



PENNSYLVANIA'S CHRISTMAS TREE SCOUTING REPORT

FRIDAY, APRIL 14, 2017

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

GROWING DEGREE DAY TOTALS FROM 4/13/17:

LOCATION	GDD TOTAL
Elizabethtown, Lancaster Co.	134.5
Indiana, Indiana Co.	119.5
Montoursville, Lycoming Co.	84
New Cumberland, York Co.	174.5
New Ringgold, Schuylkill Co.	99

* Figures courtesy of www.accuweather.com.

SPRUCE SPIDER MITES

In Carbon, Schuylkill, and York Counties this week, hatched spruce spider mite nymphs and adults



Spruce spider mite nymphs and adult (dark) [S. Pickel, PDA]

were found moving along the twigs of Fraser fir and arborvitae. In Carbon and Schuylkill County, most of the red overwintering eggs were still not hatched, while in York County, about 25%

of the eggs were hatched. Hatching typically occurs within a range of 50-121 GDD. Spruce spider mites can be found on spruce, true fir, arborvitae, Douglas-fir and occasionally other conifer hosts.

These mites cause a yellowing or browning of foliage beginning from the base of the needles

outward. In heavy populations, they will also develop a fine webbing that will surround the needles and twigs. The feeding from these mites will weaken the tree and can lead to needle drop. Spruce spider mite damage typically begins on the interior branches and moves outward. Using a hand lens, look for the red overwintering eggs to be scattered along the underside of the twigs. When nymphs first hatch, they will be red orange and will have 6 legs. As they mature, the bodies will darken to brown or dark green and they will have 8 legs. Application of a miticide or horticultural oil should be made after the majority of the overwintering eggs have hatched. (Hatched eggs will appear clear.) It is better to take control measures before the new foliage has broken to prevent damage to the new needles.

BALSAM TWIG APHID

The pale green stem mothers of Balsam twig aphid continued to feed on foliage of Fraser firs this week in York County, but were not found in Schuylkill County.

These aphids will only be found on true firs, where damage is easily recognizable as a twisting or kinking of last season's new needles. As true fir bud break draws near, stem mothers will give birth to live young, which will move into the opening buds and begin to feed on the newly developing needles. This is what causes the damage. Once the aphids move inside the buds, control measures will not prevent damage.



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

The best time to control balsam twig aphid is after the stem mothers have hatched, but before bud break occurs and aphid nymphs have had a chance to slip inside the developing buds. Control can be

achieved with one application of horticultural oil or of a traditional insecticide made after the majority of the eggs have hatched. 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>

WEEVIL PESTS

More weevils were found in the fields this week. Weevils are a type of beetle which have a long



Above: Pales weevil damage; Below: Pales weevil (top) and white pine weevil (bottom) [S. Pickel, PDA]



skinny snout. In Lancaster County, in addition to finding white pine weevils in traps, **Pales weevils** have also been found. Pales weevils are mottled brown beetles that are larger than white pine weevils. These weevils chew on the bark of lateral branches of host trees (pines species mostly, but occasionally Douglas-fir, spruce and true fir) which causes a flagging, or browning, of these side branches. If growers have noticed this flagging damage on their farms and are catching pales weevils in emergence traps, they could take control action. One option is to expand a planned white pine weevil control

spray cover the whole trees, instead of just covering the upper 1/3 of the trees (all that is needed to target white pine weevil). Another option is to remove last season's Scotch pine stumps or treat the stumps with an insecticide, because Pales weevils lay their eggs in the fresh stumps of Scotch pines (7-21 GDD).

White pine weevils continued to be found this week. To date, they've been reported in Lancaster, Schuylkill and York Counties. Since most locations in PA have moved beyond the 7-58 GDD starting range for white pine weevil emergence and soil temperatures taken in sampling locations have risen 50°F, the weevils have probably emerged in most areas of the state. These 1/4-inch brown beetles with white and rust colored spots on the lower portions of their wing covers may be found feeding, mating or laying eggs on the leaders of host trees (pines, especially eastern white pine, spruces, especially Serbian and occasionally Douglas-fir).

To prevent dieback of tree leaders (the damaged caused by weevil larvae feeding), it is important to make any insecticide applications before adults can begin laying eggs inside the leader, which occurs about a week after weevils emerge. 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>.

FIRST SIGNS OF DOUGLAS-FIR BUD BREAK

Small Douglas-fir trees in Lancaster today were showing the early signs of bud break: swelling and lightening in color, with just a very small percentage (1%) showing a slight opening at the tip. Growers should keep a close eye on these buds over the next week and be prepared to make their fungicide applications for Rhabdocline and Swiss needle cast diseases and insecticide applications for Douglas-fir needle midge.

PINE BARK ADELGID

This week in Schuylkill County, there were eggs found waxy coverings of pine bark adelgid, which are found at the base of Eastern white pine buds or candles (occasionally may be found on Austrian or Scotch pine). Eggs will soon be hatching. The adelgid nymphs will make their way up the expanding candles to find a place to settle. Once settled, they will form the recognizable white, waxy covering. In severe infestations, these adelgids may be found clustered along the main trunk of

hosts. For growers who have a problem with this pest, an insecticide may be applied when the majority of eggs have hatched.



Pine bark adelgid adult with eggs (covering scraped away) [S. Pickel, PDA]

For more information on this pest, visit:
<http://extension.psu.edu/pests/ipm/program/christmas-tree/pest-fact-sheets/shoot-and-branch-injury/pine-bark-adelgid.jpg/view>.

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 21, 2017.