Creating Landscapes for Bird Diversity

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Essential Principles: Creating Habitat and Providing Food for Birds

1. Native Plants are THE ESSENTIAL Food Source

- Native plants are the primary host plants for healthy insect populations, making them especially important. Over one-half of the general diet of songbirds is comprised of insects. In addition, nestlings need to grow very fast before they fledge, and eat only insects. Non-native plants do not as readily serve as hosts for insects, and therefore predominantly non-native gardens have much less biodiversity, including birds or butterflies. Recent research suggests that native plant biomass needs to be significant (70% or more) if we are to sustain native bird populations.
- Many natives provide fruit through berries and seeds—and it's great fun to watch the birds eat them. Plant lots of variety. There are some references to suggest which plants have fruits or seeds that will attract certain species of birds. But this information is not always complete. Make your own observations; you will learn a lot.

2. Leaf Litter — Valuable and Beautiful — Leave those Leaves!

- Leaf litter is home to a tremendous amount of life— especially arthropods (insects, spiders) and mollusks (snails). All of these are important bird food, especially to our ground feeding birds, which are often the species in decline because of the tremendous loss of ground level habitat and food sources. If you leave the leaves, you will start to see many more birds happily feeding!
- Many butterflies, moths, and native bees and other insects depend on leaf litter for overwintering or reproduction, and your entire garden food web will function much better with its soil ecosystem intact.
- A big bonus: Leaf litter is the best mulch you can get, and you don't have to buy it or ship it in.

3. Vertical Edge — Include a Variety of Canopy Layers

- Birds fly, and to increase their diversity you need lots of different levels—tall trees, medium size trees, high and low shrubs, and groundcover. The more variety the better; different bird species rely on different layers.
- Tall trees are especially important to create some approximation of a continuous woodland environment in which birds can flit from tree to tree. (Notice what happens when there are no tall trees around… do you see many birds?)
- The trees and shrubs you plant will have a significant impact on the health of your landscape. Choose species that host significant numbers of Lepidoptera, as well as those best suited to your site and soil conditions.

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4. **Provide Cover and Varied Topography**

   - One of the biggest needs for birds in our urban and suburban areas is adequate "cover" for nesting and privacy. Consider where you see birds, and notice that they like dark, wooded, or private areas for nesting and feeding, etc. Evergreen trees are especially great for this.
   - Deciduous shrub habitat is equally important. Within these areas, an understory of twigs and leaf litter will contain insects and seeds, while offering shelter.
   - Windbreaks—masses of plantings large enough to slow the wind—are important for protection.
   - The more varied and interesting the topography, the better. Embrace elevation changes, rocks, logs, nooks and crannies. Create perching spots with stones and stone walls.

5. **Birds Need Water on a Regular Basis**

   - They need water they can splash and bathe in, so shallowness is important. If you use a bird bath, or create a fancier water feature, be sure it provides perching opportunities with shallow spots and a range of depths.
   - A simple bird bath worked into the landscape can work well. Change the water regularly, but don't worry about keeping it pristine—a few leaves and insects around can add to its usefulness.

6. **Snags, i.e. Dead Trees**

   - Think about "the woods." Dead trees are important for food and habitat. They are host to insect populations and especially loved by woodpeckers and many other cavity nesters. Consider letting dead trees stand if they are away from structures, or you can create a snag by cutting down part of a tree and leaving the trunk.

7. **Deter those Ubiquitous House Sparrows**

   - "Sparrow-proof" all of your buildings and landscape elements, to eliminate the multitude of nesting opportunities. This is tremendously important, and especially if you can convince your neighbors to do the same. Get rid of the privet hedges and bobbed yews that they love!
   - If you install bird houses, monitor them regularly and remove any nesting House Sparrows.

More Anthropogenic Considerations

8. **Eliminate Unnecessary Predators — Don't Let Your Cats or Other Pets Kill or Harass Wildlife**

   - Predation by cats is a serious threat to our native songbird populations and the most significant cause of direct bird mortality from human activity (after habitat destruction and fragmentation). If you have a cat, keep it inside. Dogs also disrupt bird visitation, nesting, and feeding. Keep dogs in more confined areas, under control or on a leash.

9. **Building Design and Glass Windows**

   - Large picture windows and glass skyscrapers are the second largest direct cause of bird mortality. Mitigate the reflective qualities of your glass windows, which affect birds both during the day and at night. Learn more at https://abcbirds.org/glass-collisions/resources/

10. Say "No to Pesticides!"

- Bald eagle populations have recovered dramatically since the banning of DDT, sufficiently that in 2007 they were delisted as a threatened and endangered species in the United States. This is one great example of what happens when we remove pesticides from the food web.
- But other, still legal, pesticides are used routinely and quite dangerous. Rodenticides used to kill rats and small mammals get passed up the food chain to owls, hawks and other predators, killing many. Spraying pesticides kills the insects that birds depend on to survive, and can also have a direct effect on birds that come into contact with these poisons. Neonicitinoids are common in many garden products, and are accumulating in surface water, with negative effects on birds.

11. Minimize Outdoor Lighting — Join the Dark Sky Movement

- Nighttime lighting adversely affects many kinds of wildlife, moths, and other insects, and very much affects birds. Because many bird species migrate at night over long distances, urban lighting in particular disorients these birds, resulting in significant numbers of deaths. Minimize night lighting, direct it downwards, and use warmer color temperatures (3000K and below).