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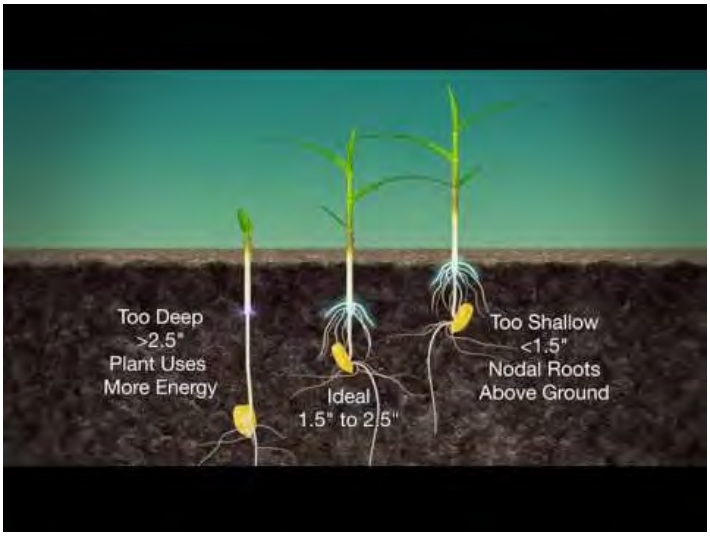
OSU Extension - Auglaize County Weekly Horticulture Newsletter – 5-8-20

When and How Should I Plant my Victory Garden?



There are three major time frames to plant vegetables, early spring, late spring and late summer. Within each of these windows the time frame can be quite large and depends upon the species you are planting.

Early planted species include radishes, spinach, swiss chard, asparagus, lettuce, broccoli, cauliflower, Brussel sprouts, red beets, carrots, onions, potatoes, parsnip, cabbage, collards, mustard greens, peas, turnip, rutabaga, kohlrabi, endive, kale, sweet corn, popcorn, and celery. These species can be planted starting in early April, although peas, popcorn, and sweet corn would be better planted for the first time in mid- to late-April. It is best to transplant plants of Brussel sprouts, cabbage, cauliflower, asparagus, and broccoli at this time frame rather than starting these species by seeds at this time, but you could plant the seeds at this time. It all depends upon how early you want to harvest these species. Most early spring species can be planted up until the end of May. However, planting radishes at this time will likely cause them to be very bitter and the spinach will soon produce a stem, called bolting, which you do not want in spinach production. There are spinach varieties that resist bolting better than others, but at some point all spinach plants will bolt and the warmer the conditions the faster it will bolt.

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Late spring planted species include beans (lima, green, other), cucumber, muskmelons, watermelons, pumpkins, squash, tomatoes, pepper, okra, eggplant, and sweet potatoes. All of these species should be planted after ANY danger of frost which is normally after May 20th, but the way this year is going who knows. Beans can be planted in early May usually with little problems, but this year maybe not. All of these species will be killed with a light frost except for beans which would need freezing temperatures, so make sure it is warm. Sweet potatoes really do not like temperatures below 45 degrees F. Late spring species can be planted into mid to late June, but for some things like watermelon and sweet potato that is getting too late. Popcorn can be planted into early-June. Sweet corn, potatoes and green beans can be planted into mid-July depending upon the days to maturity of the variety/hybrid.

Late-summer species include cabbage, broccoli, turnips, carrots, red beets, lettuce, green onions, radishes, peas, spinach, and kohlrabi. Cabbage and broccoli need to be planted in early August as plants, not seeds. A short-season pea variety and green onions need to be planted in early August. The remainder of species can be planted in early August and all the way into early September depending upon the days to maturity of the species planted and when you want to harvest.

Depth to placing the seeds is critical to planting success. Plant most species to a depth of twice the diameter of the seed. Corn should be planted at least 1.5 inches deep, but 2 inches is preferred. This is for proper root development and standability. Lettuce should only have a dusting of soil covering the seed, meaning no more than 1/16 of an inch. Transplant plants to the depth at which they are coming out of the pots. The exception to this is tomatoes. You can plant them as deep as you want as long as you have at least 3 inches of stems showing out of the soil. For potatoes make a trench at least 3 inches deep. Once plants get to be about 6 to 10 inches in height and before flowering pull up the soil to make a large mound of soil, but do not bury the entire plant. For sweet potatoes make a mound of soil at least 4” deep before transplanting the plants. Sweet potato plants can be transplanted to a depth that allows at least 2 to 3 inches of the stem to still be showing out of the soil as long as all roots are in the soil.

As you can see there is plenty of time to still start your garden, especially with this year’s current cold temperatures. Get out and begin planting your first garden. Enjoy having your own produce! If you have questions about gardening feel free to e-mail me at stachler.1@osu.edu.

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Local Observations

Asparagus bed – putting turkey manure in bottom

Plants partially covered

Putting 3” of cover over plants

Finished project for now

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A red bud in full flower

Lilac starting to flower

Lettuce growing

Red beets emerged

Good morning! I pray you are well.

We received rainfall only 2 days this past week. Rainfall on Sunday, May 3rd ranged from 0" near Kossuth, near Santa Fe-New Koxville and Kettlersville roads, and St. Rt. 385 and Feikert roads to 0.13" near Lowes. Rainfall on Tuesday ranged from a trace near Buckland-Holden and St. Rt. 501 roads and near Uniopolis to

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0.18” near Santa Fe-New Knoxville and Shelby-Fryburg roads. Rainfall for the week ranged from 0.01” near Buckland-Holden and St. Rt. 501 roads to 0.17” near Lock 2 and Tri-Township roads. The average rainfall for the week was 0.10”, 0.75” less than last week. Next week looks like rain on Sunday (today) and Thursday at amounts greater than this past week.

Another cold week! The average high temperature now is 69 degrees F, 3 degrees higher than last week. Temperatures were above normal for **2** day and below normal for **5** days this past week. Temperatures ranged from 48 degrees F to 81 degrees F. The average high temperature for the week was 64.1 degrees F which is 3.7 degrees F warmer than last week, but 4.9 degrees F lower than the historical average high. Temperatures will be below normal for most the week with a hard freeze Saturday morning (yesterday), but Thursday will be above normal.

The asparagus plants arrived Thursday! I transplanted them on Saturday as you saw the photos above. My soil and compost mixture looked great. Now I just have to keep covering them as they emerge. My red beets, carrots, Swiss chard, and peas emerged this week. Stands are pretty good. I have heard of people that have planted some of their late garden, so the cold Saturday morning will spell trouble. Lots of cover will need to be done.

