

Vermont Forest Health

Insect and Disease Observations—August 2015

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

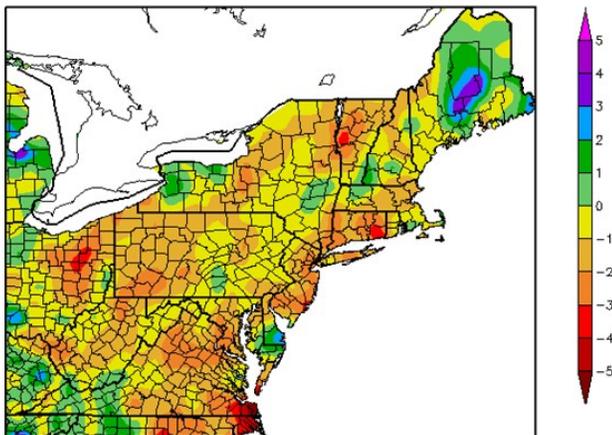
August Conditions Hot and Dry

With an average temperature of 72.3 degrees, this was Burlington’s fourth warmest August on record since 1884. The Queen City hit 90 degrees four days in a row (August 17-20), but left firm the 1944 record of eight days at 90 or above. A record temperature of 87 degrees was set at Montpelier on August 19, breaking the old high of 85 set in 1971.

Precipitation was below normal, statewide, for the month of August. According to the [Palmer Drought Severity Index](#) (which measures the duration and intensity of long-term drought-inducing patterns), southern Vermont was categorized in moderate drought as of August 29; the [US Drought Monitor](#) showed Bennington, Windham and part of Rutland counties back to abnormally dry as of August 4.

Severe thunderstorms developed along the spine of the Green Mountains on August 3rd and August 15th. In some areas, large hail, high winds, downed trees, and power outages resulted. Temperatures remain well above normal and dry conditions persist as the Labor Day weekend approaches.

Departure from Normal Precipitation (in)
8/1/2015 – 8/30/2015



Generated 8/31/2015 at HPRCC using provisional data.

Regional Climate Centers

National Weather Service Burlington

Photo Credit: Bradford Elliott Jonesville, VT 8/3/15

Photo Credit: Rosalyn Elliott Jonesville, VT 8/3/15

www.weather.gov/btv US National Weather Service Burlington, VT @NWSBurlington

End-of-August readings showed a 1.93 inch departure from normal precipitation. Data generated by [HPRCC](#). Large hail pummeled Jonesville on August 3rd. Photos: [@NWS Burlington](#)

Mischievous Member of Milkweed Family Makes Mayhem for Monarchs

This month's featured invasive plant is [Black Swallowwort](#), *Cynanchum louiseae*. Black swallowwort (BSW) is a perennial vine, with oval leaves that are pointed at the tips, dark glossy green in color, oppositely arranged, and smooth along the edges. The flowers are "star" shaped, small, and black-purple in color with white hairs. This plant is a native to Europe, and was first noted to have escaped from a Massachusetts botanical garden in the mid-1800s.

The invasive nature of this plant is observed by its rapid colonization by seed and root, blocking out sun from the native plants it twines over, creating thickets and overtaking field habitat and woodland understories, and most notably, being a "trap plant" for Monarch butterfly larvae.

When monarchs arrive to the Northeast, they need milkweed plants for the next generation to survive. The adults lay eggs on milkweed plants, providing a bountiful food source for the larvae when they hatch. The trouble arises when non-native invasive members of the milkweed family are utilized by the monarchs instead of the native milkweeds. Monarch larvae cannot successfully feed on BSW (either starving or becoming poisoned), and do not survive. Some studies suggest that adult Monarchs will lay a portion of eggs on BSW even when native milkweeds are present.

How we can help:

- Learn how to [identify black swallowwort](#), and know how to tell it apart from [our native milkweeds](#).
- [Get involved in protecting monarchs](#) and [promoting native milkweeds](#). [Monarch Watch](#) has many resources.
- Take action in your community to [stop the spread of black swallowwort](#)



Like native milkweeds, the seed is contained in pods that eventually dry and split to release winged seeds that are readily spread by the wind. Photo: E. Spinney

Contact Elizabeth Spinney (elizabeth.spinney@vermont.gov) if you think you've found black swallowwort.

Christmas Tree Observations

Symptoms of *Rhizosphaera*, *Lirula*, *Armillaria* and *Phytophthora* have been observed in balsam and Fraser fir Christmas trees in some areas. As the names suggest, *Rhizosphaera* needle blight and *Lirula* needlecast are foliar in nature, associated with discoloration and loss of needles on fir; *Armillaria* and *Phytophthora* affect root systems, but eventually result in yellowing then browning or reddening of needles.

