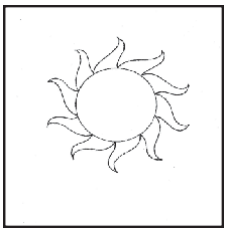
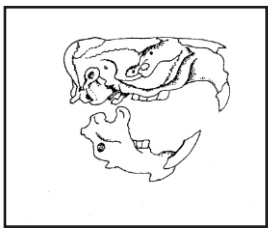
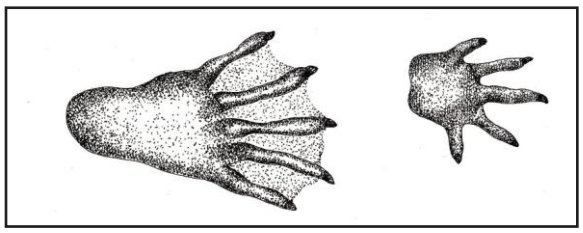
Beaver

Family Castoridae

Castor canadensis







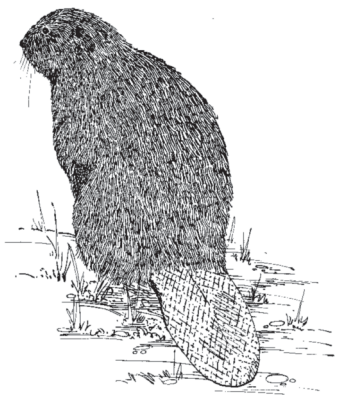
The beaver is the largest rodent in Pennsylvania and in North America. Best-known for its enormous front teeth and ability to cut down trees, the beaver has a unique set of physical and behavioral characteristics allowing it to thrive in a semi-aquatic habitat.

Beavers were plentiful when European colonists first arrived and quickly became a source of income. Their thick pelts were used to make top hats and clothing trims. Beaver fur was so in demand that new trapping expeditions helped propel the expansion of American by initiating the exploration of the West.

But by the end of the late 1800s, uncontrolled trapping had all but eliminated beavers in Pennsylvania and elsewhere. The good news is that an active PA Game Commission wildlife management plan has helped the beaver return to its original territory, and their populations are stable once again. Stable, that is, where beaver habitat is still found in our state.

Like all rodents, the beaver's front teeth never stop growing. They must chew wood and other vegetation to keep their incisors in check. Beavers are **herbivores.**

In addition to wood, beavers eat a variety of soft plant material like grasses, ferns, mushrooms, even algae. They'll take leaves, stems and roots of aquatic plants such as cattails and water lilies. And the bark, twigs and buds of many trees are favored too, especially aspens, alders, cherries, maples, willows and birches.



If there is plenty of soft food available, beavers usually only cut down trees for their dams or lodge repair. **They'll cut and carry branches or small logs to the bottom of their home ponds** and anchor them in the mud. This gives them access to food when the pond freezes over in the winter. Beavers can also create air space under the ice by removing sticks from the dam to lower the water level, if necessary.

A beaver can close its lips behind its large orange-stained incisors. This enables them to carry wood underwater or even gnaw on wood while swimming.

Adult beavers weigh up to 60 pounds. Their stocky bodies can be 40 inches in length, with rounded head, short neck and legs. Their highly-valued coat is glossy brown above and pale beneath with a dense underfur covered with longer guard hairs. The pelt is thick and has a great deal of body fat to insulate the beaver, permitting it to stay in cold water for long periods.

Beaver tails are scaled, wide and flat. Nearly a foot long and six inches wide, the tail is used as a propeller and a rudder when the beaver swims. It also serves as support when the beaver is sitting upright gnawing on a tree or as a signal. When alarmed, the beaver will slap its tail loudly on the surface of the water.

The front feet and long claws help beavers dig and work on dams. But they can easily manipulate food with a small "finger" that acts like a thumb. The broad hind feet are webbed between the toes, which also helps them swim. **Beavers even have a split claw used for grooming on the outside of each hind foot.**

Most food is located by smell, and their sense of hearing is acute. While beavers are powerful in the water and can stay submerged up to 15 minutes, they amble slowly on land. When submerged, **membrane valves seal their ears and nostrils to keep water out**. Their eyesight is weak, but like many aquatic animals, their eyes are placed toward the tops of their heads, enabling them to see above the water while most of their body is hidden underwater.

Even though beavers are well-known for their ability to cut and fell a tree, they cannot make the tree fall in a particular direction. They cut trees within a few hundred feet of their water supply, dragging saplings to their dam or even digging small canals from their pond to the cut tree in order to float logs back to the dam.

Once the tree is down the beaver will feed on fresh greens, buds and twigs growing on the branch tips. The remaining branches are gnawed into pieces used in building dams or lodges. **The dome-shaped stick and log lodges are used for shelter**. The den, which has a small hole at the top to allow fresh air in, can be five feet tall. In winter when the mud-plastered lodge freezes, it is almost impossible for a predator to invade.

