

VERMONT ENDANGERED SPECIES LAW & ENDANGERED SPECIES CONSERVATION PROGRAMS

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The Vermont Fish & Wildlife Department

The mission of the Vermont Fish & Wildlife Department is the conservation of our fish, wildlife, plants and their habitats for the people of Vermont



Agenda

- Vermont's Biodiversity and the Mounting Threats
- Ecology Fundamentals
- Vermont's Endangered Species Law
- The Wildlife Diversity Program at F&W



Biodiversity

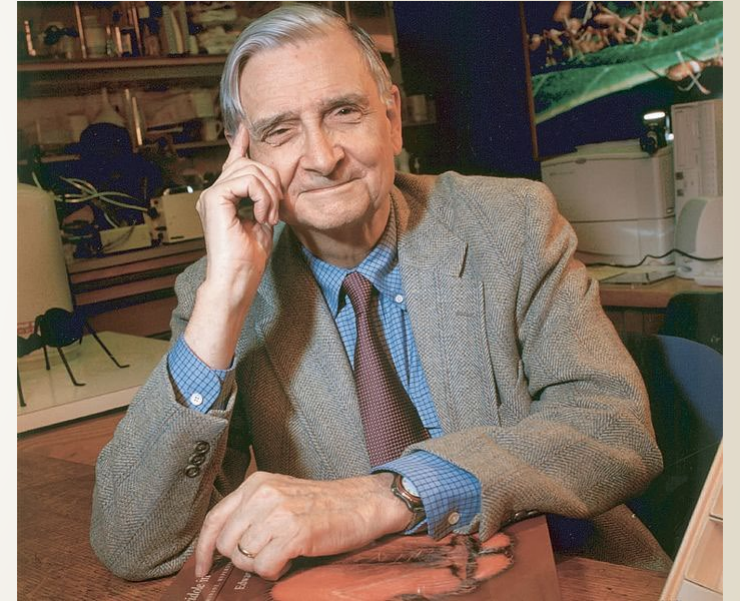
“Organisms and their relationships that together act as the glue.” EO Wilson

