

Twelve Ways to Design a Bird-friendly Garden

By Stephen W. Kress on September 1, 1998

Before you begin designing your bird garden, be sure to visit several nearby natural areas, such as parks and wildlife sanctuaries. These will give you a sense of what kinds of plants and plant communities make up the natural bird habitat in your area. Take notes on what species grow in these natural places and how the plant communities are structured—how they form vertical layers, for example, and how some plants occur in large drifts. Re-creating a similar type of growth using species native to your area is the key to a successful bird garden.

Once you've gotten a sense of the structure and makeup of the local bird habitat, make a drawing of your property and its perimeter, and sketch in all of your existing plants, especially trees and shrubs. Also note the herbaceous plants that benefit birds, such as pokeberry (*Phytolacca americana*) and black-eyed Susans (*Rudbeckia* species). Sketch in your house, outbuildings, driveway, and other primary features. With this map in hand, you'll be able to identify the resources you already have for attracting birds; you should protect and nurture these. You can also use this sketch to plan additional plantings appropriate for your area.

Following are 12 general guidelines on how to design a garden that appeals to both birds and people.

1. Re-create the layers of plant growth found in local natural areas

All natural areas are composed of various layers of plant growth. In the deciduous forests of the Northeast, for example, dominant trees such as sugar maple and American beech form a high canopy above an understory of intermediate-sized trees such as hornbeam and serviceberry. Below this is a layer of tall shrubs such as spicebush and witch-hazel, then smaller shrubs such as fragrant sumac and maple-leaf viburnum, and finally groundcovers such as partridgeberry and mosses. The layers are intertwined with vines such as Virginia creeper and wild grape. The forest edge is also layered, but with different plants, including dogwoods, nannyberry, and arrowwood.

Birds use most or all of these various layers for a multitude of purposes. The Wood Thrush, for instance, usually sings from the highest trees -- those that form the canopy. They build their nests in the layer of tall shrubs below, and find food by scratching through leaf litter. Their nests include material from all of the layers, including mud, leaves, and grapevine bark.

Be sure to mimic the vertical layers of nearby native plant communities when designing your bird garden. A handy rule of thumb is to plant tall forest-interior trees along the periphery of your property; a bit closer to the house, plant understory trees, then large shrubs, small shrubs, and, closer still, groundcovers such as bunch grasses and wildflowers. Once these plantings are well established, plant or encourage the growth of vines. If your garden already has large trees, establish islands of variable-height plantings around them.

Birds of open habitats such as meadows and prairies require many acres of grassland, but you will have some success attracting Bobolink, meadowlarks, and Savannah Sparrow to your yard by keeping the lawn in grass and planting a few shrubs that the birds will use as singing posts.

2. Select plants with an eye to providing nutritional foods during different seasons

Different birds require different kinds of foods in different seasons. During the rigorous chick-rearing days, for example, parent birds get the energy they need by feeding on sweet fruits such as blackberries, mulberries, and wild cherries. Fall migrants (thrushes, vireos, and warblers) require fatty fruits such as flowering dogwood, spicebush, and maple-leaf viburnum to build fat reserves for their long journey, while wintering birds (finches, sparrows, and waxwings) need abundant, persistent fruits such as those of conifers, bayberry, hawthorns, crabapples, and sumacs to help them survive subfreezing temperatures. Such persistent fruits are also extremely important for early spring migrants such as bluebirds, robins, and thrashers. Be sure to include a variety of plants that can help sustain the various birds that visit your garden year round.

3. Plant small trees and shrubs in same-species clumps

This is necessary for pollination of dioecious shrubs such as hollies and mulberries, with separate male and female plants. Even for species with flowers of both sexes on the same plant, planting in clumps helps boost fertility and therefore fruit yields. Clumps also benefit birds by providing highly visible, massed displays of fruit. To create a natural look, avoid planting trees and shrubs in rows, and for aesthetic reasons, plant odd numbers of specimens in rounded patches to reduce the goal-post look or plantation effect that can otherwise result.

4. Provide at least one clump of conifers

Birds find shelter in evergreen conifers during storms and winter weather. They also are preferred roosting (sleeping) and nesting sites.

5. Spare a dead tree (snag) for the birds

Birds tend to perch in dead trees, which they use as singing posts to defend their territories. It's also a good idea to leave a few dead branches on live trees for perches. Woodpeckers will channel out nesting cavities in the soft wood of dead trees and use the trees for drumming -- the woodpecker substitute for territorial song. Dead trees also make excellent anchors for bird houses.

6. Leave vines or plant them

Vines such as Virginia creeper, greenbrier, and poison ivy provide birds with perches, nesting places, and leaf surfaces from which insect-eaters such as warblers and kinglets can glean good, abundant fruit crops. Wild grape, another vine popular among birds, provides food for at least 51

species of birds, and at least 16 species use the stringy bark to help build their nests.

7. **Limit the size of your lawn**

A manicured lawn doesn't provide much in the way of food or habitat for birds, and typically contributes to a host of other environmental problems associated with fertilizing, mowing, and the use of pesticides to control insects and diseases. Across the country, people are experimenting with changing the composition of their yards and introducing native species. They are gradually replacing the monotonous green of the lawn with more natural plant communities closely mimicking the prairies or woodlands that existed before suburbia altered the American landscape. Such habitats are more interesting and much kinder to backyard birds.

