



Beaver

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Have you ever heard the sayings, “He or she is an eager beaver” or “He or she is busy as a beaver”? The dictionary says that an eager beaver is someone whom is extremely enthusiastic and enjoys working extremely hard. Has anybody ever called you an eager beaver or said you were as busy as a beaver? I can’t remember anybody calling me that! Well, beavers are an extremely and famously busy animal. They work harder than any other animal on earth and that includes most humans. They use their talents to reengineering the landscape as no other animal can except humans.

Beavers are found where their preferred foods are in good supply—along rivers, and in small streams, lakes, ponds, marshes, and even roadside ditches containing adequate year-round water flow. In areas where deep, calm water is not available, beavers that have enough building material available will create ponds by building dams across creeks or other waterways. Felling trees by gnawing with their strong teeth and powerful jaws, they create massive log, branch, and mud structures to block streams and turn fields and forests into the large ponds.

Beavers dams create habitat for many other animals, birds, and plants. In winter, deer and elk frequent beaver ponds to forage on shrubby plants that grow where beavers cut down trees for food or use to make their dams and lodges. Weasels, raccoons, and herons hunt frogs and other prey along the marshy edges of beaver ponds. Migratory water birds use beaver ponds as nesting areas and resting stops

during migration. Ducks and geese often nest on top of beaver lodges since they offer warmth and protection, especially when lodges are formed in the middle of a pond. The trees that die as a result of rising water levels attract insects, which in turn feed woodpeckers, whose holes later provide homes for other wildlife.



Beaver Dam



Goose and Ducks on Beaver Lodge

Domelike beaver homes, called lodges, are also constructed of branches and mud. They are often strategically located in the middle of ponds and can only be reached by underwater entrances. These dwellings are home to the extended families of monogamous beaver parents, young kits, and the yearlings born the previous spring.

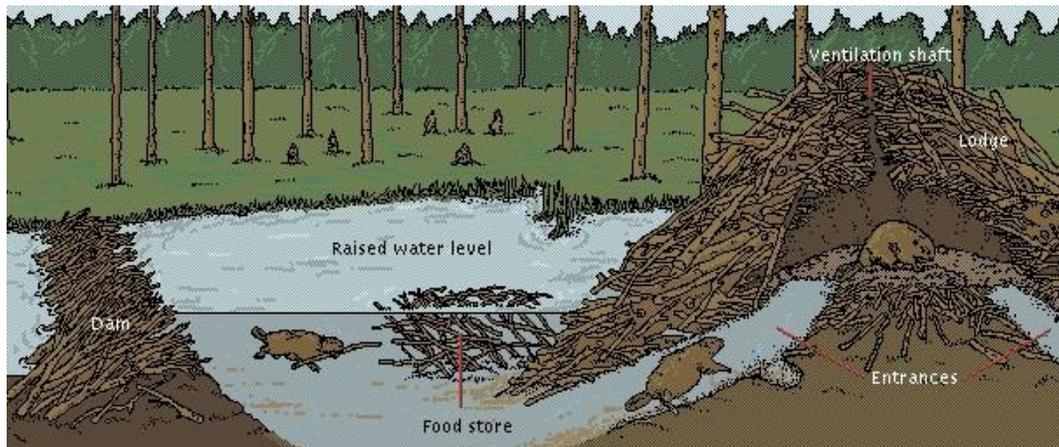


Illustration of Beaver Dam and Lodge

The beavers cover their lodges late each autumn with fresh mud, which freezes when frosts arrive. The mud becomes almost as hard as stone, thereby preventing wolves and other predators from penetrating the lodge. The Beaver lodge is approximately 20-foot in diameter and has underwater entrances, which makes entry nearly

impossible for any other animal. Only a small amount of the lodge is actually used as a living area. Beavers dig out their dens with underwater entrances after they finish building the dams and lodge structures. There are typically two dens within the lodge, one for drying off after exiting the water and another, drier one, in which the beaver family lives.



Beavers cutting down a tree



Beaver gathering branches and twigs



Beaver carrying a branch



The completed lodge

When the ice breaks up in spring, beavers pop through to begin another busy year of eating bark, building dams and gathering food just in time for winter to come again. In the autumn, they return to their old lodges and gather their winter stock of wood. They seldom begin to repair the lodges until the first frost sets in, and rarely finish the outer coating until the cold becomes severe. When they erect a new lodge, they fell the wood early in summer but seldom begin building until nearly the end of August.

