



Managing Wildlife: Raccoons, Skunks, Moles, Voles, & Squirrels

2022 OTF Conference & Trade Show and OSU Green Industry Short Course

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Living with Wildlife



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Steps for Managing Wildlife Damage

- 1) Identify the species responsible
- 2) Understand the species habitat needs
- 3) Make cost-effective decisions
 - Bring damage down to a tolerable level
- 4) Employ management options
 - Often involves persistence, commitment, and continual monitoring




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Integrated Wildlife Damage Management

The integration and application of practical methods of prevention and control to reduce damage by wildlife while minimizing the harmful effects of management measures on humans, other species, and the environment.

Trapping
Hunting
Exclusion
Pesticides
Scare Tactics
Habitat Modification




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WHO IS THE CULPRIT?




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Digging Damage ID



Skunk




Raccoon

- Raccoons and skunks use paws to dig holes and scrapes.
- Raccoons roll back sod.
- Skunks, too?


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Track ID 101



B – Raccoon

- Toes connected to pad (no negative space)
- Toes evenly spaced
- Small claw marks



C – Skunk

- Negative space between toes and pad
- Toes tightly spaced
- Claw marks register clearly


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Managing Raccoon and Skunk Damage

- Remove denning sites in spring
 - Under buildings, brush piles, dry culvert
- Treating for grubs
 - Preventative treatments
 - May also need to treat irrigated, borders
 - Spot treat with curative/rescue insecticides (trichlorfon)
 - Still other insects available
- Trapping



See bygl.osu.edu/node/855 for article on white grub control.



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Raccoon and Skunk Trapping

- Trapping
 - Along access routes
 - May not be where damage is occurring
 - Near denning sites
 - Hire an experienced trapper
- Baits
 - Raccoon - sweets
 - Skunks - cat food, sardines, peanut butter on bread




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Is relocation allowed?





- **Raccoons, skunks, opossum, beaver, fox, and coyote**
 - Must be released on-site or euthanized to prevent potential disease transmission
 - Can not be relocated
- **Squirrels (trees squirrels, groundhog, chipmunk), moles, voles, shrews, mice, rats, mink, muskrat, and rabbits**
 - Can be euthanized, released on-site, or relocated.
 - If relocated, must be outside in the city/village of capture and with permission of the recipient landowner

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List of Nuisance Wild Animal Control Trappers by County



www.wildohio.gov

Search 'Nuisance Trappers'

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The Best "Solution" for De-Skunking

- 1 quart of 3% hydrogen peroxide
- 1/4 cup baking soda
- 1 teaspoon liquid soap
- Rinse well and repeat

- This solution will generate oxygen, so do not bottle it!



Raccoon and Skunk Repellent?



- Available repellents
 - Garlic oil
 - Capsaicin
 - Black pepper
 - Mustard oil
- Limited to NO effectiveness

WHO IS THE CULPRIT?

Moles



Voiles



Mole or a Vole?



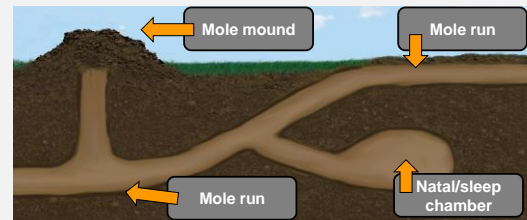
Mole

- Insectivore (worms, beetles, grubs)
- 3 species in Ohio
 - Eastern mole most common

Vole

- Rodent (plant material)
- 3 species in Ohio, two are common, AKA meadow mice
 - Meadow vole most common

Mole Ecology



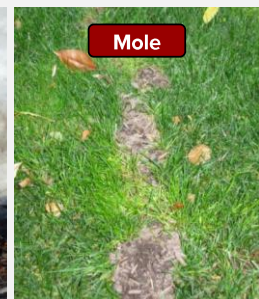
- Consumes 3/4 body weight daily
 - 15 feet of tunnel/hour
- 3-5 moles/acre = average density
- Single litter in May, 4-5 young

