



New Hampshire Beavers

“Ecosystem Engineers”

New Hampshire Fish & Game

7/20/19

Range

- Only representative of family Castoridae in North America.
- *C. canadensis* (North America)
- *C. fiber* (Europe)
 - Separate species
- *Castoroides*
 - Believed to be extinct as of 10,000 years ago
 - Black bear sized beaver



Description

- A large clumsy humped-backed animal that rarely travels far from water.
- Adapted to exploit aquatic environments
 - Webbed feet
 - Rudder tail
 - Nictitating membrane
 - Translucent eyelid
 - Intranarial epiglottis
 - Blocks airway underwater
 - Highly insulative fur



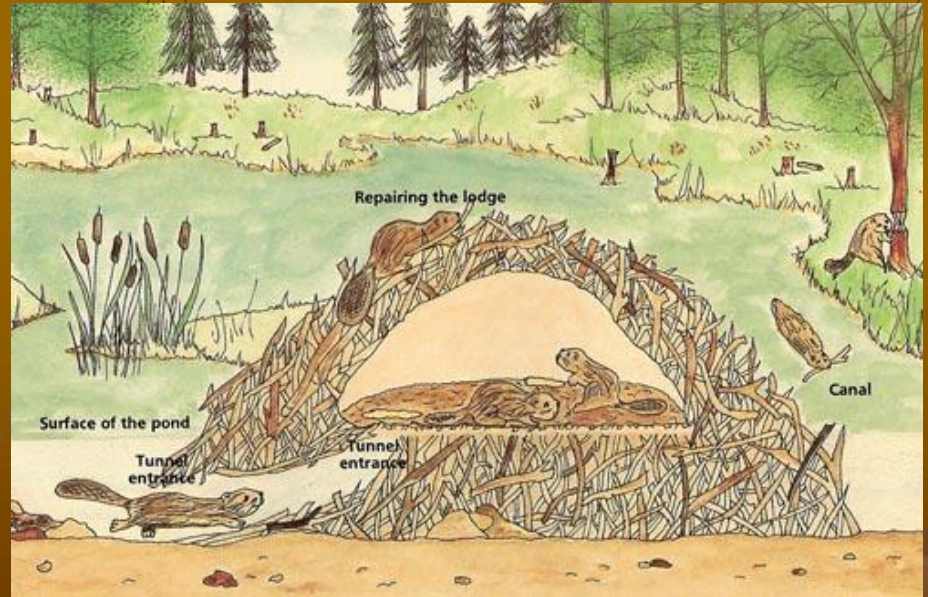
Description

- Large incisor teeth



Lodge

- Safety and Warmth



Habitat

- Slow moving streams
- Ponds
- Springs
- They are termed “Ecosystem Engineers” for a reason!



