

OSU Extension - Auglaize County Weekly Horticulture Newsletter – 7-10-20

Why are the bottoms of my tomatoes black?



Tomatoes are beginning to ripen for some. I want to talk about a problem that will likely occur on tomatoes due to the inconsistent rainfall patterns of late. If the bottom or flower end of a tomato has a water-soaked appearance followed by a sunken area turning black, then the fruit has what is called blossom end rot. The lesions may also occur on the sides of the fruit near the flower end of the tomato. In addition to tomato, pepper, eggplant, melon, squash, and cucumber can also get blossom end rot.

Blossom end rot is not a disease, it is a physiological disorder caused by an insufficient amount of calcium in the developing fruit. This insufficient amount of calcium can be a function of not enough water. It looks like a disease because the injured area of the fruit is colonized by secondary pathogens. Even though multiple fruits may have blossom end rot, it will NOT spread to other fruits like a typical disease.

Is there anything that can be done once you notice the injured fruits? There really is nothing that can be done to solve the problem, unless you catch it very early in the water-soaked lesion stage on the first fruits. At this stage calcium chloride or calcium nitrate can be applied to the foliage. This application usually does not help because the lack of sufficient calcium is usually transient.

The best thing to do is to take precautions to reduce the chance of having the problem in the future. The most important thing to do is to determine if the soil is deficient in calcium, which is not likely the case in our area. The only way to know this is to take a soil test. If soil pH is below 5.5, calcium is less available to the plant and applying lime in the fall and incorporating it deeply will raise the pH to allow more calcium to be available and add additional calcium to the soil.

The biggest reason for blossom end rot to occur is a lack of sufficient water and hot temperatures for several days. This is caused by wide fluctuations of moisture levels to the plant. Ways to correct this in future years include having an extensive root system. The way to do this is to transplant the plants deeply in the soil and allow the soil to be dry to encourage deeper root growth prior to plants flowering. Be careful when weeding to not destroy roots while hoeing.

As plants are growing before flowering add mulch to the soil to allow the soil to hold moisture for a longer period of time and reduce soil temperatures.

Another reason for blossom end rot is excessive nitrogen in the soil. The ammonia form of nitrogen competes for the uptake of calcium, reducing the amount getting into the plant. To solve this, reduce the amount of ammonia forms of nitrogen to reduce excessive growth.

Enjoy your tomato crop this season.

Local Observations



Last patch of purple green beans



Acorn squash with soaker hose



Carrots



Green peppers



Muskmelon



Moon and stars watermelon



Hens and Chicks



Castor bean



Roses



Gladiolus



Garden phlox



Spotted deadnettle or Purple dragon



Verbena



Hostas in bloom

Good evening! I pray you are well!

It is very dry in most of the county, especially near New Knoxville! We received rainfall **5** days this past week somewhere in the county! Rainfall for Saturday, July 4th ranged from 0" at 13 locations to 0.5" near Sommers and Minster-Ft. Recovery roads. Rainfall for Monday ranged from 0" at 13 locations to 1.46" near Feikert and St. Rt. 385 roads. Rainfall on Tuesday ranged from 0" at 17 locations to 0.25 near Idle and Valley roads. Rainfall on Wednesday ranged from 0" at 13 locations to 1.55" near Kossuth. Rainfall on Thursday ranged from 0" at 6 locations to 1.6" near Buckland-Holden and St. Rt. 501 roads. Rainfall for the week ranged from 0" near Glynwood and Townline-Kossuth and near Kettlersville and Santa Fe-New Knoxville roads to 2.3" near Buckland-Holden and St. Rt. 501 roads. The average rainfall for the week was 0.61, 0.26" more than last week. There is a 40% to 55% chance of rain Saturday, Sunday, and Wednesday, otherwise a very low chance of rain.

A HOT week! The average high temperature now is 84 degrees F, the same as last week. Therefore we have reached the summer high temperature now. Temperatures were above normal for **7** days and below normal for **0** days this past week. Temperatures ranged from 88 degrees F to 93 degrees F for the week. The average high temperature for the week was 90.7 degrees F which is 5.7 degrees F warmer than last week and 6.7 degree F warmer than the historical average high. Temperatures will be slightly above and slightly below normal for the week!

Vegetables, flowers, and trees in many parts of the county are very dry now!! I have continued to water the garden this week, watering the squash 3 times. With the added water and the high temperatures all species in the garden grew very well, especially the vine crops and sweet potatoes. I harvested the green beans only once this week. Still been harvesting lettuce and spinach. I still need to get the squash treated for squash vine borer.

Flowers are looking spectacular with new species starting to flower all the time.

Issues brought to my attention this week include trees with rotting wood, trees dying from mulch placed too high on the trunk, magnolia scale, identification of lichens on a tree which does not harm it, trees prematurely dropping leaves from dry weather, trees with herbicide damage due to spraying too close to the trunk, tip blight of cedars, identification of Asiatic dayflower, identification of Rhizosphaera on spruce trees, and guignardia leaf blotch on horse chestnut.

