

trapping regulations do not apply. You may also use repeater traps in the burrows to catch several muskrats at one setting.

Muskrats and woodchucks can be caught in the appropriate sized wire box trap. Bait these traps with slices of apple, white or sweet potato, or banana, pieces of carrot or any similar item that the woodchuck and muskrats readily accept. Animals caught in the wire box traps can then be humanely destroyed or transported to another location and released providing you have the permission of the landowner upon whose land you release the animal. A trapping license or a damage control permit is also needed.

Burrow Fumigation

Muskrats and woodchucks can be asphyxiated in their burrows by fumigation with concentrated smoke or toxic gas. A damage control permit is required. Additional information and certain supplies for damage control can be obtained from the United States Department of Agriculture Animal Damage Control Office. Check with your MSU Extension County Office or the District DNR Office for the address and phone number of the state ADC office. Whenever using fumigation, apply the material as directed by the label then seal the burrow entrance with a piece of inverted sod or a large wad of damp cloth or newspaper. Wait five minutes to see if a plume of smoke is rising from a second entrance. If the plume of smoke is seen, treat the second entrance in the same manner. After three days, check to see if the burrows have been reopened. If they have been reopened, re-treat in the same manner during night hours.

Moles

Mole burrows can destroy patches of sod on dams or pond banks, which causes erosion. Mole damage can be controlled by direct killing, trapping, or burrow fumigation. In all cases, only treat active tunnels. To see if a tunnel is being actively used, gently flatten a short section of the ridge above the tunnel. If in use,

the ridge will be raised again within 24 to 48 hours. Applying any mole damage control method to inactive burrow systems is futile. For further details contact your local MSU Extension county office.

Birds

Several kinds of fish-eating birds consume fish from fish ponds, especially kingfishers, herons, mergansers, and domesticated ducks. Fish-eating birds may also carry parasites that infect fish. All of these birds can be scared away by noise making devices, such as gas powered automatic explosion cannons and bird scaring shotgun shells which fire an explosive charge into the air that detonates 50 to 100 yards away. Use exploders and scare shells in combination. The locations, firing intervals, and firing times must be varied, at least every third day, or the birds soon become accustomed to these frightening techniques.

Scarecrows, artificial snakes, hawk or owl decoys, and special bird frightening balloons can also be used to scare birds away. These devices must be positioned imaginatively and must be moved frequently, at least every other day, or they soon become ineffective. They are most effective if used in combination with scare shells and automatic explosion cannons.

Discourage herons by grading pond edges to form rather steep underwater side slopes. Three feet of horizontal distance per foot of slope is the maximum slope recommended for safety (see Chapter 3—Pond Construction). If necessary, suspend chicken wire horizontally at or near the water surface along the shallow parts of the pond edge.

Discourage kingfishers by removing all perches, such as posts and dead tree limbs, close to the pond. If muscovy ducks are kept in the pond, confine them to a small part of it. Kingfishers, herons, mergansers and other migratory birds are protected by federal law. Consult the U.S. Fish and Wildlife Service or U.S. Department of Agriculture Animal Damage Control about regulations.

Swimmer's Itch

Swimmer's itch is caused by a minute free-swimming parasite that burrows into and irritates the skin. This parasite is carried by waterbirds and develops in certain kinds of snails before it attacks humans.

Ridding a pond of swimmer's itch means controlling the water birds and snails. Do not feed ducks, geese and other water birds that can carry the parasite. Remove plants and pond bottom debris to help further reduce water bird numbers and to help control snails. Copper sulfate has also been used to poison snails under an extra-label exemption. For more information contact the Michigan Inland Lakes Management Unit of the Land and Water Management Division of the DNR (Box 30028, Mason Building, Lansing, MI 48909, 517-373-8000). Do not use copper sulfate treatment in ponds containing trout; trout are extremely sensitive to copper.

Turtles and Snakes

Turtles, especially snapping turtles, and snakes, especially northern water snakes, eat fish. Turtles also eat fish eggs, fish on stringers, and bait from hooks. In recreational fish ponds, turtles and snakes rarely eat enough fish to have an effect on the fish population. Turtles and snakes do not feed daily as do mammals and birds, and then they feed primarily on minnows, other small fish, and the smaller game fish. Because only small game fish are taken and then taken infrequently, the effect of this predation rarely reduces the numbers of large catchable game fish.

Some pond owners want to remove turtles and snakes simply because they are afraid of them or don't like them. Snake and turtle populations can be reduced by mowing pond bank vegetation and removing logs, tree roots, branches, and large stones from the shoreline. Reducing this habitat reduces the opportunity for these animals to survive, but mowing eliminates the advantages of having a vegetational buffer strip to filter nutrients and silt out of water that runs off into the pond. Persistent killing can also