Life History

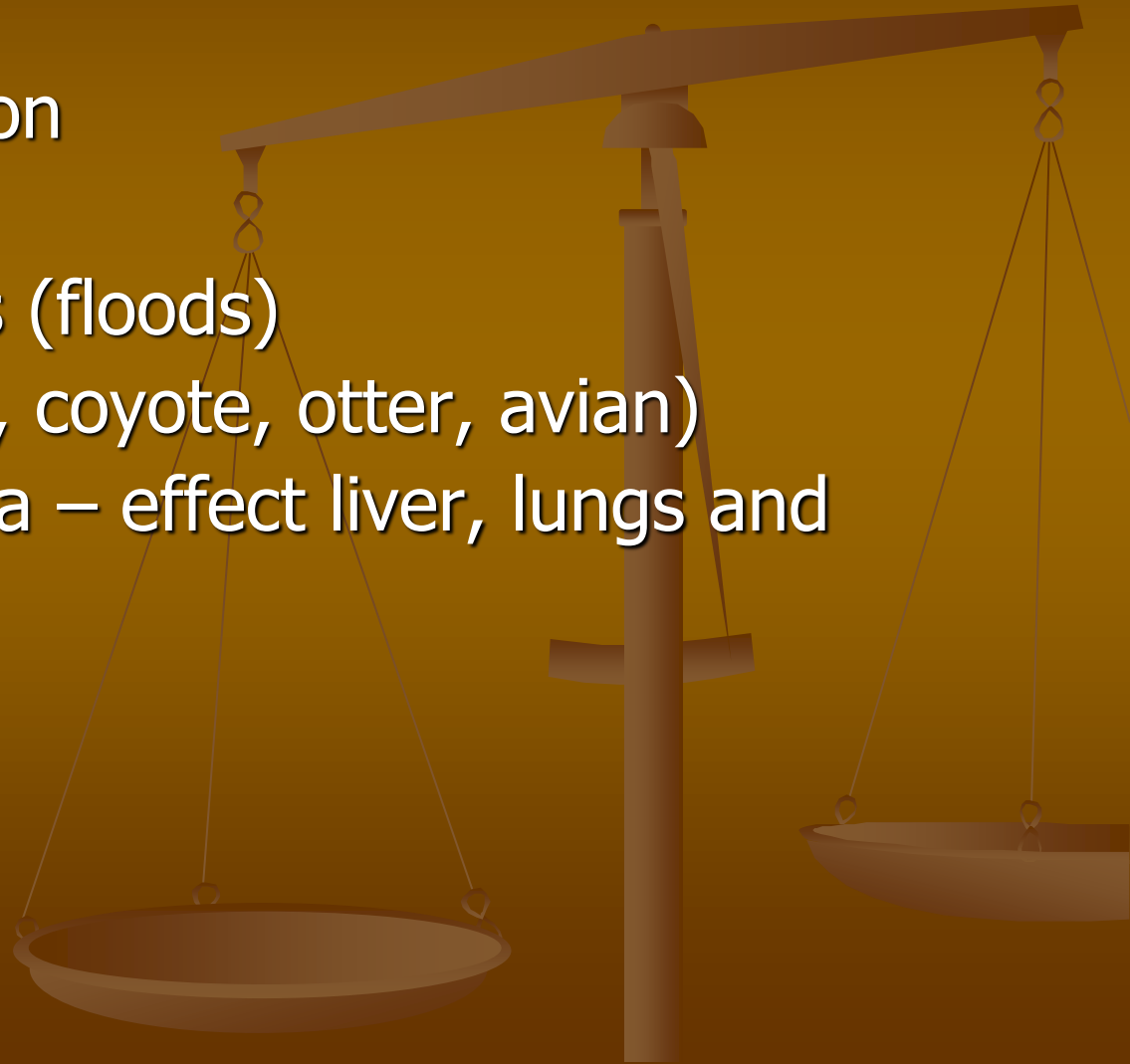
■ Reproduction

- Age of maturity (breeding) occurs around 21 months
- Breed late October – March in southern climates
- Breed January – March in northern climates



Mortality

- Prenatal
- Under ice starvation
- Malnutrition
- Water fluctuations (floods)
- Predation (bobcat, coyote, otter, avian)
- Disease (Tularemia – effect liver, lungs and lymph nodes)
- Trapping
- Road crossings



