



Blasted Insects- Insects to Watch out for in 2021

Presented by : Stanton Gill, Extension Specialist in Entomology and IPM, University of Maryland Extension, CMREC and Professor , Montgomery College, Landscape Technology Program
'Sgill@umd.edu



Two-lined Japanese Weevil

Pseudocneorhinus bifasciatus is making a comeback in the landscape.

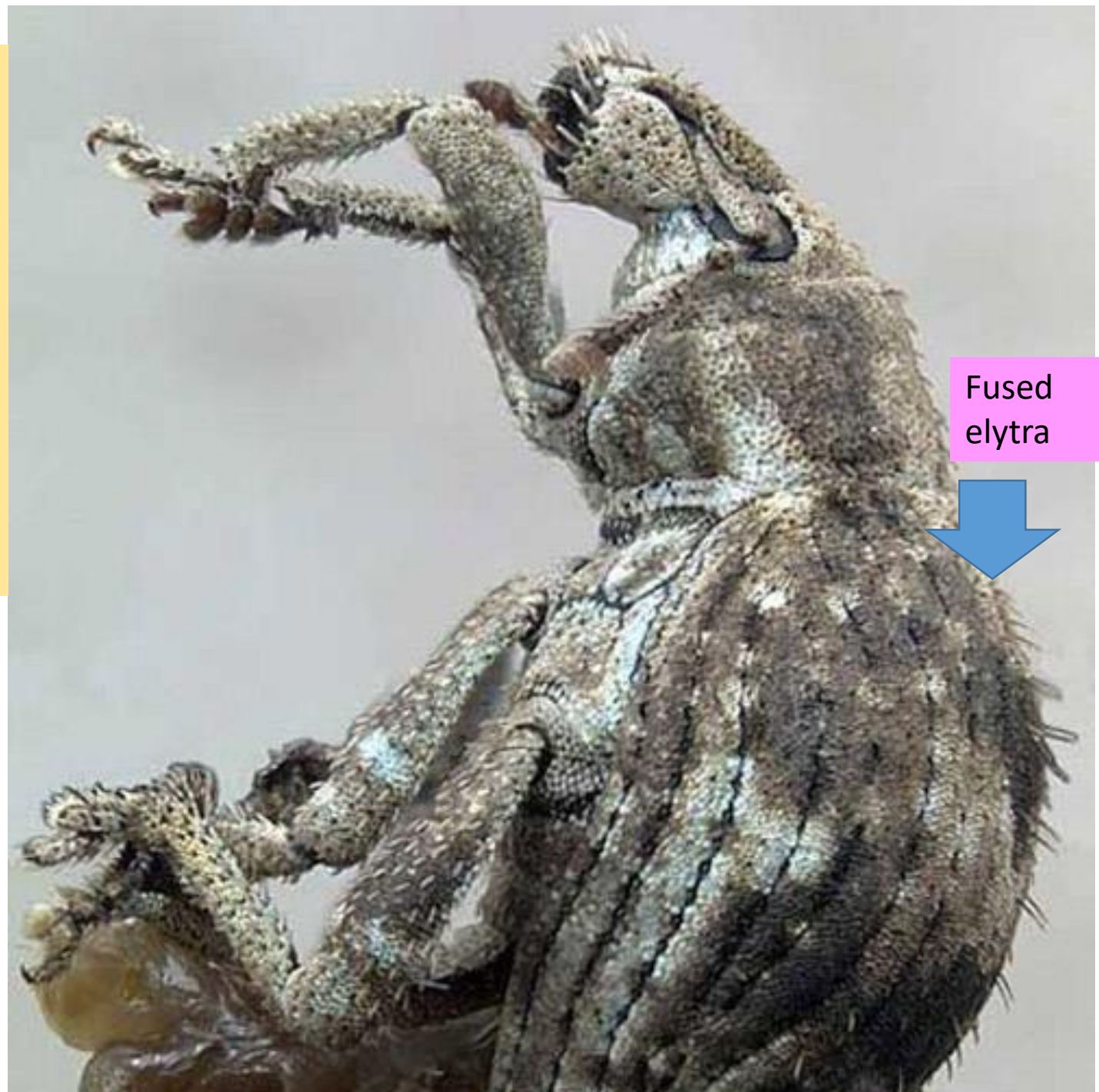
Do not introduce it into your customer's planting beds



On Sedum August 6 2020

The two-banded Japanese weevil, *Pseudocnecorhinus bifasciatus* (Roelofs), was first collected in the United States in 1914 near Philadelphia. It was most likely introduced with infested nursery stock from Japan. The weevil is native to China, Japan, Korea, Mongolia, and eastern Siberia .

