

The mysterious mole

The other day I was out walking and when I returned to my front yard, I noticed an elevated ridge of soil about 4 inches wide and several yards long. I realized it must be a mole tunnel and I went to show my son, Justin, because he is always interested in such things. He immediately began to ask me questions about moles; why they dug tunnels, what they eat, what they look like –you get the idea. I had to admit I didn't know much about moles. Justin requested that I find out more and write an article about these mysterious creatures. So I did just that, after researching these interesting critters, I am happy to share what I learned with you.

Moles are small mammals (about the size of a chipmunk- 6-8" long) that belong to the same family as shrews and desmans. They belong to the Talpidae family. These creatures were born to live underground and are rarely seen by humans. These amazing animals have tails that are so sensitive to touch that they use them to move backward in their tunnels. They have short front feet and prominent toenails. With paddle like, outward facing palms, they are able to get through the soil in the same manner a person swims underwater. Because of their specialized bone and muscle structure moles are able to exert a lateral digging force of up to 32 times their body weight.

Moles have furry, cylindrical bodies and tiny eyes and no external ears. However, they do have a keen sense of hearing. Their heads are elongated and they have a very short neck with a pig like snout. These creatures are unique because they have about twice as much blood and red hemoglobin as other mammals of their size. This feature allows the mole to breathe in its natural underground environment where there isn't much oxygen, but plenty of carbon dioxide.

Moles apparently got their name from the Early Modern English word *mouldywarp*, which means dirt thrower and refers to their habit of tossing soil while they dig their tunnels and build their mole holes. A group of moles is called a labor. Male moles are called boars; females are called sows.

They eat mostly earthworms and other small invertebrates that are found underground. Sometimes they will feast on small mice that mistakenly approach their burrow entrance. Moles have saliva which contains a toxin that paralyzes the worms. The moles then store their living prey for later in special underground areas they construct called "larders." Some moles store hundreds and even thousands of earthworms in these areas. Once the mole is ready to feast on one of these stored earthworms, it pulls it between its paws to force the collected earth and dirt out of the worm. Moles find, catch and eat their prey faster than the human eye can see. They consume approximately 45-50 pounds of worms and insects each year.

Moles are homebodies. They rarely surface above ground unless they are young and searching for their own home. Moles will return to their home if they are moved and have been known to cross roads, canals and rivers underground to find their way back. They are very quick animals and can dig surface tunnels at about 18 feet per hour. They travel through their tunnels at about 80 feet a minute.

Even though many folks think of moles as pests, they contribute significantly to the soil ecosystem. The tunneling and mound building they do aerates and mixes the soil layers and can provide drainage. In addition moles eat insects, larvae and other pests. They live in areas where the depth of the soil allows tunneling and generally make burrows in high dry spots. For hunting purposes however, the moles prefer cool and moist soil which supports worms and grubs. Moles can be found in woodlands, grasslands, neglected orchards, parks, lawns and even under buildings.

Female moles usually have 2 – 6 young. The babies are usually born from mid-April to May. Young moles have less than a 50% chance of surviving long enough to reproduce. However, even with this low survival rate, moles are considered a nuisance by many people. Some ways to control moles without pesticides or traps are as follows:

- Don't overwater your lawn. Over watering brings soil invertebrates and moles closer to the surface, which makes their tunnels more visible.
- Reduce the amount of turfgrass on your property. This will reduce the visible signs of moles.
- Convert lawn to gardens, paths, hedgerows or other more natural habitats. These can save you time and money as well as attract birds and butterflies to your yard.
- Rake away the mole mounds whenever they are formed. Chances are that they will find another area to form their mounds.

Just keep in mind that even though they might mess up your yard a little bit, moles are an important part of soil ecosystems. Try to live with them and if you can't, try some of the steps above to control them.