Surviving Wildlife on your Property

Rebecca Christoffel
Assistant Professor/ Extension Wildlife Specialist
Department of Natural Resource Ecology & Management
Iowa State University
Wildlife Management for Landowners

• Sharing your property with wildlife – what does it mean?
  – Gardens and ornamental plants
  – Unwelcome wildlife guests
  – Lawns
  – Pets
  – Predation
  – Neighbors – will others welcome this?
Deer browsing
Unwelcome wildlife guests?
Lawns
Pets
Predation
Wildlife “damage” management

- There are no simple answers
- Use several, simultaneous approaches for best success
- Learn to think like the animals you are attempting to manage
Basic protocol for wildlife damage management:

- Learn about the animal
- Change the situation
- Exclude the animal
- Scare the animal
- Repel the animal
- Remove the animal
Remember:

• No single method, used alone, is likely to solve a given problem.

• The more you know about the animal--to think like them--the more successful you will be at solving the problem.
Wildlife Damage Protocol

• Know the critter – educate yourself
Usually the animals that bug us are a lot like us:

- Ecological generalists
- Adapt well to landscape changes
- Eat a wide variety of things
- “Like” the changes we have brought to the landscape, including:
  - Fragmentation of habitats
  - Simplification of the landscape
  - Removal of other predators
Survivors
Wildlife Damage Protocol

• Change the situation
Factors to change

Food
Water
Space
Shelter
Change the situation:

- Cultural practices reduce damage by limiting attractiveness of the resource.
- Can also increase tolerance levels of damage.
- Because deer are ecological generalists, they eat a wide variety of things in different seasons.
- They have preferred and non-preferred plants, BUT if they’re hungry enough, they’ll eat almost anything.
Plants not preferred by W-T deer:

- Barberry
- Boxwood
- White birch
- Most dogwoods
- Honey locust
- Prickly ash
- Colorado blue spruce
- Norway spruce
- White spruce
- Black spruce
- Austrian pine
- Red pine
- Scots pine
- Common lilac
- Russian olive
- Forsythia
Cultural techniques for moles, ground squirrels and pocket gophers:

- Dislike tillage but not practical for most turf situations
- Encourage avian predators with perches
- Mammalian predators (i.e. badgers) are effective but often leave even larger holes!
Wildlife Damage Protocol

• Exclude the animal
Exclusion of animals:

- Economic trade-off
- Temporary vs permanent exclusion
- Investment up-front reduces costs later
- Understand behavior and biology
- Winter damage worse on woody plants, summer damage on herbaceous plants
- Without exclusion, some damage will occur every year—what can you tolerate?
Exclusion:

- Practical for deer and geese in some situations
- Impractical and not cost effective for moles, ground squirrels, and pocket gophers (and most can climb, anyway!)
Wildlife Damage Protocol

• Scare the animal
Scare tactics:

• Mostly visual and auditory techniques
• Best used on birds, not mammals
• Over-use and inappropriate use often leads to animals ignoring the tactic--acclimating to the sight or sound
• “Ultra-sonics” are ineffective
Visual and auditory:
Border collies working…
Scare tactics:

- Some limited use may be effective on deer if used strategically
- Mylar flags and propane and electronic cannons effective on some geese (unpopular in urban situations...!)
- No sonic or ultra-sonic scare tactics effective on underground animals to date
Wildlife Damage Protocol

- Repellents
Repellents:

- Usually smell and taste repellents, so are primarily for mammals
- Must be used according to label directions & only when critically needed
- Over-use & inappropriate concentrations lead to rapid acclimatization
- Are area (smell) and contact (taste) repellents
Goose repellents:

- Methyl anthranilate--grape extract that is a taste aversion agent (RejeX-it™, Bird Shield™, and Goose Chase™). Safe for human consumption.
- Anthraquinone--taste and visual deterrent (ultra-violet on treated vegetation is visible to geese) Flight Control™ uses it. Sprayed areas must be posted until product has dried, to keep people out of the area.
KEEP OUT OF REACH

WARNING

See other panel for additional precautionary statements.

