

# PENNSYLVANIA'S CHRISTMAS TREE SCOUTING REPORT

## MARCH 22, 2013

Weekly newsletter compiled by Sarah Pickel, PA  
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### GROWING DEGREE DAY TOTALS, 3/19/13:

LOCATION	GDD TOTAL
Conoy Twp, Elizabethtown (SW), Lancaster Co.	3.5
Mount Joy Twp, Elizabethtown (NE), Lancaster Co.	0
Hallstead, Susquehanna Co.	0
New Cumberland, York Co.	0
New Ringgold, Schuylkill Co.	1

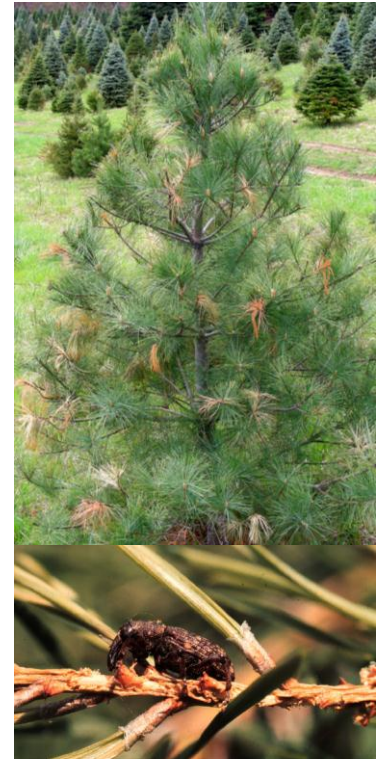
This is the first scouting report of the 2013 Christmas tree growing season. Weekly scouting reports will be published through the end of June. These reports will contain information on current pest activity in Central PA. Some information from other PA regions will also be occasionally featured. Reports will also feature pest life cycle information, management options for these pests, and growing degree day (GDD) totals from several PA locations. Growing degree days (GDD) are a measurement of heat accumulations during a 24 hour period and insect activities throughout the season (such as emerging from overwintering sites, laying eggs, nymphs hatching, etc.) correspond to various ranges of GDD. If growers are interested in tracking the GDD accumulation on their own farm, more information can be found at:

<http://extension.psu.edu/ipm/program/christmas-tree/ipm-basics/Step3.pdf/view>.

### PALES WEEVILS

This past Tuesday, March 19<sup>th</sup>, a Pales weevil was found in a pyramidal (Tedders) emergence trap in Elizabethtown, Lancaster County. This early

spring pest, a mottled brown beetle with the distinctive long weevil snout causes flagging of lateral branches of Eastern white and Scotch pines (and occasionally other hosts) by chewing on the tender bark of last season's twigs. Pales weevils need fresh stumps of Scotch pine to complete their life cycles, so removal of Scotch pine stumps or treatment of the stumps with a registered insecticide before the weevils can lay their eggs (7-121 GDD) can prevent a problem with this pest. Typically, this weevil will be found in emergence traps around the same time as White pine weevils and Eastern pine weevils.



Figures 1&2: Above: Pales weevil feeding damage to Eastern white pine [B. Schildt, PDA]; Below: Adult Pales weevil [R. Lehman, PDA]

### WHITE PINE WEEVILS

The white pine weevil is a major pest of concern for Christmas tree growers because of the type of damage that they can cause. This small (about 1/4") brown beetle with white and rust colored spots lays its eggs in the leaders of host trees (pines, spruces, especially Serbian Spruce, and occasionally Douglas-fir), which leads to larval feeding inside of the leaders causing them to wilt and die. This "shepherd's crook" [Fig. 2] damage should be removed and a new leader retrained, or the tree could be permanently stunted.

