

PENNSYLVANIA'S CHRISTMAS TREE SCOUTING REPORT

MAY 23, 2013

Weekly newsletter compiled by Sarah Pickel, PA
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This week's scouting data contributors:
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GROWING DEGREE DAY TOTALS, 5/22/13:

LOCATION	GDD TOTAL
Conoy Twp, Elizabethtown (SW), Lancaster Co.	627.5
Mount Joy Twp, Elizabethtown (NE), Lancaster Co.	418
Hallstead, Susquehanna Co.	244
Indiana, Indiana Co.*	436
Millcreek, Erie Co.**	385.5
New Cumberland, York Co.	405
New Ringgold, Schuylkill Co.	401

* Figure courtesy of www.weather.com.

** Figure courtesy of Ruth Benner, PSU Cooperative Extension, Erie.

PINE NEEDLE SCALE

The emergence of pine needle scale crawlers continues slowly this week on Eastern white pine in Cumberland, Lancaster and York Counties. Just a few burgundy-colored crawlers were found moving on the needles away from the white, oblong mother scales. The majority remain underneath the female scale covers, where egg hatch ranges from 25-75%. When the crawlers finally settle on the needles, they will lighten in color to a translucent yellow. In addition to white pine,



Figure 1: Pine needle scale settled crawlers [S. Pickel, PDA]

this scale may also be found on Scotch and Mugo pines, as well as rarely occurring on spruce, fir and Douglas-fir. Look for crawler emergence to last 2 to 3 weeks. When populations are heavy and treatment is necessary, growers may want to make two insecticide applications, with a week between. For more information on pine needle scale, visit:

<http://extension.psu.edu/ipm/program/christmas-tree/pest-fact-sheets/needle-discoloration-and-injury/pine-needle-scale.pdf/view>.

BAGWORM

In Schuylkill County this week, the cases of evergreen bagworm still contained only eggs. The time to be monitoring for is when the cream colored eggs inside these cases have hatched into brown and gray larvae. Larvae will emerge from the cases within a few days and will descend on strands of silk to move to other areas of the host tree, or to surrounding trees, in a process referred to as "ballooning." No exiting larvae were seen in northern Dauphin County or northern York County this week, however, cases that were collected from these areas last week yielded young larvae after



Figures 2&3: Above - Bagworm larvae hatching inside of casing [S. Gardosik, PDA]; Below - Silk exit strands coming from bagworm casing [S. Pickel, PDA]



just a few days in the warm environment of the lab. This means that growers could expect to see larvae very soon in their fields. It is recommended that growers open a case or two from their fields (using pruning shears) to monitor for the time of larval emergence. Insecticides for bagworm control are most effective when applied when the larvae are still small. A single application is typically effective. For more information, visit: <http://extension.psu.edu/ipm/program/christmas-tree/pest-fact-sheets/needle-discoloration-and-injury/bagworm.pdf/view>.

ELONGATE HEMLOCK SCALE

Both eggs and crawlers were found inside the protective coverings of adult females of Elongate Hemlock Scale in York and Dauphin Counties this week.



Figure 4: Elongate hemlock scale female and crawler [B. Schildt, PDA]

This means that the bright yellow, oval-shaped crawlers will soon be emerging and moving along the undersides of needles of host trees. To scout for this crawler emergence, growers should look at the preferred host trees (true firs [especially Fraser fir] and Douglas-fir), on the undersides of lower, interior twigs. The crawlers will be moving on the undersides of needles around the female scales, which are oblong, brown and very often covered with a white wax which seals them to the needles, and the male scales, which are shorter, white and covered with waxy filaments.

Traditionally, crawler emergence signals the time to begin a series of insecticide applications. The standard control application recommended by Penn State research is either a series of 3 applications with 4 weeks between each application, or 4 applications with 3 weeks between each application (trials suggest Dimethoate). Some growers, however, have tried a pre-bud break basal trunk application of Safari, as recommended by research from Connecticut's Ag Experiment Station. More information on Elongate Hemlock Scale can be found at:

<http://extension.psu.edu/ipm/program/christmas-tree/pest-fact-sheets/needle-discoloration-and-injury/elongate-hemlock-scale.pdf/view>.

FLETCHER SCALE

Fletcher scale, the soft scale pest of arborvitae, cedar and yew, was found with eggs underneath the scale covers this week in Schuylkill County. These eggs will hatch sometime in June into crawlers, which will infest new areas of the host plant. Growers of arborvitae, cedar and yew may want to scout at this time for these amber-brown, rounded scales, which will be found on the twigs. If the scales are found, the affected trees should be monitored until crawler emergence in June, so that control applications can be appropriately timed. For more information on Fletcher Scale, visit:



Figure 5: Fletcher scale on white cedar [Steven Katovich, USDA Forest Service, Bugwood.org]

<http://ento.psu.edu/extension/factsheets/fletcher-scale>.

SPRUCE NEEDLE RUST

Spruce needle rust continues to sporulate this week in much of PA, including Cumberland, Northampton and Schuylkill Counties. This means that fruiting bodies of the disease, which infects Colorado blue and Serbian spruce, are currently releasing spores to be spread through the air and infest newly expanding needles (unless those needles have been coated with a protective fungicide). The fruiting bodies can be seen on last season's needles splitting the needle surface within noticeable, yellow-orange bands which surround the needle. The time to control for this disease is when the susceptible spruce have broken bud. Fungicide applications should begin at bud break and be repeated weekly until the needles harden off or until the diseased needles have been cast. For more information, visit:

<http://extension.psu.edu/ipm/program/christmas-tree/pest-fact-sheets/needle-discoloration-and-injury/spruce-needle-rust.pdf/view>.

SPIDER MITES & ERIOPHYID MITES

Again this week, both spider mites and Eriophyid mites (rust or sheath mites) continue to be active in Northampton, Schuylkill and York Counties. If populations of these mites continue to increase beyond the treatment threshold (10+ mites per twig), growers may want to consider making another miticide application before damage is done to the new growth. While the new needles are still tender, growers may want to avoid using a horticultural oil, which could lead to damage (burn) of tender growth.

HELPFUL RESOURCES

A list of Pennsylvania's registered miticides and insecticides, entitled *2011 Insecticides and Miticides for Christmas Tree Pests*, can be found at the Penn State Christmas tree Website, <http://ento.psu.edu/extension/christmas-trees>.

A great source for in-depth pest information and scouting suggestions is the PA IPM Program publication, *Integrated Pest Management for Christmas Tree Production: A Guide for Pennsylvania Growers*, available for free download (<http://pubs.cas.psu.edu/FreePubs/pdfs/agrs117.pdf>) or for purchase from the PSU College of Ag Publications office (phone: 814-865-6713, fax: 814-863-5560, e-mail: AgPubsDist@psu.edu). Ask for publication item # AGRS-117.

The next scouting report will be available May 30, 2013.