Landscape

Natural Communities

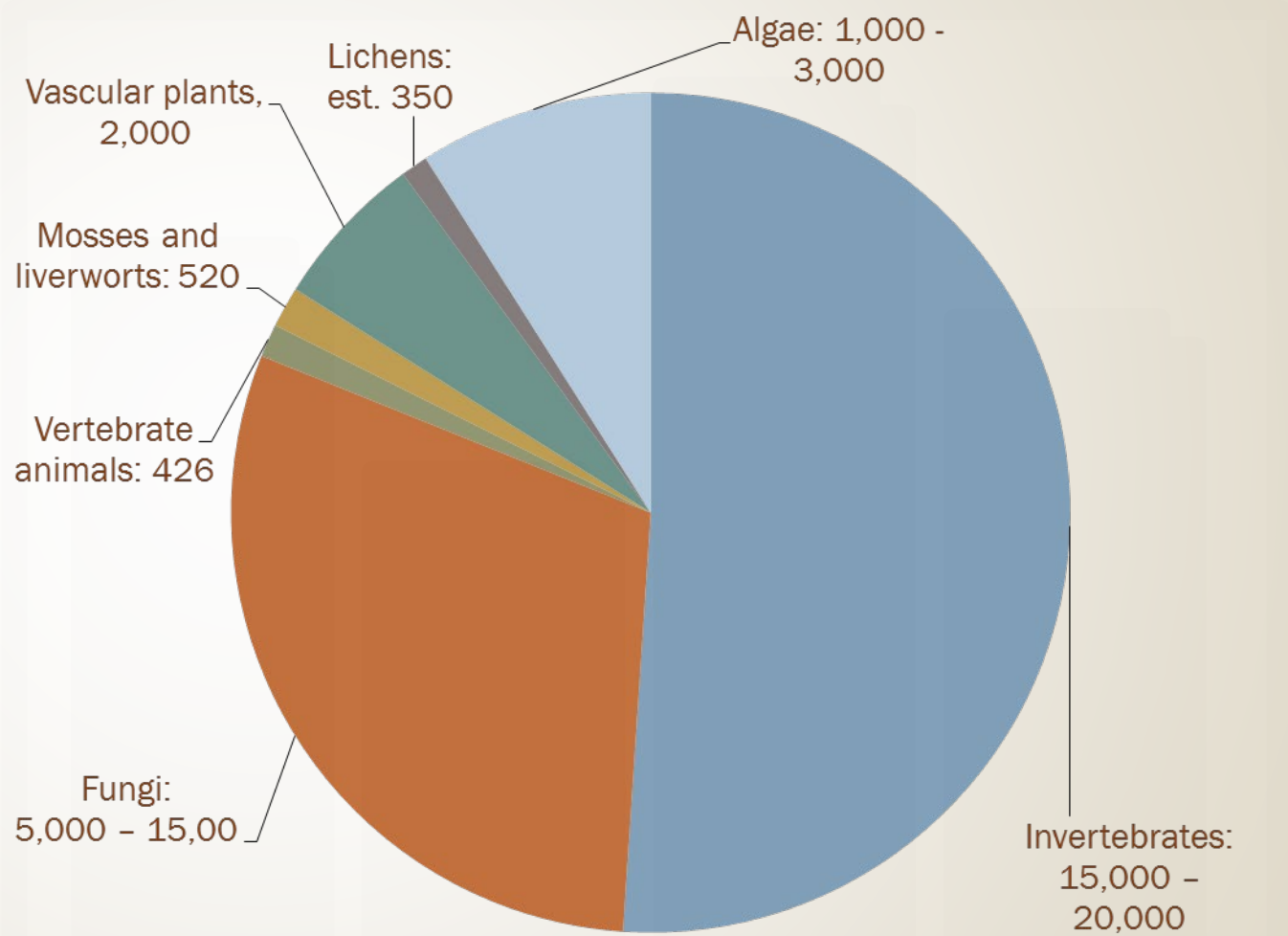
Species

Genetic



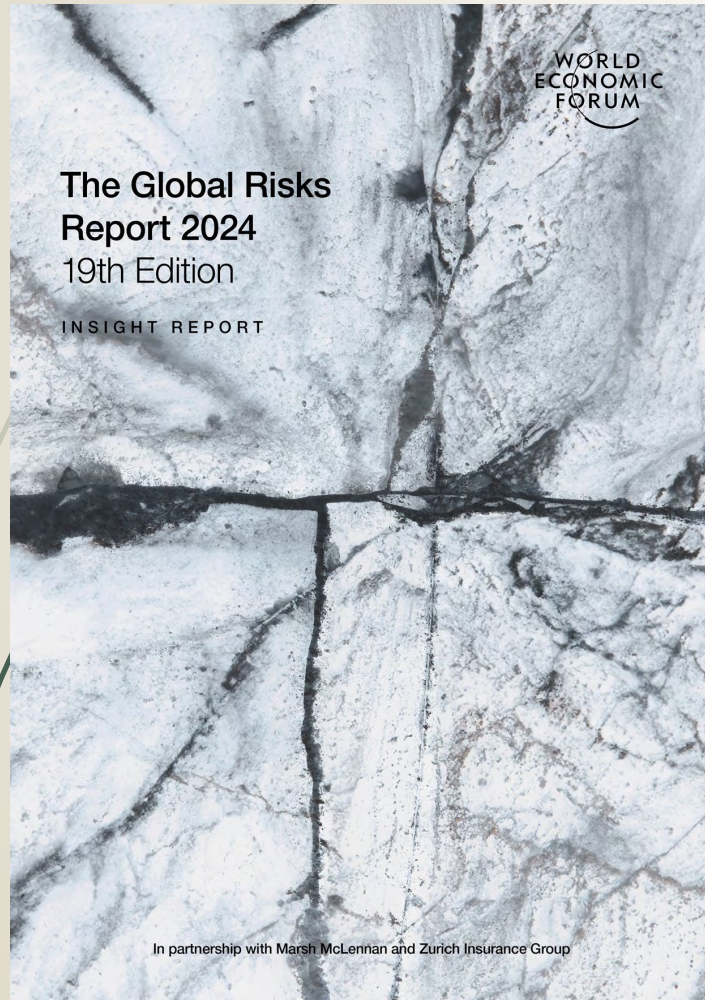
Biological Diversity in Vermont

- 24,000 – 43,000 species in Vermont
- Most species we know little about



Vermont Biodiversity Project

World Economic Forum Global Risks Report 2024



Likely impact (severity) of 34 risks over a 10-year period? 1,311 respondents...

