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LIVING

Wetland mammals

Mammals are not an easy group of animals to observe. Many are nocturnal and most are quite secretive in their comings and goings. November, however, does offer us an opportunity to see two very interesting species as they prepare themselves for winter. With



OUR CHANGING SEASONS

Drew Monkman

binoculars and a little patience, a late-fall visit to a local wetland can often provide a front-row seat to the secret lives of muskrats and beavers. In the process, you're very likely to see other types of wildlife as well, because wetlands — and beaver ponds in particular — are rich in plant and animal life in general.

Judging simply by appearance, it's easy to think that muskrats are related to beavers. However, they are really big "aquatic field mice" that have adapted through evolution to life in and around the water. The close relationship to mice is apparent in the scaly, rat-like tail which is compressed from the sides to serve as a rudder. In mid to late fall, and often during the daylight hours, muskrats spend considerable time building homes for winter shelter. As Tom Anderson, an American nature writer notes, "While everything around it is falling, the muskrat is busy raising a new house."

Looking much like beaver lodges, muskrat lodges are made of mud, cattails and other small aquatic plants. After having built up the mound to about one and a half metres in height, the muskrat literally eats and digs out an entrance from under water. It then excavates chambers in the mound for sleeping and resting. All of the vegetation around the lodge is usually cleared away, which makes it quite conspicuous. Muskrats will also dig out homes in the bank of a stream or lake. They consist of an underwater entrance and an enlarged chamber above water level.

Feeding platforms are also built in the fall. They serve as a place where the animal can climb out of the water to eat its food. There is usually an obvious hollow on top of the structure where the muskrat sits. Although most of the muskrat's diet consists of water plants, it's not uncommon to find large piles of clam shells on these platforms. Feeding platforms are made from the same materials as lodges, but are much smaller.

Muskrats tend to live in large family groups. Because they are so prolific, however, living conditions often become too crowded. When this happens, the young are often forced to find their own unoccupied territory. This dispersal is most common in autumn and even has its own name — "the fall shuffle." Some are forced to travel considerable distances to find suitable habitat and often fall prey to coyotes and mink. Many are also killed by cars.

Muskrats are sometimes forced to relocate, even in mid-winter. This can happen when they have set up home in a shallow wetland that freezes to the bottom. Because of the ice, the animals are no longer able to swim out to find food, and end up wandering on top of the snow in search of a deeper pond.

Because muskrats eat the stems and root-stalks of large aquatic plants like cattails, they help to maintain channels and openings in wetlands that may otherwise fill in completely. These open areas are important habitat for a host of other animals such as ducks, herons, turtles and frogs.

Like overzealous lumberjacks, they often cut down large numbers of trees at this time of year to gather food branches for their winter caches. Willow, alder, aspen and poplar are favourite species. Both the bark and the buds are eaten. One possible reason for the popularity of these trees is the softness of the wood. A beaver can cut through willow, for example, about three times faster than through a harder wood like maple. The animals can therefore save valuable energy and

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Karl Egressy, special to The Examiner

Beavers remain very active in late fall. Below, a beaver lodge surrounded by ice, with food cache beside it.

time out of the water — a dangerous place to be — by concentrating on the softer woods. They will, however, turn to trees such as birch when their preferred species are not as easily available.

The branches for the winter food cache are heaped in a big pile within three to four metres of the lodge. The pile slowly sinks to the bottom under its own weight. Eventually, only the tops of the branches can be seen sticking out of the water. The food cache provides close and easy under-the-ice access in winter. These piles are a sure sign of an active beaver colony.

Six or more beavers sometimes hole up in the same lodge for the winter, so they need fairly spacious quarters. Lodges average one to two metres in height and three to six metres in width. Inside, the temperature averages 7 C or higher, even during the coldest nights. At the top of the lodge, look for a black hole in the snow. This is a sure indication that the lodge is occupied. Like a smoke hole in a wigwam, the warm air generated by the beavers inside rises through this air vent and melts away a circle of snow.

If beavers occupy a deep water body with safe access to nearby trees, they often forgo building dams or lodges at all. It is quite common in these circumstances for beavers to simply excavate a burrow in a sandy bank with the entrance hidden below the waterline.

Beavers are the farmers of the mammal world. The agricultural engineering starts with the construction of a dam. Although it seems hard to believe, a pair of beavers can build a solid dam in three or four days. After sticking the branches diagonally into the stream bottom, the hardworking rodents fill in the structure with mud that they scoop up with their paws. The flooded area behind the dam sometimes covers an area of several hectares. Nutritious water plants grow in profusion here and provide the colony with food. In fact, during the summer, most beavers hardly ever go near trees. Instead, they stay in the pond and live almost entirely



Doug Sadler, special to The Examiner

on aquatic vegetation, especially water lilies. The entire plant is eaten. By building the dam, the beavers create suitable habitat for the water lilies. It is almost as if they had intentionally set out to construct a water lily farm.

Unfortunately, beavers don't seem to pay much attention to local bylaws. They routinely plug culverts, cut down trees in parks and backyards and even flood out the odd road. In many ways, they are just like us. Beavers have an overwhelming urge to change and control their environment.

In many cases, however, beaver dams help to maintain water levels and to improve habitat for other forms of wildlife. They also stabilize stream flow, and prevent stream bed erosion. At the Miller Creek Conservation Area on the Seventh Line of Smith-Ennismore, the presence of a beaver dam used to keep the water levels sufficiently high to allow black terns, a threatened species, to nest. It is therefore important that they be managed carefully.

Winter is not just a time for lounging

around and enjoying the succulent bark of the fall harvest, however. This is also the time of year that beavers are consumed by love. Shunning the relative comfort of the lodge, the beaver couple take to the water to consummate their relationship. Swimming side-by-side through the frigid darkness, their love embrace can last for up to four minutes. Taking time out for a little recuperation back at the lodge, they repeat these underwater love dives several times in a row.

Muskrat and beaver pelts are valued highly by the fur industry. However, despite trapping and draining of wetlands, the numbers of both species remain as high today as they have ever been.

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