

Vermont Forest Health

Insect and Disease Observations—April 2012

Department of Forests, Parks & Recreation
April 2012 vtforest.com

Spring Weather and Tree Development

The Department of Forests, Parks and Recreation has been monitoring the timing of spring flowering and leaf out of sugar maple trees at the Proctor Maple Research Center since 1991. Record-setting March temperatures this spring led to **earlier than normal bud development**, especially of flower buds. For every previous year, there was little to no bud activity before April 1st.

In 2012, we started monitoring buds the middle of March, at which time flower buds were already visibly swollen. Our data show that **flower bud development** on April 1st was 30 days earlier than the long term average. Vegetative buds on saplings and trees were also earlier, by 22 and 17 days respectively.

Development stalled with the return of the cool weather. Those plants that did break bud in mid-March (forsythia, lilacs, cherries, and others) don't seem to have been nipped by the hard frosts that followed the March warm spell. Low snow cover has resulted in **reduced rodent damage** to ornamentals in many areas.

Diseases

The foliage of some Christmas trees and landscape evergreens suffered significant **desiccation** during the abnormally warm weather in March. Most severely affected were recent transplants, trees growing in heavy or wet soil, and other trees with compromised root systems. In some locations, damage was severe enough to cause branches, upper crowns, or entire trees to dry out completely. The foliage has turned a pale beige color, rather than the bright red associated with winter injury. Trees in exposed locations have the most severe symptoms. Saturated soils in 2011 are thought to have contributed to the problem.



*Effects of desiccation on balsam fir Christmas trees
Photo: Barbara Burns*



Phytophthora-infected tree with brown stain under bark at root collar
 Photo: E.L. Barnard, Bugwood.org

Phytophthora root rot has been observed killing trees in several Christmas tree plantations. This water-borne root rot had ideal conditions to move through the soil in 2011. Affected trees may have a brown staining under the bark at the root collar, and the bark slips easily off fine roots. Lower branches may be killed, and the whole tree takes on a grey-green color before it dies. Diagnosis can only be confirmed with a lab test.

Although the early spring has been dry, don't be surprised to see diseases show up on older foliage of softwoods. There was ample opportunity for those needles to become infected when they were emerging under

last spring's rainy conditions. We're expecting another year of **white pine needle damage**. Thanks to work coordinated by the US Forest Service, we now know that several disease fungi are associated with these symptoms. http://na.fs.fed.us/pubs/palerts/white_pine/eastern_white_pine.pdf. Most trees are expected to recover, since the upper crowns and/or current foliage of most trees has remained healthy.

Insects and Their Relatives

Eastern tent caterpillar tents are noticeable now in the crotches of roadside cherry and apple trees. As recommended by the Maine Forest Service, you can remove the webs when they are occupied in the evening or early morning by simply pulling the webs out of the tree with a wet soapy rag and dropping them in a bucket of soapy water. http://www.maine.gov/doc/mfs/fhm/Cond_2012_1.htm

Pear thrips emerged by March 23rd at Proctor Maple Research Center in Underhill. Much like the weather, thrips counts on sticky traps have been yo-yo-ing, ranging from 121 (total count on the 4-trap cluster) during the warm week of March 19-26, down to 6, then 7, for the subsequent weeks, then up to 84 on the week of April 9-16. <http://www.forestpests.org/vermont/pearthrips.html>



Pitch tube indicative of turpentine beetle infestation.
 Photo: Steven Katovich, USDA FS

Turpentine beetles are already active under the bark of infested white pine trees. These are not aggressive bark beetles, but can attack stressed trees. Look for the globs of pitch near the base of the tree, sometimes mixed with red sawdust. Beetle emergence holes can be observed in the center of some of these pitch tubes. (See http://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5303050.pdf.)



Red turpentine beetle, Dendroctonus valens
 Photo: Pest and Diseases Image Library, Bugwood.org

Gypsy moth egg hatch is synchronized with the blooming of shadbush, which began in Rockingham on April 16th. Egg mass counts were very low in 2011 and minimal feeding injury is anticipated for 2012. (For gypsy moth basics, see <http://www.forestpests.org/vermont/gypsymoth.html>.)



American dog tick, *Dermacentor variabilis*
Female and male
Photo: Gary Alpert, Harvard Univ., Bugwood.org

Deer tick activity got off to a busy start this spring with early warm temperatures and plenty of questing adult ticks seeking blood meals. Always take precautions and look yourself over well when you have been in the field. (See http://healthvermont.gov/prevent/lyme/lyme_disease.aspx for more information.) In mid-April, we received our first specimens of **American dog ticks**.



