The Eastern Mole

Eastern moles (Scalopus aquaticus) are insectivores and are in the order Eulipotyphla (hedgehogs, shrews, and moles). The other species of moles found in the eastern U.S are the Star-nosed (Condylura cristata) and the Hairy-tailed (Parascalops breweri).

Eastern Moles are just a little smaller than a chipmunk with a length between 5½" and 8½ ". Eastern moles are larger in the northern parts of its range with southern populations being smaller. Moles are not blind and can sense light from darkness. Moles are most active early morning, mid-day, and again early in the evening. Their sense of smell, touch, and ability to detect vibration make up for the lack of good vision. Their head is featureless except for a flexible pig like nose with no ears visibly present. Their fur is normally a silver color with juveniles being darker, is very soft, and when brushed in any direction offers no resistance. This adaptation allows them to travel forward or backward very easily.

Moles are opportunistic feeders eating mainly earthworms, grubs, and beetles. Adult moles eat about 1/8 pound of food each day which equates to 80%-100% of its body weight.

Lawn care businesses will often tell the customer that grub control must be conducted to gain control. The problem with this is even if there is a grub population present there is almost certainly an earthworm population, so the grub killer has little to no effect on mole related damage.

Due to the Eastern mole's fossorial lifestyle, they have very few predators allowing them to live for up to 3-4 years. Moles are not social except during breeding season, so 3-5 adults per acre is considered a high population. Although not social, home ranges often overlap, and several moles may use the same tunnel. Eastern moles breed in late winter with litters being born March, April, and May depending on the part of the country. After a 45-day gestation period the female has a litter of 2-5 (average of four) young born per year in the spring. Juveniles leave the nest chamber at about one month old, and at three months they will be the size of an adult. There can be periodic population fluctuations mainly due to weather and food availability. Populations can increase dramatically when cicada populations are present. These inflated populations often crash after the seven-to-eight-year cycle ends with cicada emergence.

There are several methods to reduce or eliminate mole populations, including trapping, toxicants, and fumigants. Trapping is often the most effective and cost-effective method of controlling moles since the average yard only has 2-3 moles. Commonly used traps are the WCS™ Pro Scissors, NoMol®, and the Trapline Moleinator.

WCS™ Pro Scissors

NoMol®

Moleinator

Trapping in early spring before young moles become mobile can greatly increase your efforts in reducing populations. Although trapping moles is not a difficult task it is important to know which runs are active. One way to check to see if a run is active is to flatten a small section and check it in a few days to see if it becomes raised. Some tunnels may only be used once while others can be a superhighway that will produce over and over. Runs that seem to have no pattern, are relatively short in length, and are in a zig-zag pattern are feeder runs that may not be reused. Active burrows tend to run in a fairly straight line, often follow edges like sidewalks and foundations, and usually connect to multiple feeding areas. These active tunnels will be used more frequently during periods of rain, and in the spring and fall. During periods of draught and during the hotter months of summer moles will go deeper in the soil column. Mounds, called boils, are indicators that the mole is digging deep tunnels and is bringing soil to the surface. These are very common in the fall when the mole is preparing to go deeper in the soil column during winter months. When setting new traps, it is best to "weather" them for a few days or rub them down with dirt to remove foreign odors. It is also best to wear gloves to avoid leaving human scent on the traps. Some professionals like to add a small amount of Proline™ Underground as a bait/lure that moles and other animals that feed on underground invertebrates find attractive. It has been reported by a few very experienced mole trappers that a small amount of beaver castor placed beneath the trap has also increased capture rates. It is best to set multiple traps in what you believe to be active runs. If you don't catch a mole within two or three days it is likely that the trap is not set properly, the run is not active, or the mole has changed its travel patterns so adjust things accordingly.

The most popular and easy to use toxicant used for mole control are synthetic worms that contain toxicants. These seem to work well for some people as they mimic the moles natural food source. Be sure to follow the label, have a pest control license if necessary, and be aware that pets should not have access to the area being treated. Another option for the professional is the BurrowRx Rodent Control Device. This device delivers carbon monoxide (CO) thought the burrow system killing any moles present. Secondary poisoning of nontarget animals is not likely if this tool is used as directed. When the carbon monoxide dissipates there is no risk to anything that enters the burrow system. After gaining experience with different soil types and where to use this device, the

BurrowRx can be a great tool. Most operators treat twice about two weeks apart when the soil is moist. This device utilizes a smoke oil tracer that will show you were the CO is being delivered.

When it comes to repellents Mole Scram is probably the most popular and widely used product. Mole scram is a spreadable granular repellent that is biodegradable and is environmentally safe. It is important to follow all laws regarding moles and their control. Ignorance of state and federal laws will not protect you from prosecution.