

= Muskrat =

The muskrat (*Ondatra zibethicus*), the only species in genus *Ondatra* and tribe Ondatrini , is a medium @-@ sized semiaquatic rodent native to North America , and is an introduced species in parts of Europe , Asia , and South America . The muskrat is found in wetlands over a wide range of climates and habitats . It has important effects on the ecology of wetlands and is a resource of food and fur for humans .

The muskrat is the largest species in the subfamily Arvicolinae , which includes 142 other species of rodents , mostly voles and lemmings . Muskrats are referred to as " rats " in a general sense because they are medium @-@ sized rodents with an adaptable lifestyle and an omnivorous diet . They are not , however , members of the genus *Rattus* .

= = Etymology = =

The muskrat 's name probably comes from a word of Algonquian (possibly Powhatan) origin , *muscascus* (literally " it is red " , so called for its colorings) , or from the Abenaki native word *mòskwas* , as seen in the archaic English name for the animal , *musquash* . Because of the association with the " musky " odor , which the muskrat uses to mark its territory , and its flattened tail the name became altered to *musk @-@ beaver* ; later it became *muskrat* due to its resemblance to rats .

Similarly , its specific name *zibethicus* means ? musky ? , being the adjective of *zibethus* ? civet musk ; civet ? . The genus name comes from the Huron word for the animal , *ondathra* , and entered New Latin as *Ondatra* via French .

= = Description = =

An adult muskrat is about 40 ? 70 cm (16 ? 28 in) long , half of that is the tail , and weighs from 0 @.@ 6 ? 2 kg (1 @.@ 3 ? 4 @.@ 4 lb) . That is about four times the weight of the brown rat (*Rattus norvegicus*) , though an adult muskrat is only slightly longer , and are almost certainly the largest and heaviest members of the diverse family Cricetidae , which includes all voles , lemmings and most mice native to the Americas . Muskrats are much smaller than beavers (*Castor canadensis*) , with whom they often share their habitat .

Muskrats are covered with short , thick fur which is medium to dark brown or black in color , with the belly a bit lighter (countershaded) ; as the age increases , it turns a partly gray in color . The fur has two layers , which helps protect them from the cold water . They have long tails covered with scales rather than hair and , to aid them in swimming , are slightly flattened vertically , which is a shape that is unique to them . When they walk on land , their tails drag on the ground , which makes their tracks easy to recognize .

Muskrats spend much of their time in the water and are well suited for their semiaquatic life . They can swim under water for 12 to 17 minutes . Their bodies , like those of seals and whales , are less sensitive to the buildup of carbon dioxide than those of most other mammals . They can close off their ears to keep the water out . Their hind feet are semiwebbed , although in swimming , their tails are their main means of propulsion .

= = Distribution and ecology = =

Muskrats are found over most of Canada and the United States and a small part of northern Mexico . They were introduced to Europe in the beginning of the 20th century and have become an invasive species in northwestern Europe . They mostly inhabit wetlands , areas in or near saline and freshwater wetlands , rivers , lakes , or ponds . They are not found in the state of Florida , where the round @-@ tailed muskrat , or Florida water rat (*Neofiber alleni*) , fills their niche .

Their populations naturally cycle ; in areas where they become abundant , they are capable of removing much of the vegetation in wetlands . They are thought to play a major role in determining

the vegetation of prairie wetlands in particular . They also selectively remove preferred plant species , thereby changing the abundance of plant species in many kinds of wetlands . Species commonly eaten include cattail and yellow water lily . Alligators are thought to be an important natural predator , and the absence of muskrats from Florida may in part be the result of alligator predation .

While much wetland habitat has been eliminated due to human activity , new muskrat habitat has been created by the construction of canals or irrigation channels , and the muskrat remains common and widespread . They are able to live alongside streams which contain the sulfurous water that drains away from coal mines . Fish and frogs perish in such streams , yet muskrats may thrive and occupy the wetlands . Muskrats also benefit from human persecution of some of their predators .

The muskrat is classed as a " prohibited new organism " under New Zealand 's Hazardous Substances and New Organisms Act 1996 , preventing it from being imported into the country .

