

Lawn Care

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CONTROLLING MOLE MANEUVERS

THREE different groups of moles operate in the eastern half of the country. They are the common, the star-nosed and the Brewer's moles, all similar in activity and habits.

Except where their telltale ridges and mounds disfigure lawns and golf courses they need not be discouraged. To the extent that moles destroy harmful insects, they are beneficial. The burrowing activity of moles is largely a search for food consisting of beetle grubs and other larvae, spiders and centipedes. They also consume earthworms, in this case feeding on soil inhabitants that are beneficial to man.

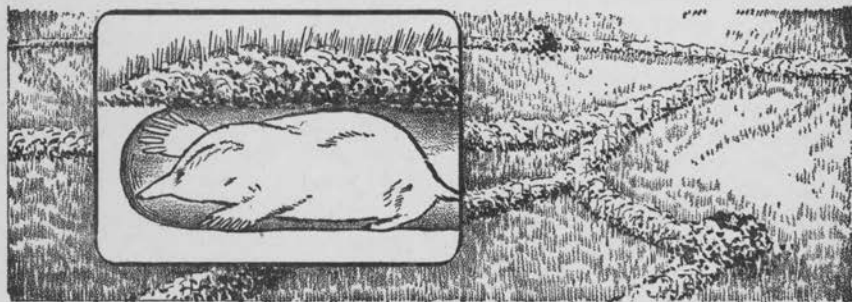
Few people have ever seen a mole. It is often confused with members of the rodent order, particularly the meadow mouse and the pocket gopher. A mole is distinguished by its short front legs that end in broad, rounded hands with strong claws and palms turned outward which they use breast-stroke fashion to dig their passageways. The body is about six inches long, cov-

ered with a plush-like fur that makes the moleskin economically valuable in some European countries. The mole has a long, pointed snout, a sensitive organ of touch not used for rooting. Neither external eyes or ears are much in evidence. What the mole lacks in sight it makes up in touch, acute hearing and unusual powers of smell.

The mole seldom ventures out of ground except possibly at night. The raised ridges of sod indicate the course of its hunting paths. The star-nosed mole may also throw up occasional mounds of loose soil.

Active Periods. In spite of popular belief otherwise, moles are not active at any particular interval. They work day or night but are more apt to extend their runways when the ground is soft after a summer rain or winter thaw. During periods of frost or drought they must use old runs or tunnels not affected by surface changes.

Moles work fast either to develop an insatiable appetite or in an effort to



satisfy it. It is said that a mole may in a day eat more than its own weight.

Except for the Townsend's mole found on the Pacific coast, the mole eats very little vegetable matter. Mostly they devour harmful insects but they are often blamed for destruction of tubers and bulbs and other roots. Moles may indirectly cause this damage since their runways are used by pocket gophers, field mice, and other rodents as a way to get at one of their favorite sources of food.

CONTROL METHODS

In soft soil a single mole may work so fast that many yards of runway will seem to appear suddenly and make it look like a full scale invasion. Immediate action to prevent further damage is advised but patience and care are necessary to plan the attack, which may follow one of these plans:

Trapping. In spite of their suspicious nature and their keen sense of smell, it is not difficult to trap moles.

The orderly nature of the little creature can prove his undoing. If an opening is made in his runway or it is blocked with earth he will try to repair it when next he comes that way. So if a break is made with the foot and a trap properly set, it should serve its purpose when the mole starts repair operations. He will back away from a poorly set trap and burrow under or around it. If the trap is properly placed the mole will push through the dirt until he springs the trap.

Mole traps are of two general types, the kind that grip or choke and the harpoon trap. The harpoon trap is easier to set but some moles may escape if the prongs do not strike a vital spot. One kind of gripper trap works on a choker-loop principle, others on scissors-jaw or diamond jaw principles. They are set by making a small excavation across the burrow and a little

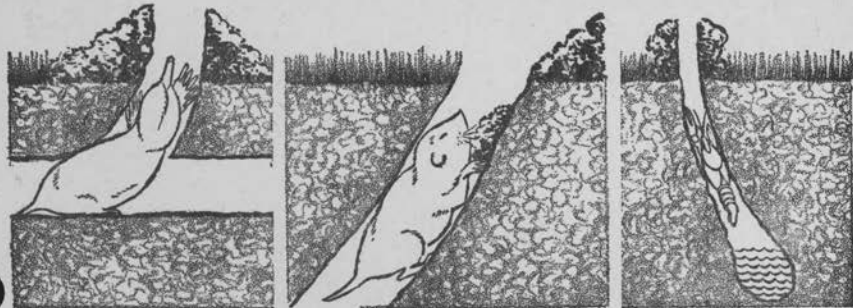
deeper than the burrow, just the width of the trap. The set trap is placed so that the loops or jaws encircle the direction of the runway. The excavated section is then blocked with damp soil, free from stones. Soil is also packed firmly under or against the trigger pan. Finally the trap hole is filled with loose dirt up to the level of the trigger mechanism so as to exclude all light from the burrow.

The harpoon trap is set after one of the main runway ridges is depressed with the foot. With the safety catch in place, the operator pushes the set trap into the ground with the two pointed supports straddling the runway evenly. The trigger pan should rest snugly on the depressed soil and the safety catch released. It is a good idea to spring the trap once to make sure that the impaling spikes easily penetrate the soil and do not strike stones.

