

# Basic Beaver Biology

## Basic Busy Beaver Biology

*By Betsy Washington and Kevin Howe*

Indians believed that beavers were the “sacred center” of the land because of their central role in creating rich wetlands that create habitat for many species of mammals, birds, fish, turtles, and frogs. In fact, beaver wetlands are so rich in biodiversity that they can rival tropical rain forests! Most beavers inhabit streams and are famous for their incredible engineering skills used in building elaborate dams and canal systems and shallow ponds. This of course, has created conflicts with humans by cutting trees and flooding forests, agricultural lands, or occasionally roads. Beavers are extremely gentle and highly intelligent animals. A famous animal behaviorist said, “When we think of the kinds of animal behavior that suggest conscious thinking, the beaver comes naturally to mind”.

The American beaver is the largest rodent in the N. hemisphere. They average about 900 – 1200 mm in total length and about 20 kg. in weight. Beavers are readily recognizable by their horizontally flattened, scaly tails. Beavers use their tail both as a rudder for swimming and navigating while carrying large logs, and also to warn other beavers of danger by slapping their tail against the water with a loud smack and splash. Their back feet are webbed and used to propel themselves through the water at up to 3.2 km/hr. Their front feet have specialized digging claws for creating bank burrows and canals.

They have a range of special adaptations that allow them to remain underwater for 15 minutes!

In Lake Barcroft, beavers do not build dams, but instead construct lodges of stripped branches and sticks in the lake bank. Burrows are typically built under tree roots or shallow docks where beavers interweave thick sticks and logs and plaster these in place with mud. A single lodge or burrow may have several entrances all located under water. Tunnels slant up above water level to the interior of the lodge where the beaver family is safe from predators. A single beaver family may have several lodges or burrows, so the number of lodges is not a reliable indicator of beaver populations. Beavers are chiefly nocturnal, and spend their daylight hours in their lodges.

Beavers are highly territorial animals and produce a pungent “castor” oil that they deposit on “scent mounds”, that mark the boundaries of their territory and serve to keep other beavers away. The average territory is 2.5 – 4.0 hectares.

Beavers feed mainly on the inner bark of deciduous trees. Beavers have 2 chisel-like, orange lower incisor teeth, which are used for cutting trees. Beavers can easily fell a 4” diameter tree in about 15 minutes! Generally they prefer trees less than 6” in diameter, but they have been know to fell a tree over 5’ in diameter! Favorites include fast growing trees with soft wood such as birches, willows, alders, maples, tulip poplars, sweet gums, magnolias, and dogwoods. However, speaking from experience, our beavers are opportunistic and will also readily take trees with harder wood such as oaks, beeches, ironwoods, serviceberries, and even certain conifers including red cedars, pines, and even blue spruces. The best protection is to wrap your trees in hardware cloth or paint them with a mix of shellac and sand.

During spring and summer, beavers feed on herbaceous plants such as spatterdock and roots of aquatic plants. With the onset of fall, they are especially busy cutting and caching small trees and branches in the mud at the bottom of the lake near their lodge for food when the lake is frozen.

Beavers mate for life and may live for 12 years or more. Young are born in May and June with an average litter size of between 3 and 4 young. However, this may vary as beavers tend to self regulate population levels, so that if populations are low, they produce larger litters and vice versa. Beavers are devoted parents and spend much of their time training and instructing their young. A typical beaver colony consists of the parents, young kits, and yearlings or “teenagers”. Parents drive the yearlings out of their territory in their second year, after the new litter of kits is born.

Lake Barcroft's Beaver Management Policy takes advantage of the natural behavior of our resident beavers in order to effectively and humanely limit beaver populations in the lake and to discourage beaver damage to personal property. This Policy along with tips on protecting your property can be found on the Lake Barcroft website.