



William T. Kemper Center for Home Gardening

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Bird Gardening

Birds are beneficial in our gardens. They add color, liveliness, movement and music to the garden. Birds provide a natural form of pest control by eating huge quantities of insects. For example, a single purple martin consumes several hundred insects per hour including wasps, beetles, flies and mosquitoes! Birds also perform an essential service to plants by dispersing their seeds over wide areas.

The loss or replacement of native vegetation to development, agriculture and the introduction of exotic species has threatened many of our bird populations. Fortunately, the home landscape with its combination of plants, open space and buildings offers many parallels to natural bird habitat.

You can attract birds to your landscape no matter what style garden you have. However, you can greatly enhance the bird-attracting power of your landscape by planting native species such as our native dogwoods, serviceberries and hawthorns. In addition to improving wildlife habitat, a garden of native plants is well-adapted to the local weather and soil conditions. As such, natives are especially hardy to our environment and climate extremes. They require little or no fertilizer and are relatively low maintenance. They are also less frequently bothered by insect and disease problems thus reducing the need for chemical controls.

Designing the Bird Garden

There are three important considerations when planning the ideal bird garden. First, be certain that your garden provides birds with a wide variety of the resources they need such as food, water, shelter and nesting sites. Second, locate these resources in areas that offer the best opportunity for bird watching. This may be close to the house or where an observer can easily hide. Finally, the plants that are attractive to birds should include a diverse mix of vegetation types. This also serves to enhance the beauty of your landscape. A good way to begin planning your bird garden is to determine which bird species are already visiting your yard and which ones you want to attract. Permanent residents that stay all year are usually territorial birds and include cardinals, mockingbirds, blue jays, tufted-titmouse, American robins, Eastern bluebirds, several woodpeckers and many other species of birds. Rose-breasted grosbeaks, scarlet tanagers as well as many vireos, warblers and flycatchers are pass-through migrants in the Midwest. Northern and orchard orioles, indigo buntings, purple martins, the ruby-throated hummingbird and some vireos, warblers and flycatchers set up summer residency while the American goldfinch, hermit thrush, pine siskin, purple finch, cedar waxwings and many species of sparrows may be seen in the winter.

After researching the birds you want to attract, prepare an inventory of their habitat requirements. Plants are a very important habitat element. They are a source of food for many birds, and in some cases they even provide energy sources and moisture in the form of sap or nectar. Living and decomposing plants attract many insects, which compose a large part of the diet of some birds. Plants also provide shelter and comfortable nesting sites, protecting birds from unfavorable weather and predators.

Generally, a multi-leveled planting design is recommended as each bird species has a particular preference for the elevation at which they feed and nest. Varying levels can be accomplished by planting tall and understory trees, spreading shrubs, native grasses and a few bird-attractive annuals and perennials. Consider including evergreen shrubs and trees in your planting plan. In addition to their value as a food source in winter, they offer year-round cover from the weather as well as providing birds with secluded nesting sites. Scrubby hedge rows are also very important to some birds. They provide shelter from predators and weather extremes and can be a good source of fruits and insects. When planting your hedge, choose a variety of plants that fruit at different times of the year to insure a constant food supply. Thicket shrubs, such as hawthorn, wild rose, barberry, pyracantha and raspberry also provide safe nesting sites as they have thorns that deter predators.

A manicured lawn has little value in the bird landscape. To a bird's eye-view, it is preferable to plant ground covers that produce berries such as bearberry, bunchberry, creeping juniper and cotoneaster. These low-growing, spreading shrubs produce an abundance of berries for birds and make the gardeners life easier by reducing the amount of lawn to maintain.

Overzealous gardeners often rake away all of their leaves, thus depriving ground-feeding birds of food. Leaving some of the leaf litter beneath bushes, trees and shrubs will give ground feeders such as thrashers, thrushes and sparrows an ideal place to feed. The decomposing leaves will also help enrich your soil.

