Landscaping for Wildlife
Hennepin County Master Gardener Training
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Sources and Resources
Enticing Wildlife into your Yard


Many, many web sites – search on your own or check out my site (see 1st page)

Minnesota DNR web site, conservation officer, or regional office

Sources and Resources
Advanced Options

- Cornell Lab of Ornithology’s Citizen Science programs at http://www.birds.cornell.edu/

Go see it!

- The Minnesota Landscape Arboretum
  - Wild About Birds Exhibition (2005), including Hummingbird Garden Display
    - See some of our favorite annuals in this classic garden for hummingbirds. These amazing birds usually visit in the morning, but you can see the plants anytime near the Sensory Garden entryway. Growing June through mid-September
    - Your local garden center

Sources and Resources
on Wildlife Damage Management

  - This is the ‘bible’ for managing a variety of wildlife-human interactions.
  - Books ($46), CD-ROM ($43), or both ($65)
  - http://wildlifedamage.unl.edu/handbook/handbook/
- The Internet Center for Wildlife Damage Management at http://wildlifedamage.unl.edu/
- Barryman Institute for Wildlife Damage Management at http://www.barrymaninstitute.org/
- Many Minnesota Department of Natural Resources sites as well at http://www.dnr.state.mn.us/
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

This is all Habitat for Wildlife

- Potential depends upon your property

Landscaping for Wildlife Benefits

- **Wildlife Values!**
- **Energy & Soil Conservation**
- **Natural Beauty**
- **Habitat for Kids** (exploration and appreciation)
- **Birdwatching**
- **Photography, Windbreaks, Food production, etc.**

Native plants and seeds

- More readily recognized by wildlife
- Adapted to climate
- Require less maintenance
- Ask at your local garden store, Extension office, or soil and water conservation district

Plant Components of Wildlife Habitat

- Conifers
- Grasses and Legumes
- Nut and Acorn Trees
- Winter Plants
- Fall Plants
- Summer Plants
- Hummingbird Plants
- Butterfly, Bee, and Moth Plants

Conifers (evergreens)

- Important shelter
  - Winter
  - Escape
- Summer nesting cover
- Limited food
- Pines, spruces, firs, arborvitae, junipers, cedars, and yews
Conifers
Wildlife Habitat Components

- Balsam fir, eastern red cedar, all spruces, eastern hemlock
  - Excellent Food and Cover
- Common Juniper, Red (Norway) Pine
  - Moderate value
- Scotch pine, northern white-cedar
  - Low value
- Canada Yew – Deer love it!

Grasses and Legumes
Wildlife Habitat Components

- Large yards and more rural areas
- Ground nesting habitat
  - Pheasants, mallards, blue-winged teal, meadowlarks, bobolinks, and vesper sparrows.
- Food/forage for herbivores
  - Deer, cottontail rabbits, woodchucks, meadow voles, etc.
- Avoid mowing or disturbance until 15 July

Grasses and Legumes
Wildlife Habitat Components

- Natives are better than the exotics
- Switchgrass, bluestem, etc. (diversity!)
  - Vigor maintained by low-intensity burns every 3-5 years
  - Increasingly popular – seeding mixes are more available.
- Exotics - brome, bluegrass, alfalfa, sweet clover
  - Generally lose vigor over time

Butterfly, Bee, and Moth plants
Wildlife Habitat Components

- Sources of great enjoyment and pride
- Themes?
  - Native wildflowers, woodland wildflowers
- Butterflies
  - 200+ species in Midwest!
- Bees – several species,
- Moths
  - Several species of day- and night-flying Sphynx Moths (hawk or hummingbird moths) as well as others

Attracting Butterflies to your Yard

- Remember the Butterfly Life Cycle
  - Eggs – Caterpillar – Pupa – Adult
  - 2 “species” in 1
- Caterpillars - eat foliage and have species-specific food requirements
- Adults - feed on nectar and nectar-rich plants
- You probably have 15 – 20 species in your yard.
- >175 plant associates identified.
- Arrive in Minnesota in early/mid-May through fall

