Vermont Forest Health

Insect and Disease Observations—August 2013

Department of Forests, Parks & Recreation
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Insects

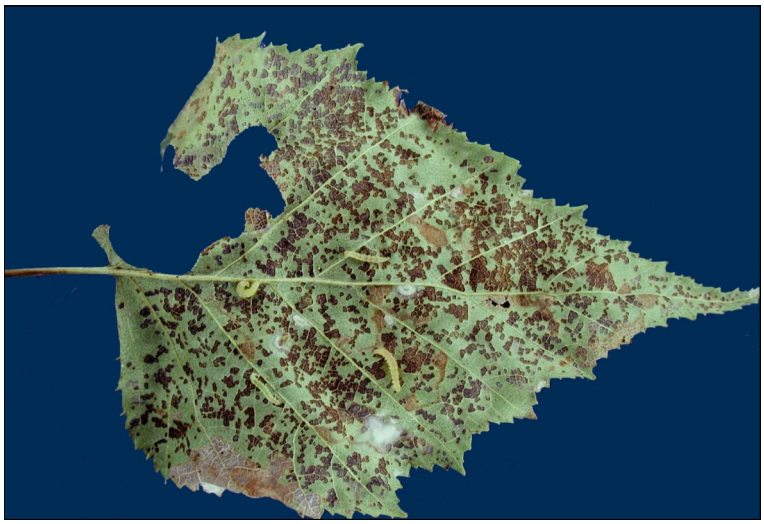
Fall webworm, with characteristic webs spun by larvae around leaves at the ends of tree branches, is most noticeable in August and September. Larvae feed gregariously throughout the summer, gradually enlarging the web to enclose more and more foliage. Although webs can be an unattractive nuisance, the loss of leaves generally has little effect on the health of the tree because it occurs at the end of the growing season.

Fall webworm larvae feed on leaves that they have covered with webbing. Photo R. Kelley

Larvae of the cherry scallop shell moth feed in groups in shelters made by tying leaves together. Photo: R. Kelley

Another "shelter-feeder" now obvious is the **cherry scallop shell moth**. This insect prefers black cherry but will occasionally feed on other wild cherries. Look for reddish-brown leaves webbed together toward the end of the branch, with feeding caterpillars inside. When fully grown, larvae drop to the ground and pupate over the winter in the forest litter.

Oak defoliation and browning continue to draw attention. The ragged appearance of the leaves appears to be a combination of insect, mite and mechanical damage, along with the refoliation that resulted in a variation of leaf sizes and colors. Types of damage recently observed on leaves from Ascutney included stippling, skeletonizing, window feeding, free feeding, hole feeding (like Swiss cheese), leafrolling and general tattering and tearing. Most of the leaf-feeding caterpillars likely involved have now left the leaves, but we observed quite a few **oak skeletonizer** cocoons on leaf samples.



Early instar larvae of birch skeletonizer are legless and feed within leaf tissues. Later instars have fully-functioning legs and feed externally. Note the presence of silken molting webs.
Photo: R. Kelley

Browning of birch is also the result of a combination of agents. Among these are **birch skeletonizer**, **birch lace bug** and **birch leaf folder**, as well as birch leaf fungi.

Birch leaf folder larvae feed in August and September.
Photo: R. Kelley

Lace bugs work from the underside to suck sap from leaves. Photo: R. Kelley

Balsam woolly adelgid was observed causing heavy gouting of scattered mature sized Fraser fir Christmas trees in a Walden plantation. This is an introduced insect, first recorded in North America from Brunswick, ME. Gouting is the result of an irritating salivary substance that is introduced when the adelgid feeds. Cells in the host tree multiply abnormally and excessive growth results. The swollen areas are especially noticeable at nodes and around buds.

Gouting caused by balsam woolly adelgid.
Photo: R. Kelley

Balsam woolly adelgid nymphs and eggs.
Photo: R. Kelley

Miscellaneous

In a trapping survey this summer for **tabanids** (horse and deer flies) near Snake Mountain in Addison, VT, researchers collected 34 of 72 species of tabanids known to occur in Vermont.