The entrance to the lodge is in the middle of a pond and is always below water. But the den itself is dry and located above water. Beavers that live in fast-moving streams or rivers may build their lodge at the water's edge or burrow into the bank to avoid fighting the strong currents. Most beaver lodges are found in remote areas with a water source.

Beavers need water for their own habitat, and their habit of dam building creates a new habitat which benefits many other species. Once a dam is created, an open pond is formed behind the dam. Any trees standing in the wooded valley the beavers occupy may have their roots flooded, eventually killing those trees. Within a few years the dead tree "snags" provide homes for many cavity-nesting mammals and birds (like the pileated woodpecker, below).

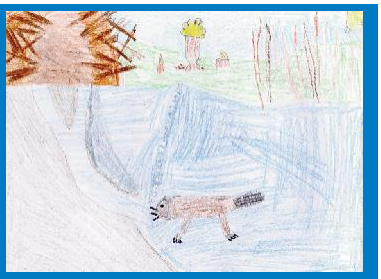
The pond the beavers create can be as large as several acres, effectively beginning a chain of events in a thriving, constantly changing wildlife habitat, even long after the beaver has left the area. A variety of birds, reptiles, amphibians, insects, mammals and fish will create diversity as they immigrate to the new pond (great blue heron and painted turtles, below).

In time the beavers will use up their own food supply of timber and move on, but the pond will continue to evolve. Like all ponds, silt begins to accumulate, along with leaves and other plant material, slowly filling in the pond. Once the pond becomes shallow enough, grass will start to grow in the rich, fertile soil.

The pond will succeed into a meadow. Then the meadow will be replaced by small bushes, shrubs and eventually trees. At each stage of **succession** different animals will take up residence to take advantage of the plant life for food and nesting purposes. Insects and small rodents that thrived in the meadow give way to deer, bear, grouse, turkeys and woodland songbirds when the meadow eventually becomes a woodland. Over time **this ever-changing habitat will become a wooded valley again for another beaver to find and change.**

Because beavers play such an important role in creating new habitats, they are considered a **Keystone Species.** They can also be considered a pest especially when their dams cause pastures or roads to flood, or they cut down trees we find important or create unwanted channels leading to erosion problems. But **beavers are important species in their ecosystem, creating important wetland habitat for a variety of other species** that are completely dependent on an aquatic way of life. Like all keystone species, if that one species is removed, the habitat it supports is often drastically changed, sometimes even destroyed. **This makes keystone species vital to certain ecosystems.**

A Simple Review of Beavers



The beaver is our largest rodent—almost four feet long—including their flat, leathery and wide tail. Most weigh between 45 and 60 pounds. That's big! Beavers are called aquatic mammals because they spend so much time in the water. That special tail of theirs helps them swim; they move it back and forth like a boat rudder. They can also use their tail for balance while eating upright or as an alarm. If danger is near, beavers will loudly slap the water with their tail.

Beavers have feet that help them swim. Their big hind feet have five webbed toes that propel them through the water. Their much smaller front feet are used to hold sticks for gnawing and to help them carry stones and sticks to construct their dams. Their fur is long and glossy. They groom their fur with special claws on the hind feet. And they even have **special glands that produce oils to help make their fur waterproof.** Did you know that top hats used to be made from beaver fur? When men wanted to dress in formal black-tie, they often wore a beaver fur top hat.

Like all rodents, **beavers have large, sharp, front teeth called incisors**. Beaver incisors are an orangy-yellow color. The big incisors can easily gnaw on wood for food and chopping up twigs for their dams. Beavers have ears and nostrils that are so small they can be closed when the beaver swims underwater.

Tree bark stripped off tree trunks near the ground might mean a beaver is near. They love twigs from aspens, poplars and alders. But **beavers will eat all kinds of plants**, especially water grasses and the roots of water lilies. In the fall, beavers begin to store branches and logs in the water near their lodge or bank burrow so they have food throughout the winter.

When beavers build their large lodges, they dam up small streams and create ponds. All around the pond are canals and runways for carrying food and building materials back to their lodge. The stick and mud dam can be as wide as 15 feet and as high as five feet tall. The dams do more than help beavers. Many other wildlife species like otter, mink, muskrats, deer, bear, waterfowl, waterbirds and grouse benefit from the flooded habitats. But sometimes people think the dams are a problem because of the flooding they may cause.

Beavers live in colonies made up of a family of five to a dozen beavers. Many biologists believe that beavers mate for life. After breeding in the winter, four or five kits are born in May or June. The **kits are born fully furred with their eyes open and their front teeth showing.** Though they only weigh about one pound at birth, beaver kits grow quickly. They will stay in their family colony until about two years old, when they leave home to start their own colony.

Most rodents don't live very long, but beavers do. **Some beavers may live to be as old as ten to twenty years old!**