Once it is established, it tends to stay put in the operation since the weevil has non-functioning elytra (hardened wings) The elytra are fused and due to lack of flight wings, the adult weevils cannot fly. The weevils feed during the day but are less apparent because of their subdued brown –gray coloration and markings .



The adult twobanded Japanese weevil is stout, convex, and pear-shaped with a short, blunt snout, and elytra much broader than the pronotum. It is about 5 mm long, and has a body covered with brown and grey scales that form bands across the elytra





Egg pods **are** formed by adult females folding the leaf margin and pressing the edges with their legs. Only females are present.

Two-banded Japanese weevils reproduce parthenogenetically, and males are generally not encountered in the United States although they are known to occur in China

The host range of over 100 plant species, but we tend to find it damaging sedums and astilbe the most frequently.

Our frequent hosts include azalea (*Rhododendron*), privet (*Ligustrum*), *Forsythia*, *Abelia*, *Viburnum*, *Acer*, *Morus*, *Populus*, *Lythrum*, *Campsis*, *Thunbergia*, and *Coleus*. Two-banded Japanese weevils are especially found in cherry laurel (*Prunus laurocerasus*), *Pyracantha*, *Euonymus*, barberry (*Barberis*)

A variable number of small, cream colored eggs are laid within egg pods formed on leaf margins on most plants, but tougher to do on sedum. .Egg pods are formed by adult females folding the leaf margin and pressing the edges with their legs. Fully-grown larvae are white, legless, and 7.5 to 8.5 mm.



- Twobanded Japanese weevils reproduce parthenogenetically (just females and they reproduce without males) , and males are generally not encountered in the United States although they are known to occur



Fully-grown larvae are white, legless, and 7.5 to 8.5 mm. Look for the larvae in the root zone of container grown plants in September through the fall and winter.





The weevil overwinter as adult, egg or larva, and has one generation per year (univoltine). With the approach of the warm weather in spring, the overwintering population of adult weevils become active and resume feeding. Eggs are laid from middle of May through October. Scout for the eggs on the foliage as we move into the end of summer.



Both adults and larvae cause plant damage. Adults cause defoliation, whereas the larvae live in the soil and destroy the roots. Adults chew leaf tissues at the margins and create notches. Initial damage by the overwintering population of adults is quickly masked by rapidly growing spring flushes, but severe defoliation can occur when new adults emerge.



Notching of
leaves from
adult feeding



Chemical control



- Foliar for adults :
- Acephate, (brand name Orthene)
- Dinotefuran (Safari and Transtex brand names)
- Soil drench for larvae: bifenthrin
- In container stock – *Heterorhabditis bacteriophora* beneficial nematodes

Tea scale, Tea Scale, *Fioriniidae* *theae*

Stanton Gill

Extension Specialist in IPM and Entomology

University of Maryland Extension and Professor, Landscape Technology,
Montgomery College

Camellia – major pests host for tea scale

Infested camellia in Bethesda, MD – Sept 2020





White – male covers on leaves
Brown color scale are females



Yellow foliage developing on upper leaf surface



Teas scale tends to build up heaviest on undersides of foliage

Yellow body of female
with cover removed

Light white wax coating
female covers



© Blake Layton

Tea Scale, *Fiorinia theae*

Female covers of scale



Yellow foliage develops as scale remove plant fluids and chlorophyll breaks down.



Control

- Horticultural oil 1-% during season, 2- 3% when dormant
- Altus (Bayer company)
- Ventigra (BASF company)

