

Vermont Forest Health

Insect and Disease Observations—May 2014

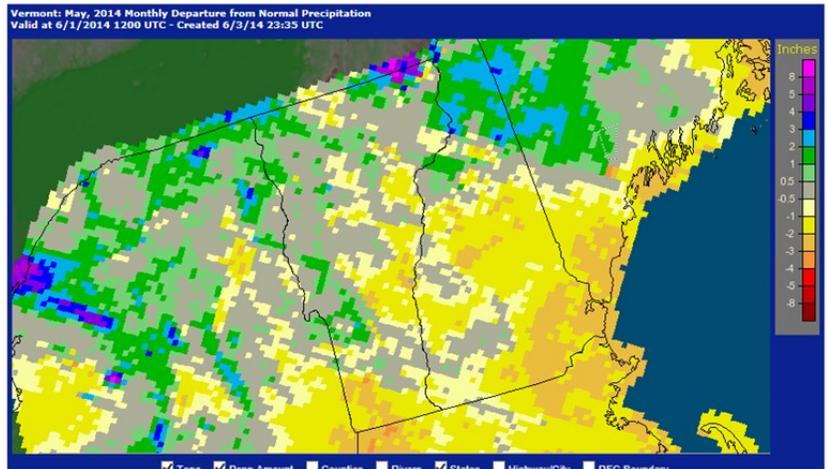
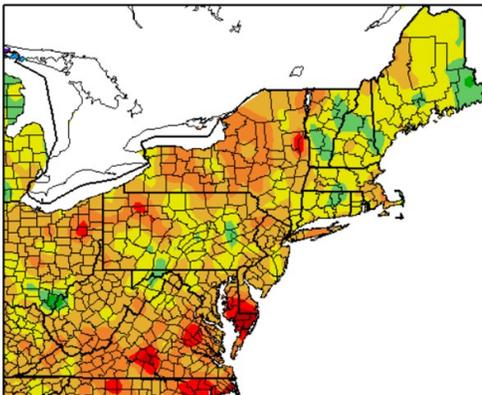
Department of Forests, Parks & Recreation
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May Weather and Spring Green-Up

May started out chilly and wet but ended up warmer than normal for most of Vermont for the first time since October 2013. Damp or rainy days were frequent but overall the month averaged normal for most of northern and western Vermont and below normal for southern and eastern Vermont.

In the Rutland area, the green-up line was 1600-1700 feet on May 19, and most everything leaf-wise except ash and oak were about 1/2 sized. Leaves statewide were slow to expand, but by month's end, most species except for ash had completely developed. Lush full crowns of maples were a common sight by May 31.

Departure from Normal Temperature (F)
5/1/2014 – 5/31/2014



Departure from normal temperature (left) and normal precipitation (right) for May, 2014.

Maps: [High Plains Regional Climate Center](#), [National Weather Service](#)



A localized severe [supercell storm](#) moved through central Vermont on the afternoon of May 27. [Tornado warnings](#) were issued but none were confirmed. The storm produced damaging winds up to 75 mph in [Bridport](#) that toppled trees. Penny and golf-ball sized hail was reported in several locations in Addison and Rutland counties and torrential rain left standing water in places along Route 7.

Hail that accompanied the severe storm system moved through central and southern Vermont. Photo: K. Anderson (from VPR story)

Defoliators

Sugar maple buds were still closed when the majority of the [pear thrips](#) emerged. When the buds finally did open, they expanded very quickly minimizing any thrips damage.



[Satin Moth](#) caterpillars left roadside cottonwoods in Starksboro completely leafless. Caterpillars were roaming widely after the trees were stripped, crossing Route 116 and showing up on the outsides of nearby dwellings, mailboxes and the elementary school. Most defoliated trees will refoliate successfully by midsummer. Satin moth eggs, larvae, pupae, and adults have a number of natural enemies, including insect parasites, insect and vertebrate predators, fungi, bacteria, and viruses. Although defoliation may cause the death of a few branches, it rarely kills healthy trees.



Cottonwood defoliation caused by satin moth caterpillars (left), and caterpillar close-ups. Photos: D. Dillner, R. Kelley



[Euonymus webworm](#), whose adults are sometimes known as ermine moths or spindle ermines, were observed in West Haven, VT. The yellowish-green larvae with a conspicuous parallel row of black spots along their length, feed communally on foliage from within webbed nests that wrap around branches and twigs.

Ghostly appearance of euonymus that has been defoliated by ermine moth caterpillars. Photos: S. Eugair, (NRCS) and J. M. McHugh



[Gypsy moth](#) caterpillars were seen feeding in large numbers on spruce trees in Whiting. Though feeding on coniferous hosts is a well-established behavior, it is most often observed when other hosts (preferably white oak) are defoliated to the extent that the gypsy moth caterpillars seek less palatable foliage. In recent years, gypsy moth caterpillars have shown up in scattered northern parts of the state, but feeding has been minimal and few egg masses observed. The fungus [Entomophaga maimaiga](#) has become a very important natural control in limiting the development of gypsy moth populations. The fungus attacks and kills the caterpillars in midsummer, often leaving them hanging straight down on tree trunks. Adult moths usually emerge around the 4th of July.

Dead gypsy moth caterpillar killed by the fungal pathogen Entomophaga maimaiga. Photo: S. Katovich at <http://www.forestryimages.org/>

Sapsucking Insects

[Balsam twig aphid](#) has been reported from scattered locations. Overwintered eggs hatched just prior to budbreak. The aphids develop quickly into the adult, wingless females known as stem mothers. The stem mothers will begin to produce live young just at budbreak, and these offspring are most injurious to the host plant.

