

ORNAMENTALS

• H O T L I N E •

INSECTS

May 5, 2017

Brian Kunkel
Ornamental IPM Specialist

PINE NEEDLE SCALES (PNS) are mature females, eggs or crawlers now, and we are close to peak crawler activity (crawler activity 63 - 1046 [498 peak] GDD₅₀). Crawlers are light purple to reddish until they settle and turn a light yellow with a dark line down the center. They spread by crawling, wind or birds. This scale prefers pines, especially Scotch and mugho, but may also be found on firs, Douglas-firs, and spruces. PNS, as the name implies, is found on the needles. Adults appear as white oyster-shaped scales and when populations are large, give plants a frosted appearance. Untreated heavily infested plants may cause needles to turn yellow to brownish and cause twigs or branches death. Females mate with males and lay about 40 reddish eggs during the summer at 1622 - 2745 [2053 peak] GDD₅₀. The second generation of crawlers usually begins at 1791 GDD₅₀. Another closely related scale, *Chionaspis heterophyllae* (commonly called PINE SCALE or PINELEAF SCALE), feeds on pines predominately, but has been reported on fir and spruce. The differences between the species are only noticeable under a microscope.

Natural enemies, such as the twice-stabbed lady beetle and parasitoids, attack this scale species. Treatment options for this scale include: horticultural oil, insecticidal soap, dinotefuran, acetamiprid, pyriproxyfen, buprofezin, acephate, and synthetic pyrethroids such as deltamethrin. In some cases, such as on Christmas tree farms, removal of heavily infested trees reduces the likelihood of other nearby trees becoming infested.

DISEASES

Nancy Gregory
Plant Diagnostician

THE SENTINEL PLANT NETWORK is a partnership between the American Public Gardens Association and the National Plant Diagnostic Network engaging public garden professionals and volunteers in the early detection of serious plant pests and diseases. The Sentinel Plant Network was launched in 2011 with financial support from the USDA's Animal and Plant Health Inspection Service and currently includes over 225 public gardens across North America. Participants in a regional workshop last week learned about the economic and environmental impact of plant pests and diseases, emerging threats, signs and symptoms, and the best practices for monitoring and reporting. There are educational outreach materials on the public website, sentinelplantnetwork.org, as well as through the American Public Gardens Association's [Plant Heroes®](http://PlantHeroes.org) youth education program. "Public gardens are strategically positioned to protect plants from serious plant pests and diseases by monitoring their collections and educating the public about the importance of early detection

(Continued)

UNIVERSITY OF DELAWARE

COOPERATIVE EXTENSION

Issue 7

What's Hot!

Blackened foliage on arborvitae has never been linked to a consistent cause, but we believe it is due to environmental stress. The black foliage occurs in dense areas or places where air circulation is low, does not spread, and will not harm the long term health of the shrub. Winter injury and desiccation of foliage has also been associated with black foliage, along with

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Pine needle scale in the UDBG. 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)	831-8862
New Castle County Extension	831-2506
Kent County Extension	730-4000
Sussex County Extension	856-7303

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

Diseases (Continued)

and rapid response," said Daniel Stern, the Association's Plant Protection Program Manager and Coordinator for the Sentinel Plant Network."

THRIPS have been detected damaging Nordmann fir in Chester County, causing damage to new growth, distortion, and needle loss. The thrips were not a known Pennsylvania species and were sent for further verification and determined to be *Scirtothrips* sp., but the species has not yet been determined. Therefore we have little information about its biology or pest potential. Conserve (spinosad) may help protect specimen trees. Suspect samples should be sent to DE Dept of Ag or the UD Plant Diagnostic Clinic for confirmation.

Editor: Susan Barton
Extension Horticulturist

What's Hot (Continued)

- root rot or root collar injury. Prune to increase air circulation in the plant and to remove the worst affected.
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- Both DE and MD are finding high frequency of tick activity.
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- MD has found lilac ash borers. This insect attacks ashes (and is frequently misidentified as EAB) and lilacs.
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- Eastern tent caterpillars are entering the wandering stage and may be seen on sidewalks, driveways, roads, etc... They are looking for places to pupate and are not pests at this stage. Forest tent caterpillars look similar and are also wandering to find pupation sites.
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Curling of new growth on fir due to thrips. Photo credit: N. Gregory

**GROWING
DEGREE DAYS**

AS OF May 2, 2017

- Swarthmore College (Delaware County, PA) = 311 ('16 = 291)
- Fischer Greenhouse (New Castle County) = 339 ('16 = 227)
- Research & Educ. Center, Georgetown (Sussex County) = 436 ('16 = 291)