

Urban Wildlife Damage Control

The muskrat (*Ondatra zibethicus*) is a stout, chunky animal with short legs. An adult is 22 to 25 inches long and weighs an average of 2.5 pounds. The 11-inch black tail is scaly, practically hairless and laterally flattened. It is used as a prop when the animal is on its hind feet and as a swimming aid. The large, broad, hind feet are partially webbed and also well-adapted for this purpose.

Biology and Habits

Muskrats have dense, silky, grayish underfur that is heavily overlaid on the back and sides with glossy, dark-brown guard hairs. In Kansas, muskrats are classified as furbearers, and their harvest is regulated. Muskrats are historically an important item in the fur market. Their population in Kansas is considered spotty. Because of a decrease in surface water and an increase in stream pollution muskrats have declined. But, in some areas of good habitat, they are abundant. Sometimes muskrats cause problems in sewage treatment ponds and drainage canals.

Muskrats are seldom far from water. They prefer the still or slow-moving water of marshes, ponds and streams. Muskrats are active year-round and, while usually nocturnal, may move during daylight hours.

Muskrats are primarily vegetarians, feeding mostly on the roots and stems of aquatic plants and, if they occur near water, legumes, grasses, grains, garden crops and apples. They occasionally eat animal food, particularly crayfish and freshwater mussels.

Muskrats live in houses constructed of vegetation or in burrows dug into banks. Both houses and burrows have underwater entrances and above-water living chambers (Figure 1).

Muskrats breed from early spring until fall, giving birth to several litters of from four to seven young. The

young are born naked and helpless in protected nest chambers in houses or bank burrows. Young muskrats grow rapidly and are independent at an early age.

Urban Problems

Although muskrat feeding habits may damage agricultural or ornamental crops growing near water, the principal concern is potential damage to earthen water-retaining structures. Extensive tunneling into earthen dams may cause water leaks or the loss of stored water. Burrowing damage occurs most often in older ponds where the dike is thinner from erosion or is poorly designed.

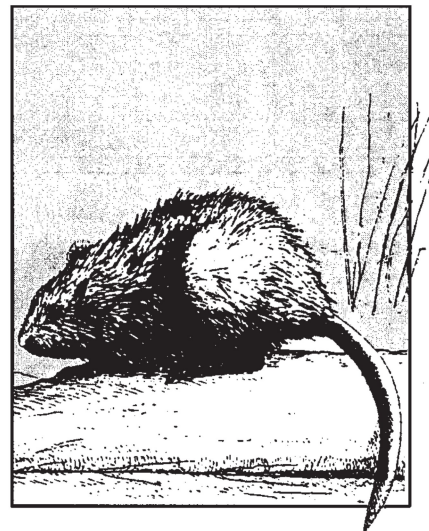
Trees growing on the dike sometimes create problems attributed to muskrats. Tree roots die, and water follows the roots until the dike gives way.

Since it is easier to deal with a population of muskrats before they have become established, watch for signs of their presence and adopt remedial measures as soon as possible.

Landowners should watch dams closely for burrows and repair weak spots at once. It is relatively easy to fix a weak spot, but it is a big job to repair the dam after it is broken.

Law and Regulations

Muskrats are classified as furbearers in Kansas. Licensed fur harvesters may take muskrats during the regular



fur-harvesting season. Landowners may take problem muskrats at any time of the year if they follow the provisions in KSA 32-1002 which states: "Kansas law does not prevent owners or legal occupants of land from killing any animals when found in or around buildings on their premises, or when found destroying property, subject to the following: (A) the provisions of all federal laws and regulations governing protected species and provisions of the Kansas nongame and endangered species conservation act are met; (B) it is unlawful to use or possess with intent to use, any animals so killed unless authorized by rules and regulations of the secretary; and (C) such owners or legal occupants shall make reasonable efforts to alleviate their problems with any such animals before killing them."

