

OSU Extension - Auglaize County Weekly Horticulture Newsletter – 10-18-19

Fall Turf Weed Control

Fall is an excellent opportunity to attack hard-to-control perennial broadleaf weeds such as clover, dandelions, ground ivy, plantains and wild violets and biennials such as bull thistle and wild carrot. Because these weeds are perennial or biennial, they will be bolstering their nutrient reserves in their root systems and crowns that are needed to get them through the winter and growing again next spring. Thus, the dominant direction for the flow of photosynthate and other nutrients in these plants is toward the root systems and crowns. If application timing coincides with this flow, our herbicides will more readily reach the critical parts of the plants that need to be killed to rid lawns of these pesky weeds.

The most common and effective herbicides to use would be products such as Trimec and Triplet and other names that contain 2,4-D, dicamba, and MCPP. For lawns dominated by some of the more problematic weeds (i.e. clover, ground ivy and wild violets) using a combination of four active ingredients may be needed such as triclopyr, sulfentrazone, 2,4-D and dicamba (e.g., T Zone SE). Another option would be to add the triclopyr (Turfлон Ester) to the Trimec type products mentioned above. Apply the maximum rate of Turfлон and Trimec type products to control these problematic weeds. To improve activity of these products, it is recommended to wait until after 1 or 2 frosts have occurred, which we may not have had yet in all parts of the county. Preferably apply the herbicides before temperatures drop and remain below 45 degrees F during the day for most days.

Apply the herbicides in temperatures as warm (>60 degrees F) as possible. Making herbicide applications at temperatures below 60 degrees F, but above 40 degrees F during the day usually controls the weeds, but the activity will be slower. If you miss spraying during a warm period, it is still better to spray the herbicide in the fall at temperatures just above freezing than to wait until spring. When making applications be sure the temperature in the morning is above freezing. It is best to have the temperature above freezing and as warm as possible and sunny for two days before and two days after application, but we do not always get that, so at least make sure it is sunny and warm on the day of application.

Allow a 6-hour rainfree period after the herbicide application.

Herbicides sprayed on the lawn always work more effectively compared to the dry weed and feed products.

Written by Curtis Young and Jeff Stachler

Local Observations



Harvesting potatoes

Good Afternoon! I pray you are well! Some rain in the past week!

It rained 3 days this past week. Rainfall on Friday, October 11th, ranged from 0.13" Santa Fe – New Knoxville and Kettlersville roads to 0.7" north of Wapakoneta on Buckland – Holden Road. Rainfall on Tuesday was 0.01" at about 2 miles west of Minster to 0.3" at about 5 miles east of Waynesfield. Rainfall on Wednesday was 0" at 5 locations around the county to 0.2" near Bloody Bridge. Rainfall for the week ranged from a trace a about 2 miles southeast of Fryburg to 0.92" north of Wapakoneta on Buckland – Holden Road. The average for the week was 0.55". We have seen variable temperatures this past week.

I'm still harvesting tomatoes, watermelon and Swiss chard. The watermelon sure have been good. I sure hope my bees are doing better. I found some larvae in it, but not very many, so I'm not sure how good they will be.

VegNet

No news this week

BYGL

Weird Willow Galls

Authors

Joe Boggs

Published on

October 15, 2019

Willow Pinecone Galls
Pre-Winter



Joe Boggs, OSU Extension©

Willow Pinecone Galls are produced by the Willow Pinecone Gall Midge, *Rabdophaga strobiloides* (family Cecidomyiidae), to house, nourish, and protect a single fly larva (maggot) located deep within the gall. The elaborate structures bear a striking resemblance to a pine cone complete with faux seed scales.

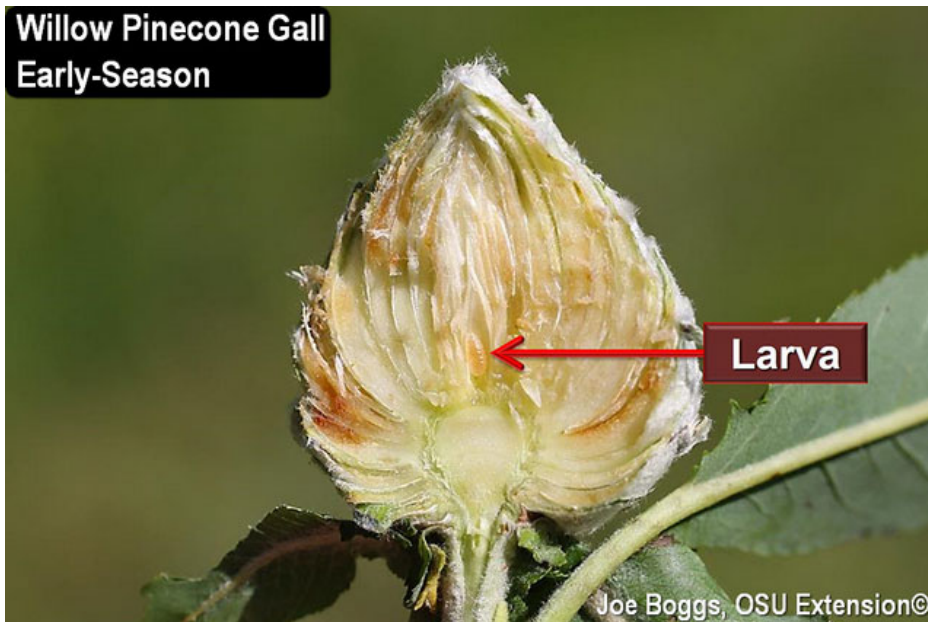


The literature lists a number of willow hosts; however, I've only ever found them in Ohio on black willow (*Salix nigra*). The galls arise from apical buds, so they are only found at the tips of branches. The galls cause no apparent harm to overall tree health. In fact, I believe they add ornamental value to their willow hosts.

