

# PENNSYLVANIA'S CHRISTMAS TREE SCOUTING REPORT

2011, Report 4: April 13, 2011

Weekly newsletter compiled by Sarah Pickel, PA  
Department of Agriculture.

This week's report includes data from Jim Fogarty (Halabura Tree Farm), Susan Newhart (Acadia Tree Farm), Tracey Olson (PDA), Brian Schildt (PDA), and Cathy Thomas (PDA). The links included in several paragraphs lead to fact sheets from the new PA IPM Program publication, *Integrated Pest Management for Christmas Tree Production*. Those interested in purchasing this publication can call the PSU College of Ag Publications office at 814-865-6713, fax them at 814-863-5560 or send an e-mail to [AgPubsDist@psu.edu](mailto:AgPubsDist@psu.edu) and ask about publication item # AGRS-117.

As of April 12<sup>th</sup>, growing degree day (GDD) accumulations were 54.5 in both Elizabethtown, Lancaster County and in New Cumberland, Cumberland County, 36.5 in New Ringgold, Schuylkill County, and 8 in Montrose, Susquehanna County. Ground temperatures in New Ringgold, Schuylkill County have been holding steady at 50° F this week.

As of last Friday in southern York County, spruce spider mite eggs on Fraser fir had not hatched and as of this

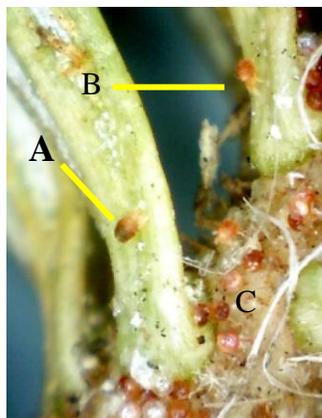


Figure 1: Spruce spider mites: adult (A), nymph (B), and Egg (C) [B. Schildt, PDA]

morning in New Ringgold, Schuylkill County, spider mite eggs on arborvitae had not hatched. The GDD range at which the eggs hatch is 50-121, so in counties that have passed 50 GDD, growers could see spider mite hatch any day now. Fraser fir and arborvitae are two of the preferred hosts of spruce spider mite, but they can be found on many conifer species (spruces, true firs, and others). When looking for spider mites, look at the interior branches of a tree, near the base, for twigs with a yellow or brown discoloration near the bases of the needles. On the underside of symptomatic twigs, growers can find

round, red overwintering eggs. [Fig. 1] After mites have hatched out of the eggs, the eggs will be clear. Mites first hatch as red nymphs with 6 legs. Mature mites are red and brown, have 8 legs and are covered with hairs. If the population is high, control can be achieved by applying a horticultural oil or miticide after the majority of overwintering eggs have hatched. For more spider mite control information, visit:

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

Balsam twig aphid stem mothers were found on Fraser fir foliage this week in Schuylkill County. [Fig.2] The



Figure 2: Balsam twig aphid stem mother [PDA]

aphids were starting to hatch last Wednesday in York County. When scouting for this pest of all true firs, look on the outer twigs of trees that had the typical twisted-needle damage last season. [Fig. 3] On these outer twigs, the gray-green, sometimes waxy looking stem mothers will be found on the under-

sides of the needles. Often they will have a shiny droplet of honey dew (or excrement) extending from their abdomen. The damage caused by these aphids is primarily aesthetic, so if trees are more than two years away from sale and damage is light, control from natural predators (lady beetles, lacewing larvae, etc.) may be adequate. If damage was high last season and the trees are two years or less away from sale, then growers may want to use horticultural oil or an insecticide to achieve control. The key to controlling balsam twig aphid is to make sure that chemical controls are applied after the eggs hatch, but **before** bud break begins. As soon as buds open, stem



Figure 3: Balsam twig aphid damage [PDA]

mothers will give birth to live nymphs, which will feed inside the opening buds on the developing needles. This feeding will cause the needles to become kinked and stunted. Find more on balsam twig aphid at: <http://extension.psu.edu/ipm/program/christmas-tree/pest-fact-sheets/needle-discoloration-and-injury/balsam-twig-aphid.pdf/view>.

In New Ringgold, Schuylkill County and southern and western York County, white pine weevil adults were still



**Figure 4: White pine weevil adult [R. Lehman, PDA]**

being found in traps this week. [Fig. 4] The weevils have been seen for several weeks now, so growers could expect them to lay eggs any day now. When the mottled brown and white spotted adults lay their eggs inside the tree leaders, the eggs will hatch inside the tree as larvae.

These larvae will tunnel

down and around the cambium, or inner bark, tissue of the leader, cutting off nutrient flow to the top and killing the leader. This damage is what leads to the recognizable "shepherd's crook" symptom. [Fig. 5]

Once the eggs are laid inside the leaders, the damage cannot be avoided. It may be difficult to find time to spray with all the rain we've seen in Pennsylvania for the past week. When growers find a break in the rain, they may want to make an insecticide application, if they've found weevils in



**Figure 5: "Shepherd's crook" damage [S. Gardosik, PDA]**

traps on their farms. For information, visit: <http://extension.psu.edu/ipm/program/christmas-tree/pest-fact-sheets/shoot-and-branch-injury/white-pine-weevil.jpg/view>.

Lastly, on Douglas-fir clippings brought in last week to the plant pathology lab from Allegheny County, needles infected with Rhabdocline needle cast were beginning to swell. Rhabdocline fruiting bodies will be ready to release spores when Douglas-fir bud break occurs.

While we are still possibly a few weeks away from bud break, growers should be prepared to make their fungicide applications for needle cast when bud break does begin. Needle cast infections thrive in wet conditions, so during a wet spring like we're experiencing, regular fungicide applications will be important to prevent infection of this year's new growth. Look for more information on Rhabdocline and swiss needle casts in future reports. More info can also be found at the following links:

- *Rhabdocline Needle Cast*:

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

- *Swiss Needle Cast*:

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

A list of insecticides and miticides registered for use in Pennsylvania, prepared by PA IPM Program scouting consultant, Brian Schildt, can be found on the Penn State Christmas tree website (<http://ento.psu.edu/extension/christmas-trees>).

The next scouting report will be available April 20, 2011