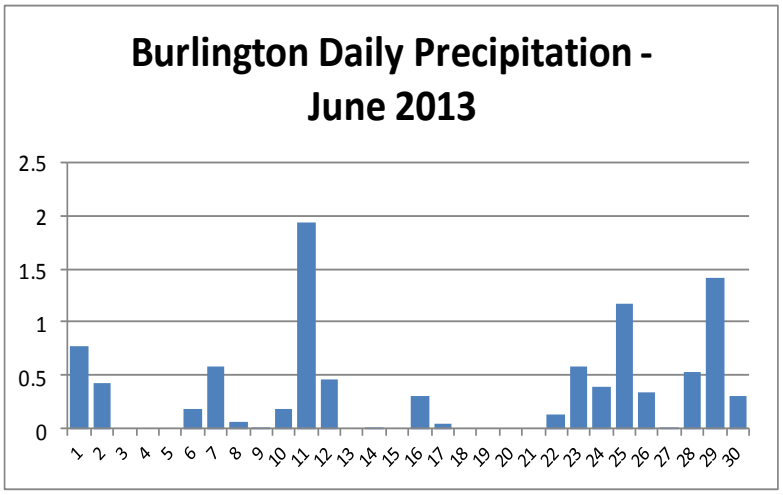
Vermont Forest Health

Insect and Disease Observations—June 2013

Department of Forests, Parks & Recreation
June 2013 vtforest.com

Weather

June rainfall total in Burlington reached 9.86 inches and kept us just 0.07 inches shy of having the wettest June on record, set in 1922. Conditions have continued into early July.



Although there was no freezing weather in June, symptoms were observed from **Frost damage** in May. Hardwood defoliation was observed at mid-upper elevation sites, and mapped by the US Forest Service at scattered locations on the Green Mountain National Forest. Some frost damage to early breaking balsam fir Christmas trees was also noted in scattered locations.

Frost damage and refoliation of maple on Dorset Mountain (right) and beech on Mt Ascutney (above)

Diseases

To quote Ben Dillner, nursery inspector with the Vermont Agency of Agriculture, Food & Markets, "It's a good year to be a spore."

Delphinella shoot blight is having a great year in Christmas tree plantations and the impact is significant at some locations in Essex County and elsewhere. Early signs of infection are slightly chlorotic needles on new shoots in spring. Historically, the worst plantations seen for damage have tall infected native firs next to the plantation. Though spore dispersal distance is unknown, removal of nearby

trees, especially tall ones that can rain down spores onto smaller Christmas trees, should help. Severely infected plantation trees should probably be removed from the site or burned.

Delphinella shoot blight cankers may girdle needles at the base; as the fungus moves into shoots, they shrivel and wilt. Photo S. Hagle on Bugwood.org

Lirula fruiting bodies on balsam fir. Photo: R. Kelley

Lirula needlecast, a second disease, has been observed in some Christmas tree plantations, but appears to be less damaging.

Like our neighbors in Maine, we are noting **Balsam fir branch flagging**. Also, like folks in Maine, we have been unable to identify a causal agent. Hypotheses posed by the MFS include, among other things, fine root-tip injury due to the excessively warm late winter of last year. A variety of stress agents, working in concert, may be causing the symptoms, which have appeared from northern towns like Newport, Jay and Concord, to southerly sites in Dorset and Weston.

Balsam fir flagging observed in Starksboro, VT. Photo: Chris Runcie

Black hair-like fruiting structures of Caliciopsis canker. Photo: M. Cram on Bugwood.org

Brown spot needle blight on Scots pine. Photo: Ron Kelley

Caliciopsis canker is fruiting on declining sawlog-sized white pines. Symptoms of the canker include pitching from small cankers in the mid to upper bole.

Brown spot needle blight of pines is obvious in many areas right now. You might notice it as you drive on Interstate 89 between White River Junction and Bethel.

Symptoms of **Dutch elm disease** are showing up…but no more or less than normal.

Insects

Balsam shootboring sawfly is heavier than expected on Fraser fir in Morrisville and balsam fir in Hyde Park. Some frost damage to early breaking balsams was noted in both locations.

Balsam twig aphid populations seem to be increasing as well, with moderate damage to some individual balsams in Hyde Park.

Fluffy, pale bluish-white **beech blight aphids** have been observed in flight. As early as July but by September and October they gather in masses on beech trees, sometimes making branches appear snow-covered. A select few of you might be lucky enough to see the **beech blight aphid boogie**, which is apparently a defense mechanism.

