

Vermont Forest Health

Insect and Disease Observations

Department of Forests, Parks & Recreation
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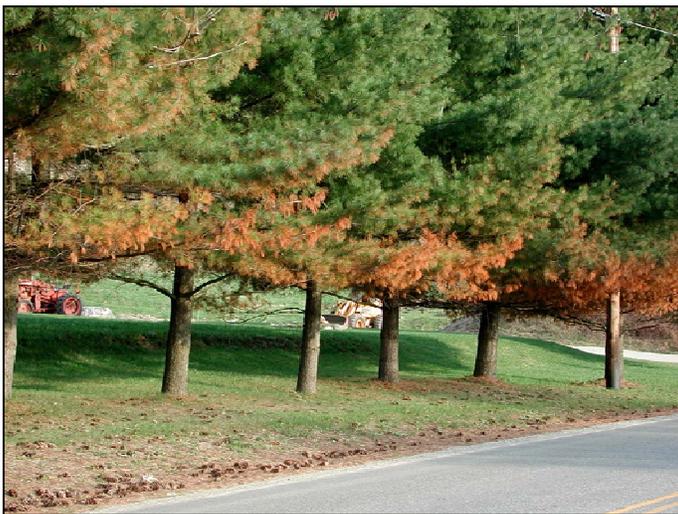
Diseases

Scattered white pines throughout the state are showing symptoms of **white pine needlecast** again this year, although the damage, to date, is not as severe as it was in 2010. This has been common in northern New England and eastern Canada, thanks to wetter-than-normal springs for the past few years.

One-year old needles may be straw-colored to brown, especially on lower branches. When examined closely, the bases of symptomatic needles are usually green, and symptoms vary between needles in a single fascicle. All sizes of trees can be involved, though the tops of larger trees are rarely affected. Symptom severity varies considerably, even between adjacent trees.

A small percentage of the trees that had heavy damage in 2010 have higher than normal mortality of lower branches. Otherwise, current year shoots are growing normally. Although many look thin, and tree growth may be reduced, we don't expect severe impacts on affected pines.

A variety of fungi have been associated with the disease; however, we can't attribute the disease to a single pathogen at this time. Fungi on pine needles collected throughout the region this spring are being identified by the US Forest Service to help narrow down the causal agents involved.



Salt damage to white pines. Photo: R. Kelley

Salt damage to roadside pines made *Seven Days*:
<http://www.7dvt.com/2011brown-trees-interstate>

Rhizosphaera needlecast is once again abundant on blue and white spruce in many locations.

<http://umaine.edu/ipm/ipddl/publications/5104e/>



Blue spruce with Rhizosphaera. Photo: R. Kelley



Symptoms of Sirococcus shoot blight include this drooping needle syndrome. Photo: J. O'Brien

Sirococcus shoot blight, *Sirococcus conigenus*, was confirmed on red pine samples from Williamstown and Chelsea, as well as a spruce sample from Chelsea.

<http://imfc.cfl.scf.rncan.gc.ca/maladie-disease-eng.asp?geID=409>

Fir-fern rust is starting to be noticeable now.

<http://www.plantpath.cornell.edu/Trees/Firfern.html>

Anthracnose is widespread throughout Vermont. It won't kill your trees and no treatment is necessary. For more, see http://www.vtfor.org/protection/documents/VTForestHealthUpdate_Anthraco.pdf

Spring rains have prompted the horn-like structures, called telia, to emerge from galls on *Juniperus* hosts in the condition known as **cedar apple rust**.

