



PENNSYLVANIA'S CHRISTMAS TREE SCOUTING REPORT

FRIDAY, APRIL 7, 2017

Weekly newsletter compiled by Sarah Pickel, PA
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GROWING DEGREE DAY TOTALS FROM 4/6/17:

LOCATION	GDD TOTAL
Elizabethtown, Lancaster Co.	87
Indiana, Indiana Co.	92.1
Montoursville, Lycoming Co.	43.5
New Cumberland, York Co.	120.5
New Ringgold, Schuylkill Co.	48.5

* Figures courtesy of www.accuweather.com.

BALSAM TWIG APHID

A common pest of true firs was observed in southern York County this week. Stem mothers of balsam twig aphid were active on Fraser fir. The hatching of these first-generation aphids typically occurs within the range of 30-100 GDD. These aphids have hatched from the overwintering eggs. There were still some eggs found to be unhatched. The newly hatched stem mothers will feed on last season's needles. This feeding doesn't cause much damage,



Balsam twig aphid stem mother [S. Pickel, PDA]

but when bud break of firs begins, these stem mothers will give birth to nymphs that will enter the opening buds and begin feeding on the newly expanding needles. This feeding will cause the needles to curl and this damage is not reversible.

When scouting for the balsam twig aphid, a hand lens is necessary. The overwintering eggs will be found on the twigs, tucked in at the bases of needles. They will most commonly be found on the

outer two inches of growth and on undamaged twigs located next to twigs with damage. The eggs are football shaped and covered in fine silver filaments. The stem mothers which hatch from these eggs are pale green, wingless and waxy. They often will have a clear bubble of 'honey dew' or excrement at their posterior. If growers are having difficulty finding aphids on the foliage, an easy scouting technique is to hold a paper plate under symptomatic foliage and tap the foliage to dislodge any hatched aphids onto the plate. A hand lens will be helpful to see aphids moving on the plate.



Balsam twig aphid egg [S. Pickel, PDA]

To prevent damage from this pest, growers who have had damage in the past should apply a horticultural oil or insecticide after most of the eggs have hatched, but before bud break.

For more information, visit:

<http://extension.psu.edu/pests/ipm/program/christmas-tree/pest-fact-sheets/needle-discoloration-and-injury/balsam-twig-aphid.pdf/view>.

WHITE PINE WEEVIL MONITORING

White pine weevils were found in two traps this week: a trap in southern York County and Schuylkill County. Most locations in Pennsylvania are beyond the 7-58 GDD starting range for adult weevil emergence. Another indicator for the emergence of this pest is ground temperatures. When soil temperatures rise above 50°F, these weevils will begin to be found. This week temperatures collected in Dauphin, York, Cumberland and

Schuykill, the soil temperatures had risen above 50°F. Growers can expect to be finding weevils in their traps as this week's temperatures continue to warm up.

For growers who are using the pyramidal traps (Whalon Modified Tedder's traps available at www.greatlakesipm.com) to monitor for white pine weevil, it is important to remember to keep the bait vials filled with ethanol and turpentine. These attractants are essential drawing the weevils into the traps, but the ethanol will eventually evaporate if not regularly refilled.

Growers who are not trapping for this pest may still be able to see weevils in their fields. On warm, sunny days like today, weevils may be found on leaders of host trees feeding on sap or mating. Those trees are pines, especially eastern white pine, spruces, especially Serbian and occasionally Douglas-fir. These weevils are approximately ¼ inch in size and are brown in color, with white and rust colored spots on the lower portions of their wing covers (or elytra).



Figure 1: White pine weevil adult on spruce leader [S. Gardosik, PDA]

After emerging and moving to the leaders of the trees, the weevils will feed and mate for a while, but after about a week, they can begin to lay eggs in the leader. After this happens, the damage will be inevitable, so it is important to make any pesticide applications before egg laying begins, or in less than a week after weevil emergence on your farm. Insecticides can be applied to the top third of the trees. If weevils continue to be found in traps several days after the first application, growers may want to consider making a second application 7-10 days after the first.

For more information on white pine weevil visit: <http://extension.psu.edu/pests/ipm/agriculture/christmas-tree/pest-fact-sheets/shoot-and-branch-injury/white-pine-weevil.jpg>.

ERIOPHYID MITES

In Schuykill and York Counties, hatched Eriophyid mites (also called rust mites) continue to be found on the foliage of Colorado blue spruce. These mites began emerging a few weeks ago, as the



Rust mites on spruce. [S. Pickel, PDA]

GDD range for the start of egg hatch is 7-22. Activity of these cool season mites peaks in the spring and decreasing as the warmer temperatures of summer arrive. A lot of foliage damage can occur within that peak cool season activity. Look for twigs that have a rusty or gray discoloration. This damage is caused by the

rust mites sucking on the plant fluids. Hatched mites are somewhat cone shaped and will be peach or off-white in color. A hand lens is needed to see both the mites and the overwintering eggs, which are even smaller and will be clustered together on the undersides of needles, very close to the needle bases. Eggs are salmon colored or off-white.

If mites are found on 80% of the twigs sampled, then a control action may be necessary. When most of eggs have hatched (hatched eggs will be transparent) and there is no risk of freezing temperatures, growers can apply a horticultural oil (prior to bud break) or a miticide with rust mites listed on the label. It isn't advisable to apply a horticultural oil to blue spruce because it can affect the blue coloration. For more information on this pest, visit:

<http://extension.psu.edu/pests/ipm/agriculture/christmas-tree/pest-fact-sheets/needle-discoloration-and-injury/eriphyid-rust-sheath-mites.pdf>.

For more information on white pine weevil visit: <http://extension.psu.edu/pests/ipm/agriculture/christmas-tree/pest-fact-sheets/shoot-and-branch-injury/white-pine-weevil.jpg>.

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ADDITIONAL RESOURCE

More information on Christmas tree pests and production is available at the PSU Department of Entomology's Christmas tree site:
<http://ento.psu.edu/extension/christmas-trees>.

The next scouting report will be available Friday, April 7, 2017.