

# GOPHERS



Unlike surface dwelling Idaho ground squirrels, pocket gophers (*Thomomys* spp.) are burrowing rodents. Gophers are well equipped for a digging, tunneling lifestyle with powerfully built forequarters, large-clawed front paws, fine short fur that doesn't cake in wet soils. One gopher may create several mounds in a day.

Mounds are formed as the gopher digs its tunnel and pushes the loose dirt to the surface. Gopher holes are typically off to one side of the mound and usually plugged. Mole mounds are sometimes mistaken for gopher mounds. Unlike gophers, moles commonly burrow just beneath the surface, leaving a raised ridge to mark their path.

In nonirrigated areas, mound building is most pronounced during spring or fall when the soil is moist and easy to dig. In irrigated areas such as lawns, flower beds, and gardens, digging conditions are usually optimal year round.

## DAMAGE

Pocket gophers often invade yards and gardens, and feed on many garden crops, ornamental plants, vines, shrubs, and trees. A single gopher moving down a garden row can inflict considerable damage in a very short time. Gophers also gnaw and damage plastic water lines and lawn sprinkler systems. Their tunnels can divert and carry off irrigation water and lead to soil erosion. Mounds on lawns interfere with mowing equipment and ruin the aesthetics of well-kept turf grass.

## NATURAL CONTROLS

Because no population will increase indefinitely, one alternative to a gopher problem is to do nothing, letting the population limit itself. Predators, including owls, snakes, cats, dogs, and coyotes, eat pocket gophers. Predators rarely, however, remove every

prey animal, but instead move on to hunt at more profitable locations. In addition, gophers have defenses against predators. For example, they can escape snakes in their burrows by rapidly pushing up an earthen plug to block the snake's advance.

## Habits

Pocket gophers live in a burrow system that can cover an area of 200 to 2,000 square feet. The burrows are 3-6 inches in diameter and are 6 to 12 inches below ground. The nest and food storage chambers may be as deep as 6 feet. Gophers seal the openings to the burrow system with earthen plugs. Short, sloping lateral tunnels connect the main burrow system to the surface and are created during construction of the main tunnel for pushing dirt to the surface.

## Probing for Burrows

Successful trapping or baiting depends on accurately locating the gopher's main burrow. Because lateral tunnels may not be revisited by the gopher, trapping and baiting in these aren't as successful as in the main burrow.

To locate the burrow, you need to use a gopher probe. Probes are commercially available or can be constructed from a pipe and metal rod. An enlarged tip that is wider than the shaft of the probe is an important design feature that increases the ease of locating burrows.

Locate areas of recent gopher activity based on fresh mounds with dark, moist soil. The main burrow can be found by probing about 8 to 12 inches from the plug side of the mound, it is usually located 6 to 12 inches deep. When the probe penetrates the gopher's burrow, there will be a sudden, noticeable drop of about 2 inches. You may have to probe repeatedly to locate the gopher's main burrow, but your skill will improve with experience.

## Trapping

Trapping is a safe and effective method to control pocket gophers. Several types and brands of gopher traps are available. To successfully control gophers, the sooner you detect their presence and take control measures, the better.

To set traps, locate the main tunnel with a probe. Use a shovel or garden trowel to open the tunnel wide enough to set traps in pairs facing opposite directions. By placing traps with their openings facing in opposite directions, a gopher coming from either end of the burrow can be intercepted.

## Exclusion

Small areas such as flower beds may be protected by complete underground screening of sides and bottoms. When constructing raised vegetable or flower beds, underlay the soil with wire to exclude gophers. Wire baskets to protect individual plants can be made at home or are commercially available and should be installed at the time of planting. If you use wire, use light-gauge wire for shrubs and trees that will need protection only while young. Leave enough room to allow for the roots to grow. Galvanized wire provides the longest lasting protection.

## Habitat Modification

Reduction of gopher food sources using either chemical or mechanical methods may decrease immigration of gophers. If feasible, remove weedy areas adjacent to yards and gardens to create a buffer strip of unsuitable habitat.

## Other Control Methods

Pocket gophers can easily withstand normal garden or home landscape irrigation, but flooding can sometimes be used to force them from their burrows where they can



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be dispatched with a shovel or caught by a dog. Fumigation with smoke or gas cartridges is usually not effective because gophers quickly seal off their burrow when they detect smoke or gas. But if you are persistent with and use repeated treatments, some success may be achieved.