Home Ranges

- Average .8 miles of stream length
 - Habitat quality effects home range size



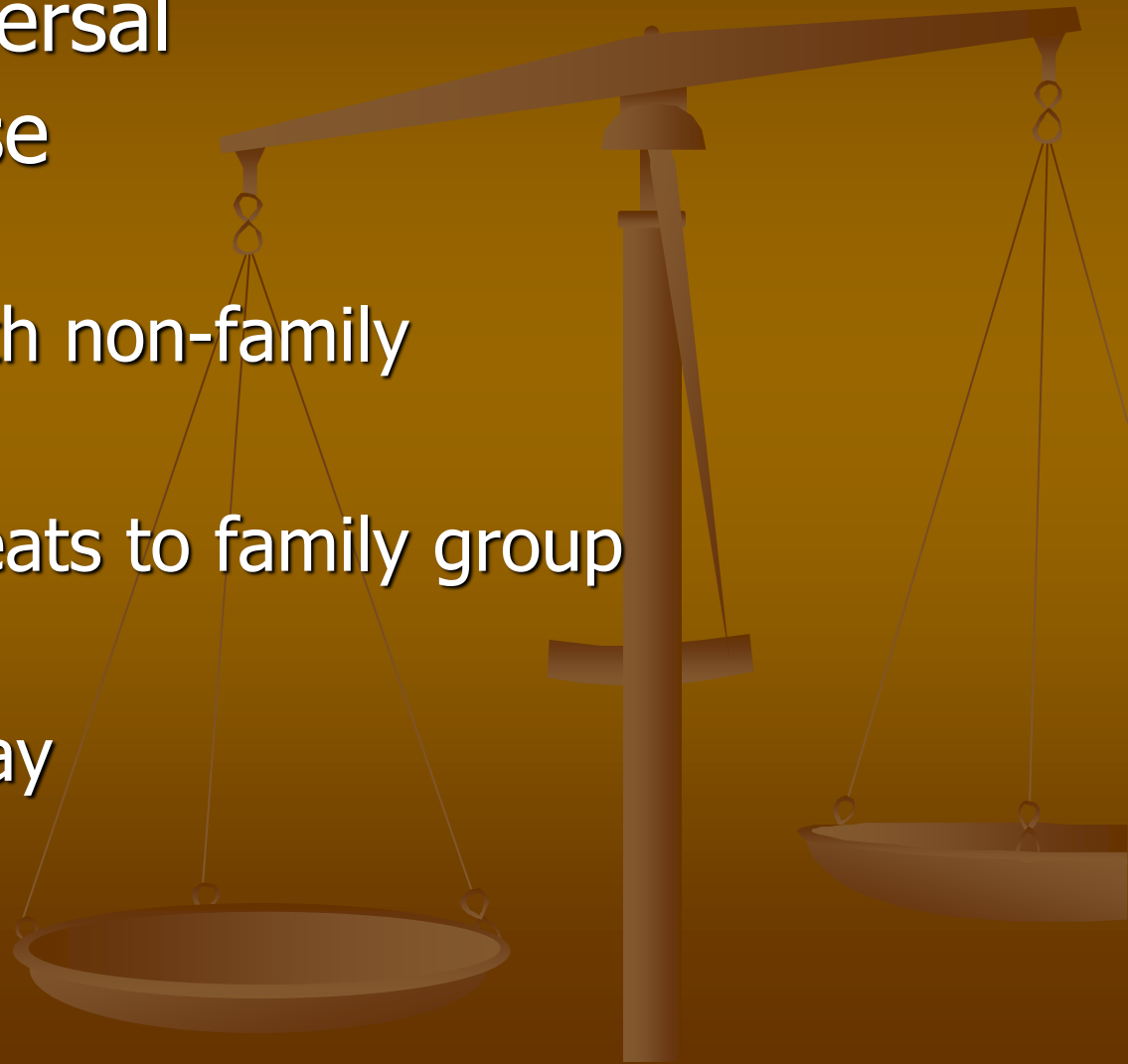
Food Habits

- Food caches
 - 50-75% unused
- 1 - 2.8 pounds consumed daily
 - Herbaceous material consumed during summer
 - Woody material consumed during winter
 - Bacteria consume the plant material, beavers digest the bacteria.



Behavior

- Spring/Fall Dispersal
- Territory defense
 - Castor mounds
 - Interactions with non-family
- Tail slapping
 - Warning of threats to family group
- Daily activity
 - Sleep/nap all day
 - Work all night





New Hampshire

FISH AND GAME

Connecting you to life outdoors

Guardian of the state's fish, wildlife, and marine resources.

Powers

- **206:10 Powers and Duties. –**

I. ...“The executive director shall, subject to the limitations hereinafter set forth, have the power and authority to adopt and enforce rules, pursuant to RSA 541-A, for the adequate and effective control, management, restoration, conservation, and regulation of the fish, game, bird, and wildlife resources of the state,”

- ... “Such power and authority may be exercised with reference to the state as a whole, or for any specified county or part thereof, or for any lake, pond, stream, or part thereof”...

