CONTROLLING VERTEBRATE DAMAGE

Extension Bulletin E-865 April 1977

wild mice

(Microtus, Peromyscus and Clethrionomys species)

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

BY GLENN DUDDERAR, Extension Wildlife Specialist

THERE ARE MANY SPECIES of wild mice in Michigan, generally called field mice. They often damage lawns, shrubbery, gardens, field crops, forest trees and fruit trees. Signs of their presence include small burrow openings in the ground approximately 1 inch in diameter, runways in grass and gnaw marks on the stems of trees and shrubs, sometimes to the height of snow accumulation. Occasionally, they invade dwellings.

In general wild mice can be distinguished from house mice by color and tail characteristics. *Peromyscus* species have white or light-colored bellies in contrast with the back color. Their tails are dark above and light below. *Microtus* species have short, hairy tails. *Clethrionomys* species also have short hairy tails, but the back is red and the sides gray.

AROUND THE HOME

EXCLUSION

During the winter, field mice gnaw the inner bark of ornamental trees and shrubs, often killing them. This damage is most easily prevented by wrapping the base of these plants with light-gauge sheet metal. Extend the wrapping from the ground to at least the height of the expected snow accumulation.

REPULSION

The following formulations of thiram may be used to repel wild mice from plants. However, thiram must not be applied to any plant parts that are to be consumed by humans or domestic animals. Use when foliage is dry. Apply to fruit trees only during dormant season.

Formulation

—7-10%
—20 % (dilute 1 to 1 with water)
—42% (dilute 1 qt. with 1 qr. of sticker in 1 gal. of water)

Use

Spray on plants before damage starts, or after leaf-fall on fruit trees. Reapplication is necessary to protect new growth. On trees and shrubs, treat root collar as well as the bole.

POPULATION REDUCTION

Trapping

Mouse-size, wooden-base snap traps can reduce a field mouse population. These traps are available at most stores. Numerous traps should be used, the number depending on the size of the problem area. Bait the traps with a mixture of peanut butter and oatmeal. Place them in areas where activity is greatest but where birds are less likely to find them, such as under low vegetation, next to foundations, etc. Check the traps daily. Move traps that do not catch at least one mouse every three days.

Poisoning

If mice around a home become extremely numerous, poison baiting may be the only practical method of reducing the population. Because of the potential hazard to children and pets, obtain professional assistance before conducting a poisoning operation. Such assistance is available from the U.S. Fish and Wildlife Service, the MSU Extension Service, and professional pest control companies.

FRUIT AND FORAGE CROPS NURSERIES AND PLANTATIONS

REPULSION

Seeds for direct seeding of forest trees can be treated with materials containing 42% thiram to divert field mice from eating the seeds.

Mice can also be repelled from fruit trees and forest tree seedlings by spraying the boles of the dormant trees in the fall with 42% thiram. Mix 1 qt. with 1 qt. of sticker in 1 gal. of water. For maximum protection, repeat every 90 days during the dormant season.

POPULATION REDUCTION

The only way to effectively reduce field mouse damage over large acreages is to reduce the population, using poison baits. Zinc phosphide is a good poison for this purpose, but must be used cautiously because it is extremely poisonous to all warm-blooded animals. Zinc phosphide and zinc phosphide-treated bait are available from U.S. Fish and Wildlife Service but the treated bait is also available commercially.

Zinc phosphide poison bait may be applied by hand or broadcast. Control of pine mice usually requires hand baiting of burrows, whereas broadcast baiting is satisfactory for control of meadow mice.

When hand baiting, place teaspoonful quantities near holes to underground burrows and in active runways that are under vegetation or artificial cover. Apply at 2-3 lb. per acre. Never apply to bare soil or exposed places. When broadcasting, spread bait evenly by hand, cyclone seeder or aircraft at the rate of 6-10 lb. per acre. Apply only where vegetation is heavy; do not apply to bare soil or growing crops. Careless application could destroy grain-eating birds.

Commercial baits are available, but homemade baits can be formulated using the following directions: Pour 1 pt. of vegetable oil into a l-lb. can of 80% zinc phosphide and stir carefully to form a paste. Pour this paste over 50 lb. of cracked corn, rolled oats or a mixture of the two and stir until all grains are coated. Place in a bag and label **"ZINC PHOSPHIDE - POISON."** Use as directed above. Wash hands, face, and all implements when finished.

