

THE PURDUE LANDSCAPE REPORT

Case Study: Maple tree pests in the landscape

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Recently a homeowner in Hamilton County posted on the Indiana Native Plant Society Facebook page with concerns about aphids, mites, and apple scab in her maple and oak trees. She asked for a second opinion and treatment options for these pests. I reached out to the homeowner and requested permission to collect samples from the trees. Let's look at what I found (or didn't find) and discuss when and if these issues should be treated.

Apple scab on maples?

First, we can eliminate the concern about apple scab because maple and oak trees are not hosts for this pathogen. Apple scab is caused by the fungus *Venturia inaequalis*, and hosts include apples, crabapples, hawthorn, mountain ash, firethorn, and loquat. There are other fungal diseases which cause leaf spotting in maples, such as Anthracnose, tar spot, and Phyllosticta leaf spot. To diagnosis these diseases, homeowners can submit a sample to the [Purdue Plant & Pest Diagnostic Lab](#), or hire a certified arborist to assess the tree. However, all these diseases are primarily aesthetic issues. A healthy tree will not die from these pathogens and does not require treatment. You can find more information about maple diseases in this publication: [Diseases in Hardwood Tree Plantings](#). You can also find a previous article on [Tar Spot in Maple](#) in the Purdue Landscape Report (Issue 18-12).

Spider mites

The next pest concern on these trees is spider mites. Out of the dozens of leaves I collected, I found only two immature mites on a couple of maple leaves I examined. This is a very small mite presence, and it is not recommended to treat for spider mites unless the populations threaten the health or appearance of the tree. Limiting pesticide usage will conserve the natural enemies, which are vital to keeping mite populations in check. In fact, improper pesticide applications can kill these important natural enemies and worsen mite infestations.

When do you know if the mite population is large enough to merit intervention? Check your trees for signs of heavy feeding

damage, such as leaf stippling (Fig. 1), or dense webbing on the leaves. Mites can also be monitored by placing a sheet of paper (8.5×11") beneath a branch and striking the limb. Chemical treatments should be considered when you count ≥ 24 mites per strike. You can find detailed management recommendations and a full list of pesticide options in this Purdue Extension publication: [Spider Mites on Ornamentals](#).



Fig. 1. Severe spider mite damage on maple leaves. (Photo: S. D. Frank, North Carolina State University)

Aphids

The aphids I found on the homeowner's maple trees are *Drepanaphis acerifoliae*, or the painted maple aphid (Fig. 2). This species only feeds on maple trees, and is not a threat to the oak tree on this homeowner's property. Painted maple aphid is a very common aphid in our region. I found only a few aphids on one of the maple trees I sampled, which is not enough to require treatment. In addition, one of the aphids was a "mummy", or a carcass left behind from a parasitoid wasp. This indicates that natural enemies are already at work managing the aphid population. Aphids may rarely require chemical control if their numbers grow large enough to produce significant amounts of honeydew, which can result in sooty mold outbreaks.



Fig. 2: Adult painted maple aphids found on maple in Hamilton Co, Indiana. (Photo: Andrew Johnston, Purdue University).



Fig. 3: White-marked tussock moth caterpillar. (Photo: John Obermeyer, Purdue University).

Tussock moth

The only insect I found on the oak tree was a white-marked tussock moth caterpillar, *Orgyia leucostigma* (Fig. 3). This is the likely culprit for the minor feeding damage I noticed. These are not significant pests and do not require treatment. Don't touch them, though! The setae of this caterpillar are irritating and may cause allergic reactions.

Overall, the pests I found were minimal and non-threatening to the trees. It's normal to find some insect pressure in the landscape. Knowing when and if to treat requires accurate diagnosis and monitoring of pest levels. Check out PurduePlantDoctor.com for an easy-to-use diagnostic aid and treatment recommendations.

References

1. Gauthier, Nicole. 2018. Apple scab. The Plant Health Instructor. doi: 10.1094/PHI-I-2000-1005-01
2. Sadof, Clifford S. and Gibb, Timothy J. 2017. Spider Mites on Ornamentals. Extension Entomology, Purdue University. [E-42-W](#).

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