EFFECTIVE ECO-FRIENDLY PEST CONTROL • LESS-TOXIC PRODUCTS

PROTECT YOUR GARDEN FROM

MOLES, VOLES, AND GOPHERS

CONTROL MOLES, VOLES, AND GOPHERS, WITH THESE ECO-FRIENDLY PRODUCTS

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<td>TRAPS</td>
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Something is tearing up your garden. Varmints! But what kind?

In most parts of California, the likely culprits are moles, voles, or pocket gophers. All are controllable with non-toxic strategies, combined with accurate pest identification, determination, and perseverance.

MOLE, VOLE, OR GOPHER? HOW DO I KNOW?

- If you see cone-shaped mounds of soil or a network of raised tunnels, and your plants are not getting eaten, you likely have **moles**.

- If you see a network of closed or partly exposed tunnels (runways) and a clean, golf ball-sized entrance hole to a tunnel, you likely have **voles**. Locate the runways by moving aside groundcover.

- If you see a crescent-shaped mound of soil with a plugged opening, you likely have **gophers**. A gopher will plug any opening to its burrow system.
KNOW YOUR TARGET PEST!

Moles

Moles (*Scapanus* species) are small mammals (4 to 7 inches long) that eat grubs, other insects, and earthworms. With oversized front claws, sensitive snouts, and poor eyesight, moles are adapted to life underground and are terrific diggers. In a single day, a mole can crisscross a lawn with 150 feet of tunnels, and shallow feeding runs. Moles are most active after rain or irrigation when the soil is easy to work; they are less active during very hot or very cold weather, or during drought. Moles are solitary animals except during the breeding season (late winter to early spring).

Voles

Voles (meadow mice) are rodents with short tails and round bodies. In California, we have six species of voles from the genus *Microtus*. The California vole (*M. californicus*) and the montane vole (*M. montanus*) are the most common garden pests in our state. Adult voles are 5 to 8 inches long, including the tail. Vole populations can be cyclical, which means that their numbers can spike to several thousand per acre in a short time. If you think you have voles, it’s important to get them under control quickly.

Voles are vegetarians, feeding on grasses, vegetables, herbaceous plants, bulbs, tubers, tree roots, and bark. Unlike moles and gophers, they’re not diggers, so they often take over abandoned gopher or mole burrows.

Mole hills: a mole heading for the surface will push soil straight up, forming soil mounds that are cone- or volcano-shaped.

Moles make feeding tunnels or runways close to the surface.

The openings of vole burrows are relatively smooth and round. Voles construct shallow runways, covered or partly covered with vegetation.
Pocket Gophers

Pocket gophers (*Thomomys* species) are so called because they carry food and nesting material in furry cheek pouches. Gophers are larger than moles or voles—about 6 to 10 inches long, and have large yellow-orange front teeth and small eyes and ears. Like voles, they are plant eaters, preferring roots and the fleshy underground portion of plants. They’re very busy under ground—a gopher’s burrow system can cover an area 200 to 2,000 feet square. A typical system includes feeding tunnels 6 to 12 inches below the surface, and nesting and food storage chambers as deep as 6 feet.

Vole runways are partly exposed and often covered with vegetation.

**Pocket Gophers**

Pocket gophers are small and mouse-like, about 4 to 6 inches in body length plus a short tail. Moles are about the same size, but have short dark fur, no noticeable eyes or ears, and distinctive flat, wide front paws. Gophers are the largest of the three, about 6 to 10 inches long with a short tail and large front teeth.

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**Pocket Gopher**

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CONTROLLING BURROWING CRITTERS

The less-toxic, more humane, and generally safer methods of control are barriers, which keep them away from your plants, and trapping. Castor oil-based repellents may be effective temporarily, but are not as effective as barriers or traps.

The Our Water Our World Program doesn’t recommend poisons, fumigants, or incendiary devices to control moles, voles, or gophers.

Barriers: Protect your plants from voles and gophers

- Remove weeds and other plant material to help discourage voles, which are attracted to dense foliage where they can hide from owls, hawks, and other predators.
- For voles, bury ¼-inch wire mesh 6 to 10 inches below the surface, extending 12 inches above ground, to keep the animals from tunneling in. A cleared area outside the barrier provides extra protection.
- For gophers, install ¼-inch wire mesh at least 2 feet deep with at least 1 feet extending above ground, bent back away from the planting area you are protecting. This approach is not foolproof, though, as gophers are talented and motivated diggers.
- Plant tender plants in wire “gopher baskets.” Be sure to choose a basket large enough to allow room for root growth, and leave a few inches of mesh above the ground.
- For new raised planter beds, cover the entire bottom of the box with half-inch hardware cloth or gopher wire before adding soil. For existing raised beds, remove soil down to 14 to 18 inches and lay ¼-inch wire mesh across the entire bottom and up the inside walls of the bed. Secure with fencing nails.

Trapping moles, voles, and gophers

Call a professional if you plan to trap burrowing pests. Traps can be dangerous! They must be set properly and placed where they won’t harm children or pets. If you call a professional, be sure to ask them not to use poison baits or fumigants.

If you plan to do it yourself, first identify the pest correctly and use a trap that is specific to moles, voles, and gophers. Be sure to follow the instructions on the label, in the packaging, or on the manufacturer’s website. Set traps in places where children or pets won’t dig them up.

FOR MORE INFORMATION

Moles: ipm.ucanr.edu/PMG/PESTNOTES/pn74115.html
Voles: ipm.ucanr.edu/PMG/PESTNOTES/pn7439.html
Pocket gophers: ipm.ucanr.edu/PMG/PESTNOTES/pn7433.html

Many thanks to the University of California Statewide Integrated Pest Management Program for their excellent Pest Notes, from which we have borrowed much content!