Weekly Weed Photos



Hemp dogbane



Eastern black nightshade



Marestalk or horseweed



Redroot pigweed

Special OSU Horticulture Meetings

Horticulture Lunch and Learn and Horticulture Happy Hour

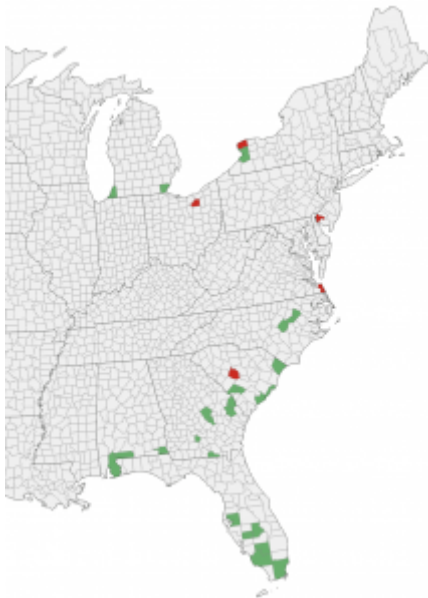
During this period of COVID-19 OSU Extension is offering a Horticulture Lunch and Learn Program and a Horticulture Happy Hour Program. If you are interested, visit the following web address: <http://go.osu.edu/MGVlearn> The Lunch and Learn occurs every Tuesday and Thursday from noon to 1:00 PM and the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

VegNet

Cucumber Downy Mildew Confirmed in Medina County, OH

July 8²⁰²⁰

Share



2020 cucurbit downy mildew outbreaks as of July 8. cdm.ipmpipe.org

Downy mildew was confirmed today in a 3 acre cucumber field in Medina County, OH. Given the outbreaks reported in Michigan in June and an outbreak confirmed in Kent County, Ontario this week, this was expected. Although recent weather has been hot and dry, there have been localized intermittent rainstorms that favor downy mildew spread, and nighttime temperatures are usually cool enough for infection.

Growers in northern Ohio should protect cucumbers and melons with fungicides. Recommendations can be found [here](#).

Thanks to Frank Becker, OSU Extension Wayne County IPM Program Coordinator, for bringing us the sample.

Wayne County IPM Notes from 6-28 to 7-4

July 7²⁰²⁰

Share



ECB damage to sweet corn tassel. F. Becker photo.

European Corn Borer has been doing damage in tasseling corn. The small ECB larva feed in the tassels as well as the developing ears. It is important to thoroughly inspect the plants as you are scouting, especially with early season corn as their damage will not always be detected in the tassel like in later planted sweet corn. The ECB moth traps were high again this week, which is consistent with the amount of damage being done in early planted sweet corn.

Japanese Beetles are also starting to increase in number. They are a pest on most any crop. They can be especially damaging to sweet corn. The beetles can defoliate the leaves, but they can also clip the silks which can prevent proper pollination from occurring.

Worm feeding on cole crops has really started to pick up. I am finding a lot of imported cabbageworms doing damage on all ages of cole crops such as cabbage and kale. The adult butterflies can be seen in large numbers in cole crop plantings laying eggs on the plants. Read more [here](#) on pests of crucifers. I saw an uptick in the

population of the [flea beetle](#) as well. Keep in mind that especially on younger plants, the flea beetles can cause a lot of damage and may stunt the plant.



Imported Cabbageworm larva on cabbage. F. Becker photo.

This hot and dry weather has been perfect weather for onion thrips. The thrips population has been high already in some areas, so this weather is favorable for large populations of thrips to develop. The thrips feeding can open the plant up to diseases such as purple blotch, so early detection and management are crucial to maintaining the health of the plant.

Vegetable Diseases

Downy Mildew has been confirmed, again, in southern Michigan. Considering the proximity to Ohio, it has been recommended that cucumber growers begin a downy mildew fungicide program immediately. [“Managing Downy Mildew in Cucurbits”](#)

[Powdery mildew](#) is starting to show up on cucurbit crops around the state. I have not yet had any cases in Wayne County, but this disease should be watched for closely.

Some of the field peppers I am scouting showed signs of damping off. Damping off is caused by soil borne fungi such as Rhizoctonia, Pythium, Fusarium and Phytophthora.

Angular leaf spot has started to show up on some cucurbit crops, however, the hot and dry weather has helped slow it down or stop its progression altogether. Angular leaf spot is a bacterial disease, meaning that fungicides are not effective for management of this disease.

Fruit Pests



SWD female with a serrated ovipositor. F. Becker photo.

[Spotted Wing Drosophila](#) are here. All the traps out in Wayne County were positive for SWD. These traps are out in blueberry and strawberry patches. Strawberries are winding down, but blueberries and raspberries getting ripe should be managed accordingly.

Codling Moth and Oriental Fruit Moth trap counts were down this week. Another week with our traps not over threshold.

Keep an eye out for aphids and mites in orchard crops. We are getting into the time of year where aphid and mite populations begin to increase and can do so rapidly. Leafhoppers are also a pest to be on the look out for, especially in grapes. More on [Spider Mites](#)

Fruit Diseases

It is the right time to consider looking at managing summer diseases such as flyspeck, sooty blotch, and fruit rots. This can go for peaches as well with diseases such as [brown rot](#) and scab.



Peach “mummy” still present in a tree this spring. F Becker photo.

[Necrotic leaf blotch](#) and *Alternaria* leaf blotch can be found on some apple trees right now. *Alternaria* leaf blotch can be made worse by red mite infestations. With high populations of mites and the leaf blotch, severe defoliation can occur. More on foliar apple diseases: [Leaf Spots](#)

Another note on apples, although not a disease, the effect of freeze/cold damage can appear unsightly and may be confused for a disease. This scabby looking ring or spots on the fruit are known as “frost rings”. This is a result of the tissues being damaged in cold or freezing temperatures.

Grapes are now around the “shatter” stage where the unfertilized berries fall off the clusters. It is important to be considering proactive treatments for grape downy mildew especially if you have a variety of grapes that are susceptible to downy mildew.

