

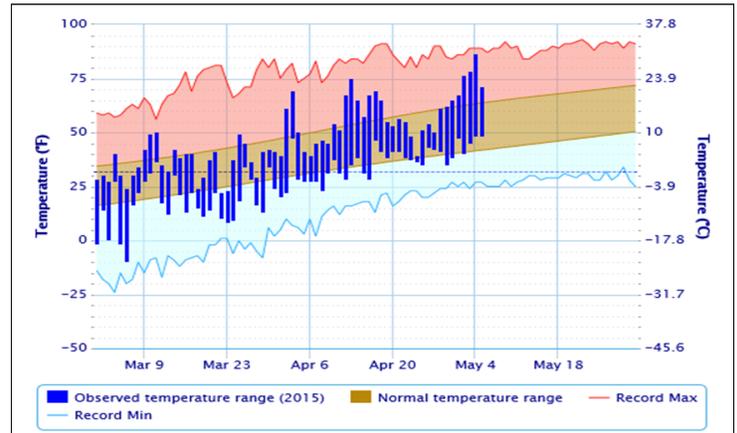
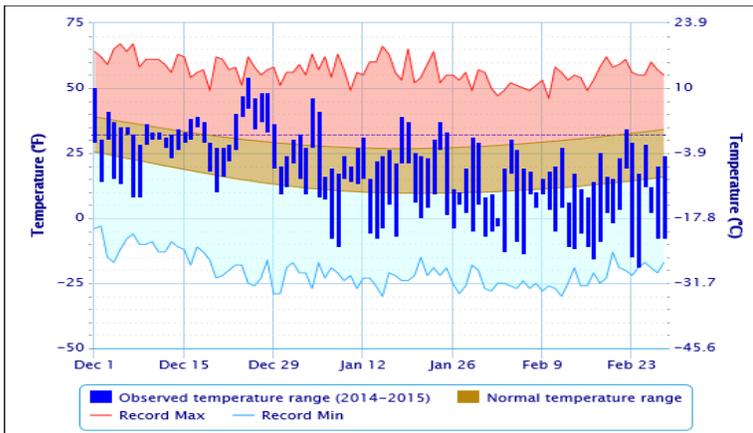
Vermont Forest Health

Insect and Disease Observations—April 2015

Department of Forests, Parks & Recreation
April 2015 vtforest.com

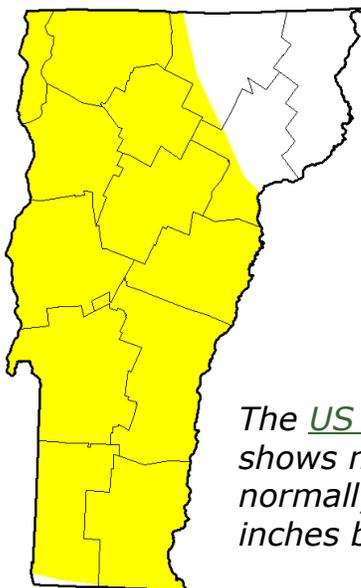
A Long Winter and a Volatile Start to Spring

Was the winter of 2013-2014 as long and cold as we thought? The NWS graphs below, showing daily temperature data in the Burlington area, provide the cold truth.



Despite the deep snow banks, spring flooding was minimal because there were no heavy spring rains to combine with snow melt. Now, though, we need rain.

After snow melt, exposed fuels began to dry out and, as usual, fire danger increased. By mid-month, reports of wildfire activity began. More information about the historical impact of fires on our forest ecosystems is at this link about [Spring Wildfires](#).



The [US Drought Monitor map](#) shows much of Vermont as abnormally dry (in yellow), 2 to 6 inches below normal.

FPR staff were able to conduct two successful prescribed burns in April. Controlled burns like these are a useful tool in managing wildlife in early successional habitat on state wildlife management areas.



