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Controlling Vertebrate Damage: Muskrats
Michigan State University
Cooperative Extension Service
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CONTROLLING VERTEBRATE DAMAGE

Extension Bulletin E-872

April 1977

muskrats

(*Ondrata zibethica*)

See also the first in this series: Extension Bulletin E-860 on "General Considerations."

BY GLENN DUDDERAR, Extension Wildlife Specialist

MUSKRATS are an important part of wetland communities in Michigan. They consume large amounts of aquatic vegetation and help keep marshes open for the benefit of fish, waterfowl and shorebirds. Their lodges, made of cut vegetation, often serve as nesting platforms for waterfowl. They also make dens by burrowing into banks on the water's edge. On occasion, however, muskrats will cause damage by burrowing into pond dams or levees, causing the structure to leak, or will burrow under shorelines, making them rough and ragged. When this kind of damage occurs, control is often desired.

PREVENTION

If muskrat damage is expected, during construction extend the width of the structure to accommodate muskrat burrowing. The larger the structure, the less likely muskrat damage will be.

REPULSION

Burrowing into banks of dams or levees or under a shoreline can often be prevented by rip-rapping above and below the edge of the water with at least 2 layers of grapefruit-sized rocks. This method, however, is usually practical only where the shoreline is fairly steep; it is impractical where shorelines are gradual.

The rock rip-rap should extend at least 4 ft. below the average water level and at least 2 ft. above it, and the rocks should be placed close enough to prevent the muskrats from burrowing between them. Rip-rapping is especially desirable in locations where population reduction is not feasible or where the damage area is so close to other large muskrat populations that removed rats will quickly be replaced by rats from the adjacent areas.

POPULATION REDUCTION

Habitat Alteration

Muskrats thrive where standing water produces lush aquatic vegetation. If the standing water can be eliminated, or drained as low as possible and the vegetation eliminated, the number of muskrats will decline. This procedure is especially effective during the winter. **A permit from the DNR may be necessary.**

Trapping

Because muskrat fur has commercial market value, landowners often invite trappers to remove the muskrats. Trappers may be commercial trappers or a schoolboy who catches muskrats to earn some spending money. Where muskrat populations are high, landowners often receive a fee for permitting trappers to take muskrats.

Muskrats may be trapped only during the legal season by persons with a trapping license. A permit from the Law Enforcement Division, Michigan DNR, is required otherwise, or if the trap is placed within 6 ft. of a muskrat burrow or lodge. Use a leg-holding trap, size No. 1, or the body-gripping trap, size No. 110, referred to as the conibear. Both traps should be set along muskrats' slides, runways, in front of burrows or lodge entrances or in areas along the shoreline where muskrats are digging for roots.

The leg-holding traps should be used where the adjacent water is deep enough to drown the muskrat. The trap should be staked down as far out into the water as possible. When the muskrat drags the trap into the water, the weight of the trap will pull it beneath the water and drown the muskrat. This technique prevents the animal from escaping and prevents needless suffering.

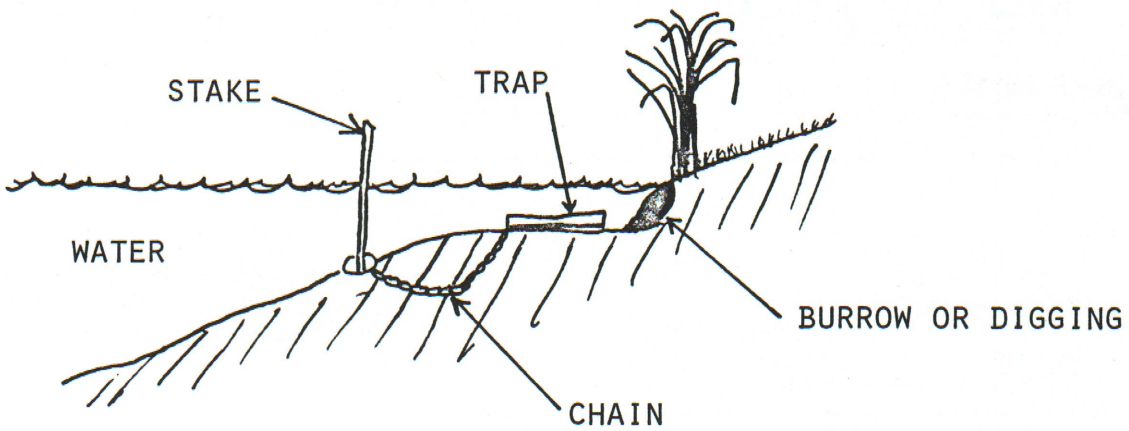
Because the conibear is a body-gripping trap, the trapped muskrats are usually killed when trapped. Thus, it can be used on land or in water. It can be set in burrow entrances so that the muskrat has to pass through the trap to get out of the burrow, or set at the base of slides and along travel ways.

