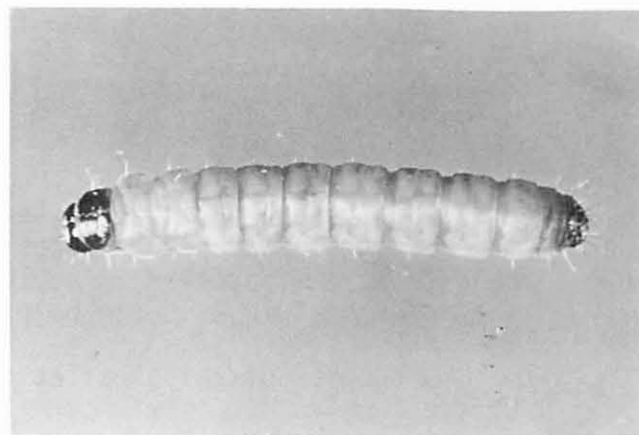
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## Cedar Leaf Miners

The cedar leaf miners<sup>1</sup>, also called arbor-vitae leaf miners, are common pests of cedar in eastern Canada and the northeastern United States. Although *Argyresthia thuiella* is perhaps the most common species in Ontario, it is not uncommon to find all four species in a single location. Feeding by these insects has caused severe "scorching" of the foliage and often subsequent twig, branch or tree kill in southern Ontario, Quebec, New Brunswick, and Prince Edward Island. Fortunately, however, severely injured trees will often produce new foliage later in the growing season.

These leaf miners overwinter on the tree in hollowed out yellow-brown leaflets, the *Argyresthia* species as nearly full-grown larvae and the *Pulicalvaria* as younger larvae. Mining is completed in the spring, causing discolored foliage and the full-grown larvae are 6 or 7 mm long.



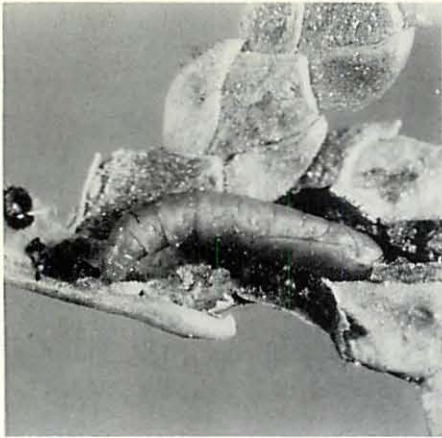
*A. thuiella* larva

The larva of *A. thuiella* changes to a pupa in the mined leaflet. The curved posterior tip and green color of the pupa are characteristic for the species. The larvae of *A. aureoargentella* and *A. canadensis* are similar in appearance to the larva of *A. thuiella*. However, they vacate the mined leaflet and change to pupae in silken cocoons attached to the foliage. In Ontario, adults of the *Argyresthia* species emerge from late May to early July.

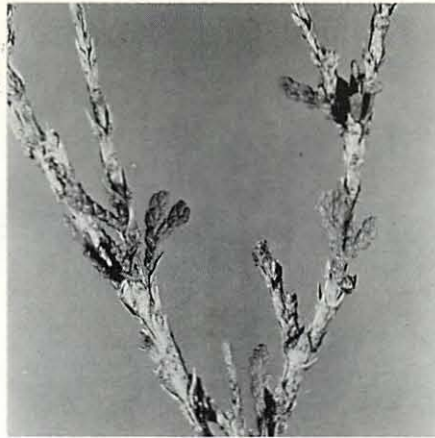
The brown larva of *P. thujaella* also changes to a pupa in the mined leaflet but this pupa is brown and the tip is not curved. The adults of this species emerge a few weeks later than the *Argyresthia* species.

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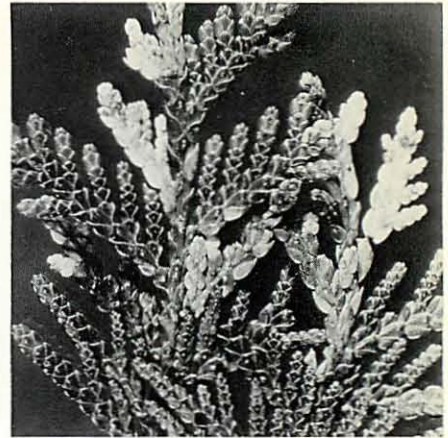
<sup>1</sup>*Argyresthia thuiella* (Packard), *A. aureoargentella* Brower, *A. canadensis* Freeman and *Pulicalvaria thujaella* (Kearfott).



*A. thuiella* pupa exposed



New foliage



Mined foliage

Although parasites often kill many larvae of the cedar leaf miners, other controls may become necessary. In Ontario, a systemic insecticide would be effective if applied in early May or mid-August. On individual ornamentals the infested twig tips can be pruned and destroyed in early spring.

Copies of this leaflet can be obtained from the Centre's Information Office.

Information on many other larch, cedar and juniper insects is given in "Insects of eastern larch, cedar and juniper", Forestry Technical Report 28 (price: \$6.95), available from any bookstore distributing Government of Canada publications.

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