Vermont
Forest Health

Insect and Disease Observations—May 2012

Department of Forests, Parks, & Recreation
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Now that the hillsides have finished greening up for the summer, the trees that had **Frost Damage** are starting to show up. It looks like the damage is going to be quite spotty, although we've received reports from throughout the state. In the central Green Mountains, there is scattered heavy damage to mid-slope sugar maples… with up to 100% defoliation in the upper crown. Some of this is from heavy frost damage to the flower buds. Further north, the damage has been a little lower in elevation. Frost injury to ash, oak, apple, sycamore, and lilac have also been reported. Sugar maples recovered rapidly from frost injury in 2010, and are expected to do so again as long as growing conditions remain good. http://www.vtfpr.org/protection/documents/TreeRecoveryfromFrostDamageinMapleSugaringSitesonStateLands.pdf

Pear Thrips damage to sugar maple and other hardwoods is also significant in some areas, notably mid-elevation stands in central Vermont. Look for crinkled foliage, and raised scars on the petioles where thrips lay their eggs. http://www.forestpests.org/vermont/pearthrips.html

In addition to frost injury, notably in the central Green Mountains, Pear Thrips have damaged sugar maple foliage. Look for the raised scars on the petioles.

Needle Diseases of White Pines continue to be widespread, with straw-colored one-year-old needles showing up suddenly in late May. Heavy flowering of white pine makes the foliage look thinner still. The USFS Northeastern Area Durham Field Office has found that these needles to be infected with brown spot needleblight (*Mycosphaerella dearnessii),* and/or two needlecast fungi (*Canavirgella banfieldii* or *Bifusella linearis)*. Damaged needles were infected last year. Damage is most severe if conditions are wet when needles are elongating (June). Where heavy defoliation extends to the upper crown, impacts on tree growth are expected. http://na.fs.fed.us/pubs/palerts/white_pine/eastern_white_pine.pdf

White Pine Needle Diseases are noticeable this spring because wet conditions last June allowed fungi to infect elongating needles.

Browning from **Larch Casebearer** defoliation is common in the Northeast Kingdom. This exotic caterpillar has been in New England since the 1880's, and causes heavy defoliation now and then. It is thought to be one of the factors that can initiate episodes larch decline. http://www.dec.ny.gov/docs/pdf/cbearer.pdf

Heavy Larch Casebearer defoliation is common in northeastern Vermont. Look for hollowed out needles the caterpillars use for shelter.

We haven't seen many **Defoliating Caterpillars** on hardwoods. A menagerie of Oak Leaf Rolling Caterpillars can still be found in some red oak stands, but it's too early to say what the level of damage will be this year. There is some dieback in stands which have had several years of defoliation. Nests of Eastern Tent Caterpillar are unusually rare on cherries and apples. Occasional larvae of Gypsy Moth and Forest Tent Caterpillar have been observed, but no damage has been reported… or expected. Moths of the Spring Hemlock Looper, which defoliates hemlock later in the season, and the Rosy Maple Moth, whose eggs will hatch into the Green-Striped Mapleworm in July, have also been observed. http://www.ag.auburn.edu/enpl/bulletins/greenmapleworm/greenmapleworm.htm

The larva of the Rosy Maple Moth is the Green-Striped Mapleworm, which feeds in mid-summer.

Bruce Spanworm moths were common in the fall, but its inchworm larvae have only been observed occasionally this spring on maple. If you observe any of the characteristic lacy defoliation in the next few weeks, we'd like to know about it. Bruce spanworm is very closely related to the exotic Winter Moth, which is advancing towards us, and is now in central Massachusetts. Researchers would like to locate Bruce spanworm populations to study. http://www.na.fs.fed.us/spfo/pubs/pest_al/bruce_spanworm/pa.htm

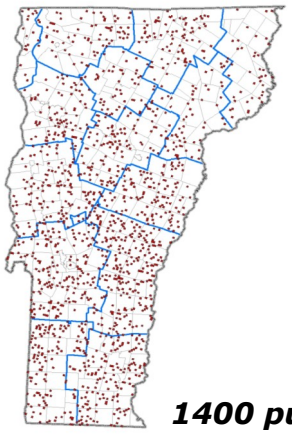
We're looking for sugar maples with lacy Bruce Spanworm defoliation to help research on the potential impact of Winter Moth.

Black fruiting bodies in stomates of green needles are diagnostic for Swiss and Rhizosphaera Needlecasts. Damage is most severe in lower branches.

