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OSU Extension - Auglaize County Weekly Horticulture Newsletter – 6-5-20

What is Causing my Austrian Pine Needles to Turn Brown?

I have received several samples and visited a few locations in the last few years to look at pine trees having brown needles. As I drive around the county I see many Austrian pine trees having brown needles. One location has over 20 trees, with nearly every tree having some amount of disease present and some dead trees. Yes, this disease can kill trees.

The disease is called Dothistroma needle blight or sometimes called red-band needle blight. The disease is caused by the pathogen *Dothistroma septosporum*. Austrian, ponderosa, and mugo pines are most susceptible. Red and Scots pines are usually resistant to the disease.

To identify the disease look for small reddish-brown spots that eventually encircle the needle forming a band. This is most evident in the fall, but can also be seen now. Once the band is formed the needle tip will turn a brown or tan color while the base of the needle stays green. This is what you see now. The needles having a green base and a brownish tip is the tell tail sign that the tree has Dothistroma needle blight. Eventually the entire needle will turn brown and fall off the tree. The oldest needles on the tree are the ones that become

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infected. Tiny black pimple-like fungal spore producing structures, called stromata, may be visible pushing through the surface of the needle within the spots and bands. The disease usually starts from the lowest branches and moves upward.

Dothistroma needle blight takes over a year to complete its life cycle. Stromata, the fruiting structures, start to form under the needle epidermis in the fall and break through in the fall. The stromata contain spores called conidia that do not mature until spring. Around mid-May the conidia begin to be released during periods of cool and wet conditions. Spores will be produced throughout the growing season any time there are several consecutive days of cool (41-77 degrees F) and wet weather. The spores are windblown or rain-splashed onto mature needles. The mature needles, second year and older needles, are the ones infected at this time. New needles are not susceptible until they become hardened off around July. The symptoms usually do not show up for three to six months after infection. Needles infected during the growing season will not become completely brown and drop off until the following summer or fall.

Management options to reduce the risk of getting the disease include wide spacing for good air flow, remove the bottom branches for better air flow, control weeds under tree with mulch, maintain a three to four inch depth of the mulch, make sure lawn sprinkler is not spraying the tree, and do not plant these pines in a low-lying area. If you can observe the disease soon enough you could prune it out of the tree and burn the branch, but only do this during sunny and dry conditions. If the disease is present apply a copper-based fungicide in mid-May to protect the old needles and again in mid-July to protect the new and old needles. Fungicide applications probably need to be made for a two to three year period to ensure control. Once a tree has developed symptoms on 50 to 60 percent of the tree, applying fungicides may not save the tree. If you have a severely infested tree and several pine trees not infected or barely infected, remove the severely infested tree, otherwise the other trees will end up the same way.

Pine trees in Ohio have a limited life span because they are not native, so they easily become infected with a disease, especially with all this rain or infested with an insect. Get out and scout your pine trees for the presence of Dothistroma. It is life or death for the tree.

Local Observations

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Current stage of neighbor's potatoes

Current stage of my carrots

Current stage of my asparagus

Current stage of my tomatoes

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Rose

Peony

Sunflower

Holly hock

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Bird bath turned to flower pot

Palenstine woundwort (Lambs's ear)

Geranium

Cat mint

Good afternoon! I pray you are well.

A dryer week for most! We received rainfall **2** days this past week! Rainfall on Friday, May 29th ranged from 0.05" near Feikert and St. Rt. 385 roads to 0.38" near Lowe's. Rainfall early Thursday morning ranged

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from 0.2" near Harris and St. Rt. 29 roads to 1.41" near Tri-Township and Lock Two roads. Rainfall for the week ranged from 0.35" near Harris and St. Rt. 29 roads to 1.63" near Tri-Township and Lock Two roads. The average rainfall for the week was 0.74", 0.08" more than last week. Rainfall for the month of May ranged from 3.53" near Kettlersville and Santa Fe-New Knoxville roads to 6.07" near Mercer Line and St. Rt. 197 roads. The average rainfall for the month of May was 4.62", 0.44" above the historical monthly average of 4.18". It rained 18 days in the month of May. Rainfall for the year in the county is averaging 19.66" which is 4.71" above the year to date normal of 14.95". It will be dry early in the week and then a chance of rain every day in the middle and end of week.

