



Vermont Coverts Woodlands for Wildlife

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

Volume 67 Winter 2025

NOTE FROM OUR PRESIDENT

Rich Chalmers, *Class of 2005 Spring*



Thank you to everyone who contributed to the success of our annual fund drive! Because of your generosity and commitment to the Covert mission, we not only reached but exceeded our goal.

Looking ahead to 2025, we're excited to offer programs that you will find helpful as you steward your land and serve in your community.

One issue that's on the rise is bear encounters. As human-wildlife boundaries blur, understanding how to prevent conflict has never been more crucial. That's why we're continuing our popular Bear Ambassador Program, launched last year. This course equips you with the latest insights into bear biology and behavior, plus effective strategies to foster coexistence. You will also gain the confidence and skills to help your neighbors navigate these challenges.

Another growing topic in land stewardship is ecological forestry. Coverts is offering an advanced three-day class to dive deep into what ecological forestry is, why it matters, and how we can apply it to improve forest health. A key part of this is understanding the value of dead wood—something we explore in greater detail in the article by Cooperator Steve Hagenbuch on page 2.

HIDDEN LIFE UNDER THE SNOW

Lisa Sausville, *Executive Director*

Beneath the snow exists a hidden world known as the subnivean layer. This zone, nestled between the soil surface and the base of the snowpack, provides a vital refuge for a variety of wildlife that persist through the harshest winter months.

The subnivean layer offers a microhabitat with relatively stable temperatures and high humidity, shielding its inhabitants from the extreme cold above. The activity within the subnivean layer helps maintain nutrient cycling and soil fertility, setting the stage for robust plant growth in spring.

These are just a few of the programs we're offering in the coming year, all designed to help you confidently steward your land and engage with your community. A few are listed in this newsletter, but you can learn more through our enews or visiting our online calendar (vtcoverts.org/calendar.html).

And, save the date for our 40th celebration, September 21, at Lareau Farm in Waitsfield!

We are also now accepting applications for the 2025 Cooperator Training. Thank you for recommending the Training to your friends and neighbors, for hosting and attending workshops, and serving on your town conservation and forest committees. This is our peer-to-peer network in action, supporting our woodlands and enriching wildlife habitats.

We hope you will take advantage of the connections made through your Coverts experience. See you in the woods!

Sincerely,

Rich Chalmers, President



American marten utilizing coarse woody debris
photo by Courtney Celley, USFWS

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A REVERENCE FOR DEAD WOOD

Steve Hagenbuch, *Coverts Cooperator (2006s)* and
biologist with Audubon Vermont



Downed woody material – photo by Steve Hagenbuch

Healthy forests are the key to resilience and adaptation, addressing the biodiversity crisis, and supporting a viable forest economy. As we consider how to steward our forests to improve their overall health we must recognize that dead wood, both standing and on the ground, is just as much a part of a healthy forest ecosystem as live trees are.

Dead wood comes under many monikers. Standing dead trees are often referred to as snags. When those trees ultimately fall to the ground the twigs and small branches, generally less than 4 inches in diameter, become fine woody material. The trunks and larger branches can be described as coarse woody material.

Within these different classifications, not all dead wood is created equal. How sound or decayed the wood is provides an additional way to look at it. It can be helpful to consider stages of decay when developing our understanding of the ecological role that a particular dead wood feature plays within the forest.

Speaking of ecological roles of dead wood, what are they? Why is an abundance of standing dead trees and dead wood on the ground a critical component of a healthy forest?

Perhaps the most commonly understood value is that standing dead trees, snags, provide habitat for everything from birds and bats to flying squirrels and fungi. By some estimates, roughly $\frac{1}{4}$ of northeastern wildlife species utilize snags for all or a portion of their life cycle.

Pileated Woodpeckers will seek out larger (~20 inch diameter) and minimally decayed snags for perching, foraging for insects, and excavating a nest cavity. Little brown bats may be found roosting in more decayed,

hollow snags. Regardless of the wildlife species, the larger the snag, generally the greater the habitat value.

