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Moles in Home Lawns

"Look, there's another one!" Homeowners often see large mounds of soil and ridge-like tunnels in their lawns shortly following snowmelt in early spring. This is the result of mole activity. Because of the unsightly mounds moles create, they are often considered unwanted pests in home lawns.

There are two common species of moles found throughout New Hampshire, the Star-nosed (*Condylura cristata*) and Hairy-tailed (*Parascalops breweri*) types. Star-nosed moles frequent damp soils near swamps and streams while the Hairy-tailed types are usually found in well-drained upland soils.

Moles are often confused with meadow mice (voles) which also form tunnels under snow in their search for food. While meadow mice will feed on bulbs and injure fruit trees (especially apple trees) by eating the succulent bark, they will not cause any serious damage to a home lawn.

Identification

Moles are not rodents, but members of the order *Insectivora*. All moles are characterized by enlarged forefeet with long claws, stout necks and powerful shoulders that make them capable burrowers. Depending on the species, moles are usually 4 to 8 inches long, with long snouts (1/2 inch) and velvety fur.

Habits

Moles live in underground runways and are seldom seen above the ground. In heavily infested areas, these tunnels form a vast network of interconnecting highways. The main runways are often 5 to 8 inches deep, but can vary from 2 to 20 inches underground. The chambers created are about the size of a quart jar.

Moles dig runways to search for food, provide protection from predators and create space for resting and breeding. The annoying mole hills are external evidence of the moles' underground tunneling activities. Unfortunately, for most homeowners, moles remain active throughout the year.

Due to their secluded life underground, moles have only a few natural enemies. Dogs, coyotes and skunks can dig out a few and occasionally a cat, hawk, or owl surprises a mole surfacing at night in search of food, water or nesting material.

Moles prefer loose, moist soil (sandy loam is ideal) where digging is easy and food plentiful. They generally avoid heavy clay, stony or coarse gravel soils. As moles search for mates during the March and April breeding season, they may create many shallow tunnels. Moles produce young only once per year, averaging three to the litter. The young spend about one month in the nest and are nearly full-grown when they leave.

Food

Moles are primarily carnivores. Their diets consist mainly of earthworms, grubs, beetles and insect larvae they find in the soil. Moles have hearty appetites, consuming 60%-80% of their body weight each day. A single mole eats about 40 pounds of food each year.

Spending up to half their time searching for something to eat, moles can cover a substantial distance each day, digging up to 150 feet of new tunnels. This extensive movement also contributes to the control problem, because the neighbor's moles may move right into your lawn and garden.

Damage

In home lawns, moles remove beneficial organisms such as earthworms, as well as damaging insects such as Japanese beetle grubs from the soil. In some cases, moles might be considered helpful in suppressing grub populations in those lawns with a serious infestation. Most homeowners do not want moles burrowing through their lawns - the burrowing activity may shear off turfgrass roots and leave behind unwanted mounds of excavated soil.

Control Measures

In the long haul, moles are here to stay. Their elusive lifestyle and ability to form extensive networks of underground tunnels and chambers make them difficult to control. Some farmers have trapped more than 100 moles in a single season, only to be faced with the same degree of mole infestation the following spring.

As a result, when large populations of moles invade a lawn, all control measures are short-term and partial.

Trapping: Trapping is the most effective and practical method of controlling moles. There are several mole traps on the market that give good results if properly handled and placed in an active runway.

Fumigants: Gassing is normally ineffective because of the moles' numerous burrows and escape openings.

Insecticides: Because moles feed on a variety of other invertebrates, not just grubs, applying insecticides to kill grubs in a lawn in hopes of depriving moles of their food supply applications is not generally effective. The practice may increase tunneling activity, as moles seek further for other sources of food.

Baits: Baits are seldom effective as moles normally do not eat grain-based food.

Nonchemical Measures: Some electronic, magnetic and vibrational devices have been promoted. Research data to support their use is lacking.

Other Measures (including home-made remedies): Such cures as placing broken bottles, razor blades, bleach, chewing gum and other foreign objects in the tunnel will not work and may harm the environment or family pets. There's no evidence that electronic or ultrasonic devices or that planting borders of marigolds, planting castor beans or the so-called "mole plant" (*Eurphorbia latharis*) will keep moles from your lawn.

Peaceful coexistence may be the best strategy for dealing with moles. Mole activity should subside later in the spring once the ground dries out. In the meantime, continue to press down ridges and mounds by stepping on them and tamping down firmly. Smooth out mounds of excavated dirt with a garden rake. Some light over-seeding may be necessary.

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