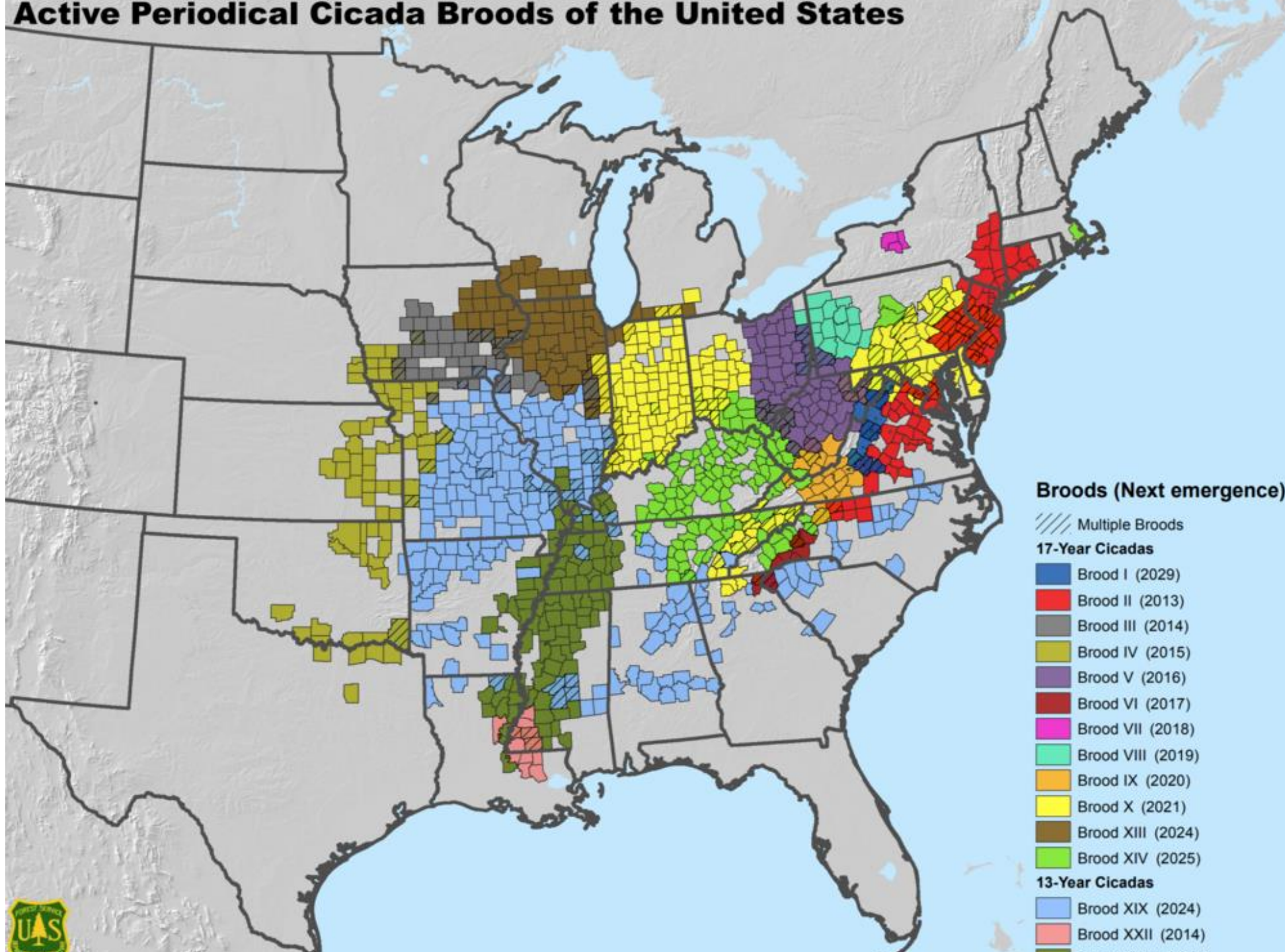


Periodical cicada

Professor Stanton Gill

Montgomery College, Landscape Technology Program

Active Periodical Cicada Broods of the United States



- *Magicicada* is the genus of the 13-year and 17-year periodical cicadas of eastern North America, consisting of seven species.
- Although they are sometimes called "locusts", this is a misnomer, as cicadas belong to the taxonomic order Hemiptera (true bugs), suborder Auchenorrhyncha, while locusts are grasshoppers belonging to the order Orthoptera





- **Periodical Cicada**

The periodical cicada (*Magicicada*), is a native North American insect species inhabiting the eastern United States and, according to Penn State University, is found nowhere else in the world.

- Periodical cicadas require either 13 or 17 years in the nymph stage, developing underground, and mature very slowly.
- They are synchronized to emerge en masse, every 13 or 17 years. Their 17-year life span makes them the longest-lived insect known.
- There are two races of periodical cicadas, which are distinguished by the time required to develop into adulthood: the 17-year cicadas, which appear in the north, and the 13-year cicadas, which appear in the south.