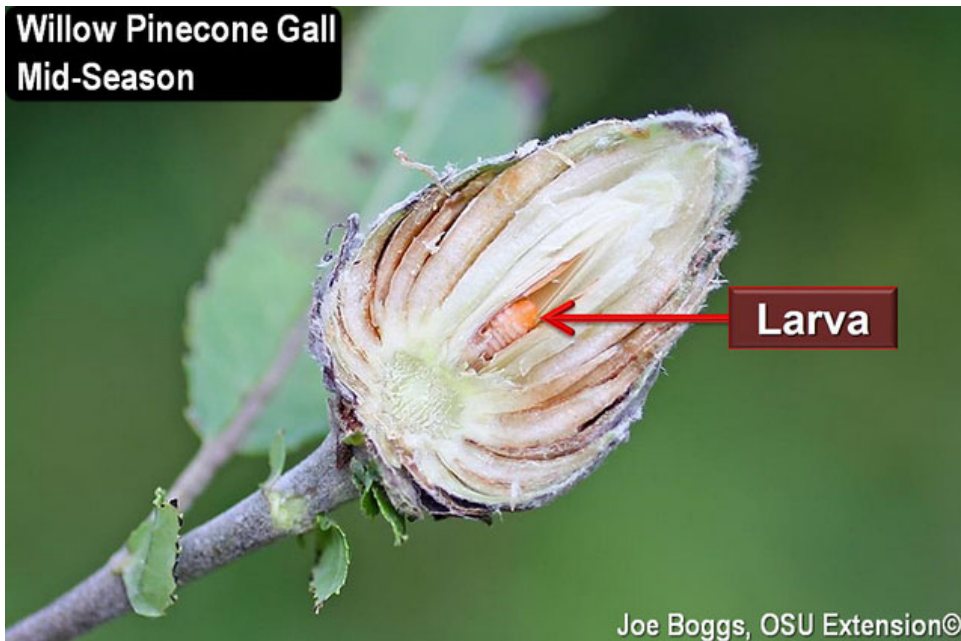


Carefully slicing the galls open lengthwise at this time of the year will reveal a multi-layered structure surrounding an orange to orangish-yellow midge fly maggot nestled within a central elongated chamber. The layers are packed with dense down-like fibers presumably to serve as winter insulation.

Willow Pinecone Gall
Early-Season



Willow Pinecone Gall
Mid-Season





The gall maggots overwinter in the final instar stage meaning that galls remain attached throughout the winter. Research published in 1987 in the journal *Oikos* showed the maggots survive winter deep-freezes by loading their bodies with "antifreeze" in the form of glycerol. The galls have been reported from New England to California and north to Alaska.

Willow Pinecone Galls
Winter



Joe Boggs, OSU Extension©

Willow Pinecone Galls
Utah



Jim Chatfield, OSU Extension©

The maggots pupate in the spring with adults emerging just prior to bud break. What happens next applies to both midge fly as well as wasp gall-makers and is poorly understood. However, it's one of the most fascinating things you'll ever come across in nature.

New galls are initiated when females use their sharp ovipositors (= egg depositor) to insert an egg into an apical bud; the galls always appear at the tips of twigs. The females also introduce chemicals into the wound. Whether the chemicals coat their ovipositors or are found in their saliva, or both, is not well documented. The eggs may also exude gall growth-directing chemicals, but this is also poorly understood.

However, it is known that the chemicals turn plant genes on and off in the meristematic bud tissue at just the right time to direct gall formation. It is highly directed growth specific to the gall-maker. In this case, the improbable looking willow pinecone galls are formed; they never look like anything else.

The galls at first appear as a dense cluster of curved, nascent leaves. They later pass through a "ball stage" before becoming elongated into a cone-like structure.

Willow Pinecone Gall Formation from Apical Bud



Joe Boggs, OSU Extension©



As with the vast majority of plant galls created under the direction of insect gall-makers, willow pinecone galls cause no appreciable harm to the overall health of their willow host. However, this does not mean they don't produce measurable effects beyond their strange appearance.

Research published in 1984 in *Ecological Entomology* showed that the willow pinecone gall midge manipulates their willow host's growth and development to funnel tree resources to their maggot progeny. Twigs with a gall at the tip become significantly larger in diameter compared to twigs without galls even when the foliage is stripped from both galled and non-galled twigs early in the gall development.

Last Hurrah for Willow Sawfly

Authors

Joe Boggs

Published on

October 14, 2019



Kris Stone, Director of the Boone County Arboretum and horticulturist extraordinaire, texted images this past Friday of Willow Sawfly (*Nematus ventralis*) larvae chowing down on the leaves of a Dewystem Willow (*Salix irrorata*) in his home landscape. It's a reminder that although the plant pest season may be drawing to a close, it ain't over 'til it's over.

Despite their common name, this non-native European sawfly may also feed on poplars (*Populus* spp.). Although the sawfly is considered somewhat rare, occasional population outbreaks have been observed on both poplars and willows.

Willow sawfly has at least two generations per season with the heaviest leaf damage typically produced by the second-generation late in the season. This means willow sawfly larvae usually cause little damage to the overall health of established tree hosts. Affected trees generally have enough time before leaf-loss to produce and store sufficient carbohydrates to support leaf and stem growth next spring.



It may be a different matter for newly planted trees. Reduced stem growth has been observed on young trees that suffered heavy defoliation by this sawfly the previous season.

Kris noted the larvae are "*rather Halloween-ish in color.*" Indeed, the striking-looking larvae are shiny black with a row of slightly raised orangish-yellow spots along the sides of their bodies. As with many types of sawfly larvae, when disturbed willow sawfly will form their bodies into an "S" shape (S for sawfly?).



Don't confuse this species with another sawfly species found in North American that also feeds on willow. *Nematus oligospilus* has no approved common name; however, it is also commonly referred to as the "willow sawfly." Larvae of this species are much less colorful; their head capsules are flesh-colored and their bodies are light green with faded green and white longitudinal stripes.

Willow sawfly larvae feed in colonies that typically include 5 - 10 individuals. Early instars produce holes and notches in leaves while later instars consume entire leaves except for the midveins.

Early Instar Willow Sawfly



Joe Boggs, OSU Extension©

Late Instar Willow Sawfly



Joe Boggs, OSU Extension©

The sawfly larvae in Kris' text image were late instars meaning feeding damage will soon cease once larvae drop to the ground where they pupate prior to winter. However, it's not too late to reduce the population for next season knocking the colonies into a bucket of soapy water or onto the ground and doing the "sawfly stomp dance." Thus far, no populations have become resistant to stomping.





White-Haired Alders and Meat-Eating Caterpillars

Authors

Joe Boggs

Published on

October 14, 2019



Woolly Alder Aphids (*Prociphilus tessellatus*, family Aphididae) produce large, white fluffy colonies on the branches of their namesake host making the branches look like they're covered in patches of white hair. A close look will reveal woolly aphid nymphs exuding strands of white waxy filaments from block-like structures on their backs (*tessellatus* means "mosaic pattern").