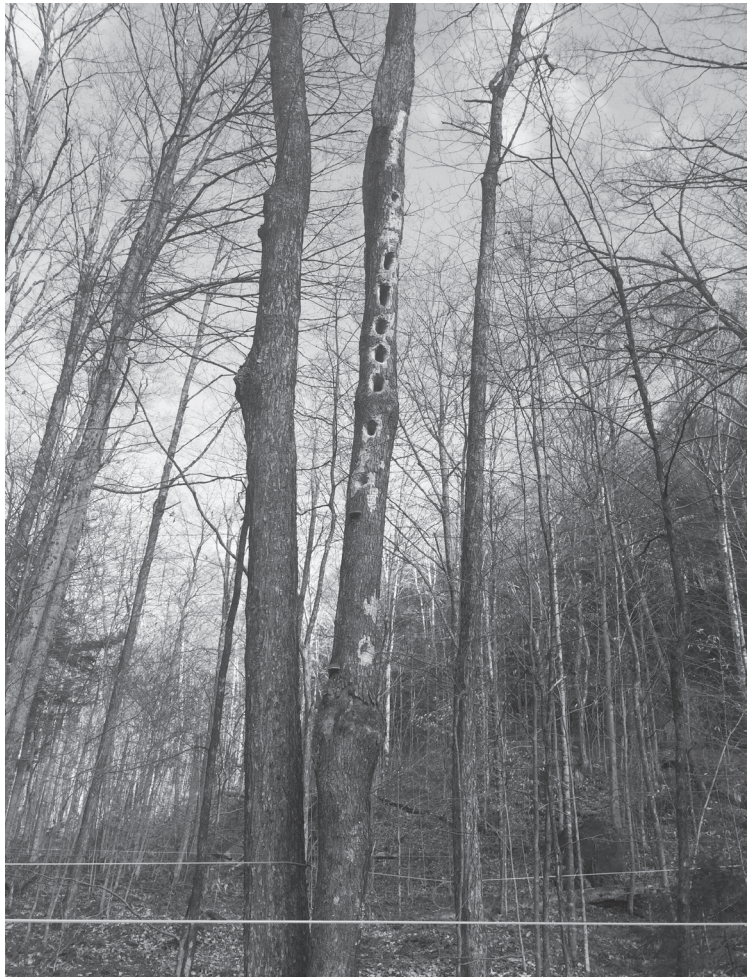
Eventually all trees will fall to the ground, adding to the amount of coarse and fine woody material on the forest floor. While this may appear “messy” at first glance, once the ecological values of downed woody material are understood, it can become quite beautiful.

Larger logs may provide a courtship “drumming” site for male ruffed grouse or be chosen by a black bear as a place to spend their winter torpor (a period of light sleep, decreased breathing and heart rate, and lower metabolic rate). The tops of those fallen trees provide great cover for a variety of small mammals and songbirds. They also provide tree seedlings and small saplings with protection from being easily browsed by deer.

Both coarse and fine woody material can help slow, spread, and retain water; a key consideration in thinking about how to support our forests in being more resilient to extreme weather events in a changing climate.

Two additional topics related to dead wood that are receiving a great deal of attention are old-growth forests and forest carbon. Old-growth forests have abundant large-diameter snags and downed dead wood in various stages of decay. It is estimated that old-growth forests often have two

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*Snag excavations by Pileated Woodpecker
– photo by Steve Hagenbuch*

A REVERENCE FOR DEAD WOOD

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to four times the amount of dead wood on the forest floor than is typically found in second-growth forests.

Dead wood, of all types, plays a crucial role in carbon sequestration and storage within forest ecosystems. Sound pieces of dead wood can keep carbon locked up for many years. As the wood decomposes carbon is released to the atmosphere. However, a significant amount of the released carbon gets captured by fungi and other decomposers and stored in the soil.

If one's interests lie in managing forests for old-growth characteristics and/or carbon sequestration and storage, giving due consideration to current and future dead wood is paramount. But how much is enough?

Guidance on how many snags or pieces of coarse woody material to retain or recruit per acre is wide-ranging and somewhat dependent upon overall forest management goals. Where the primary goal is to develop old-forest characteristics a landowner will undoubtedly strive for more snags than a forest where maple syrup production is the highest priority.