Ground-feeding birds are particularly attracted to changes in ground elevation. A gentle slope can be constructed by mounding soil and adding a steep rock face. The slope may be planted with low-growing fruit and seed producing shrubs and ground covers while the rock face will attract earthworms and insects. A brush pile is another important feature. It offers protection to ground-feeding birds and other animals. If you have the room in your yard, a well-made brush pile provides sanctuary from both the weather and predators. A good brush pile will have tunnels throughout so the birds have several entrances and exits and can move easily within the brush.

Food

Commercial bird seed is a convenient source of food for birds. However, many commercial mixes contain seeds that go uneaten by birds. All birds have specific seed preferences so you may want to experiment with mixing your own. Some commonly available seeds eaten by birds include buckwheat, crack corn, millet, flax, oats, peanuts, thistle, wheat, safflower and sunflower seeds. Other important food sources for birds include fruits and berries, nuts, peanut butter and suet.

Consistency is extremely important in a bird feeding program as it will be difficult to persuade birds to your feeder if the source is unreliable. While many people restrict their feeding program to the cold winter months, supplemental feeding of birds offers continuing benefits year-round. As some winter residents depart for their breeding places farther north, the warm months bring new migratory summer residents.

A summer feeding program should include the same foods offered in the winter with a few additions. Orioles and tanagers will appreciate fresh fruit such as apple and orange slices, while sugar solutions will attract hummingbirds to your garden. Suet turns rancid in temperatures over 70 degrees F and, therefore, should be discontinued in the summer. Bakery goods, shelled nutmeats and hulled sunflower should be offered sparingly as they also tend to spoil rapidly in the summer heat.

Adding grit to a winter feeding program will greatly benefit birds particularly in areas where ice or snow covers up the natural supply for long periods of time. Birds do not have teeth and so they rely on hard particles of grit in their gizzards to grind up hard seeds. Grit is usually composed of crushed oyster shells, ground limestone, coarse sand or eggshells. It can be purchased at garden centers, pet stores/ feed stores.

A wide variety of feeders and feeding spots are also important for a well-rounded feeding program. Many styles of bird feeders are commercially available. Be certain that the feeder you chose is designed for the food you plan to offer. Where you place your feeders will also help determine the type of birds you attract (see Table 2). Feeders should be placed in areas that will help prevent attacks from predators as well as provide shelter from rain and harsh weather. Squirrels are a particular nuisance at bird feeders. There are a number of predator guards designed to keep these pests away from your feeders.

Finally, cleanliness is extremely important at the feeding station. Spoiled food is extremely dangerous to birds and serves to attract undesirable visitors such as rodents. Don't be overzealous; set out only enough food for a few days. Rake the ground beneath the feeders frequently to remove debris. Plastic tube feeders should be cleaned once a month with a nine-to-one bleach solution to avoid the spread of disease. Other feeders should be cleaned occasionally as well.

Table 1. Birdseed Preferences of Common Birds

- | | | |
|-----------------------------------|-------------------------------|------------------------------|
| 1. Canary Seed | 6. Oats - Hulled (Groats) | 11. Sunflower - Grey-striped |
| 2. Crack corn-fine | 7. Peanuts - Hearts | 12. Sunflower - hulled |
| 3. Millet - Red Proso | 8. Safflower Seed | 13. Thistle (Niger) |
| 4. Millet - White Proso ("White") | 9. Sunflower - Black oil type | 14. Wheat |
| 5. Milo (Sorghum) | 10. Sunflower - Black-striped | |

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
American goldfinch	L	L	L	L	L	L	L	L	H	H	M	H	H	L
Blue jay	L	M	L	L	L	L	L	L	M	H	H	L	L	L
Chickadee	L	L	L	L	L	L	L	L	H	H	H	M	L	L
Common Grackle	L	H	L	L	L	L	M	L	H	H	H	M	L	L
House Sparrow	M	M	M	H	L	L	L	L	M	M	M	M	L	L
Mourning Dove	H	M	H	H	M	L	M	M	H	M	M	H	M	M
Northern Cardinal	L	L	L	M	L	L	L	M	H	H	H	M	L	M
Purple Finch	M	L	L	L	L	L	L	H	H	H	H	M	M	L
Song Sparrow	H	L	H	H	L	L	M	M	M	M	M	M	L	L
Tufted Titmouse	L	L	L	L	L	L	L	L	H	H	H	L	L	L
White-crowned Sparrow	M	M	H	H	M	L	H	L	H	H	M	H	L	L
White-throated Sparrow	M	H	H	H	M	M	M	M	H	H	M	H	L	M