Woolly Alder Aphid
(*Prociphilus tessellatus*)



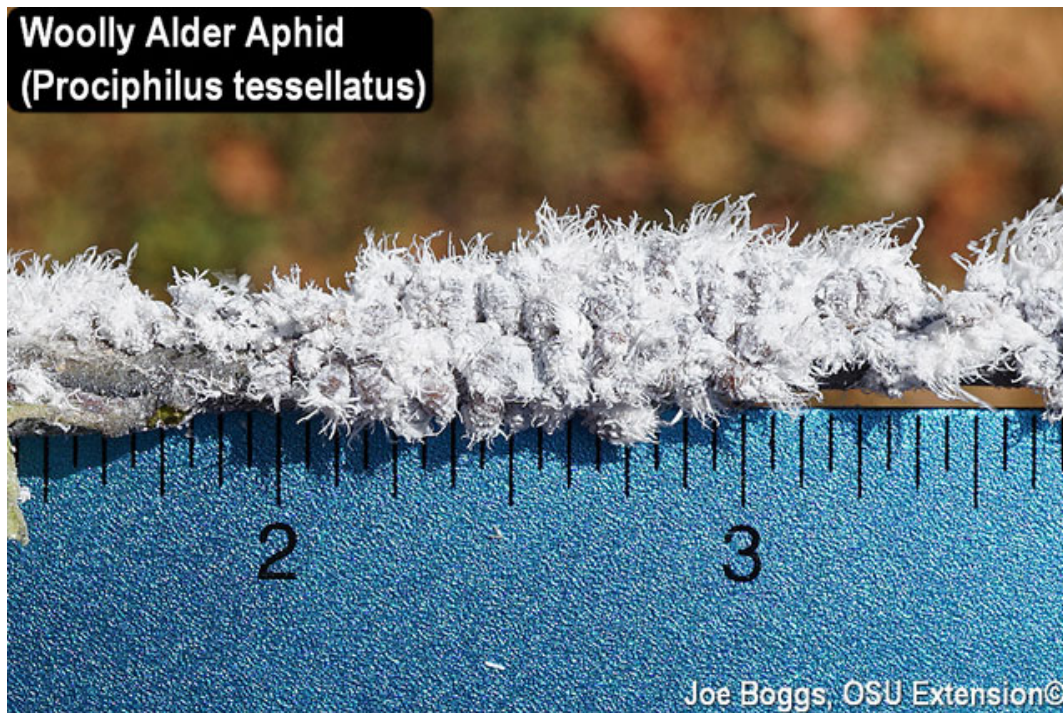
Joe Boggs, OSU Extension©

Woolly Alder Aphid
(*Prociphilus tessellatus*)

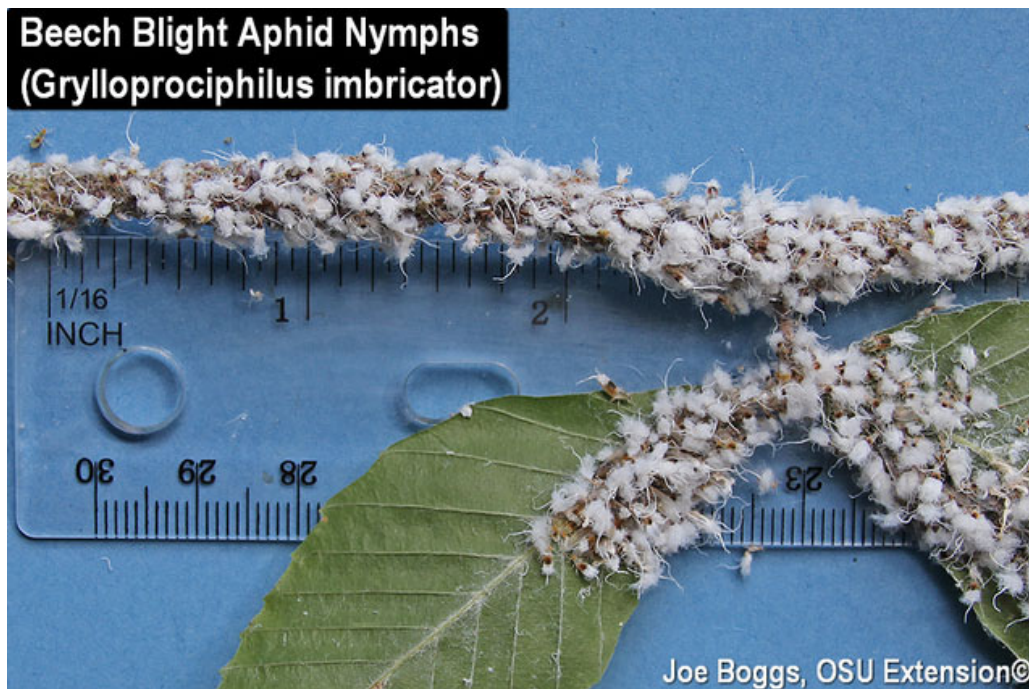


Joe Boggs, OSU Extension©

I've encountered these unusual woolly aphids twice over the past couple of weeks. My friend Ron Rothhaas (Arbor Doctor, LLC, Cincinnati, OH) gave me directions to heavy infestations on several alders used as street trees in Cincinnati. I also came across these fluff-covered aphids adorning alders in southern West Virginia.



Woolly alder aphids closely resemble Beech Blight Aphids (*Grylloprociphilus imbricator*) which are found exclusively on the twigs and branches of American beech (*Fagus grandifolia*). Indeed, both aphids belong to the same subfamily, Eriosomatinae (woolly and gall-making Aphids), and tribe, Pemphigini.



However, unlike their beech-sucking cousins, woolly alder aphids don't pulse their posterior ends in unison when they're disturbed. This unusual defense behavior is responsible for beech blight aphids being called "boogie-woogie aphids." More about these aphids later.

Woolly alder and beech blight aphids practice the same phloem-sucking behavior and both produce copious quantities of honeydew which becomes colonized by a specific sooty mold fungus, *Scorias spongiosa* (Ascomycete). The fungus has an obligate relationship with these and a few other woolly aphids.

