



# Birch Leaf Miner

All Birch Species



**Photo, top right:** Adult egg laying causes small yellowish blotches on leaves. **Photo, above:** Heavily infested trees can appear off color. (Ronald S. Kelley, Vermont Department of Forests, Parks and Recreation, Bugwood.org) **Bottom, above:** Birch leaf miner adults are fly like wasps. (Todd Murray, Washington State University, Whatcom.wsu.edu) **Bottom, below:** Leafminers can cause leaves to look blotchy and dried out. (Whitney Cranshaw, Colorado State University, Bugwood.org)

## What is Birch Leaf Miner?

Birch leafminer is the larval stage of a small “fly-like” wasp, *Fenusa pusilla*. The larvae feed between the upper and lower leaf surface and are protected from predators and parasites by the leaf. Once damage is obvious, it is usually too late to treat as the larvae leave the mine to pupate. Control measures need to be systemic or be timed to coincide with early larval feeding before damage becomes apparent.



## Biology

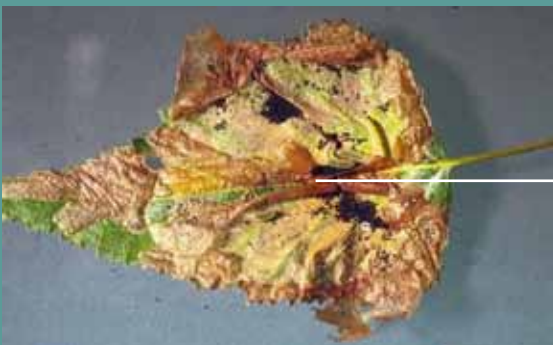
- Pupae overwinter in a cocoon 1-2 inches under the soil.
- Adults emerge in spring (March-May).
- Mated females lay eggs in leaf (April-May).
- Larvae produce a blotch mine (April-June).
- Larvae form a pupation chamber in the soil (May-June).

## Susceptible Trees

All birch species.

## Signs and Symptoms

- Large blotch mines in the leaves.
- Damage is scattered throughout the tree.
  - Mines will turn brown.
  - Leaves will look wilted.
- High populations can damage the entire canopy.
- Repeated defoliation by leaf miner will decrease tree health.
- Leaf miner defoliation is directly correlated to bronze birch borer attack.





## DIY Shopping List

### Option 1:

**Application Type – Soil drench,  
Soil injection**

**DIY Product/Equipment Needed**

- Xytect™**
- Measuring or diameter tape
- Gloves
- Soil Drench:* Bucket or watering can
- Soil Injection:* HTI Soil Injection Kit



### Option 2:

**Application Type – Soil injection**

**DIY Product/Equipment Needed**

- Lepitect™**
- HTI Soil Injection Kit
- Measuring or diameter tape



## Treatment Strategies

Treatments for birch leaf miner are effective, and will also protect the tree from bronze birch borer. Which product to use is determined by the time of year treatment will be applied.

Minor infestations do not affect the health of the tree or the appearance. Major infestations will cause the whole tree to look brown and compromise its ability to make sugars in the leaves, which can compromise health.

### Xytect™

Xytect™ is extremely effective against leaf miners because it works where the insects feed. It does need 30 days to reach the leaves, so it needs to be applied very early in the spring to control current season leaf miners, or in the late summer through fall for control next year. Most arborists use Xytect™ as a fall application to effectively control leaf minor in the spring. Xytect™ is very easy to apply and can be drenched at the base of the tree. It provides 12 months of protection.

### Lepitect™

Treatments done later in the spring require a faster insecticide. An effective last minute treatment of Lepitect™ takes as few as two days to move from the soil into the leaves, controlling leaf miners as they are feeding. Apply Lepitect™ soil injections in the spring to control emerging leaf miners.

## Cultural Practices

Cultural practices such as watering and low nitrogen fertilization can help affected trees regain vigor.

