

G1571

Backyard Wildlife *Planting for Habitat*

Ron J. Johnson, Extension Wildlife Specialist; Christine M. Meyer, Communication Specialist, Forestry and Wildlife; and Kim W. Todd, Extension Horticulture Specialist

This NebGuide, the third in a series of six, provides information on planning and planting for wildlife habitat in the backyard. NebGuide G05-1572, *Landscape Plants for Wildlife*, has a more complete list of plants along with their wildlife benefits and growth characteristics.

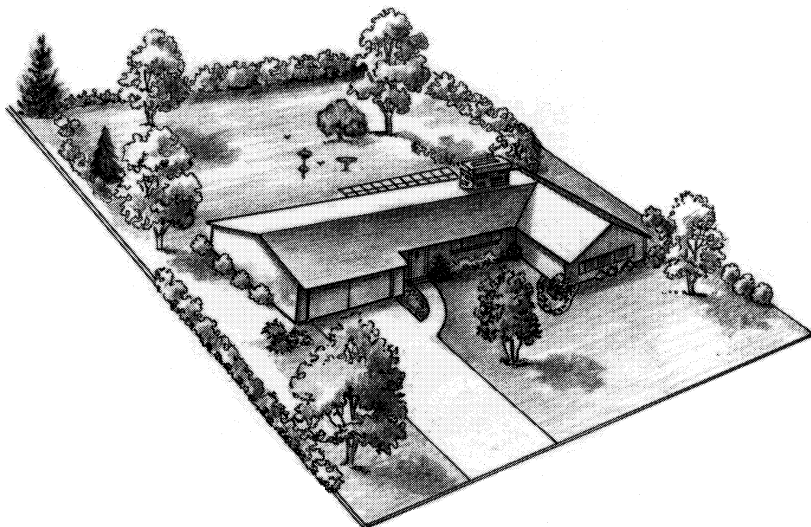
Plants are perhaps the most important part of a backyard habitat because they provide an environment for the family as well as for songbirds and other wildlife. Plants add beauty and comfort to your home and often increase the property value.

Trees and shrubs help reduce heating and cooling bills by providing summer shade and protection from winter winds, and they often form the foundation for all other landscaping. Shrubs can add privacy, and plants of various shapes or sizes can be used to screen an unpleasant view. Woody plants can provide high quality fruits or nuts for your own consumption or to leave for wildlife; several varieties have been improved for this purpose.

For wildlife, landscape plants provide shelter, nesting and foraging sites, and a variety of foods such as fruits that may otherwise be unavailable. Proper selection of plants can fill family needs for beauty and comfort and at the same time provide a haven for wildlife.

How to Start

First, Set a Goal. Take into consideration the size of your backyard, what plants are already present or nearby, and what



wildlife you would like to attract. Plants to attract songbirds include tall and medium deciduous trees, evergreen trees, shrubs, grasses, and flowers. Consider what plant types are nearby in adjacent backyards, parks, connecting vegetation corridors, or natural areas. Consider plant “layers” at low, middle, and high levels to meet the variety of wildlife needs, as in a natural forest. Plant layers provide food, foraging, and nesting spaces at heights that meet the needs of a variety of species. A layer near the ground of flowers, grasses, and small shrubs provides key habitat that, in natural areas, may carry as much as 60 percent of the bird use. Tall trees form a canopy of cover that adds shade and a place for birds that forage, sing, or nest high up. A middle layer of tall shrubs and small trees adds landscape value and an additional habitat component. You can select plants that meet your needs, and can include plants that complement what is already present or add types that are missing.

Next, Form a Plan. Trees and shrubs will continue to grow so it is important to consider mature plant size, shape and spacing. Outline your yard on a piece of paper. Sketch in ideas to make your basic plan (drawing on graph paper helps with dimensions). A sketch is particularly helpful in planning where future shade will be needed and where shading may not be desirable, such as over solar collectors or gardens.

Some woody plants have a short life span. Allow flexibility in your plan to provide for replacing such trees or shrubs. Remember that open space is important too — for viewing wildlife, for recreation, and for separating use areas.

Guidelines to Plant Selection

Where You Live. Soil type; sun and shade exposure; relationships to nearby plants; and climate factors, including sunlight, moisture, wind, and temperature extremes are important in plant selection. Results of a soil test can be helpful when selecting plants and deciding what soil treatments might be needed for them. Your local University of Nebraska–Lincoln Extension office can help with your soil test.

