

# Check for Vole Damage

Voles are small, mouse-like rodents found throughout Nebraska. They are sometimes called meadow mice or field mice. Voles have short tails (about one inch long), stocky build and small eyes. Voles can cause problems by damaging lawns, gardens, tree plantings and other plants.

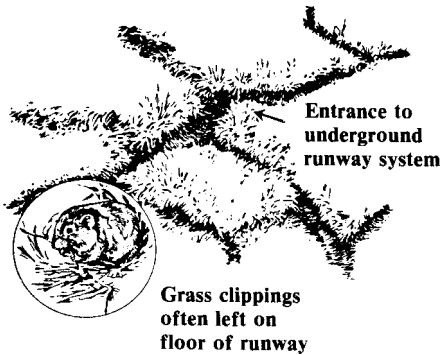
The most common species, the prairie vole, is found statewide. Meadow voles are also found throughout the state. Pine voles, or woodland voles, live in the woodlands of the extreme south-eastern corner of Nebraska.

Voles are an important food source for many predators, including snakes, hawks, owls, coyotes, weasels, foxes, mink and badgers. Death rates for voles are very high. In the wild, they may not live longer than two months and few live longer than 16 months.

Prairie and meadow voles normally have five to 10 litters per year and average three to five young per litter. The gestation period is about 21 days. One meadow vole held in captivity had 17 litters during one year, totaling 83 young. One of the females from her first litter had 13 litters, totaling 78 young before she was one-year-old.

**Damage:** One clue you may have prairie and meadow voles in an area is by finding their surface runways. The voles make runways by clipping off grass and plants making a path about one to two inches wide (see image). Typically, homeowners call the extension office in early spring when they discover these paths after the snow melts.

The voles damage woody plants during late-fall through early-spring when it is hard to



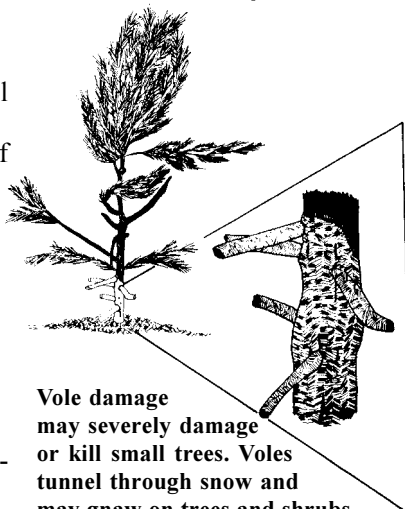
find green vegetation. Voles tunnel through snow and may gnaw on trees and shrubs up to the height that snow accumulates during winter.



Prairie vole

**Control:** If you discover voles, it doesn't mean you automatically have major property damage. But, high populations can build up quickly and can be cause for concern.

Before you decide to control voles, consider the extent of the problem in relation to the cost of control. For example, a few voles could damage a highly valued tree or flower bed and warrant control. At other times, you may not even notice the voles or find damage, making control unnecessary. There is a relationship between vole populations and the level of damage you can expect. Prevention is more beneficial than population control after the damage has occurred.



Vole damage may severely damage or kill small trees. Voles tunnel through snow and may gnaw on trees and shrubs up to the height that snow accumulates during winter.

A combination of methods may be more effective than relying on any one method for vole damage control. Most vole damage problems in urban and backyard areas probably involve small vole populations that can be controlled with habitat modifications, fencing or exclusion, snap-trapping and repellents. Non-urban vole damage situations may involve larger vole populations over greater areas, and can be dealt with by habitat modifications, repellents and toxic baits, when necessary.

**To Learn More:** Call or visit the extension office to pick up the publication "Controlling Vole Damage" (NebGuide G887). This resource is also available on the web. Visit [lanecaster.unl.edu](http://lanecaster.unl.edu). (SC)

## Tip for Mouse Trappers!

Are you frustrated because your mice are licking the peanut butter off traps without springing them? A local pest control professional says he cuts caramels in half (i.e., the little ones wrapped in plastic), and presses half into the trigger mechanism of each trap. The caramels are hard enough the mice can't steal the bait without springing the trap. He also swears mice like it better than peanut butter, too. Try it and see if it works. (BPO)

# Natural Insecticides Aren't Always So Safe

Barb Ogg  
Extension Educator

Because of general misunderstandings floating around, there is a lot of confusion about "natural" products. There is an assumption "natural" pest control products are safer than synthetic ones. This is not necessarily true. The following was a response to an internet client who wanted to know about "natural" products that have insecticidal properties.

**Q.** I purchased a home a year ago and am finding some insect problems in the home and garden. I have browsed your site and think it is the most informative I have found. Are you aware of the use of natural plants to control insects? I would like to use natural, instead of man-made pesticides, to control insects.

