

# Mystery solved: voles responsible for all those holes

BY MARY FOLEY

What are they? There are dozens of them. Little round holes about the diameter of a golf ball and they are everywhere. They look like snake holes but snakes aren't out yet; and that would be a lot of snakes. What are they? Why do we have so many of them all of a sudden?

These holes are made by voles. Some speculate that this year's mole and vole population boom is a consequence of last year's cicada hatch. That's true in the case of moles but doesn't explain the explosion of the local vole population. Moles and voles are both mammals and that's about all they have in common.

*Better Homes and Gardens* puts the differences between moles and voles into context for homeowners: "moles are insect eaters, feasting on grubs or worms. Although they're often accused of gobbling bulbs, they aren't the guilty party—it's the voles that gorge on bulbs and perennials, eating them from belowground. Chipmunks and squirrels also eat bulbs, but they dig them up before devouring them. Voles gnaw on the bark and small twigs of shrubs and trees, and will munch on new shoots of perennials." Voles are particularly fond of daffodils, hostas, iris, tulips, and lilies as well as anything growing in the vegetable patch. It's possible to distinguish vole damage from that caused by rabbits or deer. Vole damage to trees and shrubs is characterized



by girdling and areas of irregular patterns of gnaw marks about 1/16 to 1/8-inch wide; gnawed stems may have a pointed tip. Stems damaged by rabbits are clipped at a smooth 45-degree angle and have wider gnaw marks than those made by voles. Stems browsed by deer usually have a rough, jagged edge.

Voles are the garden culprits. They look like field mice and live close together in colonies of up to 300 individuals (which is why when you have one vole hole you are likely to have a lot of vole holes). The clearest signs of their presence are aboveground runways, often hidden under grass or mulch, connecting 1/2 to 2 inches in diameter burrow openings. Vole populations are cyclical, reaching peak numbers every three to six years before dropping back to low levels after a year or two. According to wildlife biologist and cicada/mammal population expert Dr. Keith Clay of Indiana University in Bloomington, the best predictor of vole population fluctuations are not cicada hatches

but rather the weather. Wet springs and summers support the growth of lots of grass, the principle food source for herbaceous voles. In other words, a good hay year is a good vole year. Last year farms in the Piedmont got three cuttings of hay and the vole population had a hay day.

Dr. Jim Parkhurst, wildlife biologist with the Virginia Tech Cooperative Extension Service, believes common suburban landscaping practices also contribute to increased vole populations. Voles travel above ground under long grass to hide from predators; heavy mulch and fabric weed barriers work just as well for their purposes. In an effort to control weeds and produce aesthetically pleasing, lush landscapes homeowners have unwittingly created vole havens. Parkhurst also points out that, particularly in suburban areas, vole predators have been reduced to the point they can no longer keep vole populations in check. The number one natural predator of the vole is the eastern rat snake.

Pictured, at left, is a hole created by a vole. The holes have been appearing in yards throughout the county. The rodents, which look like field mice, live in colonies of up to 300 and snack on bulbs and perennials.

PHOTO BY PHIL AUDIBERT

How many homeowners encourage rat snakes in their yards?

"Everything—birds, rodents, small mammals, even snakes, lizards, and fish will feed heavily on cicadas when they are out," according to Dr. Keith Clay. Those predators usually eat voles. It's possible predators were eating more cicadas and fewer voles last year. Dr. Parkhurst believes all of these factors: weather, landscaping practices, predator population reduction, possible alternative food sources for the remaining predators and the cyclic population patterns of the species all came together in a perfect storm. The vole population exploded.

The good news is that these periods of overpopulation rarely last more than a year or two. What can be done in the meantime? The three primary methods of damage control are mechanical, chemical and deterrence.

The Virginia Tech Cooperative Extension Service has published

a new guide for homeowners dealing with mole and vole damage. The guide can be found at <http://www.anr.ext.vt.edu/lawnandgarden/turfandgardentips/tips/mole-vole.html> Parkhurst, whose work is featured in the new guide, is a proponent of mechanical control measures as a first line of defense. His advice for homeowners with vole problems: create more space between plants, mow grass very low, remove fabric weed barriers and don't automatically kill the rat snakes.

Chemicals are often ineffective. The 2013 Pest Management Guide published by the Virginia Tech Cooperative Extension Service says "[Chemical] Repellent is registered for [voles] but is largely ineffective or has not been proven effective." Chemical baits can harm or kill more than just voles for which they are intended. Predatory and scavenging birds and mammals like owls, hawks, raccoons, foxes, skunks and coyotes that eat dead or dying voles will also be poisoned. Pets can also become poisoned by digging up and consuming chemical baits or by eating dead or dying voles.

The best known brands in the poison bait industry contain anticoagulants or blood thinners which cause internal bleeding and hemorrhaging when ingested leading to death. There is a treatment for pets that have

accidentally ingested these poisons, if caught in time, but signs of sickness are not always obvious. Symptoms to look for include pale gums and weakness. Dogs and cats often suffer from unseen internal bleeding into the chest or abdomen. I've seen pets die if not treated in time and it's heartbreaking because it is so preventable." If you suspect your pet may have come in contact with a poisoned rodent or a chemical bait, call your vet right away.

Local business St. Gabriel Organics sells a product for controlling moles that is environmentally preferable to traditional chemical baits and may offer an alternative for homeowners.

Dan Gregg has encountered voles both at Grelen Nursery and at home. At Grelen, voles attacked stands of young Christmas trees to the extent they stripped the cambium layer (the living layer just below the bark) right off the trunk. By mowing the tall grass surrounding these trees Gregg was able to control his vole outbreak and has had no further problems. Gregg and his wife Leslie installed a large, lushly planted shade garden 17 years ago at their home. "In two months", he recalls, "we didn't have a root left thanks to the voles." Their solution? They got an outdoor cat. They have not had a vole problem since...and they still have an outdoor cat to act as a vole deterrent!

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