1. Extreme weather events
2. Critical change to earth's systems
3. **Biodiversity loss and ecosystem collapse**
4. Natural resource shortages
5. Misinformation and disinformation
6. Adverse outcomes of AI technologies
7. Involuntary migration
8. Cyber insecurity
9. Societal polarization
10. Pollution

Threats

➤ HABITAT...

- Loss
- Fragmentation
- Reduced quality

➤ Disturbance, Displacement



Threats



END WILDLIFE TRAFFICKING
Department of Homeland Security

The logo consists of three colored squares in a row: a blue square with a white silhouette of a fish, a green square with a white silhouette of a tree, and an orange square with a white silhouette of a rhinoceros. Below the squares, the text "END WILDLIFE TRAFFICKING" is written in a bold, sans-serif font, with "END" in blue, "WILDLIFE" in green, and "TRAFFICKING" in orange. Underneath that, "Department of Homeland Security" is written in a smaller, black, sans-serif font.

Ecology Fundamentals: Natural Communities

An Interacting assemblage of organisms, their physical environment, and the natural processes that affect them.



Dry Chestnut Oak Woodland

A rare natural community in the Taconic Mountains and southern Champlain Valley



Ecology Fundamentals: Habitat

Food, water, shelter, space



Ecology Fundamentals: niche

The role or “profession” of a species

- Specialists and generalists
- Specialized species are more vulnerable and call for customized conservation strategies



Vermont's "Ecosystem" of Protections

Landscape

Vermont Conservation Design,
Act 59

Natural
Communities

VCD, Planning Support,
Regulatory

Species

Conserve habitat
Reduce threats

Genetic

Robust
populations



Species

- Some “fall through the cracks”
- Can occur in small areas



Esqua Bog



Cobblestone tiger beetle

Vermont's Endangered Species Law (1972)

TITLE 10 CHAPTER 123: PROTECTION OF ENDANGERED SPECIES

- Requires list of state threatened and endangered species
- Taking a listed species prohibited without a permit
- Establishes Nongame Fund
- Endangered Species Committee to advise ANR Secretary
- Critical Habitat



Listing

A species is considered **endangered** if its continued existence as a sustainable component of the State's wildlife or wild plants is in jeopardy.

A species is considered **threatened** if it is reasonable to conclude based on available information that its numbers are declining; and unless protected, it will become an endangered species.



Brook Floater





Listing

217 species are threatened or endangered.

	State Threatened	State Endangered	Federally listed
Plants	93	71	3
Animals	16	37	7 (+ 5 under review)



Critical Habitat

A delineated location within the geographical area occupied by the species that:

- Has the physical or biological features that are identifiable, concentrated, and decisive to the survival of a population of the species; and
- Is necessary for the conservation or recovery of the species; and
- May require special management considerations or protection.



A plan for the management of nongame wildlife

10 App. V.S.A. § 25 Nongame wildlife species

Guiding principles for ways Fish & Wildlife conserves and protects all “nongame” species

- Inventory and Status of Species and Natural Communities
- Species, Habitat, and Natural Community Management
- Planning Assistance and Environmental Review
- Outreach and Education



Vermont Wildlife Action Plan

Strategic guidance at all scales:

Landscape

Natural communities

Habitat

Species of Greatest
Conservation Need

Status: How are they doing?

Threats: What are the problems?

Actions: What can be done?