**A.** We don't promote natural products because, in many cases, they are more toxic than some other pest control approaches that actually are much safer. We are more interested in having people use low toxic approaches than ones that are natural. But, there are many products available that are botanical/natural.

Many plants have insecticidal/repellent properties. Because the insecticidal compounds in plants are often found in low concentrations, scientists have been working to identify these plant compounds, determine their effectiveness and either extracting them outright or synthesizing them so they can be produced more economically. Many products are already on the market.

Many people equate a product that is "natural" with "safe," but this just isn't true. Nicotine, from tobacco, is a natural insecticide is very toxic—much more toxic than

most synthesized insecticides. Nicotine is so toxic that many of its uses have been cancelled by the EPA. The only form that may be available to the public is called Nico Soap. Nicotine is an alkaloid. Other well-known alkaloids which DO NOT have insecticidal properties include caffeine (from coffee and tea), morphine (opium poppy), cocaine (coca leaves), strychnine (climbing trees and shrubs in the genus *Strychnos*), coniine (spotted hemlock, the poison that killed Socrates) and LSD (ergot). Another alkaloid in the news lately is ricin, a very poisonous toxin in castor beans. It should be apparent alkaloid compounds are powerful chemicals.

## Botanical Insecticides Include:

**Pyrethrum** — from chrysanthemum flowers. This naturally occurring chemical is unstable and breaks down into

non-toxic products quickly after it is applied. It has quick knock-down activity, but no residual activity, which means insects appear to die, but then revive. A synthesized synergist—known as piperonyl butoxide—is usually added to pyrethrum to increase its residual activity. There are many pyrethrum products labeled for many different uses.

**Rotenone** — from the roots of two types of tropical legumes (derris and cubé). It has been used for generations as the ideal general garden insecticide because it is harmless to plants, highly toxic to insects and moderately toxic to warm-blooded animals. It leaves no harmful residues on vegetables and there is no waiting interval between application and harvest. It is both a contact and stomach poison and is sold as spray concentrates and a ready-to-use dust. It kills insects slowly, but causes them to stop feeding almost immediately. However, it is also highly toxic to fish and is

used to kill unwanted species in ponds before restocking with game fish.

**Limonene** — from citrus peels. It is effective against external parasites (fleas, mites and ticks) on pets and is virtually non-toxic to warm-blooded animals. It is available as ready to use sprays, aerosols, shampoos and dips for pets. There is a citrus extract product labeled for ants, fleas, roaches and silverfish, but there may be other more effective products on the market.

**Azadirachtin** — from seeds of the neem tree. These products are registered for use on horticultural crops, in the greenhouse and on ornamentals. It has some rather sensational insecticidal properties, including disrupting the molting process. Products are labeled for use on garden crops, ornamentals and in the greenhouse.

**Sabadilla and Ryania** —

see *INSECTICIDES* on page 11

## Environmental Focus



## Hunting Workshop: Spring Turkey

Wednesday, March 19 • 6–9 p.m.  
Lancaster Extension Education Center,  
444 Cherrycreek Road, Lincoln

If you are interested in hunting turkeys in the spring season, this is a workshop you can't miss. Experts will share information about turkey biology, behavior and hunting tips that will make you more successful. Topics covered will include turkey calls, camouflage, using ground blinds, choosing the best shot load, field dressing, guns, safety and state regulations.

This FREE seminar is offered by Nebraska Game and Parks Commission, but seating will be limited so RESERVATIONS ARE REQUIRED. Call 402-332-4543.

## Protect Your Well Water

Many rural Lancaster County folks obtain their drinking water from a well on their property. Well water may look and taste okay, but bacteria in the water can make you sick. Nitrates in water can pose a health hazard to infants, in particular, causing methinoglobinemia, also known as "Blue Baby Syndrome."

It is wise to have your well water tested periodically, especially if your neighbors are finding contaminants are in their water or your family has unexplained gastrointestinal illnesses.

To prevent contaminants from entering your well, the EPA recommends the following steps to protect groundwater supplies.

- Periodically inspect exposed parts of the well for damage to the casing or cap. Look for any cracking or corrosion.
- Slope area around the well to

- drain surface runoff away.
- Install a well cap or sanitary seal to prevent unauthorized entry to the well.
- Disinfect drinking water wells once a year with bleach or hypochlorite granules.
- Keep maintenance records, such as disinfection or sediment removal, that may require the use of chemicals.
- Hire certified well drillers for new construction, modification or abandonment of wells.
- Avoid mixing or using pesticides, fertilizers, herbicides, degreasers or other potential pollutants near wells.
- Do not dispose of wastes in abandoned wells.
- Do not cut the well casing below the land surface.
- Pump and inspect septic systems routinely.
- Never dispose of hazardous materials in septic systems.

Source: USEPA (BPO)