



Vertebrate Pest Identification Key: Field Rodents & Other Vertebrate Pests

This key is to help landowners and property managers properly identify common vertebrate pests in Montana's fields. This key is not exhaustive. Questions and images can be submitted to svantassel@mt.gov or by calling 406-431-7720. Additional resources may be found at the end of the document.

Ground Squirrels

- Activity—Daytime; Mar-Oct



Figure 1. Richardson's ground squirrel. Columbian ground squirrels look similar except that they have a rusty colored nose.



Figure 2. Range of the Columbian ground squirrel (blue), and Richardson's ground squirrel (pink) and where the ranges overlap (purple).



Figure 3. Holes are 2-2.5 inches wide. Excavated soil will be present in front of some holes.



Figure 4. Trails between holes average 2 inches in width.

Moles

- Moles do not occur in Montana.



Figure 5. Eastern mole.



Figure 7. Pocket gopher. Note the blunt nose, exposed incisors, small ears and eyes.



Figure 6. Mole run.

Pocket Gophers

- Activity- Daytime/Nighttime/Year-round.
- Mound creation increases during spring and fall.
- Rarely come to the surface during daylight hours.
- Eat roots of plants, especially alfalfa.



Figure 8. Typical kidney-shaped mound created by a pocket gopher.



Figure 9. Example of an area inundated with pocket gopher mounds.



Figure 10. Tubes of soil (called Soil Castes) created by pocket gophers under snow.

- Also gnaw tool handles and wood impregnated with salt.



Figure 11. Pine tree showing bark damage caused by a porcupine.

Porcupines

- Activity-Nocturnal/Year-round
- Bark damage to the upper sections of trees.



Figure 12. Close up of bark damage caused by a porcupine.

Prairie Dog

- Activity- daytime/year-round
- Live in communities called “towns”.
- Hole openings tend to be 5-8 inches wide.



Figure 13. Prairie dog in alert posture.



Figure 14. Prairie dog burrow and mound. Holes can be 4-12 inches wide and may have a dirt plume (shown).

Skunk

- Activity: Nighttime/year-round
- Late summer turf damage consists of precise divots in turf where skunks hunt for insect larvae.
- Smell: contrary to the cartoon character PePe LePew, skunks don’t emit odor. Their odor is only smelled when they spray.



Figure 15. Divots to turf caused by skunks digging for insect larvae and worms.

Voles (aka meadow mice)

- Activity- Daytime/Nighttime/Year-round
- Damage typically occurs in tall grass, crawling shrubs, and under snow.



Figure 16. Meadow vole. Note the blunt nose, unpronounced ears, and tail typically shorter than $\frac{1}{2}$ the length of the body.



Figure 17. Trails cut through grass caused by voles, about 1-2 inches wide.



Figure 18. Trails created by voles under the snow that are revealed when the snow melts.



Figure 19. Cluster of vole holes in the grass; about 1-2 inches wide. Excavated soil will not be found in front of holes as voles scatter the soil.



Figure 20. Gnawed bark caused by voles; typically below the snow line.

Additional Information

For technical assistance on the management of vertebrate pests, visit <https://agr.mt.gov/Vertebrate-Pests> or contact Stephen M. Vantassel, Vertebrate Pest Specialist, Montana Department of Agriculture, 625 NE Main St. Suite 3, Lewistown, MT 59457: 406-431-7720 svantassel@mt.gov.

Photo Credits: Fig. 1. Szmurlo/Wikimedia. Fig. 2. Montana Field Guide <http://fieldguide.mt.gov/>. Fig. 5. Bert Cash. Fig. 6 and 14. Wildlife Control Consultant, LLC. Fig. 7. Motomco. Fig. 16. Jan Gamble/NPS. All other photos: Stephen M. Vantassel/Montana Department of Agriculture.