

PENNSYLVANIA'S CHRISTMAS TREE SCOUTING REPORT

2010 Special Report: August 18, 2010

Subject: Cryptomeria Scale, second generation

Newsletter compiled by Sarah Pickel, PA Department of Agriculture.

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It's time again for growers to be thinking about the insect pest Cryptomeria scale. The bright yellow, oval-shaped, 2nd generation nymphs, or "crawlers," were beginning to emerge this week on Fraser fir in New Ringgold, Schuylkill County [Fig 1]. The emergence was still light because, the majority of the adult scales still had unhatched eggs beneath their waxy scale covers. Over the next week, the amount of scale crawlers on the foliage should increase.



Figure 1: Adult scale (1), settled crawler (2), and moving crawler (3) [S. Pickel/PDA]

The crawlers are the only stage that can be found on the surface of the needle without a scale covering. Because of this exposure, the crawler stage is the one stage that is best controlled with a contact insecticide or horticultural oil. Over the next week, growers should be monitoring their scale populations to determine how heavy it is.

This pest can be found on many conifer hosts, but prefers the true firs. To monitor for this pest, look for trees with yellow spotted needles on the bottom of the tree, close to the trunk [Fig. 2]. On the undersides of these needles, there will be oval, flat, yellow-pale colored adult scales [Fig. 1]. To determine if scales still have eggs underneath them, growers can scrape off the scale

coverings with a fingernail and use a hand lens to look for bright yellow, jelly bean shaped eggs [Fig. 3]. The crawlers will be bright yellow also, but will be oval shaped and will be outside of the adult scale covering.

Typically, the scale crawlers will emerge over a Growing Degree Day (GDD) range of 1750 – 2130. This years numbers are much higher. In Schuylkill County, Cryptomeria crawlers were found when the GDD total was 2268. The total in New Cumberland, Cumberland County was 2599.5 GDD, and in Elizabethtown, Lancaster County, the total was 2738 GDD. A possible reason that Cryptomeria scale crawlers emerged later on the GDD scale could be a delay caused by dry weather.



Figure 2: Yellow speckling is a symptom of Cryptomeria scale feeding [S. Gardosik/PDA]



Figure 3: Female scale (cover removed) with eggs [S. Gardosik/PDA]

Growers should start with one application of insecticide or horticultural oil (Be sure to follow application instructions on the label to avoid oil or chemical burn to the foliage.). A few days following the application, monitor the scale population again to determine if another spray is necessary.

One last note: An issue that many growers may be facing this year is heat or drought stress to their trees. This stress causes a browning of the foliage, especially on the southwestern side of the trees. I have been hearing from many growers that this has been a common problem on their farms this year. Shearing may help to remove some of the damaged foliage and next years growth should also cover up some of the damage.



Figure 4: Heat stress to spruce
[R. Bates/PSU]

The 2010 *Insecticides and Miticides Update for PA Christmas Tree Pests* can be found at the site: <http://ento.psu.edu/extension/christmas-trees/scouting-reports>.