H = High attractiveness relative to standard feed (more than 50% as attractive)
M = Moderate attractiveness relative to standard feed (from 15-50% as attractive)
L = Low attractiveness relative to standard feed (less than 15% as attractive)

Table 2. Feeder Heights Preferences of Common Birds

Ground Feeders

American Tree Sparrow, Black-capped, Chickadee, Common Grackle, Dark-eyed, Junco, House Sparrow, Northern Flicker, Red-bellied Woodpecker, Red-breasted Nuthatch, Red-headed Woodpecker, Song Sparrow, Starling, White-crowned Sparrow, White-throated Sparrow

Raised Feeders (Low)

American Goldfinch, American Tree Sparrow, Black-capped Chickadee, Blue Jay, Common Grackle, Dark-eyed Junco, Downy Woodpecker, House Finch, House Sparrow, Northern Cardinal, Northern Flicker, Northern Mockingbird, Pine Siskin, Red-bellied Woodpecker, Red-breasted Nuthatch, Red-headed Woodpecker, Song Sparrow, Starling, White-crowned Sparrow, White-throated Sparrow, Yellow-bellied Sapsucker

Raised feeders (High)

Blue Jay, Evening Grosbeak, Pine Siskin, Purple Finch

Hanging Feeders (Seed)

American Goldfinch, Black-capped Chickadee, House Finch, Starling, Tufted Titmouse

Hanging Feeders (Suet)

Downy Woodpecker, Northern Flicker, Red-bellied Woodpecker, Red-breasted Nuthatch, Red-headed Woodpecker, White-breasted Nuthatch, Yellow-bellied Sapsucker

Water

Nothing will attract more birds to your garden than a reliable source of clean water. Birds often have to travel many miles in search of it, especially in winter when most bodies of water are frozen. Birds can obtain much of the water they require in their food, but all species need it for bathing and drinking.

Adding water to your garden may be as simple as placing a trash can lid on the ground or as elaborate as building an in-ground pond with water features. As with feeders, birdbaths should be placed near shelter where the birds feel safe, but at such a distance that they may flee from their predators.

A common source of water in the home landscape is the backyard birdbath. Birdbaths are available in a variety of materials. Terra-cotta and glazed ceramic birdbaths are both attractive but crack easily when water freezes in winter. However, immersion water heaters are available to keep bath water from freezing. Concrete and cement are the most widely available type of birdbath. The heavy construction of concrete withstands freezing better than other materials, but may still need to be emptied in the winter if not equipped with an immersion heater. Plastic and metal birdbaths withstand all kinds of weather, but are slippery to birds unless their surfaces are textured.

The backyard birdbath can be made more appealing with the addition of gently moving water. Draping a small plastic tube over a tree branch near your birdbath is the easiest method to add moving water. A shut-off clamp with adjustable screw will allow you to regulate the water flow. There are also special adaptors available made specifically to fit birdbaths that add dripping or gentle sprays of water.

Fountains, ponds and waterfalls are available in many shapes, sizes and price ranges. If you want to build a fountain, pond or waterfall, you may purchase the necessary components at a hardware store. Remember to keep it simple. More elaborate fountains, ponds and waterfalls will require the technical expertise of a professional landscape designer.

Shelter and Nesting

To a bird, shelter can mean anything from a place to escape from predators and bad weather to a place to nest and raise young. There are several factors that are important in a bird's choice of nesting site. Many birds are especially territorial during breeding season and unless you have an extremely large tract of land, it is unlikely that you will attract more than one breeding pair to your property.