<http://orchard.uvm.edu/uvmapple/pest/BacktoBasics/Diseases.htm#CedarAppleRust>

Brown rot on stone fruit, caused by fungi that require an extended period of wetness to cause infection, has been reported from some areas. <http://www.uri.edu/ce/factsheets/sheets/stonefruitbrownrot.html>

Insects

Pear thrips counts on yellow sticky traps from the monitoring site at Proctor Maple Research Center in Underhill were very low. Tom Simmons, who monitors the traps, reported that the week from April 21st to April 29th was the only week with what could be called an emergence...nearly 50 thrips per card. Since that week, there were only about 3 thrips per card. For the seven week total for all four cards, there were only 243 thrips and 191 came from that one week. Very minor thrips damage has been observed. <http://www.forestpests.org/vermont/pearthrips.html>

Young gypsy moth caterpillars have been observed at a handful of sites, including on poison ivy leaves in Quechee State Park.. <http://www.forestpests.org/vermont/gypsymoth.html>

There are noticeably few **eastern tent caterpillar** nests. <http://www.forestpests.org/vermont/eastertentcaterpillar.html>

With recent regional increases in **spruce budworm populations** in eastern Canada, we are once again deploying pheromone traps to keep track of the trend in Vermont. As in 2010, spruce budworm traps have been deployed in Orleans, Caledonia, Essex and Chittenden Counties.

<http://imfc.cfl.scf.rncan.gc.ca/insecte-insect-eng.asp?geID=12018>

Balsam shootboring sawfly damage is more abundant than expected for an odd numbered year, perhaps because the prolonged bud development due to the cool spring extended the egg-laying opportunities for it. <http://www.forestpests.org/vermont/balsamsawfly.html>



Mature spruce budworm larva on fir twig.
Photo: Natural Resources Canada, CFS

Forest tent caterpillars have been observed, but no noticeable damage has been reported. <http://www.forestpests.org/vermont/foresttentcaterpillar.html>

Viburnum leaf beetle larvae have completely defoliating highbush cranberries in some sites.

<http://www.entomology.cornell.edu/cals/entomology/extension/idl/upload/Viburnum-Leaf-Beetle.pdf>

In Montpelier, **lily leaf beetle** was observed feeding on tiger lilies on May 11. They were removed and no other troublemakers have been observed at that site since, according to the reporter. Here's hoping you're as lucky!
http://www.umassgreeninfo.org/fact_sheets/defoliators/lily_leaf_beetle.html

To learn more about **mosquitoes**, you can listen to *Vermont Edition* with Alan Graham (Ag Agency) and Erica Berl (Health Dept). <http://www.vpr.net/episode/51308/>



Eastern eyed click beetle, with its showy "eyes." Photo: G. J. Lenhard

If you're wondering how some of the "**friendlier insects**" are handling the wet conditions, think "resilience." As Naturalist Bryan Pfeiffer put it, "There's nothing like hundreds or thousands of eggs, powered flight and 400 millions years of evolution by means of natural selection to make even epic floods seem like little more than an inconvenience!"

The odd lot: Every year, we receive a call about one insect or another that is not commonly seen. This spring it's the **eastern eyed click beetle**, observed in flight in Addison County. This is one of the largest of all click beetles and the false eyes can really spook a potential predator. <http://www.hiltonpond.org/ThisWeek010515.html>

Exotic Insects

For those who get calls about possible **Asian longhorned beetles**, white-spotted sawyer beetles are in flight, and are a common suspects. Here are a couple of references for distinguishing lookalikes from the real culprit: http://www.na.fs.fed.us/fhp/alb/pubs/alb_wss/alb_wss.htm; <http://www.uvm.edu/albeetle/identification/index.html>

Purple traps for **emerald ash borer** are everywhere! If you see a trap on the ground, please call the USDA's toll-free number: 1-866-322-4512. The EAB hotline is staffed during regular business hours and a message may be left at any time. Callers are asked to include a name and telephone number. For additional information on EAB, visit www.purpleEABsurvey.info

Photos of Emerald ash borer lookalikes are available on our website at http://www.vtfpr.org/protection/documents/VTEABlookalikes_000.pdf.