Weekly Weed Photos

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Purple deadnettle reaching maturity

Giant ragweed

Cressleaf groundsel (notice head and ray flowers)

Field pennycress

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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

Lunch with Great Lakes Vegetable Producer's Network

May 6 2020

Share

If your schedule permits consider listening in on the Great Lakes Vegetable Producer's Network, an offshoot of the Great Lakes Vegetable Working Group, designed to help you with your production and pest management questions.

A live weekly roundtable discussion during the growing-season for commercial vegetable producers in the Great Lakes and Midwest region. Join us! We broadcast live via Zoom at 12:30 ET/11:30 CT every Wednesday from the first week of May to the first week of September.

To be a part of the live audience, join here -> bit.ly/glvegnetwork. If you have a pressing vegetable production issue that you would like discussed, simply email it, along with your phone number, to greatlakesvegwg@gmail.com.

First Episode Airs Today, May 6th

In the first episode, on May 6, we will interview Amanda Byler, a Family Nurse Practitioner who works with migrant worker communities Great Lakes Bay Health Centers, and Annalisa Hultberg, University of

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Minnesota Extension Educator for on-farm food safety, about farm family, farm worker, and customer safety as we enter our production season during a global pandemic.

Great Lakes Vegetable Producer's Network

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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/

Marsh Marigold Madness

Authors
Erik Draper
Published on
May 8, 2020

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On one of our jaunts through the woods and parks in NE Ohio, my wife was thrilled to see glorious blooms of intense yellows created by *Caltha palustris* or Marsh Marigold (MM). The genus name "*Caltha"* is derived from the Latin meaning "yellow flower" and the specific epithet *"palustris"* means marsh-loving. Therefore, the Latin binomial for this plant literally means "yellow flower marsh-loving"!! This North American native plant thrives in bogs, ditches, swamps, forested swamps, wet meadows, marshes, and stream margins from as far east as Newfoundland to as far west as Alaska. MM then slips down into Nebraska and then over to Tennessee and North Carolina and that is as far down south that it is able to tolerate the intense summer heat.

Beautiful golden yellow blooms of Marsh Marigold

MM flowers are a cheery yellow and a welcome signal that Springtime is just around the corner! In fact, MM is really NOT a marigold nor in the family, Asteraceae, the family to which marigolds belong, but it is a perennial in the Ranunculaceae or buttercup family. Looking closely at the flowers, you clearly see the shiny, yellow, buttercup-like resemblance. These plants may commonly be referred to as Caltha cowslip, cowslip, cowflock, or kingcup.

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Buds and blooms of *Caltha palustris* or Marsh Marigold

As an herbaceous perennial, MM prefers full sun to light shade and grows 1-2 feet tall and wide, with a naturally mounding growth habit. The planting site would of course have to be consistently moist or even wet. MM flowers are 1-2 inches in diameter, with 5-9 waxy, rich, golden yellow “petals”, which are really sepals, that appear in early Spring; specifically, they can bloom April to June depending on elevation, temperatures, and exposure to sunlight.

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Moist wet areas preferred by Marsh Marigold

In fact, humans see MM sepals as yellow, but to insects, the outer half of the sepal is a mixture of yellow and the ultraviolet “bee's purple", while the inner most portion of the sepal is yellow. MM flowers have anywhere between 50 to over 100 stamens. The flowers offer an early source of pollen and nectar to insects, butterflies and hummingbirds, but they are most commonly pollinated by hoverflies (Syrphidae)! MM can be propagated by either using “fresh seeds” (planting mature seeds immediately harvested from existing plants) or by dividing mature plants.

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Marsh Marigold sepals and stamens

The more exposed MM are to direct sunlight in their site, the more quickly the soils will warm up and plants will bloom; conversely, the less exposure and more hidden or cooler the site, the flowers take much longer to mature and emerge. While it is true that the best flowering will occur in full sun during the Spring, later in the season, especially during the heat of the summer, MM will do better if they have partial shade. If sited in full sun in warm summer climates, the plants can actually go dormant with summer heat and dry conditions and drop their leaves!

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Marsh Marigold thriving in wet shaded sites

MM's have waxy, glossy green, basal leaves that may be round, oval, heart or kidney shaped and by mid-summer they may mature in size to about 7 inches across. The leaves can have smooth margins or small scallops or teeth along the leaf margins. The basal leaves of MM's have long petioles with a deep, narrow sinus or notch where the petiole attaches to the leaf blade. The upper leaves are alternate on thick, hollow stems with shorter petioles or no petioles at all and tend to be smaller than the basal leaves.

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Marsh Marigold leaves

I found it fascinating that parts of MM are processed and used medicinally but handling the plant can cause skin irritation and blisters, and uncooked parts are toxic to humans. WHAT?! Now this is where plant research REALLY gets fascinating! All plants of the buttercup family, Ranunculaceae, contain the toxic glycoside *protoanemonin*, sometimes called anemonol or ranunculol! MM contains this yellow oil irritant, protoanemonin, throughout the entire plant, especially the older foliage and supporting plant parts. Protoanemonin can be broken down or destroyed by heat! Cattle and horses can be poisoned too by consuming raw or fresh MM, although dried plants, like those that may be found in hay, are no longer toxic to them! That is so WILD!! So, if you are outdoors and need to go on a buttercup binge, just look and enjoy these beautiful marshy, swamp loving plants but NO TOUCHY!!

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Marsh Marigold perfect growing site

Shrub of the Week: Exochorda

Authors
Paul Snyder
Published on
May 8, 2020

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The Rosaceae is the most influential plant family in our landscapes (and the angiosperms), from *Spiraea* to *Physocarpus*, *Prunus* to *Alchemilla,* and most notably for us at Secrest, *Malus*. While **crabapples are showing their beauty at Secrest** another member of the Rosaceae, *Exochorda*, is also putting on quite a display.

Over the last week I have received several inquiries from people wanting to know the identity of this stunning plant, which remains in obscurity until it flowers. Michael Dirr states it best, “For about 50 weeks no one knows they exist, come March, usually mid-March in Athens, calls pour into the Horticulture Department wanting to know the identity of the white-flowered bush. I am secure in stating that *E. racemosa* (primary garden species) thrives with neglect” (*Manual of Woody Landscape Plants,* p. 421).

Exochorda. Pearlbush.

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Exochorda racemosa

Pearlbush is a great addition to the landscape. It has few to no insect or disease issues, clean blue-green foliage, and show-stopping 1-2” white flowers. The common name, pearlbush, refers to the white flower buds, which hang on the plant like strings of pearls prior to opening.

