

LIVING with WILDLIFE

Beaver



North America Range

Beavers are found throughout North America. The only areas they are not found are the arctic tundra, most of peninsular Florida, and the southwestern desert areas. Beavers can live anywhere aquatic habitats are found. Beavers once lived in Europe and northern Asia. They became extinct in the British Isles in the 12th century. Today, beaver can be found in Norway, Poland, and Russia.



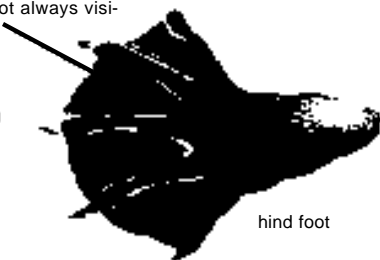
Castor canadensis

6 inches

Marks of the webs are not always visible.



front foot



hind foot

IDENTIFICATION

The beaver is the largest North American **rodent**. Most adults weigh between 35 and 50 pounds, with some reaching 70 to 100 pounds. The beaver is a stocky rodent adapted for **aquatic** environments. A beaver has a nose and ears that seal out water. It may remain submerged for up to 15 minutes. Its lips close behind the four large **incisor** teeth so it can eat underwater. All four feet have five toes. The hind feet are webbed between the toes for swimming. A split second claw on each hind foot is used for combing through their fur. The front feet are small in comparison to the hind feet.

Beaver **fur** has long shiny guard hairs that repel water. The fur has dense, soft underfur that provides warmth. Beavers range in color from yellowish brown to black, with reddish brown the most common color.

Beavers have broad, flat tails. The tail is almost hairless. It is used as a prop while the beaver is sitting upright and for a rudder when swimming. Beavers also use their tail to warn others of danger by slapping the surface of the water. Beavers store fat in their tail for winter survival.

The beaver's large front (incisor) teeth are bright orange on the front and

grow continuously throughout their life. These teeth are beveled so that they are continuously sharpened as the beaver **gnaws** and chews while feeding, **girdling**, and cutting trees.

HABITAT

Beavers can live anywhere there is a year-round source of water. Beavers build dams to change their environment more to their liking. Besides humans, only beaver create their own habitat by building dams. Beavers use whatever materials are available to build dams. This includes trees, woody bushes, fencing materials, bridge planking, rocks, wire, corn stalks, etc.

FOOD

Beavers are **herbivores**. They eat mostly woody plants. They may eat aspen, cottonwood, willow, sweetgum, black gum, black cherry, poplar and pine. Sometimes they eat crops like corn and soybeans. They also eat **aquatic** plants.

HABITS

Beavers are very social animals. They live in families or extended family units called **colonies**. Colonies are made up of adults, **yearlings** (beaver born the previous year) and this year's young. Young beavers are called **kits**. Beavers will have 2 to 4 kits each year. Colonies range from 4 to 10 animals. Beavers are **nocturnal**, which means they are most active

The European beaver is nearly identical to the American beaver. However, European beavers have no interest in building dams. Instead, they dig burrows in stream banks.

Living in Harmony, Living in Conflict

Living in harmony . . .

Most of the time, beavers and humans live in harmony.

- Beavers create wetland habitat for other wildlife like birds, fish, insects, amphibians and other mammals.
- Beaver dams help reduce **erosion** and **sedimentation** in rivers and streams.
- Beavers provide a valuable fur resource.
- Beaver ponds create diverse aquatic ecosystems.
- Beavers can provide valuable habitat for endangered animals and plants.
- Beavers can provide natural irrigation ponds.

Living in conflict . . .

- Beaver dams can cause flooding of crops and roads.
- Beavers can spread disease, for example, **giardia** in drinking water.
- Beavers can cause damage to forests and landscaping.
- Beavers can dam **irrigation** canals preventing water from flowing to farmland.
- Beavers can undermine dams and roads built by humans.
- Beavers can cause problems for some endangered plants and animals.