Water Needs and Supplies, and Delivered during Typical Drip Irrigation Events

July 4²⁰²⁰

Share1

Warm, dry weather can lessen some production challenges, but it clearly increases the need to irrigate. Not surprisingly, growers are currently working overtime to meet crop water demands. Some forecasts call for high water demand conditions to continue, important because many crops are entering particularly “thirsty” stages uniquely sensitive to water deficits. Therefore, as one step in overall crop water management, consider taking stock of how much water is delivered during typical irrigation events. Doing so helps compare water supplies to expected irrigation demands and prioritize irrigation across plantings if rationing becomes necessary, in addition to providing other benefits. Of course, in the big picture, crops differ in their sensitivity to even temporary periods of sub-optimal soil moisture. Just as relevant, the production cycle for each crop includes stages in which sub-optimal soil moisture has a greater or lesser impact on yield and quality. The June 28, 2016 VegNet article (https://vegnet.osu.edu/sites/vegnet/files/imce/newsletters/VegNet/6-28-16%20VegNet%20Vol%2023%20Issue%2011_0.pdf) outlined this issue briefly for cabbage. In addition to the yield and head size differences shown there, laboratory and taste panel tests revealed: (a) that irrigation program (timing) influenced cabbage flesh chemical properties and (b) that panelists could differentiate cabbage samples from different treatments by taste.

Installing and recording information provided by a flow meter is a simple, relatively inexpensive, and, importantly, direct method of measuring system flow. Using charts, tables, and other references such as the one below also helps. They remind us that irrigation system factors, especially bed or row spacing and emitter flow rate, typically set the baseline system flow rate, although actual flow rate is impacted by leaks and plugs. Leaks, plugs, etc are another reason to both include a meter in the line and check the system frequently. Ultimately, keeping and reviewing irrigation and crop records can be useful in optimizing irrigation practices as a major step in maximizing yield and quality.

TABLE 5.20. VOLUME OF WATER (GAL WATER PER ACRE PER MINUTE) DELIVERED UNDER VARIOUS BED SPACINGS WITH ONE TAPE LATERAL PER BED AND FOR SEVERAL EMITTER FLOW RATES

Bed Spacing (m.)	Drip Tape per Acre (ft)	Emitter Flow Rate (gal per min per 100 ft)			
		0.50	0.40	0.30	0.25
		(gal per acre/min)			
24	21,780	108.9	87.1	65.3	54.5
30	17,420	87.1	69.7	52.3	43.6
36	14,520	72.6	58.1	43.6	36.6
42	12,450	62.2	49.8	37.3	31.1
48	10,890	54.5	43.6	32.7	27.2
54	9,690	48.4	38.7	29.0	24.2
60	8,710	43.6	34.9	26.1	21.8
72	7,260	36.3	29.0	21.8	18.2
84	6,220	31.1	24.9	18.7	15.6
96	5,450	27.2	21.8	16.3	13.6
108	4,840	24.2	19.4	14.5	12.1
120	4,380	21.8	17.4	13.1	10.9

Source: Knott's Handbook for Vegetable Growers (5th ed.; D.N. Maynard and G.J. Hockmuth)

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/>

First Generation Redbud Leafroller

Authors

Joe Boggs

Published on

July 10, 2020



The unusual damage caused by the native redbud leaffolder (*Fascista cercerisella*, family Gelechiidae) on its namesake host (*Cercis canadensis*) is becoming evident in southwest Ohio as caterpillars develop through the first generation. Thus far, populations appear to be sporadic and highly localized. However, population densities and distribution may change with the appearances of the second and third generations.

The nest-making caterpillars are commonly found on wild eastern redbuds but infestations tend to be light and irregularly distributed throughout the canopy. I've never seen appreciable damage. However, I have commonly observed obvious, damaging populations on weeping redbuds. Whether this is due to host preference or simply because the vertical orientation of the leaves makes the damage more obvious is an open question. I'm not aware of any host preference studies for this native moth. Regardless, it's important to closely monitor the weepers.



The caterpillars use silk stitching to produce two types of nests. Leaf edges may be folded over to produce nests that conform to the "leaffolder" common name that's approved by the Entomological Society of America.

**Two Types of Redbud
"Leaffolder" Nests**



Joe Boggs, OSU Extension©

Redbud Leaffolder Symptom



Joe Boggs, OSU Extension©

Leaffold with Silk Stitching



However, the nonconformist caterpillars also make nests like a "leaftier" by stitching together neighboring leaves. In fact, various online resources may inaccurately refer to the caterpillars as the redbud leaftier.

"Leaftier-Like" Nests



**Redbud Leaffolder
"Leaftier-Like" Symptom**



Joe Boggs, OSU Extension©

The caterpillars reside in heavy silk tubes within both types of nests. They partially emerge out of their tubes to feed as skeletonizers, consuming the upper and lower leaf surfaces. The affected areas turn orangish-brown which sharply contrasts with the normal dark green color of the foliage.

**Redbud Leaffolder
Silk Tube**



Joe Boggs, OSU Extension©

Early instar caterpillars are cream-colored and have no discernible markings. As the caterpillars mature, markings begin to develop with alternating segments darkening to produce a striking appearance of black and light-green bands running the length of the body. They resemble tiny banded sea kraits (snakes). When disturbed, the caterpillars wiggle back and forth violently further enhancing their tiny snake impersonation. They have great entertainment value!





Like fall webworms (*Hyphantria cunea*), the velvety black female leaffolder moths tend to lay their eggs on or near the leaves from which they developed. So, the nests are expanded with each successive generation. The tree generations also overlap meaning that it's common to find both early and late instar caterpillars in the same nest.



Populations tend to build with each generation meaning that the most significant damage occurs late in the season. The moth spends the winter as pupae in debris and fallen leaves beneath infested trees.

The leaffolder seldom causes enough damage to redbuds in landscapes to significantly affect the overall health of infested trees. Of course, heavy leaffolder activity can affect tree aesthetics.

However, using insecticides to manage this leaffolder is problematic. The protection provided by folded or tied leaves place the caterpillars out of the reach of topical insecticides. I could find no data on the efficacy or application timing of systemic insecticides.

Where practical, populations can be reduced by pinching nests to kill caterpillars. Raking and destroying fallen leaves will also reduce localized numbers by eliminating overwintering moth pupae.