A cooler week! The average high temperature now is 78 degrees F, 2 degrees higher than last week. Temperatures were above normal for **3** days and below normal for **4** day this past week. Temperatures ranged from 64 degrees F to 88 degrees F. The average high temperature for the week was 75.9 degrees F which is 4.7 degrees F cooler than last week but 2.1 degrees F cooler than the historical average high. The average high temperature for May was 68 degrees F, which is three degrees colder than normal. We had 4 days in the month of May with the low temperature being 32 degrees F or 30 degrees F with the last day being May 13th. Temperatures will be near normal or above normal for most of the week with Tuesday forecasted to be 92 degrees F.

Most of the stuff in my garden looks great, but not all. Some of my green onions finally emerged. I still need to plant part of the garden. I need to move my dirt pile created by the asparagus bed. I have thirteen of the 14 asparagus plants that have emerged and the trench is covered in.

New plant species begin to flower every day. What a joy. Fungicide applications for Rhizosphaera and Dothistroma should be applied now and again in another three weeks. I have seen photos of maple anthracnose and cottony maple scale and calls about spruce trees this week.

Weekly Weed Photos

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Common milkweed (friend or foe?)

Common cocklebur

Cressleaf groundsel

Common yellow woodsorrel

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White clover

Common ragweed

Special OSU Horticulture Meetings

Horticulture Lunch and Learn and Horticulture Happy Hour

During this period of COVID-19 OSU Extension is offering a Horticulture Lunch and Learn Program and a Horticulture Happy Hour Program. If you are interested, visit the following web address: http://go.osu.edu/MGVlearn The Lunch and Learn occurs every Tuesday and Thursday from noon to 1:00 PM and the Happy Hour is Wednesdays from 4:00 to 5:00 PM.

VegNet

No news this week.

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BYGL

I did not include all of this week's articles in this newsletter. To see all of them go here: https://bygl.osu.edu/

Maple Cuisine

Authors
Jim Chatfield
Published on
June 4, 2020

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Delicious Autumn-olive (*Eleagnus angustifolia,* not a true olive) *pâte de fruit* that Cathy Herms made for our October ArborEatUm at Secrest Arboretum years ago. Brined white fringetree (*Chionanthus*, actually in the olive family) that Mark Hoenigman made for ArborEatUm last year. White pine tea served and dandelion greens written about by my students in Sustainable Landscape Maintenance this past semester. Vinaigretted elm fruits and goldenraintree shoots I enjoyed in China several years ago. The ethereally hued violet (*Viola*) jelly that my wife Laura made this May. Backyard edible landscaping is quite the *amuse-bouche* for the adventurous diner in any year, but perhaps especially now.

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Autumn-olive fruits make a nice fruit paste.

My host Ling Guo introduced me to perhaps the best landscape juice ever, from *Zizyphus jujube,* the Chinese date palm. You can grow it *Zizyphus* here. Check out Holden Arboretum.

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Which brings us to Cathy's classic line for her quite tart and tasty invasive Autumn-olive delicacy: "*Controlling invasives – one bite at a time."* Well, today's post is not of a non-native invasive, but rather of a native plant, which nevertheless has a weed (unwanted plant) context, certainly in the ChatScape. Laura has scooped up bushelfuls of red maple, silver maple, and "rilver" maple (silver & red hybrid) fruits ("helicopters, "keys", samaras) this year, valiantly attempting to forestall garden bed seedling maple trees.

Beaucoup maple fruits

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Of course, red maple fruits are a little cuter earlier, shown here from early May

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Other maple fruits are quite attractive as well, here are mid-May hedge maple (*Acer campestre*) fruits. Really look avionic here.

By this time of year, hedge maple fruits are a little less cute, and show the relationship to Norway maples, *Acer platanoides*, inasmuch as they both have horizontally oriented wings.

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Box elder maple (*Acer negundo*) fruits are quite attractive, and have more of the droopy-eared look.

And look at these Japanese maple fruits. Glorious!

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And the robust fruits of paperbark maple (*Acer griseum*). Wake up and see the maple (fruits)!

So, the inevitable Springtime of the Plague question: can we make use of these helicopters in some way? Hmm, what about the seeds inside? Can they be eaten? Are they in any way toxic? Onward to the references. Obviously we eat maple sap processed into syrup. Sap not toxic, but it turns out that dried red maple leaves and leaves of a few other maple species are quite toxic to horses, goats and other animals. Do not eat the leaves.