Vole Ecology



- Prolific breeder
 - Every 3 weeks from March-November
 - Target populations fall-winter
 - 4-6 young/litter (up to 11)
 - Sexual maturity after 25-40 days
- Densities of 10-100/acre are common
 - Cyclic populations
 - Population monitoring

Identifying Mole and Vole Damage



Identifying Mole and Vole Damage



Mole



Vole



Mole

Vole tunnels under mulch



Identifying Vole Damage



1.5-2"
diameter
holes



Management Options for Mole Damage



Management Options for Mole Damage

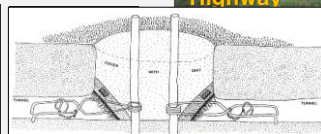
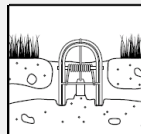


"Our little mole problem is getting worse."

- Trapping
- Pesticides
 - Toxic baits
 - ~~Repellents~~
 - ~~Gas cartridges~~
 - ~~Fumigation~~
- Harassment
 - ~~Ultrasonic devices~~

Trapping Moles

- Several types of traps
 - Harpoon, choker loop, scissor jaw
 - NoMole, Moleinator, Victor Out O' Sight
- All are lethal and effective.



Highway

Side streets

Use multiple traps and trap active, straight feeding runs near soil surface.

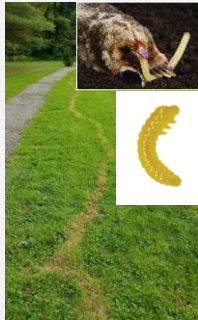
Wear gloves!

Mole Pesticides – Toxic Baits

- Most poison baits can be used in residential areas, golf course, around homes, and other non-crop grassy areas.
 - Always read the label!
- Must be applied below ground.
- Place in straight, active runs.

- Secondary toxicity concerns (gel bait)

- "Dogs, cats, and other predatory and scavenging mammals and birds might be poisoned if they feed up on animals that have eaten this bait."



Is it a Mole or a Vole?



Mole

Vole

- Insectivore (worms, beetles, grubs)**
- 3 species in Ohio
 - Eastern mole most common

- Rodent (plant material)**
- 4 species in Ohio, two are common, AKA meadow mice
 - Meadow and Woodland vole

Quick Quiz!

Is this a vole?



Management Options for Vole Damage



- Habitat Modification
- Exclusion
 - Short-term use
- Trapping
- Pesticides
 - Repellents
 - Short-term use
 - Toxic baits

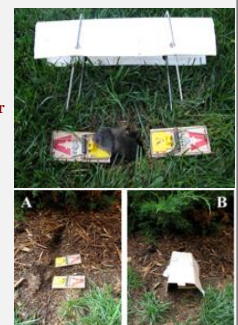
Vole Habitat Modification

- Reduce/eliminate ground cover
 - Landscape grasses
 - Mulch
 - Grass/weeds around trees
 - Grasses cut short into fall
 - Increases predator access
- Remove attractive cover & food sources
 - Straw bales, boards, etc.
 - Bird feeders
 - Fruit drop (especially if using poison baits)



Vole Trapping

- Most effective for smaller areas **or** in conjunction with toxic baiting
- ID active areas
 - Cut grass blades/vegetation in runs or around holes
- Snap traps – expanded trigger (use dozens) or multiple catch traps
 - Hit population hard = longer recovery time
- Place directly inline with vole runs
 - Cover traps to prevent non-target captures



Vole Pesticides – Toxic Baits

No toxic baits are available for use in edible gardens or crops.