Providing nesting materials can be a great enticement to birds. Nesting materials should be offered in concentrated, readily-obtainable piles to reduce the time a bird spends searching. Nesting materials may be placed near the base of shrubs or feeders. They can be placed in empty suet feeders and wire baskets suspended from trees for easy access. Do not place nesting materials directly into the birdhouse, because it will look as if it is already occupied. Most birds will use animal hair, straw, feathers, bits of string and yarn or other stringy material. These materials should measure four to five inches; longer pieces could entangle birds.

About fifty species of North American birds use birdhouses for nesting, and a wide variety of birdhouses are available for purchase. Some houses come completely assembled; others may come as a kit and require some assembly. You may also choose to build your own.

Regardless of which option you chose, a birdhouse should be designed and built for a particular species of bird. Generally the simplest designs will be the most attractive to birds.

Mount your birdhouse within easy view and out of the reach of predators. Take care that the entrance is directed away from prevailing winds. A slight downward tilt will help to assure the house will not collect rain. It is very important to establish a good maintenance routine for birdhouses and nesting boxes. They should be cleaned out immediately after the young have fledged. It is a good idea to fumigate, dust or spray the box for parasites. Remember, never disturb a birdhouse once it is occupied as it could cause incubating parents to abandon the nest.

For more information about birds and bird gardening visit the Center for Home Gardening's Lang Family Bird Garden or contact your local Audubon Society.

Annuals

Scientific Name	Common Name	Season	Uses
<i>Amaranthus</i> spp.	Amaranth	Su-F	Seed
<i>Centanna cyaruis</i>	Bachelor Buttons	Su	Seed
<i>Calendula officinalis</i>	Pot Marigold	Su-F	Seed
<i>Coreopsis tinctoria</i>	Calliopsis	Su-F	Seed
<i>Cosmos bipinnatiis</i>	Cosmos	Su-F	Seed
<i>Dianthus</i> spp.	Pinks	Sp-Su	Nectar
<i>Helianthus anninis</i>	Sunflower	Su-F	Seed
<i>Impatiens walleriana</i>	Impatiens	Su	Nectar
<i>Lantana</i> spp.	Lantana	Su-F	Nectar, Seed
<i>Nigella</i> spp.	Love-in-a-mist	Su	Seed
<i>Salvia corciica</i>	Scarlet Sage	Su	Nectar
<i>Salvia guaranitica</i>	Hummingbird Salvia	Su	Nectar

<i>Tagetes</i> spp.	Marigold	Su-F	Seed
<i>Trupaeotiim majiis</i>	Nasturtium	Sp	Nectar
<i>Pentas lanceolata</i>	Evgptian Star-cluster	Su	Nectar
<i>Petunia x hybrida</i>	Petunia	Su	Nectar
<i>Portulaca grandiflora</i>	Moss Rose	Su-F	Seed
<i>Portulaca oleraceae</i>	Flowering Purslane	Su-F	Seed
<i>Verbena</i> spp.	Verbena	Su-F	Nectar
<i>Zinnia</i> spp.	Zinnia	Su-F	Nectar, Seed