If the mice reject the grain bait, a fresh fruit or vegetable bait may be necessary. Apply 1 ts. of 63% zinc phosphide to 1 qt. of diced fresh apples, carrots, or potatoes. The cubes should be about ½ in. square. Stir thoroughly until all cubes are evenly coated and apply immediately. Place several cubes in

each runway or around each burrow at the base of affected trees. Do not pile cubes. Repeat treatment if necessary. Always mix bait fresh, do not store bait. Do not breathe dust. Use metal and enamel implements. Wash hands, face and all implements when finished.

Another poison available for mouse control in orchards is diphacinone, commercially available in a pellet bait. Apply at the rate of 10 pounds per acre by broadcast baiting for meadow mice and burrow baiting for pine mice. Retreat in 20-40 days if necessary. Do not pile bait or apply to bare soil. Bait stations should be used where the exposed bait may be consumed by non-target wildlife, livestock, or pets, especially dogs.

CONTROLLING VERTEBRATE DAMAGE

woodchucks

(Marmota monax)

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

BY GLENN DUDDERAR, Extension Wildlife Specialist

WOODCHUCKS, OR GROUNDHOGS, live in brushy areas adjacent to grass or croplands. Their burrows open at the base of a tree or rock on one end, and in an open field at the other end. The openings are several inches in diameter and should not be confused with the smaller chipmunk or ground squirrel burrows. These extensive burrows often afford winter shelter for other wildlife, especially rabbits. At times, however, woodchucks consume crops and pastures, or dig holes which are hazards to livestock and cultivating equipment. To prevent extensive damage, woodchuck numbers often have to be reduced.

EXCLUSION

Woodchucks can be excluded from a home garden by encircling it with 2-in. mesh chicken wire. The bottom 12 in. of wire should be bent outward and buried several inches in the ground to prevent tunneling under the wire.

POPULATION REDUCTION

Shooting

Shooting provides sport hunting and may be effective, depending upon the area and hunter interest. Use any weapon from a .22 caliber to a .45 caliber. Shooting by the landowner is legal at any time. High-power weapons should not be used in populated areas or where prohibited by law.

Trapping

Woodchucks can be trapped with steel or live traps. Set No. 1½ or No. 2 steel traps in runways leading to the burrows. Live traps are also effective in early spring and may be desirable if steel traps pose a hazard to other animals. Live traps may be purchased from various commercial sources. (See "Sources of Supply.")

Bait live traps with corn, apples, sweet potatoes or any other vegetable matter attractive to a woodchuck.

A permit is required from the Law Enforcement Division, Michigan DNR, except during the legal trapping season. A legal trapping license is also required unless the trapper owns the land upon which he traps.

Den Gassing

The most practical method of controlling large numbers of woodchucks is to gas them in their dens. Treat only active dens. Identify active dens by observing woodchucks using them, evidence of fresh diggings, well-defined trails leading out from the burrow, freshly moved earth around the entrance hole, and the presence of fresh, balled up soil, ranging from small size pellets to apple-size clods.

Skunk, badger and fox dens can be identified by refuse lying about the entrance and the odor. Do not disturb badger dens because these predators help control woodchuck numbers.

Gas dens during the spring months when woodchucks are active and rearing young and before vegetation hides their dens. In most areas, March, April and May are the best months for attempting control. Do not gas dens in late summer, fall and winter when the burrows may also shelter other wildlife.

A permit from the Law Enforcement Division, Michigan DNR, is required for den gassing.

Gas cartridges—These devices are available commercially or from the U.S. Fish and Wildlife Service (see "Source of Supply"). Prior to the gassing, cut a piece of sod slightly larger than the den opening to use to plug the hole. If the Fish and Wildlife Service gas cartridge is used, punch a small hole in the gas cartridge with a knife or nail at a designated point and insert the fuse to half its length. Punch five pencil-sized holes in the end of the cartridge near the fuse. This will allow the gas to escape as it is released. The cartridge is now ready for use.

Light the fuse and place the cartridge as far down in the den as possible. Do not throw the cartridge into the den. As soon as the cartridge is burning, plug the hole with the sod, grass side down, so that loose soil does not smother cartridge.

If the cartridge does not burn, leave it alone. Place another cartridge in the den alongside the one that did not burn. The second cartridge will ignite the first. Plug any holes in the ground that allow smoke to escape.

Avoid prolonged breathing of smoke. Since sparks may cause a fire, do not use near buildings, haystacks or other inflammable material.