Problem Management

Trapping

Muskrats may be trapped or shot when they damage property. Muskrats are easily trapped. They may be captured using a No. 1 or 1½ foot-hold

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| <input type="checkbox"/> Bats, L-855 | <input type="checkbox"/> Skunks, L-862 |
| <input type="checkbox"/> Birds, L-856 | <input type="checkbox"/> Tree Squirrels, L-863 |
| <input type="checkbox"/> Blackbirds in Roosts, L-857 | <input type="checkbox"/> Snakes, L-864 |
| <input type="checkbox"/> Cottontail Rabbits, L-858 | <input type="checkbox"/> Woodchucks, L-865 |
| <input checked="" type="checkbox"/> Muskrats, L-859 | <input type="checkbox"/> Woodpeckers, L-866 |
| <input type="checkbox"/> Opossums, L-860 | <input type="checkbox"/> Woodrats, L-867 |
| <input type="checkbox"/> Raccoons, L-861 | |

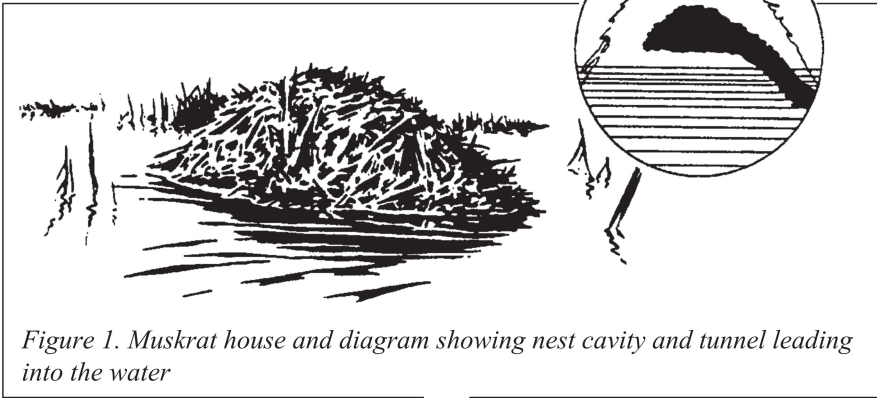


Figure 1. Muskrat house and diagram showing nest cavity and tunnel leading into the water

stop-loss trap or a Conibear model No. 110 body-gripping trap. Another is called a colony trap. In some situations a cage-type live trap can be used to catch problem muskrats.

Selecting trap sites is important and should be done carefully. Muskrat trails are particularly productive. A trap may be anchored in the mud or sand and wired to a stake.

In underwater trails or at underwater den openings, colony traps are effective. Foot-hold traps set on floats, either natural objects or artificial rafts, can be successful. Foot-hold trap sets in runways, den openings, slides or near natural resting places are also productive. Good baits include carrots, potatoes, sweet potatoes and apples.

Where possible, the stake to which the trap chain is attached should be placed in water at least 2 feet deep so the captured animal will drown. This is not necessary when using the Conibear No. 110 body-gripping trap, because it humanely kills the animal outright.

If there are muskrats in your pond and they are not causing serious trouble, consider them a cash crop.

They are easy to trap and skin. Trap them heavily each open furbearer season; in good habitat muskrats produce a lot of young and come back rapidly. A local trapper may be interested in taking the fur for profit if you do not want to trap.

Before starting any muskrat control effort check with the Kansas Department of Wildlife and Parks and request a copy of the dates and regulations governing muskrat removal. Traps must be tagged with the trapper's name and address and checked once a day.

It is a good idea to check traps more often than this, because more muskrats can be caught when traps are checked and reset. Muskrats are active throughout the day and at night. Some muskrat trappers check their traps three or four times in 24 hours.

Protecting Pond Dams

The area of a pond that is most sensitive to muskrat damage is the dam or dike itself. A trench may be cut with a narrow trenching machine along the centerline of the earth fill. The trench should extend the length of the fill, be cut about 3 feet below water level, and

filled to 1 foot above water level with concrete. This concrete core will effectively prevent muskrats from digging through the dam.

Riprapping with coarse stone or gravel may prevent muskrats from digging into the banks or dam slopes of ponds. Apply the material in a layer about 6 inches thick, extending from 1 foot above to 3 feet below water level. This also protects the pond banks and earthen fill from wave action.

Galvanized 1- or 2-inch mesh poultry wire may be pegged to the inside surfaces of the pond. Lay the wire flat against the banks and fasten it down every few feet to keep it in place. Wire should extend from a foot above to at least three feet below water level.

Since the wire will eventually corrode, this method is not recommended for swimming ponds.

Pesticides

Pesticides are not recommended nor are any toxicants registered for use in controlling muskrats in Kansas.

For more information, contact Wildlife Damage Control, 131 Call Hall, Manhattan, Kansas, 66506-1600, 785-532-5734.

Figure of muskrat home reprinted from the The Wild Mammals of Missouri by Charles W. and Elizabeth R. Schwartz, by permission of the University of Missouri Press. Copyright 1981 by the Curators of the University of Missouri.

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