At this time, growers who have had a problem with damage from the white pine weevil in the past should be monitoring for the weevils'

emergence from overwintering sites underneath host trees using emergence traps. The traps, which are known as Whalon modified Tedders



Figures 3 & 4: Above: Tedders trap [S. Pickel, PDA]; Below: White pine weevil adult [PDA]

traps, can be ordered on-line from Great Lakes IPM ([www.greatlakesipm.org](http://www.greatlakesipm.org)) or can be constructed using instructions found here: <http://extension.psu.edu/ipm/program/christmas-tree/appendixes/insect-traps.pdf/view>. The traps are baited with vials of turpentine and denatured alcohol to simulate the chemicals emitted by a wounded tree. When GDD totals fall in the range of 7-58 GDD, white pine weevil adults can be found in the traps. Tracking ground temperatures will also help to determine the time of emergence. Weevils will emerge from overwintering sites when ground temperatures average 50°. Traps should be placed next to previously infested trees, preferably in a location with southern exposure. Traps should be monitored several times a week. Growers can also scout host trees to look for weevils feeding on leaders. Weevil feeding results in clear bubbles of sap, which are noticeable when scouting on sunny days.

As of this week, there were no white pine weevils found in traps in Lancaster, Schuylkill and York Counties. When weevils are found on a farm, control measures should be taken to prevent damage. An appropriate insecticide should be applied to the upper 1/3 of the trees after weevils are found in the traps, but before they've had a chance to mate and lay eggs. This can happen within 2 weeks of emergence, so growers need to

apply the insecticide product before those two weeks have passed. It may be wise for growers to apply a second application if weevils continue to be found in traps after the first application.

### ***ERIOPHYID (RUST) MITES***

At various scouting locations in York and Lancaster, no rust mite activity was observed this week, however these tiny mites may soon be seen moving about on the foliage of their various hosts in Central PA. Hosts trees of this pest include spruces, firs, hemlocks and pines (called sheath mites when found on pines). Eriophyid mites are cool season mites, hatching from their overwintering eggs very early in the spring (around 7-22 GDD).

To scout for these mites a hand lens of 16X magnification or higher is necessary. Begin by looking for foliage that has a rusty, silver or faded appearance on spruces, firs and hemlocks. On pines, symptoms are yellowed and sometimes stunted needles. The overwintering eggs are faintly salmon colored, about the size of needle stomates, and are clustered together at the base of a needle. When they hatch, the mites are triangular and elongated in shape and peach to off-white in color. In addition to discoloration, Eriophyid feeding damage can affect tree vigor when severe. If the mite population is heavy, consider treating with a miticide. Carefully check to make sure that Eriophyid mites (or rust & sheath mites) are mentioned on the miticide label, as not all miticides are effective against eriophyid mites. For more information, visit: <http://extension.psu.edu/ipm/program/christmas-tree/pest-fact-sheets/needle-discoloration-and-injury/eriophyid-rust-sheath-mites.pdf/view>.



Figure 5: Eriophyid mite eggs on spruce [R. Lehman, PDA]

### ***SUGGESTED SCOUTING ACTIVITY***

While growers are getting back into their tree fields to select trees for digging or to assess field conditions, it would be good to remember to keep an eye out for disease symptoms that would have intensified over the winter. On Douglas-fir, both Rhabdochloa and Swiss needle casts may be more visible and on Colorado blue and Serbian spruces, discoloration from spruce needle rust may be more obvious. Making notes about damage from these and other diseases at this time can help a grower to be prepared for the fungicide applications that may be necessary to make at the time of bud break.

### ***HELPFUL RESOURCES***

A list of Pennsylvania's registered miticides and insecticides, entitled *2011 Insecticides and Miticides for Christmas Tree Pests*, can be found at the Penn State Christmas tree Website, <http://ento.psu.edu/extension/christmas-trees>.

For growers who are interested in finding information on scouting techniques, the PA IPM Program publication, *Integrated Pest Management for Christmas Tree Production: A Guide for Pennsylvania Growers* is available for free download as a PDF at <http://pubs.cas.psu.edu/FreePubs/pdfs/agrs117.pdf>. This publication may be purchased by calling the PSU College of Ag Publications office at 814-865-6713, faxing them at 814-863-5560 or sending an e-mail to [AgPubsDist@psu.edu](mailto:AgPubsDist@psu.edu) and asking about publication item # AGRS-117.

The next scouting report will be available March 27, 2013.