



# What is Tunneling in My Yard?

WASHINGTON STATE UNIVERSITY EXTENSION FACT SHEET • FS143E

The purpose of this publication is to help homeowners identify vertebrate pests that tunnel in lawn and garden areas around the home. Successful pest management depends upon being able to correctly identify the pest species—a critical step—before moving forward with management options.

Throughout Washington, there are a number of small animals that can cause damage to lawns, gardens, and crops through their tunneling habits. The most common pests are moles, voles, gophers, and rats.

While ground squirrels (found primarily in eastern Washington) and chipmunks also have a habit of burrowing; they are usually easy to visually identify, since they are active during the day.

## Common Tunneling Pests of Washington

No area of the state is immune from tunneling rodents. However, certain areas of the state do play host to specific species:

- Moles – Townsend's moles, *Scapanus townsendii* (Figure 1) are found in western Washington, along with Pacific moles, *Scapanus orarius*. Pacific moles are smaller than Townsend's, but otherwise resemble them in appearance and tunnel design. They

are mostly found west of the Cascade Mountains, however, a few isolated populations are found in eastern Washington.

- Voles – There are seven vole species (*Microtus spp.*) found in Washington, occupying diverse habitats throughout the state (Figure 2). Most vole species are similar in appearance and tunneling habits. In western Washington, the Townsend's vole (*M. townsendii*) is often a pest. In eastern Washington, Montane voles (*M. montanus*) and meadow voles (*M. pennsylvanicus*) commonly cause damage.
- Pocket Gophers—Mazama pocket gophers, *Thomomys mazama*, are found in small populations in the South Sound area and the Olympic Peninsula. Northern pocket gophers, *Thomomys talpoides* (Figure 3), are found throughout eastern Washington. Both species are similar in appearance and tunnel design.
- Rats – *Rattus spp.* Of the two rat species found in Washington, the Norway rat, *Rattus norvegicus* (Figure 4) is the most energetic at tunneling, and can be found near human habitation throughout the state. Roof rats, *Rattus rattus*, have longer tails, but are otherwise similar in appearance. However, they are less likely to tunnel. The fur color of both species may range from gray to black.



Figure 1. Townsend's mole (*Scapanus townsendii*).



Figure 2. Townsend's vole.





Figure 3. Northern pocket gopher. (*Thomomys talpoides*).



Figure 6. A mole hill.



Figure 4. Norway rat (*Rattus norvegicus*).



Figure 7. A vole tunnel opening.



Figure 5. Roof rat (*Rattus rattus*).

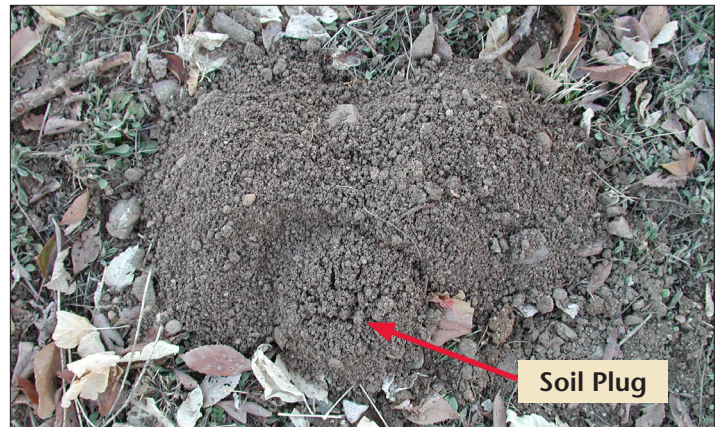


Figure 8. Note the "soil plug" of this pocket gopher mound. Photo: University of Arizona Cooperative Extension.

## Signs of Pest Infestation

Each species has a distinctive tunneling style, which homeowners should identify before moving forward with pest-management options.

- Moles create volcano-like mounds of clumpy, moist soil, and sometimes, ridges made by shallow tunneling (Figure 6).
- Most vole species create a 1 to 2 inch-wide trail through the grass, and open tunnels are  $\frac{3}{4}$  to  $1\frac{1}{2}$  inches in diameter (Figure 7).
- Pocket Gophers usually make fan-shaped mounds

of fine, dry soil with a "soil plug" at one end of the mound (Figure 8).

- Rats have open holes that are 2 to 3 inches in diameter, usually around buildings, and near a food source (Figure 9).

## Online Resources for Management Options

Information for the management of the pests described in this publication are just a mouse-click away:





Figure 9. A Norway rat hole.

- Moles—For information on managing moles, see *Mole Management in Washington Backyards* (Pehling 2014), <http://cru.cahe.wsu.edu/CEPublications/FS146E/FS146E.pdf>.
- Voles—For voles, see *Vole Management in Home Backyards and Gardens* (Pehling 2013), <http://cru.cahe.wsu.edu/CEPublications/FS094E/FS094E.pdf>.
- Pocket Gophers—Homeowners with infestations of pocket gophers should consult the *Living with Wildlife* series from the Washington Department of Fish and Wildlife. <http://wdfw.wa.gov/living/gophers.html>.
- Rats and Mice—For management options of rats and mice, see Washington State University's Pestsense database, <http://pep.wsu.edu/pestsense/scripts/query/displayProblem.asp?tableName=plant&categoryID=2&problemID=794>.

## Further Reading

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By David Pehling, Extension Educator, WSU Snohomish County, Everett, WA.

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