Perennials

Scientific Name	Common Name	Season	Uses
<i>Aquilegia canadensis</i>	Columbine	Sp-Su	Nectar
<i>Asclepias tuberosa</i>	Butterfly Weed	Su-F	Nectar
<i>Aster</i> spp.	Aster	Su-F	Seed
<i>Buddleja davidii</i>	Butterfly Bush	Su	Nectar
<i>Coreopsis</i> spp.	Tickseed	Su-F	Seed
<i>Digitalis purpurca</i>	Foxglove	Sp	Nectar
<i>Dianthus barbatus</i>	Sweet William	Sp-Su	Nectar: Seed
<i>Echinacea purpurea</i>	Purple Coneflower	Su-F	Seed
<i>Fuchsia x hyhrida</i>	Fuchsia	Sp	Nectar
<i>Geranium maculatum</i>	Wild Geranium	Su	Seed
<i>Hesperis matronalis</i>	Dame's Rocket	Su	Seed
<i>Heuchera sanguinea</i>	Coralbells	Su	Seed
<i>Hibiscus coccineus</i>	Red Hibiscus	Su-F	Nectar
<i>Hosta</i> spp.	Hosta	Su-F	Nectar
<i>Hylotelephium spectabile</i>	Sedum	F	Seed
<i>Lavendula angustifolia</i>	Lavender	Su	Nectar
<i>Liatris spicata</i>	Blazing Star	Su-F	Nectar; Seed
<i>Lilium</i> spp.	Lilies	Su	Nectar
<i>Lobelia cardinalis</i>	Cardinal Flower	Su-F	Nectar
<i>Monarda citriodora</i>	Horsemint	Su	Nectar
<i>Penstemon barbatus</i>	Beardstongue	Sp	Nectar
<i>Phlox paniculata</i>	Summer Phlox	Su	Nectar
<i>Rosa rugosa</i>	Rugosa Rose	F-W	Fruit: Shelter: Nesting
<i>Rosa setigera</i>	Prairie Rose	F-W	Fruit; Shelter: Nesting
<i>Rudbeckia</i> spp.	Black-eyed Susan	Su-F	Seed
<i>Scabiosa caucasica</i>	Scabiosa	Su-F	Seed
<i>Solidago</i> spp.	Goldenrod	Su-F	Seed
<i>Verbena canadensis</i>	Rose Verbena	Su-F	Nectar

Shrubs

Scientific Name	Common Name	Season	Uses
<i>Abelia x grandiflora</i>	Glossy Abelia	Su-F	Nectar
<i>Aesculus pavia</i>	Red Buckeye	F-W	Seed, Shelter, Nesting
<i>Aronia melanocarpa</i>	Black Chokecherry	F-W	Berries, Shelter, Nesting
<i>Berberis thunbergii</i>	Japanese Barberry	F-W	Berries, Shelter, Nesting
<i>Callicarpa dichotoma</i>	Beautyberry	F	Berries, Shelter, Nesting
<i>Cornus</i> spp.	Shrub Dogwood	Su-F	Fruit, Shelter, Nesting
<i>Cotoneaster adpressus</i> var. <i>praecox</i>	Creeping Cotoneaster	F-W	Berries, Shelter, Nesting

<i>Euonymus</i> spp.	Euonymus	F-W	Berries, Shelter, Nesting
<i>Hamamelis</i> spp.	Witchhazel	Su	Fruit, Shelter, Nesting
<i>Hibiscus syriacus</i>	Rose-of-Sharon	Su-F	Nectar
<i>Ilex glabra</i>	Inkberry	F-W	Berries, Shelter, Nesting
<i>Ilex verticillata</i>	Winterberry	F-W	Berries, Shelter, Nesting
<i>Ilex x meserveae</i>	Meserve Holly	F-W	Berries, Shelter, Nesting
<i>Juniperus</i> spp.	Juniper	S-Su-F-W	Seeds, Berries, Shelter, Nesting
<i>Ligustrum</i> spp.	Privet	F-W	Seed, Shelter, Nesting
<i>Lindera benzoin</i>	Spicebush	Su	Fruit, Shelter, Nesting
<i>Morus rubra</i>	Red Mulberry	Su	Berries, Shelter, Nesting
<i>Myrica pensylvanica</i>	Bayberry	W	Berries, Shelter, Nesting
<i>Pyracantha angustifolia</i>	Firethorn	F-W	Fruit, Shelter, Nesting
<i>Rhamnus frangula</i>	Glossy Buckthorn	F	Seed, Shelter
<i>Ribes</i> spp.	Currant	Su-F-W	Fruit, Shelter, Nesting
<i>Rhus glabra</i>	Smooth Sumac	F-W	Berries, Shelter, Nesting
<i>Rhus tyhina</i>	Staghorn Sumac	F-W	Berries, Shelter, Nesting
<i>Rubus</i> spp.	Blackberries and Raspberries	Su	Berries, Shelter, Nesting
<i>Taxus x media</i>	Yew	W	Berries, Shelter, Nesting
<i>Vaccinium corymbosum</i>	Highbush Blueberry	S-F	Fruit
<i>Viburnum</i> spp.	Viburnum	W	Berries, Shelter, Nesting

