

NEWS RELEASE
August 21, 2002

GOPHERS

BACKYARD HORTICULTURE
By Gary W. Hickman, Horticulture Advisor
University of California Cooperative Extension, Mariposa County

Most of us in Mariposa County have seen the work of pocket gophers. Mounds of soil and disappearing garden plants are sure signs of this very common animal. The University of California leaflet, available from the UCCE office at the fairgrounds, offers some useful information on control methods. Pocket gophers (*Thomomys* spp.) are burrowing rodents that get their name from the fur-lined cheek pouches, or pockets, that they use for carrying food and nesting materials.

IDENTIFICATION

Mounds of fresh soil are the best sign of gopher presence. Mounds are formed as the gopher digs its tunnel and pushes the loose dirt to the surface. Typically mounds are crescent or horseshoe-shaped. The hole, which is off to one side of the mound, is usually plugged. One gopher may create several mounds in a day, especially in moist soil.

BIOLOGY AND BEHAVIOR

Pocket gophers live in a burrow system that can cover an area up to 2,000 square feet. The burrows are about three inches in diameter; feeding burrows are usually 6 to 12 inches below ground, whereas the nest and food storage chamber may be as deep as six feet. Gophers seal the openings to the burrow system with earthen plugs. Gophers do not hibernate and are

active year-round, at all hours of the day. Gophers usually live alone within their burrow system, except for females with young or when breeding, and may occur in densities of up to 16 to 20 per acre.

Pocket gophers are herbivorous, feeding on a wide variety of vegetation. Gophers use their sense of smell to locate food. Most commonly they feed on roots and fleshy portions of plants they encounter while digging

LEGAL STATUS

Pocket gophers are classified as non-game mammals, which means if they are found to be injuring growing crops or other property, the owner or tenant of the premises may control them at any time and in any legal manner.

Probing for Burrows

Successful trapping or baiting depends on accurately locating the gopher's main burrow. To locate the burrow, you need to use a gopher probe, as described in the leaflet.

First, 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. Because the gopher may not revisit lateral tunnels, trapping and baiting in them is not as successful as in the main burrow.

Trapping

Trapping is a safe and effective method to control pocket gophers. Several types and brands of gopher traps are available. The most commonly used is a two-pronged pincher trap, such as the Macabee trap, which is triggered when the gopher pushes against a flat vertical pan.

To set traps, locate the main tunnel with a probe, as previously described. Use a shovel or garden trowel to open the tunnel wide enough to set traps in pairs facing opposite directions.

It is not necessary to bait a gopher trap, although some claim baiting gives better results. Lettuce, carrots, apples, or alfalfa greens can be used as bait. Wire your traps to stakes so they can be easily retrieved from the burrow. After setting the traps, exclude light from the burrow by covering the opening with dirt clods, sod, cardboard, or some other material.

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. Following label directions, place the bait carefully in the probe 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. This bait generally contains 0.5% strychnine and is lethal with a single feeding. 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. Exclusion from areas around plants is also possible using hardware cloth or $\frac{3}{4}$ inch mesh poultry wire.

Natural Controls

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.

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. 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.

No repellents currently available will successfully protect gardens or other plantings from pocket gophers. Plants such as gopher purge (*Euphorbia lathyris*), castor bean (*Ricinus communis*), and garlic have been suggested as repellents, but these claims have not been substantiated by research. Although there are many frightening devices commercially available to use on pocket gophers (vibrating stakes, ultrasonic devices, wind-powered pinwheels, etc.), pocket gophers do not frighten easily. Consequently, frightening devices have not proven to be effective. Another ineffective control method is placing chewing gum or laxatives in burrows in hopes of killing gophers.

The University of California prohibits discrimination against or harassment of any person employed by or seeking employment with the University on the basis of race, color, national origin, religion, sex, physical or mental disability, medical condition (cancer-related or genetic characteristics), ancestry, marital status, age, sexual orientation, citizenship, or status as a covered veteran (special disabled veteran, Vietnam-era veteran or any other veteran who served on active duty during a war or in a campaign or expedition for which a campaign badge has been authorized). University Policy is intended to be consistent with the provisions of applicable State and Federal laws. Inquiries regarding the University's nondiscrimination policies may be directed to the Affirmative Action/Staff Personnel Services Director, University of California Agriculture and Natural Resources, 1111 Franklin, 6th Floor, Oakland, CA 94607-5200, (510) 987-0096.