



# PENNSYLVANIA'S CHRISTMAS TREE SCOUTING REPORT

## FRIDAY, JUNE 17, 2016

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

### GROWING DEGREE DAY TOTALS, 6/15/16:

LOCATION	GDD TOTAL
Indiana, Indiana Co.	731
Montoursville, Lycoming Co.	759
Elizabethtown, Lancaster Co.	926
New Cumberland, York Co.	958
New Ringgold, Schuylkill Co.	929

\* Figures courtesy of [www.accuweather.com](http://www.accuweather.com).

### CRYPTOMERIA SCALE

This week in Lancaster and York Counties, crawlers (or 1<sup>st</sup> stage nymphs) continued to emerge from underneath the female scale covers. While last



*Cryptomeria scale with crawlers [S. Pickel, PDA]*

week in these counties, the majority of eggs under the scale covers had still not hatched, this week underneath the scales, about 50% of what had been eggs were crawlers that would soon be emerging. In Schuylkill County, crawlers were found moving on host needles on Tuesday. Underneath the female scales, it was still mostly eggs. In Dauphin County, the crawlers were just beginning to emerge on Wednesday afternoon. There were still 90% or more eggs underneath the female scale coverings.

Damage from this armored scale pest can be severe. It is found on several species of conifers, including true firs, spruces, Douglas-fir and hemlocks. Growers who are scouting to determine if crawlers have emerged on their farms will need to use a hand lens. Select twigs which have bright

yellow speckling on the upper surface of the needles and look for oval shaped, yellow scales on the underside of needles. Scraping back the papery covering of the scale with a finger nail, the round, bright yellow female scale will be visible. If there are eggs present, they will be yellow, bean-shaped, nestled around her and <1/10 her size. Crawlers are also very small, yellow and oval shaped. These may be seen moving on the undersides of the needle, or settling in a permanent place on a needle. When this happens, they will begin to form a round, pale scale covering.

Crawlers are the stage that is vulnerable to insecticide sprays, so an application should be made when crawlers are found on foliage. Because the crawler emergence can be spread out over several weeks, it is suggested that growers plan to make at least a second application of an insecticide 7-10 days after the first application. There will be a second generations of this pest occurs early in August (GDD range of 1,750 – 2,130). If the control window is missed with the first generation, growers can attempt to get the population under control during the second generation.

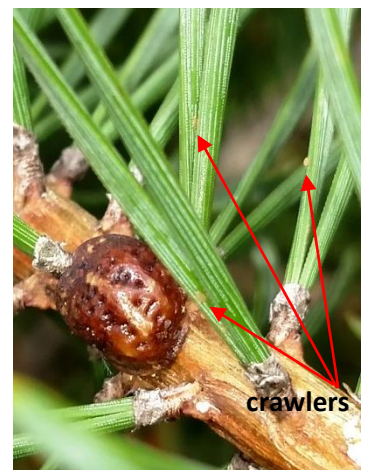
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### PINE TORTOISE SCALE

In northern Dauphin County this week, tiny, peach colored crawlers of a soft scale pest of hard needle pines were seen moving on the needles of Scotch pine. This crawler emergence of pine tortoise scale was just beginning. This round, helmet-shaped scale is rusty-brown in color and can be found on the pine twigs, often near the new growth. This scale is related to another soft scale, striped pine scale, which as the name suggests, has white stripes on the surface of the scale. In heavier populations of these armored scales, black sooty mold may also

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*Pine tortoise scale with crawlers on needles [S. Pickel, PDA]*

be found on the twigs and needles. This mold grows on the honey dew (sticky, sugary excrement) the scale produce. Control of this pest is best achieved when the majority of the crawlers have emerged from under the female scales. The scales can be flipped over to see if there are still eggs or crawlers inside of the scale. A single application of an insecticide or horticultural oil at that time should give growers good control.

**INTRODUCED PINE SAWFLIES**

Introduced pine sawflies were still found feeding on Scotch pine new growth this week in Schuylkill



Introduced pine sawfly larva [S. Pickel, PDA]

County. In addition to hard needle pines, they will also feed on Eastern white pine. Larvae are yellow with thick black stripes running the length of the body, with black heads. These larvae will eat needles down to the base and move on until a whole twig could be cleared.

When the larvae are small, they may feed in colonies like other sawflies, but as they

mature they will be solitary feeders. When mature, the larvae will pupate on branches in early July. There is a second generation that will be found feeding late August to early September. If the population is heavy enough to warrant control, an insecticide can be applied when larvae are still feeding.

**FLETCHER SCALE**

This week in Schuylkill County, about 50% of eggs were hatched into crawlers inside Fletcher scales on Arborvitae. This soft scale pest of many common landscape conifers including arborvitae, cedars, hemlocks, juniper, and yew is amber colored and helmet shaped. The crawler emergence may



Fletcher scale and crawlers [S. Pickel, PDA]

begin soon. When the tiny, oval, peach-colored crawlers are found settling on foliage, an insecticide or horticultural application can be made to achieve control.

**HEMLOCK WOOLLY ADELGID**

Another insect that is not a pest of Christmas trees, but may be found on hemlock trees, which many



Hemlock woolly adelgid nymphs on new growth [PA DCNR - Forestry, Bugwood.org]

Christmas tree growers also plant, is the hemlock woolly adelgid. Hemlock woolly adelgids get their name from the white clusters of wool-like filaments that they produce to protect themselves. An infested branch will appear to

have tiny cotton balls along the underside of the twigs. Underneath these masses, dark, oval-shaped adelgids are feeding on the plant juices. This feeding causes a general discoloration and decline of the tree. At this time in Schuylkill County, the exposed, black adelgid crawlers can be seen at the base of the needles. This is the second of two generations that occur each growing season. To achieve control in the nursery setting, growers can apply an insecticide spray or horticultural oil. For control of adelgids on large landscape plantings, other insecticide methods, such as soil drenches or trunk applications, may be necessary.

**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 Friday, June 24, 2016.