

THE PURDUE LANDSCAPE REPORT

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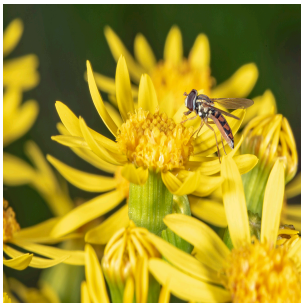
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Buzzing Swarms of Yellow and Black Flies Are Not A Stinging Threat

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Recently we have received reports of swarms of hover flies (aka syrphid flies) around Indiana and wanted to take the opportunity to tell you a bit about this curious insect. Adult hover flies can sometimes be mistaken for bees or wasps, because they look a lot like them! Some people refer to hover flies as “sweat flies” or “sweat bees,” but these insects are actually quite different from bees.

Hover flies belong to the Order Diptera, or the true flies.



Hoverflies commonly feed on pollen as adults (Photo by J. Obermeyer).



Hover fly larvae have distinct stripes that run along the sides of their bodies. This larva is a predator that feeds on milkweed aphids (Photo by C. Sadof).

The swarms of flies that we have been hearing about belong to the genus *Toxomerus*, which feed on pollen rather than other soft-bodied insects, like aphids. Hover flies are typically lighter in color, have a characteristic abdomen-bobbing behavior, and cannot sting at all – in fact, they are harmless. Sweat bees, on the other hand, are typically dark or metallic in color, smaller than common bees and do have stingers. Both hover flies and sweat bees can be a minor nuisance. They are attracted to us by moisture and salts they get by lapping up our sweat. Sweat bees will sting if accidentally squished against our skin while they are feeding.

In corn fields and other flowering crops, you will likely find the larval form of this insect, a small, rather plain-looking maggot, feeding in leaf axils and other areas where pollen collects.



Corn pollen grains adult hover fly and yellow larvae with brown stripes along the length of its body. (Photo by J. Obermeyer).

Be advised that the larvae are not pests, as they do not damage the crop. Rather, they are taking advantage of an abundance of pollen. This holds true for other flowering crops as well. As corn continues to mature at a more staggered rate than usual this year (a result of the wet spring and delayed/sporadic planting), you may continue to see these insects. Just remember they are not pests and cannot sting you, they just might be a bit bothersome *hovering* around you in large numbers!.

Use the [Purdue Doctor](#) apps to help you identify these and other insects found on flowers.

Educational Event: The Changing Nursery Industry: How Will You Adapt?

(Kyle Daniel, daniel38@purdue.edu)

You are invited to attend this free educational opportunity on campus or via webinar to this event on October 23rd! If you are interested in attending in person, please contact Kyle Daniel at daniel38@purdue.edu for details.



Title: The Changing Nursery Industry: How Will You Adapt?

Date: Wednesday, October 23, 2:30-5:15 PM, EDT

Moderator: Kyle Daniel

Registration Link:

<https://attendee.gotowebinar.com/register/3432994560801591051?source=college+and+ffa>

In this student- and young professional-focused webinar, you'll hear from thought leaders like Kyle Daniel, Tom Buechel, Megan Abraham, and more! Learn how to better understand how to think and act progressively as a grower, how to find opportunity in pest and regulatory issues, how to navigate e-commerce shipping, and more.

Join our experts as we dive into the many dynamics driving change throughout the nursery industry. You'll hear from thought leaders like Goris Passchier, Tom Buechel, Megan Abraham, and more! Learn how to better understand how to think and act like progressively as a grower, how to find opportunity in pest and regulatory issues, how to navigate e-commerce shipping, and more.

INTRODUCTION: Moderator Kyle Daniel

SESSION 1 Systems Approaches for a Brighter Future: Tom Buechel

SESSION 2 Challenges and Solutions for E-commerce Shipping: Tom Buechel

SESSION 3 Regulatory Functions, Challenges, and Opportunities: Megan Abraham

SESSION 4 Connecting the Dots of Growing Systems in Agriculture: Goris Passchier

SESSION 5 Grower Concerns and Opportunities of Pest and

Regulatory Issues: Rick Haggard

SESSION 6 Perspectives and Insight from a Recent Horticulture Graduate: Brittany Weerts

SESSION 7 Caught with your plants down? There are apps for that!: Janna Beckerman

SESSION 8 Are you staying ahead of the game or falling behind? Tips to think and act progressively as a grower: Kyle Daniel

WRAP-UP Q & A Time: Moderator Kyle Daniel

This virtual conference experience is brought to you by AmericanHort and Purdue University, and sponsored by Nature Hills Nursery/Plant Sentry™.

The Silent Tree Killer- Compaction

(Lindsey Purcell, lapurcel@purdue.edu)

Many tree issues are relatively easy to diagnose, especially when it comes to insects or diseases attacking the leaves or branches, or problems with the above ground part of the tree. However, when it comes to diagnosing issues below ground, where the roots are located, it becomes a bit tricky.



Yellowing of the leaves and thinning canopy can be indicators of soil and root issues.

Often, we see trees suffering, especially during the summer months with chlorotic leaves, smaller leaf size or thinning canopy. Most tree owners suspect it's a pest issue and turn to chemical sprays or fertilizers to improve the situation. However, chemical applications won't help your tree if there is compaction in the root zone.

Compaction is one of the biggest health risks to trees and is caused by excessive traffic or activity on the soil around the root zone. This compaction or compression occurs because excessive weight can press the soil particles together very tightly reducing the pore space between them which holds vital air and water. This air and water is required for roots to take up water in the soil and for roots to breathe.

