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Embracing Bird Conservation at Home

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Cedar Waxwing feeds on native *Amelanchier* berries. All photographs by the author.

One of my very favorite birding spots in New England is at my own home in Cambridge, Massachusetts. Sitting on my back porch or nestled somewhere in the garden, I have delightedly observed and documented 80 species of birds over the past decade. It is not a large property—the 7,300 square feet of land includes the substantial footprint of a two-family house—located in a residential neighborhood with rows of two-families lining the streets. Yet, my birding experiences here have been rich and wonderful, and the wide variety of species present has increased as I have created valuable habitat that these birds use in diverse ways. Often, they are foraging and eating caterpillars, insects or berries. Some of them sing, call, or hoot to announce their presence, proclaim their territory, or look for a mate. Larger birds such as Red-tailed Hawks hunt for prey, catching squirrels or crows. I was even delighted and surprised last year to see a Blue Jay catch and eat a House Sparrow. A few of these 80 bird species have taken up residence in my garden at times, and not just the predictable American Robin. The highlight to date has been the pair of Downy Woodpeckers that built their nest one year in a large snag that I had created for just that purpose. There, they successfully raised and fledged two young. Watching all this bird life has brought me and my husband tremendous pleasure. More important, this habitat that I steward is also supporting life for a large number of species of conservation concern, whose populations are declining throughout eastern North America.

Two species that have benefitted from my garden, American Woodcock and Wood Thrush, are on the North American Bird Conservation Initiative (NABCI) Watch List denoting species of highest conservation concern and at risk of extinction, as reported in their *State of North America's Birds 2016* (available online at <<http://www.stateofthebirds.org/2016>>). For several years in a row, I have witnessed a migrating American Woodcock in the back garden where it stayed and rested overnight, before flying on find more suitable nesting ground. It appeared exhausted after what I assume was a long migratory flight, and it was able to rejuvenate and recoup its energy in a quiet and sheltered corner of my urban habitat. Wood Thrushes also have been regular visitors during the spring migration. They and other migrating thrushes particularly like the shrubby back edge of my garden, filled with sheltering Canada yew (*Taxus canadensis*) and gray dogwood (*Cornus racemosa*), and an understory of twigs and leaf litter that provides insects and arthropods to eat. Perhaps of value to both of these species is also the moisture that is sometimes present. The clay subsoil in this part of Cambridge is relatively impervious to water, and my back garden floods a bit in heavy rains. I appreciate that character of my land and, unlike many neighbors, have not tried to flatten out the subtle contours to create a level lawn.

Thirty-two of the bird species that have been using my garden are classified as Species of Moderate Concern in the NABCI report. Some of these are more at risk than others, but generally all have declining populations and other negative factors affecting their habitat, breeding, and their ability to sustain populations. Not surprisingly, the majority of those 32 species of concern that take sustenance from my garden are Neotropical migrants. Every spring many species of warblers actively forage for insects and caterpillars in the variety of native trees in my garden, such as shadbush (*Amelanchier* spp.), river birch (*Betula nigra*), silver maple (*Acer saccharinum*), muscledwood (*Carpinus caroliniana*) and others. Northern Flickers are regular visitors almost year-round, feeding on the open ground and on the trunks of trees. White-throated Sparrows are common as well. They dance forward and backward in the leaf litter throughout my garden, and especially like the area near the naturalistic granite bird bath that is tucked under the edge of a protective evergreen tree; there they regularly stir up lots of juicy insects to eat. I have also observed Louisiana and Northern waterthrushes, Swainson's Thrushes, Ovenbirds (rarely), flycatchers, and even a Scarlet Tanager. Throughout the summer, Eastern Screech-Owls feed in my garden at night, and my ears seem attuned to their descending whinnying calls that often wake me up at 3 or 4 am. (See Table 1 for a complete list of bird species observed in my garden.)

The remaining 46 avian species using my garden are of lower conservation concern. Many of these have stable, or even increasing, populations. Included, of course, are just a few dominant non-native species, such as House Sparrows and European Starlings. But the vast majority of these 46 other species utilizing my landscape are native, and ones that we all delight to watch. They include Red-tailed, Sharp-shinned, and Cooper's hawks; Ruby-throated Hummingbirds; Downy, Hairy, and Red-bellied woodpeckers; Yellow-bellied Sapsuckers; Eastern Phoebes and flycatcher species; Black-capped Chickadees; Tufted Titmice; White-breasted and Red-breasted nuthatches; Brown Creepers; House and Carolina wrens; Golden- and Ruby-crowned

