

Beavers On The Capital's Doorstep!

You can easily see beavers during a walk in Gatineau Park, especially in the early morning or at dusk. They can even be spotted in the Park's pathway sector which is easily accessible from downtown Ottawa-Gatineau. If you see a gnawed tree trunk, a dam, a lodge or beaver prints in the mud, you know they are nearby.

Background

Description

Habitat

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Background

It was the beaver's **fur** that was the greatest motivating factor in the exploration of our country. And if the beaver has become a national emblem, it is because the trade in its fur was for many years a mainstay of the Canadian economy.

Description

The beaver is **the largest rodent in North America**: an adult weighs from 15 to 35 kilograms (35 to 75 pounds) and averages 1 metre (3 feet) in length. Its webbed hind feet, a second pair of transparent eyelids, and valves on its ears and nose, make it a **skilled swimmer**. An additional pair of lips, situated behind the incisors, also enables the beaver to peel and cut branches under water.

Its large flat **tail** fulfils several purposes. It is used to give a warning in case of danger, and helps the beaver maintain its balance when gnawing trees. The beaver also uses it as a rudder when swimming. Contrary to what is seen in comic strips, the beaver does not use its tail as a trowel to shape its dam.

Habitat

The beaver lives on the banks of **waterways bordered by deciduous trees**.

An outstanding engineer, it contains the waterway by building **dams**. The ponds thus created provide the beaver with a secure habitat, and are deep enough that the water does not freeze to the bottom, even during the coldest winters. The beaver uses the pond as a location for its **lodge**, which includes one or more openings beneath the surface of the water, and a ventilation chimney. The depth of the water basin enables the beaver to store reserves of food consisting of branches for the winter.

The beaver may also build tunnels on the shores of its pond. These generally serve as additional hiding places and shelters in emergency situations.

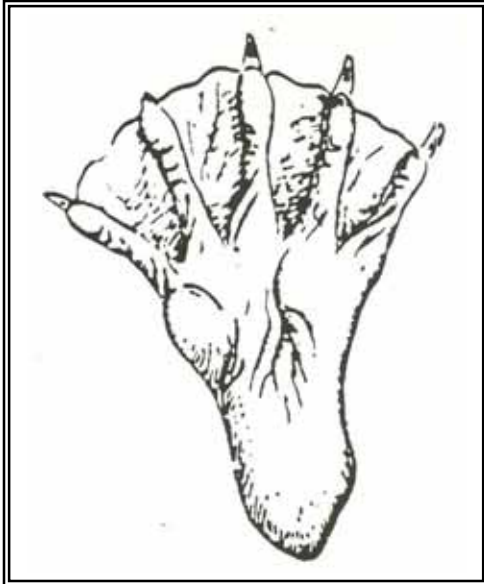
Feeding and Behaviour

The beaver **feeds** mainly on the tender bark of certain trees such as the trembling aspen, white willow, sugar maple, black alder, and white birch, but also on leaves, buds and aquatic plants.

This rodent, which has a lifespan of 12 to 15 years, is monogamous and mates for life. A beaver **colony** usually consists of a couple of adults, the year's litter (two to four) and the previous year's young who help

the parents. During their second year of life, the young beavers must leave the pond to form a colony of their own. The beaver's main **predators** are the wolf, black bear, the otter (kits) and humans.

The beaver marks its **territory** with several mounds of earth that it saturates with **castorium**, a scented secretion from one of the two glands at the base of its tail. The second gland produces an oil that the animal uses to waterproof its fur by using two special claws on its hind feet like a comb.



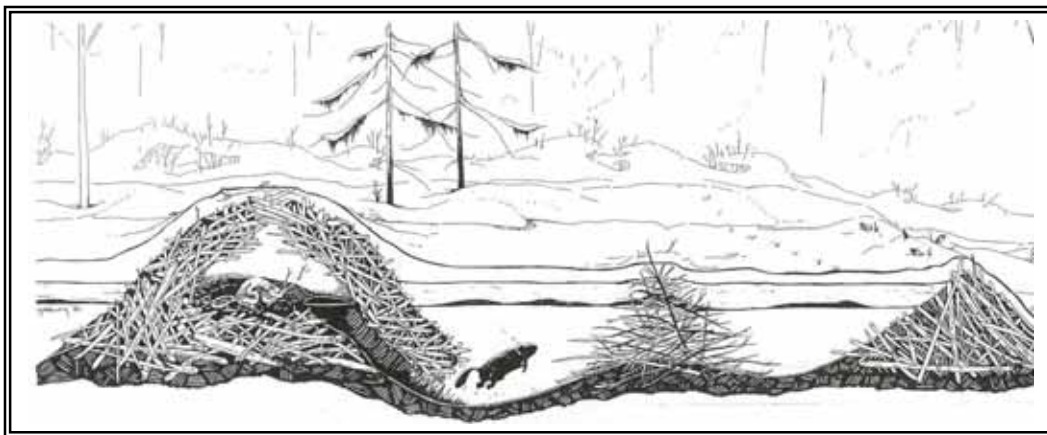
Print, hind foot of beaver
(NCC, 1990)

Gatineau Park Beaver Population

In the early 1980s, Gatineau Park was recognized as having **one of the largest beaver populations in Canada**. The Park's abundance of beavers is linked to the richness of the habitat, since it is bordered by two important rivers (Ottawa and Gatineau), and contains around fifty lakes and a large number of wetlands. In addition, the forest cover provides the beaver with quality food.

