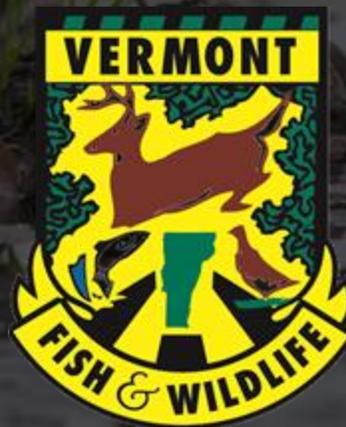


Vermont Envirothon

Wildlife Station

Created by the Vermont Fish & Wildlife Department



Wildlife Station Training Presentation



What to Expect:

- Definitions
- Brief land use history and wildlife population dynamics in VT
- Wildlife Management Fundamental Principles

Definitions

- **Wildlife**

- All animals (mammals, birds, fish, reptiles, amphibians, invertebrates) that are not dependent on people for their immediate survival. Excludes domesticated animals.

- **Habitat**

- The arrangement of food, water, shelter, or cover, and space suitable to animals' needs.

- **Ecosystem**

- A natural unit that includes living and nonliving parts interacting to produce a stable system in which the exchange of materials between the living and nonliving parts follows closed paths.

- **Population**

- The total number of organisms representing a single species that lives and reproduces within a common geographic area.

- **Carrying Capacity**

- The maximum number of individuals or inhabitants that a given environment can support without detrimental effects

- **Conservation**

- The use of natural resources in a way that ensures their continuing availability to future generations; the wise and intelligent use or protection of natural resources

- **Public Trust**

- We have a share in all the wildlife and water.

For a comprehensive list of terms related to wildlife management, click [HERE](#).

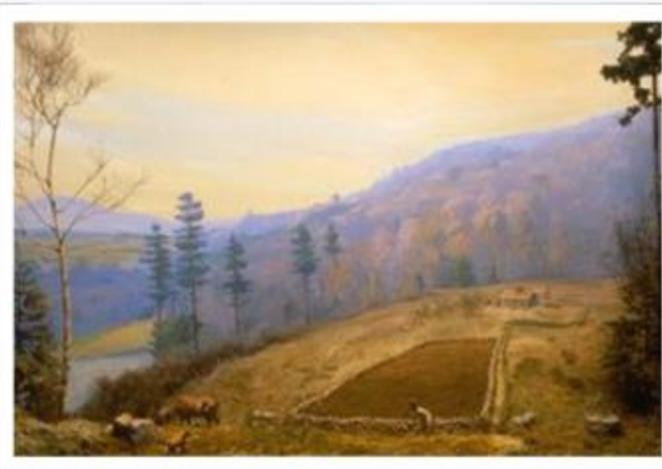
[Source: AFWA Project WILD]

Brief History of Land Use in VT

Changes in the Vermont landscape have impacts on wildlife habitat quality both on land and in water. Understanding the history of land use in Vermont is vital in understanding wildlife populations past and present.



Pre-settlement 1700



Clearing for Farms 1740



Forest Clearing 1830



Farm Abandonment 1850

[Source: Harvard Dioramas]

In an upcoming slide, you will see how wildlife populations have fluctuated. These fluctuations are mostly in response to habitat availability but have also been impacted by changes in the way humans interact with wildlife populations (for example, the establishment of fishing and hunting regulations).