Many things cause this compression of soil particles, including lawn maintenance activities, vehicles parked on or driving over the tree root zone, flooding or lack of drainage, and most unmonitored construction activities. Construction equipment is the biggest contributor to soil compression and adverse effects on trees. Even constant foot traffic in the same areas can cause soil compaction. The best remedy for compaction is to prevent it in the first place. Designated paths, and restriction of activity such as parking on and driving around trees can help greatly.



Construction activities compress soil particles making it challenging for roots to survive.



Constant foot traffic can cause compaction making it a challenge to grow turf or trees.



Parking and driving on tree roots can cause long-term damage and death.

When we see the tree is not doing well because of unexplained decline, such as early fall color or other symptoms mentioned earlier; we must look to see what the underlying problem that is causing the tree health issues. If we determine compaction is the main reason, we can understand there isn't an easy remedy. But, there is help...

If you suspect compaction to be an issue, contact an ISA Certified Arborist to review the site conditions, assess tree health and inspect the soil around the tree. Often the compaction can be assisted with good cultural practices such as keeping off the root zone, adding mulch, and supplemental irrigation. In severe cases, the tree can be saved with the use of air excavation tools. Professional arborists have special tools to loosen the soil and add suitable soil replacements to improve aeration and water infiltration. In these cases, this is often the best way to improve tree health.

For this issue and any other tree care challenges, always consult an International Society of Arboriculture Certified Arborist to review your tree and get the best remedy for your situation.

The best place to look for an arborist in your area is www.treesaregood.org.

To learn more about construction damage and compaction, refer to the Purdue education store for these publications.

[Why is my tree dying? FNR-FAQ-11-W](#)

[Construction and Trees: Guidelines for Protection FNR-463-W](#)

Which Web is Which?

(Elizabeth Barnes, barne175@purdue.edu) & (Cliff Sadof, csadof@purdue.edu)

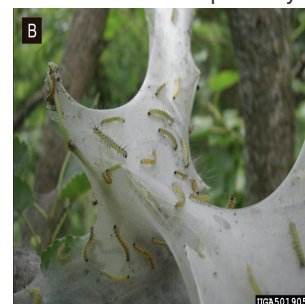
As summer draws to a close webs can become a common sight in the landscape. Some web-makers feed on trees and shrubs, while others feed on pests. Learning the difference can take the worry out of late summer.

The Pests

Fall webworms build massive webs that are particularly prominent at this time of year (figure 1). These yellow, fuzzy caterpillars will happily eat the leaves of more than 100 species of hardwood trees. Fall webworms hatch in midsummer and continue feeding on trees through early September. They construct white, gossamer webs on tree branches where they spend time hiding from predators and daytime heat. Caterpillars tend to build their webs around the ends of branches and expand outward. The webs are messy and show little obvious structure. The initial webs are small and usually go unnoticed. By the time webs are visible from a distance, the caterpillars are generally almost finished eating leaves for the summer.



A. Fall webworm webs start at the end of branches and expand down them. Webs will often contain partially eaten dead leaves.



B. Fall webworm caterpillars are yellow with fuzzy tufts of hair. They spend part of the day outside the web and part of it hiding inside.

Images by Kelly Oten, North Carolina Forest Service and Pennsylvania Department of Conservation and Natural Resources.

In landscape trees, fall webworms are primarily an aesthetic issue on healthy trees. Caterpillars eat leaves shortly before they drop in the fall so the tree only experiences minor stress. However,

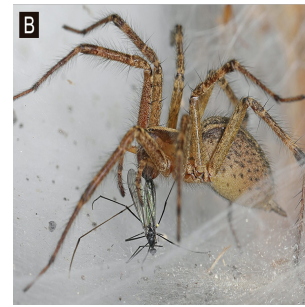
they can harm already stressed trees particularly during outbreak years and can be an eyesore on landscape trees. Management options include mechanical [removal of the caterpillars](#) or using [insecticides](#).

The Pest Eaters

Funnel weaving spiders earn their keep by feeding on small insects (e.g. gnats, mosquitoes, even Japanese beetles) that get snared in their web. Spiders in the family Agelenidae weave funnel shaped webs across gaps of foliage on dense shrubs to ensnare their prey. Webs have broad flat platforms and one or more round funnels that the spiders hide in (figure 2). Numerous tufts of webs are clearly visible on foliage, especially in morning dew. These spiders are also called grass spiders when they weave funnels in turf.



A. Funnel weaver spiders spin flat webs that are commonly found in bushes, in grass, and on trees. The webs have a small hole near the center that forms the opening of the funnel where the spiders hide.



B. When prey lands on the platform of the webs, funnel weaving spiders dart out from their funnels to grab it. These spiders are typically light to dark brown and often have visible sensory hairs on their legs.

Images by Judy Gallagher and Whitney Cranshaw, Colorado State University, Bugwood.

Spiders hatch in spring and begin making small webs across foliage. Webs become larger and more numerous in late summer and fall. No control is needed. Unlike in other parts of the world, there are no [medically significant funnel weaving spiders in North America](#). Unsightly webs can be knocked off with a hard stream of water from a garden hose.

How to tell web makers apart

To tell these animals apart, look at the structure of the webs and for the occupants. Funnel weaving spiders build mostly flat webs with a single primary layer (figure 2) whereas fall webworms build messy, multilayered webs that enclose the ends of branches (figure 1). Look for funnel weaving spiders inside their funnel. If the funnels are too dark to see into, use a flashlight to look for the reflection of their eyes. Look for fall webworms near the center of their webs. They make frequent trips outside of the web but there are almost always a few left inside.

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