Beavers are active all winter, swimming and foraging in their ponds even when a layer of ice covers the surface.

Summary – Why do Beavers build dams and lodges?

Beavers create dams to raise water levels so they can build their homes, or lodges, in the water. By effectively creating an island with an underwater entrance, they are protected from most predators. The entrance leads to dry chambers where beavers sleep, give birth, and store food for future consumption.

General Information:



North American Beaver

The North American Beaver (*Castor Canadensis*) is one of two beaver species. In this article, we will be talking about the North American Beaver and refer to it as just “Beaver”. The Beaver is the official national animal symbol of Canada. This beaver is the largest rodent in North America and competes with its Eurasian counterpart, the European Beaver, for being the second-largest in the world, both following the South American Capybara.



European Beaver

The Eurasian beaver or European beaver (*Castor fiber*) is a species of beaver which was once widespread in Eurasia. It was hunted to near-extinction for both its fur and their castor sacs and by 1900 only 1200 beavers survived in eight countries in Europe and Asia. Reintroduced through much of its former range, it now occurs from Great Britain to China and Mongolia, although it is absent from Italy, Portugal, the southern Balkans, and the Middle East.

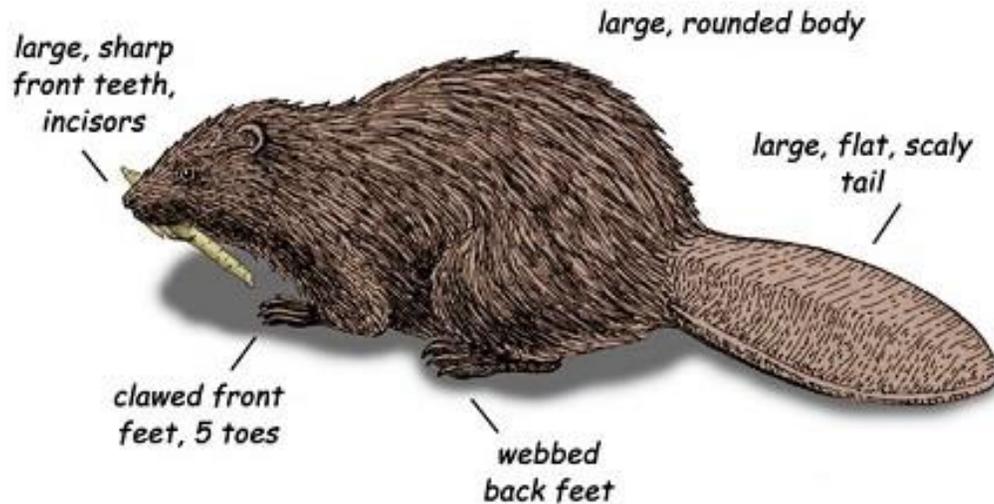


Capybara

The Capybara is the largest rodent in the world. It is not a Beaver but a close relative to Guinea Pigs and Chinchillas. Native to South America, the Capybara inhabits savannas and dense forests and lives near bodies of water.

Beaver

Castor canadensis



Description:

The beaver is semi-aquatic and has many traits suited to this lifestyle. It has a large flat paddle-shaped tail and large, webbed hind feet. The unwebbed front paws are smaller, with claws. The eyes are covered by a nictitating membrane which allows the beaver to see underwater. The nostrils and ears are sealed while submerged. A thick layer of fat under its skin insulates the beaver from its cold water environment.

Size: Adult beavers usually weigh between 40 and 60 pounds with 50 pounds being typical. The head-and-body length is between 30 and 35 inches, with the tail adding a further 10 to 15 inches.

Fur: The beaver's fur consists of long, coarse outer hairs and short, fine inner hairs. The fur has a range of colors (from light brown to black) but usually is dark brown. Scent glands near the genitals secrete an oily substance known as castoreum, which the beaver uses to waterproof its fur.

