

Sherdec Tree Service

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Leaf Mining Insects

Characteristics & Control

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About Leaf Miners

Leaf miners are insects that develop and live inside the leaves of plants. Most leaf miners are sawflies a species of non-stinging wasp. One common exception is the spruce needle miner, which is a moth. The immature (larval) stage of these insects produces the distinctive mines. Adults lay their eggs on the leaves or insert them under the leaf surface. The leaves are injured when the larvae feed on the soft interior tissues so that only the transparent outer leaf surfaces remain. Although leaf miners destroy the leaf they inhabit, the percentage of leaves affected is usually small. Severe infestations that recur over several years will begin to stress the plant. In the case of birch, stress can be serious because weakened birch are vulnerable to the bronze birch borer.

For some leaf miners the pupal stage also takes place within the leaf. More commonly the insect larva cuts a hole in the mined leaf after it completes its feeding and drops to the ground to pupate.

Control of Leaf Miners

There are currently two methods available for managing leafminer problems: a soil application of an insecticide or foliar sprays. Both techniques utilize a systemic insecticide that is carried throughout the plant. This mode of action allows the insecticide to reach the larvae, which otherwise are protected effectively within the leaves. The first option for control is to use Merit (imidacloprid) which is applied as a soil drench or soil injection. It is taken up through the roots and moved into the tree. When the leaf miner larvae begin to feed on the inner leaf tissues, the insecticide is present to kill them before they cause significant damage.

The other option is to spray the tree with an insecticide. The spray must be precisely timed just after the larvae hatch. Milky white halos around the oviposition (egg-laying) punctures are the signs that the hatch has just taken place. Spraying trees however can be very difficult and is the least desirable of the two options. Windy or rainy weather conditions may interfere with the ability to spray the tree at a time when the insects are most vulnerable to control.

There are several major advantages to the use of soil application techniques: Merit can be applied in the fall to prevent damage the following spring. Birch leaf miner can also be effectively controlled by an early spring application. Soil application of insecticides eliminates the need for the precise timing, and there is literally no possibility of windrelated drift.

After assessing your site and plant health your Sherdec Arborist can make specific recommendations regarding treatment for your important landscape plants.



Leaf Miner Damage on Birch