Choose plants that are adapted to the growing conditions in your area. Long-lived plants must be able to withstand Nebraska’s winter and summer extremes. Generally, native species and their selections from nearby sources are a good first choice because they are adapted to local conditions and the timing of wildlife use. UNL Extension, the Nebraska Forest Service, and reputable nursery personnel can help with plant selection.



Easter Red Cedar. Winter food and cover; used for nesting by robins, chipping sparrows, mockingbirds.



Virginia Creeper. Colorful in fall; fall and winter food for mockingbirds, flickers, thrushes.



Bur Oak. Winter food, cover, nesting sites—used by many birds, squirrels, deer.



Crabapple. Showy flowers in spring; winter food for gamebirds, songbirds, rabbits.



Purple Coneflower. Native prairie flowers such as purple coneflower add beauty and butterfly nectar.



Sideoats Grama. Sideoats grama (photo), big bluestem, little bluestem, and other native prairie grasses can provide landscape focus areas or, with prairie flowers, a showy mini-prairie.

Food and Cover. Birds need both food and cover, so a single shrub with fruit or a feeder standing alone in the middle of the lawn is unlikely to have many visitors. Plants produce foods such as fruits, acorns, and seeds, and provide foraging sites where birds can search for insects and larvae. Plants provide protective cover for nesting and perching, areas for concealment or hiding, shelter from harsh weather, and escape from predators. Many attractive landscape plants provide both food and cover.

Shrubby thickets of dogwood, chokecherry, and viburnum provide winter protection, nesting sites, and a fruit source for many species of birds. Eastern redcedar and Rocky Mountain juniper provide shelter and food during winter and are used by some birds for nesting. Crabapple varieties provide flowering beauty and nesting sites, plus a winter

through spring fruit supply. Cultivars such as ‘Sargent,’ ‘Prairifire,’ and ‘Snowdrift,’ are disease resistant and attractive to birds. Other good selections for Nebraska that attract birds include ‘Bob White,’ ‘Indian Magic,’ ‘Mary Potter,’ ‘Ormiston Roy,’ ‘Red Jade,’ and ‘Red Splendor.’ Birds, however, do not readily eat the fruits of ‘Donald Wyman’ and ‘Red Jewel’ varieties. Because of potential problems with cedar-apple rust, cedars aren’t suitable for growing next to an apple orchard. Instead, use resistant cultivars of apples or other evergreens such as pine, spruce, or fir. Using a diverse selection of landscape plants can provide food and cover through much of the year, lasting well into the lean winter months.

Plants for All Seasons. Different kinds of birds will visit your backyard at different times of the year. Migrants pass



Pine. Winter cover, food, nesting sites for mourning doves, chipping sparrows.



Hackberry. Food and nesting sites. Fruits liked by waxwings, mockingbirds, robins.



Sumac. Colorful in fall; winter food for songbirds and gamebirds, browse for rabbits and deer.



American Bittersweet. Decorative and colorful. Fruit or seeds eaten by gamebirds, some songbirds.

through during spring and fall. Winter and summer residents stay for only a few months each year, while still other birds are year-round residents.

Plant combinations that provide food and cover throughout the year, especially for the winter months, are best. Oaks, hackberry, American cranberrybush, native sumacs, hawthorn, and flowering crabapples are examples of fall and winter food plants. Dense shrubs and sheltering evergreens, such as spruce, cedar, or several pines together provide good cold-weather shelter. Black cherry, serviceberries, mulberry, elderberry, and blackberries provide summer fruits. Many tree and shrub species provide summer nesting sites.

Plant Diversity. A backyard with a variety of different plants generally attracts more wildlife species and is often more attractive as well. A variety of plants offers a greater choice of food and cover and reduces many seasonal or weather-related effects. For example, unfavorable conditions such as very cold winters or drought may cause some plants not to bear fruit. Other plants such as some oaks bear fruit only in alternate years. Planting a variety of different species helps ensure a steady food supply every year.