White pine forest 1910



White pines succeeded by deciduous hardwood species



Mature deciduous hardwood forests



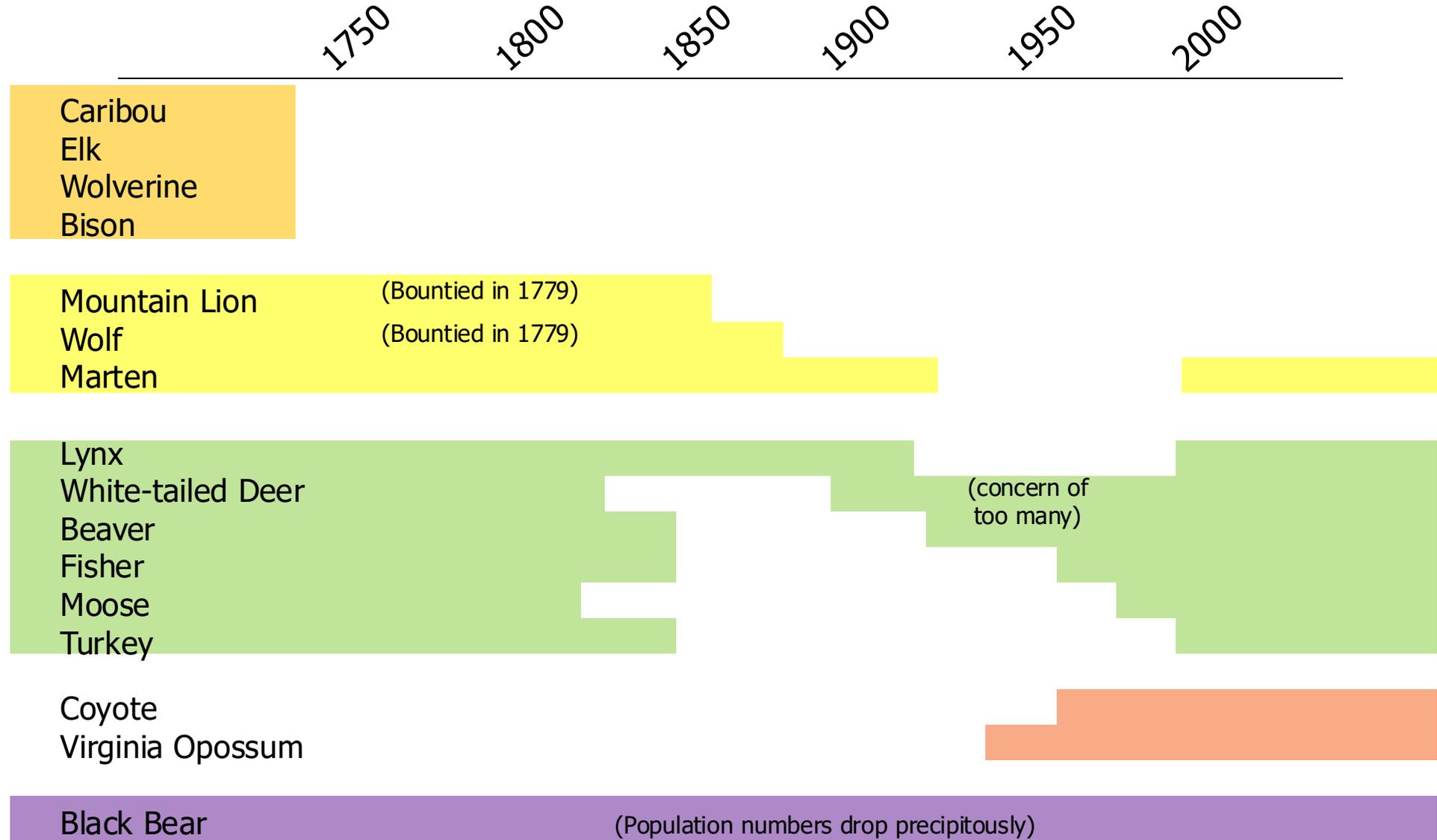
Logging Barges

Vermont's Landscape Today

About 100 years ago, Vermont was about 80% cleared of forests and 20% forested. Today, those figures are the opposite, and Vermont has about 70-80% forest cover.



Wildlife Population History: Responding to habitat availability



Fundamentals of Wildlife Management

- Setting the stage – biodiversity
- Wildlife Management, defined
- Public Trust
- Habitat conservation
- Population dynamics
- Wildlife research
- Rules, regulations, and laws
- Human dimensions
- Funding for wildlife and wildlife habitat conservation