Outliers emerged in 2020



Several places in Maryland sent in pictures of out of sync emergence in 2020



- Periodical cicadas are not the same species as annual cicadas. Even though annual cicada nymph development cycles are also very long and variable, they are not synchronized like the periodical cicadas. Annual cicadas mature at different times, which is why we see them each year. Annual cicadas are green with black and are also larger than periodical cicadas, approximately 1½ to 2½ inches in length, and appear from July to September.



- *Magicicada* species spend almost the full length of their long lives underground feeding on xylem fluids from the roots of deciduous forest trees in the eastern United States.
- In the spring of their 13th or 17th year, mature cicada nymphs emerge in the springtime at any given locality, synchronously and in tremendous numbers.



Nymphs make hole sin
April and May, They
emerge when soil
temperatures reach 64 F



April 15, 2004 - The Taxman comes





Nymphs I that were removed from the soil



- **Periodical cicada Brood X (10) will emerge in the spring of 2021 in Delaware, Georgia, Illinois, Indiana, Kentucky, Maryland, Michigan, North Carolina, New Jersey, New York, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia, and Washington D.C.**
- The last time this brood emerged was in 2004









Periodical Cicada



Joe Boggs, OSU Extension©







Late May: Damage Occurred
Early October: Picture Taken







MARK VITOSH