Many people feel that grass is an essential play surface for children; if you plan to include lawn in your yard, seek out the kinds of grasses that require little upkeep and that stand up well to children, too. As your children grow, you can reduce the area dedicated to grass, replacing it with other low-maintenance plants, including native wildflowers and grasses, and shrubs and woodland groundcovers.

8. **Avoid invasive non-native plants**

Invasive non-native plants are still commonly available through many nurseries, in part because some provide food and cover for wildlife. However, the threats of these plants to native vegetation and wildlife far outweigh any short-term benefits. They can rapidly invade natural areas, crowding out diverse mixes of native plants that are much more valuable to wildlife. Others pose a threat to the unique gene pools of closely related natives, as white (Russian) mulberry (*Morus alba*) threatens red mulberry (*M. rubra*) by interbreeding.

9. **Supply a source of water**

Birds get much of the water they need from foods, but they will readily use open water sources for drinking and bathing. Birds in arid regions such as mountains and deserts are especially drawn to such watering spots, but birds in the Northeast, Southeast, and Pacific coastal regions are also highly attracted to open water year-round. Birds need water not only for drinking but also to cool themselves in the heat of the summer, while wintering birds welcome water when natural supplies become locked in ice and snow and are unavailable.

During migration, land birds are most in need of fresh water. Each spring many perform a remarkable feat, flying nonstop over the Gulf of Mexico, exhausting both their fat and water supplies; they must refuel and rehydrate at the first opportunity in coastal states.

Hummingbirds sometimes bathe in a few drops of water that collect in the midribs of large leaves, but most land birds prefer to drink and bathe in shallow puddles and pools, and will

readily use birdbaths. Baths atop pedestals will keep birds out of reach of predatory cats and are easier to clean than ground-level baths. When choosing a bath, find one with a shallow slope, as most birds are short-legged and avoid deep water.

Clean the bath with a stiff brush every few days in summer, adding water as needed; make sure that it is no deeper than three inches at the deepest spots. Make sure, too, that the water is clean, as birds will drink from your bath as well as bathe, and excrement and algae can accumulate when baths are neglected. Birds are especially attracted to pools that have a dripping action; they like to perch on the source of the drip and drink drops of water before they fall into the pool. Birds are probably lured to these baths by the movement of the dripping water and the concentric ripples created as each drop falls. Several devices are available that tap into garden hose supplies to create a continuous dripping action.

Birds bathe and drink in winter as well as summer, so make sure that your bath does not freeze over completely during cold weather. When the air temperature hovers just below freezing, add warm water to the bath several times a day. At lower temperatures, you will need to install an electric heating device to provide a reliable water source. Cement or granite birdbaths are best for winter use because ceramic baths can crack when water freezes.

Birds are also attracted to larger garden pools. For details on how to create a water garden that can double as bird habitat, consult Brooklyn Botanic Garden handbook #151, *The Natural Water Garden: Pools, Ponds, Marshes, and Bogs for Backyards Everywhere*.

10. **Provide nest boxes**

Birds that nest in tree cavities often lack suitable nesting places, as natural cavities are scarce; these cavities develop when branches break off and the wound does not self-heal, permitting the inner wood to rot. Most cavity-nesting birds rely on woodpeckers to create their nesting and roosting places. Woodpeckers chisel into trees to feed, creating openings that are often enlarged for nesting by small cavity nesters like chickadees and titmice. Squirrels and larger birds such as the Great-crested Flycatcher may enlarge these holes further. Suitably sized cavities have probably always been scarce, but they are in even greater demand today because native birds are competing with House Sparrow and European Starling, which usurp millions of nesting places that traditionally would have been used by the native bird life.

The simplest way to increase the variety of birds nesting on your property is to provide nest boxes, which substitute for natural tree cavities. In all, 48 species are known to raise young in nest boxes, including bluebirds, Tree Swallow, Purple Martin, and Prothonotary Warbler. Some species prefer wood chips in the bottom of their nest box to cradle eggs, while others build elaborate nests of sticks, grass, and feathers. Boxes can be made of any wood, but avoid using wood preservatives and paint on the interior, as these could affect the eggs or young. There are a variety of excellent designs for boxes, but they must include a sloping roof to shed rain, drainage holes in

the bottom, an access door for annual late-winter cleaning, and a predator guard to keep raccoons from reaching in to snatch eggs and young. By keeping the entrance hole 1-1/2 inches in diameter or smaller, you can exclude starlings. Modify the box dimensions and size of the openings to accommodate specific species.

Location is another important consideration. Bluebird houses placed in the woods will be used by chickadees and titmice; if placed at the forest edge or in thickets, expect to find House Wren. However, place the same box in an open field and you'll likely attract bluebirds or Tree Swallow.

11. Leave some leaf litter for the birds

Rather than raking leaves into a pile for roadside pick-up, use them to create feeding places for ground-feeding birds such as thrashers, White-throated Sparrow, and robins and other thrushes. Just rake the leaves under hedges or trees that produce a dense shade. Rake the leaves in the fall, creating beds five to six inches thick; by spring, they will have decomposed just enough to have attracted a good supply of earthworms, insects, and other animals on which the birds feed.

12. Use pesticides sparingly, if at all

Some pesticides harm birds directly. Others kill or contaminate insects and other creatures on which many birds feed.

Keep in mind that the typical lawn is coddled with an arsenal of chemicals. If you're thinking of hiring a lawn-care company, choose one that favors the use of alternatives to chemical insecticides and herbicides. If they do recommend the use of chemicals, ask for the names of the substances, the reasons for their use, the quantities to be applied, and where and when it will be done.

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