- **210:23 Authority of Fish and Game Executive Director. –**

The executive director of the fish and game department with the approval of the commission may declare an open season or closed season on any fur-bearing animals in any town and county in the state. The executive director may make such other rules as necessary as to lengthening or shortening the seasons, bag limits, reporting requirements, and the method and manner of taking, in accordance with RSA 541-A

Property Protection

■ Property Protection

- **207:26 Killing by Land Owner of Bird or Animal Inflicting Damage.** — A person may pursue, wound or kill, on land owned or occupied by such person, any unprotected bird or wild animal which the person finds in the act of doing actual and substantial damage to poultry, crops, domestic animals, or the person's property, and may authorize a family member, employee, or other person requested to do so under the provision of a depredation permit issued by the executive director pursuant to RSA 207:22-c, III.
- **207:30 Rights Reserved.** — The provisions of this subdivision shall not impair the constitutional rights of persons to protect themselves or their property from injury or destruction by wild birds, game, or fur-bearing animals, protected by the laws of this state.

Protection of Beaver

■ **210:9 Protection of Beaver. –**

I. No person shall destroy or disturb or interfere in any manner with the dams or houses of beaver, without first obtaining a special permit from the executive director.

II. Notwithstanding paragraph I or any other provision of law or rule of the executive director or the department of environmental services, a landowner, the landowner's agent, or any town or municipal or state official or employee, may destroy beaver, remove beaver dams, or install beaver pipes or beaver fences on property under their control to protect property, public highways, or bridges from damage or submersion. **Dam removal** shall be allowed without a permit under RSA 482-A if machinery does not enter the water and filling or dredging in or adjacent to surface water, wetlands, or their banks does not occur. Removal shall be done in a gradual manner that does not allow a sudden release of impounded water so as to cause erosion, siltation, or a safety hazard downstream.

II-a. For purposes of paragraph II, the term **"beaver pipes"** means no more than **3 temporary structures** with the widest dimension **no larger than 15 inches** that is placed in a beaver dam to allow water passage to maintain a specific water surface elevation, and the term **"beaver fences"** means posts and **fencing installed at culverts** in such a manner as to either encourage or discourage beaver damming against the fence.

III. The executive director may require the reporting of beaver taken pursuant to paragraph II by rules made in accordance with RSA 541-A.

IV. Skins or unskinned carcasses taken under this section shall be sealed pursuant to RSA 210:8 before such skins or unskinned carcasses are sold or given away.

V. The executive director or his agents shall provide advice relative to beaver control techniques when requested.

Regulated Trapping

- ▶ Regulated trapping does not cause wildlife to become threatened or endangered.
- ▶ Science based regulations manage trapping activities.
- ▶ Regulated trapping provides many benefits, including-
 - Wildlife damage to crops and property.
 - Reduce human health and safety threats.
- ▶ Regulated trapping provides raw materials for various commodities-
 - Clothing, soap, scents, etc.

Regulated Trapping

■ Open Trapping Season

- Requires Written Landowner Permission Filed with NHF&G.
- License required when trapping on land owned by other.
- Seasons and Regulations set by NH F&G.

