

Vermont Forest Health

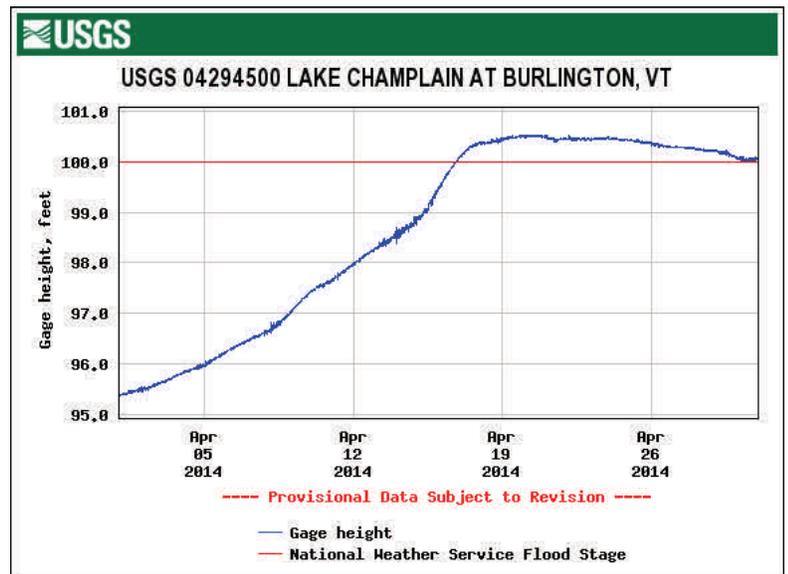
Insect and Disease Observations—April 2014

Department of Forests, Parks & Recreation
April, 2014 vtforest.com

Early Spring Weather

April 2014 was a month of contrast...from winter to spring and from flooding to fires. Overall temperature was colder than normal as was the case throughout the winter. Precipitation was below normal for the month. However, a deep snowpack at the beginning of the month set the stage for an above normal risk of spring flooding. On April 1, 8 to 12 inches of snow was on the ground in the valleys, 3 feet plus in the higher elevations and over 6 feet in the mountains.

Snow melted slowly during the beginning of the month but on April 15 from ½ to 1 ½ inches of rain caused rivers to rise. Roads were closed due to high water and field flooding was common. Lake Champlain remained above flood stage through April. A drying trend began after the mid-month rain. Less than a week later, as fine dead grasses and leaves dried out, fire danger rose and fires were reported all over the state. On 4/24 a red flag warning for high winds, low relative humidity and dry fuels was issued for Bennington, Windham, Orange, Windsor, Western Rutland, Western Addison counties.



Cool, damp weather ended the short fire season as well as the month. The only remaining snow was at the highest elevations and leftover snow banks here and there. Some greening of lawns and mowed fields began, lilacs budded and other signs of spring were a welcome sight after a long, cold winter.

Though concerns about spring flooding along many rivers and streams didn't last long, some mechanical damage was sustained by riparian trees. Flooding can harm trees by washing away soil and undermining root systems, depriving roots of oxygen by soil saturation and deposition of sediment, and, often most obviously, by causing stem wounds from fast-moving debris.

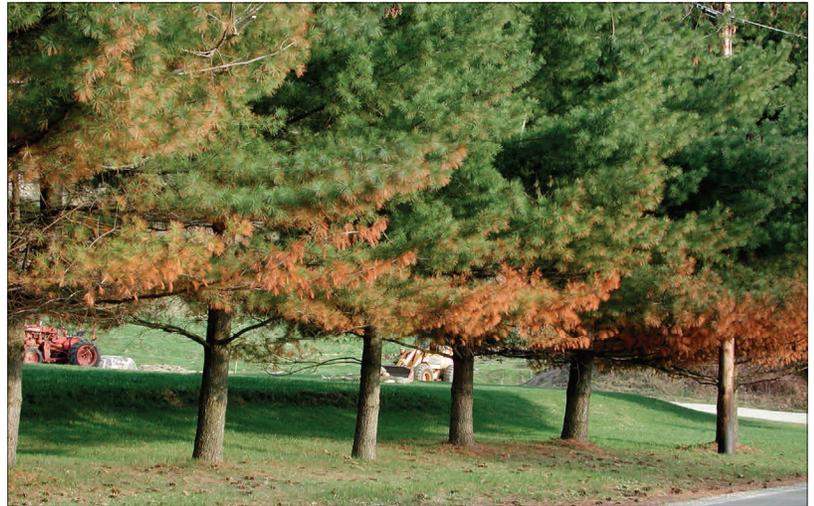
Effects of Winter Weather on Trees



Winter burn on balsam fir. Photo: D. Dillner

More than usual "winter burn" has been observed on landscape conifers. In some cases, winter injury begins at the protective snowline, which provides shelter from drying winds and from the glare of the sun. This results in the upper half of the tree having reddish-brown needles, while the lower half, protected by the snow, remains green. Winter injury is sometimes most severe on the southern and western sides of the trees, where exposure to sunlight warms needles and breaks dormancy. At sunset, the warmed needles cool rapidly and ice crystal formation results in tissue death. Drought stress is suspected when an entire tree develops reddish or purplish-brown foliage.

Salt injury to white pines along highways has been commonly observed. Along with white pine, trees listed as relatively intolerant of salt spray include basswood, hemlock, red and sugar maple, red pine, and shagbark hickory.



Salt damage to roadside white pines. Photo: R. Kelley

The deep and persistent snow cover over the winter gave the rodent population the opportunity to girdle apples and other hardwoods.



In other weather-related observations, extreme wet conditions in some areas last summer appear to have taken their toll in scattered Fraser and balsam fir plantations.

