



# Managing Vertebrate Pests

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# Legal Restrictions:

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- Special laws and regulations restrict how and when you can hunt and kill many vertebrates (unlike insects)
  - Migratory Bird Treaty Act
  - Pesticide Laws
  - Endangered Species Act
  - City, County, State, and Federal Regulations

For control restrictions in IN visit: [www.fnr.purdue.edu/PubsOnLine/Faq16w.PDF](http://www.fnr.purdue.edu/PubsOnLine/Faq16w.PDF)

# Vertebrate Pests can be managed by IPM

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- **Cultural Controls-** landscape management tactics that discourage vertebrate foraging
  - control weeds and limit dense plantings
  - select unpalatable varieties
  - plant barrier vegetation
  - use ornamental or temporary fences
  - use rock mulch (if it won't harm plants)
- **Killing animals should only be pursued as a last option**



# Bird Management

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- **Migratory Bird Treaty Act-**  
Protects all birds except pigeons,  
European starlings, and house  
sparrows



European starling



house sparrow



pigeon

# Pigeons, starlings, and sparrows- Oh, my.



# Bird Control



- **Sanitation**- eliminate sources of food and water, remove nests
- **Exclusion**- make it impossible for birds to use human structures for nesting, roosting, or loafing
- **Repellents**- tactile, sound, visual, and chemical repellents (gels, taste, and odor repellents)
- **Population Reduction**- toxic baits, traps, and shooting



# Canadian Geese

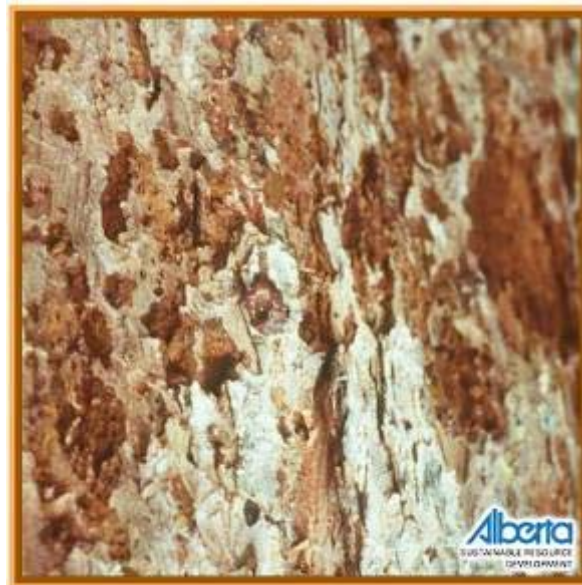
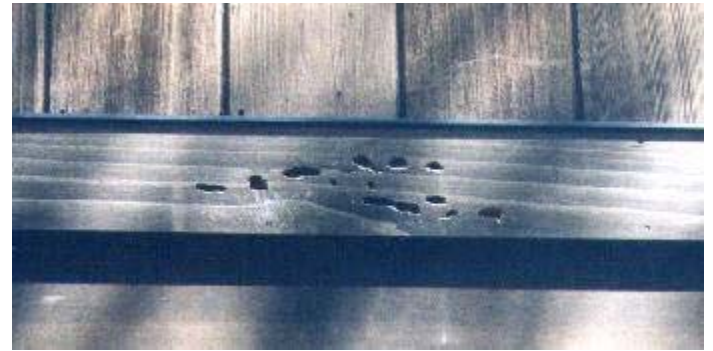


- One goose can eat 5 lbs of turf in a day and produce 548 lbs of excrement in a year. They can also be unfriendly.
- Control-
  - Use plants with hair or tough leaves to create a barrier
  - Design ponds with steep slopes to prevent them from easily moving to turf areas
  - Mechanically remove geese with **herding dogs** or **leaf blowers**
  - Chemical taste repellents are commercially available such as **Goose•B•Gone™**



# Woodpeckers

- Woodpeckers damage trees leaving a shredded or ragged appearance to the bark
- “Drumming” can damage homes and be a nuisance





# Yellow-bellied sap-sucker

- **Damage:** new rows of ¼" holes closely spaced
  - Usually only damages trees- feed on sap and insects attracted to the sap
- **Control for woodpeckers and sap-suckers:**
  - Visual, sound repellents
  - Exclusion tactics
  - Live trapping (both are protected by the MBTA)



