



The Plant Doctor's LANDSCAPE TIPS

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Photo 1: The most common symptom of Maple Petiole Borer is leaf fall from maples in the late spring and early summer.



Photo 2: Note leafless petioles (leaf stems) on this twig. The leaf at the top is wilted and will soon break off and fall. Note darkened areas on some petioles where the Maple Petiole Borer has hollowed out the petiole.



Photo 3: The homeowner of this tree demanded the tree be sprayed with an insecticide *after* he noticed leaves falling from maple petiole borer infestation. Not only was the spray ineffective, but the toxic effects from the spray proved more serious than the insect. Note large sections of brown foliage caused by toxicity from the insecticidal spray.

MAPLE PETIOLE BORER

INTRODUCTION:

Maple trees (*Acer* sp.) are common forest trees and widely planted landscape trees. Maples are susceptible to a variety of disease, insect, cultural and environmental problems. Among the diseases, tar spot and anthracnose are possibly the most common ailments that affect these popular landscape trees in the spring and early summer. Possibly one of the more noticeable insect problems on Maple is some defoliation (leaf fall) of trees in late spring and early summer caused by the maple petiole borer (*Caulocampus acericaulis*).

Diagnosis of maple petiole borer is fairly easy. Leaves began to fall to the ground in late May to early June (Photo1). Part of the petiole (leaf stem) remains attached to the tree (Photo 2); the end of the petiole often appears blackened and shriveled. Several days later, the remaining portion of the petiole will also fall to the ground. The maple petiole borer attacks all maples but sugar maple is particularly susceptible. Other problems that cause leaf drop include anthracnose and tar spot, both fungal diseases. Anthracnose causes brownish leaf blotches on leaves and tar spot causes largish dark spots on the leaves; portions of petioles are not left on the tree with either of these diseases. It is possible that some maple trees may have multiple problems.

INSECT CYCLE:

Maple petiole borers are small sawflies, related to non-stinging wasps. The insects overwinter as pupae in the soil and emerge as adults in the spring, when they lay eggs on the petioles of emerging leaves. Larvae hatch and burrow into the petiole and hollow it out, weakening the petiole and ultimately inducing the leaf to drop. The larvae remains in the portion of petiole attached to the tree, until it too drops to the ground. Maple petiole borer usually ceases its activity by mid-June.

MANAGEMENT:

Maple petiole borer requires no management procedures. Usually no more than 10% of the leaves are lost, sometimes more, often a lot less. Trees can easily sustain this level of loss and show no detrimental long term effects.

Raking leaves in the fall will probably have little effect because larvae remain in the small portion of the petiole that falls separately from the leaflet. Maintain good vigor and avoid stress in maple trees with moderate (not excessive) fertilization and supplement water during dry periods, or as needed.

Because the problem is minor, applications of insecticides cannot be justified. Over the past couple of decades, the author has witnessed several futile attempts to control this pest. Usually these control failures involve finding some unscrupulous person to spray trees after the leaves begin to fall; obviously, as with many other insect and disease problems, these sprays are useless because the damage is already done and the chemical cannot reach the insect and correct the problem after the fact. In some cases, insecticidal sprays containing oil carriers have resulted in severe phytotoxic (toxicity to plants: browning, leaf fall) effects on trees (Photo 3), not to mention unnecessary contamination of the environment.

For more information, please feel free to email me at robertsd@msu.edu or contact a professional plant health care provider. The author, MSU or MGIA do not endorse any particular products. If using pesticides, be sure to read and follow label directions.



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Development of Landscape Tips was sponsored by MSU and MGIA.