Living With Wildlife
U of M Master Gardener Training

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Today’s Agenda
- Basics of Wildlife Management
- Enhancing gardens for wildlife
- Discouraging wildlife visits to your garden
- Legal Issues
- Specific Control Issues

Habitat Management Principles
- 4 basic needs of wildlife
- Diversity
- Seasonality
- Arrangement
- Protection
- Native plants and seed origins

Four basic needs of wildlife
You can provide for one or more
- **Food** - Nutritional needs change with age and season
- **Water** - Bird-baths, ponds, creeks, and wetland – usually abundant in MN
- **Cover** - Protection from adverse weather and predators, places to raise young
- **Space** - Home range or territory requirements

Water for wildlife
Things to remember
- Requirements for water will change seasonally (e.g., winter vs. summer)
- Drought-related problems
- Riparian areas are of critical importance
  - Important habitat
  - Multiple Uses – homes, travel, connectivity

*Cover* is a habitat requirement that prevents waste of energy

Types of cover
- Hiding or escape cover
- Thermal
- Reproductive
Space
- *Home range* is the area used by an animal for all its activities
- *Territory* is defined as all or part of a home range defended to exclude competitors

Territories
- Vary in response to resource level and competition
- Territory influences population size

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Bluebird Boxes
*Placement is Important*
- Pair the boxes >5 – 25 feet apart
- Pairs are 125-150 yards apart

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Population Dynamics
- Reproduction is seasonal in Minnesota
- Peak populations of occur in mid-summer
- *Stable populations* have natural highs and lows in the same range year after year.
- Abundance increases by births (natality) and decreases with deaths (mortality)
Carrying capacity

- The number of a given species that a habitat can sustain
- Can be increased (or decreased) by managing for (or against) a limiting factor
- Long-term improvements include planting natural sources of food and shelter or removing limiting factors associated with undesirable species

Enhancing your garden for wildlife

Benefits of wildlife landscaping

- Increase wildlife diversity and abundance
- Discovery for children
- Natural beauty
- Photography and birdwatching
- Food production
- Property value

Diversity

- Species – different plant species
- Structural – vegetation layers and components
- Landscape – you, your neighbors, and beyond

Species richness increases with diversity elements

Threats to wildlife

- Natural predation
- Domestic animals
- Structural hazards
- Pesticides

Hummingbird and Butterfly Gardens

- See your local garden center for site- and zone-specific recommendations

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http://www.fotronix.com/
http://www.kidzone.ws/animals/research_butterfly.htm
Provide and protect habitat

- Habitat is the environment that supplies the basic needs for life
- Special or unique habitats are snags, logs, seeps, springs, ponds, cliffs, talus, and caves

Maintain or increase habitat characteristics

- Protect unique features with buffer zones
- Provide more and larger snags
- Provide more and larger logs

Damage Control

Coping with less desirable wildlife

Undesirable Wildlife

- Modify habitat or practices
- Restrict access
- Repellents
- Removing the problem animal
Habitat Modification is Key

- Best long-term solution is to eliminate a key habitat component.
- Alternately, restricting access to that resources is an option.

Repellents

- Visual, auditory, taste, smell
- Wide range of effectiveness
- Some proposals are pretty strange

Animal Removal

- Should be the last effort
- Usually will be replaced unless the habitat changes
- Check with your local Minnesota DNR conservation officer

Trapping Wildlife

- Translocating wildlife often prohibited
  - “Saving” wildlife generally does not work
- Use great care and discretion with carnivores and rodents

Legal Issues

- All migratory birds are protected by international treaty, except 3.
- All hunted or “game” species are protected by the state or federal government.
- Mammals have various degrees of protection from fully unprotected (e.g., porcupine in Minnesota) to federal ESA protection (gray wolf)

When the call comes in . . .

- “I’ve got a rabbit that is eating the bark off of all my trees!”
- Listen carefully to the description
- Independently assess the potential culprit (the public’s ID skills vary)
- Ask questions
Specific Wildlife

- Moles and Shrews
- Mice and Voles
- Bats
- Deer
- What else?

