

Habitat Considerations for Urban or Backyard Wildlife

Habitat Extension Bulletin

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Wildlife, whether living in native habitats or urban areas, has four basic requirements. The first is space, which must be available in sufficient amounts to allow for the other three requirements: food, water, and cover. All species need varying amounts and combinations of these requirements, and these requirements vary seasonally.

The greater the variety in these basic requirements and in terrain, habitat structure, and plant species composition, the greater the abundance and diversity of wildlife a particular area can support. Greater variety in these habitat components also creates more "edge effect" and "edge contrast".

Edge is the interface between two distinct vegetation or habitat types. Edges place different elements necessary for the survival of certain wildlife species in close proximity. The ecotone, or zone of influence created by an edge, will often support more species than the two distinct habitat types creating it are able to. Edge contrast is the difference in structure or appearance between two habitats that meet at an edge. For example, the area where a lawn meets a shelterbelt has high edge contrast, whereas the interface between a stand of trees and a tall shrub planting has low edge contrast.

Greater landscape diversity puts more basic wildlife requirements in close proximity to one another, while at the same time making them more numerous. This allows a site to either support more individuals or support species that might not otherwise be found in the area.



Bird feeding is a good way to get a close-up look at winter birds in your yard, but it will not attract many birds unless you have plenty of wildlife habitat nearby.

Space

Regardless of the size of a piece of property, it can be developed to provide for at least some wildlife needs. However, in yards of limited size, wildlife will probably be transient, using the property on a limited basis. There are two reasons for this: first, the area may not provide all the requirements or the right combination of requirements necessary for wildlife survival. Second, the daily "cruising radius" or area of daily activity of many species may be larger than the area available on a single piece of property.

This is why, particularly in urban areas, a cooperative effort between neighbors is often beneficial. The cooperative development of two or more pieces of property may provide wildlife requirements that might not

be possible if only one property is developed. A joint effort may also attract and support wildlife in a much shorter time frame than if one individual is trying to fund and install all the necessary improvements.

It should be noted that open areas or open space (i.e., grassy areas, grass/forb associations, or lawns) are as essential as cover. Many bird and mammal species forage in these open areas. Robins, bluebirds, kingbirds, cottontail rabbits, and bats are some examples. Security while foraging, in the form of good visibility, is often important to species that feed on the ground. So grass or grass/forb areas near woody cover will not only provide the landowner with lawn space he will undoubtedly want to retain, but will also provide an important wildlife habitat component.

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Food

There are two basic categories of wildlife food in an urban setting; natural and artificial. Natural foods, which are the most desirable, include such things as seed, insects, berries, nectar, and vegetative parts. Seasonal variations in natural food supplies and in individual preference cause many species to move from one area to another, or result in changes in food habits through the year.

Planting a variety of food-producing trees, shrubs, grasses, annual and perennial broadleaves, and vines can result in food availability through much of the year.



Your choice of food and feeders can influence the kinds of birds you attract. Black sunflower seed is a good general-purpose bird food that will not break your budget.

Food-producing plants should be located near cover. Plant species or associations that provide cover can also be used. Plants that produce persistent fruits should be included in landscaping plans since these foods will remain available well into the winter.

Ideally, artificial feeding should only be a temporary measure used until food-producing plants mature. Once a diverse collection of food plants begins, artificial feeding should be stopped or curtailed so visiting birds are encouraged to forage naturally.

There are a number of references on the subject of artificial wildlife foods and feeding. Many articles in birding and wildlife periodicals, and even sections of some gardening books address this topic. Also, there are a number of very good books devoted to feeding and feeders. These books are available from various wildlife-oriented citizen groups such as the Audubon Society, the National Wildlife Federation, and the Sierra Club, as well as bookstores.

Rather than attempt to address all the various kinds of foods and feeders one can choose from, the following will cover some general considerations of this topic. First, although artificial feeding has some attractions or benefits, *it also has some drawbacks.*

- ∞ It causes reduced wariness that may carry over to the rest of the year or to other locations individuals may use annually or daily;
- ∞ It may expose feeding animals to situations with poor security and poor escape options, making them vulnerable to predation;
- ∞ It can lead to conflict between feeding animals;
- ∞ It increases the potential for death by delaying natural seasonal migrations, particularly if feeding is interrupted or stopped;
- ∞ It may expose wildlife to disease from other individuals because of unnatural crowding or from fungus or mold existing on dirty feeders or old seed;
- ∞ It makes wildlife dependent on artificial food sources when natural food is limited.

On the other hand, there are many effects of artificial feeding that are or may be beneficial including:

- ∞ Increased distributional range of some species;
- ∞ Allowing some species to remain in an area during times of the year they normally would be absent;
- ∞ Allowing an area to support more individuals or species than it would otherwise;
- ∞ Providing excellent wildlife viewing and considerable satisfaction to the person involved with feeding.

