

# Voles

## Management Tools for a Healthy Learning Environment

### Voles

#### General Info:

Voles are a frequent pest of turf, ornamental plantings, orchards, hay, and pasture. Though voles do not often enter homes, they can occasionally find their way indoors. Voles are listed as non-game animals in Utah and are protected, but controls can be implemented when voles are causing damage. There are five vole species in Utah, but the meadow vole (*Microtus pennsylvanicus*) is the most common (Fig. 1).

#### What do they look like?

Voles are stocky rodents with short legs, small ears and a blunt nose. They are typically brown to gray mixed with black hairs. Younger voles may be darker with nearly black feet. Voles range in size from 4 to 7 inches with tails that span 3/4 inch to 4 inches. Their average weight is 3 to 4.5 oz.

#### What are their nesting habits?

Voles are active year-round and do not hibernate. They are difficult to observe during the day, as they tend to be most active in the morning, evening, and night. Peak breeding occurs in early spring and in the fall.

Voles love low cover. Groundcovers and thick litter are their preferred nesting habitat (Fig. 1). Often, runways can be seen leading from turf into areas with low-growing vegetation where the burrow or nest is located (Fig. 3). Voles prefer to stay close to home if food is readily available, but territory can range from 0.5 to 1.5 acres.



#### Above:

Fig. 1. Adult meadow vole (University of California Statewide IPM Project).

#### Right:

Fig. 2. Meadow vole nest in groundcover (Kiera's Forest, Natureguelphtracking.wordpress.com).



#### Did You Know?

- Voles are prolific breeders and produce an average of 3 to 5 litters per year in outdoor locations.
- Vole populations vary from year to year, depending on environmental factors. In epidemic years, they can number over 400 per acre!
- Voles can eat almost their entire body weight in one day!
- Voles live from 2 to 18 months, with predation being the top killer— up to 88% in some cases.



**Left:**  
Fig. 3. Meadow vole runways in turf (Ryan Davis, Utah State University).

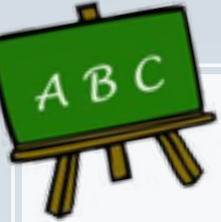


**Right:**  
Fig. 4. Vole feeding injury to tree bark (USDA Forest Service, Bugwood.org).

## How to Identify a Vole Problem

Control of voles begins with monitoring for signs of activity. Signs of voles include:

- Active, worn burrow openings about 1.5 inches wide in fields or cultivated areas (Fig. 2)
- Runways in turfgrass about 2 inches wide; these often include multiple borrows and can be littered with vegetative clippings, feces and soil (Fig. 3)
- Gnaw marks at the base of trees or on roots measuring about 1/8-inch wide and 3/8-inch long (Fig. 4)
- Plant clippings
- Feces



## Managing Voles With Integrated Pest Management

### Habitat Modification/Exclusion

- Prune trees, shrubs and branches away from the ground, mow the lawn short, remove weeds or tall grasses in turf and around trees and remove mulch from around root collars.
- Wrap a 1/4-inch hardware cloth around the stem of shrubs and trees. The mesh should be buried to a depth of 6 inches and extend 6 inches out of the ground.
- Install properly fitted door sweeps, door seals, and plug any access points into the buildings.

### Monitoring/Trapping

- Outdoors, place expanded-trigger snap traps in vole runways near burrows or areas of high activity. Place traps at right angles, flush with the bottom of the burrow to catch voles as they accidentally run over the triggers.
- Indoors, place traps in sets, 1 inch apart, along baseboards with expanded triggers facing the wall. Live trapping options include multiple-catch traps in runways and Sherman live traps next to walls.
- Check traps and remove dead voles daily. Due to possible disease transmission, always handle rodents with rubber gloves and bury dead voles.

**For more info, check out:**

**Utah State Univ.:** [http://extension.usu.edu/files/publications/publication/NR\\_WD\\_009.pdf](http://extension.usu.edu/files/publications/publication/NR_WD_009.pdf)

**University of Idaho:** [http://www.extension.uidaho.edu/forage/Proceedings/2011Proceedings/5MmgtofMeadowVoles\\_Gunn.pdf](http://www.extension.uidaho.edu/forage/Proceedings/2011Proceedings/5MmgtofMeadowVoles_Gunn.pdf)

**EPA Rodenticide Regulations:** <https://www.epa.gov/rodenticides/restrictions-rodenticide-products>