Sycamore Anthracnose Redux

Authors

Jim Chatfield

Published on

July 9, 2020



Jim Chatfield, OSUE

In most years, cool wet weather during leaf emergence of sycamore (American planetree) in May, combined with the sycamore anthracnose fungal pathogen, results in trees that look dead and dying, as young leaves are killed aborning in the bud. Sadness ensues, but patience is a virtue in this case.



The seeming devastation from sycamore anthracnose from earlier infections, seen here on June 1.



The sycamore in question is a storied one, at the College of Wooster in northeast Ohio.



Very few expanded leaves were present on June 1.

As the season progresses alternate leaf buds burst forth, the cool weather abates, the new leaves are thicker and less susceptible to infection, and the tree refoliates. This year I took pictures of the iconic sycamore on the storied College of Wooster campus in early June and again last week in early July, As per usual, all is now well.



Recovery of sycamore from sycamore anthracnose at the College of Wooster by July 2



Jim Chatfield, OSUE

Symptoms of sycamore anthracnose on a mature, expanded leaf.



Jim Chatfield, OSUE

From beneath the spreading sycamore tree at the College of Wooster...

Under The Sycamore Tree

*Under the sycamore tree let us meet;
shelter a while from the afternoon heat.
Others make haste but we'll make our retreat
under the sycamore tree...*

- Nick Baker.

Midge Fly Galls on Baldcypress

Authors

Joe Boggs

Published on

July 8, 2020



First-generation galls produced by the midge fly, *Taxodiomyia cupressiananassa* (family Cecidomyiidae) are nearing maturity and are very apparent on baldcypress in southwest Ohio. The spongy, snow-white galls occur on baldcypress (*Taxodium distichum*) where heavy galling may occur year-after-year on highly susceptible trees. The literature notes that galls may also arise to a lesser degree on pond cypress (*T. ascendens*); however, I've never observed that in Ohio.

The gall-making fly has no approved common name by the Entomological Society of America. Online references often use the name "cypress twig gall midge" which is not accurate. The galls do not arise from "twigs;" they arise from the base of leaflets. Indeed, needles extend through the galls to protrude beyond the gall surface and a portion of new leaf growth usually extends beyond the tips of the galls.



This is an odd-ball gall. Unlike most gall-makers, this midge fly has two gall-making generations per season in Ohio. This means trees that are heavily galled now will be even more heavily infested later this season.

The galls appear white due to a covering of fine, powdery material. Rubbing the powder off reveals the gall's true light green color. Old "mature" galls become shriveled and turn purplish-brown.

Cypress Twig Gall (Midge Fly)



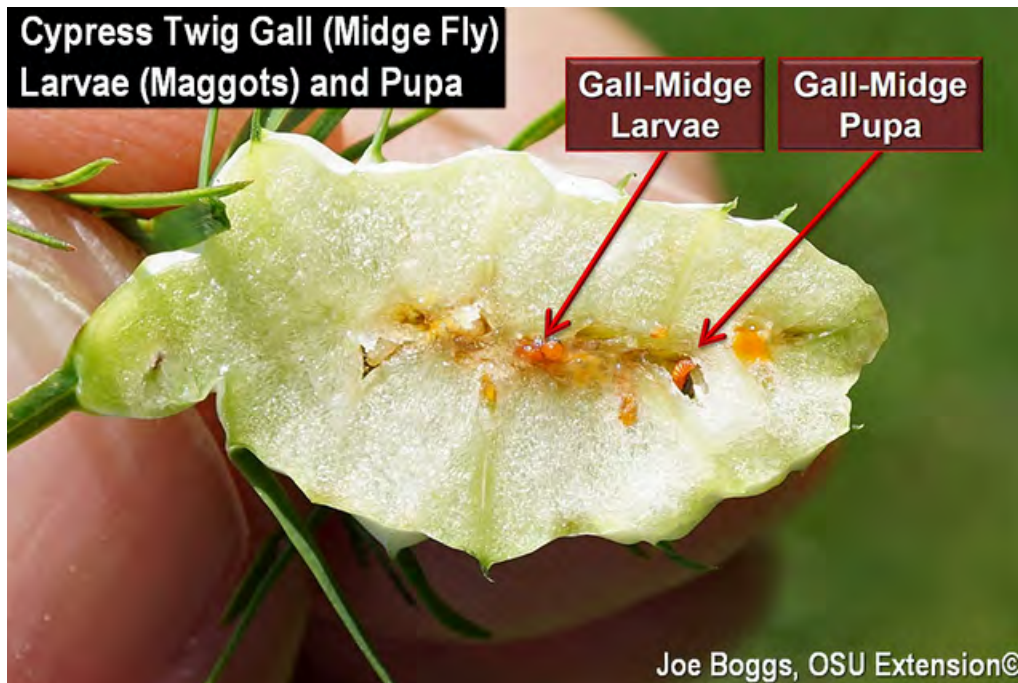
Joe Boggs, OSU Extension©

Cypress Twig Gall (Midge Fly)
White "Powder" Removed



Joe Boggs, OSU Extension©

Slicing open the spongy galls will reveal multiple larval chambers with each chamber containing a single tiny, midge fly larva (maggot). Early instar larvae are cream-colored but turn orangish-yellow to bright orange as they mature. The size of the gall depends on the number of maggots that are housed within.



The midge flies spend the winter as larvae inside galls on the ground that have detached from the trees in the fall. The immature flies pupate in the spring with adults emerging to fly to the newly expanding leaf buds where they lay eggs to initiate gall formation. Larvae in the resulting first-generation galls pupate within galls that remain attached to the tree. Pupae are beginning to form in these first-generation galls meaning adults will appear in around 1 – 2 weeks to initiate the second generation galls.