IOWA DEPT. OF NATURAL RESOURCES





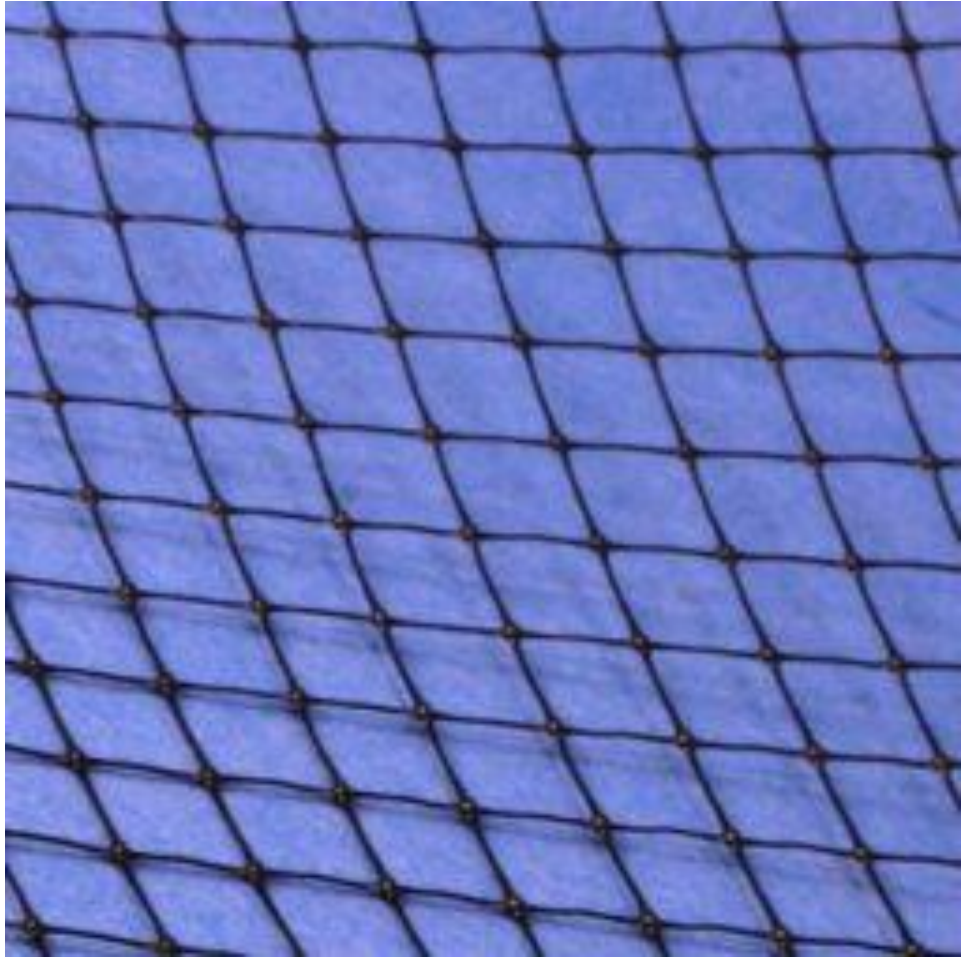
UMD-IPMnet

Cicada hit paperbark maples heavy in 2004

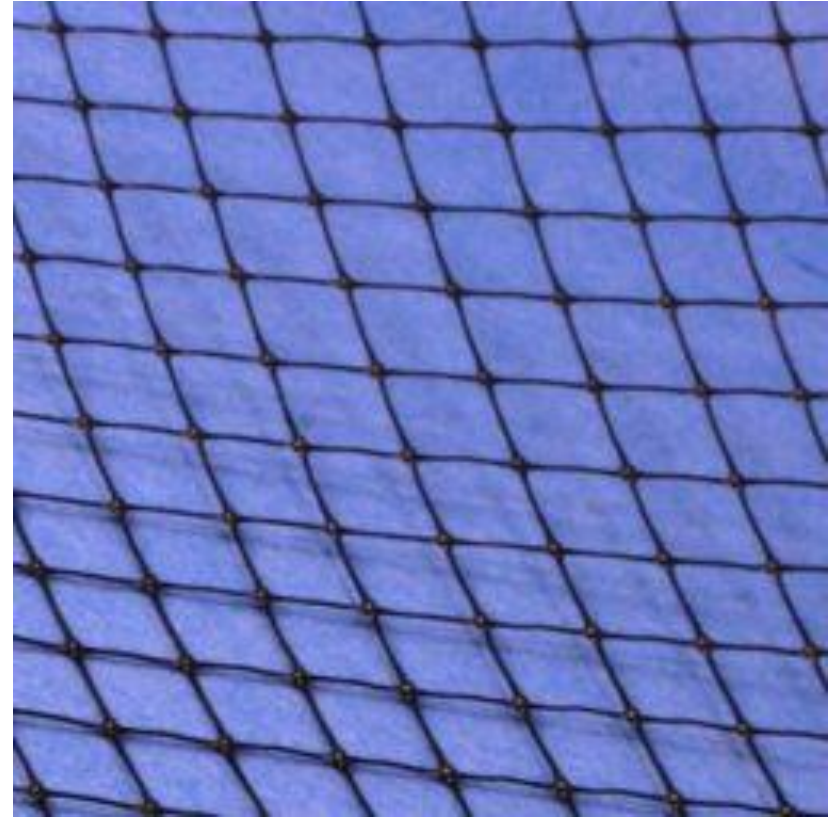


Nursery – pruning back damage





OB5340 - Cicada Control Netting
14' x 100'
\$152.15



OB5340 - Cicada Control Netting
14' x 50'
\$97.36

Japanese maple scale, *Lopholeucaspis japonica*
(Cockerell) 1897

(Order: Hemiptera, Family: Diaspididae)

Rages out of control: knowing and controlling the
enemy with an IPM approach

Researchers:

Stanton Gill¹, Brian Kunkel², Paula Shrewsbury³, Nancy Harding⁴, Charles Schuster⁵, Tom Ilvento⁶, Suzanne Klick⁷, and Ginny Rosenkranz⁸

Japanese maple scale, *Lopholeucaspis japonica*, is an armored scale that was introduced to the eastern United States in the early 20th century. Japanese maple scale is now widely distributed and difficult to manage.



JMS Host Plants (not a complete list)

- *Acer*
- *Alnus*
- *Amelanchier*
- *Betula*
- *Buxus*
- *Carpinus*
- *Camellia*
- *Castanea*
- *Celastrus*
- *Cercis*
- *Citrus*
- *Cladrastis*
- *Cornus*
- *Cotoneaster*
- *Cydonia*
- *Cytisus*
- *Diospyros*
- *Enkianthus*
- *Euonymus*
- *Fagus*
- *Fraxinus*
- *Ficus*
- *Evodia*
- *Gledetsia*
- *Ilex*

- *Laurus*
- *Ligustrum*
- *Liriodendron*
- *Magnolia*
- *Malus*
- *Menyanthes*
- *Paeonia*
- *Parrotia*
- *Paulownia*
- *Poncirus*
- *Populus*
- *Prunus*
- *Pyracantha*
- *Pyrus*
- *Rosa*
- *Salix*
- *Stewartia*
- *Styrax*
- *Syringa*
- *Tilia*
- *Ulmus*
- *Wisteria*
- *Zelkova*
- *Ziziphus*