Preventing Damage Done by Beavers

It is possible to control damage done by beaver. Some of the control methods are:

- installing fences and barriers around culverts, drains, structures and trees to keep beavers away
- painting trees with a sand and paint mixture that discourages beavers from chewing the trees
- using electric fencing to discourage beavers from staying in an area
- using electric shock in the pond to repel the beaver
- removing small trees and woody vegetation that beavers eat to make place undesirable to them
- plugging water drainage
- removing their dams may encourage beavers to move elsewhere
- installing a beaver pond leveler, three-log drain, or other device to maintain desired water level

- capturing and relocating the beavers
- shooting or trapping the beavers.



In the 1700s and 1800s hats made from beaver were very popular. The people who made these hats used arsenic in tanning the hides. They became ill. This is where the phrase "Mad as a hatter" developed.

Economics of Damage

The types of conflicts beavers cause include damaging roads by flooding; damaging timber by girdling trees; killing trout by destroying free-flowing streams and rivers; damaging property by chewing fences, decks, trees and shrubs; and damaging crops. Beaver in North Carolina cause over \$3.7 million damage annually to timber, crops and roadways. For every \$1.00 invested in

controlling beaver, the public saves \$5.80 in North Carolina. Mississippi experiences \$1.6 million in reported damage to roads and another \$1.6 million in damage to timber. By removing beaver, Wisconsin has restored 751 miles of trout streams for a value of \$617,000. In the southeast, damage by beavers amounts to over \$100 million each year.

Legends and Folklore

The name beaver is from an old Native American word *Mni*, which means brown and refers to the animal's fur. Because of the beaver's astounding ability to build dams, sometimes replacing an entire dam overnight, this remarkable mammal has come to represent **industriousness** and **perseverance**. Beavers also symbolize gentleness and wisdom in some cultures.



The beaver has been of economic and religious importance to many native people of North

America. For thousands of years Indians utilized beaver for its meat and fur. It has also been part of their religious ceremonies. In the 16th and 17th centuries, beaver became an important commodity in the trade between Indians and early settlers. The beaver trade helped lead to the exploration of North America.

Cherokee children participated in a tradition that reflects their respect for the beaver. When a Cherokee child's first tooth fell out, the youngster took it in his or her hand and ran around the outside of his or her house four times saying, "Da, yi skinta" which means, "Beaver, put a new tooth into my jaw." Upon completion of the running, the child threw the tooth onto the roof of the house. This ritual was believed to make the new tooth come in straight and strong. The beaver was invoked because of its outstanding ability to gnaw through even the hardest wood.

The beaver is the emblem of the state of Oregon. It is often used as a symbol of Canada. The first Canadian postage stamp issued in 1851 was a "three-penny beaver."

Your turn . . .

Dilemma . . . what would you do?

A road that many of the students from your school have to cross each day is flooded because of a dam built by beaver. The water is a foot deep in many places. Cars have to slow down when they travel through the water. Even with the cars slowing down, many students have been splattered with water. It will soon be winter and everyone is discussing what happens when the water turns to ice. What solutions do you recommend?

RESEARCH

Beavers are rodents. Research rodents. What other animals are classified as rodents? Make a list of several rodents and describe how these rodents are similar to and describe how they are different from beaver. Which rodents would you expect to find living around you? Why do you think you would find them there? What type of habitat do they need? Where is the nearest place you might find a beaver?

Across: 4. persevere, 7. giardia, 10. incisors, 12. girdling, 13 rodent, 14 industrious
DOWN: 1. fur, 2. diversity, 3. gnawing, 5. ecosystem, 6. sedimentation, 8. aquatic, 9. erosion, 11. irrigation