There are some general recommendations that can serve as a starting point. Audubon Vermont suggests a target of at least 6 snags per acre, with one tree greater than 18 inches in diameter and three greater than 12 inches. When it comes to fine woody material, Audubon recommends leaving as many of the tops of harvested trees, often referred to as slash, in the forest as possible. No need to lop those tops, simply leave them as they fall.

In "Restoring Old-Growth Characteristics to New England's and New York's Forests" (2022), Tony D'Amato (UVM) and Paul Catanzaro (UMass) offer benchmarks for snags and coarse woody material. Where restoration of old-growth structural characteristics in a northern hardwood forest is a primary objective, they suggest a target of 16-20 trees greater than 20 inches diameter be recruited and/or retained onto the forest floor as coarse woody material. For standing dead trees that recommendation is 8-12 trees greater than 20 inches diameter.

Regardless of ownership goals, intentionally planning to maintain current and recruit future dead wood in the forest will go a long way toward promoting overall forest health, resilience, biodiversity, and wildlife habitat.

HIDDEN LIFE UNDER THE SNOW

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Small mammals such as voles, shrews, and mice thrive in this protected space, creating intricate tunnel systems and shallow burrows that help them forage for food while evading predators. Coarse woody debris—often referred to as dead wood or necromass—plays a vital role in maintaining habitat complexity. This dead wood provides physical structure and creates microhabitats. Decaying wood houses insects and fungi utilized for food.

Predators like American martens use the subnivean zone for shelter, hunting and rest. They depend on the structural complexity provided by the necromass. Other predators hunt this zone as well. Owls can hear mice and voles running around under the snow while foxes and coyotes can detect their prey by scent. Another predator, the ermine or weasel can slip down the narrow airshafts to find a meal.

Shifts in the climate can impact this delicate layer. Warmer winters, coupled with inconsistent snowfall and reduced snow depth, disrupt the stable environment found beneath the snow. Research indicates that organisms endure more winter days of frozen ground without the protective snow cover leaving them more vulnerable to colder temperatures and predators.

This under-snow ecosystem plays a crucial role in Vermont's forest health by sustaining a diverse community of wildlife throughout winter. For landowners, maintaining a healthy amount of coarse woody debris can be a key management strategy, ensuring that the subnivean layer continues to support both prey and predator species. This in turn promotes overall forest health and resilience in the face of a changing climate.

Be a Leader for Vermont's Wildlife and Forests!

Become a Bear Ambassador

Are you passionate about wildlife conservation? Join our Bear Ambassador program and learn about bear biology, behavior, and coexistence strategies. This interactive course equips you to promote peaceful human-bear relationships in your community. Gain the tools to make a difference and help ensure a future where humans and bears thrive together. This is a fun class that offers great resources.

Course Details:

Two online sessions March 12 and 19
6:30pm – 8:30pm

One in-person full-day workshop March 28
9:00am – 4:00pm

**Don't miss this opportunity to deepen your
knowledge and make an impact!**

E-mail lisa@vtcoverts.org to learn more and
register. Spaces are limited!



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Vermont Coverts Woodlands for Wildlife

Vermont Coverts: Woodlands for Wildlife, Inc.

PO Box 328, Vergennes, VT 05491

EXECUTIVE DIRECTOR

Lisa Sausville

Lisa@vtcoverts.org 802-877-2777

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Upcoming Programs

(to learn more or to register for any of these visit the
Coverts calendar on our website or email lisa@vtcoverts.org)

Early Detection Invasive Plants: ID, Reporting, and Management Tips

Wednesday, March 5, 12:00pm - 1:00pm - Online

Winter Tree ID

Sunday, March 9, 2:00pm - 4:00pm

Matsinger Forest, 3072 Thaddeus Stevens Rd, Danville

Butterflies of Vermont

Wednesday, March 19, 12:00pm - 1:00pm - Online

What's Next For Your Woods? A Legacy Planning Workshop

Friday, March 21, 9:30am - 4:00pm

St Albans Town Hall, St. Albans



MISSION Together we enlist and
support Vermont landowners in a
long-term commitment to maintain
and enhance diverse wildlife habitat and healthy ecosystems.