As with the vast majority of plant galls, cypress twig galls appear to cause no appreciable harm to the overall health of their tree hosts. However, their snow-white appearance against the dark green foliage of baldcypress makes them very noticeable. Also, the foliage extending from the tips of the galls may turn brown further reducing a tree's aesthetic appeal.



Adding to the challenge, it appears the genetics of some trees makes them very susceptible to gall formation. It's common for one baldcypress tree to be heavily galled year-after-year while nearby trees remain free of galls.



The cypress twig gall midge has several natural enemies including parasitoid wasps that target the eggs or the larvae. There are also a few predators that may feed on the larvae. Unfortunately, natural enemies appear incapable of significantly reducing galls on highly susceptible trees.

There are no effective chemical control recommendations to suppress this midge fly gall-maker. Pruning and destroying newly forming galls right now may be helpful in reducing populations on small trees. However, heavy galling indicates the tree is highly susceptible to the handiwork of the cypress twig gall midge fly. Ultimately, knees won't be the only thing that stands out on the tree.

Entwined by Vines

AuthorsAshley Kulhanek**Published on**

July 7, 2020



Ashley Kulhanek, OSU Extension

Got vines? I sure do... take virtual tour through the grape vine, Virginia creeper, and poison ivy vines hanging around my yard.

WILD GRAPE VINE (*Vitis* spp.)



Ashley Kulhanek, OSU Extension

Wild Grape (*Vitis* spp.) can be desirable or undesirable depending on where it pops up. It is a native that can provide food for birds and insects. The vines can grow as long as 15 meters and beyond. Vines often grow up tree trunks and eventually out across the tops of tree canopies, shading out the trees' own leaves. As trees and vines mature, they can cause girdling of tree trunks as well.

There are several species of wild grape that favor different habitats. Wild grape seeds requires full sun to germinate. This specimen started growing when an Ash tree was cut down and the area became fully exposed all day. So keep an eye out in areas where landscaping and sun exposure may change in your yard. Many "new" weeds that may have been shaded out could start appearing!

Leaves are broad and slightly heart-shaped with toothed edges and 3 short lobes.



The vines have forked tendrils that help it grab onto structures and other plants.



These tendrils can coil and wrap around fencing, small branches, stems, and other objects to climb and grip.



As the vine matures, the vine becomes dark brown, woody and flaky. These vines are often used in crafts and wreaths. Fruit is edible though they are not table grapes. Flavor varies from tart to sweet and contain seeds, unlike your grocery produce.



Public Domain, Pixabay.com



Ashley Kulhanek, OSU Extension

This vine was removed by pruning and pulling. Once the vine is cut, you may find you can pull multiple feet of the vine away from your landscape. There are also multiple herbicides labeled for woody vines that are available for tough areas. Broadleaf herbicides can impact off-target plants as well, so use caution, especially if the vine is attached to a tree.

NEXT! VIRGINIA CREEPER (*Parthenocissus quinquefolia*)



Virginia Creeper (*Parthenocissus quinquefolia*) is another native vine that can be found in our landscape. It is a member of the grape family (vitaceae). This woody deciduous vine has palmately compound leaves with 5 toothed leaflets. Leaves may vary with leaflets ranging from 3 to 7. They may look slightly akin to our BUCKEYE tree leaf.



Virginia creeper is also a strong grower like grape, reaching tree canopies and shading out other leaf canopies. It can grow prostrate as a ground cover or up onto trees, other plants, walls and structures.



Ashley Kulhanek, OSU Extension

Virginia creeper tendrils have adhesive suction cups that fasten them to surfaces. These suction cups are a useful ID feature when distinguishing Virginia creeper from other vines in winter.



Virginia creeper has extraordinary fall color showing bright red to maroon. Unlike wild grape, the bluish-black berries of Virginia creeper are toxic to humans but are a beloved favorite of birds and wildlife.



Public Domain, Pixabay.com



Public Domain

Virginia creeper is often confused for poison ivy, which also has a compound leaf and bright fall colors. See below for more.

POISON IVY VINE (*Toxicodendron radicans*)

Vining poison ivy is another perennial woody, native vine found in Ohio woodland landscapes. It is a member of the CASHEW family (Anacardiaceae).



Ashley Kumanek, OSU Extension

Poison Ivy can be difficult to identify. While the adage, "leaves of 3, let it be" is a great first tip, its appearance can still vary significantly from plant-to-plant and as it grows. Poison ivy indeed has compound leaves with 3 leaflets that arise alternately on the plant stems or vines. A "typical" poison ivy leaf can be described as having two mitten-shaped leaflets on the left and right, and a central, terminal leaflet on an extended petiolule (leaflet

stem). The terminal leaflet may appear to have two thumbs or small lobes. I outlined this general shape below. Leaves are often shiny in appearance, especially when younger.

But keep in mind that nature never reads the handbook! Poison ivy is deceitful and leaflets can vary in shape significantly with margins being toothed, lobed, or entire. It is often found in moist forested habitat but can show up in pastures, roadsides, and ornamental plantings. It can grow as a ground cover, shrub, or a vine as shown here and spread by both seed and root. And as mentioned earlier, is often confused with other vines, as well as young boxelder trees! So use caution around those leaves of three.





Note that below the poison ivy outline is a leaf of Virginia Creeper with the 5 leaflets.

Another great way to help identify poison ivy as a vine is the distinctly hairy vine itself. Poison ivy attaches via "aerial rootlets" that grasp onto surfaces as they climb. This gives poison ivy its signature hairy vine appearance. These can help identify poison ivy even in winter without leaves.



Ashley Kulhanek, OSU Extension



Poison ivy has impressive fall color from bright orange to deep red and has very distinctive WHITE berries in fall! These are full of urushiol oil and are not for human consumption. But birds love them!



To kill the vine on a tree, you can cut a section out of the vine.



