



# Vermont Coverts Woodlands for Wildlife

A newsletter of Vermont Coverts: Woodlands for Wildlife, Inc.

Volume 55 Spring 2021

## NOTE FROM OUR PRESIDENT

Rich Chalmers, *Class of 2005 Spring*



This is an exciting time. There seems to be real light at the end of this pandemic tunnel and a good chance that life for us humans, at least in Vermont, will be approaching some form of normalcy later this year.

Our fingers are crossed for a Coverts event in September – an opportunity to reconnect in person after all this Zoom-limited contact.

It will be good to have real eye contact and have conversations that go beyond what is possible electronically.

In the meantime, try to spend as much time outside as you can. There is much to explore and learn. Brush up on your fern ID, learn some new bird calls, appreciate the quirky magic of those woodcock, get to know those vernal pools and wetlands better. Check out your town forest.

Take the time to sit quietly and appreciate all that is going on around you. Think about how you relate to your land, how it informs your land ethic. Develop your understanding, based on study, connection and experience that will help you make better, science based, decisions.

As always, we are here to help. Check out the YouTube channel for a long list of programs, recorded and waiting for you. The E-News and website event calendar will keep you informed of upcoming programming and there is lots more in the works. Got a question? Let us know. It may be the seed of a great workshop.

This is a time of transition - for us and all around us. Create the chance to enjoy it.

*Rich Chalmers*

Rich Chalmers  
President



*Downy woodpecker*  
photo by Tina Barney

## NEW COVERTS LOGO AND WEBSITE CHECK THEM OUT!

Coverts has a new logo. This logo was designed to represent our connection with the woods and the wildlife. Thank you to Cooperator Emily Cooper for her help with the design work. Can you identify all the species represented by the tracks? (answers on page 4)

We also redesigned our website. Visit [www.vtcoverts.org](http://www.vtcoverts.org) for videos, resources and a calendar listing of events to help you in your landowner journey.



**MISSION** Enlist Vermont landowners in a long-term commitment to maintain and enhance diverse wildlife habitat and healthy ecosystems.

# DEATH IN THE FOREST: THE PROFOUND PROCESS OF TREE MORTALITY

By Ethan Tapper



To understand how to take care of forests, we first need to understand what they are and how they work. While most peoples' understanding of them starts and ends with trees, forests are complex, dynamic communities comprised of many different organisms and the processes that affect them.

While forests function as systems in many ways, they are not utopias. Organisms compete with one other, parasitize each other, eat and destroy each other. Within forests, one of the incredible processes that make forests work – and one that we need to learn to accept – is tree death.

When trees die it may seem startling or sad; the end of a decades or centuries-long life, the loss of a once-beautiful and healthy living thing. To the forest, however, the death of a tree is something much more profound; supporting critical ecological functions and processes and providing habitat for many native organisms.

I think of a tree as having a “biological life” (when it is “alive” in a traditional sense) and also an “ecological life” (the tree’s overall influence on forest ecology, which can persist for decades or centuries after it dies).

The death of a tree can happen in a moment, like when they are snapped or uprooted in a windstorm.

But it usually happens over time, the product of numerous interrelated factors called stacking stressors. For instance, a tree’s branch is broken by heavy ice and snow. This wound is colonized by fungi, which breaks down and softens the tree’s wood, paving the way for wood-boring beetles and other arthropods (bugs). Searching for these bugs and their larvae, woodpeckers excavate cavities (holes) in the tree. Cavities create still more opportunities for fungi, bacteria and arthropods to colonize the tree. As these stressors compound on one another, the stress eventually becomes too much and the tree dies.

Tree death is often a biological process; the product of a rich assemblage of organisms taking advantage of their natural habitat. While it’s tempting to vilify fungi, bacteria and bugs for “killing our trees,” a more holistic understanding of forests reveals that these organisms are actually critical parts of ecosystems. They help break-down and recycle dead trees and plants, enriching soils and feeding future generations of trees. In facilitating tree death, they create snags (dead-standing trees) and cavity trees, both of which are used by a huge number of animals as nesting and denning habitat.

Once the tree falls, “dead” wood on the forest floor stores carbon, improves the forest’s ability to absorb water, provides a place for trees like yellow birch and hemlock to take root, and provides habitat for underground mycorrhizal fungal networks critical to our forests’ ability to function.

Dead wood is critical habitat for salamanders, the apex predator of the forest floor, which account for the most biomass of any vertebrate predator in the northern forest (meaning that if you weighed all the coyotes and all the salamanders in the forest, the salamanders would weigh more). Dead trees are such a rich habitat that they can contain as much as four times as much living biomass as living trees.