Ground Covers

Scientific Name	Common Name	Season	Uses
<i>Ajuga reptans</i>	Bugle Weed	F	Seed
<i>Fragaria vesca</i>	Strawberry	Sp-Su	Berries
<i>Liriope muscari</i>	Lily Turf	F	Seed
<i>Rhus aromatica</i> 'Gro-Low'	Fragrant Sumac	F-W	Berries, Shelter, Nesting
<i>Symphoricarpos orbiculatus</i>	Coralberry	Su-F	Seed

Ornamental Grasses

Scientific Name	Common Name	Season	Uses
<i>Andropogon scoparius</i>	Little Bluestem	F-W	Seed, Shelter
<i>Deschampsia caespitosa</i>	Tufted Hair Grass	F-W	Seed
<i>Koeleria argentea</i>	Silver Hair Grass	Su-F	Seed
<i>Koeleria glauca</i>	Blue Hair Grass	Su-F	Seed
<i>Miscanthus</i> spp.	Eulalia Grass	F-W	Seed, Shelter
<i>Pennisetum alopecuroides</i>	Fountain Grass	F-W	Seed, Shelter
<i>Sesleria autumnalis</i>	Autumn Moor Grass	F-W	Seed
<i>Sesleria caerulea</i>	Blue Moor Grass	F-W	Seed
<i>Sorghastrum nutans</i>	Indian Grass	F-W	Seed, Shelter

Trees

Scientific Name	Common Name	Season	Uses
<i>Amelanchier</i> spp	Serviceberry	Su	Berries, Shelter, Nesting
<i>Betula papyrifera</i>	Paper birch	F-W	Seed, Shelter, Nesting
<i>Crataegus</i> spp.	Hawthorn	Su-F-W	Fruit, Shelter, Nesting
<i>Diospyros virginiana</i>	Persimmon	F	Fruit, Shelter, Nesting

<i>Malus</i> spp.	Crabapple	F-W	Fruit, Shelter, Nesting
<i>Picea omorika</i>	Serbian Spruce	Su-F-W	Seed, Shelter, Nesting
<i>Picea pungens</i>	Colorado Spruce	Su-F-W	Seed, Shelter, Nesting
<i>Pinus nigra</i>	Austrian Pine	W	Seed, Shelter, Nesting
<i>Pinus strobus</i>	White Pine	W	Seed, Shelter, Nesting
<i>Prunus</i> spp.	Cherry	Su-F	Fruit, Shelter, Nesting
<i>Prunus virginiana</i>	Common Chokecherry	Sp-Su-F	Fruit, Shelter, Nesting
<i>Quercus rubra</i>	Red Oak	F-W	Seed, Shelter, Nesting
<i>Sambucus canadensis</i>	American Elder	Su	Berries, Shelter, Nesting
<i>Sorbus</i> spp.	Mountain Ash	Su-F-W	Fruit
<i>Tsuga canadensis</i>	Hemlock	F-W	Seed, Shelter, Nesting

Vines

Scientific Name	Common Name	Season	Uses
<i>Akebia quinata</i>	Five-leaf Akebia	Su	Fruit, Shelter, Nesting
<i>Ampelopsis brevipedunculata</i>	Porcelain Vine	Su-F	Berries, Shelter, Nesting
<i>Campsis radicans</i>	Trumpet Creeper	Su	Nectar, Shelter, Nesting
<i>Celastrus scandens</i>	Bittersweet	F-W	Berries, Shelter, Nesting
<i>Hedera helix</i>	English Ivy	F-W	Berries, Shelter, Nesting
<i>Ipomoea purpurea</i>	Morning Glory	Su-F	Nectar, Seed
<i>Lonicera</i> spp.	Honeysuckle	Su-F	Nectar, Shelter, Nesting
<i>Parthenocissus quinquefolia</i>	Virginia Creeper	F-W	Seed
<i>Vitis riparia</i>	Wild Grape	F-W	Fruit, Shelter, Nesting