Engorged deer tick, *Ixodes scapularis*
Photo: Scott Bauer, USDA Agri.



Red Admiral, *Vanessa atalanta*
Kevin D. Arvin, Bugwood.org

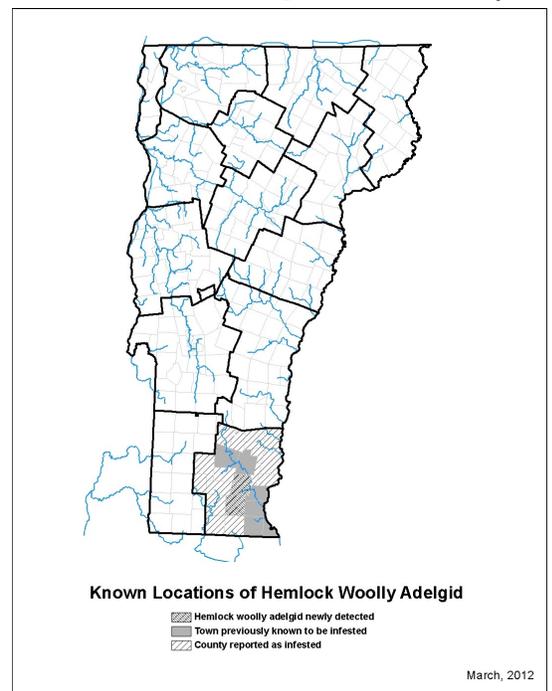
The spring migration from southern states northward of **Red Admiral Butterflies** is stirring up a lot of attention with butterfly enthusiasts and casual observers. As one observer said, "Stand in one spot long enough and you will have multiple sightings of individuals headed in a northern direction. They are everywhere." In other butterfly news, after a start one week earlier than the Vermont Butterfly Survey "extreme date", **West Virginia whites** are flying in numbers. Records of butterflies with photos can be submitted to BAMONA at <http://www.butterfliesandmoths.org/>. Those of you interested in dragonflies and damselflies can share your sightings at <http://www.odonatacentral.org/index.php/PageAction.get/name/HomePage>

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Exotic Insects

Hemlock woolly adelgid started laying their eggs by the third week of March in the Vernon, Brattleboro area. Winter survival studies are underway in Vermont. Observations and data from NH and ME indicate that the mortality rate is likely very low this winter.

We continue to track all known locations of hemlock woolly adelgid. We're trying to figure out how successful the insect will be as it moves north. If you come across infested hemlock, even in a town we know has hemlock woolly adelgid, please let us know.



Elongate hemlock scale has been reported in Barnardston, MA – right near Vernon and Guilford – but is not known to be in VT yet. Contact us if you think you have seen this insect. (See http://na.fs.fed.us/spfo/pubs/pest_al/ehscale/ehscale.htm.) There are several other species of scale insects found on hemlock, including Cryptomeria scale (*Aspidiotus cryptomeriae*), Hemlock Scale (*Abgrallaspis ithacae*), Pine Needle Scale (*Chionaspis pinifoliae*), Shortneedle Conifer Scale, (*Dynaspidiotus (Nuculaspis) tsugae*).



Elongate hemlock scale, *Fiorinia externa*
 Photo: Eric Day, Virginia Tech., Bugwood.org

Emerald ash borer was detected this spring infesting girdled trap trees on the east bank of the Hudson River in Rhinebeck, NY. Looking for EAB using girdled trap trees is labor-



Girdled trap tree. Photo: Pennsylvania Department of Conservation and Natural Resources - Forestry Archive, Bugwood.org

intensive, but the most sensitive early-detection tool we have. If you'd like to monitor for the EAB using girdled trap trees in your woodlot, land you manage, or trees in your community, visit <http://www.vtinvasives.org/group/eab-girdled-trap-trees> for more information. The trees need to be girdled before June 1st. In late fall, we will assist in looking for the subtle signs of EAB under the bark of these trees. Other information about ash, including the new Ash Management Guidance for Forest Managers, is now available through our website at <http://www.vtfpr.org/protection/idfrontpage.cfm>.

The 2011 Forest Insect and Disease Conditions in Vermont report is now available at <http://www.vtfpr.org/protection/idfrontpage.cfm>



For more information, contact the Forest Biology Laboratory at 802-879-5687 or:

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Forest health programs in the Vermont Department of Forests, Parks, and Recreation are supported, in part, by the US Forest Service, State and Private Forestry, and conducted in partnership with the Vermont Agency of Agriculture, Food, and Markets, USDA-APHIS, the University of Vermont, cooperating landowners, resource managers, and citizen volunteers.