Watch List Species

American Woodcock
Wood Thrush

Species of Moderate Conservation

Concern

Common Nighthawk
Eastern Screech Owl
Northern Flicker
American Kestrel
Eastern Wood-Pewee
Least Flycatcher
Eastern Kingbird
Warbling Vireo
Veery
Swainson's Thrush
Purple Finch
Pine Siskin
White-throated Sparrow
Eastern Towhee
Baltimore Oriole
Common Grackle
Ovenbird
Louisiana Waterthrush
Northern Waterthrush
Golden-winged x Blue-winged Warbler
hybrid
Black and White Warbler
Nashville Warbler
Common Yellowthroat
American Redstart
Chestnut-sided Warbler
Blackpoll Warbler
Black-throated Blue Warbler
Yellow-throated Warbler
Black-throated Green Warbler
Wilson's Warbler
Scarlet Tanager
Indigo Bunting

Species of Low Conservation Concern

Mallard
Wild Turkey
Rock Pigeon (Feral Pigeon)
Mourning Dove
Ruby-throated Hummingbird
Sharp-shinned Hawk

Cooper's Hawk
Red Tail Hawk
Great-horned Owl
Yellow-bellied Sapsucker
Red-bellied Woodpecker
Downy Woodpecker
Hairy Woodpecker
Eastern Phoebe
Great Crested Flycatcher
Red-eyed Vireo
Blue Jay
American Crow
Barn Swallow
Black-capped Chickadee
Tufted Titmouse
Red-breasted Nuthatch
White-breasted Nuthatch
Brown Creeper
House Wren
Carolina Wren
Golden-crowned Kinglet
Ruby-crowned Kinglet
Hermit Thrush
American Robin
Gray Catbird
Northern Mockingbird
European Starling
Cedar Waxwing
House Finch
American Goldfinch
Chipping Sparrow
Dark-eyed Junco
White-crowned Sparrow
Song Sparrow
Northern Parula
Magnolia Warbler
Yellow Warbler
Yellow-rumped Warbler
Northern Cardinal
House Sparrow

Total Number of species: 80

Watch List Species: 2
Species of Moderate Concern: 32
Species of Low Concern: 46

Table 1. Species seen in Claudia Thompson's yard, by NABCI status



Wilson's Warbler finds a caterpillar on the *Amelanchier* leaves.

kinglets; Hermit Thrushes; Northern Mockingbirds; Cedar Waxwings; at least four more species of warblers not on the “moderate concern” list; Northern Cardinals; various sparrows; Dark-eyed Juncos; American Goldfinches; and more. Wow! And I don't have nearly as much time just to sit in my garden and observe birds as I would like, so there may well be others I haven't seen.

How Did My Garden Come to Be Important Habitat for So Many Birds?

When my husband and I bought our house in 1992, we didn't think of our gardening efforts as a stewardship process or part of a larger conservation strategy. We selected plants primarily because of their aesthetic qualities and based on hardiness zones, and with a perhaps bit of consideration for our soil conditions. This conventional approach was driven (and still is for many people today) by the view that conservation and the protection of “nature” is done somewhere else—not at our homes, businesses, or institutions, but on larger pieces of land that have been set aside as parkland or restricted from development. But my Cambridge garden has taught me much, changing my viewpoint dramatically over these past 27 years.

One of our first actions was to take down the old decrepit garage on the property to maximize the available open space on our 7,300 square feet and increase the available planting area. Back in the 1990s much attention was starting to be paid to invasive species. Caring about conservation, I jumped on that bandwagon—removing Norway maple and common buckthorn trees, multiflora rose bushes, winged euonymus, and a number of other invasive species that were seeding in here and there from the neighborhood: Oriental bittersweet, garlic mustard, black swallow-wort, and goutweed.

In total, I have successfully managed and controlled 10 different invasive species that had started to take hold on my property.

While our original planting strategy in 1992 paid no attention to the evolutionary origin of plant species, fortunately I got interested in using native plants within just a few years. I am grateful that my interest was sparked early on, as I was starting to plant more trees and shrubs, and the choice of species was to have a big impact on my emerging garden. And then, a funny thing happened: the garden started teaching me. Happily, my skills as a naturalist kicked in so that I could learn some of the lessons it offered. I originally made the decision to plant more native trees and shrubs primarily because I appreciated their beauty in the landscape. I had grown up in a rural, woodland setting, and liked the native plant aesthetic. But little by little, I began to observe more and more birds in my garden. Interesting warblers became regular arrivals in spring; they and many different species would forage for insects among the tree canopy and along the tree trunks, especially finding prey in the exfoliating bark of the river birches. Cedar Waxwings arrived on cue every June as the *Amelanchier* berries ripened. Cardinals, Mockingbirds, and Catbirds loved eating the berries on my straight-species native winterberry holly (*Ilex verticillata*), but did not eat the larger berries on the much touted ‘Sparkleberry’ hybrid that I had planted because it had been acclaimed through prominent horticultural awards. (‘Sparkleberry’ is a cross between our native *Ilex verticillata* and the Japanese *Ilex serrata*.)