Once the vine is severed from the ground roots, the vine will slowly die (shown: about 2 weeks after cut). **DO NOT BE FOOLED!** All parts of even dead poison ivy contains the rash-inducing urushiol oil, from the root, vine or dead leaf. Always use protection when handling poison ivy, dead or alive, in landscapes, on trees, or even on logs that might be used for bonfires or fireplaces. Smoke from burning poison ivy vine can result in severe allergic reactions in the mouth, nose, and airway. **NEVER** burn poison ivy.



As you can see, I missed a few feeder vines and had to go back and cut again. If you catch it early as a vegetative ground plant, you can mow it back to help control it. As it gets woody and vines, it can become more of a challenge. There are several herbicides labeled for control of poison ivy, commonly containing active ingredients glyphosate and/or triclopyr. The challenge with vines is the risk to hitting the tree roots or trunk and causing damage, as well as other off-target plants. Some products may include instructions or application methods which allow for more targeted applications. Read instructions carefully and wear all personal protective gear for both the herbicide, and to protect from the oils of the plant. Because this tree pictured is on a stream bank and near several aquatic habitats, we are limiting management to mechanical cutting due to the heavy restrictions many herbicides carry for application near water. Make sure you take into account all label warnings.

More Information

Penn State University Wild Grape

<https://extension.psu.edu/invasive-weeds-wild-grape>

USDA Plant NRCS Plant Guide

https://plants.usda.gov/plantguide/pdf/pg_pagu2.pdf

poison ivy

<https://extension.uga.edu/publications/detail.html?number=C867-10&title=Control...>

Magnolia Scale: Puffing-Up, Dripping Honeydew, and Drawing Flies

Authors

Joe Boggs

Julie Crook

Published on

July 6, 2020



Magnolia scale (*Neolecanium cornuparvum*) is a type of "soft scale" so named because of the helmet-like soft leathery covering that protects the females. This is one of the largest soft scales found in Ohio with mature females measuring as much as 1/2" in diameter.

Mature Magnolia Scale



Joe Boggs, OSU Extension©

Magnolia Scale
"Soft Scale"



Joe Boggs, OSU Extension©

I've gotten numerous e-mails about magnolia scale in southern Ohio over the past several days. A few of the senders correctly identified the scale and asked for management advice; however, others were a bit off the mark. Their questions ranged from wanting to know about the "white stuff" adorning magnolia branches to seeking the identity of the "mealybug" infesting their tree to asking why bees, wasps, and flies are swarming a magnolia.

**Magnolia Scale Covered in
White Waxy Material**



Joe Boggs, OSU Extension©

**Magnolia Scale with
Waxy Material Rubbed Away**



Joe Boggs, OSU Extension©

The confusion is understandable because magnolia scale females have not yet acquired their most identifiable form. The females are still somewhat flattened and may be obscured by a heavy coating of white, waxy material. As the females "puff-up" to their full squishable size, the waxy material will eventually peel away to reveal the pinkish-tan colored females beneath.

**Magnolia Scale
Early Summer**



Joe Boggs, OSU Extension©

**Magnolia Scale
Early Summer**



Joe Boggs, OSU Extension©



As they puff-up, the females drip copious quantities of honeydew. The sticky, sugary liquid may cause heavily infested trees to literally buzz with insect activity as flies, bees, and wasps seek a sweet treat.

**Black-And-Yellow
Mud Dauber Wasps**



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**Flies Drawn to Honeydew
from Magnolia Scale**



Joe Boggs, OSU Extension©

This native scale has a strong affinity for non-native magnolias and associated hybrids. Common hosts include star magnolia (*Magnolia stellate*), lily magnolia (*M. liliiflora*), and saucer magnolia (*Magnolia x soulangeana*). Native magnolias are more resistant perhaps because of natural defenses that developed through a shared evolutionary history with the scale.



Life Cycle

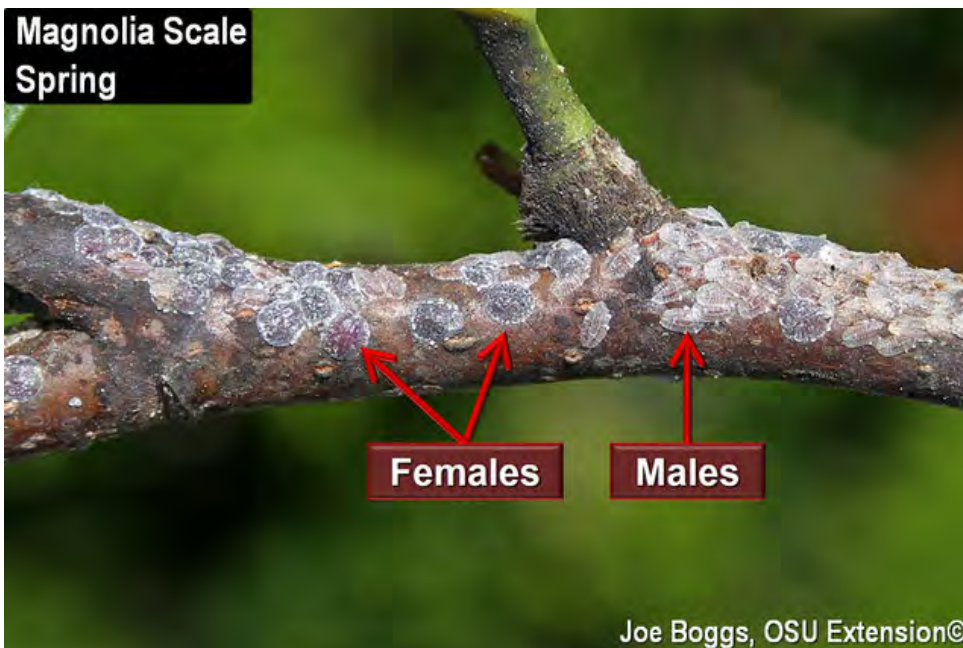
Magnolia scale has one generation per season. Females and males spend the winter as first instar dark-colored nymphs attached to the stems of their host plant. Their resemblance to lenticels makes them inconspicuous. The nymphs mature in the spring with the males developing into small gnat-like insects that fly to females and mate.