# Squirrels



- Squirrels frequently strip bark and dig in landscaping

- **Control:**

- **Exclusion-** Band trees with 2 ft wide metal sheets to prevent their climbing them, netting
- **Live trapping-** (squirrels are protected game animals)

# Deer

## ○ Damage:

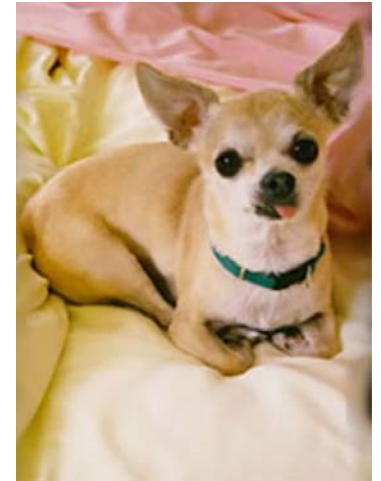
- Rip and tear plants while eating
- Trample crops and landscaping
- Cause car accidents
- Carry nasty things on them like ticks that vector Lyme disease



# Deer Control



- **Taste repellents**- effective but spray repellents can wash away
- **Electric and non-electric fencing**
- **Dogs**
- **Shooting**- requires permit except in Massachusetts
- **Hunting**- conducted by licensed hunters during the regular statewide hunting seasons
- **Offal** (remains from slaughter house) does NOT repel deer
- Don't plant hostas- deer love them



# Moles



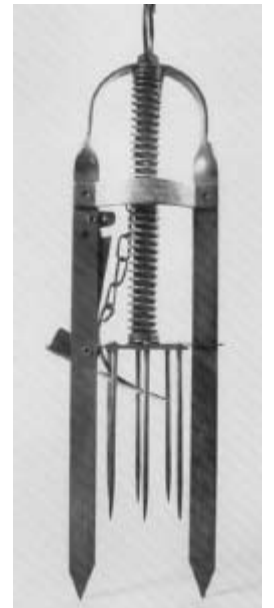
- Active day and night throughout the year
- Most active during spring and fall (burrow deeper in summer and winter)
- Feed on earthworms and soil insects
- Cause raised ridges in lawn and turf