Prescribed burns, like the one conducted at Dead Creek Wildlife Management Area on April 29, have a clear objective and are performed by highly-trained individuals.

Photo: A. Alfieri

What the Melting Snow Revealed

The record cold and snowy winter of 2014-2015 left some reminders behind. As snow banks receded, they revealed plenty of girdling done by meadow voles and other creatures. Though you may be tempted to prune back partially girdled trees right away, it is often prudent to wait. Chemicals already present in the shoots will help promote root growth this spring. If trees suffer dieback later, you can deal with it then.



Below-snow feeding by vertebrates (left) salt damage (center) and winter desiccation (right) were noteworthy this winter. Photos: R. Toolan, Bugwood.org, and M. Langlais

Roadside and ornamental conifers throughout the state are showing browning due to [salt](#) and [desiccation damage](#). Some Christmas tree growers have reported that about 20% of trees have marked browning, and that mature trees as well as younger grower stock are affected. In some settings, winter damage is limited to the south side of the trees. Evergreens that have sustained light to moderate damage may look much better by late spring after the affected needles fall off and the vegetative buds, if undamaged, have produced new growth. If buds of Christmas trees were killed (which is uncommon) it may delay harvest.

Recently Attracted to Your Buckets?

Of the 2,000 or so species of moths recorded in Vermont, at least a couple of dozen are attracted to sugar maple sap, either in buckets or around seeps from recent injuries to trees. (Once 1% of canopy red maple are in bloom, the numbers of sap feeding moths drop 1-3 orders of magnitude.) Several families of moths may be represented. Those that show up in sap buckets have spent the winter months as adults, hiding under bark and leaf litter. As temperatures rise and days lengthen, these moths cease hibernation and become active. They need to feed before they mate and lay eggs.



Moths aren't the only insects with a sweet tooth. Butterflies such as the mourning cloak, tortoiseshells, comma and questionmark also overwinter as adults and are attracted to the ready nourishment of sap.

*[Lithophane innominata](#) (the "Nameless Pinion Moth") and [Lithophane grotei](#) ("Grote's Pinion Moth") in the subfamily Noctuidae (which contains the cutworm and dart moths), are among the early spring sapfeeders. Larvae of both species feed on *Prunus*. Photos: J. Davis and K. Childs.*

Other Signs of Spring

Newly-emerged [eastern tent caterpillars](#) are constructing their tents and seem more numerous than in recent years. If you are concerned, a good control option is to simply remove and destroy the tents.

The large, overwintered [bumblebee queens](#) are now active. Only these fertile females survive the winter, then forage for their newly-established colony in the spring. After the first set of smaller workers matures, the queen stays home in the underground nest, so bumblebees appear to some observers to have shrunk as the season progresses. Just recently, [three species of bumblebees once common in Vermont](#) were added to the Vermont list of endangered and threatened species. These include the Rusty-patched Bumblebee (*Bombus affinis*), Yellow-banded Bumblebee (*Bombus terricola*), and Ashton's Cuckoo Bumblebee (*Bombus ashtoni*).



*A tri-colored bumblebee (*Bombus ternarius*) queen wanders the forest floor in search of a new nesting site. Photo: K. McFarland*



Orchard mason bees are efficient pollinators of many plants. Photo: [ARS, USDA](#)