Tabanid flies have large eyes. In males, the eyes touch; in females the eyes are separated by the frons. Photo: Richard Steele

Weather

FPR has been monitoring fire danger using weather observations from fire weather stations throughout the state since the 1980's. The Essex and Danby (Sweezy) stations have the longest data record. More recently, Elmore and Marlboro have a data record back to 2003. We have also been using the data from USF&W's Nulhegan weather station in Brighton since it was established in 2003.

Hourly observations including temperature, relative humidity, wind speed and direction and precipitation are retrieved via satellite, and fire danger indices are calculated. The hourly weather observations are available online.

Rainfall data for March through August indicate that March and April were below normal. May precipitation was above normal at all stations and significantly above normal at Brighton and Essex. June was significantly above normal and July above normal for all stations except Essex which was near normal. August was below normal at all stations.

Note about Marlboro RAWS. This station was re-located to Woodford State Park. The last observation from Marlboro was on 7/24/13 and first observation at Woodford was 8/7/2013. There are no monthly totals at either location due to missing data. However, from the available data, both locations followed the above trends.

August temperatures have been below normal for much of the month by 1-4^0, a refreshing change from the heat wave of July. The last week of August has seen temperatures closer to normal.

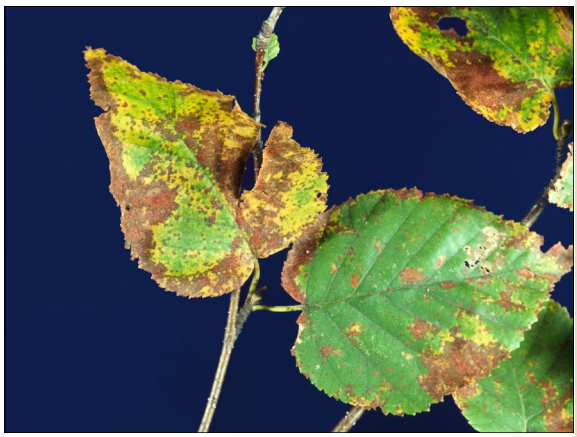
2013 Fire Season - Rainfall Data

	Brighton	Elmore	Essex	Danby
March	2.7	2.28	2.13	1.99
April	2.75	2.95	2.16	2.62
May	7.4	5.12	9.21	5.35
June	6.77	7.11	10.33	8.37
July	5.64	7.87	4.12	6.4
August	2.36	2.46	3.05	2.39
Total March 1 to August 31	27.62	27.79	31.00	27.12

Precipitation observed at Vermont RAWS March 1 to August 31 2013. Table prepared by T. Greaves

Diseases

Leaf diseases on hardwoods are very evident now, including **anthracnose** on ash and maple, **Septoria leaf spot** on white and yellow birch and **Coccomyces leaf spot** on black cherry.



Septoria leaf spot Photo: Bruce Watt, University of Maine, Bugwood.org

Coccomyces leaf spot on black cherry. Photo: R. Kelley

Widespread damage continues to be noticeable on balsam, Fraser and Canaan fir Christmas trees due to **spring frost**.

There are reports of early color and **"more-than-normal" yellow** on maples statewide. This isn't the first time. Similar reports were received in 2008, when excessive soil moisture from record rainfall amounts was the suspected cause.

At Ascutney, high elevation maple trees were observed to have refoliated twice. Frost damaged the leaves early in the season. However, the conditions that prompted the trees to expend this energy a second time are not known at this point.

"Three-foliation" of sugar maple at Ascutney. Photo: B. Schultz

Symptoms of shoot blight on hemlock first observed in June (and still noticeable) were identified by USFS pathologist Isabel Munck as **Sirococcus Shoot Blight**. This disease has been common in northern New England in the last few years, although less so in Vermont than in neighboring states. According to Isabel, it may be new to the region, but this is not known for sure.

Though symptoms of Sirococcus shoot blight on hemlock are most easily observed in the spring, the infected dead tip may remain attached to the shoot throughout the summer. Photo: Maine Forest Service

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
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