Deciduous trees provide birds with important nesting and foraging sites, food such as fruit or seeds, and summer cover. Many birds forage for insects along the branches of deciduous trees. A few conifers or evergreen trees provide winter shelter, nesting sites for several species, and some provide fruits or seeds used by birds. Shrubs form a shelter layer near the ground and are important nesting sites for many

Some Backyard Plants That Help Wildlife^a

TREES

fir (*Abies* spp.)
 shadblow serviceberry (*Amelanchier canadensis*)*
 Saskatoon serviceberry (*Amelanchier alnifolia*)*
 hickory (*Carya* spp.)*
 hackberry (*Celtis occidentalis*)*
 hawthorn (*Crataegus* spp.)*
 eastern red cedar (*Juniperus virginiana*)*
 Rocky Mountain juniper (*Juniperus scopulorum*)*
 flowering crabapple (*Malus* spp.)
 spruce (*Picea* spp.)
 pines (*Pinus* spp.)
 black cherry (*Prunus serotina*)*
 white oak (*Quercus alba*)*
 swamp white oak (*Quercus bicolor*)
 red oak (*Quercus borealis [rubra]*)*
 bur oak (*Quercus macrocarpa*)*
 chinkapin oak (*Quercus muehlenbergii*)*
 black oak (*Quercus velutina*)*

VINES

American bittersweet (*Celastrus scandens*)*
 Virginia creeper (*Parthenocissus quinquefolia*)*
 raspberry and blackberry (*Rubus* spp.)*
 wild grape (*Vitis* spp.)*

SHRUBS

pagoda dogwood (*Cornus alternifolia*)
 gray dogwood (*Cornus racemosa*)*
 redosier (redtwig) dogwood (*Cornus sericea*)*
 American hazelnut (*Corylus americana*)
 American (wild) plum (*Prunus americana*)*
 nanking cherry (*Prunus tomentosa*)
 chokecherry (*Prunus virginiana*)*
 smooth sumac (*Rhus glabra*)*
 fragrant sumac (*Rhus aromatica*)*
 American elder (*Sambucus canadensis*)*
 common snowberry (*Symphoricarpos albus*)*
 arrowwood viburnum (*Viburnum dentatum*)
 nannyberry viburnum (*Viburnum lentago*)
 blackhaw viburnum (*Viburnum prunifolium*)
 American cranberrybush (*Viburnum trilobum*)

OTHER PLANTS (examples)

sunflowers	black-eyed susan
asters	marigolds
millet	zinnias
native prairie grasses and wildflowers *	

^aNebGuide G05-1572, *Landscape Plants for Wildlife* has a more complete list of plants along with their wildlife benefits and growth characteristics.

*Species native to Nebraska

species such as cardinals, brown thrashers, catbirds, and others. Herbaceous plants also benefit backyard habitats — sunflowers, zinnias, marigolds, millet, and native prairie flowers and grasses provide food and/or cover for songbirds.

Favor Native Species. Native species should be considered as a first choice because they are generally more adapted to the area, tend to be disease-resistant, and are more familiar and beneficial to birds, butterflies, and the native insects that many birds need as food. Introduced (also called exotic, nonnative, or alien) plants that at first may seem beneficial can turn out later to be invasive or to have other serious drawbacks. For example, the introduced Amur honeysuckle (*Lonicera maackii*) and common buckthorn (*Rhamnus cathartica*), once considered beneficial to wildlife, have turned out to be invasive plants that crowd out native species. In addition, studies indicate that birds nesting in these shrubs may have greater predation rates, possibly because of plant structure or because they green up earlier and thus attract both nesting birds and nest predators. Other introduced but invasive species that were once promoted for wildlife benefits include Russian olive (*Elaeagnus angustifolia*), autumn olive (*Elaeagnus umbellata*), Japanese honeysuckle (*Lonicera japonica*), and multiflora rose (*Rosa multiflora*). Avoid using these invasive plants.

Some introduced plants provide wildlife benefits and have not become invasive. One such plant often used in landscaping is Nanking cherry (*Prunus tomentosa*). This native of China and Japan is a shrub that provides summer fruits and cover. Other useful introduced plants include white pine (*Pinus strobus*), native to the eastern U.S., and Norway spruce, native to Europe. Avoid planting Scotch pine (*Pinus sylvestris*) because it is highly susceptible to a fatal disease called Pine Wilt; Austrian pine (*P. nigra*) is somewhat susceptible.