Results of Cinara aphid feeding on understory white pine. Photo: R. Kelley

Large, generally dark-colored **Cinara aphids**, and associated sooty mold and dieback, have been observed on understory white pines and on balsam fir Christmas trees. Nymphs are now active.

Arbovitae leafminer moths have laid their eggs and the tiny larvae have mined into the foliage. They will spend the summer mining and then pupate in the foliage before emerging as adults next June.

Arborvitae leafminer emergence holes. Photo: R. Kelley

Panel trap used for detecting Asian longhorned beetle

Exotics

This year, survey traps will be used in Vermont for detecting **Asian Longhorned Beetle** (ALB). The traps, positioned in the lower canopy of selected host trees, will be in place from early July through September. The lure in the traps is a combination "cocktail" of ALB pheromones and plant volatiles of host trees. Priority sites were selected based on a number of criteria, including areas known to be visited by people from ALB-infested areas and towns with second-home owners from ALB zip codes. These pheromone traps have proven effective in identifying previously unknown infested areas, notably two areas in the Worcester area last year.

Early detection of Asian Longhorned Beetle infestations is a critical tool for the eradication of the pest and the preservation of non-infested host trees. Within the last year, ALB was declared eradicated from NJ, Manhattan, Staten Island, and Toronto.

Examination of ALB-infested trees in Worchester, MA, where the insect was first discovered in 2008, shows that the infestation is 15-20 years old. So far, 100% of the host trees in an area of 1,100 acres have been removed, plus another 33,000 individual trees. Surveys have been conducted on 52,000 acres, with another 10,000 acres to go. Workers hope to finish by 2014, when they will have looked at over 4 million host trees. The massive re-planting effort (about 25,000 trees to date) is starting to have a visual impact.

The New Hampshire **Emerald Ash Borer** delineation survey is complete. According to Kyle Lombard, New Hampshire forest entomologist, the generally infested area is six miles by two miles, all along the Merrimack River, and includes one forested site where EAB is well established. An integrated pest management strategy is being implemented, including installation of sink sites, trap trees, and EAB population reduction with pesticides.

In June, Forest Pest First Detectors and other Vermonters travelled to Vorheesville, NY, to see an EAB infestation under the expert guidance of Mark Whitmore, Cornell University. A first hand visit is an excellent opportunity to see the symptoms, signs and challenges of dealing with this pest. Visit vtinvasives.org for more information on invasives.

Miscellaneous

The **Climate Change Adaptation Framework Report** is now available. This report examines historical trends and future projections for the state's climate, evaluates the state's varied habitats and species for their likely response to the current and predicted changes, and identifies adaptation strategies for the habitats and species identified as vulnerable.

Spider feeding on a Bruce spanworm, a sugar maple defoliator. Photo: R. Kelley

Sugaring Season Results: According to Tim Wilmot, University of Vermont Extension Maple Specialist, over 200 sugar maple producers participated in the 2013 tapping survey. A few highlights: The total tap count of all survey participants was 936,849. The total syrup made was 373,303 gallons. Sap was collected by 18,710 buckets (2% of total taps), 31,393 taps on gravity tubing (3.3% of total taps) and the remainder with vacuum pumps. There were 21 producers who made at least a half-gallon of syrup per tap this year. Town Meeting Day certainly wasn't the tapping date this year, as 83% of producers tapped before March 1. Fourteen Vermonters tapped trees in January, and 11 had their first boil by February second. The latest reported boiling was April 29. Elevation had more to do with how late the boiling went than latitude; almost everyone who boiled after 4/19 was at 1200' or higher. Fifteen percent of producers said sap sweetness averaged below normal, 64% said about normal, and 21% said above normal. Contact Tim Wilmot for further details: timothy.wilmot@uvm.edu

FORESTS, PARKS & RECREATION VERMONT
AGENCY OF NATURAL RESOURCES

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

Windsor & Windham Counties	Springfield (802) 885-8845
Bennington & Rutland Counties	Rutland (802) 786-0060
Addison, Chittenden, Franklin & Grand Isle Counties	Essex Junction (802) 879-6565
Lamoille, Orange & Washington Counties	Barre (802) 476-0170
Caledonia, Orleans & Essex Counties	St. Johnsbury (802) 751-0110

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.