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Pearl-like flower buds on 'The Bride'

Exochorda racemosa flowers

Most selections on the market are hybrids (*Exochorda* x*macrantha,* E. *xmacrantha* x E. *racemosa*) *which* reach heights of 3-5', making them a good fit for many landscapes. The plant is also deer resistant. 😊
To successfully grow pearlbush plant in full sun to part shade in soils that are well-drained. Pearlbush can adapt to different soil pH without difficulty. Better news for those with clay soils, pearlbush can also adapt to clay soils.
Cultivars:
The Bride: old standby with a vigorous weeping habit and 1" white flowers on 3-4" long racemes.

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The Bride'

Snow Day ™ Surprise: Upright growing compact plant (4-5’ tall) with 2” white flowers.

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The large flowers of Snow Day ™ Surprise

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Snow Day ™ Surprise

Snow Day ™ Blizzard: 5-6’ tall plant with 4-5” long pendulous racemes of large white flowers.

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Buds and flowers

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Snow Day ™ Blizzard
First Editions® Lotus Moon™: 4-5’ tall with an upright rounded habit.

Additional Reading
Dirr, Michael. *Mannual of Woody Landscape Plants*
North Carolina State University Extension

Japanese Maple Scale (JMS)

Authors
Joe Boggs
Published on
May 7, 2020

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Scale management is difficult but an incorrect identification can make it impossible. This is sometimes the case with the exotic Japanese maple scale (JMS) (*Lopholeucaspis japonica*, family Diaspididae). It's relatively new to Ohio, its name is misleading, and it may be mistaken for other more familiar scales.

I recently came across a heavy JMS infestation on American elm (*Ulmus americana*). The trees were also infested with the European elm scale (*Gossyparia spuria*, Family Eriococcidae (Felt Scales)) which produces copious quantities of honeydew that commonly becomes colonized by black sooty molds.

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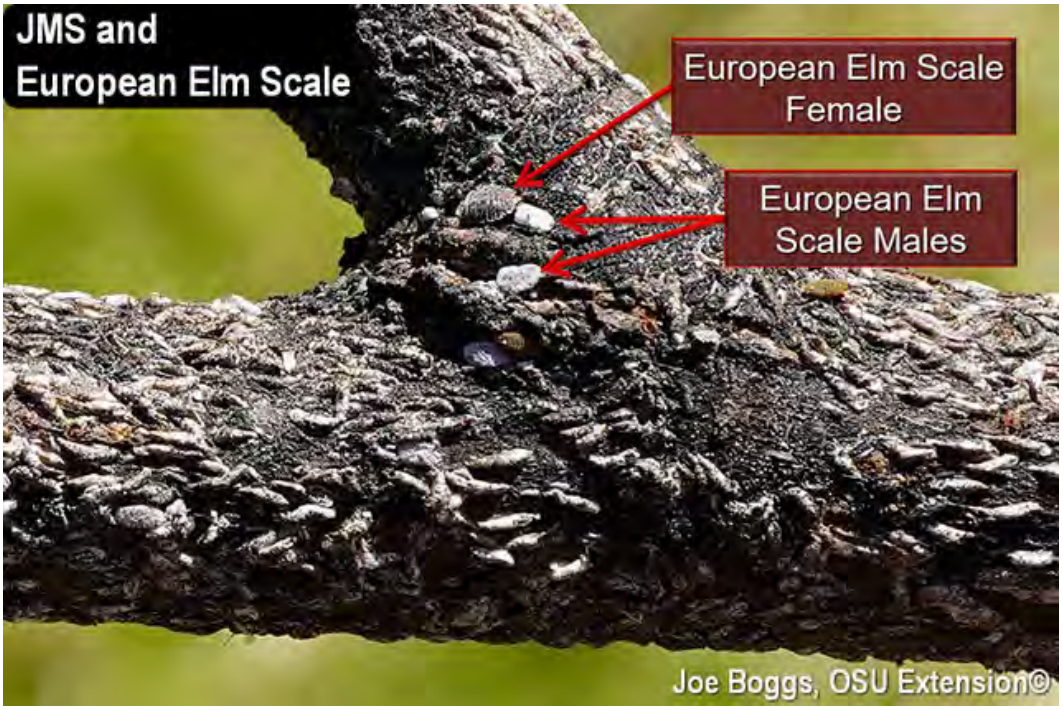

JMS is a so-called "armored scale." This group of scales is so-named because they spend much of their life cycle protected under a waxy armored cover, called a "test." The only mobile stages in the life cycle are the adult males, which look like tiny winged aphids, and the first instar nymphs that hatch from the eggs. These are called "crawlers" … because they crawl.

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As with all armored scales, JMS nymphs and females feed by inserting their long piercing-sucking mouthparts into plant cells causing them to rupture and collapse. This is unlike soft scales, felt scales, and a number of other insects that insert their piercing-sucking mouthparts into phloem vessels to withdraw large quantities of sugary sap with the excess liquid excreted the form of honeydew which is a polite name for scale poo. Armored scales do not produce honeydew.

As you can see in the image below and many of my other images, the black sooty molds colonizing the honeydew from the European elm scale had an impact. On one hand, the accretion obscured some of the armored scale coverings. On the other hand, the charcoal black accentuated some of the white scale coverings. In fact, my attention was drawn to the trees by small white spots highlighted by a black background.

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JMS tends to congregate on the undersides of stems. They also gather in bark fissures presumably to reduce the drilling depth required for their piercing-sucking mouthparts to reach delectable stem cells.

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Blurred Lines

JMS is sometimes confused with oystershell scale (*Lepidosaphes ulmi*, family Diaspididae)) and vice versa. Part of the problem is that oystershell scale has long been one the most common armored scales found on woody ornamentals. Indeed, oystershell scale has a worldwide distribution, it has a wide host range (over 150 plant species) and shares many tree and shrub hosts with JMS.