Foliar symptoms of [Rhizosphaera needle blight](#) (caused by *Rhizosphaera pini*) and [Lirula needlecast](#) (caused by *Lirula nervata* and *L. mirabilis*) often begin in the lower branches. Both diseases are apt to be more prevalent in small trees than that are growing in cool moist conditions, or on larger trees growing close together where air circulation may be compromised.



(Left) With *Rhizosphaera*, the black fruiting bodies emerge from the stomata on the underside of needles. (Right) With *Lirula*, a single row of spore-producing fruiting bodies forms on the midrib on the underside of needles. Photos: [B. Watt](#) and R. Kelley

[Armillaria](#), also known as shoestring root rot, is caused by a fungus called *Armillaria mellea* that kills trees by girdling them at the root collar. Christmas trees planted on cutover sites, particularly if they contained hardwood stumps, are at higher risk of acquiring the disease. [Phytophthora root rot](#), caused by *Phytophthora cinnamonomi* and other *Phytophthora* species, is most common in poorly drained or heavy soil. Whole trees turn red-brown. Roots become discolored and rotten.



(Left) Black rhizomorphs from this nearby stump have grown through the soil to infect the nearby Christmas tree. White sheets of fungus (mycelial fans) can be observed under bark at the root collar. (Right) *Phytophthora* fungi produce spores that swim through free moisture in the soil. Photos: R. Kelley and [S. Ott](#)

Maple Trumpet Skeletonizer Horning In

Three late-season maple defoliators are now apparent. These include the [maple leafcutter](#), mentioned in our [July Update](#), [maple webworm](#) and [maple trumpet skeletonizer](#).



Maple trumpet skeletonizer caterpillars construct elongated tubular shelters ("trumpets") of silk and feces in which to live. The tube is enlarged as the caterpillar grows.
Photos: D. Dillner

Leaf Spots and Bronzing

When this time of year rolls around, it's nearly impossible to find a perfect leaf. Black cherry is sporting [Coccomyces leaf spot](#), caused by the fungus *Blumeriella jaapii*. This fungus overwinters in dead leaves on the ground. Balsam poplars are noticeably "bronzed" due to [poplar leaf blight](#) caused by *Linospora tetraspora* and *Septoria populicola*.



(Left) Coccomyces leaf spot disease is characterized by angular lesions and browning of leaves as lesions coalesce. Linospora tetraspora causes large, brownish-gray blotches with feathery margins. Septoria leaf spots first appear as sunken black flecks that enlarge and coalesce. Photos: R. Kelley, [BC Ministry of Forests](#), [P. Bachi](#)

Brown-hooded Owlet Caterpillar

The lovely larva shown below is the immature stage of the brown-hooded owlet moth, *Cucullia convexipennis*. The caterpillar feeds on the flowers of asters and goldenrod. There is a reddish-brown line of tufts along the back of the adult moth.



A common name for this insect is the "Calico Paint Caterpillar". It occurs along the edges of woodlands and in fields. Photos: R. Russotti (caterpillar) and [L. Line](#) (adult).

New Record for Sugar Maple

During their carpool ride home on Friday, August 21st, Windham and Windsor County Forester Sam Schneski and State Lands Forester Aaron Hurst stopped to measure a sugar maple for a possible big tree record. The tree is located at the Sojourns Health Clinic in Westminster in Windham County. After measuring the tree multiple times, Sam and Aaron determined it was indeed the new state record holder for the largest sugar maple at 349 points. The previous record holder in Dummerston scores 336 points, but has some serious structural issues and is leaning right over the owner's home.



*New holder of the sugar maple big tree record.
Photo: S. Schneski*

Now Available: The Hemlock Restoration Initiative has recently posted the bulletin [Beetles Save Needles](#) that provides information on biocontrol of hemlock woolly adelgid using the predaceous beetle *Laricobius nigrinus*. The publication discusses beetle collection, release, and monitoring success of introductions. In addition, a recent article in *Science* magazine entitled "[Battling a Giant Killer](#)" covers control efforts.



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

Windsor & Windham Counties.....
Bennington & Rutland Counties.....
Addison, Chittenden, Franklin & Grand Isle Counties.....
Lamoille, Orange & Washington Counties.....
Caledonia, Orleans & Essex Counties.....

Springfield (802) 885-8845
Rutland (802) 786-0060
Essex Junction (802) 879-6565
Barre (802) 476-0170
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. In accordance with Federal law and U.S. Department of Agriculture policy, this institution is prohibited from discrimination on the basis of race, color, national origin, sex, age, or disability.