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Maple syrup from OSU School of Environment and Natural Resources students and the OSU-Mansfield maple trees in their experimental forest.

From maple fruits on the sidewalk...

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...To a peeled maple seed...

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...To the kitchen

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...To a tasty maple treat

But we could not find indications of maple seeds being poisonous, and a number of people do eat the seeds. So, Laura proceeded with caution and in moderation. Peeling off the papery parts of the fruit covering is quite laborious, so you may not be inclined to do it in usual springtimes, but it is certainly easier than trying to crack walnuts or hickory nuts with your bare fingers. With raw seeds there was not much flavor, although some report red maple seeds to have a sweet taste. But sautéed in olive oil with a little bit of salt, and you will have a nutty, pumpkin seed-like flavor that will soothe your foraging heart. The things you learn.

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And come October, we hope, the next edition of ArborEatUm. Featuring such delicacies as the edible landscape jams and jellies of Lois Rose.

Poison Hemlock and Wild Parsnip are Blooming in Southern Ohio

Authors
Joe Boggs
Published on
June 3, 2020

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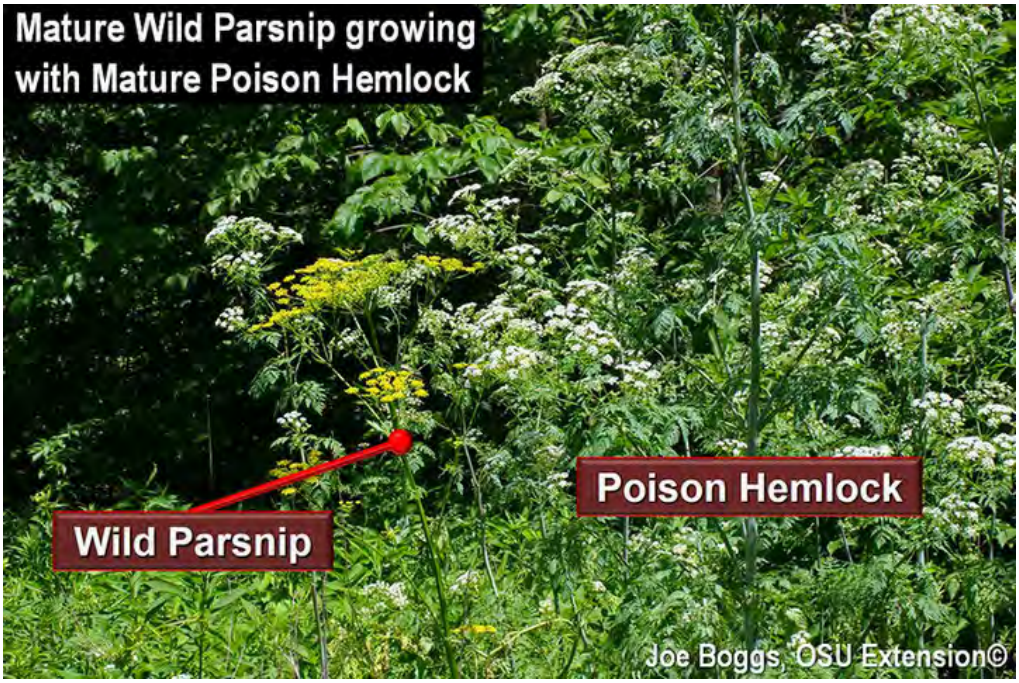

Poison hemlock (*Conium maculatum*) and wild parsnip (*Pastinaca sativa*) are two of our nastiest non-native weeds found in Ohio. Poison hemlock is one of the deadliest plants in North America. Wild parsnip can produce severe, painful blistering. Both are commonly found growing together.

Poison hemlock and wild parsnip are members of the carrot family, Apiaceae. The old name for the family was Umbelliferae which refers to the *umbel* flowers. They are a key family feature with short flower stalks rising from a common point like the ribs on an umbrella.

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Poison hemlock produces white flowers on stalks that create a more rounded look; perhaps a bit more like an umbrella. Wild parsnip has intense yellow flowers with the stalks producing a more flat-topped appearance.

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Both are biennial weeds meaning that it takes two years for plants to produce seed. The seeds currently being produced will give rise to plants that spend their first year as low-growing basal rosettes. The plants produce a long, thick taproot while in this stage.