**Magnolia Scale
Early Winter Crawlers**



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**Magnolia Scale
Spring**



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The females remain immobile but rapidly expand in size as they mature through the spring and summer. Eggs are produced in late summer to early fall and are held internally until they hatch creating the illusion that the females are giving birth to the first instar nymphs (= crawlers). The first instar crawlers are highly mobile but become immobile once they insert their piercing-sucking mouthparts into stems. This is the overwintering stage.

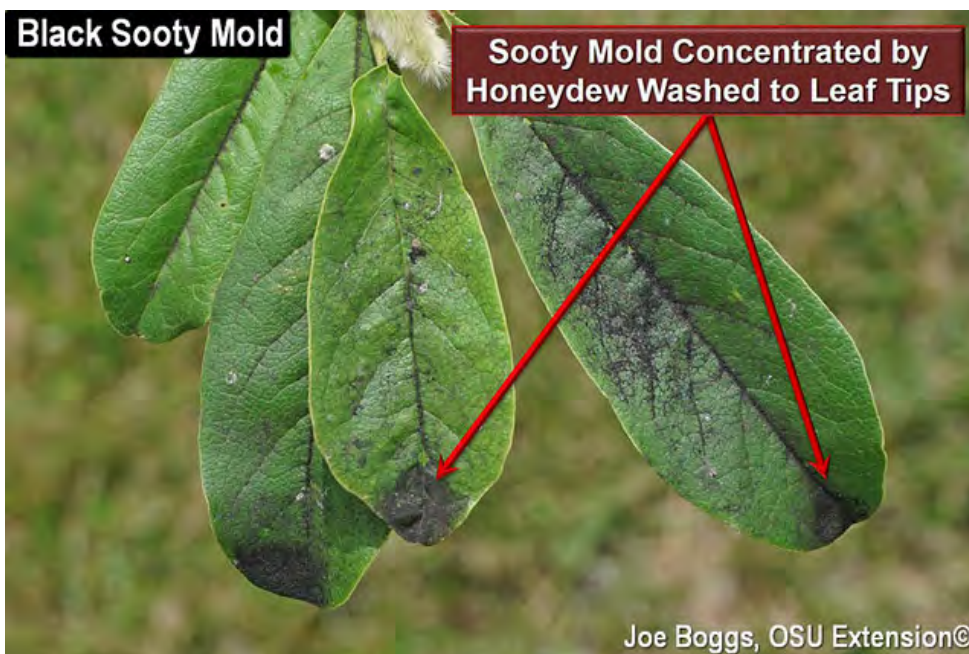


Impact

Magnolia scale adults and nymphs insert their piercing-sucking mouthparts into phloem vessels to tap plant sap. As with most soft scales, magnolia scale is seldom a direct killer of established landscape trees. However, a substantial loss of sap from a heavy scale infestation represents a serious loss of energy resources to the trees. The accumulated stress coupled with other stress-producing conditions may cause leaf yellowing and loss; branch dieback and canopy thinning, and even the death of entire trees.

Magnolia scale sucks sap to acquire carbohydrates which provide energy. They also extract amino acids which are building blocks for proteins and enzymes. However, the sap only contains trace amounts of amino acids compared to huge amounts of dissolved carbohydrates. This means the scale must process a large quantity of sap to extract the necessary amino acids. They discharge the excess sugar-rich liquid from their anus in the form of a sticky, sugary "honeydew" which is just a nice name for scale diarrhea.

Magnolia scale is a prolific honeydew producer. During normal years, the sticky honeydew drips onto the leaves and stems of the host plant as well as understory plants to eventually become colonized by black sooty molds. Although the molds do cause no harm to the overall health of infested trees, the blackened leaves can seriously reduce the aesthetic appeal of heavily infested trees.



The honeydew also attracts a plethora of freeloading sugar-sippers including flies. In fact, a high percentage of the flies are often members of the blow fly family, Calliphoridae. Their maggots may have a taste for decaying flesh, but adults like sweets.



Management

Although significant magnolia scale infestations are rare on native magnolias, the first and best approach to managing this native scale is to reduce tree stress-inducing conditions such as watering trees during a drought. However, fertilizers should be used with caution, particularly high nitrogen applications. Numerous studies have shown that high nitrogen benefits sap-sucking insects by increasing the amino acid concentration in the sap.

Magnolia scale infestations attract a wide range of natural enemies including lady beetles such as Sigil lady beetles (*Hyperaspis* spp.) and Australian mealybug destroyers (*Cryptolaemus montrouzieri*). Both have wool-coated larvae that are actually wolves in sheep's clothing.

**Hyperaspis Lady Beetle Larva
Feeding on Overwintered
Magnolia Scale**



Joe Boggs, OSU Extension©

**Hyperaspis Lady Beetle Larva
Feeding on Early Summer
Magnolia Scale**



Joe Boggs, OSU Extension©



These and other bio-allies can have a significant impact on maintaining magnolia scale infestations below noticeable levels on native magnolias. Unfortunately, they appear to have a limited effect on magnolia scale populations on non-native magnolias. It's speculated that the lack of defenses by the non-native trees may support such a rapid scale proliferation, the large numbers simply overwhelm the ability for natural enemies to have a significant effect.

This means other management tactics may be necessary to support plant health. A direct approach is to use physical removal. If trees are small and scale populations are low, a dish scrubber or bathroom scrub brush can be used to physically remove the females before they produce eggs at the end of summer.