Poisoning

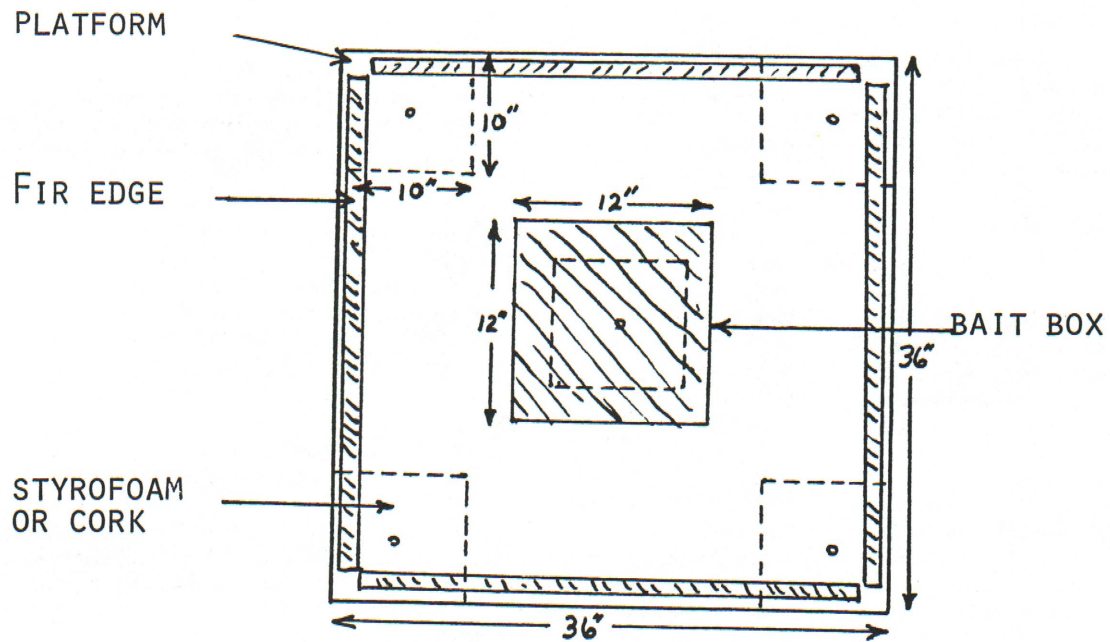
(A permit is required from the Law Enforcement Division, Michigan DNR.)

Zinc phosphide is toxic to all warm-blooded animals; it must be used with care. It must be used for muskrat control only under government supervision. Apply 54.1 grams of 63% zinc phosphide to 10 lb. of cubed apples, carrots, or sweet potatoes. Stir until all pieces are evenly coated. Avoid breathing dust. Place baits into burrows out of reach of domestic animals and other wildlife. If burrow placement is impossible, the use of a floating bait box will be necessary. Prebait the bait boxes until muskrats begin consuming untreated baits.

The floating bait box should consist of a wooden box 8 in. high and 12 in. square, with a 5-in. square hole cut in one end. Fasten this box to a 3-ft. square piece of board, cork or synthetic material with sufficient buoyancy to keep the box afloat without tipping when a muskrat climbs onto it. Place the bait in the floating bait station and anchor the station within 2 to 10 ft. of the bank adjacent to muskrat houses, burrow entrances or other areas of recent muskrat activity. Fresh bait must be placed in the bait station as soon as the old bait is eaten or spoils. A continuous supply of bait is essential. After feeding has stopped for several days, move the bait station to a new location.



EXAMPLE OF A TRAP SET FOR MUSKRATS



EXAMPLE OF FLOATING BAIT BOX FOR MUSKRATS
(TOPVIEW)