During their second year, plants "bolt" by producing erect, towering stalks and multi-branched stems topped with umbel flowers. Mature wild parsnip plants may top 6' tall while poison hemlock plants can tower to as much as 8 - 10' tall. Both are prolific seed producers

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Wild parsnip plants have leaves that look vaguely like celery, another member of the carrot family. Mature plants have a single, thick, deeply grooved, greenish-yellow stem that sprouts lateral branches topped with flowers.

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All stages of poison hemlock plants have bluish-green leaves that are 3-4 times pinnately compound. The deeply cut parsley-like leaflets have sharp points. Flowering plants have hairless, light-green to bluish-green stems that are covered with obvious reddish-purple blotches. However, the blotches may occasionally coalesce to cause stems to appear an almost solid color.

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What are the Risks?

Poison hemlock plants contain highly toxic piperidine alkaloid compounds, including coniine and gamma-coniceine, which cause respiratory failure and death in mammals. The roots are more toxic than the leaves and stems; however, all parts of the plant including the seeds should be considered dangerous.

The **toxins must be ingested** or enter through the eyes or nasal passages to induce poisoning; **they do not cause skin rashes or blistering**. Regardless, this plant should not be handled because sap on the skin can be rubbed into the eyes or accidentally ingested while handling food.

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Wild parsnip sap contains psoralen which presents a completely different mode of action compared to the piperidine alkaloids in poison hemlock sap. Psoralen is a naturally occurring phytochemical grouped in a family of organic compounds known as linear furanocoumarins. Psoralen acts as a photosensitizing compound by inhibiting DNA synthesis in epidermal cells which kills these light-shielding cells responsible for protecting us from long-wave ultraviolet radiation (LWUVR) bombarding us in sunlight.

Severe blistering occurs when affected skin is exposed to LWUVR. The synergistic effect is called *phytophotodermatitis* (a.k.a. Berloque dermatitis) and the burn-like symptoms, as well as skin discoloration, may last for several months.

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However, connecting skin blistering to exposure to wild parsnip sap can be a challenge. It takes around 24 hours for symptoms to first appear *after exposure* to LWURV and severe blistering typically doesn't peak until 48 -72 hours. The time required for symptoms to appear after exposure to the sap means the effect may be disconnected from the cause.

Another challenge with connecting the dots is that wild parsnip commonly grows in and around other weeds, particularly poison hemlock (*Conium maculatum*). Gardeners who are exposed to wild parsnip sap while weeding a mixed-patch may mistakenly blame the poison hemlock for their ultimate misery.

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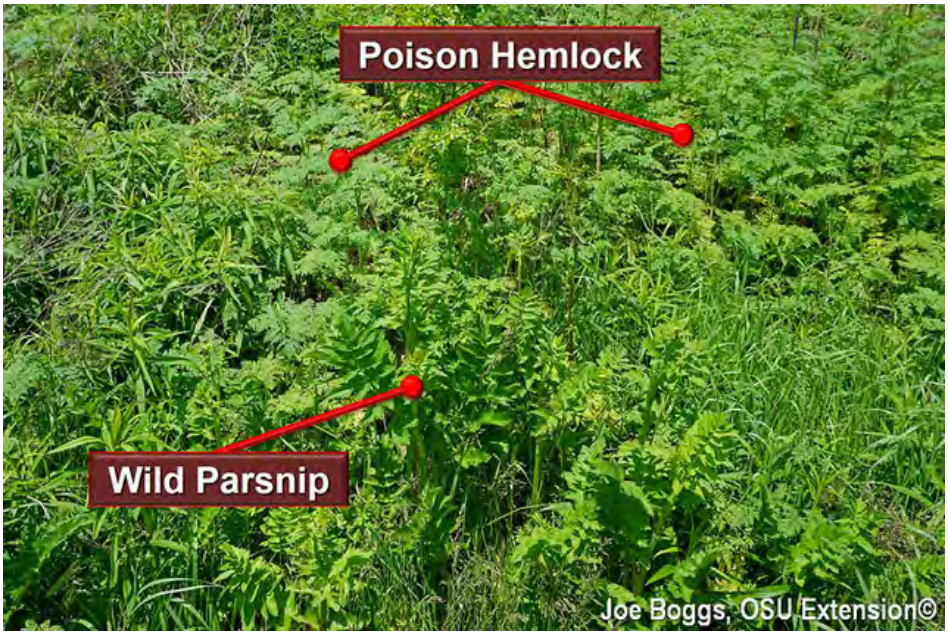

Psoralens are also found in a number of other members of the Apiaceae family including the notorious giant hogweed (*Heracleum mantegazzianum*) which has captured national attention in the past. However, giant hogweed has only been confirmed in Ohio growing in the extreme northeast part of the state primarily in and around Ashtabula County. Wild parsnip is found throughout the state and is equally damaging. Of course, giant hogweed has a more threatening sounding common name; wild parsnip just sounds like a vegetable gone wild; which it actually is!