Vermont Fish & Wildlife Department

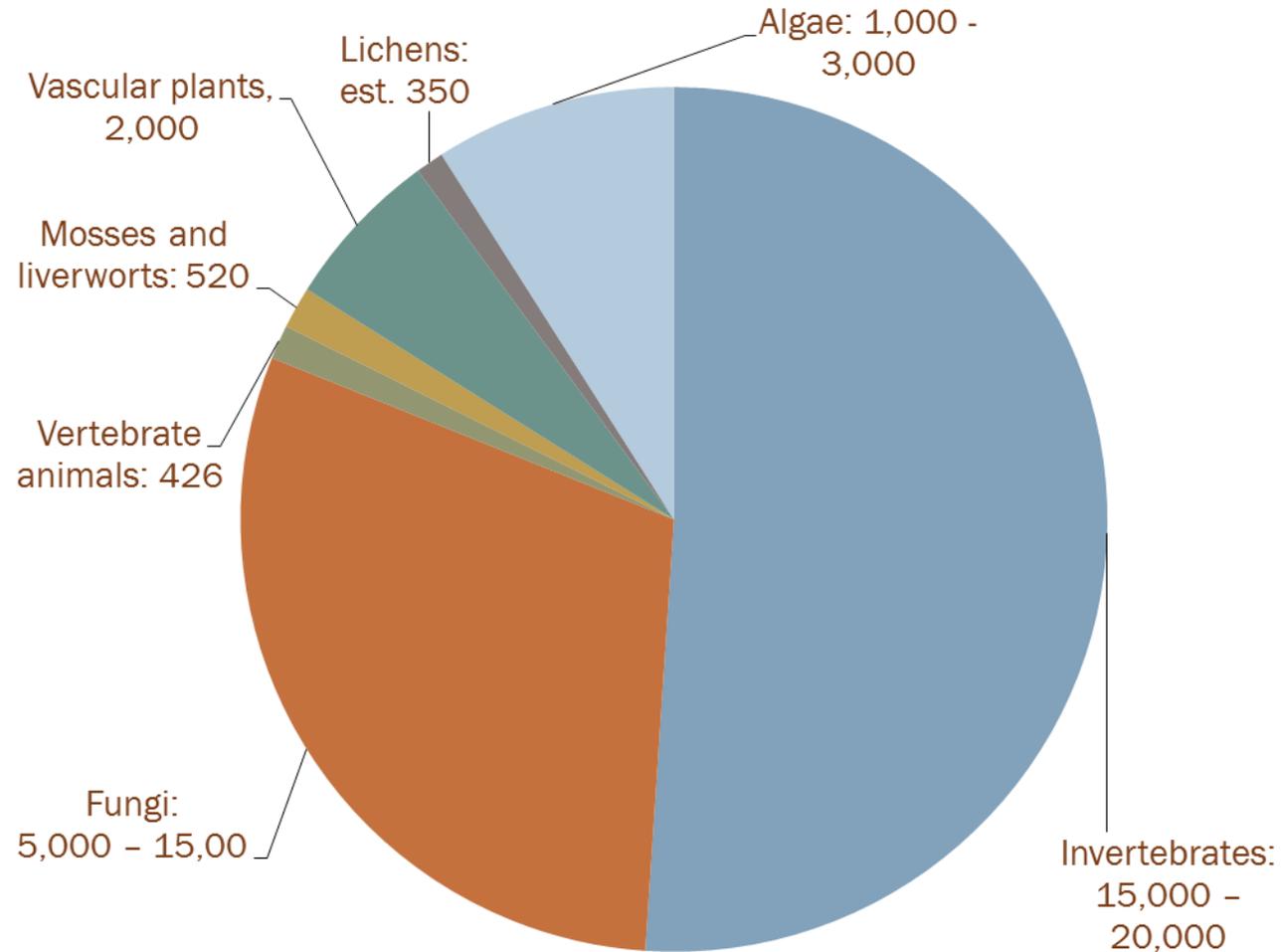
*The mission of the Vermont Fish & Wildlife Department is the conservation of **all** species of fish, wildlife, and plants and their habitats for the people of Vermont.*

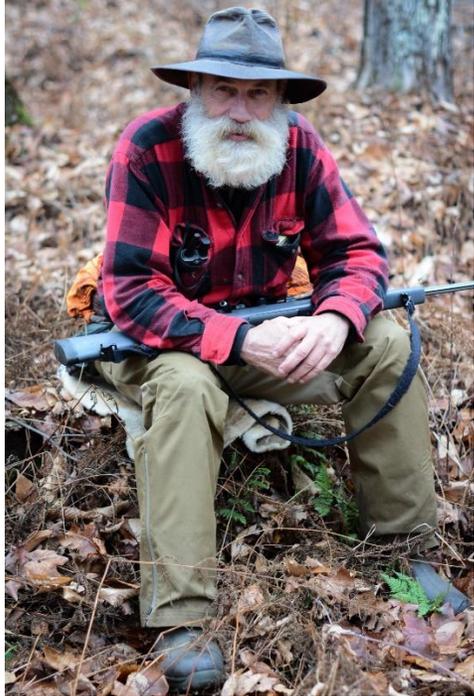
The department is charged with conserving ALL wildlife species and their habitats. The majority of work done by department staff is related to habitat conservation and restoration for a variety of wildlife, both game and nongame.