The reinforcing cycle had started. Seeing more birds and connecting them to the native plants in my garden prompted me to plant even more natives. Within that first decade of gardening I went from not even thinking about what was native to being committed to using predominantly native plants. I evolved my approach, now even taking out some of the non-natives I had planted earlier in the 1990s. Fifteen years in, I was so intrigued by the bird life in my garden, that in 2007 and 2008 I started making lists of the species I saw. These notes quickly evolved into an Excel spreadsheet documenting the species observed each year, with, if I remembered to write it down, the dates first seen in spring for the annual migrants. Concurrently, I got better at keeping records of every plant species added to my garden, and to some extent even recording the failures, the species I planted that didn’t survive or persist in the landscape.

Today, I have truly transformed this piece of land, planting well over 100 species of flora in my garden. The vast majority, more than 95%, are native; they feel right together and they grow well together. Much of my garden is a rich woodland environment with many tall trees and vigorous shrubs. Friends who visit and walk through it are amazed to learn that I have planted every single plant in this entire landscape of rich greenery, with the exception of one large silver maple at the back of the property, and one old rhododendron at the back corner of the house planted by the home’s owner back in the 1950s. It is a wonderful garden, constantly evolving, full of nooks and crannies and microclimates, and helping to support life for so many native bird species. They need many more places like this if they are to survive.

The Science Behind My Garden

Naturalists and ecologists have long observed the importance of insects as one of the principal food sources for birds. The current statistic popularized by Douglas Tallamy, the much-acclaimed author of *Bringing Nature Home*, that it may take between 6,000-9,000 caterpillars to raise just one clutch of chickadees, is based on original research on chickadees done by Richard Brewer in the 1950s and published in 1961. An even older, detailed, and worthwhile 1912 classic, *Some Ohio Birds* by Harry A. Gossard and Scott G. Harry, documents the food sources of birds on a species-by-species basis, illustrating their tremendous reliance on insects and, correspondingly, the value of birds to healthy gardens and farms because of their important role in controlling insect pests. (This report was republished in 2009 by Ohio State University as *Red Bird, Green Bird*, and it is an interesting read full of valuable data.) What is fundamental to understanding this issue writ large is to know that insects are the most important intermediaries in any ecosystem's food web, and that without a tremendous supply of insects, birds will simply not survive. Insects and arthropods are the predominant food source for a large number of bird species, and 96% of terrestrial birds raise their young exclusively on insects (Tallamy 2007). So a rich abundance of insects is critical to bird survival.

But what about native plants? Why do they matter in these equations and complex ecosystem relationships? What is much newer in our understanding of ecology is the essential role that native plants play in supporting insect life, and therefore bird life and the entire ecosystem itself. Douglas Tallamy has been researching this subject with his graduate students at the University of Delaware for several decades. Other researchers are studying these issues as well. The conclusions should not really surprise us. Native plants support far more insect life than do non-native ones. Plants and animals co-evolve together, and every ecosystem on earth is somewhat different in its species and relationships. Dr. Tallamy explains this subject in great detail in his wonderful book and sums up his discussion with a simple conclusion, "My own research has shown that native ornamentals support twenty-nine times more biodiversity than do alien ornamentals." So the oversimplified equation is: Native plants grow insects, and insects grow birds; therefore native plants are one of the most essential ingredients for bird life. Yes, my garden was trying to teach me that!

A New Conservation Paradigm for the Twenty-first Century

The birth of the conservation movement in the United States from the post-Civil War period of the late 1800s and into the twentieth century was logically focused on setting land aside for protection, with the expectation that nature would successfully regulate itself largely absent from human management and intervention. Indeed, a tremendous amount has been achieved by the creation of our national and state parks, nonprofit preserves and sanctuaries, and with the addition of other tools such as conservation easements on private lands. But we have been learning that our human impact is felt almost everywhere, and some land management actions are genuinely good and necessary. In addition, what the older conservation model doesn't account for is the amount of land in the United States that is in private ownership. Setting aside

a small percentage of land into “protected” status is clearly not solving the continuing problem of biodiversity and species loss. Since the end of World War II, the pattern of land development that subdivides large tracts of land into smaller and smaller parcels, vividly illustrates the challenge, and we know it has had a dramatically negative effect on wildlife and biodiversity. Habitat loss and habitat fragmentation are major drivers of the problem. Not only has this development pattern removed large tracts of second-growth forests that provided important habitat and food for birds, but the subsequent plantings on these properties with non-native ornamentals and lawn have almost no ecological value to our local fauna.