In addition to the purple trap survey for emerald ash borer that is part of the USDA effort, we will be joining other states in using girdled trap trees to detect emerald ash borer. As the girdled trees become stressed, there is a change in the chemicals given off from the ash foliage, bark or wood. Wavelength of light reflected by leaves also differs between healthy and girdled trees. The beetles detect this and are attracted to the stressed trees. For more information about surveying with girdled trees, see <http://www.emeraldashborer.info/files/handoutforpdf.pdf>.

We are continuing our search for nest sites of *Cerceris fumipennis*, the wasp that provisions its nest with buprestid beetles, including the emerald ash borer if present. Observing the wasps is another tool for tracking down potential emerald ash borer infestations. <http://www.cerceris.info/>. For more information on Vermont's biosurveillance effort, contact the Forest Biology Lab at the number below.



Hemlock woolly adelgid adult and eggs inside an ovisac.
Photo: M. Montgomery

Hemlock woolly adelgid winter mortality was significant, but the survivors have laid eggs and the first crawlers have been observed. Citizen monitors have found a few new areas with the insect but not in any new towns – at least so far! <http://www.vtfpr.org/protection/hwaupdate.cfm>

Spring Tree Development

Heavy flowering of sugar, red and silver maples, as well as white ash, birch species, red oak, willow, bitternut hickory, apple, hawthorn, blueberries, grapes and other plants, has been observed throughout the state. Jim Esden reported coming home from surveying for hemlock woolly adelgid covered with hemlock pollen.



Heavy seed on sugar maple.
Photo: L. Lund

Why all the flowers? Various dynamics appear to have aligned this spring to encourage heavy bloom in a variety of tree species. While last year's very late frost wreaked havoc on tree development, spring weather was favorable for trees in 2011. Some trees have natural cycles that prompt them to flower more heavily periodically, and we are likely seeing this for some species. If some trees were delayed in this cycle last year, they may have been triggered to flower more this year. Every so often there may be a year when apparent synchrony of flowering occurs that is basically by chance. Some species tend to follow an alternate year pattern, with an occasional bumper seed crop.

Tapping Survey Results

Vermont led all states in 2011 maple syrup production with 1,140,000 gallons, an increase of 28 percent from 2010 and the highest on record in over sixty years. Of the 212 producers who reported on the 2011 season, 39% started tapping by February 15, including many produces from northern VT counties. 29% started tapping in March. The latest boil reported by county was: Bennington 4/12; Windham 4/15; Orange 4/18; Windsor 4/19; Franklin 4/23; Rutland and Addison 4/24; Caledonia, Essex and Orleans 4/25; Chittenden and Washington 4/27; and Lamoille 4/29. The largest group finished between 4/8 and 4/12. 36% of producers boiled at least 2 months after they started tapping. For more details of the survey, contact Tim Wilmot, UVM Extension Maple Specialist at timothy.wilmot@uvm.edu

Weather

We can't resist including the National Weather Service 2011 precipitation statistics for March, April and May.

2011 Precipitation (inches) vs. Climatology for Burlington, Vermont (since 1883)

Month	2011	Normal	Departure	% of Normal
March	3.39	2.32	+1.07	146%
April	7.88	2.88	+5.00	274%
May	8.67	3.32	+5.35	261%
Meteorological Spring	19.94	8.52	+11.42	234%

Widespread wind damage from multiple events and saturated soils have been reported in many areas. While trees on well drained soils appear vigorous and very healthy, significant dieback is anticipated from all of the lakeshore trees that have been submerged now for 5 or 6 or more weeks.



For more information, contact the Forest Biology Laboratory at 802-241-3606 or:

Windsor & Windham Counties.....
Bennington & Rutland Counties.....
Addison, Chittenden, Franklin & Grand Isle Counties.....
Lamoille, Orange & Washington Counties.....
Caledonia, Orleans & Essex Counties.....

Springfield (802) 885-8845
Rutland (802) 786-0060
Essex Junction (802) 879-6565
Barre (802) 476-0170
St. Johnsbury (802) 751-0110

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