

Canadian Natural History.

The Musk-Rat or Muskquash.

[*Fiber Zibethivus.*]

The musk-rat, called also sometimes by its Indian name the Ondatra, is a native of North America, and is found between 30° and 69° north latitude. It belongs to the order *Rodentia*, or gnawers, so called from their habit of gnawing their food in a particular manner with their front teeth. The animals of this order feed for the most part on hard substances, or on food enclosed within a hard covering, such as nuts, grain, roots, &c.; and for this mode of obtaining a livelihood they are admirably fitted by the structure of their teeth. In the front of each jaw are a pair of long, slightly curved, chisel-like teeth, as every one has observed in rats and rabbits. The constant wearing away which these teeth undergo would in time grind them down, and reduce them to useless stumps, were it not for a beautiful arrangement by which it is provided that as fast as their upper surface is removed by friction the loss is repaired by the outward growth of the tooth. If by any accident the opposite tooth is broken, that which remains entire continues to grow, and not being worn away, sometimes attains exceedingly awkward dimensions. Cases, indeed, have been known where the tooth curved round until it penetrated the skull of its unfortunate owner, who thus perished miserably for want of a dentist.

The musk-rat forms a kind of connecting link between the voles, (*Arvicolæ*) of which the water rat and field-mouse are examples, and the Beavers (*Cas'orida*). Its colour is dark brown on the back, reddish on the neck, ribs, and legs, and ashy grey underneath. It measures from eighteen to twenty inches, including the tail, which is about seven or eight inches long. The incisor teeth are bright yellow. In shape it much resembles a rat, but is more robust and thick-set; and its muzzle is shorter. Its ears are nearly concealed in the fur. The toes of its fore feet are distinct; but those of its hind feet are fringed with stiff bristles, and the two middle ones are united by a short web. The claws are white. Its tail is long, pointed, and vertically compressed, (that is, flattened on the sides) and is covered with rounded scales interspersed with a few white hairs. It presents a sort of transition from the broad flat tail of the beaver, to the cylindrical, taper tail of the rat. The name musk-rat is given to this animal from the strong odor of musk which it emits, particularly in summer, and which the fur sometimes very persistently retains. It inhabits chiefly the banks of streams; and the whole colouring of its coat is often so wonderfully like the hue of the muddy banks where it resides, that a practised naturalist has frequently mistaken the creatures for mere lumps of mud, till they began to move, and so dispelled the illusion. Its food is mostly of a vegetable nature, though it seems also fond of fresh water musels and other mollusks. It is said sometimes to make depredations in gardens, gnawing and carrying away turnips, parsnips, carrots, and even maize, procuring the latter by cutting down the stalks near the

ground, somewhat after the manner that, for a different purpose, the beaver fells a tree. The motions of this animal in the water, its favourite element, are extremely quick; but on land it is slow and awkward, and may be easily caught. Though armed with formidable teeth it appears very inoffensive, and makes little or no resistance when captured—the writer has more than once taken them about his own dwelling, which was situated some forty rods from a stream, and found no difficulty in securing the meek and harmless intruder. The most common habitation of the musk-rat is made by burrowing in the banks of rivers; but occasionally it constructs a different kind of habitation, according to the locality and the soil. In the stiff clay banks of rivers it digs a rather complicated series of tunnels, some of them extending to a distance of fifteen or twenty yards, and sloping upwards. There are generally three or four entrances, all of which open under water and unite at their other extremity, in a single chamber where the occupant of the dwelling makes its bed. The couch of this luxurious animal is composed of sedges,



water-lily leaves, and similar plants, and is so large as to fill a bushel basket. On marshy ground, the musk-rat builds little houses of mud and reeds. These hut-like dwellings rise about three feet above the water, and look something like small hay-cocks.

As the fur of the musk-rat is rather valuable, and its flesh is by some considered nearly as good as that of the wild duck, it is exposed to no small persecution at the hands of man. If these creatures have taken up their abode in burrows, the hunters capture them by stopping up all the holes which they can reach, and intercepting the animals as they try to escape. But if the ground is marshy, and they live in houses, or "lodges," a different plan is adopted. Being armed with a four-pronged barbed spear, the hunter creeps quietly towards one of the houses, and with the full strength of his arm drives the barbed prongs completely through the frail walls, transfixing at the same time one or more of the luckless inhabitants. A companion, who is furnished with an axe, immediately hauls down the remainder of the walls, and secures the unfortunate victims, who are held down by the merciless steel.

In a work by Audubon and Bachman, the habits of these creatures are thus picturesquely described:—

"Musk-rats are very lively, playful animals, when in their proper element, the water; and many of them may be occasionally seen disporting themselves on a calm night in some mill-pond or deep seques-

tered pool, crossing and recrossing in every direction, leaving long ripples in the water behind them, while others stand for a few moments on little hurdles or tufts of grass, or on stones or logs, on which they can get a footing above the water, or on the banks of the pond, and then plunge one after the other into the water. At times one is seen lying perfectly still on the surface of the pond or stream, with its body widely spread out, and as flat as can be. Suddenly it gives the water a smart slap with its tail, somewhat in the manner of the beaver, and disappears beneath the surface instantaneously, going down head foremost, and reminding one of the quickness and ease with which some species of ducks and grebes dive when shot at.

"At the distance of twenty yards the Musk-rat comes to the surface again, and perhaps joins its companions in their sports; at the same time others are feeding on the grassy banks, dragging off the roots of various kinds of plants, or digging underneath the edge of the bank. These animals seem to form a little community of social, playful creatures, who only require to be unmolested in order to be happy.

"Should you fire off a fowling-piece while the Musk-rats are thus occupied, a terrible fright and dispersion ensues; dozens dive at the flash of the gun, or disappear in their holes; and although in the day-time, when they see imperfectly, one may be shot while swimming, it is exceedingly difficult to kill one at night. In order to ensure success, the gunner must be concealed, so that the animal cannot see the flash, even when he fires with a percussion lock."

Traps are also largely employed for the destruction of these gentle but unfortunate animals. Their fur, like that of the beaver, is peculiarly adapted for *felting*; and besides the quantity used in this coun-

try, from four to five thousand skins are annually exported to England, for the manufacture of hats.

RARE AVES.—The movements of the feathered race to students of nature form certain prognostics of the coming weather. On the Continent, this season, the migration of birds southwards has led to anticipations being formed there of the ensuing winter being a severe one. From the appearance in this country of rare visitants, we are led to infer that a rigorous winter will also be experienced here. In the shop of Mr. Small, taxidermist, George Street, we on Thursday were shown a specimen of the Rough-legged Buzzard (*Buteo lagopus*), which was shot on Friday last at Billholm, in Eskdale. The bird was in fine plumage, and the feathering of the tarsi, one of the marks by which it is distinguished from the Common Buzzard, was very complete. Mr. Small has also had committed to him for preservation, a specimen of the Gadwall (*Anas strepera*), one of the duck tribe, which breeds in Holland, and is rarely found in this country. It was shot at Newburgh, in Fife.—*From British American.*

Some interesting experiments in raising fish, have been made by Mr. Samuel Willmot of Newcastle, C. W. These promise to be productive of important results, and to make up almost indefinitely the losses which our lakes and streams have suffered from wholesale methods of destroying fish. We hope to give some interesting particulars related to Mr. Willmot's researches in a future number.