Other introduced plants have mixed results depending on the species and location. Some cotoneaster species, including cranberry cotoneaster (*C. apiculatus*), spreading cotoneaster (*C. divaricatus*), and Peking cotoneaster (*C. acutifolia*), native to Europe and Asia, have been used without being noted as invasive. Some other cotoneaster species, however, including Franchet (*C. franchetti*), silverleaf (*C. pannosus*), and milkflower (*C. lacteus*) are invasive in other states, primarily California. Birds eat the fruits and help spread the seeds where these aggressive plants push out natives. Although native species also can fill wildlife food and cover needs, introduced plants may appeal because they add landscape variety and interest.

If you encounter interesting nonnative plants and want to combine them with native plants, research how long the plant has been used in our region and find out about any local experience with it. Ask if there is evidence that the plant might be invasive, and consider the timing of the leaves and fruits in relation to possible bird uses. Predicting whether a newly introduced plant will become invasive is difficult, but growth characteristics and experience from elsewhere about the plant or related plants can help. For example, plants that grow and mature rapidly or spread quickly by vegetative means or that are invasive elsewhere are more likely to become invasive problems in new locations where introduced. More information is available in the references listed at the end of this NebGuide. Internet Web sites that carry helpful plant information include the USDA, NRCS plants database (plants.usda.gov/); the USDA invasive species

site (invasivespecies.gov/); and the Plant Conservation Alliance site (www.nps.gov/plants/).

Benefits for Wildlife and You

In selecting and placing plants, plan for a balance that meets your family needs and provides the desired wildlife benefits. It is generally best to avoid trees or shrubs that offer little or no food value. Seedless tree varieties, however, such as seedless ash, are preferred if planted where they will overhang gutters. Forsythias (*Forsythia* spp.), eastern redbud (*Cercis canadensis*), and lilacs (*Syringa* spp.) offer some cover, but no food. Lilacs attract butterflies, and many people like the spring color of redbuds. These plants and others like them can be used for their appealing flowers, but be aware of their limits and include other plants to meet the wildlife needs in your landscaping plan.

Keep in mind that many plants offer both striking beauty and wildlife benefits. Consider the fall leaf color of deciduous trees, shrubs, or vines such as Virginia creeper; the spring flowers of flowering crab; and the red winter stems of redosier dogwood — these plants provide aesthetic appeal and excellent wildlife benefits. Finally, remember that many woody plants can provide fruits or nuts for home consumption — just plan a balance of additional plants to meet wildlife needs.

Other NebGuides in the Backyard Wildlife series include *Feeding Birds* (G83-669), *Bird Houses and Shelves* (G01-1472), *Making It Come Alive* (G84-672); *Tips for Success* (G97-1332); *To Feed a Hummingbird* (G97-1331), and *Landscape Plants for Wildlife* (G05-1572). Copies are available from your extension office.

Suggested Reading

- Anonymous. 1999. *Landscaping with native plants*. U.S. Environmental Protection Agency, Region 5, 77 West Jackson Boulevard, Chicago, Illinois. 6 pp.
- Backyard Wildlife Habitat™ Program. For information, write: National Wildlife Federation, 11100 Wildlife Center Drive, Reston, VA 22203.
- Henderson, C. L. 1987 (reprinted 1994 with expanded index). *Landscaping for Wildlife*. Minnesota Department of Natural Resources, Non-game Wildlife Program, St. Paul. 150pp.
- Johnson, R. J., M. M. Beck, and J. R. Brandle. 1991. *Windbreaks and Wildlife*. Extension Circular EC 91-1771. 8 pp.
- Mizejewski, D. 2004. *National Wildlife Federation, Attracting Birds, Butterflies and Other Backyard Wildlife*. Creative Homeowner, Upper Saddle River, NJ.
- NEBRASKAland Magazine. 1991. *Wildlife Habitat Improvement Guide*. Vol. 69, No. 1, January/February. Nebraska Game and Parks Commission, Lincoln. 90pp.
- Wasowski, S. 2002. *Gardening with Prairie Plants*. University of Minnesota Press, Minneapolis. 285pp.
- Xerces Society (multiple authors). 1998. *Butterfly Gardening*. Xerces Society and Smithsonian Institution. Sierra Club Books, San Francisco. 208pp. (The Xerces Society, 4828 SE Hawthorne Blvd. Portland, OR 97215)

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