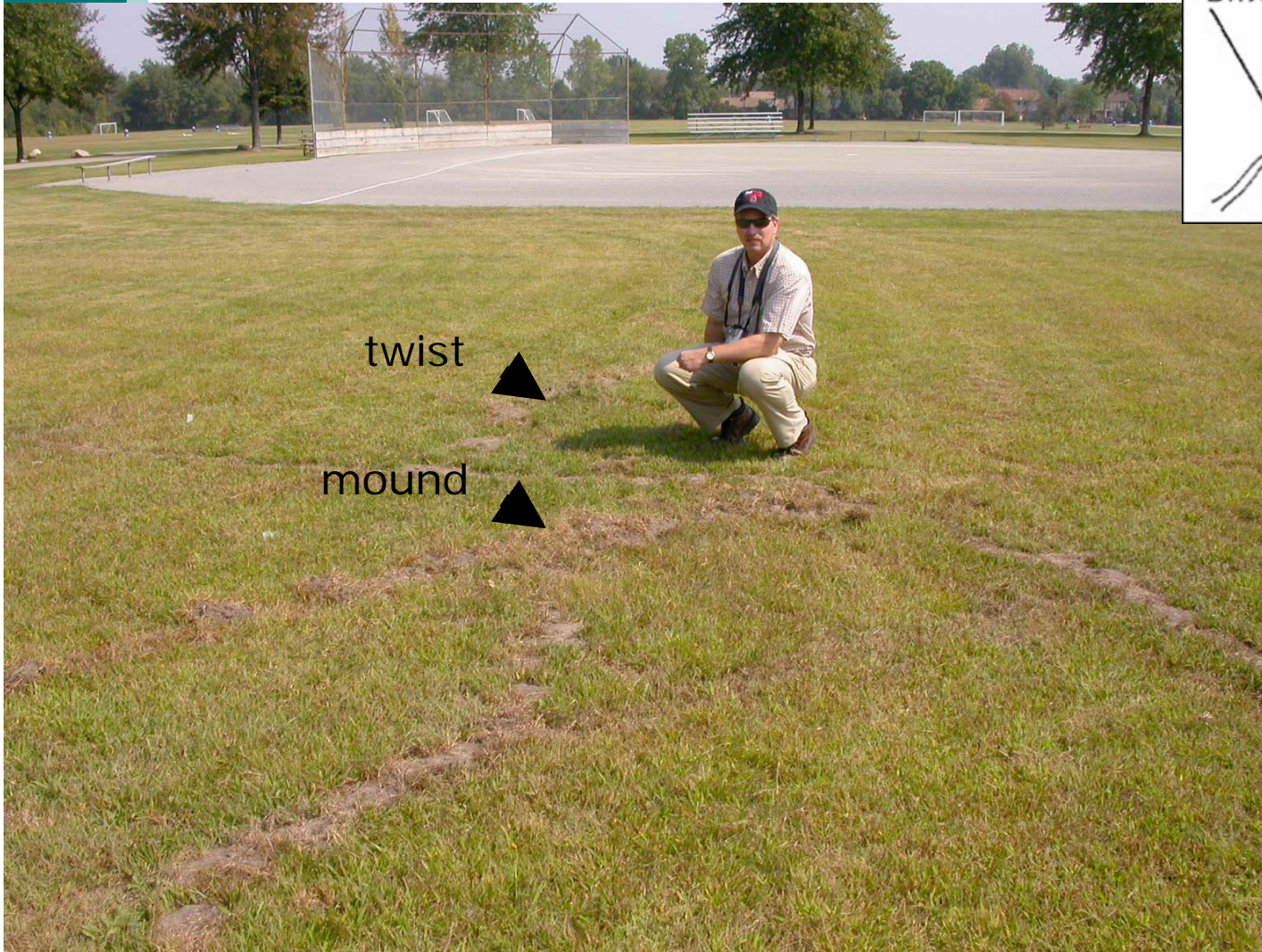
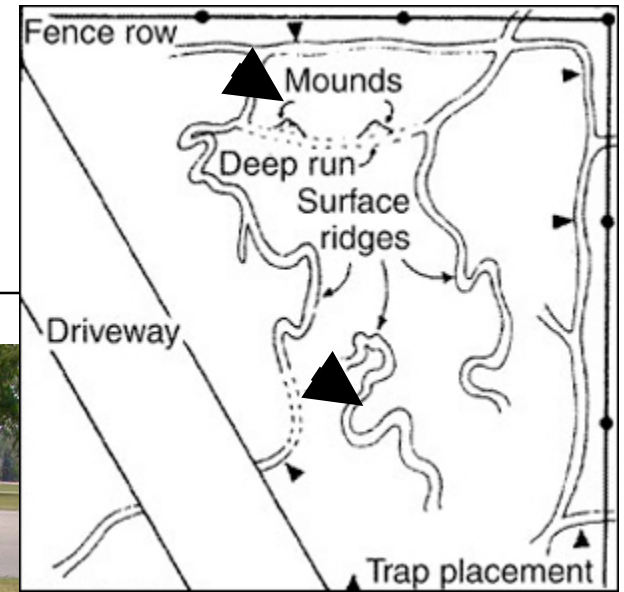
# Mole Control



- **Poisons**- difficult to get moles to eat
- **Cats**- may be successful in reducing populations
- **Spring loaded traps**- most effective
  - Scissor traps are best for deep runs
  - Harpoon traps are best for runs close to the surface
  - Find a straight run and stomp it flat
  - Check the next day to see if the run has been used
  - Place the trap in an active straight run



# Trapping moles- Avoid twisting runs and mounds



Check long runs  
To see if active



# Voles



- Commonly called field or meadow mice
- Dig trenches in turf
- Strip bark from young trees and shrubs
- Eat leaves, shoots, roots, tubers and seeds of most grasses and broad-leaved flowering plants
- Sometimes chew through irrigation systems





# Vole Control

- **Habitat modification-** keep grass and weeds controlled around young shrubs and trees
- **Exclusion-** woven wire or hardware cloth can be placed around plantings
- **Traps-** traps can be set along vole runways
- **Poison baits-** baits made with grain are readily eaten and can reduce populations
- **Repellents-** provide only short term protection, not very effective





# References:

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<http://www.fnr.purdue.edu/PubsOnLine/Faq16w.PDF>

<http://www.entm.purdue.edu/entomology/ext/targets/ADM/ADMPDF/ADM-5.htm>

<http://www.entm.purdue.edu/entomology/ext/targets/ADM/ADMPDF/ADM-10.htm>