Biological Diversity in Vermont

- There are between 24,000 – 43,000 species in Vermont.
- Most species we know little about.





Wildlife Management

The application of ecological knowledge to populations of animals and their plant associates in a manner that strikes a balance between the needs of those populations and the needs of people.

~Robinson & Bolin (1984)



Wildlife management is a necessary tool to balance the needs human communities, their values, and wildlife populations and the habitats they rely on for survival.

Public Trust

Resources do not belong to the government. The government carries out the important task of keeping natural resources safe, sustainable, and accessible to the public beneficiary.

U.S. Fish & Wildlife Service

Celebrating the Wildlife and Sport Fish Restoration Program

75 years of Conservation and Partnership Success



Habitat Conservation through Diverse Management Practices

- Land acquisition for wildlife management areas
- Stream bank management areas
- Access areas for boating and fishing
- Habitat restoration
- Private landowner assistance
- Rare, endangered, and threatened species monitoring
- Game species and their habitat monitoring
- Wildlife corridors conservation for movement of wildlife and the plant community both across the landscape and in elevation

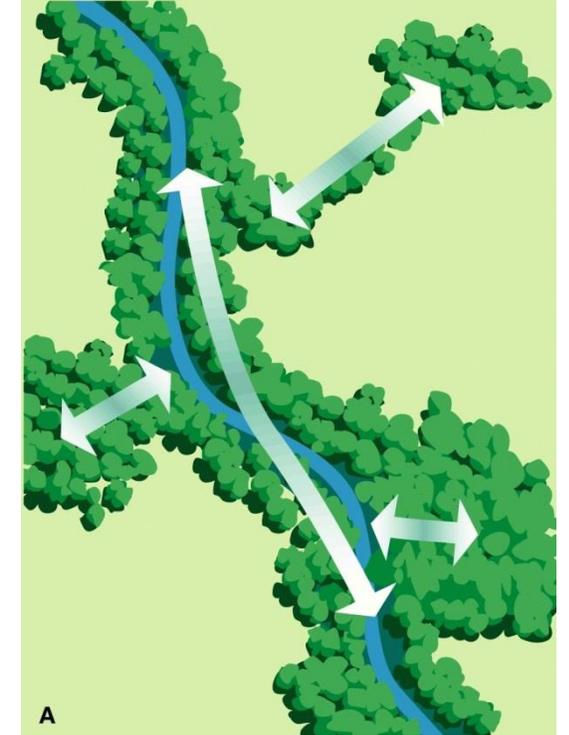
Terrestrial and Aquatic Connections

Barriers to wildlife movement

- Roads
 - Traffic Volume
 - Traffic Speed
- Development
- Agriculture



- Islands of habitat are isolated
- Riverbanks don't allow for wildlife movement



- Islands of habitat are connected (Uplands to Lowlands – elevation and across landscape)
- Riverbanks are travel corridor

Aquatic Habitat Connections

- Poorly installed crossing structures fragment aquatic habitats
- Limit recreational opportunity
- Disequilibrium in sediment transport



