

# How You Can Help Forest Biodiversity

Whether you own forestland, care for a backyard, or simply enjoy Vermont's woods, **your actions matter.**



## Learn About Biodiversity

Learning which species live in different habitats allows you to recognize the conditions that support a healthy, diverse forest.



## Slow the Spread of Introduced Species

We may not be able to remove all introduced invasive species, but we can slow their spread. Keep an eye out for new invasions — early detection and quick action make a big difference.



## Get Help from Experts & Peers

You don't have to do it alone. Many professionals and organizations offer guidance, technical assistance, cost-share programs, and opportunities to learn from others through woods walks and workshops.



## Perform Forest Stewardship

Thoughtful forest management plays an important role in supporting and promoting biodiversity. Even small actions make a big difference.

### Embrace messiness

Standing and fallen dead trees provide food and shelter for countless species. Unless blocking a road, trail, or structure, leave dead trees and branches where they naturally fall, including those that land in streams, where they create pools for fish. Cutting and leaving diseased or slow-growing trees to decompose on the forest floor returns nutrients to the soil, supports wildlife, and can reduce deer browsing on young trees.

### Encourage plant diversity

A mix of plant species — especially uncommon ones — supports more wildlife. Even a single conifer in a hardwood stand can double bird diversity.

### Grow trees of different ages

A mix of young, middle-aged, and mature trees creates diverse habitat and improves recovery after storms and insect outbreaks.

### Connect habitat areas

Connected habitats allow species to move into areas to feed, reproduce, seek cover, and adapt to change. Even a row of shrubs or trees can serve as a corridor. Where introduced plants are not a concern, reduce mowing to encourage native plant cover to grow naturally. Otherwise, plant native trees and shrubs to jump-start connectivity.

Scan the QR code to find resources, experts, and tools to help you get started.



# Healthy Forests Need Biodiversity



From soil fungi to songbirds, biodiversity keeps Vermont's forests resilient, productive, and full of life.



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# What Is Biodiversity?

Biodiversity — short for biological diversity — is the variety of life on Earth. It includes everything from microscopic fungi in the soil to trees, birds, insects, mammals, and the ecosystems they form. Biodiversity isn't just about how many species exist, but also includes:

- Genetic differences within species
- Interactions among species
- The habitats species depend on

These relationships keep ecosystems functioning, supporting pollination, clean water, food production, and climate regulation.

## Why Biodiversity Matters

A forest's strength lies in its diversity. The more complex a forest is, the more resilient it is to pests, diseases, and climate change. Biodiversity helps forests:

- Maintain healthy soils and nutrient cycles
- Regulate water and air quality
- Support wildlife
- Provide wood, food, medicine, and scenic beauty



# What Are the Threats to Biodiversity?

## Simplified Forest Structure

Because of past land use, many forests are now *even-aged*, having grown back after widespread clearing for agriculture, or were *high-graded* for the most valuable lumber. These simplified forests often lack large trees, diverse species, and decaying wood — key features that support biodiversity from woodpeckers and salamanders to soil microbes. As a result, habitat diversity across Vermont's landscape has declined.

## Habit Loss and Fragmentation

Development and roads divide once-continuous forests into smaller, disconnected patches. This isolation can limit wildlife movement, reduce available habitat, and make forests more vulnerable to invasive species and climate stress.



**Did you know?** Many forest species depend on dead wood at some stage of their life cycle.

## Introduced Invasive Species

Introduced plants and pests outcompete native species and change habitats. For example, emerald ash borer and hemlock woolly adelgid threaten keystone tree species. Honeysuckle and buckthorn alter soil conditions, crowd out native plants, and offer little nutritious food for wildlife.

## Overbrowsing by Deer

High deer browsing can prevent many tree and wildflower species from regenerating, leading to simplified forests dominated by a few unpalatable plants. This reduces habitat quality for songbirds and pollinators and limits forest resilience.

## Climate Change

Warming temperatures, shifting precipitation patterns, and more frequent storms are already changing Vermont's forests. Species that depend on cold conditions — such as balsam fir and moose — are declining, while southern species may move north. Extreme weather events can damage trees, increase erosion, and stress regeneration.

<https://go.uvm.edu/biodiversity>

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