Trematode *Metorchis conjunctus* can also infect muskrats .

= = Behavior = =

Muskrats normally live in groups consisting of a male and female pair and their young . During the spring , they often fight with other muskrats over territory and potential mates . Many are injured or killed in these fights . Muskrat families build nests to protect themselves and their young from cold and predators . In streams , ponds or lakes , muskrats burrow into the bank with an underwater entrance . These entrances are 6 ? 8 in (15 ? 20 cm) wide . In marshes , push @-@ ups are constructed from vegetation and mud . These push @-@ ups are up to 3 ft (91 cm) in height . In snowy areas , they keep the openings to their push @-@ ups closed by plugging them with vegetation , which they replace every day . Some muskrat push @-@ ups are swept away in spring floods and have to be replaced each year . Muskrats also build feeding platforms in wetlands . They help maintain open areas in marshes , which helps to provide habitat for aquatic birds .

Muskrats are most active at night or near dawn and dusk . They feed on cattails and other aquatic vegetation . They do not store food for the winter , but sometimes eat the insides of their push @-@ ups . While they may appear to steal food beavers have stored , more seemingly cooperative partnerships with beavers exist , as featured in the BBC David Attenborough wildlife documentary *The Life of Mammals* . Plant materials make up about 95 % of their diets , but they also eat small animals , such as freshwater mussels , frogs , crayfish , fish , and small turtles . Muskrats follow trails they make in swamps and ponds . When the water freezes , they continue to follow their trails under the ice .

Muskrats provide an important food resource for many other animals , including mink , foxes , coyotes , wolves , lynx , bears , eagles , snakes , alligators , and large owls and hawks . Otters , snapping turtles , and large fish such as pike prey on baby muskrats . Caribou and elk sometimes feed on the vegetation which makes up muskrat push @-@ ups during the winter when other food is scarce for them . In their introduced range in the former Soviet Union , the muskrat 's greatest predator is the golden jackal . They can be completely extirpated in shallow water bodies , and during the winter of 1948 ? 49 in the Amu Darya (river in central Asia) , muskrats constituted 12 @. @ 3 % of jackal faeces contents , and 71 % of muskrat houses were destroyed by jackals , 16 % of which froze and became unsuitable for muskrat occupation . Jackals also harm the muskrat industry by eating muskrats caught in traps or taking skins left out to dry .

Muskrats , like most rodents , are prolific breeders . Females can have two or three litters a year of six to eight young each . The babies are born small and hairless , and weigh only about 22 g (0 @. @ 78 oz) . In southern environments , young muskrats mature in six months , while in colder northern environments , it takes about a year . Muskrat populations appear to go through a regular pattern of rise and dramatic decline spread over a six- to 10 @-@ year period . Some other rodents , including famously the muskrat 's close relatives the lemmings , go through the same type of population changes .

= = In human history = =

Native Americans have long considered the muskrat to be a very important animal . Some predict winter snowfall levels by observing the size and timing of muskrat lodge construction .

In several Native American creation myths , it is the muskrat that dives to the bottom of the primordial sea to bring up the mud from which the earth is created , after other animals have failed in the task .

Musk rats have sometimes been a food resource for Americans . In the southeastern portion of Michigan , a longstanding dispensation allows Catholics to consume muskrat on Ash Wednesday and on Lenten Fridays (when the eating of meat , except for fish , is prohibited) ; this tradition dates back to at least the early 19th century .

Muskrat fur is warm , becoming prime at the beginning of December in northern North America . In the early 20th century , the trapping of the animal for its fur became an important industry there . During that era , the fur was specially trimmed and dyed to be sold widely in the US as " Hudson seal " fur . Muskrats were introduced at that time to Europe as a fur resource , and spread throughout northern Europe and Asia .

In some European countries , such as Belgium , France , and the Netherlands , the muskrat is considered an invasive pest , as its burrowing damages the dikes and levees on which these low @-@ lying countries depend for protection from flooding . In those countries it is trapped , poisoned , and hunted to attempt to keep the population down . Muskrats also eat corn and other farm and garden crops growing near water bodies .

Royal Canadian Mounted Police winter hats are made from muskrat fur .