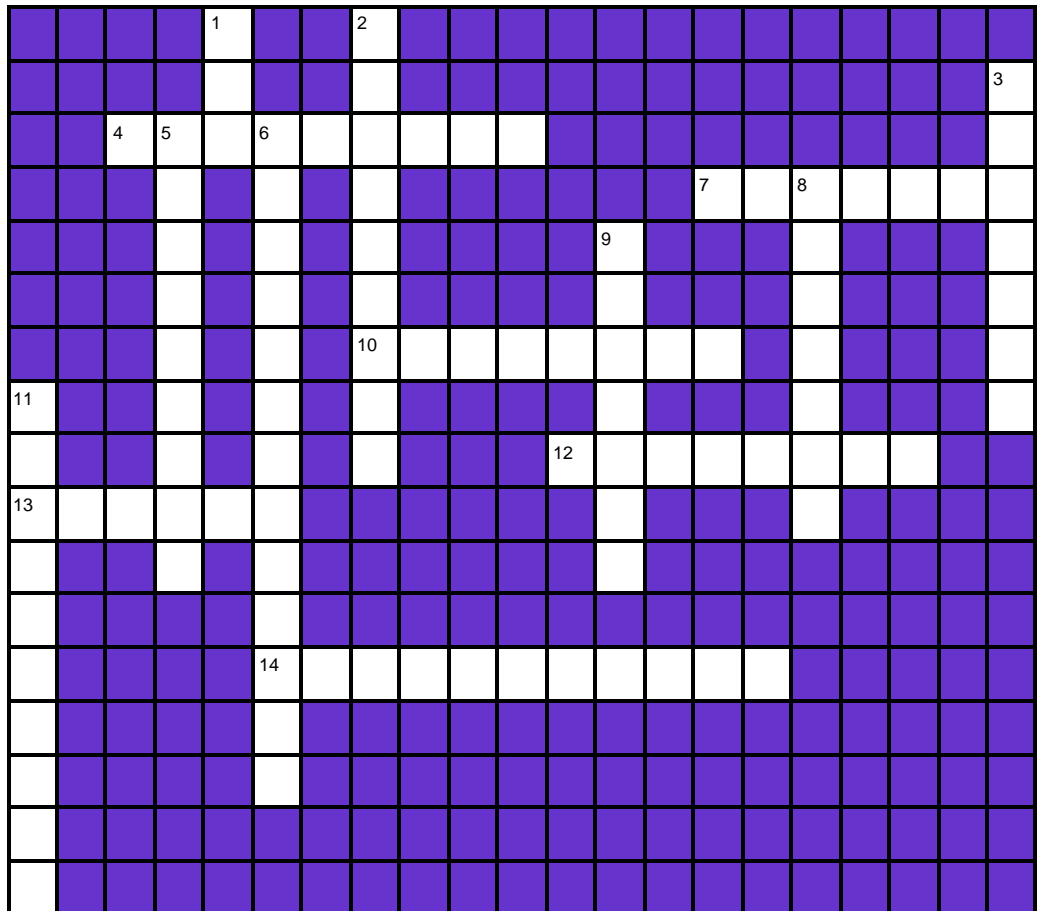
CROSSWORD REVIEW

ACROSS

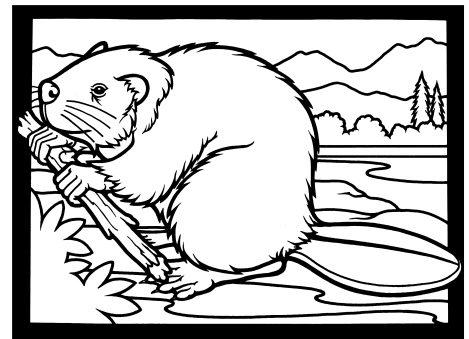
4. to keep on trying to accomplish something
7. disease that can get into water
10. front teeth of beavers (p I)
12. when beavers gnaw around tree trunks
13. beavers are this type of animal
14. hard working

DOWN

1. the hair on beaver is called this
2. to make diverse
3. beavers chewing on trees
5. organisms and their environment
6. the process of matter settling to the bottom of a liquid
8. having to do with water ecosystems
9. when wind or water moves soil from the ground
11. humans moving water to bring it to crops



- One of the largest beaver dams ever recorded was 2,140 feet long.
- The giant beaver which inhabited North America during the Pleistocene age weighed about 900 pounds and was 9 feet long.
- The sound of running water triggers dam building instinct in beavers.



Additional Resources

Wildlife Activity Book and
1998 Wildlife Issue
Colorado Reader
Colorado Foundation for
Agriculture
P.O. Box 10
Livermore, CO 80536

Prevention and Control of
Wildlife Damage CD ROM
or Handbook
202 Natural Resource Hall
University of Nebraska
P.O. Box 83819
Lincoln, NE 68583

Jack H. Berryman Institute
for Wildlife Damage
Management
Utah State University
Logan, Utah 83431-5210



This activity sheet has been developed by USDA Wildlife Services. For more information about beavers contact your state's Wildlife Services office or USDA Wildlife Services at (301) 734-7921.