If feeding is undertaken, there are some general considerations to note. Observe or read about the foraging strategies of species that may visit your feeding stations and select methods and feeder types that best suit these species.

Feeders can be designed and placed, and food types selected to reduce species conflicts and exclude undesirable species.

Feeders should be located close to thermal and/or security cover and away from areas of frequent disturbance. Feeders should be cleaned regularly during the feeding period and thoroughly between feeding seasons to control mold and fungus. If winter feeding is initiated, it must be continued faithfully until fed animals have sufficient natural food sources to survive.

When deciding what type(s) of wildlife foods to purchase, be advised that commercial bird seed mixes are not usually a good buy. It is better to purchase small oil sunflower seed, proso millet, cracked corn, thistle seed, fruit, suet, or other foods specific to the needs or preferences of the wildlife on site. These food types result in less waste and have better food value than commercial mixes. Whether seed or other foods are used, those selected should be chosen for their desirability and high energy content. Appropriate foods for particular species can be found in various books and articles on feeding or by contacting Game and Fish Department personnel or suppliers of feed and feeders.

Water

Water is a very important component of urban wildlife habitat development, particularly in arid climates. It provides a vital habitat requirement for birds, mammals, reptiles, and amphibians. It is important not only in summer, but yearlong. Water is used for drinking, bathing, and, for certain reptiles and amphibians, reproduction.

Water at ground level can be used by all species, but must have some provisions for security. Elevated water such as that provided by pedestal bird baths or hanging pans is more secure, but is available mainly to birds.

Water source design can be very simple, such as an inverted garbage can lid set in the ground, or as elaborate as natural looking ponds with rocks and vegetation. The design and materials



Conifers provide a good year-round foundation for urban wildlife habitat. For the best habitat, however, try to include deciduous trees and lower shrubs in your plans. Variety in size and species of plants will attract a greater variety of wildlife.



used for a wildlife watering station are limited only by one's imagination.

The sound of running water not only has certain esthetic properties, but also seems to be more attractive to wildlife and facilitates wildlife finding it. Running water can be provided by a hose or small tube placed in an elevated position above a water source so a continual slow dripping is provided. A more elaborate water source consists of a small cascade of recirculating water driven by a small water pump.

Water sources should be located in shaded areas so the water remains relatively cool and near cover for security from predators. Locating a water source adjacent to trees or shrubby cover satisfies both these needs. Like feeders, watering devices should be away from areas of high human activity to reduce disturbance. And, they should be located a short distance from feeding stations to further reduce harassment of shyer species.

It is important that the water source, particularly if it is a small one, be cleaned and replenished regularly with fresh water. Important in the water source design are provisions for

perches and shallow areas which allow small animals falling in to escape.

There are several simple techniques for making water available to wildlife during the winter. Water can be kept open by heating it with an aquarium heater, an automobile dipstick heater, with heat tape around the outside of the container, or with a low wattage light bulb under it. There are also commercial heaters designed especially to keep water from freezing.

Cover

Cover serves several functions for wildlife:

- ∞ security and escape
- ∞ reproductive sites (nesting and denning/territorial "display")
- ∞ foraging sites
- ∞ perching, roosting and resting sites
- ∞ thermal protection or buffering

Cover can be provided with live or inert materials. Live materials include trees, shrubs, grasses, forbs, and vines. Depending on their attributes and landowner preferences, these can be native or introduced species. Usually, native species are best adapted to local climates and will have better survival. It has been suggested that 20 to 25 species of woody plants are optimum for providing various cover (and food) requirements of wildlife.

Inert materials include rocks, brush piles and rows, landscaping timbers, nesting and denning boxes or other appropriate materials. These materials can be used in combination with live materials to create esthetic areas which benefit both the landowner and wildlife. Rocks, either scattered, piled, or used for low walls in association with live materials are an example of how live and inert materials can be combined to provide better wildlife habitat than either rocks or living materials could provide alone. And, although a brush pile may not initially seem like a desirable structure to have in one's yard, cover plants such as roses, trumpet vines, grapes, Virginia creeper, climbing honeysuckle, or raspberry can be planted in association with it to enhance its appearance and increase its



A well-stocked feeder and a massive cottonwood tree to hang it in—an excellent combination for attracting songbirds to your backyard. For summer bird food, consider planting shrubs and trees that produce berries. Buffaloberry, chokecherry, mountain ash, and hawthorn are all popular with birds.

value to wildlife. The more moist regime in and next to the brushpile enhances growth of the plants associated with it. A brush pile placed in a corner or other odd area will eliminate maintenance of that area. Similarly, in an area where maintenance is undesirable, stream rock can be used to create a dry streambed with vegetation planted along its "banks". In addition to eliminat-

ing maintenance, it is very esthetic and provides some naturalized habitat; and a water source, either still or running, can be included in its design.