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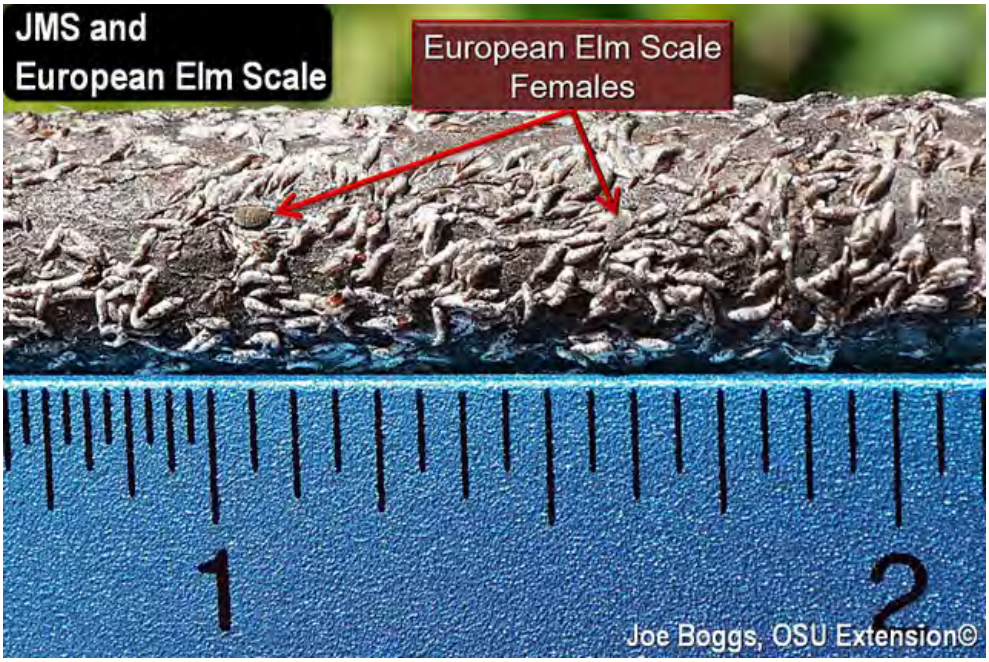

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The common name for the Japanese maple scale is misleading. Its host range encompasses over 45 plant genera in 27 plant families. Common landscape and nursery hosts include *Acer, Amelanchier, Camellia, Carpinus, Cercis, Cladrastis, Cornus, Cotoneaster, Euonymus, Fraxinus, Gleditsia, Ilex, Itea, Ligustrum, Magnolia, Malus, Prunus, Pyracantha, Pyrus, Salix, Syringa, Tilia, Ulmus,* and *Zelkova*.

Although this scale was first discovered in the U.S. in 1914, most of the detections have occurred over the last decade. Some speculate that the discovery of this non-native scale may have been hampered by cases of mistaken identity. Regardless, it's still considered relatively new to Ohio. Currently, JMS has been detected in Washington DC as well as 16 states including AL, CT, DE, GA, IN, KY, LA, MD, ND, NY, OH, PA, RI, TN, and VA.

Separating oystershell scale and Japanese maple scale is easiest at this time of the year. Oystershell scales spend the winter as eggs under the tests of the females. The female tests look exactly like light brown to grayish brown oyster shells with one end pointed and the other broadly flattened. Carefully lifting them and taking a look under high magnification will reveal the pearly white eggs.

Oystershell scales only have **one generation per season**. Overwintered eggs hatch at the accumulated Growing Degree Days (GDD) of 497 (base 50F). Full bloom of Miss Kim Manchurian Lilac (*Syringa pubescens*) at 498 GDD is a good phenological indicator of egg hatch and the emergence of first instar nymphs (crawlers).

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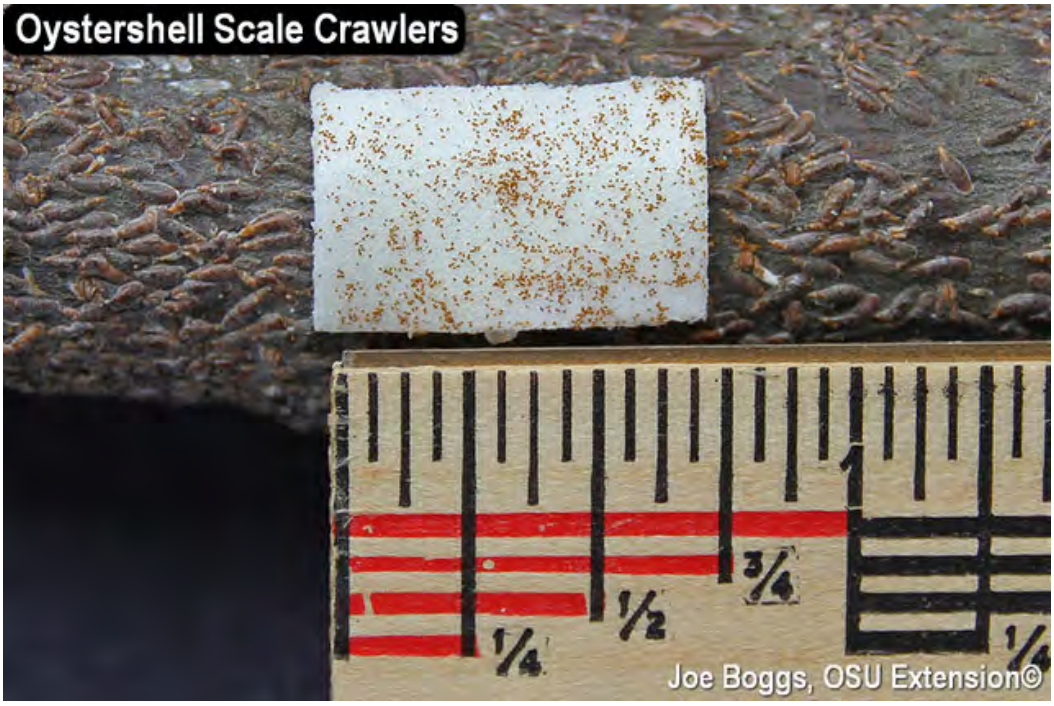

JMS overwinters as females covered in a reddish-brown test which in turn is covered by a brittle white covering. Carefully rubbing the white covering will reveal the test and lifting the test will expose the light purplish colored females. If you look closely at this time of the year in southwest Ohio, you may see the males mating with the females. They look like tiny winged aphids.