To Mow, or Not to Mow

The potential for poisonings from poison hemlock sap and the extreme skin reaction to the wild parsnip sap means these non-native invasive weeds should not be allowed to grow where they can be easily contacted by people. However, mechanical control through mowing, weed trimming, or hand-pulling is problematic. Certainly, wild parsnip presents a much higher risk with reports of sap spattered by mowers and string trimmers producing phytophotodermatitis on exposed arms and legs of equipment operators.

Still, mowing provides one option for managing poison hemlock and to a lesser degree wild parsnip. However, **timing is everything**: plants should be mowed in the spring once they've bolted but prior to the appearance of flowers. Waiting until after flowering presents a risk the cut flowers will still mature to seed.

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I've watched a gas line right-of-way near my home being slowly converted to a poison hemlock (and teasel) right-of-way over the years because of poorly timed mowing. Each season for the past several years, the right-of-way has been mowed in late August or September.

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Of course, this is long after poison hemlock seed had been shed. Mowing at that time of the year failed to cut the low-growing first-season poison hemlock rosettes. What it did accomplish was to expose the rosettes to full sun for the winter and it eliminated plant competition with the poison hemlock flourishing when spring rolled around. It's also providing me with great poison hemlock photo ops!

Chemical Control: Case Study

A strong case can be made for herbicides providing the most effective and safest approach to managing both poison hemlock and wild parsnip. I've watched Kurt Goldick (Conservation and Parks Manager of Glenwood Gardens, Great Parks of Hamilton County (GPHC)) effectively reduce the populations of both of these risky weeds by making properly timed applications of selective post-emergent herbicides. In fact, the results of his efforts have been dramatic with both weeds, particularly wild parsnip, being removed from locations that presented a high risk to the visiting public.

Wild parsnip and poison hemlock are both susceptible to non-selective post-emergent herbicides such as glyphosate (e.g. Roundup). However, "non-selective" means all plants - both good and bad - may be killed and there is a considerable downside to killing the competition as well as the targeted weeds.

Post-emergent herbicides do not affect seeds. Thus, "herbicidal openings" that occur when all plants are killed provide the perfect opportunity for more wild parsnip and/or poison hemlock to spring forth from previously deposited seed. Thus, it's important to have a plan for establishing competitive plants after the wild parsnip dies off such as over-seeding with grasses.

However, Kurt has effectively combined using selective herbicides with the existence of various grasses already growing among the wild parsnip and poison hemlock to remove the risky weeds in favor of the grasses. I've included a number of images taken over the years showing this highly effective approach.

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Selective post-emergent herbicides that will preserve competitive plants, particularly grasses, while removing poison hemlock and wild parsnip include 2, 4-D, clorpyralid (e.g. Transline), metsulfuron (e.g. Escort XP), and

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some 2 and 3-way products such as Triamine (2,4-D + MCPA). However, timing is equally important. Kurt applied after the spring emergence of the targeted weeds but before flowering.

Sneaky Four-Line Plant Bugs are Finished for the Season

Authors
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Published on
June 3, 2020

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Four-Lined Plant Bugs (*Poecilocapsus lineatus*, family Hemiptera) are one of the sneakiest, quickest hitting spring pests found in Ohio. Hordes of hungry bugs descend seemingly out of nowhere to cause extensive leaf damage, then they just fade away leaving behind their foliar wreckage.

The native plant bugs have one generation per season and their development from eggs to adults occurs over just a few weeks in the spring. Winter is spent as eggs deposited in vertical slits around 2 – 3" long created by the females in their host plant stems.