Moles and Shrews

- Insectivores (eat insects, not plants)
- Active year round

- Eastern Mole
- Star-nosed Mole

Moles - control

- Compaction destroys burrows
- Insecticides reduce food
- Harpoon and other traps generally effective

Shrews

- Shrew
Shrews - control

- Rarely a problem for gardeners
- Mowing
- Mouse traps (snap traps)
- Outside Cats
  - But they are tough on the birds

Shrews/Moles vs. Voles

Gophers

- Pocket gophers
- Ground squirrels

Moles vs. Gophers

- Gophers – fan shaped
- Mole hills – round

Gophers

- Herbivores (roots, tubers, bulbs)
  - Control
    - Trapping
    - Poisoning
Mice and Voles

- Herbivores – plants and seeds
- Can be quite damaging

Mice and Voles -- Control

- Mowing – voles
- Snap Traps or live traps

Mice and Voles -- Control

- “Sonic” devices
- Little science here

Rabbits

- Exclusion
- Repellents?
  - Cat litter --- barrier
  - Hair?

Bats

- Very Beneficial Wildlife
- Exclusion the best management option
- Alternate houses?
- Repellants and moth balls may be effective

Rabbits
Urban Deer

- Exclusion
- Repellants
  - Deer Away® Deer Repellant (some success reported by a fellow MG)
- Removal
- Diverse Solutions
  - Try and Try Again!

Sources and Resources
Enticing Wildlife into your Gardens and Yards

  - Directed at home landscaping.
  - Many, many websites – search on your own or check out my site (see 1st page)
- Minnesota DNR web site, conservation officer, or regional office

Sources and Resources on Wildlife Damage Management

  - This is the “bible” for managing a variety of wildlife-human interactions
  - Books ($45), CD-ROM ($41), or both ($66)
  - [http://wildlifedamage.unl.edu/handbook/handbook/](http://wildlifedamage.unl.edu/handbook/handbook/)
- The Internet Center for Wildlife Damage Management at [http://wildlifedamage.unl.edu/](http://wildlifedamage.unl.edu/)
- Many Minnesota Department of Natural Resources sites as well at [http://www.dnr.state.mn.us/](http://www.dnr.state.mn.us/)
Web Resources for Master Gardeners

Compiled by John P. Loegering, Wildlife Ecologist, University of Minnesota

Below I have compiled several web links that may be useful. The list is not comprehensive, but will be a good start. If you find other links that you believe warrant inclusion, please email them to me.

Several sites are commercial enterprises (i.e., .com) that had good information at the time I viewed them. Most of these sites are honorable; however, some may have marketing objectives that conflict with good gardening or wildlife objectives, or may modify their pages in the future. Please alert me to any of these when you find such conflicts. There also are several highly commercial sites that I found or that other gardeners recommended that I chose not to include because of their aggressive, commercial nature.

My criteria for inclusion was that they 1) have good science-based content, 2) are stable and not likely to change (no one likes a bunch of dead links), and 3) are reasonably objective in their presentation. Most sites satisfy these criteria; however some do not. I am assuming that the reader is astute enough to see that a raccoon trap manufacturer is likely to strongly recommend trapping as an animal damage solution. It might be one solution, but not THE solution.

Several sources are in Portable Document Format (.pdf) and require Acrobat Reader for viewing.

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General Sites

- **Minnesota Department of Natural Resources** has several interesting and important sites to visit about wildlife. It lists several species that are likely to be found in gardens or be involved in human/wildlife conflicts and provides information about the biology, damage assessment and possible solutions. This is a great 'go to' site when you want to learn more about wildlife.
- **Living with Wildlife** has several sections on specific wildlife as well as nuisance wildlife issues.
- **Nature Snapshots** features natural history about many animals, butterflies to wolves.
- **Minnesota Extension Service** has several publications available via a searchable database such as Managing Your Land for Wildlife. They also have a fabulous WebBoard titled Ask a Master Gardener that includes a wildlife segment.
- **Natural Resources and Environmental Management** (NREM) Program, Cooperative Extension Service System lists several Flagship Programs that deal with wildlife.
- **Minnesota Agricultural Experiment Station** focuses on agriculture issues with some information on wildlife.
- **Natural Resources Conservation Service** and the Wildlife Habitat Management Institute has produced nearly three dozen leaflets on a variety of wildlife species and topics.