Wildlife Diversity Program



Research and monitor
Conserve and protect
Engage the public

Research and Monitor



Conserve & Protect

Regulate collection of species

Designate critical habitats

Land acquisition of key habitats for listed species

Habitat protection through regulatory process

Conservation Easements

Restoration & Enhancement

Landowner incentives

Municipal planning

Guidance for homeowners, landowners, foresters



Engage the Public Outreach and Education





Natural Heritage Inventory & Database

Vermont Natural Heritage Inventory

Species and ecological assessment, mapping, and central repository for data on significant natural communities and rare species in Vermont.

5,841 species
All 98 natural
community types

13,628 detailed
occurrence records
of rare species and
rare natural
communities

Available to the Public!

The screenshot displays the Vermont Natural Resources Atlas web application. The interface includes a top navigation bar with the Vermont logo and the text "Natural Resources Atlas" and "Vermont Agency of Natural Resources". A search bar is located at the top right. On the left side, there is a "Layers" panel with a search box and a list of layers. The main map area shows a satellite view of a forested area with several colored overlays: a large green circle, a smaller orange circle, and several purple irregular shapes. A "Quick Tools..." button is visible on the map. At the bottom, there is a scale bar (0 to 0.6 km) and a logo for "ESRI Wor...".

VERMONT Natural Resources Atlas
Vermont Agency of Natural Resources

vermont.gov

Layers

Atlas Layers

Filter Layers...

Rare Threatened and Endangered Species

- RTE Animal
- RTE Plant

Significant

Natural Communities

- Uncommon Species and other features
- Deer Wintering Areas
- Brook Trout Waters
- Habitat Blocks
- State Game Refuges

Search...

Quick Tools...

Tools

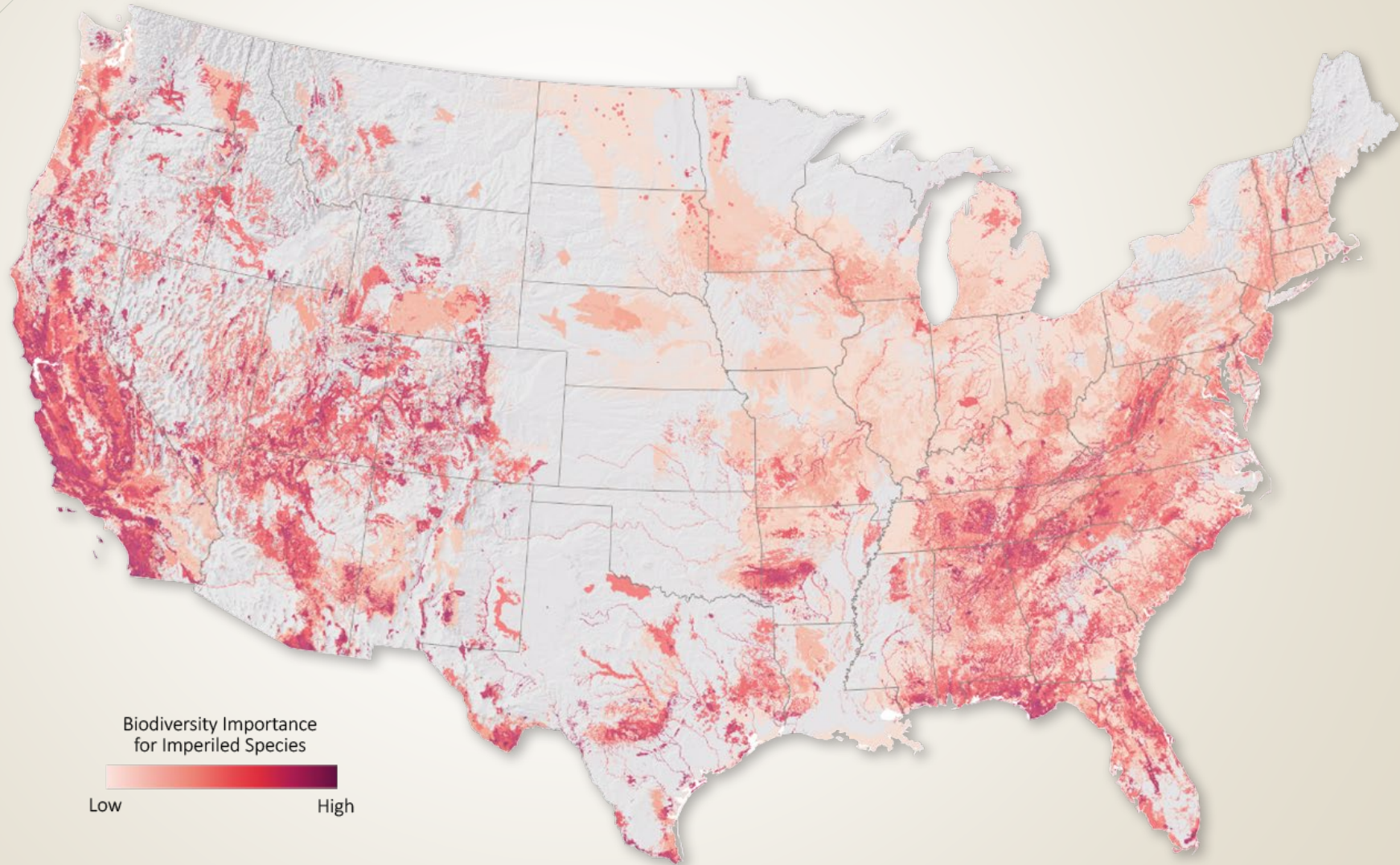
ESRI Wor...