Culvert is a barrier



Culvert allows for aquatic and terrestrial organism passage



Brook trout



Fish & Wildlife
Department:
Conserving for Diverse
Wildlife Habitat

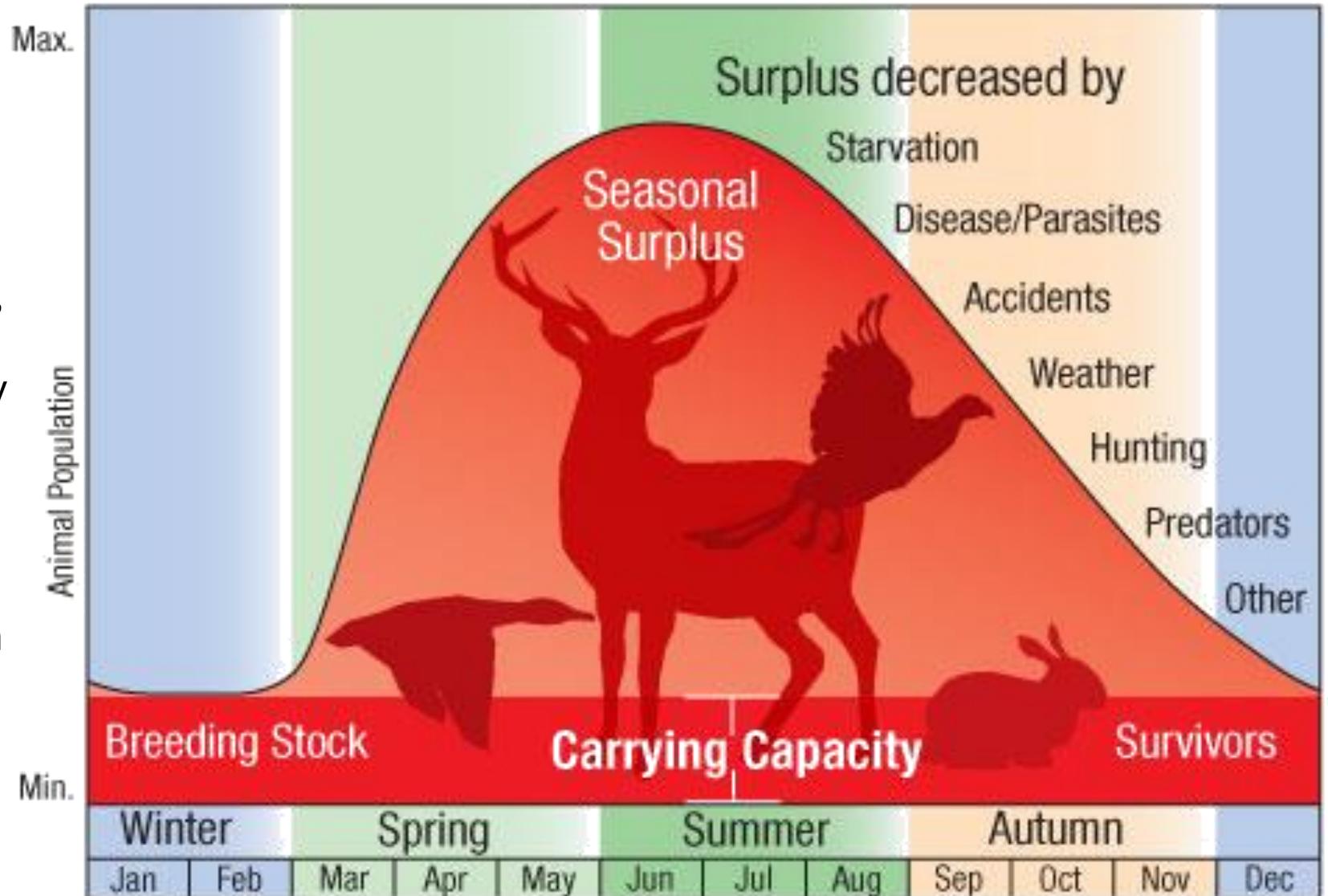


More examples [here](#)

Wildlife Population Dynamics Throughout the Year

All wildlife populations fluctuate throughout the seasons. Increases in food supply and warmer temperatures in the spring and summer result in population growth. The opposite occurs during the winter months, leading to die-off and maintaining the carrying capacity of the habitat.