The sooty mold fungus looks like other black sooty molds at the beginning. The mycelia form a dense, black, "fuzzy" mat on top of the honeydew.



However, over time, the fungus progresses into a growth phase that is unlike most sooty molds; it produces a spongy, golden-yellow heap that may rise 1 - 2" or more above the leaf or twig surface. The odd-looking fungal growths look like nothing else that would commonly be associated with aphids or honeydew.

Sooty Mold - Woolly Alder Aphid
(*Scorias spongiosa*)



Joe Boggs, OSU Extension©

Sooty Mold - Beech Blight Aphid
(*Scorias spongiosa*)



Joe Boggs, OSU Extension©

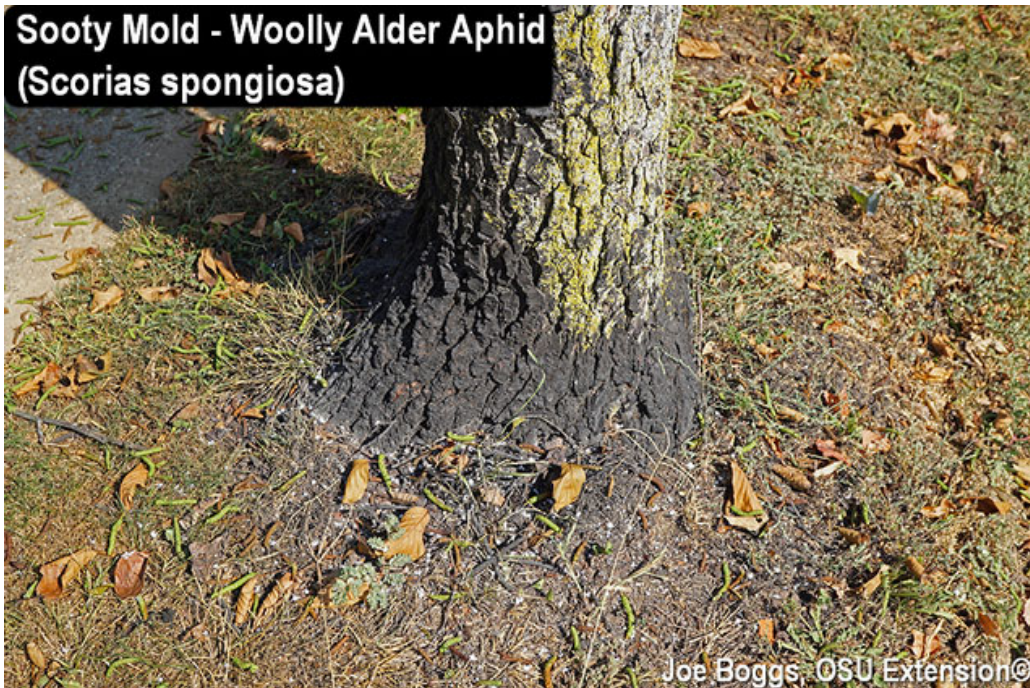
The spongy growths eventually harden and turn black in the fall. They remain evident throughout the winter and are sometimes mistaken for other tree maladies.

Sooty Mold - Woolly Alder Aphid
(*Scorias spongiosa*)



Joe Boggs, OSU Extension©

Sooty Mold - Woolly Alder Aphid
(*Scorias spongiosa*)



Joe Boggs, OSU Extension©

Woolly Alder Aphids or Maple Blight Aphids?

Woolly alder aphids have two tree hosts: alder and silver maple (*Acer saccharinum*). In fact, the alternate common name for this aphid is Maple Blight Aphid.

At this time of the year, some of the aphids on alder will mature into males and females with wings and fly to silver maple. Others remain on alder for the winter. Indeed, a portion of the colony will always stay on alder year-after-year; there is no requirement for the aphids to fly to silver maple to complete their life cycle.



The winged females lay eggs in bark crevices on silver maples; this is the overwintering stage. The eggs hatch in the spring and the resulting nymphs migrate to newly expanding maple leaves where they line-up on midveins and use their piercing-sucking mouthparts to tap into phloem vessels.

These aphids are all females and they reproduce asexually to form large, fluffy colonies. Heavy infestations can cause noticeable leaf curling and the colonies produce copious quantities of honeydew that rains down on leaves, branches, etc. to become colonized by black sooty molds

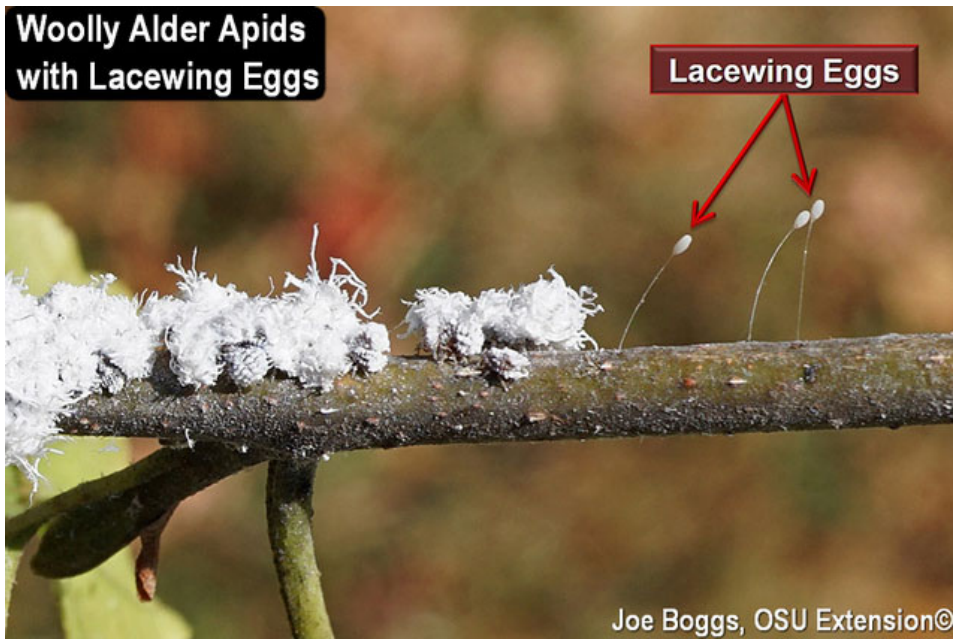
By mid-summer, the colonies of "maple blight aphids" produce adults with wings that fly to alders. These relatively large aphids are covered in waxy filaments and look like flying puffballs. They are not particularly good flyers and

large numbers can make them a serious nuisance pest as they drift around landscapes with heavily infested maples.



