



How to Steward Biodiversity in Your Forest

A Practical Guide for Landowners

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Biodiversity — short for biological diversity — is the variety of life on Earth. It includes everything from microscopic fungi in soils, to trees, birds, insects, mammals, and ecosystems they form.

A forest's strength lies in its diversity. The more diverse, complex, and connected a forest is, the more resilient it is to pests, disease, and climate change. Forest biodiversity helps maintain healthy soils and nutrient cycles, regulate water and air quality, support wildlife, and provide wood, food, medicine, and scenic beauty.

Whether you are just beginning to think about biodiversity or have been stewarding your land for years, your actions matter. Below are actions you can take to promote biodiversity in your forest.



Learn About Biodiversity



Slow the Spread of Introduced Species



Perform Forest Stewardship



Get Help from Experts and Peers

Learn About Biodiversity

Understanding what lives in your woods helps you make informed decisions and observe changes over time.

Actions to Consider:

- ✓ Learn which species, habitats, and natural communities are present on your land.
- ✓ Use field guides or apps to identify plants, animals, and fungi.
- ✓ Determine if you have any uncommon species or habitats.
- ✓ Map out important or unique features, such as vernal pools.
- ✓ Keep a journal of species you see in your woods.
- ✓ Revisit and monitor areas you care about.



Did you know that Vermont is home to over 10,000 species of animals, plants, and fungi?

Learn more Vermont's species and habitats and list of guides and apps to identify and document them.

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



Also explore and learn about the threats to biodiversity near you.

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





Slow the Spread of Introduced Species

Introduced invasive plants and pests can outcompete native species and alter habitats. Although we may not be able to remove them all, but we can slow their spread.

Actions to Consider:

- ✓ Learn if you have any introduced plants or pests on your property.
- ✓ Take photos, use flagging, or make a map to track their locations.
- ✓ Learn more at and report sightings to VT.Invasives.org.
- ✓ Create the right treatment plan for each situation (for plants: pulling, smothering, goats, or chemical control; for pests: silvicultural or chemical control).
- ✓ Use local firewood when possible (within 25 miles) to avoid bringing new pests to your land.
- ✓ Avoid purchasing known introduced plants.
- ✓ Clean footwear, gear, and vehicles after visiting infested areas and long-distance trips.
- ✓ Help raise awareness in your community.

Learn how to Slow The Spread and report introduced species.

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



flag introduced invasive species



Identify + protect rare/threatened plants



Perform Forest Stewardship

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

Embrace Messiness

Forests do not need to be tidy to be healthy. Dead and downed trees provide essential shelter, food, and nesting sites for countless forest species.

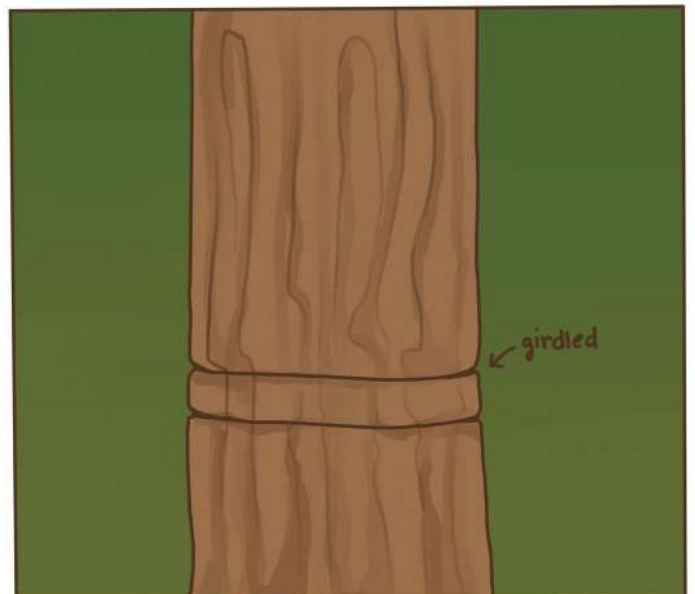
Actions to Consider:

- ✓ Unless they block a road or trail, leave dead trees and branches where they naturally fall, including those that land in streams.
- ✓ Retain standing dead trees (snags) — especially large, hollow trees that providing important denning and nesting sites for many species.
- ✓ Create additional deadwood habitat by using techniques such as girdling trees (cutting around, but not through, the trunk), felling and leaving trees on the ground, and piling brush.
- ✓ Remove groups or patches of trees to create canopy gaps that allow more light in and support a more diverse forest structure.