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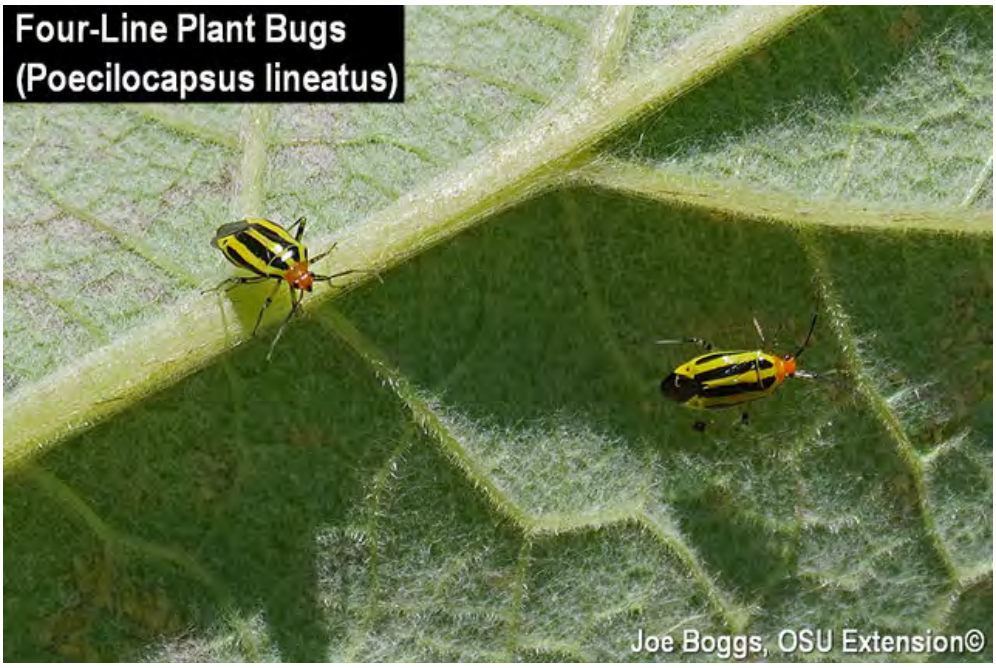
Both the adults and nymphs are heavy feeders. However, the nymphs produce the most significant damage because they feed over a longer period as they develop through five instar stages. The bugs are finished with their development for the season in Southwest Ohio; however, they are no doubt still wreaking havoc in the northern part of the state.



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Like many plant-feeding hemipterans, the bugs inject enzymes into the plant to cause cells to collapse. They then feed on the resulting "cell slurry." The damage appears as small, round, black sunken spots that may coalesce into extensive blackened areas on infested leaves. The symptoms are commonly mistaken for a plant leaf disease.

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This sucking insect feeds on over 250 plant species including woody ornamentals and herbaceous perennials. They have a particular affinity for herbs, especially members of the mint family (Lamiaceae), and high populations can produce significant plant injury. The bugs can also damage many annual vegetables; however, we seldom see significant injury in Ohio because the bugs are gone by the time plants in vegetable gardens truly get up and running.

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One of the most effective management options in perennial herb gardens as well as landscape plantings of annuals and perennials is to closely inspect plants for oviposition scars later this season. Stems that show oviposition scars should be cut and destroyed to eliminate eggs.

Weed management is another important step in reducing localized four-lined plant bug populations. For example, I consistently see some of the heaviest damage on Teasel (*Dipsacus* spp.). The preference for these non-native weeds is so strong; I use the teasels to monitor localized four-lined plant bug population densities. Mowing to destroy teasel or other weeds showing feeding symptoms will eliminate them as repositories of bug eggs that will hatch next season.

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Don't Be Fooled by Dame's Rocket

Authors
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Published on
June 3, 2020

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If you traveled at all over the past week – even for a quick drive out of town or around the county – you likely saw pockets of beautiful purple and white blooms along woodlots, roadsides, water edges, and disturbed areas. You may have even exclaimed – the “phlox are out!” So beautiful!

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Alas, the plant that is flowering profusely right now is Dame's rocket. These flowers have fooled a many folk before from a distance, including myself. Dame's rocket (*Hesperis matronalis*) resembles phlox in height and color but is in a different plant family entirely, the Mustard family (Brassicaceae) while Phlox is in the Phlox family (Polemoniaceae). Perhaps the most distinguishing difference between the two is that Dame's rocket has four petals, while phlox has five.

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*Inflorescence of **Hesperis matronalis** with individual flowers having four petals, a characteristic of plants in the Mustard family.*

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Dame's rocket flowers varying in color from milky white to violet and shades in between.