Attracting Butterflies to your Yard

- Design flower beds to provide several blooming species at a time with flowers available from spring to fall.
- Some suggested species for nectar
  - *Dogbanes (*Apocynum spp)
  - *Milkweeds (*Asclepias spp), especially the Common (*A. syraca) and Swamp (*A. incarnata)
  - Red Clover (*Trifolium pratense)
  - Aster (Aster spp)
  - Thistles, Goldenrods, Winter Cress, Joe Pye-weed
Monarch Larval Monitoring Project

- http://www.mlmp.org/

Monarch Larval Monitoring Program

- Search Milkweed plants for different life stages
- Eggs, caterpillars, adults
- Citizen Science in Action

Attracting Ruby-throated Hummingbirds

- Fascinating Birds
- RtHu - Only species in Mn
- Arrives ~1 to 15 May
- Wings at 200 beats per second
- Eats half its weight in food; 8x weight in fluid / day
- Aggressive and territorial
- Feed mostly on nectar and small insects.

Hummingbird plants

- As with butterfly gardens, design flower beds to provide several blooming species at a time with a succession of flowers blooming from May through September.
- Most attractive are red, tubular flowers with abundant nectar
- Fragrance not important

Hummingbird plants

There are many, but here is a short list.

**Early Flowering**
- American columbine (Aquilegia canadensis)
- Petunia (Petunia x hybrida)
- Foxglove (Digitalis purpurea)*
- Hardy fuchsia (Fuchsia riccartoni)
- ‘firebird’ penstemon (Penstemon glaucoideus)

**Late Flowering**
- Red (scarlet) bergamot (Monarda didyma)
- Cardinal flower (Lobelia cardinalis)
- Dwarf blue gentian (Gentiana septemfida var. lagodechiana)
- Scarlet trumpet honeysuckle (Lonicera x brownii)
- Plantain lily (Hosta spp)
- Scarlet runner beans (Phaseolus coccineus)
- Salvia spp
- Trumpet vine (Campsis radicans)

Summer Food Plants for Wildlife

- Fruit and berry plants provide both food and cover
- Grapes and vines enhance fences and dead trees

Some form thickets
- Wild plum
- Choke cherry
- Lilac-flowered honeysuckle
- Raspberry, blackberry
- Juneberry/serviceberry
Summer Food Plants

- Many species benefit
- E.g., songbirds
  - brown thrashers, gray catbirds, American robins, cedar waxwings,
- E.g., mammals
  - squirrel, raccoon, red fox,
- E.g., Invertebrates
  - butterflies

Fall Food Plants

- Food value extends into winter if not eaten
- Important for migratory species, and residents
  - Red-osier dogwood (*Cornus stolonifera*)
  - gray dogwood ()
  - Winterberry ()
  - Cotoneaster ()
  - Buffaloberry ()
- Grains (corn, wheat, oats) also used by many species (100, 94, 91; respectively), but not practical for most urban yards

Winter Food Plants

- Glossy black chokeberry (*Aronia melanocarpa var. elata*)
- Siberian, ‘red-splendor,’ and ‘prairie fire’ crabapple (*Malus spp* )
- Common snowberry (*Symphoricarpos spp*)
- Stagthorn and smooth sumac (*Rhus spp*)*
- Bittersweet (*Celastrus scandens*)*
- American highbush cranberry (*Viburnum trilobum*)*
- Red-osier dogwood (*Cornus stolonifera*)
- Rose (*Rosa spp*)
- * = “spinach” plants

Structural Components of Wildlife Habitat

- Snags
- Nest Boxes
- Brush and Rock Piles
- Cut Banks, Cliffs and Caves
- Salt
- Dust Beds and Grit
Nest boxes
- Boxes and platforms used by 46 species.
- Retaining snags and trees with cavities BEST!
- Pair bluebird nest boxes
- Entrance holes 1½ inches or less discourage starlings
- Place boxes away from feeders and predators
- At least 6 feet off ground and away from prevailing winds and direct sun

Snags, Logs, and Perches
- Snags (standing dead trees) are excellent wildlife trees; not firewood!
  - Primary and Secondary cavity nesters
  - 43 species of birds
  - 26 species of mammals
- The bigger, the better
  - At least 6” in diameter & 15 feet tall
- Create your own?