None of the aphids remain on silver maples past mid-summer. This "disappearing act" can be very dramatic with high populations seeming to suddenly disappear as the fluffy winged adults leave the maples to seek alders.

Woolly alder aphids/maple blight aphids are mainly nuisance and aesthetic pests. They cause little damage to the overall health of their tree hosts so insecticide applications are seldom warranted. The aphids attract a wide range of predators and parasitoids that play a significant role in naturally regulating populations. Several of my images showed characteristic lacewing (family Chrysopidae) eggs laid near the aphids; harbingers of doom.

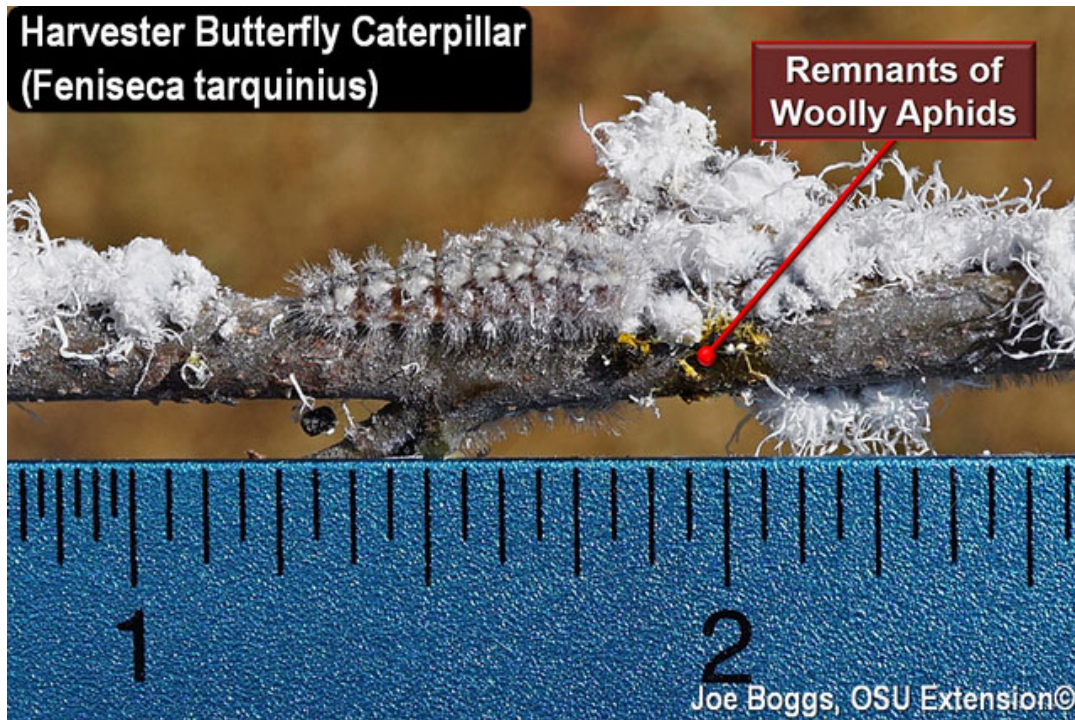


A Harvester of Woolly Aphids

A close look at woolly alder aphid colonies may reveal one of the most unusual caterpillars found in Ohio. The slug-like caterpillars of the Harvester Butterfly (*Feniseca tarquinius*, family Lycaenidae) are the only strictly meat-eating butterfly caterpillars found in the U.S. The butterfly species is also the only member of the monotypic genus *Feniseca*.



I was amazed to see the carnivorous caterpillars slinking among their woolly prey without producing any reaction from the aphids. The sheep-like aphids seemed totally unaware of the marauding wolves converting their sisters into watery, yellowish smears.



Harvester butterfly caterpillars commonly feed in groups (wolfpacks?) and apparently confine their feeding to woolly aphids. You may also find the caterpillars creeping among colonies of other woolly aphids such as Woolly Elm Aphids (*Eriosoma americanum*). The adult butterflies may be spotted fluttering in close proximity to their woolly caterpillar food.



However, the harvester butterfly does not seem to hunt beech blight aphids. Research has shown that the nymphs are highly aggressive against predators. If the organized boogie-woogie doesn't work, the nymphs will mass-attack using their piercing-sucking mouthparts to inflict serious damage to predators; possibly including harvester caterpillars. Perhaps the aphid's gyrations are actually a war dance!

You can read more about this unusual aphid behavior by clicking on this hotlink that takes you to a Scientific American article titled, "*Dancing woolly aphids will probably stab you*":

<https://blogs.scientificamerican.com/running-ponies/dancing-woolly-aphids-will-probably-stab-you/>



The National Asian Longhorned Beetle (ALB) Eradication Program Scores a "Win"

Authors

Joe Boggs

Published on

October 12, 2019



Asian Longhorned Beetle (ALB) (*Anoplophora glabripennis*) is potentially **the most devastating non-native pest** to have ever arrived in North America. **The beetle kills trees belonging to 12 genera in 9 plant families.** This includes *Acer* (all maple species); *Aesculus* (horsechestnuts and buckeyes); *Ulmus* (elms); *Salix* (willows); *Betula* (birches); *Platanus* (Sycamore/Planetrees); *Populus* (Poplars); *Albizia* (Mimosa); *Cercidiphyllum* (Katsura); *Fraxinus* (ashes); *Koelreuteria* (goldenraintree); and *Sorbus* (mountainash).

Maples are the most preferred host. The ripple effect of losing native maples across many forest ecosystems also means the potential loss of other plant species as well as animal species that are dependent upon the overall health of those ecosystems.