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*In contrast, this **Phlox paniculata** hybrid has five petals per flower on each inflorescence.*

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*The woodland wildflower **Phlox divaricata** also features five petals per flower.*

While beautiful, dame's rocket does have an invasive nature as evidenced by the prolific pockets of plants readily seen this time of year. *Hesperis* is an introduced plant to the US and can now be found in nearly every state, officially making the noxious weed lists in Colorado, Connecticut, and Massachusetts (PlANTS database.) While it is not on Ohio's Noxious weed list, it does have a place on ODA's Invasive Plants list along with 37 other plants that cannot be sold, propagated, distributed, imported or disseminated within the state.

Don't be fooled by the beauty of Dame's rocket. This plant will not make a great addition to Ohio cutting or perennial gardens. It's best to rogue any resident plants out now and in the future.

Why Are My Trees Blowing Bubbles?

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Published on
June 2, 2020

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After some hard rains this past week, I received a call from a very concerned citizen, wanting to know if their tree was in trouble. The citizen was frightened that this had happened and didn't want to lose the trees, because there was a pile of soap bubbles coming from the base! My first thought and initial response was… YOU CANNOT BE SERIOUS ABOUT TREES BLOWING BUBBLES?? Of course, the only thing I could do was ask if they could send me pictures to see what was going on with the tree!

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Soapsuds bubbles at tree base

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I was sent photos and sure enough there appeared to be a pile of soap bubbles at the base of the tree! Diagnostically, I started trying to tease apart what could have possibly happened because trees just do not go around blowing bubbles. I know this for certain because plants cannot generate enough air pressure to create a bubble! I then asked about possible soap contamination, like washing cars or detergent spills or even grandkids playing with bubble solution and… no such luck. In fact, they were quite adamant that no soap or soap-based products were ever near that area or the tree. So back to the drawing board and time to do some research on possibilities.

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Those appear to be soap bubbles...

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What I found out about rain, trees and bubbles, was simply fascinating! As it turns out, bubbles piling up at the base of trees, especially after heavy rains, is somewhat commonplace. During dry periods, there is an accumulation of salts, plant chemicals and other particulates from the air that coat the bark surface. Soap is essentially a collection of salts and acids. Think of it like you have all ingredients ready and waiting for making a crude, albeit very simple 'au natural' soap solution. Everything is ready and waiting for the final ingredient—rainwater.

As rainwater trickles down the tree stem or trunk (called stemflow), it collects deposited dust particles (i.e. salts) and plant residues (i.e. acids) that have accumulated on the bark surfaces. Bubbles are formed through the process of "stemflow mixing". As this dissolved, simple soap solution flows down the trunk, it encounters barriers and bumps, like bark plates, furrows, and ridges. The solution is then tumbled, mixed and aerified, during its downward flow to the ground, generating the bubbles or soapsuds, which collect at the tree base. Occasionally, a light coating of foam may even be visible higher up on the tree trunk. Stemflow mixing has no known deleterious effect on tree health.

Tree suds can happen in all types of trees and has been observed occurring in all continents where trees grow. There is absolutely no need for worry, if foam forms on your trees during or after heavy rains. In fact, it is an awesome natural phenomenon, so just sit back, relax, enjoy the rain and the bubbles!

Buckeye Leafmining Fly is "Unknown" No Longer

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Published on
June 1, 2020

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I've posted a number of BYGL reports over the past several years of a leafminer on wild buckeyes (*Aesculus* spp.). I first ran across the leafminer in a park near my home in Butler County, OH. However, the culprit was unknown; it had never been classified by science. The leafmines contained maggots, so I referred to the leafminer as an "unidentified fly" that most likely belongs to the dipteran family Agromyzidae (leafmining flies).

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That changed with a paper published in the journal Zootaxa in which this leafmining agromizid fly, along with 11 others, was described and given scientific names. Our previously unknown leafminer is *Phytomyza aesculi* [cue the trumpets!]. It's nice to finally know ya.

Knowing the taxonomy of an insect allows comparisons with other closely related insects which can provide clues to behaviors and life cycles. For example, there are around 400 described species belonging to the genus *Phytomyza* including the holly leafminers in the so-called *P. ilicis* species group.

