

# *Landscaping for Birds and Wildlife*

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In every natural system that exists on this planet, the plants determine what other organisms will live and survive in that space. Our backyards are no different. The plants in our landscape determine what wildlife we have living in our backyards. If you take a count of the species or individuals in your yard, you probably won't find too much. You will find only a handful of species that live in or near our homes and businesses. These species are able to adapt to human disturbance and live in close proximity to humans. But what about the hundreds of other species that once lived where our home now stands? Are they banished to parks and preserves, or the few remaining natural areas saved from development?

This doesn't have to be the case. I know from close observation that many more species of wildlife will live near our homes and offices if we provide them with the basic necessities for life.

Our modern landscapes, and the plants used in them, have been developed solely for their looks and aesthetic appearance in the landscape. The biological role and the ecological function of plants in the landscape has been largely ignored and considered irrelevant to human desires. But what is an attractive landscape with out living organisms to animate it and complete the drama of nature. We have short changed ourselves if we design landscapes that do not provide for the needs of native wildlife.

I tell people, birds need five things in the landscape; cover for resting, cover for feeding, cover for nesting, cover for protection and cover for everything else that birds do. Cover is the primary requirement for most species of birds that will be drawn to our backyards. The definition of appropriate cover will vary from species to species. If adequate cover is present then most of the other things that birds require should also be satisfied. For example the food requirements of birds will be satisfied by insects feeding on the plants providing the cover, or by the invertebrates living in the leaf litter beneath the plants.

What do I mean by cover? Cover provides a critical biological need for many species of wildlife that cannot be fully defined and quantified. Cover provides a tangible and intangible requirement for species. In a tangible way vegetative cover can provide concrete needs of wildlife such as protection from predators, or provide food and nesting sites. But cover also meets the intangible needs of species.

In a larger context cover can be combined with other equally important survival requirement and be referred to collectively as habitat. Habitat refers to the space and area that provides the critical needs of a plant or animal species. The habitat requirements of each species varies from species to species and from individual to individual. Each species is adapted to live in a certain type of habitat. If these con-

ditions are not met, that species will not be successful and remain in that habitat. The cover type and species must be compatible to meet the comfort requirement for a specific species. For example, grassland species will not be successful in a forested environment and you will not find woodland species in a grassland. A Robin may require several acres of residential lawn to meet its survival needs whereas a Wood thrush might need many acres of natural woodland for it to survive and breed successfully. Provide suitable habitat and most likely you will attract the species that are best adapted to that habitat.

How do species use habitat? In my opinion the area from ground level to several feet above the ground is the most important habitat zone for most birds. They use this space for most of their critical activities. A grass lawn is restricted to a two dimensional surface that is functional for wildlife. Birds can fly in the space above the lawn but for the most part it has no functional depth. A similar sized space covered with shrubs creates a three dimensional space that is utilized by birds quite differently than the grass lawn. Birds can readily move any where within this space to feed, perch or do any of the things that birds readily do.

What about trees? Trees are often directly and significantly associated with birds and their critical survival needs. Probably because they are one of the primary species that are found in and on trees. Many species of birds are found feeding in, perching on and nesting within the canopies of trees. But few species live their lives solely within the canopies of trees and never within the sole confines of a single tree or small group of trees. Trees are very important to the needs of birds but not entirely by themselves. Even tree top dwelling birds are dependant on other habitat types for their survival. In forest environments trees are seldom isolated from other vegetative levels in the forest. The different vegetative levels are integrated and structured so birds can move vertically up and down through all layers of the forest from ground level to the very top of the forest canopy. This vertical layering is what is missing from our backyard landscapes. Trees are isolated from each other and are devoid of companion plantings. The way we place trees and shrubs in the landscape is contrary to the needs of most bird species.

Not all habitat is equal in its wildlife benefits. By understanding the features that create good wildlife habitat one can maximize those characteristics to create the best possible habitat. You must first decide what type of habitat you are trying to create and what type of species you are trying to attract and then proceed to create it. You can create a grassland, shrubland, woodland, savannah or any variation in between. Also remember that like the plants that create habitat, habitats are living, growing, evolving entities that change over time and the species that live their will change also.

There are four habitat values that will have the greatest influence on quality of habitat and what species will live there; density of plantings, key species, species diversity and spatial scale. Each of these four factors is an important cornerstone in creating wildlife habitat, but no one value can be used independantly of one or more of the others. Each acts as a multiplier of the others. The higher the value of each one the greater the overall benefit. ( $10 \times 10 \times 10 \times 10 = 10,000$  versus  $1 \times 1 \times 1 \times 1 = 4$ ) This multiplier effect reaches its greatest impact on wildlife when all four factors have been maximized to the greatest extent possible. A golf course covering an area

of 300 to 400 acres may contain the same number of species than a quality shrubby habitat covering 50 acres. In this example, the golf course covers a very large area but the large expanse of turf is deficient in the cover and wildlife requirements needed to support a diverse wildlife community. The parcel of shrub habitat is 6 to 8 times smaller but contains all the habitat requirements to attract a complex assemblage of bird and animal species. A residential lot landscaped for wildlife with dense plantings and native species will be more attractive to wildlife than the same lot landscaped in the traditional way.

Planting density has a direct positive correlation on quality of habitat for many species of wildlife. Dense plantings are attractive to more species than open plantings. Dense cover provides the variety of cover that many species need for raising young, for feeding, for escape and for resting. Dense plantings also provides more variety, surface area and volume than a less densely planted area.

Each plant species offers varying degrees of value to wildlife. Each woody species provides different growth habit, food resources, associated insect communities and other less obvious benefits to wildlife. No one species is intrinsically better than another but some key species have unique traits that make them more valuable to certain species of wildlife than others. Select and plant those species that have above average benefits to wildlife or offer several benefits. Many shrubs produce abundant fruits or seeds that supply critical food resources during critical times of the year but also provide valuable cover. Conifers provide valuable cover year round but especially during the winter months.

Although some plant species are valuable wildlife plants and should be encouraged, it is not wise to put all of your resources in one basket. It is better to create a diverse mix of species as an insurance policy against the unforeseen. An array of species insures against the failure of any one species. Species diversity helps protect against a total seed failure in one species or the outbreak of an insect or disease pest that attacks a single species. It is not uncommon for a tree species in an entire geographic region to have a total seed crop failure. Plant diversity provides more resources and alternatives for wildlife and reduces the risk of catastrophic problems.

Spatial scale can have the greatest positive impact on total wildlife numbers but only when leveraged with one or more of the other three habitat values. Conversely the decline of wildlife populations is directly linked to habitat loss and land conversion. As large tracts of land are fragmented and converted to residential use this land is converted to low grade habitat that provides little benefit to wildlife. This can be remedied on a piece by piece basis by following the principals outlined here. High quality habitat can be as productive as large tracts of low quality habitat. Do what you can to improve habitat by planting and encouraging native species, removing invasive species and allowing nature to have its way.

Whether you own a residential lot or a 100 acre woodland, you can have a direct positive influence on your immediate surroundings and the impact on wildlife. Educate your neighbors and form collaborations to create neighborhood habitats. Volunteer and partner with environmental groups. Encourage your garden center to stock native species. Collect and disperse native seed into suitable habitat. Each effort both large and small contributes to the greater good.