During aerial inventories of the population conducted in 1992, 1997 and 2002-2003, 385 (10.78 colonies/10 km²), 266 (7.45 colonies/10 km²) and 283 (7.79 colonies/10 km²) active colonies were estimated on Park territory. The population therefore varies between 1,360 and 1,960 beavers, based on an average of 5.1 animals per colony. Recent studies show that the Park's beaver population is high but fairly stable.

At one time, however, excessive trapping resulted in the beaver's virtual disappearance from southern Quebec and the Park, and measures had to be taken to allow the population to rebuild. The most important of these was undoubtedly the trapping ban imposed by the Quebec government from 1931 to 1941. By the late 1950s, the beaver population in Gatineau Park had begun to recover.



Beaver habitat during the winter season; lodge, food reserve and dam

Impact of Dams

Other than humans, the beaver is probably the animal that has the most substantial impact on its environment. Through dams made of branches, stones and mud, the beaver can flood considerable areas. Beaver ponds frequently encroach on structures built by humans, especially roads. However, the **main problem is still the rupture** of a dam or, more frequently, a series of dams, which leads to flooding downstream. This situation is observed particularly during the spring thaw.

Nonetheless, the creation of a **beaver pond** also has positive effects. It is a **useful new habitat for wildlife**, such as the great herons that build their nests at the top of dead trees in the centre of the pond, or the white-tailed deer that come there to drink and nibble on stump sprouts.

Managing the Park's Beaver Population

In the late 1970s, Gatineau Park employees began to **manage the beaver population astutely**. They tried to find ways to cohabit with the beaver while controlling the water level in beaver ponds to protect infrastructures (roads, trails, buildings) and ensure public safety. If you walk in the Park, you will no doubt notice triangular wire cages with protruding drains that run through certain beaver dams. These devices maintain the pond water at an acceptable level.

How does this mechanism work? First, it is important to understand why beavers **build dams**. It is an **instinctive reaction**, since the sound of running water is a stimulus that induces this mammal to stop the flow of water and retain it. The beaver then erects or consolidates dams that end in the creation of ponds.

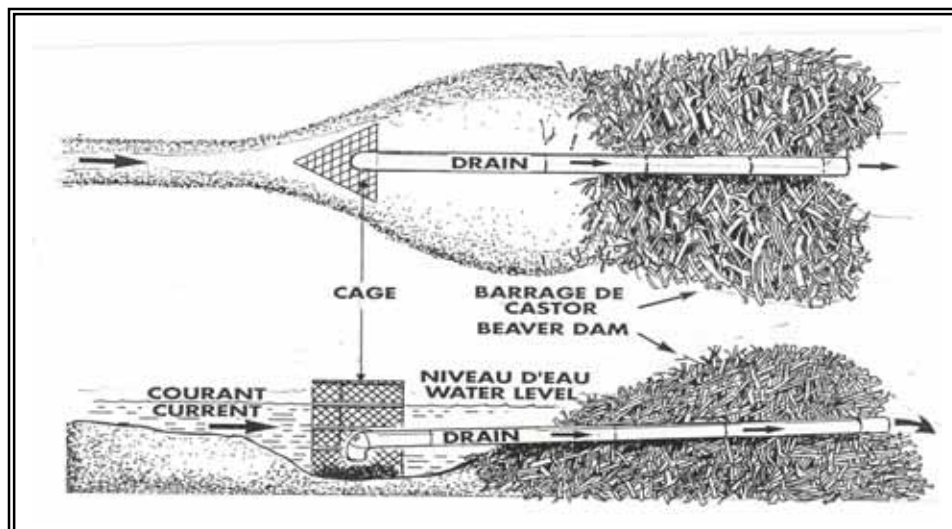


Diagram of a drain for beaver dam management
(NCC, 1990)

Drains are installed in beaver dams **to prevent flooding**, but this intervention is not sufficient, for the beaver would soon block the drain entrance. For this reason, an elbow is added to the drain entrance to reduce the stimulus created by the flow of water. Finally, a galvanized wire cage is placed around the drain opening to prevent the beaver from reaching it. This system allows the water to flow. In this way, the ponds contain sufficient water for the beavers without reaching levels that could endanger structures created by humans.

As part of the **beaver control program**, over 140 checkpoints are monitored regularly on Park territory. Nearly half of these checkpoints have water level control devices such as triangular cages, drains or pre-dams that protect facilities at the Park and in neighbouring municipalities. They are also aimed at ensuring the maintenance of a healthy beaver population and the Park's biodiversity.

Of course, beaver management techniques are not infallible and, from time to time, inclement weather and the beavers thwart our plans. The time has long passed, however, when the beaver represented an uncontrollable threat and the only solution was to eliminate it. Nowadays, Gatineau Park specialists have acquired an **expertise** in beaver management that attracts visitors from all parts of the world who are interested in our work methods or wish to film our "national rodent" at work.

How to Protect Your Trees

Beavers sometimes cut down trees on private property. There are some simple, effective means of overcoming this inconvenience. For example, **trees can be protected** with chicken wire. This protective netting is installed around the tree trunk from the ground up to a height of approximately one metre.