INSECTS

Brian Kunkel Ornamental IPM Specialist

BOXWOOD LEAFMINER are either pupae (48 – 585 [204 peak] $\rm GDD_{50}$) or have emerged as adults from 192 – 796 [366 peak] $\rm GDD_{50}$. Adults are small orange-yellow to red and gnat-like. They commonly attack *Buxus microphylla* and *B. sempervivens*; however, there are resistant cultivars such as 'Handworthiensis', 'Pyramidalis' and 'Varder Valley'. Females mate and die shortly after ovipositing eggs into boxwood leaves. These eggs hatch after three weeks and yellowish colored larvae begin to feed inside, causing a blister-like blotch to form on the undersides of leaves. Infested leaves may be slightly discolored. There is only one generation per year and larvae overwinter inside the leaves.

May 18, 2018

BOXWOOD PSYLLIDS are the other common pest found on boxwoods. They are frequently found feeding on cupped leaves at the terminal ends of twigs and branches. In April, nymphs feed and produce white wax in the cupped leaf. *Forsythia intermedia* may be in full bloom or growing degree days₅₀ are 64 -714 during the nymphal stage. There is one generation per year and most *Buxus sempervirens* are susceptible; whereas the English boxwoods are relatively resistant. Adults look like miniature cicadas and the nymphs are flattened and green.

We know little about their natural enemies. Chemical controls for leafminers may target either larvae or adults. Time products targeting adults to coincide with adult fly emergence, which may be occurring now. Make applications when weigela is in bloom. Products available include abamectin, bifenthrin or other pyrethroids, carbaryl, imidacloprid, dinotefuran, spinosad and acephate. Previous work with Casey at Longwood Gardens revealed fall soil injections of dinotefuran provided about 70% control of boxwood leafminers by two weeks whereas imidacloprid took more than three months for similar control. Insecticidal soap may be applied to control psyllid nymphs when first detected. Azadirachtin, *Beauvaria bassiana*, pyrethroids and neonicotinoids are all available chemical options for boxwood psyllids.

DISEASES

Nancy Gregory Plant Diagnostician

TIP BLIGHT OF JUNIPER caused by the fungi *Phomopsis* and *Kabatina* damages new growth and branch tips of junipers. Older, mature foliage is more resistant to infection, so most infections occur on the tips of branches or wounded areas. Affected foliage first turns dull red-brown and later gray. Gray lesions girdle branch tips and cause blighting of foliage beyond the diseased tissue, and small black fungal fruiting bodies may be seen in the (Continued)

UNIVERSITY OF DELAWARE

Issue 9

What's Hot!

Allow foliage of bulbs to remain so that plants can store nutrients. Gather with a rubber band to keep tidy.

Delaware Cooperative Extension is asking for your help in letting us know how we can better serve your needs. Responses to this survey will help us develop new programs and resources to better meet the educational needs of those living, working and recreating in Delaware.

Survey link:

 $https://delaware.ca1.qualtrics.com/jfe/for\\ m/SV_ezidFegALG8EVZX$

Roseslug sawflies are beginning to feed on foliage. They cause window panning and eventually holes where desiccated foliage drops off the plant. Hort oil (not great), pyrethroids, acephate, azadirachtin, insecticidal soap, imidacloprid, sevin, or spinosad are options for control.



Boxwood leafminer adult ovipositing. Photo credit: B. Kunkel

For more information

on pests & practices covered in this newsletter, call your County Extension Office

Helpful numbers to know:

Garden Line
(for home gardeners only)
New Castle County Extension
Kent County Extension
Sussex County Extension
Sussex County Extension

831-8862
831-2506
730-4000
856-7303

View more pictures at http://extension.udel.edu/ornamentals/

COOPERATIVE EXTENSION

Cooperative Extension Education in Agriculture and Home Economics, University of Delaware, Delaware State University and the United States Department of Agriculture cooperating. Michelle Rodgers, Director. Distributed in furtherance of Acts of Congress of March 8 and June 30, 1914. It is the policy of the Delaware Cooperative Extension System that no person shall be subjected to discrimination on the grounds of race, color, sex, disability, age, or national origin.

Diseases (Continued)

lesions. Spores of *Phomopsis* and *Kabatina* are produced throughout the spring and summer, and infection may occur on foliage when humidity is high. Plants stressed by drought or freeze injury are more susceptible to infection. The opportunistic fungus *Pestalotiopsis* can cause similar damage, and is difficult to distinguish. Regardless of causal fungus, management is similar. Prune infected twigs and branches about two inches below affected areas. Prune when plants are dry and sterilize tools between cuts. Don't over-shear, but prune and space plants to increase air circulation and reduce humidity, which favors disease. Water early in the day so foliage does not remain wet. Fungicides such as myclobutanil, mancozeb or thiophanatemethyl, applied in the spring according to the label, may help control fungal tip blight.



Symptoms of Kabatina blight on juniper. Photo credit: B Watt, Univ of Maine.

Swarthmore College PA) = 343 ('17 = 389)

Swarthmore College PA) = 343 ('17 = 415)
(Delaware County, PA) = 344 ('17 = 415)
(Delaware County) = 344 ('17 = 415)
(New Castle County)
(New Castle County) = 410 ('17 = 537)

Research & Educ. Center, Georgetown ('New Castle County) = 410 ('17 = 537)
(Sussex County) = 410 ('17 = 537)

Editor: Susan Barton

Extension Horticulturist



Boxwood leafminer adult. Photo credit: B. Kunkel