#### *Baiting with Toxic Baits*

The key to an effective toxic baiting program is bait placement. Always place pocket gopher bait in the main underground tunnel, not the lateral tunnels. After locating the main gopher burrow with a probe, enlarge the opening by rotating the probe or inserting a larger rod or stick. Following label directions, place the bait carefully in the opening using a spoon or other suitable implement that is used only for that purpose, taking care not to spill any on the ground surface. A funnel is useful for preventing spillage.

Strychnine-treated grain bait is the most common type used for pocket gopher control. Baits containing anticoagulants are also available. When using anticoagulant baits, a large amount of bait (about 10 times the amount needed when using strychnine baits) is required so that it is available for multiple feedings. Although generally less effective than strychnine baits, anticoagulant

baits are preferred for use in areas where children and pets may be present. When using either type of bait, be sure to follow all label directions and precautions.

After placing the bait in the main burrow, close the probe hole with sod, rocks, or some other material to exclude light and prevent dirt from falling on the bait. Several bait placements within a burrow system will increase success. Tamp down existing mounds so you can distinguish new activity.

#### **FOLLOW-UP**

Once pocket gophers have been controlled, monitor the area on a regular basis for reinfestation of the land. Level all existing mounds after the control program and clean away weeds and garden debris so fresh mounds can be seen easily. It is important to check regularly for reinfestation because pocket gophers may move in from other areas and damage can reoccur within a short time. If your property borders wildlands, vacant lots, or other areas that serve as a source of gophers, you can expect gophers to invade regularly. Be prepared to take immediate control action when they do; it is easier, cheaper, and less time-consuming to control one or two gophers than to wait until the population builds up to the point where the gophers are causing excessive damage.

## **WATER POLLUTION**

Common household pesticides (a term which includes all chemical control such as herbicides, insecticides, rodenticides, etc.) can make their way into treated wastewater and local waterways, and may be at levels that can harm sensitive aquatic life. Pesticides can also get into ground water which may be used as drinking water. Water pollution prevention agencies have teamed up with participating retail stores, and professional pest control associations to reduce the risks associated with improper pesticide use.

Use pesticides according to label directions, paying close attention to surface and ground water advisories. Dispose of unwanted or leftover pesticides at a household hazardous waste collection facility or event; or through the Idaho State Department of Agriculture (ISDA) Pesticide Disposal Program (PDP). Clean, plastic pesticide and fertilizer containers may also be recycled through ISDA's Container Recycling Operation Program (CROP). Please call 208-465-8442 or visit: [www.agri.idaho.gov](http://www.agri.idaho.gov) for more information. For additional information on pesticide disposal, call 1-800-CLEANUP or visit: [www.1800CLEANUP.org](http://www.1800CLEANUP.org).

## **FOR MORE INFORMATION**

Active ingredients are listed on the front of the product. Pesticide information profiles can be found on the Oregon State University hosted webpage <http://extoxnet.orst.edu/pips>. The University of Idaho's Extension Educators, located in most counties, can often assist in local pest management questions. No endorsement of specific brand name products is intended, nor is criticism implied of similar products that are not mentioned.

For more information, contact:

#### **Partners for Clean Water**

[www.PartnersForCleanWater.org](http://www.PartnersForCleanWater.org)

#### **Idaho State Department of Agriculture**

[www.agri.state.id.us/](http://www.agri.state.id.us/)

#### **University of Idaho IPM website:**

[www.extension.uidaho.edu/](http://www.extension.uidaho.edu/)

#### **University of Idaho Cooperative Extension**

##### **Master Gardeners in your area**

[www.extension.uidaho.edu/idahogardens/](http://www.extension.uidaho.edu/idahogardens/)

#### **Western Integrated Pest**

##### **Management Center**

[www.wripmc.org/](http://www.wripmc.org/)

#### **IPM Institute of North America**

[www.ipminstitute.org/](http://www.ipminstitute.org/)

#### **National Pest Management Association**

[www.PestWorld.org](http://www.PestWorld.org)

## **THINGS TO AVOID AND WHY**

*These considerations will reduce the potential indiscriminate use of chemical control products and therefore reduce the potential exposure of pesticide residues to humans, animals and the environment.*

- Use of pesticide products without:
  1. knowing what pest you are trying to control,
  2. consideration of alternative control options (IPM),
  3. selecting the most appropriate product for your situation, and
  4. reading and following the label directions.
- Automated aerosols and plant feeders: These devices may disperse chemicals in a way that can increase the risks of exposure to unintentional targets.
- Careless use of ground sterilants: These can leach; either use great care or alternative control methods to prevent damage to desired plants or water contamination.

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[www.PartnersForCleanWater.org](http://www.PartnersForCleanWater.org)