



URI COLLEGE OF THE ENVIRONMENT AND LIFE SCIENCES (CELS) OUTREACH CENTER

3 East Alumni Avenue  
Kingston, Rhode Island 02881

**For more information:**

**Call:**

In RI: URI MGA Hotline  
1-800-448-1011  
Mon.-Thurs. 9:00 a.m.—2:00 p.m.

In MA and CT: 401-874-2900

Outside New England please contact Cooperative Extension in your county.

**Websites:**

URI Master Gardener Association  
[www.urimga.org](http://www.urimga.org)

CELS Outreach Center  
[www.uri.edu/cels/ceo](http://www.uri.edu/cels/ceo)

# BIRCH LEAFMINER

Birch leafminer is one of the major pests of birch trees in the Northeast. The trees that are most likely to be attacked are gray, paper, and European white birch.

Birch leafminer adults are small, black, four-winged sawflies about ¼ inch long. The larva is very flat, lives within birch leaves, and is white with three black spots on the lower surface. Mature larvae overwinter in the soil under host trees. When the soil warms in the spring, usually in April, they pupate. Adults begin to emerge in early to mid-May and they congregate on birches where females lay their eggs in newly-developing leaves. There are three generations per year. Only the first generation is considered destructive, because adult females prefer to lay their eggs in soft, young tissue.

## Damage

The name "leafminer" is derived from the larval habit of feeding, or mining, the plant tissues between the upper and lower surfaces of birch leaves. Mines are small and somewhat serpentine in form. As the larvae grow, feeding increases and the serpentine mines often run together to form the characteristic blotches and blisters on the birch leaves. Leaves that are attacked soon turn brown. Affected trees, seen from a distance, have a scorched or blighted appearance that is often mistaken for a disease. Under normal conditions, the tops of trees are often the most seriously affected portions, although the entire tree can be affected. A healthy tree can normally lose part or nearly all of the current crop of leaves without being seriously weakened. However, repeated losses year after year will weaken the tree and may result in death.

## Control

Birch leafminers prefer sunny areas but will attack susceptible trees almost anywhere. Birches tolerate leafminers best when they are planted in shady, cool, moist areas. Since birch leafminer attacks may weaken the trees good fertility and horticultural care are needed.

A few parasitic wasp species have been released in North America, including Rhode Island, to biologically control birch leafminer larvae and they can be quite effective. Additionally, small insectivorous birds, like chickadees, can be found feeding on the developing larvae. Generalist soil-dwelling predators, like ground beetles will devour birch leafminer pupae.



PESTICIDES ARE POISONOUS!! Read and follow all safety precautions on labels. Handle carefully and store in original containers out of reach of children, pets, or livestock. Dispose of empty containers immediately, in a safe manner and place. Pesticides should never be stored with foods or in areas where people eat.

When trade names are used for identification, no product endorsement is implied, nor is discrimination intended against similar materials. Be sure that the pesticide that you wish to use is registered in the state of use.

The user of this information assumes all risk for personal injury or property damage.

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Rhode Island Cooperative Extension provides equal program and employment opportunities. U.S. Department of Agriculture cooperating.



**Note:** The Hotline is open Monday—Thursday, 9:00 a.m.—2:00 p.m. from March 1 to November 1.

If spraying is necessary it should be remembered that insecticides kill leafminer parasites as well as the leafminers. Treat only the first generation by spraying in early May, just after the leaves unfold and adults are just beginning to lay eggs. Later treatments are unnecessary in Rhode Island. Several insecticides are registered and effective against this pest; check local garden centers for product availability.

*By Dr. Richard A. Casagrande and the University of Connecticut Integrated Pest Management Program, 1999*