Consecutive wet springs continue to leave behind a legacy of **Conifer Diseases**. Rhizosphaera needlecast continues to show up on blue spruce, and Swiss needlecast on Douglas fir. Black fruiting bodies erupting through the stomates of green needles are diagnostic for both diseases. Unlike the desiccation we observed on fir, cedar, and spruce following the abnormally warm early spring, fungus diseases are more severe on lower branches, and in protected pockets where moist air accumulates. http://www.na.fs.fed.us/spfo/pubs/misc/xmastree/needlediscoloration.htm

Also on conifers, **Shoot Damage from White Spotted Sawyer** has been more common than normal. Maturation feeding by adult beetles leaves a scar on the bark of twigs and small branches, usually on the underside of branches exposed to the sun. Wounded branches may flag. http://www.forestpests.org/vermont/whitespottedsawyer.html. Because white spotted sawyers fly in May and June, we have been receiving many reports of these insects which look a lot like Asian longhorned beetles. If you see a white spot on the back between the wing covers behind the head, the insect is white spotted sawyer http://www.maine.gov/doc/mfs/wssLarge.htm.

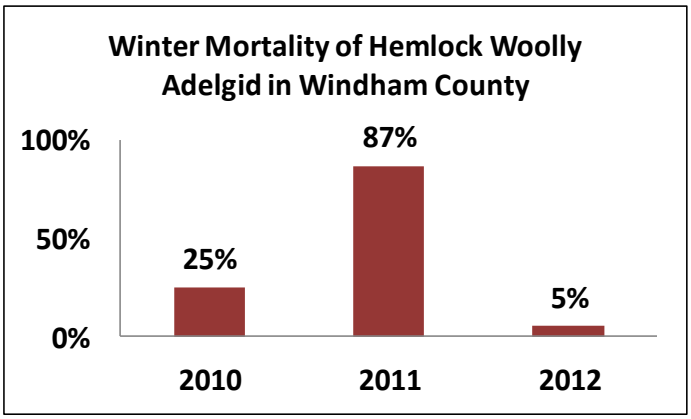
A white spot between the wings distinguishes White Spotted Sawyer adults from Asian longhorned beetles. They feed on conifer twigs, causing branch flagging.



We have also been receiving many reports of green tiger beetles, from concerned citizens keeping an eye out for **Emerald Ash Borer**. Some Vermont lookalikes can be seen at http://www.vtfpr.org/protection/documents/VTEABlookalikes_000.pdf. In the meantime, USDA APHIS has overseen the deployment of 1400 purple panel traps this month. These traps will be checked in mid-summer and removed in the fall. Please forward any reports of traps which have fallen. Frequently asked questions about traps are answered at http://www.aphis.usda.gov/publications/plant_health/2012/

1400 purple Emerald Ash Borer traps have been deployed in Vermont.

It's no surprise that last winter had little impact on our cold-sensitive invasive pests. **Hemlock Woolly Adelgid** overwintering mortality averaged 5% in the Windham County sites we monitor. Warm temperatures may have also helped the survival of the predatory beetle, *Laricobius nigrinus*, which was recovered this spring, by our UMass cooperator, from both locations where it was released in 2009. On June 12, 2012 Mary Ann Fajvan, Research Forester from the USDA Forest Service Northern Research Station, will host a webinar, *Management Strategies for Eastern Forests Threatened by Hemlock Woolly Adelgid. For more information,* visit http://extension.psu.edu/private-forests/tools-resources/webinars.



Balsam Woolly Adelgid populations also seem to have rebounded in some locations. Look for this insect's protective wool on the bark of the trunk, branches, and twigs. The presence of gouty twigs indicates past feeding, although not all infested trees develop this symptom. http://www.maine.gov/doc/mfs/bwa_alert.htm

Some exotic defoliating beetles have been observed this spring. The **European Snout Beetle** as been seen in good numbers on maples and yellow birch in several central and western Vermont locations. http://www.forestpests.org/vermont/europeansnoutbeetle.html. Heavy **Viburnum Leaf Beetle** damage has been reported from scattered locations. http://entomology.cornell.edu/cals/entomology/extension/idl/upload/Viburnum-Leaf-Beetle.pdf

European Snout Beetle feeding notches the edge of hardwood leaves.

Lacebugs seem more common than usual. Their feeding causes a characteristic stippling on hardwoods, peppered with dark frass. http://www.uri.edu/ce/factsheets/sheets/lacebugs.html

Lacebugs leave a messy combination of brown foliar damage, black droppings, and cast skins.

Thanks to last year's **Flower and Seed Production**, there's been a bumper crop of sugar maple and white ash seedlings. Red and silver maples seem to have produced seeds normally again this year, in spite of fears that early flowering would result in freeze damage. Heavy flower production has been reported on red spruce, white cedar, and white pine. Abundant flowering on blueberries (wild and domestic) promises plentiful fruit to come.

No one seems to regret that **Black Flies** seem oddly absent from many locations, which seems to be yet another outcome from flooding in 2011. Don't count on the same reprieve in 2013. According to entomologist Alan Graham from the Vermont Agency of Agriculture, "Black fly larvae tend to be very territorial, competing for fast-water rock surface sites". One result of the hurricane was reshaping waters to increase rock surfaces. http://extension.unh.edu/resources/files/Resource000529_Rep551.pdf

And, in the meantime, don't put that DEET away… it's been a banner year for ticks.

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