Did you know that deadwood supports thousands of different species, making it one of the most biodiverse habitats in Vermont's forests?



retain legacy trees



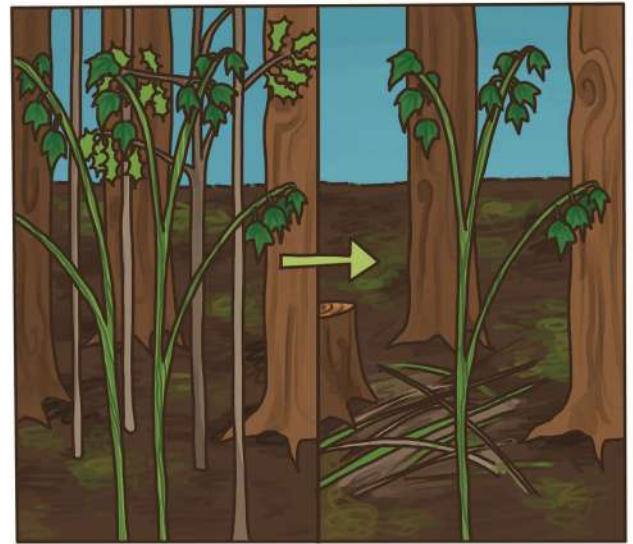
retain / create snags

Grow Trees of Different Ages

A mix of tree ages creates diversity habitats and helps forests recover from storms, insects, and other disturbances.

Actions to Consider:

- ✓ Mark and retain old and large trees to ensure they remain part of the forest over time.
- ✓ Thin crowded forests to give remaining trees more sunlight, nutrients, and growing space.
- ✓ Create small, sun-filled canopy gaps to encourage successful seedling establishment.
- ✓ Time your work in the woods so you can grow new age classes of trees, avoid seasons when wildlife are breeding or raising young, and align with ideal working and environmental conditions.
- ✓ Where early-successional forest is limited in the surrounding landscape (within about a 2-mile radius), consider patch cuts to support species that depend on younger forests.



thin overcrowded forests



canopy gap

Encourage Plant Diversity

Diverse plant communities support pollinators, wildlife, and resilient forest ecosystems.

Actions to Consider:

- ✓ Create growing space for healthy, seed-producing trees, such as oak, cherry, and beech.
- ✓ If present in your woods, maintain conifers in hardwood stands and vice versa.
- ✓ Flag uncommon or sensitive plants so they are not accidentally damaged or trampled.
- ✓ Protect young trees from deer browse such as using brush piles, cages, or other deterrents.
- ✓ If plant diversity is low, considering planting native species with guidance from a forester.



enrichment planting

Maintain Connected Habitat Areas

Connected habitats allow plants, animals, and fungi to move into areas to feed, reproduce, seek cover, and adapt as conditions change.

Actions to Consider:

- ✓ Maintain plant cover between forests and nearby habitats, such as with a line of shrubs or trees within a field.
- ✓ Where introduced species are not a concern, reduce mowing to encourage native plant cover to grow naturally.
- ✓ Where introduced species are present, plant native trees and shrubs to jump-start habitat connectivity.
- ✓ Think beyond your property boundaries by considering how your forest connects to neighboring lands and habitats.
- ✓ Keep your forest as forest beyond your ownership through estate planning, conservation easements, or other long-term strategies.



reduce mowing

Did you know that the seasonal territory of a black bear can span up to 600 square miles?

Learn how to steward forests for biodiversity

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



ensure your land stays forest forever!

This property
is protected by a
conservation easement

Get Help from Experts & Peers

You do not need to do it alone. Learning from others and accessing professional support can save time and resources, improve outcomes, and help you steward your forest with confidence.

Actions to Consider:

- ✓ Talk with your family or neighbors about your stewardship goals to build shared understanding and continuity.
- ✓ Attend workshops, webinars, and woods walks to learn from others and see stewardship examples firsthand.
- ✓ Identify people who can help you now and into the future, such as a consulting forester.
- ✓ Ask about the technical guidance or planning support you may need to meet your stewardship goals.
- ✓ Explore cost-share programs that can help fund activities such as introduced species management or other stewardship practices.

Explore different guides and programs to learn how to get started and how to reach out to experts and peers near you!

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



talk to a forester

How to Steward Biodiversity in Your Forest



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

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



This resource was supported by the U.S. Forest Service through the Landscape Scale Restoration (LSR) competitive grant program.

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