Successful eradication of ALB is essential to avoiding a catastrophic loss of trees as well as habitat on a scale never before seen in the U.S. That's why the announcement on October 10, 2019, by the U.S. Department of Agriculture's (USDA) Animal and Plant Health Inspection Service (APHIS) in coordination with the New York State Department of Agriculture and Markets, New York State Department of Environmental Conservation, and New York City Department of Parks and Recreation is so important. **ALB has been eliminated in the New York City boroughs of Brooklyn and Queens.**

This was a hard-earned victory in the long battle to eliminate ALB from the U.S. because Brooklyn was "ground zero." The non-native beetle was first detected in the U.S. infesting Norway maples in Brooklyn in 1996. Additional infestations were later found in Long Island, Manhattan, Staten Island, and Queens. Manhattan and Staten Island were declared beetle-free in 2013. Work continues towards eradicating ALB in Long Island. However, the announcement means the 137 square miles that were previously regulated for ALB in New York State are now reduced to 53-square miles in Nassau and Suffolk counties on Long Island.

You can read the complete press release by clicking on this hotlink:
<https://content.govdelivery.com/accounts/USDAAPHIS/bulletins/2654885>

Remain Vigilant!

The dedicated professionals with the ALB Cooperative Eradication Program in Ohio which includes the USDA APHIS and the Ohio Department of Agriculture (ODA) have also scored their own victories. ALB was first detected in Ohio near Bethel in Tate Township, Clermont County, in June 2011. "Satellite" infestations were found in Monroe Township in September and in Stone Lick Township in 2012; both were declared eradicated last year.

Work is continuing on eradicating ALB from Tate Township and the adjoining East Fork State Park / East Fork Wildlife Area. However, past experience dictates that we should remain vigilant for ALB not only in the immediate vicinity but also elsewhere in the U.S. That's because our Ohio ALB infestation arrived directly from China; the beetles did not come from New York. The same is true for other ALB infestations in the U.S. Beyond the associated satellite infestations sometimes found near a new ALB discovery, the beetle has not been moved or spread naturally over great distances within the U.S.

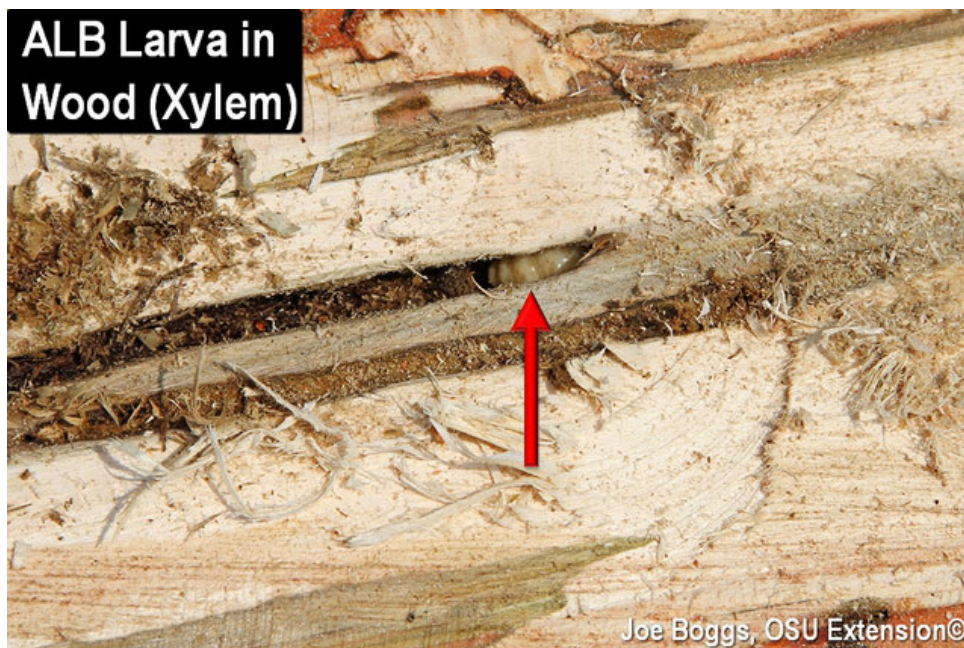
Early detection is critical to the successful eradication of ALB both in terms of time and money. Never believe ALB is "somewhere else." ALB can pop-up anywhere, even in our own backyards.

Here are some tips on what to look for:

1. Focus on Maples. ALB will attack trees belonging to 12 genera; however, maples (*Acer* spp.) are by far the most preferred host.



2. Branch Breakage. ALB larvae tunnel through and feed on the wood (xylem) of trees. This weakens branches causing them to break. Unusually heavy branch breakage on living maple trees should be investigated!



ALB Larval Tunneling Damage



ALB Indicators



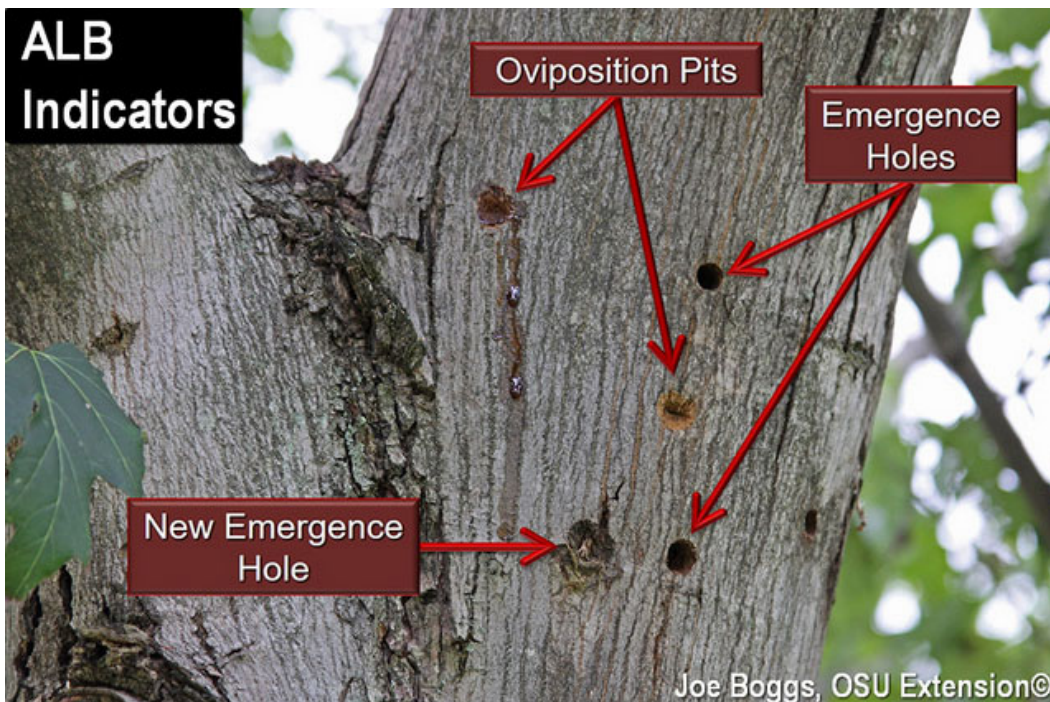
3. Holes: The "Pencil Test." The big beetles typically emerge from deep inside the wood of a tree (xylem), so the round adult emergence holes extend deep into the tree. Inserting a #2 pencil into the holes will reveal the depth of the emergence holes. However, trees may close the exit holes with callous tissue.