Thus far, I've only found *P. aesculi* on wild buckeyes. I've never observed it on buckeyes in landscapes or on horsechestnuts. The Entomological Society of American has not yet assigned a common name to the new scientific name, so as with past BYGL Alerts on this leafminer, I will continue to call it the "buckeye leafmining fly."

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Like the holly leafminers, the buckeye leafmining fly females appear to use their sharp ovipositors to pierce the upper leaf surface so they can feed on the exuding sap. Of course, they also use their ovipositors (ovi = egg) to insert eggs between the upper and lower leaf surfaces.

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Once the eggs hatch, the resulting early instar buckeye leafmining fly maggots produce snaking (serpentine) leaf mines. As the maggots mature, the mines become wider; sometimes ballooning into blotch mines. Leaves may be infested with only a single maggot that produces a meandering leafmine, or several maggots that produce coalescing leafmines.

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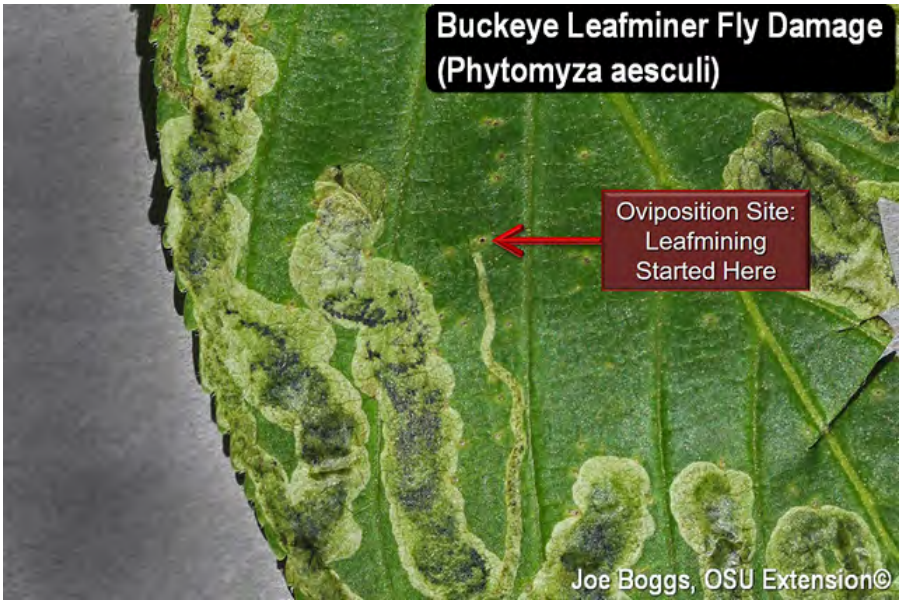

Although I've seen heavy leafmining damage on small buckeyes, populations appear to rise and fall dramatically from year-to-year. I've never seen repeat damage over multiple years meaning that trees probably have time to recover after an outbreak.

Other Articles

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Improve the Growth and Maybe the Flavor of Tomatoes with This Trick

MEGHAN SHINN

MAY 27, 2020

A favorite dish for everyone at my house is pasta with cherry tomatoes and basil. My kids love the taste. I love that they're eating a healthy dinner—and that it's super easy and quick to make. Just slice a couple pints of cherry tomatoes in half and sauté them in olive oil, a teaspoon or so of minced garlic and about two handfuls of fresh basil leaves, chopped. Meanwhile, prepare pasta—we usually opt for thin spaghetti. Then toss it all together and serve.

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We know that tomatoes and basil are fine companions in recipes like this one, but it turns out they're also a great pair in the garden. Basil is purported to repel insects that might otherwise feast on your tomato plants (and basil also reportedly repels mosquitoes) and to prevent fungal infections. Gardeners also attest that growing basil near tomatoes improves the flavor of the fruits. Studies have also shown that tomato plants grown alongside basil field more fruit.

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Tomato and basil plants share the same growing requirements. Both are native to tropical regions, so they prefer warm temperatures and steady moisture. Both need full sun. Keep this in mind when siting your basil plants, which are sure to be shorter than your tomatoes and therefore at risk of standing in their shade. Keeping the basil to the south or west side of the tomatoes (in the Northern Hemisphere) may afford them the longest stretch of sunlight. One other caveat: Avoid feeding your basil with high-nitrogen fertilizer in hopes of spurring strong leaf growth. You will be successful, but a nearby tomato plant may also produce lots of leafy growth—and no flowers or fruit.

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