Tree death also provides opportunities for forests to become diverse and complex. Openings in the forest canopy are soon filled by regeneration, the abundant growth of young trees and plants. Over time, this cycle of death and regeneration creates forests with a rich mosaic of different sizes, ages and species of trees. Forests like this supporting a diversity of bird and wildlife species, store more carbon and are more resilient and adaptive in a changing climate.

As a forester, my main concern is keeping the forest, as a system, healthy. To this end, tree death, just like tree life, is something to be celebrated, not avoided. It can even be something that we use as a tool in our stewardship of forests; using the cutting of trees to create a more diverse, complex, and resilient forest, one that is full of life in a more holistic sense.

While it might make us uncomfortable, understanding the profound and important role that tree death plays in forests is a critical part of learning how to take care of them. We should strive not to keep every tree alive, but rather to keep the forest vibrant and whole. Healthy forests not only tolerate death – they require it.

*Ethan Tapper is the Chittenden County Forester. He can be reached at [ethan.tapper@vermont.gov](mailto:ethan.tapper@vermont.gov), (802)-585-9099, or at his office at 111 West Street, Essex Junction.*

## FOREST PESTS AND YOU!

You can help protect Vermont's forests this spring. As you head out into the woods, take a closer look at your trees. Some trees are threatened by invasive forest insects. In some places, you might be the only one to spot them!

The three pests to be on the lookout for when exploring your woodlands are the emerald ash borer, hemlock woolly adelgid, and Asian longhorned beetle. If you see signs of any of these pests, take photos, capture the GPS location and report your findings using the REPORT IT link at [vtinvasives.org](http://vtinvasives.org).

Following are some details on each insect and what to look for.

### EMERALD ASH BORER

The emerald ash borer (EAB), is an invasive beetle native to southeast Asia. It was first confirmed in the United States in 2002 and first detected in Vermont in 2018. It is now known to be established in 35 states and five Canadian provinces. All of Vermont's native ash trees (green, white and black) are threatened by this forest pest with 99 percent of them likely to die if infested.

You can help slow the spread of EAB by looking for signs and symptoms of the beetle. These include patches of "blond" bark flecked off by grub-hungry woodpeckers, a dying canopy, new branches growing low on the main trunk or s-shaped galleries or tunnels just under the bark of the tree. If you see an ash tree with these signs, take photos and REPORT IT at [vtinvasives.org](http://vtinvasives.org).



*Woodpecker flecking on ash tree*

*(Credit: Art Wagner, USDA-APHIS, Bugwood.org)*

### HEMLOCK WOOLLY ADELGID

Hemlock trees, a keystone species in northern forests, provide food, shelter and shade to wildlife across the region. Hemlocks are threatened by the hemlock woolly adelgid (HWA), a small, aphid-like insect that feeds on starch in hemlock twigs. Vermont has implemented a biological control

program to keep the populations of HWA down. This tiny bug is currently in southern Vermont but has the potential to move north as it has been spotted in sections of central New York and New Hampshire.

Look at the underside of hemlock branches for small, white, cottony balls lined up along the twigs. Most new detections come from residents and visitors reporting suspect trees. Get close to a hemlock, and if you see this pest, REPORT IT at [vtinvasives.org](http://vtinvasives.org).



*Hemlock woolly adelgid on hemlock twig*

*(Credit: Connecticut Agricultural Experiment Station, Bugwood.org)*

### ASIAN LONGHORNED BEETLE

The Asian longhorned beetle (ALB) feeds on many hardwood trees, but its preferred snack is maples. The only known way to control ALB is to cut down infested trees. States with ALB infestations have cut down and destroyed thousands of trees in their efforts to eradicate the pest. Although not yet present in Vermont, if it gets a foothold here, this pest could devastate the rural and urban landscapes as we know them and the maple sugaring industry we love.

Look for perfectly round, dime-sized exit holes, at least a half inch deep. Egg mass sites appear as shallow, round scars or half-inch depressions in the outer bark. If you see these signs, REPORT IT at [vtinvasives.org](http://vtinvasives.org).



*Asian longhorned beetle emergence hole*

*(Credit: Joe Boggs, Ohio State University, Bugwood.org)*

With your help we can identify where these invasive forests pests are and limit their impact on our woodlands. For more information on these pests and others, visit [vtinvasives.org](http://vtinvasives.org)



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## SAVE THE DATE

# Coverts Crawling out of Covid Celebration

## September 25, 2021

### Tracks in the New Coverts Logo

Answers clockwise from lower left: fisher (hind foot), coyote, song  
bird, turkey, bear, deer, bobcat, human (forepaw!)



Keep Vermont Coverts growing strong!  
Donate online at [www.vtcoverts.org](http://www.vtcoverts.org)