0 0.3 0.6km

VCGI | VTANR | VTANRGIS | VCGI, M



Based on habitat models for 2,216 at-risk species



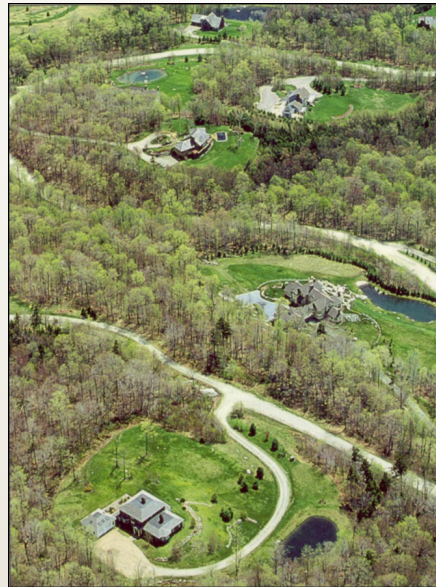
Regulatory Review Protects Species and Habitat

Act 250 Criterion 8: no undue adverse effect

8(A): Necessary wildlife habitat or any endangered species

Section 248: Public Utility Commission Applies Act 250 criteria in determining whether undue adverse effect on the natural environment

1. Avoid
2. Minimize
3. Mitigate



Necessary Wildlife Habitat

Most relevant to listed species:

- Vernal Pools
- Wildlife Travel Corridors
- Wetlands
- Riparian Habitat
- Natural Communities
- Grassland Bird Habitat
- Montane Forest
- Connectivity & Forest Blocks (Section 248)

Concentrated, identifiable, and is demonstrated as being decisive to the survival of a species of wildlife at any period in its life including breeding and migratory periods.

Endangered Species Committee

Charge

Advise F&W Commissioner and ANR Secretary

- Listing and delisting species
- Critical Habitat Designation
- Permits for taking of listed species
- Promulgation of rules for protection and conservation

Membership

Agency leadership appointees

- Secretary of VAAF, Commissioner of VFWD, Commissioner of Vermont Department of Forests, Parks, & Recreation

Governor appointees from the public at large

- 2 actively engaged in agricultural or silvicultural activities
- 2 knowledgeable concerning flora
- 2 knowledgeable concerning fauna

Endangered Species Committee

SCIENTIFIC ADVISORY GROUPS

Monitor status, threats, conservation needs of rare and listed species
Recommendations to ANR/F&W

- Species listings and de-listings
- Critical habitat designations
- Act 250 and Section 248 permits
- Develop recovery and post-delisting plans





LISTING AND RECOVERY

C Gangas

Listing criteria that were met:

- Fewer than 300 reproducing individuals
- Consistent declines in the population
- Occurs in specialized habitat that is vulnerable to loss, modification, or variations in quality



Thank you!