Ice and wind damage this past winter left many trees and shrubs in need of corrective pruning. This project can be undertaken after leaves have fully expanded.



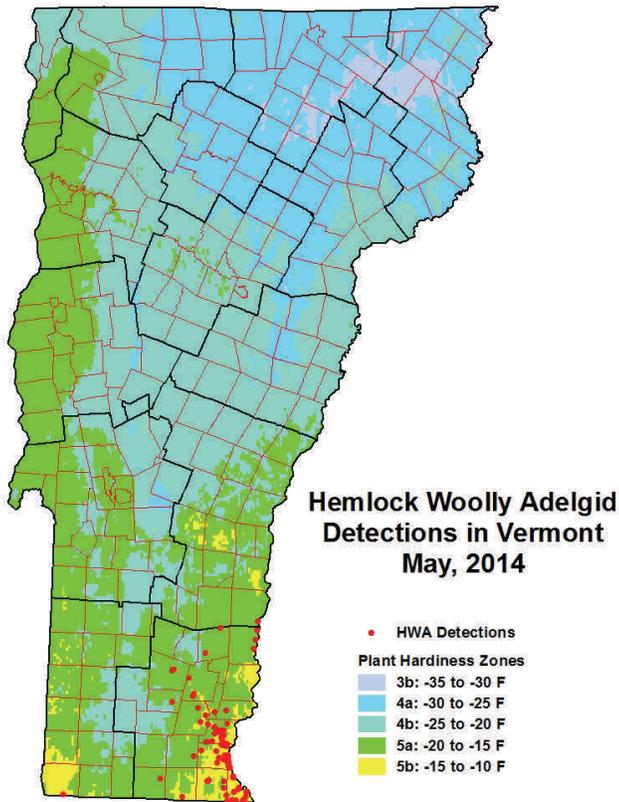
Wet-site dieback. Photo: D. Dillner

Girdling by rodents. Photo: J. Crook

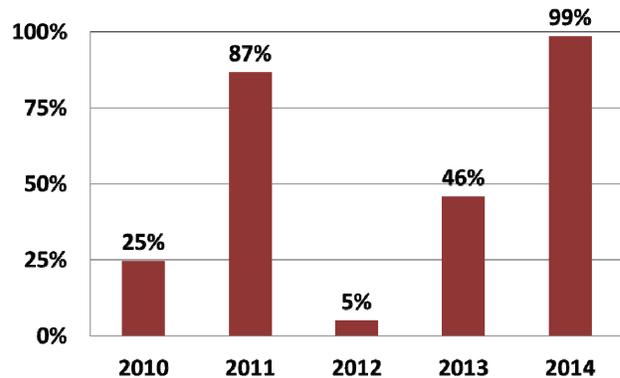
Exotic Insects

Hemlock Woolly Adelgid (HWA) has now been detected in 17 towns in Vermont, including 15 towns in Windham County, one in Bennington County and, as of February 2014, one in Windsor County in the town of Springfield, just over the county line from a previous find in Rockingham.

HWA-infested twigs were collected in mid-March from four Vermont sites for winter mortality assessments. Mortality averaged 99%, the highest recorded over the past five winters.



Winter Mortality of Hemlock Woolly Adelgid in Windham County



Emerald Ash Borer (EAB) was featured during Ash Awareness Week April 27– May 3. Activities included drawing attention to the importance of our ash resource through tree taggings, ash tree walks hosted around the state, news coverage and other events that involved 130 volunteers and staff. Though not yet known to occur in Vermont, the threat of EAB has prompted many folks to increase their knowledge of the [signs and symptoms of EAB infestations](#) and to recognize the value of their ash trees. Ash observers are also learning more about [other ash-infesting species](#). (See page 4 for notes about recent eastern ash bark beetle activity.)

As part of our statewide EAB surveillance, we will be conducting a [girdled trap tree](#) project again this year in high risk areas such as campgrounds, rest stops, and/or areas where ash is in poor health. Trees will be girdled by mid-June and peeled this winter. Also, as in the past several years, we will be looking for EAB in [Cerceris fumipennis](#) wasp nest sites.

For more information about invasive pests, visit [VTInvasives](#).

Pear thrips emergence was first observed in our long-term monitoring site at Proctor Maple Research Center in Underhill on April 18th. There were just two thrips on the four sticky traps that week, but the following week had 60 thrips total on the four cards. Pear thrips spend the winter in the ground as pupae, and adults emerge in early spring to feed on opening vegetation and flower buds.



Fir decline and mortality caused by balsam woolly adelgid has been reported this spring. Like its close relative, HWA, this insect is cold sensitive, so populations may decline after the cold winter.

Balsam woolly adelgid feeds under white flecks on fir bark.

Photo: D. Singleton

Eastern tent caterpillar tent and caterpillars.

Photo: R. Kelley



Native Insects

Eastern tent caterpillar eggs hatched in mid-late April in most locations. After spending winter in masses of 100-300 eggs, newly-emerged, gregarious larvae construct tents. Removing and destroying tents as they appear in early spring is a control option.

Large numbers of eastern ash bark beetles have been reported by staff members this spring. The overwintered beetles emerge and fly to seriously weakened, newly-felled or dying ash trees. There, they burrow into the bark and begin laying eggs. Adult beetles are covered with scales that form a distinctive, often-recognizable pattern.

Eastern ash bark beetle and its distinctive galleries.

Photos: Pest and Diseases Image Library, Bugwood.org (left) and James Solomon, USDA Forest Service (right)



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

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Bennington & Rutland Counties.....
Addison, Chittenden, Franklin & Grand Isle Counties.....
Lamoille, Orange & Washington Counties.....
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