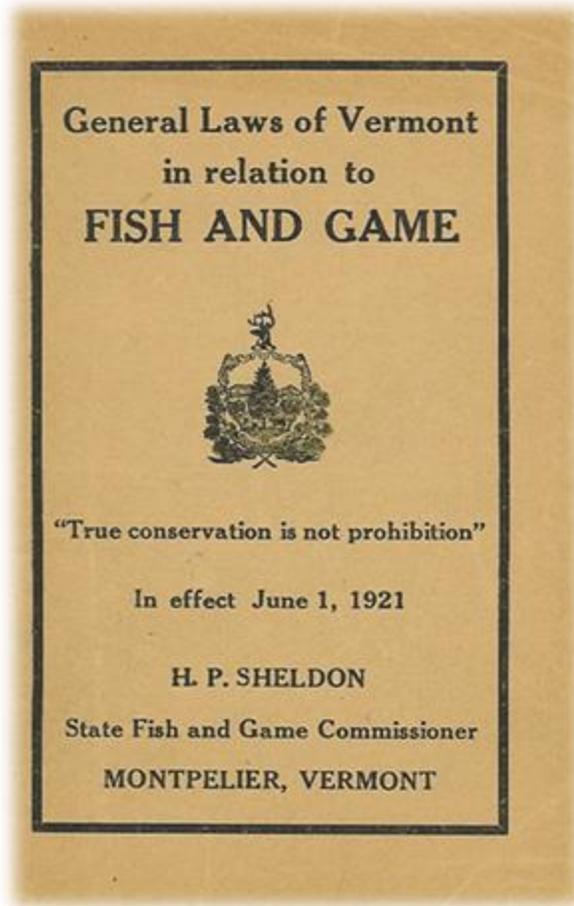
Regulated hunting, fishing, and trapping are management tools that allow people to harvest from the seasonal surplus without negatively impacting wildlife populations in Vermont.



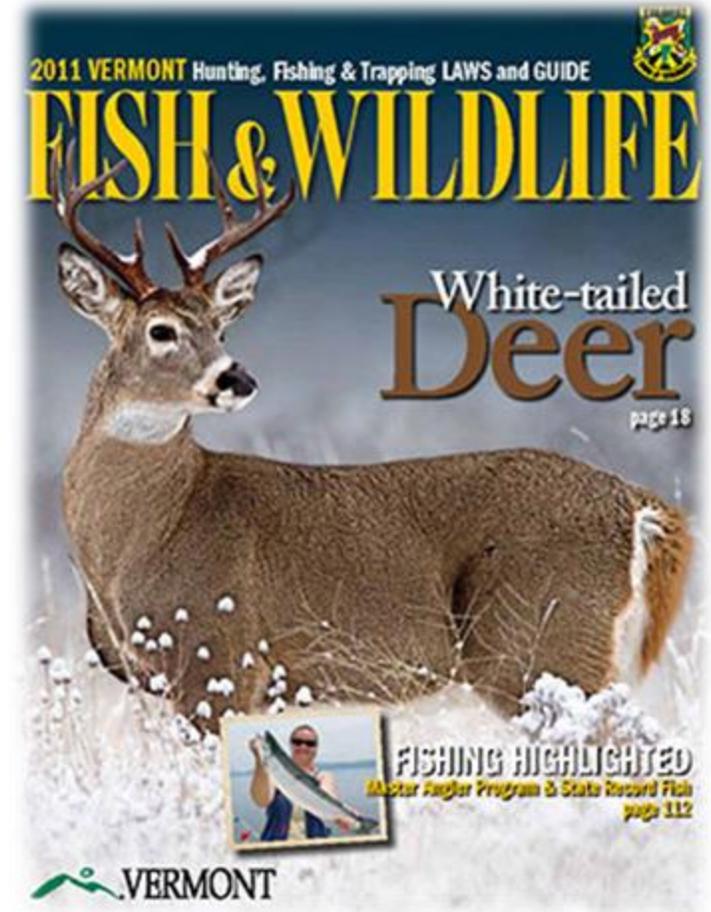
Fish & Wildlife Rules, Regulations, and Laws

The introduction of regulations addressed overharvest of many of Vermont's wildlife species.

Today, hunting, fishing, and trapping regulations are dynamic and can be adjusted to ensure long term sustainability of wildlife populations. These rules, regulations, and laws are informed by fish and wildlife scientific research and the desires of the public.



1921





Human Dimension

VT Fish & Wildlife Department staff provide outreach to the public to help educate, inform, and assist peoples' interaction with wildlife and habitat in a sustainable, legal, and safe manner.

A variety of sources help fund the work of the VT Fish & Wildlife Department



Most Vermont Fish & Wildlife Department funding comes from excise taxes on fishing and hunting equipment, gear, and motorboat fuel that are then allocated to the states by the Federal U. S. Fish & Wildlife Service.

For more information, reference the Pittman Robertson Act and Dingell Johnson Act. These funds are called Sport Fish & Wildlife Restoration.