- Application best in fall
 - After breeding season
 - Gather food for winter
- Warfarin (anticoagulant), Bromadiolone, Bromethalin
 - Must be used within 50-100 of building/residence with a bait station
- Other toxic baits are restricted use



Vole Pesticides – Toxic Baits

- Other toxic baits:
 - Zinc phosphide
 - Anticoagulants
- Specific site restrictions
 - Non-residential
 - Bare ground restrictions
 - Bait stations required
- Special care must be taken to avoid non-target species exposure
- Pre-bait to increase bait acceptance



Identifying Groundhog Damage



Look for well worn trails leading to/from burrow.

Groundhog Habitat: Den System

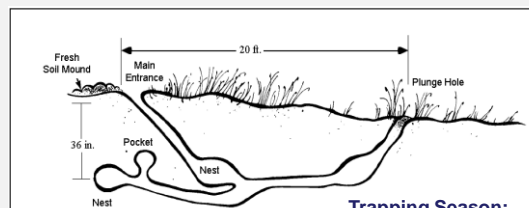


Figure 1. Diagram of a typical woodchuck burrow.

Trapping Season:
March 1st – Sept. 30th
(hibernating Oct. - Feb.)

Average 1-2 groundhogs/acre. They will defend their territories (0.6-4 ac) outside of the breeding season.

Options for Groundhog Management

- Exclusion & Repellents
 - Protecting gardens
- Habitat Modification
 - Denning areas
- Lethal Control
 - Hunting/shooting
 - Legal year round
 - Gas cartridges
- Trapping

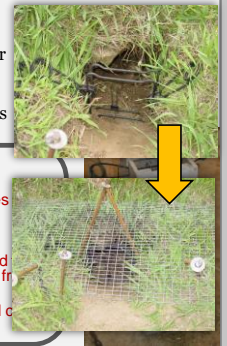


Groundhog Trapping

- Locate dens during spring
- Activity – diurnal, avoid heat in summer
- Snares w/relaxing lock (if not NWCO)
- Cage traps (10"x 12"x 32") or lethal traps

Rules and restrictions for lethal traps:

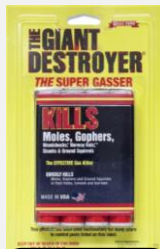
- Body gripping trap less than 7 x 7 inches or 220)
- No more than 3 feet away from hole
- Must have enclosure or structure around to prevent other animals from getting in from outside
- Tag with name and address on trap and check every 24 hours



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Gas Cartridges

- Sodium nitrate or potassium nitrate
- Non-restricted use
- **Where to find them:**
 - Pocatello - USDA, Wildlife Services (614-993-3444)
 - Farm supply stores – over-the-counter
- Not for use under buildings and structures
- Use during spring, after dusk, & plug all holes
- **Caution:** Avoid non-target burrowing animals



Giant Destroyer:
for use in open
fields and non-crop
areas, including
residential

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Managing Chipmunk Damage

- **No toxic baits labeled for use on chipmunks**
- Habitat Modification
 - Keep vegetation (cover), rocks, wood piles, and other debris away from buildings
- Trapping
 - Live traps or rat snap traps
 - Set along runways or burrow entrances
 - Secure to prevent movement
 - Bait: peanutbutter & oatmeal



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Remember to be Safe.

- Wear appropriate safety equipment
 - Glove when handling traps or pesticides
- Wash hands after handling traps
- Avoid setting traps in areas with high pet and human traffic
- Don't set traps unless you can check them daily.
- READ THE LABEL.



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Predators can help!



www.urbancoyoteresearch.com

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All Resources Posted at:



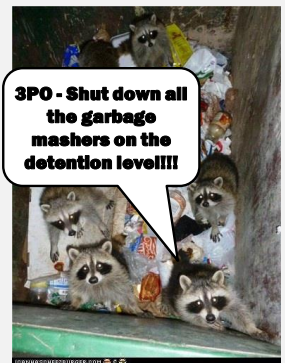
THEWILDSIDE@OSU

News, Education, and Conversations on Ohio Wildlife
u.osu.edu/wildside

Thank you!

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Raccoon Wars