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## ***Vertebrate: Moles***

*Use Integrated Pest Management (IPM) for successful plant problem management.*

### ***Biology***

There are three species of moles in the Pacific Northwest which are considered a problem in landscapes. The Townsend's mole (*Scapanus townsendii*) is the most common and is found throughout western Washington and Oregon. The Pacific or coast mole (*S. orarius*) can be found along the coast and in areas of southeastern Washington and northeastern Oregon. It prefers drier, better-drained soils than the Townsend's mole. The California or broadfooted mole (*S. latimanus*) occurs in south central Oregon. All moles have short, velvety fur (usually grayish to black). The tail is very short and nearly hairless; the snout is slender and pointed, contains small needle-like teeth, and is also nearly hairless. Ears and eyes are inconspicuous. The forearms are short and stout, with shovel-like hairless paws and stout claws on the tips of the toes. The forepaws are tipped outward for digging. Townsend's moles average around 8 inches long; Pacific and California moles are slightly smaller. Moles are rarely seen aboveground, but they occasionally emerge from their tunnels where they are vulnerable to predators such as owls, dogs, or coyotes. Underground, moles build two types of tunnels. Permanent tunnels are typically 3 to 12 inches below the surface (but sometimes up to 40 inches deep) and are used daily for moving around their territory and collecting food. Temporary surface tunnels are built beneath the soil surface up to about 4 inches deep, leaving a raised ridge of soil. These tunnels are likely only used once for collecting food. Excess soil excavated when making tunnels is pushed to the surface, leaving characteristic conical mounds. Moles are very active travelers and excavate large tunnel systems in their home territory. Most yards actually have very few moles, but when they are active it can seem that there are dozens digging and making mounds. Moles feed primarily on invertebrates, with earthworms comprising much of their diet. They also feed on other organisms such as grubs, slugs, snails, and various adult and larval insects. Occasionally they will feed on plant parts, especially grasses, but moles seldom cause significant damage to plants in the landscape. Plant damage in the landscape attributed to moles is often actually caused by voles, small rodents which may also use the tunnel systems constructed by moles.

### ***Management Options***

#### **Non-Chemical Management**

- ~ "Home remedies" such as hair, urine, used cat litter, or chewing gum are not consistently effective against moles. Flooding and mole "bombs" are also seldom effective, due to the large extent of most mole tunnel systems.
- ~ Barriers are somewhat effective deterrents, but are impractical except for small areas and special situations. Hardware cloth (1/4-inch mesh, which will also keep out voles) or other suitable material may be buried beneath the soil (bury 24-30 inches deep, leaving about 6 inches above ground) to discourage moles. Raised beds can be protected by completely screening the bottom of the bed with hardware cloth before filling with soil.
- ~ Flatten surface tunnels to keep plants or grass from drying out and dying. Rake soil mounds flat to improve appearance and fill any depressions with soil. Overseed bare areas in turfgrass to prevent establishment of problem weeds on the disturbed soil.
- ~ Healthy lawns provide an ideal habitat for moles. Even if you are successful in eliminating your moles, they will continue to move in from surrounding areas. It is impractical, expensive, environmentally unsound, and usually ineffective to attempt to control moles in landscapes by eliminating their food sources.
- ~ Mole repellents have been useful for a time in some instances, but have not shown consistent results in our area.
- ~ In 2000, Washington state voters passed Initiative 713 which revised Washington state law so that "it is unlawful to use or authorize the use of any steel-jawed leghold trap or any other body-gripping trap to capture any animal" (RCW 77.15.194). This makes body-gripping or body-piercing mole traps illegal for anyone to use in Washington. You may legally trap or kill moles on your property using only cage-traps or

"common rat and mouse traps".

*Select non-chemical management options as your first choice!*

## Chemical Management

*IMPORTANT: Visit Home and Garden Fact Sheets for more information on using pesticides*

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***Images***



~ *Caption:*  
~ *Photo by: D. Pehling*