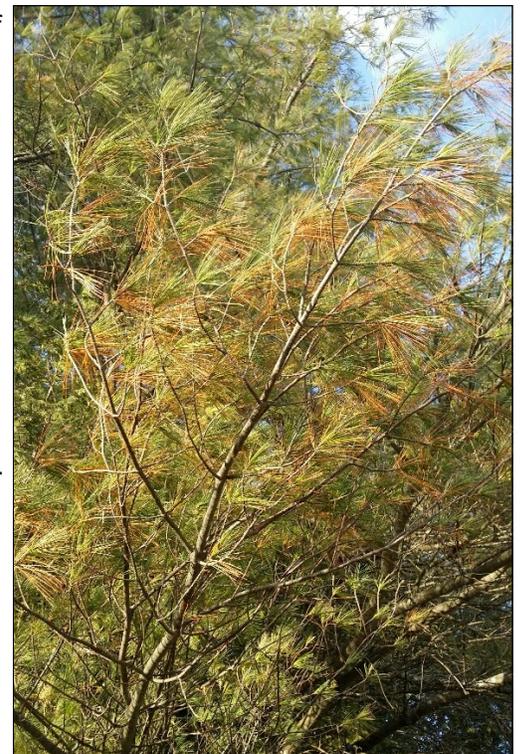
Speaking of bees, though apple trees are not yet blossoming, [orchard mason bees](#), which many people encourage to dwell in their orchards through use of nest houses, are emerging. Bee emergence and apple bloom requirements are based on different systems. While the development of apple blossoms is likely temperature dependent, bee emergence is more likely tied to lipid reserves. Bees with low reserves will emerge earlier (and at lower temperatures) in order to feed, while those with full lipid reserves can delay emergence. If apple blossoms are unavailable, the emerging bees will visit a range of early spring trees including maples and various native Rosaceae. Apple blossoms serve as a "second helping" to the earlier blooming species.

In Essex Junction, we observed our first [six-spotted tiger beetle](#) of the season on May Day. These tiger beetles continue to be mistaken for the [emerald ash borer](#). (If the sighting *had* turned out to be EAB, it could have been "May Day, May Day!")

Symptoms of needlecast are now starting to show up again on white pine. Although several different fungi have been associated with the recent outbreak of [white pine needle damage](#), these early symptoms are likely to be caused by *Lophophacidum dooksii*, (formerly *Canivergella banfieldii*). The Brown Spot Needle Blight fungus (*Mycosphaerella dearnessii*) has been even more common on white pines in the region, but doesn't turn needles brown until later in May or in June. Since the heaviest damage by these fungi tends to occur on the same trees year after year, shoot elongation and the production of new wood will likely be limited, and reductions in crown length and live crown ratio are expected.

*White pine in St. Johnsbury showing symptoms of needlecast caused by *Lophophacidum dooksii*.*

Photo: K. Decker



Heads Up

Scientists from the US Forest Service have requested assistance to support their research on silver fly predators of woolly adelgids. They are looking for help in collecting [pine bark adelgid](#) samples. This insect can be found on the smooth bark of twigs, branches, and the mainstem. If you've come across white pines with high populations of adelgid, and are willing to collect some for this effort, please contact the [Forest Biology Lab](#) for more information.

Pine bark adelgids can nearly coat the surface of pines. Females lay masses of eggs in the cottony wax threads.

Photo: R. Kelley



A new pest, the [spotted lanternfly](#) (*Lycorma delicatula*) native to Asia, has been discovered in Pennsylvania. The lanternfly has piercing-sucking mouthparts and is known to feed on over 50 species of trees. It has been observed on maple, oak, walnut, poplar, cherry, willow, grape, as well as its preferred host, the tree of heaven.

The spotted lanternfly will lay eggs on bark as well as other surfaces, giving us yet another reason to avoiding moving firewood.

Photo: H. Raguza



The [southern pine beetle](#), considered for many years the most economically destructive pest of two- and three-needle species of pine in the southern United States, Mexico, and Central America, was found this last month in Connecticut. It was previously known from southern Maryland (where its populations have been below outbreak level since 1994) and more recently, from eastern Long Island and the New Jersey Pine Barrens. Potential host trees respond to the attack of this bark beetle by releasing resin to "pitch out" the intruder. The resin forms an easily-recognizable cover over the beetle that looks like popcorn.

Signs of southern pine beetle infestation include popcorn-shaped clumps of resin on the bark. All pine trees are susceptible but pitch pine is the preferred host in the northeast. Photo: T. Tigner, [Bugwood.org](#)



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

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