When developing cover using living plants, an effort should be made to create as much vertical diversity or layering as possible. Multi-layered shelterbelts, varying height shrub plantings, or shrub/tree plantings provide more cover variety than single species or single strata plantings.

Cover plantings should be located in areas with little disturbance if possible. They can be used to fill odd areas or corners or to create visual barriers, thereby benefiting both wildlife and the landowner. By mixing various types of cover plantings, one can create horizontal diversity (variety across the property) to maximize wildlife benefits.

The plant species selected will depend on the cover and other functions they are expected to provide, their growth form, their phenology (i.e. when they produce and drop their leaves), their moisture requirements, and their hardiness. Appearance may also play a role in their selection. Evergreen plants not only provide a variety of wildlife benefits or functions during the summer, but are excellent winter cover because they do not shed their foliage. Some evergreen trees and shrubs should be included in any wildlife landscaping plan.

Diversity is the key to attracting and supporting wildlife. As alluded to earlier, to a point, the more species of plants present at a site, the more wildlife species and number of individuals the site can support. One must be mindful that some birds nest in trees but forage mainly on the ground. Some species nest on the ground and forage on the ground or in the lower strata of vegetation, and still others use their habitat

in similar but varying combinations. The idea is to provide as much of the various cover requirements as possible for the species expected to use the property.

There are several important considerations to remember when designing landscapes for wildlife habitat:

1. One must have an understanding of the needs of wildlife species that may use the site.
2. The unique features or limitations of the property must be recognized.
3. Realistic limits should be set on one's expectations.
4. Where possible, the process should be planned and implemented so those plants or features that have the most profound effect or take the longest to mature are incorporated in the early stages.
5. The process should be implemented at a pace consistent with the property owner's time and financial constraints.
6. Other benefits to the landowner should be given equal consideration in planning the landscaping. Quite often, those benefits can be satisfied while, at the same time, meeting the needs of wildlife.



Columbine

Wyoming Game and Fish Department habitat extension bulletin number 36 "General Guidelines for Planting Trees and Shrubs for Wildlife" provides a fairly exhaustive list of recommended landscaping plants adapted to Wyoming. The following are some additional species that are geared more toward fruit production, decoration, and will also provide benefits to wildlife and the landowner. Local nurseries, extension agents and other authorities should be consulted for advice on which species are best suited for your location.

Fruit Trees

Apples

Anoka, Cortland, Eastman, Goodhue, Haralson, Joyce, Loki, Transparent Red Duchess, Redant, Roberts, Sharon, University, Wealthy, Sweet 16, Northwest Greening, Jonathan, McIntosh, Prairie Spy, Norland Carroll, Parkland

Cherry

Early Richmond, English Morello, Meteor, Montmorency

Currant

Red Lake, Red Cross

Crabapple

Columbia, Dolgo, Heart River, Linda Sweet, McPrince, Sugar, Whitney, Radiant

Gooseberry

Pixwell, Red Jacket

Grape

Beta

Native Plums (need pollinators)

Manet, South Dakota, Terry

Plums: Prune Type

Blue Damson, Bonne St. Anne, Hildreth+, Mt. Royal, Richland, Yakima

Plums: Japanese-Hybrids (need pollinators)

Emerald, Fiebing, La Crescent, Pembina, Superior, Tecumseh

Raspberry

August Red, Pathfinder+, Trailblazer+

Sandcherry Hybrids

Opata, Sapa, Oka

Strawberry

Fort Laramie+, Ogallala+, Superfection



Lupine



Rocky Mountain bee plant



Common wild geranium

Perennial Flowers

Clematis hirsutissima
 Euphorbia epithymoides
 Papaver orientale
 Veronica spuria
 Lilium umbellatum
 Anchusa-Dropmore
 Iris, many cultivars
 Penstemon glaber
 Dictamnus albus and D. albus 'rubra'
 Nepeta Mussinii
 Peony, many cultivars
 Lilium superbum
 Lilium sp. Amber Gold, Bright Star, Crimson
 Beauty, Fire King, John Evans, Luna, Overture,
 Queen of Hearts, Thunderbolt, Turkscape
 Gaillardia
 Potentilla recta sulphurea and P. Anserina
 Delphinium species and cultivars
 Sedum species and cultivars
 Achillea ptarmica
 Artemisia-Silver Mound
 Perennial phlox
 Lilium tigrinum
 Fall asters
 Blue flax
 Chrysanthemum, many cultivars
 Shasta daisy
 Common wild geranium
 Rocky Mountain bee plant
 Coreopsis
 Day lily
 Poppy
 Columbine
 Cosmos
 Coralbells
 Lupine

Bulbs

Daffodil	Jonquil
Dahlia	Tulip
Gladioli	Crocus
Grape Hyacinth	Allium

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