



PENNSYLVANIA'S CHRISTMAS TREE SCOUTING REPORT

THURSDAY, MAY 21, 2015

Weekly newsletter compiled by Sarah Pickel, PA Department of Agriculture. This week's scouting data contributors: Jim Fogarty (Halabura Tree Farm), Karen Najda (PDA), Sarah Pickel, Brian Schildt (PDA), and Cathy Thomas (PDA).

GROWING DEGREE DAY TOTALS, 5/20/15:

LOCATION	GDD TOTAL
Indiana, Indiana Co.*	397.5
Montoursville, Lycoming Co.*	410
Mount Joy Twp, Elizabethtown (NE), Lancaster Co.	522.5
New Cumberland, York Co.	492.5
New Ringgold, Schuylkill Co.	529

* Figure courtesy of www.weather.com.

PINE NEEDLE SCALE

In Lancaster and York Counties this week, crawlers of pine needle scale were found to be about 10-25% hatched underneath the adult scale coverings. Only 2 crawlers (flat, round and brick red) in a



Figure 1: Pine needle scale on Eastern white pine [S. Pickel, PDA]

block of Eastern white pine were found to have actually emerged out on the needles in the York County location. This armored scale pest of Eastern white pine and Scotch pine (and occasionally other pine hosts) is generally less of a concern on Eastern white pine than it is on Scotch pine. The scale coverings of this insect pest are cottony white,

smooth and oblong. There are two generations of this pest. In mid-late May, eggs that have overwintered under the adult scale will hatch into 1st stage nymphs, or crawlers, and will begin to move from under the scale covering along the needles. They will find a place to settle and then will begin to feed and molt, developing their own covering. As is the case with other armored scales,

the best time to gain control with this pest is when the crawlers, are exposed on the needles and have not yet begun to form their protective covering. If growers notice a heavy infestation (with multiple scales per needle or needle bundle) they can apply an insecticide when the majority of crawlers have moved out from under the adult scale covering. Because of the staggered emergence, 1-2 applications may be necessary.

GYPSY MOTH

Larvae of gypsy moth were observed in Dauphin and Schuylkill Counties this week. While hardwoods species (especially oak species) are considered preferred hosts, they can feed on over 300 species.

This includes conifer species. Some damage to Colorado blue spruce and Douglas-fir has been observed in the past in Central PA. Gypsy moth overwinters in tan egg cases, found on or near host trees. The eggs hatch into caterpillars which go through several larvae stages, all of which are hairy and range from tan to dark coloration.

After feeding for over a month, the caterpillars will pupate and then turn into mottled tan (male) or cream-colored (female) moths. These mate and lay egg cases to start the overwintering process again.



Figure 2: Early instar (stage) of Gypsy moth larvae [S. Pickel, PDA]

If growers are noticing feeding damage on their conifers (or to deciduous ornamentals growing next to their conifers), an application of a Bt (*Bacillus thuringiensis* subsp. *kurstaki*) insecticide or other insecticide product where caterpillars are actively feeding will help to control this pest.

This pest is a real concern for growers who ship trees out of state. Trees cannot be moved from

counties/states inside the quarantine area to states outside of the quarantine area without a compliance agreement. The European gypsy moth is found in all the northeastern and mid-Atlantic states, as well as parts of the Midwest. View the map on this link to see what counties/states are quarantined for gypsy moth:

http://www.aphis.usda.gov/plant_health/plant_pest_info/gypsy_moth/downloads/gypmoth.pdf If growers would like to find more information about compliance agreements, they can contact their PDA plant inspector, or if they would like more information on gypsy moth and the federal regulations, visit:

http://www.aphis.usda.gov/wps/portal/aphis/ourfocus/importexport?url=wc:path:/aphis_content_library/sa_our_focus/sa_plant_health/sa_domestic_pests_and_diseases/sa_pests_and_diseases/sa_insects/sa_gypsy_moth/ct_gypsy_moth

ELONGATE HEMLOCK SCALE



Figure 3: Bright yellow Elongate hemlock scale crawlers (above), EHS damage (below) [PDA]

In Carbon, Lancaster and Schuylkill Counties, the first few crawlers of Elongate Hemlock Scale were seen moving around on the needles of Fraser fir. This armored scale pest can be found on Douglas-fir, hemlock, true firs and occasionally spruce. The scale can be found on the undersides of lower, interior branches. Symptoms include yellow spotting on the upper surface of the needles as well as white-gray wax flocking on some needles.

Underneath the needles, growers will see brown oblong female scales as well as shorter, white waxy male scales. Tiny,

bright yellow, oval shaped crawlers will be found moving around these adult scales. At this stage, it is still early to begin with insecticide applications. A greater number of crawlers should be exposed on the needles before controls are applied.

The generations for this pest can be staggered throughout the growing season so the

recommended control pattern for this is to make several applications throughout the season. Recommendations from Penn State research suggests making 3 applications, beginning at the start of crawlers and spaced with 4 weeks between each spray, or making 4 applications spaced with 3 weeks between each spray. Some growers have found that a single application of the chemical spirotetramat (Movento, Kontos) has been effective.

ERIOPHYID MITES

Sometimes by this point in the season, the weather has warmed up enough that Eriophyid mite activity slows down. In Schuylkill County this week, rust mites were still found to be active. This could activity could be drawn out because of the cooler temperatures we've been seeing in the region. Although it is later than usual to gain control, if activity is seen on other farms, application of a miticide could still prevent further damage.

ADDITIONAL RESOURCE

For a list of control options for insect and mite pests, the most recently updated list of Insecticides & Miticides for PA Christmas Tree Pests can be found at the following link:

<http://ento.psu.edu/extension/christmas-trees/publications/2013%20Christmas%20Tree%20Insecticides-Miticides.pdf>.

The next scouting report will be available Thursday, May 28, 2015.