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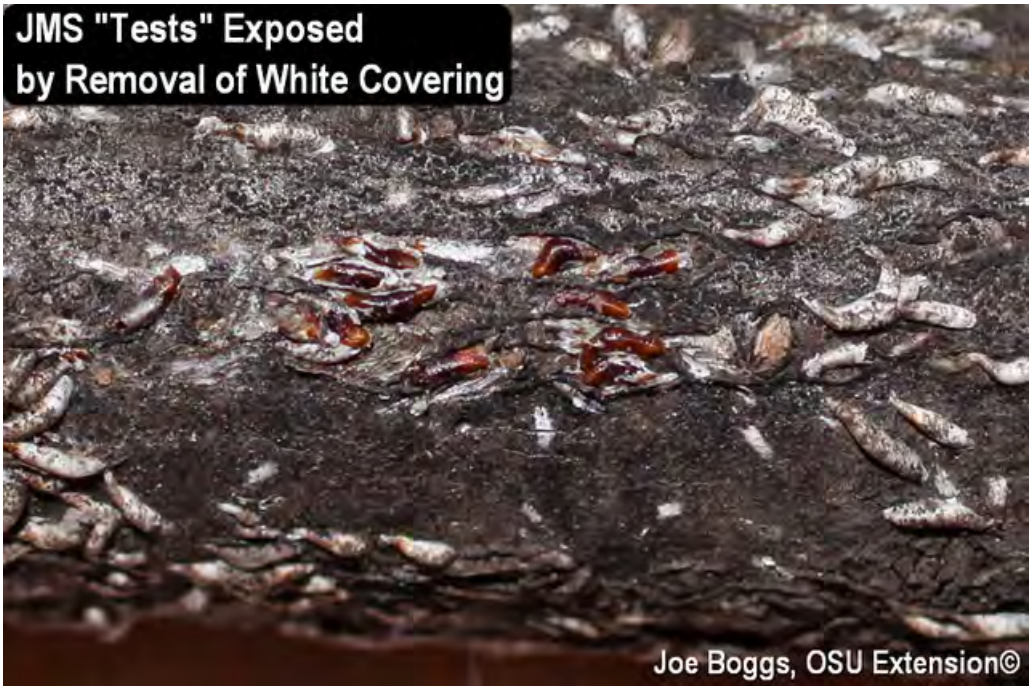

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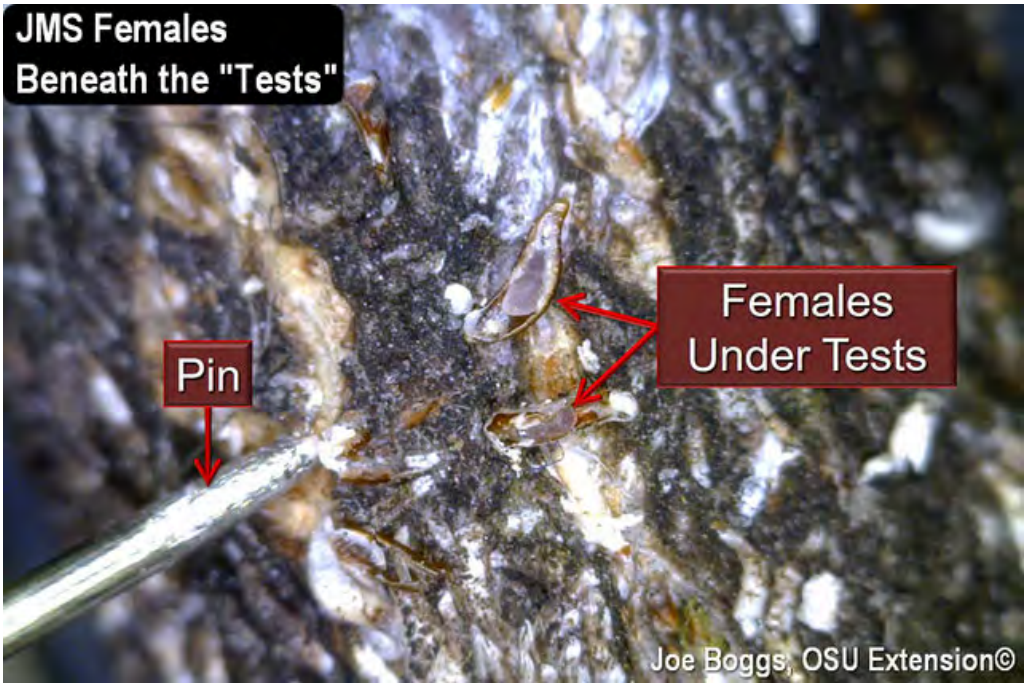

Much less is known about the seasonal life cycle of JMS compared to oystershell scale. Research has shown that the scale has **two generations per season** in Maryland and Virginia and **one generation** in Pennsylvania. However, based on my own observations, I believe it has two generations in southern Ohio. The exact number has not yet been established for the northern part of the state.

According to a University of Maryland Extension fact sheet, JMS eggs begin hatching at 816 GDD (base 50) and peak at 1,143 GDD. Full bloom of smokebush (*Cotinus coggygrias*) and Chinese lilac (*Syringa chinensis*) can be used as phenological indicators. The first instar nymphs crawl about for around 8 weeks. Second generation crawlers appear at 2,508 GDD with peak egg hatch at 3,022 GDD. Crawlers are active for around 7 weeks.

Note that because oystershell scale spends the winter as eggs while JMS overwinters as females, the oystershell crawlers emerge much earlier in the season compared to JMS. Also, oystershell scale only has one generation per season while JMS may have more than one generation, at least in southern Ohio. Although both of these armored scales are susceptible to many of the same insecticides, application timing is very different. Mistaking one for the other seriously effects management.

Integrated Pest Management (IPM)

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1. Inspection: this is particularly important for new plants. A low-level infestation on a few new plants can quickly explode into multiple high-density infestations across multiple plants. Make sure to part the foliage on plants with dense canopies so you can peer down onto the lower stems. Also, look at the undersides of the stems and examine bark fissures where JMS often congregates.

2. Don't Destroy Beneficials: scale insects have many natural enemies and JMS is no exception. The key is to apply tactics that kill the scale, not the beneficials. For example, if the JMS population is low and the scale is accessible, it can be physically removed through selective pruning or by scrubbing the stems.

First instar nymphs (crawlers) are highly susceptible to insecticides, but so are the beneficials. Don't use a topical insecticide such as a pyrethroid that kills beneficials. Research has shown that you'll eventually be dealing with higher scale populations on the rebound.

3. Choose Your Weapons Wisely: there are a number of effective insecticides that will kill the JMS crawlers and leave the beneficials alone. According to various university fact sheets, dormant and horticultural oils are effective and they preserve beneficials. However, the job may be incomplete if the JMS population is high. Tank mixing with an insect growth regulator (IGR) such as pyriproxyfen (e.g. Distance) or buprofezin (e.g. Talus) provides greater efficacy, although the IGRs alone also work well.

The systemic neonicotinoid insecticides Acelepryn, dinotefuran (e.g. Safari, Transtect), and clothianidin (Arena) are also effective against JMS. However, the neonicotinoid imidacloprid (e.g. Merit) is not effective against this or other armored scales.