ALB Exit Tunnel



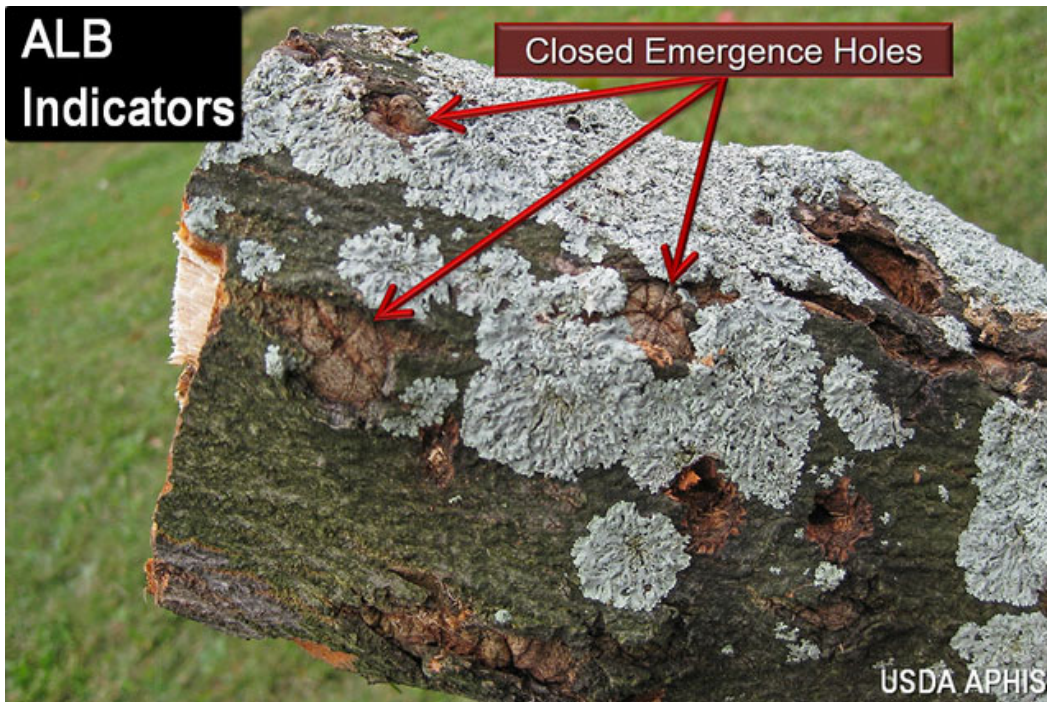
ALB Indicators



ALB Closed Exit Hole



Joe Boggs, OSU Extension©



4. Pits in the Bark. ALB females chew a concave pit through the bark to the xylem where they lay a single egg. The "oviposition pits" may weep sap during the season. However, usually close the pits relatively quickly, so you may only see rounded wounds.

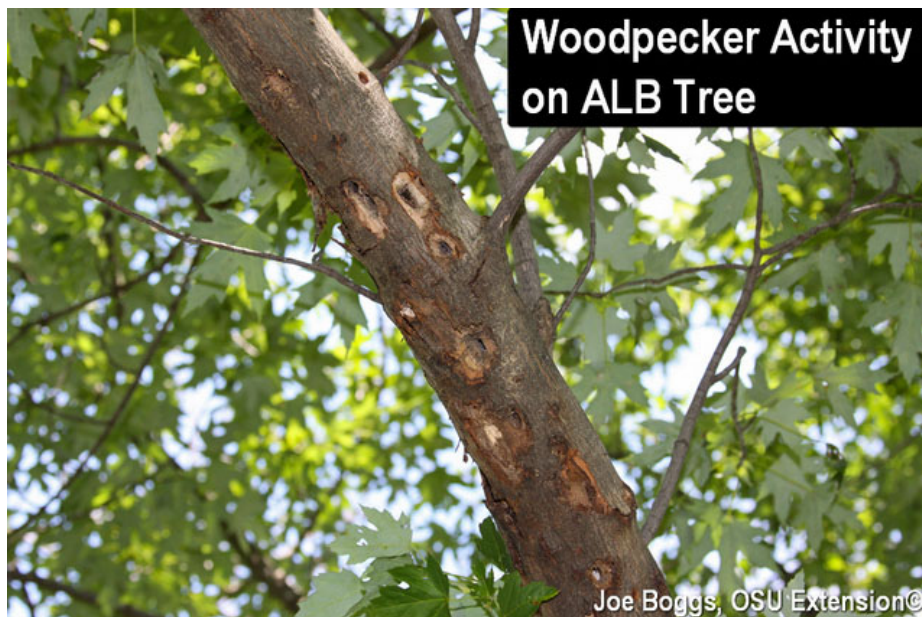
**ALB Female Chewing
Oviposition Pit**



Joe Boggs, OSU Extension©



5. Heavy Woodpecker Damage. ALB larvae live deep inside the xylem. Woodpeckers excavate deep holes in search of these large tasty meat morsels. Look for deep woodpecker damage **on living tree stems**.



6. Frass: Small Wood Shavings. ALB produces small wood shavings as they emerge from trees or as the females chew oviposition pits.



7. Bark Cracking. Larval feeding damage may stimulate trees to produce callous tissue then woundwood beneath the bark. The expanding wound response tissue lifts the overlaying bark producing cracks and fissures.



8. Big Beetles. ALB is a very large beetle. We are at the end of the "beetle season" in Ohio; however, some beetles may still be found wandering about. It's also important to monitor insect collections submitted as school or 4-H projects. Larvae, which are known as "roundheaded borers," that are found inside **living tree trunks and branches** may signal an ALB infestation.