Tail: The tail of a large beaver may be 15 inches long and 6 inches wide. It is covered with leathery scales and sparse, coarse hairs. The beaver's tail has important uses both in the water and on land. In the water, the animal uses its flexible tail as a four-way rudder. When diving after being frightened, a beaver loudly slaps the water with its tail; the sound warns all beavers in the vicinity that danger is near, and perhaps serves to frighten potential predators. On land, the tail acts as a prop when a beaver is sitting or standing upright. It also serves as a counterbalance and support when a

beaver is walking on its hind legs while carrying building materials with its teeth, front legs, and paws. Contrary to common belief, beavers do not use their tails to plaster mud on their dams. The tail stores fat, and because it is nearly hairless, releases body heat, helping the beaver to regulate its body temperature.

Teeth: To gnaw through tree trunks, they need extra-strong teeth. Fortunately, their tooth enamel contains iron, which makes them incredibly strong, sharp, and orange. Because the orange enamel on the front of their teeth wears away more slowly than the white dentin on the back, a beaver's teeth self-sharpen as he chews on trees. This creates a sharp edge that enables a beaver to easily cut through wood. The large front teeth of the beaver never stop growing. The beavers constant gnawing on wood helps to keep their teeth from growing too long.



More Facts About Beavers

Mortality and Longevity: Because of their size, behavior, and habitat, beavers have few enemies. When foraging on shore or migrating overland, beavers are killed by bears, coyotes, bobcats, cougars, and dogs. Other identified causes of death are severe winter weather, winter starvation, disease, water fluctuations and floods, and falling trees. However, humans remain the major predator of beavers. Historically, beavers have been one of the most commonly trapped furbearers. Beavers can live up to 20 years in the wild but 12 years is about the average lifespan.

Reproduction and Family Structure: A mated pair of beavers will live together for many years, usually for life. Beavers breed between January and March, and litters of one to eight kits (average four) are produced between April and June. The number of kits is related to the amount of food available (more food, more kits), and the female's age. The female nurses the kits until they are weaned at 10 to 12 weeks of age. Most kits remain with the adults until they are almost two years old. The kits then go off on their own in search of mates and suitable spots to live, which may be several miles away. Beavers live in colonies that may contain 2 to 12 individuals. The colony is usually made up of the adult breeding pair, the kits of the year, and kits of the previous year.

Food and Feeding Habitats: Beavers eat the leaves, inner bark, and twigs of the quaking aspen tree (their favorite food), alder, birch, cottonwood, willow, and other

deciduous trees. Beavers also eat shrubs, ferns, aquatic plants, grasses, and crops, including corn and beans. When the surface of the water is frozen, beavers eat bark and stems from a food “cache” (a safe storage place) they have anchored to the bottom of the waterway for winter use. They also swim out under the ice and retrieve the thick roots and stems of aquatic plants, such as pond lilies and cattails.



Beaver Having Lunch



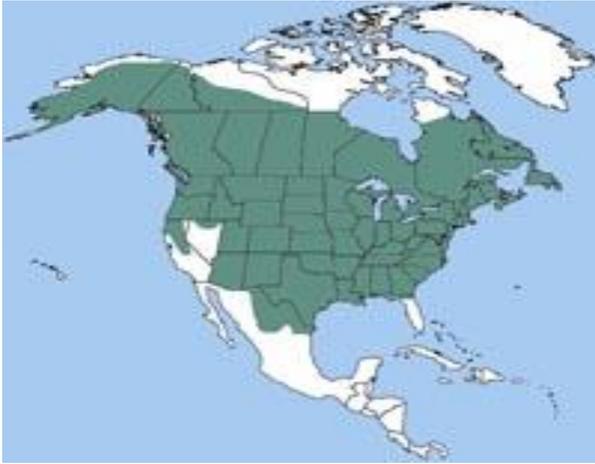
Beaver Swimming Under Water



Beaver Swimming on Water Surface

Walking and Swimming: Beavers move with an ungainly waddle on land but are graceful in the water, where they use their large, webbed rear feet like swimming fins, and their paddle-shaped tails like a rudder. These attributes allow beavers to swim at speeds of up to five miles per hour. They can remain underwater for 15 minutes without surfacing, and have a set of transparent eyelids that function much like goggles. Their fur is naturally oily and waterproof.