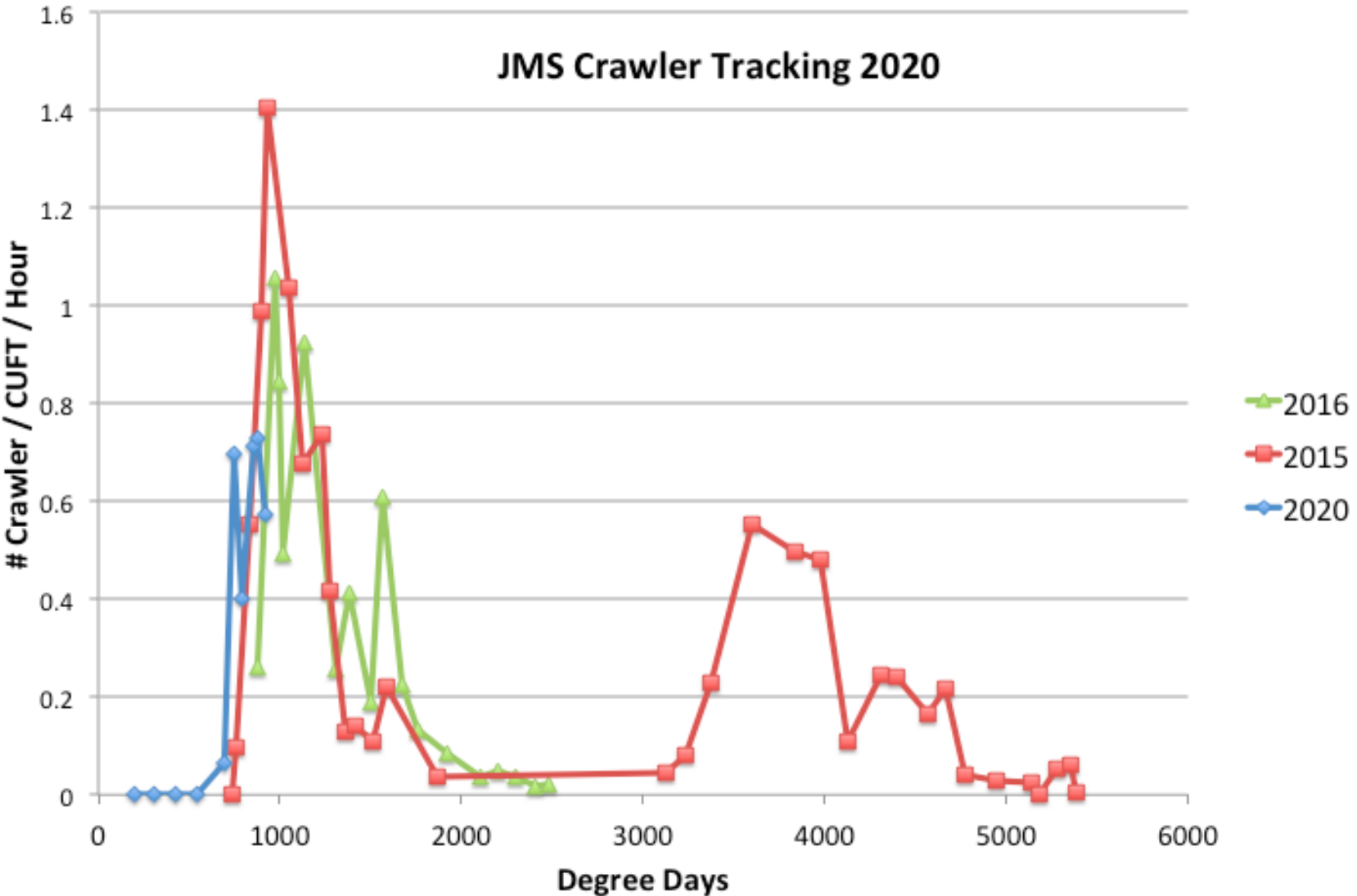
1996 (Miller & Davidson, 2005):
13 families,
16 genera

2018:
27 families,
47 genera
Many species and
cultivars within genera

Real world example:
~ 45% of the 300 plant
species and cultivars
in nursery are hosts
for JMS

* list determined from literature,
nursery surveys, and industry
reports

Japanese maple scale



Time to Chat Send an email to Sgill@umd.edu