ACTIVE INGREDIENT:
Powdered Inedible Egg Solids:

Inert Ingredients:
ACTIVE INGREDIENT
Benzyldiethyl [(2,6 xylyl carbamoyl) methyl] ammonium benzoate .... 0.20%*

INERT INGREDIENTS ................. 99.80%

*Contains 0.017 lbs (7.76 g) active ingredient (also known as Denatonium Benzoate or Bitrex) per gallon.

Total 100.00%
Repellents:

- Useful for deer (& rabbits) if not over-used or overly hungry
- Methyl anthranilate (grape flavoring) useful for geese--have *some* sense of taste
- No repellents, to date, proven for underground species (castor bean oil?)
- Remember: no repellents for human food plants. If it repels them, it will repel you!
Wildlife Damage Protocol

- Removal
Live trapping and relocation legal is not necessarily the most humane.
Trapping:
Removal:

- Legal hunting—by permission only
- Depredation permits
- Contact your local DNR Conservation Officer
- Depends on what is possible and practical in your situation
- Archery hunting may be a possibility
Removal of the problem animals:

- Deer: translocation expensive and ineffective
- Geese: egg destruction and hunting only by special permit
- No traps or poisons for deer or geese
- Live and kill-traps legal for moles, ground squirrels, and pocket gophers
- Some registered poisons for ground squirrels and pocket gophers
Wildlife Damage Protocol

- A word about contraception
For more information:

Iowa State Wildlife Extension:
http://www.extension.iastate.edu/wildlife/Publications

Rebecca Christoffel
Extension Wildlife Specialist
(515) 294-7429
christof@iastate.edu
Deer are LARGE ruminant herbivores!

- **Summer**: eat herbaceous plants and leaves
- **Winter**: browse woody vegetation
- Eat over 350 different species of plants!
- Consume ~2.5% of their body weight of vegetation per day (by dry matter basis) but vary seasonally
Iowa deer are productive:

- One-year-old does have fawns
- Most older does in Midwest have twins
- Triplets are not uncommon
- Without hunting, deer have ~8% mortality and 5% dispersal rates annually
- Without hunting, deer herd could easily grow 20-30% annually
Look familiar?
Damage to trees and turf:
Canada geese:

- Canada geese were once extirpated from Iowa due to uncontrolled harvest
- Have been brought back with careful and deliberate management
- Are grazers, preferring the careful manicuring you do on lawns, cemeteries, golf courses, and airports
- Migratory (most) with strong “site tenacity”
Often, we create our own problems by not understanding the critter…
...or by not thinking about them.
Moles:

- are mostly solitary animals—except during the breeding season
- “Main Mole Meal” is earthworms, some larvae, centipedes, millipedes, and spiders
- DON’T eat bulbs, roots, pets, or small kids
- have a High metabolism
- hear and smell well, but see poorly
Moles, continued:

• are active year-round if soils not frozen
• are woodland/woodland edge animals
• prefer well-drained, loamy soils
• feeding runways may only be used once
• deep tunnels and nests are 12-24 inches below surface, often under stumps, rocks
• 1 acre land = ~3 moles (It only looks like there are hundreds!)
Benefits:

- mix, aerate soil
- provide tunnels for irrigation of deep roots
- eat destructive insect grubs like cutworms, Japanese beetles, etc.
Ground squirrels:

- 3 ground squirrel species in Iowa:
  - 13-lined, Franklin’s, and Woodchuck
- All are *mostly* herbivorous (plant eaters)
- All dig holes in the ground
- All are hibernators
- Emerge in spring (males first), have young in burrows, family groups or semi-colonial
Three Iowa species:
Pocket gophers:

- Underground rodents
- Primary food is roots, NOT worms or grubs
- Damage to turf comes mostly from digging
- Live in family groups/semi-colonial
- Predictable tunnel systems
- Unlike moles, soil piles more fan-shaped and have a soil plug to get to the surface for grass, seeds, etc.
Pocket gophers:
Cultural techniques for geese:

• Don’t mow so much!
• Plant tall grass buffers around ponds
• Encourage predators
Check the label for active ingredients.
Secondary poisoning a problem or not?
Bird toxicants:

- Fewer and fewer available
- Not acceptable in many circumstances
- “Starlicide” (DRC 1339) available but used mostly for feedlot situations
- Avitrol available but often entails PR problems so cities usually opt not to use it
Habitat

Area in which wildlife’s basic needs are met.

Food
Water
Space
Shelter
Thermoregulatory options