

Voles

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Voles are small mammals that are commonly confused with other rodents such as mice, moles and shrews. They are widely distributed and can be found throughout North America. Because their diet may include bark and succulent roots, voles can pose a threat to woody plants in residential landscapes. Correctly identifying the rodent pest is the first step towards a successful management program, as management strategies vary between species.

Description and Biology

Most voles are approximately 4-6 inches in length at maturity and possess stout bodies with short limbs. Voles generally have brown fur that can include shades of black or gray (Figure 1). Their eyes are black and their external ears project just outside their fur. Compared to mice, voles generally have shorter tails. Voles lack the enlarged front legs and digging claws of moles and have more rounded snouts than shrews. Additionally, whereas moles and shrews feed mostly on soil dwelling invertebrates, voles are primarily herbivores, or vegetarians. While voles feed on a variety of plant materials, they are more likely to feed on bark or roots during autumn and winter. Voles may breed throughout the year and produce around 3 to 6 young per litter. Within 4 to 6 weeks, they are sexually mature. This short reproduction cycle allows vole populations to increase rapidly. Voles will construct runways (Figure 2) near the surface that can be used for foraging or as a means to access their burrow.

Damage

One indicator that voles may be present is an extensive surface runway system. However, similar runways are created by other ground-burrowing rodents. Also, some vole species build runways deeper underground, so the absence of surface runways does not rule out vole activity. Voles often cause damage to trees and

Figure 1: Woodland (or pine) vole, *Microtus pinetorum*

Photo Credit:

https://commons.wikimedia.org/wiki/File:Woodland_Vole_Microtus_Pinetorum.jpg



Figure 2: Vole runway

Photo credit: Dave Robson,

<https://www.wildlifeillinois.org/gallery/mammals/mole-like/voles/>



shrubs by chewing through bark near the ground (Figure 3). Evidence can also be less obvious, such as root girdling belowground or below the snow line. If vole damage occurs during winter, evidence of plant decline or death may not appear until drought stress occurs the following growing season.

Management

Vole management begins with proper yard sanitation. Tall vegetation should be trimmed and woody debris removed to reduce vole habitat. When a specific woody plant is targeted, all vegetation and mulch should be removed from the area immediately surrounding the trunk, and a layer of stone or gravel added. Next steps depend on the size of the vole population, but may include repellants, traps, or other strategies. Trials are ongoing at the Bartlett Tree Research Laboratories in Charlotte, North Carolina to determine the efficacy of commercially available repellants. Contact your local Bartlett Arborist Representative to learn more about strategies for managing voles in your landscape.



Founded in 1926, The Bartlett Tree Research Laboratories is the research wing of Bartlett Tree Experts. Scientists here develop guidelines for all of the Company's services. The Lab also houses a state-of-the-art plant diagnostic clinic and provides vital technical support to Bartlett arborists and field staff for the benefit of our clients.

Figure 3: Close-up view of chewing damage consistent with voles