Dust beds, grit, and salt
- Many species use dust for bathing and grit to grind their food
- Can make platform or provide area on ground
- May attract cats
- Salt block could attract deer and even a few birds (grosbeaks and crossbills).

Brush and Rock Piles
- Great escape cover, especially for rabbits, woodchucks, weasels, and snakes.
- Added components of diversity
- Best if located ‘in the back corner’ of the lot

Cut banks, Cliffs, and Caves
- Odd features, not to create but protect if you have them
- Used by Belted kingfishers, Bank swallows, Peregrine falcons, and bats.

As Special note on Bats
- Gardener’s Friend
  - Eat many moths and insects
    - Some are garden pests,
    - Some are the species we are attempting to attract
- Very, very cute!
- Bat house designs are available
**Water**
- Availability may affect birds seen in your yard
- Adding water can double the number of birds
- Adding dripping or splashing water can double the number again!
- Maintenance issues seem to be the biggest liability.

**Feeding Wildlife**
- Not recommended for mammals, Birds OK
- Provide natural food sources where possible
- Most popular food for birds is
  - black-oiled sunflower (cheap)
  - thistle seeds (not so cheap)
- Avoid mixed seeds with high sorghum or milo content

**Bird Feed**
- Most popular food for birds is
  - black-oiled sunflower (cheap, favored, #1)
  - thistle seeds (not so cheap)
- Avoid mixed seeds with high sorghum or millet content
  - Commercial mixes are not economical
  - Millet favored by platform feeding birds
  - Sorghum (milo) eaten by very few
- Many seeds might wind up on the ground – ground feeding birds, squirrels, and rodents will eat them.

**Cleaning and maintenance**
- Songbird feeders - clean with dilute bleach solution at least once a month
- Hummingbird feeders - clean weekly with weak vinegar solution
- Keep seeds DRY!
- Continue feeding through winter once birds are attracted to your property

**Recipes for Birdfeeding**

**Easy Suet cakes**
- 2 lbs ground beef suet
- 1/4 cup sunflower seeds
- 1/4 cup oatmeal
- 3 tbsp crunchy peanut butter
- Melt suet in a skillet or sauce pan, mix in other ingredients. Pour mixture into plastic margarine containers to a depth of 1-2 inches (or use mini-bunt pans for those special Christmas gifts). Refrigerate or freeze before removing from the pan. Store in freezer.
- Feel free to experiment with contents including dried fruit, nuts, seeds, cornmeal, etc.

**Hummingbird Nectar**
- Dissolve 1 part sugar in 4 parts boiling water, cool before you fill the feeders
- Red dye is not needed (most feeders have red parts)
- Store unused portion in a sealed jar in the refrigerator
- Do NOT use honey or corn syrup
- Do NOT alter the ratio!
Landscaping your yard for wildlife

1. Set your objectives and priorities
2. Draw a map of your property
3. Review the 16 vegetative and structural components
4. Confer with resource people and check reference books
5. Develop your planting plan

Avoid Fouling your Yard – Plants to avoid

- Leafy Spurge (Euphorbia esula)
  - Invasive noxious weed
- Purple loosestrife (Lythrum salicaria)
  - Invasive aquatic weed that dominates wetlands
- Buckthorn (Rhamnus cathartica and R. frangula)
  - Invasive, dominating shrub in woodlands
- Reed canarygrass (Phalaris arundinacea)
  - Very invasive in wet prairie areas, has little wildlife value

You, your neighbors, and beyond

- Obtain aerial photographs and/or vegetation maps
- Discuss objectives and future plans with your neighbors
- Consult state natural resources agency biologists regarding the value of your land in maintaining biodiversity on landscape scale

Home Habitat Plan