Oct. 15, 2018–Apr. 10, 2019

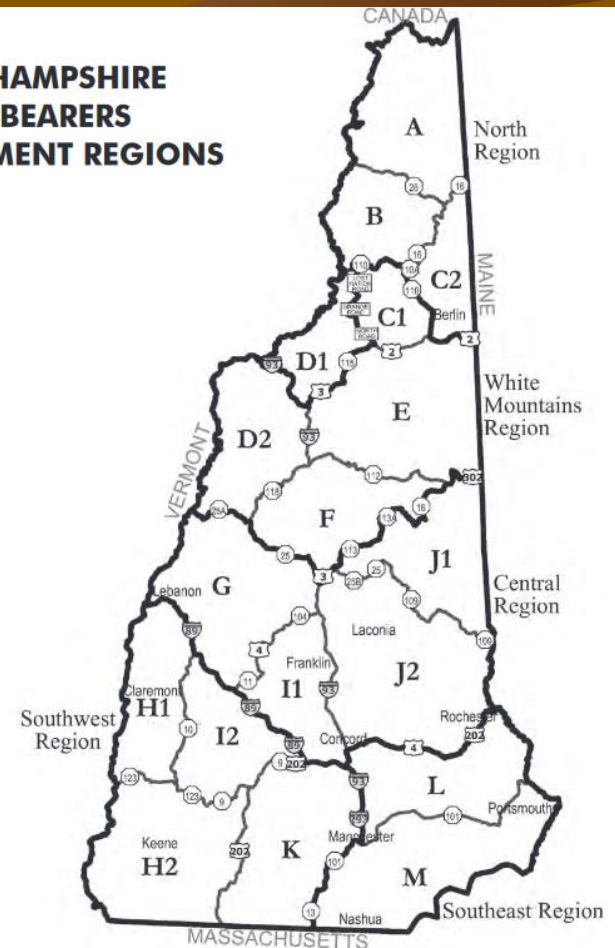
A–F

Beaver

Nov. 1, 2018–Apr. 10, 2019

G–M

NEW HAMPSHIRE FURBEARERS MANAGEMENT REGIONS



Wildlife Control Operator

■ Wildlife Control Operator

Fis 308 WILDLIFE CONTROL OPERATORS

Fis 308.01 Definitions.

“Level I wildlife control operator” means a person who is a licensed trapper and who is also engaged in the practice of trapping nuisance animals under RSA 210:24-b.

“Level II wildlife control operator” means a person who is engaged in the commercial practice of trapping nuisance animals under RSA 210:24-b.

(c) “Nuisance animal” means wildlife that a landowner wants excluded or removed to protect their family or their property from injury or destruction by the animal specified in Fis 308.02(e).

Take by Trap & WCO

2016/2017 NH Furbearer Take by Trappers and Wildlife Control Operators.

Species	By Trap	By WCO	Total	Percent by WCO
Beaver	1202	1226	2,428	50.49%

2015/2016 NH Furbearer Take by Trappers and Wildlife Control Operators

Species	By Trap	By WCO	Total	Percent by WCO
Beaver	2244	1,190	3,434	35%

2014/2015 NH Furbearer Take by Trappers and Wildlife Control Operators

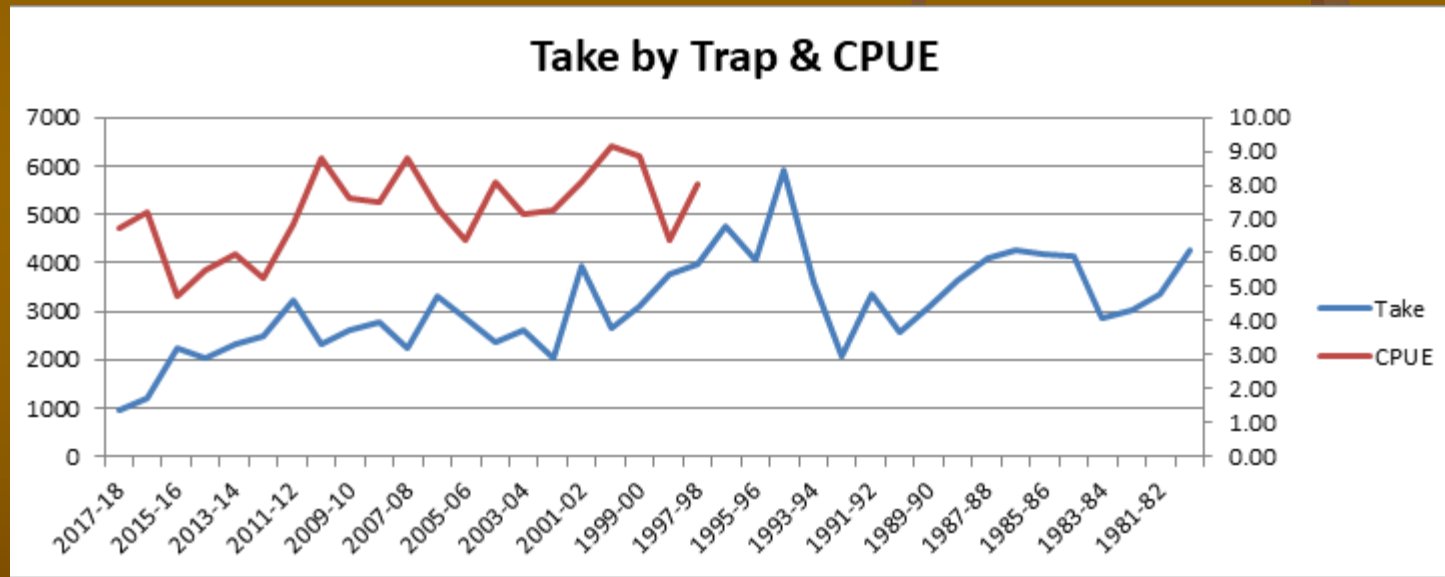
Species	By Trap	By WCO	Total	Percent by WCO
Beaver	2,044	1,177	3,221	37%