Julie Crook (OSU Extension, Hamilton County) appears to have eliminated a substantial scale infestation on a medium-sized magnolia in her landscape by using this approach. Many of the images included in this Alert show the infestation or close-ups are of specimens collected from her tree. However, sadly for me, almost no magnolia scale is evident on her tree this season.

Topical insecticide applications targeting 1st instar crawlers later in the growing season can be effective. However, the extended period of egg hatch presents a challenge and requires thorough stem coverage as well as multiple applications following label recommendations. Insect growth regulator products based on the active ingredient pyriproxyfen are effective and will not affect the beneficial bio-allies helping to keep scale populations in check.

"Horticultural oils" (e.g. summer oils) can also be effective on 1st instar crawlers; however, oils require direct contact and there is no residual activity. Thorough coverage is critical because oils only kill on contact. Spring applications can also be effective; however, there is a risk for damaging flower buds.

Control can be achieved with single applications of neonicotinoid systemic insecticide products with the active ingredients imidacloprid or dinotefuran. There are two effective "treatment windows" in Ohio. They are late summer to early fall, before settled crawlers stop feeding for the season, or sometime in May after overwintered nymphs start feeding. However, spring applications should be delayed until after trees have finished flowering to avoid killing pollinators. Of course, as with all insecticide applications, it is critical to read and follow label directions.

Aster Yellows

Authors

Joe Boggs

Julie Crook

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Aster Yellows
Purple Coneflower



Julie Crook, OSU Extension©

Aster yellows is a serious, chronic disease that occurs throughout North America and may affect over 300 species of plants in 38 families including a number of vegetables such as carrots, potatoes, lettuce, endive, and artichokes. However, as its common name implies, aster yellows occurs most often on members of the aster family (Asteraceae) and coneflowers are particularly susceptible.



Of course, coneflowers (*Echinacea* spp.) have long been a favorite in Ohio landscapes and naturalized areas because of their beauty and attractiveness to pollinators of all sorts. Unfortunately, aster yellows can turn a longstanding planting of coneflowers into a collection of stunted and weirdly deformed plants.

Aster Yellows Symptoms



Aster Yellows Symptoms



The disease is caused by a phytoplasma. All known forms of these small, specialized bacteria are plant pathogenic and they infect plant phloem tissue. Phytoplasmas are naturally spread from plant to plant by sucking insects, particularly leafhoppers.

Symptoms of aster yellows include chlorotic, curled foliage; stunted stems; and bizarrely distorted flower parts. Flower petals may appear as a ring of tiny greenish-yellow spoons arrayed around the base of highly deformed cones. Cones may appear as tightly clustered rosettes. This symptom is sometimes mistaken for damage caused by the eriophyid mite commonly known as the Coneflower Rosette Mite and vice versa.





Aster Yellows wreaks havoc on all parts of the plant. There are no sprays that will suppress the disease and once plants become infected, they remain both infected and infectious which means they serve as a constant reservoir of the phytoplasma to be spread to other plants. Thus, sanitation is key to managing the disease. All parts of the

plant including the root system must be removed and destroyed. As with all phytoplasmas, the aster yellows pathogen cannot survive outside of the plant so the bacterium should not remain infectious in the soil.

Other Articles

Expand Your Butterfly Garden with Less Common Milkweeds

CALEB MELCHIOR

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- Source: <https://www.hortmag.com/plants/less-common-milkweeds>

You've probably heard that monarch butterflies are in trouble, and that a good way to support them is to plant swaths of milkweeds (*Asclepias*), because these plants are the only ones the monarch larvae will eat. Perhaps you've planted some of the three species that are commonly available: orange milkweed (*A. tuberosa*), common milkweed (*A. syriaca*) and swamp milkweed (*A. incarnata*).

Everybody loves these classics, but perhaps you feel it's time to broaden your monarch-garden repertoire. Worldwide, there are more than 200 milkweed species currently identified. The [Biota of North America Program \(BONAP\)](#) lists 79 species native to North America. For starters, you might try two compact, garden-worthy species: antelope-horn milkweed (*A. asperula*; USDA Zones 5–9) and green milkweed (*A. viridis*; Zones 5–9).



Above: Antelope-horn milkweed

Antelope-horn milkweed has exotic-looking flowers—like a cross between an orchid and sweet William—but this plant is native to the Central Plains, Interior West and Southwest regions of the United States. Each stem is topped with three or four heads of waxy flowers with green star-like petals surrounding a purple-and-white array. The

flowers last for several weeks, to the delight of native bees, honey bees and bumblebees. The flowerhead transform into bulbous seedpods that are said to resemble the horns of an antelope. Plant this species and you can be the judge.



Above: Green milkweed

Green milkweed is a delight for lovers of green flowers. Its flowerheads are smaller and not as dramatically domed as those of other species. Their outer green petals are relatively large, giving these flowers a softer appearance. This species hails from the US Southeast.

Both of these species grow as multistemmed, rounded plants 18 to 24 inches tall and wide. They are clumping plants not apt to spread by their roots. They are easy to grow in full sun and well-drained soil.

Recommended related reading:

[Gardening for Butterflies](#) by The Xerces Society covers monarch butterflies as well as other species in need of help. It includes many facts about butterflies and explains how to create a garden that supports them as well as moths and hummingbirds, from choosing effective plants to laying out the design and maintaining the garden.

[The Monarch: Saving Our Most-Loved Butterfly](#) by Kylee Baumle covers the threats that this butterfly faces and provides nine hands-on projects that gardeners can undertake to help it and other butterflies. The book also includes thorough information about milkweeds as well as lists of nectar plants.

Prepared by Jeff Stachler

Ohio State University

Agriculture and Natural Resources Extension Educator, Auglaize County