North America Beaver Range:



All beavers need water to survive. They live in or around freshwater ponds, lakes, rivers, marshes and swamps. Beavers live throughout North America, but stay clear of deserts and the far northern areas of Canada. Beavers can be found in every state except Hawaii. Most beavers are found in Canada.

In the 1800s, the North American beaver population was about 300 million. 30 years ago, the beaver was on the verge of extinction with only about 100,000 of them left in North America. The decline in beaver populations was due to the beavers being hunted for their fur and for the beaver's glands that are used as medicine and perfume. In 1986, a beaver pelt sold for around \$500 a skin, compared to about \$20 a pelt today. Since then, the beaver has made a dramatic comeback. Today in 2016, due to conservation efforts, it is estimated that there are about 30 million (20 million in Canada and 10 million in the US) beavers found in the wild.

Viewing Beavers: Beavers are nocturnal (active at night), but are occasionally active during the day. They do not hibernate, but are less active during winter, spending most of their time in the lodge. Probably no animal leaves more obvious signs of its presence than the beaver. Freshly cut trees and shrubs, and prominent dams and lodges are sure indicators of their activity. Look for signs of beavers during the day but look for the animals themselves before sunset or sunrise. Approach a beaver site slowly and downwind. Beavers have poor eyesight but excellent hearing and sense of smell. Look for a V-shaped series of ripples on the surface of calm water. A closer view with binoculars may reveal the nostrils, eyes, and ears of a beaver swimming. If you startle a beaver and it goes underwater, wait quietly in a secluded spot and chances are that it will reemerge within one or two minutes. Beavers stand their ground and should not be closely approached when cornered on land. They face the aggressor, rear up on their hind legs, and hiss or growl loudly before lunging forward to deliver extremely damaging bites.

Droppings: Beaver droppings are seldom found on land; those that are will commonly be found in the early morning at the water's edge. Individual beaver droppings are usually cylindrical, up to 2½ inches long (sometimes shorter), and look as if they were

formed of compressed sawdust. The diameter is an indication of the animal's size, with 1 inch being average for adults.

Slides and Channels or Canals: Slides are the paths beavers make where they enter and leave the water. They are 15 to 20 inches wide, at right angles to the shoreline, and have a slicked down or muddy appearance.



Beaver Slide



Beaver Channel or Canal

Beavers construct channels or canal systems leading to their ponds, using them to float food—such as small, trimmed trees—from cutting sites. Canals are also safe travel ways for swimming instead of walking. With receding water levels during summer, beaver activity shifts toward building and maintaining channels to access new food supplies. Channels often look man-made, have soft, muddy bottoms, and are filled with 15 to 25 inches of water.

Common problems and solutions:

The two most common problems associated with beavers are flooding that results from blocked streams/ivers and the damage caused to trees:

Flooding

Flooding becomes a crisis after unusually heavy rain or snow enters bodies of water with significant blockages. While beaver dams sometimes contribute to this type of flooding, they can also store water during periods of drought and slow down the movement of water from land to river systems, thereby preventing more serious floods and significant financial damage downstream.

Tree Damage

Damage to trees in urban and suburban areas is likely to be noticed before it becomes critical, but perhaps not before a valuable tree or two has been lost. Operators of commercial forests attribute millions of dollars of timber loss annually to beavers. Fences and tree guards can be used to save valuable trees.

What to Do About Beavers

For those who say beaver flooding and tree damage can only be fixed by trapping and killing the beavers, I say they are wrong. I believe that the information presented in this article shows why people should (for the most part) leave the beavers alone. They do much more good than harm for our ecology, environment, and the landscape.



What do you think?

Conclusions

The beaver's comeback from near extinction will provide significant benefits to our country's ecology, which has lost much of its wetlands to development and agriculture. Despite this, we often find ourselves in conflict with beavers over who gets to occupy the areas of low-lying ground adjacent to rivers and ponds. I think it is most appropriate to allow beavers to live and build in their habitat without disruption. We can gain great benefit from working with, rather than against, this industrious rodent.

Beavers presence in nature greatly affects other wildlife. In fact, the removal of beavers from their natural setting leads to a decrease in habitat quality. This results in fewer wildlife species being able to utilize the area. Wherever beavers decide to take up residence, it lets us know that the ecosystem in that area is healthy.

See picture of a cute beaver on the next page.



A Friendly Beaver