Of course, as with all pesticide applications, it's critical to read and follow label directions to maximize efficacy while minimizing off-target impacts. Also, you should never rely on a single tactic for suppressing JMS or any other armored scale. For example, an effective strategy may be to target the first generation JMS crawlers with a systemic neonicotinoid to account for the extended period of time that crawlers are present then follow-up with an IGR on the second generation crawlers.

4. Don't Walk Away: it's rare for any chemical suppressant to provide 100% efficacy. You should continue to closely monitor affected plants and be prepared to repeat the IPM steps listed above.

Turfgrass 101 by Scott Zanon

Authors
Scott Zanon
Jim Chatfield
Published on

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May 7, 2020

Turfgrass 101 by Scott Zanon with Comments by Dave Gardner

Every homeowner wants the nicest and best-looking lawn and to have their neighbors be green with envy. Living in the Midwest for the most part means that we have cool-season grasses to care for and nurture.

In our yards, turfgrass is the basis of a beautiful landscape. Keeping our lawns looking their best year-round is both challenging and difficult for sure. The hope for this condensed version of lawn care is that by gaining a little more knowledge, following the guidelines, and tweaking some management practices in your particular region, you too can have a healthy and viable stand of turf.

SOILS
Good soil is a major component of having a great lawn. Six inches of good topsoil and some organic matter is a must. Most types of turfgrass thrive with a neutral pH so it may be prudent to have your soil tested.

GRASSES
In our regions, cool-season grasses both rule and thrive.

- Kentucky Bluegrass – very popular creeping type that prefers full sun. Perennial Ryegrass – bunch type that prefers full sun and is high traffic tolerant. It is the quickest to germinate and establish of our cool season grasses.

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- Fine Fescue (Creeping Red) – bunch type that is also shade tolerant
- Tall Fescue (Turf Type) – bunch type that prefers full sun but will tolerate some shade and is high traffic tolerant
- Bentgrass – creeping type rarely found on residential properties that requires full sun and short mowing height

Kentucky bluegrass lawn

WATER
Watering deeply but infrequently enables development of a deeper and healthier root system that will help your lawn endure periods of heat and drought. If drought causes your lawn to go dormant, fear not as the grass will not die as long as the crown of the plant is still alive. About one inch of water a week during the active growing season is a good guideline and morning is preferable to reduce evaporation. Wise water use is a sure sign of a practical and thoughtful gardener.

MOWING PRACTICES and HEIGHTS

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Below are a few practices.

- Keep your blades sharp and balanced and mow when the grass is dry (less clumping).
- For early spring mowing, start early enough so that you can cut at a lower cutting height (2 inches) to remove dead grass blades and expose sunlight to the crown in order to promote faster green-up. You should avoid scalping (see below)
- A good rule of thumb - never “scalp the lawn” – which is to remove more than one-third of a grass plant in one mowing.
- Change the mowing pattern each time you mow. Alternating the patterns causes more upright growth.
- Bagging your grass clippings is not necessary. Mulched grass clippings left on the lawn add organic matter and even provide a small source of nitrogen. They do not promote thatch!
- With the exception of creeping bentgrass, mowing your lawn at a higher cutting height has huge benefits. Taller grass allows for great photosynthesis and healthier stands of turf. It also shades out weeds and increases the drought and disease resistance. Our suggestion is 3 inches.
- For the last few mowings of the season, cut the grass low again (2 inches) to avoid potential problems such as snow mold. This problem occurs in areas where winter snow cover is common.

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Grass height may be measured with a Zanometer

SHADE

It is a well-known fact that trees and turf do not get along well and is best to keep them separated. However that cannot always be the case. They compete for sunlight, water, nutrients, and ground space below surface level.

Shade can be the biggest obstacle when trying to maintain turf and trees together. Two somewhat incompatible plants are forced to coexist together and both are expected to perform optimally. It reduces the quantity of light available to turf and the length of time it is available. It leads to reduced turf density, increased root competition, and increased weed invasion. The trees reduce air circulation which can create additional problems with turf diseases. Shade is a major stress factor for turf.

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A shaded lawn is not a Zanon lawn

Despite their differences, turf and trees can peacefully coexist and even thrive together. Achieving that balance can be attained. Armed with an understanding of how each affects the other, decisions can be reached to modify the environment and maintenance procedures to optimize the growing conditions for both.

If after thinning, limbing-up, or removing trees and shade remains a problem, plant shade tolerant ground covers, perennials, or annuals in landscape beds where these will thrive.

FERTILIZATION
An essential nutrient for all plants (including grasses) to survive and thrive is nitrogen. Let us not going to pontificate and tell you that you need to fertilize x times a year. What we suggest is do what you are comfortable with but stress the importance of late season fall fertilization. Below is one approach (Zanon)practices on his lawn with very successful results.

1. Apply a fertilizer (slow release) application with crabgrass control between April 1-15. If you plan on seeding the lawn in the spring, do not apply the pre-emergent herbicide for crabgrass as it will inhibit seed

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germination.

2. Between May 15-30, apply optional second round of fertilizer with broad-leaf weed control. This has to be put on grass that is wet for the herbicide to stick to and effectively control the broadleaf weeds. If you have few broadleaf weeds, we suggest you simply spot treat them or if you have none, just use straight fertilizer. If grubs are an issue, apply grub control now too.
3. As your lawn may be starving by September 1, (Zanon) applies straight fertilizer.

4. Around November 1, apply fertilizer with a high level of nitrogen. This is the most important fertilization of the year. If you choose to only feed your turf once a year, this would be it. At this time of year, the plant used the feeding to promote root growth all winter long. Another benefit is an earlier spring green-up.

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Fall fertilization effects

AERATION/THATCHING/SEEDING/OVERSEEDING

- In our heavy clay soils we are fans of core aeration every fall or every other fall in mid-late September. Besides helping to reduce compaction by allowing oxygen, moisture, and nutrients into the root zone, this also reduces thatch

- Speaking of thatch, it is an almost impenetrable mat of intertwined and tangled grass on the ground surface. If you have a lawn primarily of older Kentucky bluegrass cultivars, you may have this problem. If so, dethatch the lawn

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with hand or machine-powered thatch removers and note that you will not need to do this every year. I suggest mid-late September.

Core aeration plugs

- If you have large patches of the lawn that needs to be seeded/overseeded, please do so by mid-September for best establishment prior to winter. And remember to water and then water some more for best germination.