2013/2014 NH Furbearer Take by Trappers and Wildlife Control Operators

Species	By Trap	By WCO	Total	Percent by WCO
Beaver	2,269	1285	3,554	36%

Population Monitoring

■ Capture Per Unit Index



Beaver Dams



Additional Beaver Information Available at NH Fish & Game's Web Site

<https://wildlife.state.nh.us/wildlife/profiles/beaver.html>



Beavers and Their Control

Introduction

Beavers were numerous in New Hampshire when European settlers first arrived. Their ponds were extremely valuable to trappers who, at that time, knew little about beaver management. By the late 1800s, trapping had virtually eliminated the beaver in the state.

Between 1928 and 1930, the state began a restocking program in central New Hampshire, releasing six beavers. In 1942, 46 more were released. By 1955, the entire State was populated to its carrying capacity.

Like all wildlife beavers have both positive and negative wildlife values. Their unique ability to construct dams and create substantial water impoundments can drastically change the ecology of wooded areas and natural marshes. Beavers are credited with creating some of the finest waterfowl habitat in the state. Black ducks, mallards, and wood ducks thrive in these areas, and moose may feed on aquatic plants growing along the edges.

These same abilities create potential problems for humans, where flooding can damage roads, forests and farmland. In addition beaver will feed on ornamental shrubbery, fruit, and shade trees for food when they have been planted near potential beaver habitat.

Beavers may exhaust the food supply along the immediate edge of the water and move to a new location. The abandoned pond will eventually return to the early succession stage of brook and meadow. These meadows are ideal areas for grouse to rear their broods. In addition, deer and other animals use these areas in summer because of the edge which is created between woods and meadow. Beaver impoundments also create good fish habitat. In some cases, trout habitat is improved, while in others the water is warmed so pickerel and horned pout thrive.

Life History and Habits

The beaver is the world's second largest rodent. The largest known beaver weighed more than 100 pounds; however, today a 50-pound beaver is considered large.

Both sexes look exactly alike from external appearances, except when the female is nursing. Brooding takes place in winter and pregnancy lasts about 90 days, with the young arriving in April or May. Beaver do not breed until the second or third year, and give birth to an average of four young per litter.

Beaver are equipped with four opposing chisel-like teeth set in powerful jaws, and they are capable of felling some very large deciduous trees, which they use in dam building and for winter food. They select out evergreen trees, and rarely travel more than 100 yards from the edge of the pond in search of food or building material.

Dam construction is a specialized art for beaver. Dams may be made from almost any tree species; but, in New Hampshire, alder seems to be a favorite material. Beavers use relatively small brush which is placed with the butt end downstream, and a thick coating of mud and rock is applied to the face of the dam. They



Beavers fell deciduous trees for their winter food of bark and branches and store it underwater near their houses.