Direct Attack. With a little time and patience the activity of a mole can be observed as he extends his burrow. Then opportunity is given for quick kill with a spade, pitchfork, or other sharp instrument. Some gardeners open or depress runways in the hope of later slipping up on the mole in the act of repairing.

Another possibility along this line is flooding the runway by using the water hose. This is said to be especially effective in the spring when the young of the moles may be in the nests and can also be drowned. The story was told in a previous LAWN CARE of park employees who poked a hose into a runway and turned on full pressure. As a mole came out for air they smacked him and started after another. Their claim was eleven in an hour and none of the big ones got away. They can't run fast on the surface.

Gas Attacks. Since mole runways are pretty well confined, they afford some opportunity for extermination by fumi-



Left: Typical volcano shaped mound thrown up by some species of moles. Center: The mound of soil excavated by a pocket gopher is one-sided and kidney shaped at the surface because of the way it is pushed up. Right: Chimney shaped mound made by crayfish operating in wet soil.

gation. Calcium cyanide dust available in the convenient commercial product Cyanogas is effective though some trouble to use. This must be forced into the runway at five-foot intervals by use of a special foot pump. This material is poisonous to humans, animals and plants. A teaspoonful of carbon bisulfide inserted at five or six-foot intervals is also said to be effective, if the opening is carefully closed.

Any automobile provides a possibility for mole extermination. By use of a length of hose the lethal carbon monoxide from the exhaust of a running engine can be carried into mole runways. Friction tape may be used to make a suitable connection between the exhaust pipe and the hose. The car should be operated in the open for 15 minutes or more. Any gassing attack is more successful when the ground is wet and less porous and the fumes are better confined to the runway.

Repellents. Quite a few people have written in that they have gotten rid of moles by using lye, naphthalene or paradichlorobenzene. The mole runways are opened with a small stick, a teaspoonful of one of the materials inserted at intervals of 8 to 10 feet. The openings must be carefully closed. These don't affect the mole except possibly to drive him away as he exhibits

a marked tendency to avoid obnoxious or injurious substances.

Poisons are often recommended but there is much doubt as to their effectiveness. Moles have specialized carnivorous appetites and highly developed instincts that make them avoid unfamiliar substances. It is not likely that moles are fooled by clever poisons.

Other Burrowing Friends

This page carries an illustration of a pocket gopher, another animal that tunnels underground but usually so deep as not to harm lawns. Gophers feed on the more fleshy succulent underground roots and tubers.

The common crayfish or crayfish is objectionable because of its ugly burrows. These animals are easily destroyed by placing a teaspoonful of carbon bisulfide or cyanogas in the entrance and covering the hole to retain the poisonous fumes.

SIRS:

Clyde W. Mattern, East Northfield, caught 27 moles last summer by taking a gallon crock, locating the main runway, digging the crock in the ground a couple of inches below the runway, putting a bag or board over the top. The moles dig through to repair the runway, fall into the crock and cannot get out.

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Grub Control Ready for Use

In LAWN CARE No. 85, the new U. S. Department of Agriculture Milky Spore disease, a new control for grubs of Japanese and other beetles, was discussed. A convenient remedy is now available for home lawns and is offered under the name Scotts Grub Control.

Until spore disease material was developed the only weapon against grubs was to poison the soil with arsenate of lead. Many folks objected to this because of the danger of poisoning some member of the family or pets or even birds. Now this objection is overcome because the new milky disease control is harmful to grubs only and destroys them by inoculating the soil with organisms which produce a fatal disease in the grubs. It has been found that birds may feed on diseased grubs without harm. As a matter of fact the disease spores pass through the intestinal tract of the bird and serve to spread the grub disease as they are later deposited on the soil in droppings.

The cost of treatment is nominal. Enough for a permanent job on 2500 square feet of area is \$4.75 postage paid.

The sections of the country most apt to require grub control include practically all the Atlantic Coastal States, portions of Ohio, also around Chicago, Detroit, Indianapolis and St. Louis.

A suggested weapon for moles is a homemade fork constructed as follows: Two half-inch boards 4 inches by 6 inches with a hole bored in the center large enough to hold a broom handle securely. Through one board drive nine five-inch nails placed irregularly and close enough to prevent the mole from wriggling through. The two boards are nailed together with the handle fitted in place.

Weed Seeds in the Soil

Some weed seeds are endowed by nature to resist decay in the soil and to remain alive for 25 years or more. They simply remain dormant until they are brought nearer the surface where they may get the required light and air for germination.

That is why many, and at times strange, weeds may appear in a new lawn or a garden after cultivation turns up deeper soil. To overcome this problem many efforts have been made to destroy weed seeds in the soil but so far no practical method has been devised for lawn use.

Chemical sprays that may kill weed growth cannot be counted upon to destroy weed seeds buried in the ground. The best way yet devised to get rid of weed seeds is by summer fallowing and cultivation but this means doing without sod covering from about June to August. As successive weed crops sprout, they should be killed by hoeing or discing.

Lawn Care Binder



This durable loose-leaf ring binder, containing all issues of LAWN CARE and with capacity for five more years, will be sent for \$1.00 postage paid. Hundreds of

LAWN CARE readers have presented them to friends as gifts and to public libraries and garden clubs.

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