**Asian Longhorned Beetle
(ALB)**



ALB Mature Larva



If you find any of these ALB indicators, report it. Give the ALB professionals a chance to investigate. In fact, if you find **ANY suspicious signs or symptoms, report it!** There is no harm if it turns out not to be ALB; there is great harm if it is ALB and it's not reported.

You can report by phone by calling 1-866-702-9938, or 513-381-7180. You can also report online by clicking the hotlink below:

<https://www.aphis.usda.gov/aphis/resources/pests-diseases/asian-longhorned-beetle/report-it>

Workshop on Treating for Hemlock Woolly Adelgid (HWA) and Elongate Hemlock Scale (EHS)

Authors

Joe Boggs
Dave Shetlar

Published on

October 12, 2019



Tom Macy (Forest Health Program Administrator, Division of Forestry, Ohio Department of Natural Resources) has organized a workshop on treatment options for two non-native invasive pests threatening hemlock in Ohio: hemlock Woolly Adelgid (HWA) and Elongate Hemlock Scale (EHS).



The workshop will cover strategies for managing these significant pests in landscapes as well as forests and will include indoor presentation and outdoor demonstrations. The program has been submitted for continuing education credits for Ohio pesticide applicators (core, forest pest, and ornamental pest categories), the Society of American Foresters, and the International Society of Arboriculture.

Where: Holden Arboretum, 9550 Sperry Rd, Kirtland, OH 44094

When: November 14, 2019

Fee: \$25.00

To view the agenda and register for the program, click on this hotlink:

<http://support.nature.org/site/Calendar?id=12824&view=Detail>

Tree Mortality from HWA Great Smoky Mountains National Park



Joe Boggs, OSU Extension©

More Information

Workshop Agenda and Registration

<http://support.nature.org/site/Calendar?id=12824&view=Detail>

Other Articles

Plant This Daffodil for Its Large Flowers

October 15, 2019 | [Meghan Shinn](#)

Source: <https://www.hortmag.com/plants/plants-we-love/plant-this-daffodil-for-its-large-flowers>



Virtues: ‘Flower Record’ daffodil offers large flowers with white petals surrounding a big, ruffled golden cup.

Common name: ‘Flower Record’ daffodil

Botanical name: *Narcissus* ‘Flower Record’

Exposure: Full to part sun

Season: Mid- to late spring, for flowers

Flowers: Crisp, clean white petals surround a large golden-yellow cup with a ruffled orange-red rim. The flowers appear on 14- to 16-inch-tall stems in mid- to late spring and offer a slight fragrance.

How to grow ‘Flower Record’ daffodil: Plant the bulbs in the fall in full or partial sun. After the spring bloom, allow the foliage to grow until it dies back naturally, then clear it away. Daffodils can be divided in early summer as the leaves fade. USDA Zones 3–8.

Gardening Basics 3: Soil pH and What It Means

October 15, 2019 | [Meghan Shinn](#)

Source: <https://www.hortmag.com/weekly-tips/tools-materials/gardening-basics-3-soil-ph-and-what-it-means>



Rhododendrons are one example of a plant that requires a certain soil pH. They prefer acidic soil.

by Tammie Painter

Too often it is assumed that just because a plant grows in a gardener's region it will do well in every garden within that region. Unfortunately, even native plants grown in the wrong conditions will become weakened and troublesome over time, while plants grown in their preferred conditions will flourish with less care. The right choices will allow you to spend time enjoying a healthy garden rather than tending to a weak one. This post, the third in a three-part series, covers soil pH: what it means for plants and how to test and treat it.

Key condition #3: Your Soil's pH

Soil pH may seem too scientific for the home gardener, but it's a vital matter for your plants.

At its most basic level, soil pH determines your plant's ability to access nutrients. In the right pH conditions, a plant's roots are able to absorb nutrients from the soil. The wrong pH locks up those nutrients, making them unavailable to the plant. This has to do with pH affecting the ions on nutrient molecules in a way that either gives the nutrients a free pass into the roots or puts up a wall to the nutrients' entry.

A common pH problem can be seen when acid-loving plants, like blueberries, are planted in neutral or basic soil. At first the shrub does fine, but over time its leaves yellow as it goes into iron chlorosis. Your immediate reaction is to give it a dose of fertilizer. The nitrogen in the fertilizer will give the blueberry a spurt of leaf-producing growth, but this spurt places additional stress the nutrient-deficient plant. Left in neutral soil, the shrub's health and stamina suffers, you get few blueberries and eventually the plant dies.

Extension services and better gardening books can tell you a plant's pH requirements. You can also make some general assumptions. The majority of plants do well in near-neutral soil (pH 6.5 to 7.5); plants from rainy areas tend to prefer acidic soils (pH 4.5 to 6.5); and plants from arid regions do well in the alkaline range (pH 7.5 to 8.5). Keep in mind that these are broad generalizations and they don't apply to every plant.

Tests for soil pH range from full-analysis kits you send to a lab to inexpensive litmus-strip kits available at most garden centers. If you suspect your soil has serious problems, opt for the lab-tested kits, because many of these will also tell you what nutrients your soil is lacking. For most home gardeners, though, the inexpensive home tests will suffice.

Once you have your soil's pH numbers, you can either choose plants to match or you can adjust it by amending the soil (see box). This change is best done slowly over a season or two, and it will need to be maintained on a regular basis. Trying to push your soil beyond what is the normal range for your region will be an uphill and continual struggle.

It's much easier to simply use plants that prefer your soil's natural pH, but if you want to attempt something different, it's possible to adjust the pH. Bear in mind it will be an ongoing process as the soil will shift back toward its natural pH over time.

You can raise the pH of acidic soil by working in lime (calcium carbonate) or pulverized oyster or clam shells into the soil. Liming agents work most efficiently when they wash into the soil soon after application, so time this project when rain is predicted.

Liming agents generally require three to four months to change pH. Carefully follow all application directions, as this change is difficult to reverse if you swing the pH too far.

Wood ashes also raise pH, but not as strongly as liming agents. They are good if a small pH increase is desired.

Adding any kind of organic matter, such as compost, shredded leaves, conifer needles, or bark mulch, will lower soil pH as they decompose. Plan to add organic matter at least a month or two ahead of planting time to give the amendments time to work.

Prepared by Jeff Stachler
Ohio State University
Agriculture and Natural Resources Extension Educator, Auglaize County