Turfgrass Times, 05.01.2020

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Published on
May 6, 2020

Last Friday, the OSU Turfgrass Team recorded their timely Turfgrass Times. Team regulars included Dr. David Gardner; Dr. Ed Nangle; Joe Rimelspach; and Dr. Dave Shetlar (aka the Bug Doc); with two special guests OSU's Dr. Karl Danneberger and meteorologist Ben Gelber NBC4 WCMH-TV.

Here is the link to the recording: https://www.youtube.com/watch?v=cINXpnWekqw&feature=youtu.be

Asian Giant Hornet (a.k.a. "Murder Hornet") Update

Authors
Joe Boggs
Published on
May 6, 2020

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The Asian Giant Hornet (*Vespa mandarinia*) (AGH) is generating social media buzz bolstered by news feeds referring to it as the "murder hornet." However, nothing has changed since **it was found late last season** in the extreme northwest corner of Washington State and the southwest corner of British Columbia, Canada.

Thus far, **AGH has not been confirmed anywhere else in North America including Ohio.** But this does not mean we should be complacent. As other non-native insect pests have taught us, we must remain watchful.

Beekeepers should be particularly vigilant. AGH is a predator of other insects and **extremely aggressive towards European honey bees** (*Apis mellifera*). In fact, beekeepers are on the front lines in monitoring for AGH in Washington State.

Ohio Department of Agriculture (ODA) Responds

The ODA has created an AGH Reporting Tool so Ohioans can provide photographs and locations of suspicious insects. Although photographs can't serve as official confirmation, they are very helpful in making an initial identification before opening an investigation.

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Here is the hotlink to the ODA's Asian Giant Hornet Online Reporting Portal:
https://agri.ohio.gov/wps/portal/gov/oda/divisions/plant-health/invasive-pests/agh

The Asian Giant Hornet

AGH is the world's largest hornet with a body length of 1.5 – 2" and a wingspan from 1.5 – 3". Two of its most notable features are its large orange or orangish-yellow head and distinct orangish-yellow and reddish-brown bands on its abdomen.

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AGH produce annual underground nests often taking advantage of cavities created by burrowing rodents and other animals. Their seasonal development matches that of our own North American yellowjackets (*Vespula* spp.) and bald-faced hornets (*Dolichovespula maculata*) with the nests only being used for one season.

Despite the social media hype and dubious web postings, experts consistently note that AGH is not particularly hostile towards humans, pets, and large animals. As with our native yellowjackets and bald-faced hornets, AGH generally goes about its business unless its nest is threatened. Of course, swatting at an AGH may also elicit a painful introduction to its 1/4" stinger.

As noted above, AGH is an extremely aggressive predator of European honey bees. It will mass-attack honey bee hives and quickly dispatch the workers primarily by clipping off their heads. They then rip out the honey bee larvae and pupae, fly back to their underground nests and feed the *mellifera* meat morsels to their young.

This discriminating taste for honey bees is a two-edged sword. On one hand, AGH can be highly destructive by quickly devastating honey bee hives. On the other hand, their strong preference for honey bee meat means beehives are highly effective in revealing undetected AGH populations. For this reason, beekeepers are most likely to be the first people to observe AGH in an area where this non-native has established a new outpost.

Look-A-Likes

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The two insects most commonly mistaken for AGH are European Hornets (*V. crabro*) and our native Cicada Killer Wasps (*Sphecius speciosus*). Cicada killers are the largest native wasp found in Ohio.

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Cicada killer wasps will appear much later in the season with the arrival of their namesake food item, Annual Dog-Day Cicadas (*Tibicen* spp.; family Cicadidae), and disappear once annual cicada activity concludes for the season. Cicada killers create underground burrows. However, unlike AGH, the burrows are excavated and occupied by a single female wasp.

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European hornets were first found in the U.S. in New York State around 1840. Since that time, the hornets have spread to most states east of the Mississippi and a few states to the west. These hornets are impressively large, measuring 1 - 1 1/4" in length. Their black and yellow markings on their abdomen make them look like yellowjackets on steroids; however, their head and thorax have distinct chestnut-colored markings. Yellowjackets have black and yellow markings on the head and thorax.

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Technically, the non-native European hornet is the only "true hornet" found in Ohio. Taxonomically, our native bald-faced hornets are not hornets; they are grouped with yellowjackets which is why they are in the same genus as native Aerial Yellowjackets (*D. arenaria*).

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Unlike our native yellowjackets and wasps, European hornets can cause noticeable girdling damage to twigs and branches of trees and shrubs by stripping bark to the white wood. It is speculated that the hornets are extracting sugar from the phloem tissue. Although the damage may be noticeable, it's seldom significant enough to cause concern.

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European hornets construct paper nests that may look similar to the bald-faced hornet nests. However, they are most often found in hollow trees and sometimes in the walls of homes. They do not produce underground nests.

Normally, European hornets overwinter just like our native bald-faced hornets, paper wasps, and yellowjackets with only the queens that are produced this season surviving the winter. The new queens leave the nests to seek protected overwintering sites; old nests are not re-used. However, occasionally the entire European hornet nest will survive the winter if they are sufficiently protected. Indeed, although it is rare, nests in Ohio have been observed surviving through three winters.

European hornets are reputed to be highly aggressive and their large size does make them look pretty scary. However, during past encounters with this hornet, I was able to take close-up images and move branches with hornets on them without being stung or even charged. Still, landscapers should be cautious around these large stinging insects. Like wasps and yellowjackets, they are capable of stinging repeatedly.

The European hornets may also fly at night and are attracted to porch lights or lights shining through windows. They have been known to repeatedly charge windows at night inducing panic in homeowners.

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Other Insects Found in Ohio

The following are a number of other native and non-native insects found in Ohio that may be mistaken for AGH.