Characteristic curled needles on balsam fir caused by balsam twig aphid feeding.

Photo: W. Frey



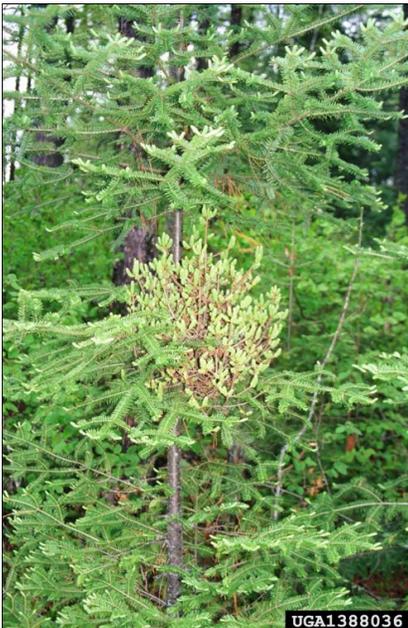
If you examine honeylocust foliage carefully, you might see the newly-hatched green nymphs of the [honeylocust plant bug](#). Though these insects can cause chlorotic, stunted or deformed leaves, their effects are generally less noticeable when budbreak is not prolonged.

Adult and immature honeylocust plant bug.

Photo: E.B. Walker

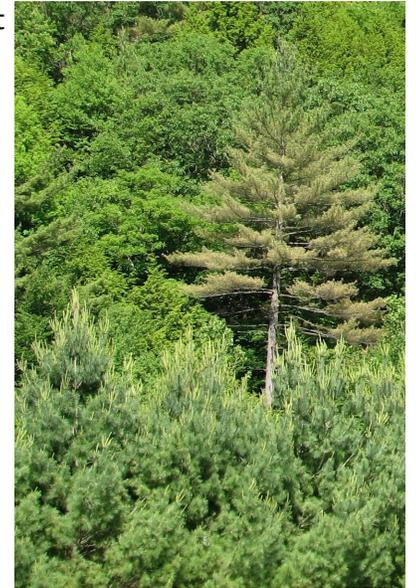
Diseases

This May, [White Pine Needle Damage](#) seemed less obvious than it had in recent years, but as June came on, symptoms of this fungus-caused disease worsened statewide. As Bill Guenther, Windham County Forester put it, "Over the weekend (June 7-8) the golden hue of the white pine needle blight exploded onto the scene .. it is looking like we have another bad outbreak down here. The pattern is still typically worse at the bottom and gets better as you go higher, but I have seen some trees completely engulfed and some barely, if at all, affected." Dan Dillner, Forest Protection Forester out of the Essex Junction office, reported that the white pine looked worse that he'd ever seen it between St. Albans and Essex Junction. Look for more details in the June Insect and Disease Observations.



White pine needle damage completely engulfs some trees and barely affects others.

Photo: B. Schultz



Broom rusts, which can be caused by a variety of agents including fungi, insects, dwarf mistletoes, mites, nematodes, viruses and mycoplasma-like organisms, can result in bud and shoot tissue proliferation, and what we call "witches' brooms" are formed. The brooms often grow slowly and may not be noticed until they become very large. One type of broom commonly observed on balsam fir is caused by [fir broom rust](#).

Fir broom rust on balsam fir. Photo: S. Katovich



Symptoms of [Dutch elm disease](#), which often begin with wilting and yellowing of leaves on a single branch, have been observed this spring. Twigs of infected trees have brown streaks in the outer sapwood.



Above: Brown streaks in the outer sapwood of twigs with Dutch elm disease.

Below: The bright orange, gelatinous galls of cedar-apple rust are hard to miss.

Photos: R. Kelley

[Weir's Cushion Rust](#), caused by *Chrysomya weirii*, was observed in spruce in Norwich. This fungus overwinters in needles infected during the previous growing season. In late summer, or more usually the following spring, spores develop on these needles in tiny, blister-like pustules. These spores are rain-splashed or blown by wind to newly emerging needles on the same tree or other trees in the vicinity. Young needles are then infected as spores germinate.



Yellow bands and spots give rise to *Chrysomya's* blister-like fruiting bodies.

Photo: R. Kelley

There have been numerous reports of heavy [cedar-apple rust](#) in Addison and Chittenden Counties causing destructive disfiguring of juniper and eastern red cedar.

Other Interesting Observations

This [bedstraw hawkmoth](#) was observed by 13-year old Ben McHugh in his front yard. We often receive inquiries about this insect, but nearly always when it is in the caterpillar stage, roaming across the road.



Caterpillars of the bedstraw hawkmoth feed on fireweed, bedstraw and other plants in the Evening Primrose family.

Photo: M. McHugh



If you're lucky, you might catch a glimpse of the showy, green and gold ground beetle, *Carabus auratus*. This beetle is about an inch long, and the upper surface is a brilliant metallic green, becoming somewhat golden at the sides. The legs are mostly orange. The beetle, a European species, was introduced into the Boston area as a possible predator of gypsy moth caterpillars. In the 1940s, *Carabus auratus* began to appear in scattered spots in New England, and is now widespread in our area.

Carabus auratus preys on slugs, worms, cutworms, and other invertebrates.

Photo: D. Burnham



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

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