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More Giant Asian Hornet Information

The following websites provide updates on AGH in Washington State and British Columbia as well as details on the discoveries and official confirmations:

Washington State Department of Agriculture (WSDA) Pest Alert: Asian giant hornet
https://wastatedeptag.blogspot.com/2019/12/pest-alert-asian-giant-hornet.html

WSDA Asian Giant Hornet Reporting in Washington State
https://agr.wa.gov/departments/insects-pests-and-weeds/insects/hornets

Washington State University Extension, Additional Information on Asian Giant Hornet
https://extension.wsu.edu/wam/asian-giant-hornet-found-locally-what-we-know/

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British Columbia Ministry of Agriculture, Three Asian giant hornets found in Nanaimo
https://news.gov.bc.ca/releases/2019AGRI0102-001759

British Columbia Ministry of Agriculture, Asian giant hornet nest eradicated in Nanaimo
https://news.gov.bc.ca/releases/2019AGRI0106-001818

British Columbia Ministry of Agriculture, Pest Alert: Asian Giant Hornet
https://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/agriculture-and-seafood/animal-and-crops/plant-health/pest_alert_asian_hornet.pdf

Check Out the Spotted Lanternfly FactSheet

Authors
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Published on
May 6, 2020

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While the spotted lanternfly (*Lycorma delicatula*) (SLF) has not been found in Ohio, the detection of the non-native invasive in Western Pennsylvania has people concerned as the known population is moving closer to Ohio. Ashley Kulhanek, OSU Extension Agriculture and Natural Resources Educator in Medina County, and Jamie Dahl, Central State University Extension's Forest Outreach Coordinator, have co-authored a FactSheet, Be Alert for Spotted Lanternfly, ANR-83. The FactSheet can be found on Ohioline at: https://ohioline.osu.edu/factsheet/anr-83

In addition to raising awareness about this invasive planthopper, we would also encourage BYGLers to be on the look-out for this insect. The insect has spent the winter as an egg arranged in columns or rows with other SLF eggs and covered with a waxy substance that appears like mud. Egg masses can be found on any flat surface as shown below on this tree.

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Photo Taken in Pennsylvania; Photo Credit: Amy Stone, OSU Extension, Lucas County

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As temperatures warm, the eggs will begin hatching and 1st instar nymphs will begin their feeding by peircing their mouthparts into branches, twigs and trunks. While the host plant list is extensive for this insect, tree of heaven (*Ailanthus altissima)* and grapes (*Vitis* spp.) are two favorites. If you want to join the SLF scouting ranks, you could likely see both, egg masses and 1st instar nymphs.

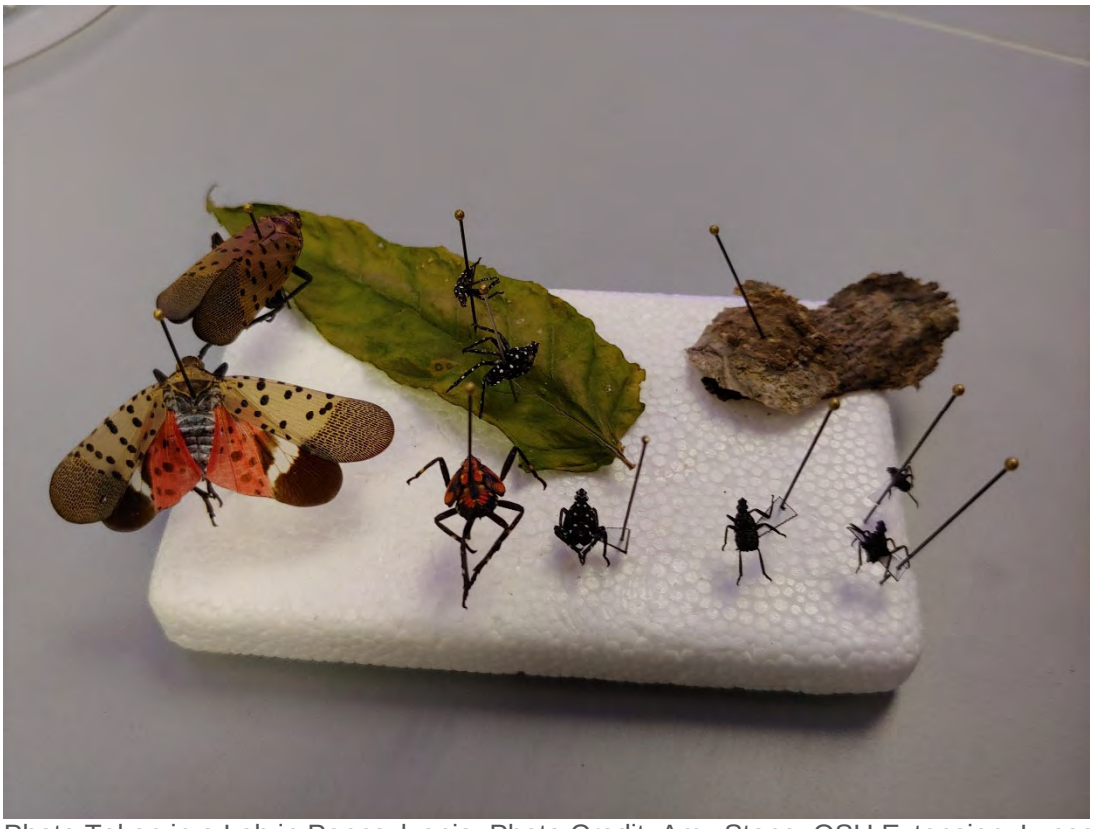

Photo Taken in a Lab in Pennsylvania; Photo Credit: Amy Stone, OSU Extension, Lucas County

If you see something that you suspect is SLF, please take a photo or collect the specimen and secure it in a container. Reports can be made by contacting the Ohio Department of Agriculture (ODA). Here is a link to their website and page for SLF: https://agri.ohio.gov/wps/portal/gov/oda/divisions/plant-health/invasive-pests/slf

Suspect reports can also be made using the Great Lakes Early Detection Network (GLEDN) App. Currently we are asking that you report tree of heaven, an invasive plant that SLF prefers, in addition to any suspect SLF finds in Ohio. For additional information on the App check out: http://go.osu.edu/GLEDN

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Other Articles

Five Tips for a Lower Maintenance Garden

MEGHAN SHINN

MAY 5, 2020

- Source: https://www.hortmag.com/smart-gardening/low-maintenance-garden

A low-maintenance garden can still look special. You can take steps to reduce the amount to work you put into your garden while at the same time making it healthier and beautiful. Try these tips!

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Including some lawn areas and blocks of the same type of perennial can reduce overall maintenance time.

1. Use a mulch-and-compost blend. These mixes are half bark mulch, half compost. They conserve moisture and suppress weeds while feeding the soil and improving drainage.

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2. Plant in drifts. Devote sections of the garden to one kind of perennial that has proven itself in your area. This way any maintenance can be done in one fell swoop, since all the plants will need the same input at the same time.

3. Choose perennials and shrubs with multiple seasons of interest. This saves you from having to plant and maintain annuals for color each season. Choosing plants whose primary interest is in their leaves provides for longer, consistent beauty.

4. Keep some lawn. Garden areas can be more demanding than turf, particularly if you don't require a "perfect" lawn.

5. Edge your beds and install edging. Take some time to re-carve your beds in spring and install six-inch-deep, heavy-duty edging. Your garden will look neater and grass won't invade the beds.

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