So what is to be done? The solution is simple, radical, and challenging and, *yes*, obvious. Every piece of land matters and deserves to be treated as part of our larger collective habitat, and as important to conservation. Our shared ecosystems are our shared commons. Take it from the birds, they don’t stop at the property line. They certainly don’t know what one is.

That became my approach to my garden. Here was a piece of land that I could steward without restriction, according to my values and my desire to create needed habitat for birds. What joy! The results have exceeded my expectations. If you had told me in 1992 that I could create garden habitat around my house that would result in its use by 80 bird species, I think I would have been quite skeptical. How wonderful that it simply happened as I experimented along the way and nurtured the process. I don’t claim that my garden fully supports those 80 species; it certainly does not. And that is exactly the point. It takes a village—well, interconnected habitat, to be exact. What I do conclude by the presence of so many diverse bird species are two things: 1) how important native plant landscapes are to bird life, and 2) how much the birds are searching for such habitat in a developed world where it is all too rare. I am certain they delight in finding my garden amidst a sea of more barren residential landscapes.

So, bird lovers, please join me in this quest and this passion. We humans can make a dramatic difference in the lives of our declining species. Our everyday actions do matter. Imagine if all property owners—residential and institutional— better integrated our human-built environment into functioning and healthy ecosystems with native plants at their foundation. Imagine that we no longer think of “nature” as out there, somewhere else, but rather right here where we are at this moment, and we are a part of it. Imagine that we planted all of our landscapes with predominantly native plants, gardened using ecological processes that respect the importance of soil and leaf litter, and stopped our love affair with pesticides and rodenticides and other destructive chemicals. And imagine that every trip outside of our houses greeted us immediately with butterflies, dragonflies, and yes, lots of birds.

The challenge is that this radical approach requires a wholesale and completely changed paradigm to the normal landscaping practices of our culture. It requires making concepts of ecology mainstream throughout our society and requires many of us to learn much more about botany. It will likely mean learning to use less technology in our everyday life rather than ever more. It requires that we place greater value on the organic biodegradable life processes that are inherently sustainable because of



In 2013, Downy Woodpeckers nested successfully in a snag created by the author.

how well they cycle nutrients and energy. It compels us to understand ourselves as organic beings, who like any other species on earth, are just as much a part of its ecosystem and the cycles of life and death. This is no small call to action.

Taking Action

Adopting this attitude and approach to conservation and stewardship is empowering and full of joy. It makes our home life even richer with lots of moments of discovery. It catalyzes other important environmental benefits, such as driving less to watch birds elsewhere, thus reducing excess CO₂ put into the atmosphere. It makes birdwatching easier and more accessible. I still marvel about

spring 2013, from March through early June, sipping a cup of joe on the back porch each morning and watching while just 75 feet away a pair of Downy Woodpeckers excavated a nest in the snag I created, mated and laid a clutch of eggs, and then fed and raised their young until they fledged. It was a balcony seat on a grand stage, and not something I would have experienced if I had had to go somewhere else every day to watch the show.

If you want to join in the fun and have the opportunity to steward a bit of land that falls under your care, here are some tips for action.

Plant primarily native species, especially trees and shrubs. This will greatly increase the bird food in your habitat, including Lepidoptera species (moths and butterflies), other insects, and arthropods. You can also choose species with fruits edible to birds.

Garden using ecological processes. Leave your leaf litter undisturbed in your woodland garden areas and anywhere that isn't lawn. A tremendous amount of life exists in this leaf litter layer that is so important to many ground feeding bird species. And the annual cycling of nutrients in this layer is vital to soil health.

Create a garden rich in layers, everything from high tree canopy (think orioles) to mid-level canopy from smaller trees (so many species) to shrubs (think sparrows and catbirds) to the herbaceous ground layer (think thrushes). Don't suppress your living system by using layers of bark mulch at the base level. Plant the ground layer under the trees and shrubs so that there is life happening everywhere.

Provide water. You don't have to be fancy; a simple birdbath that you fill regularly works well. Keep cats away, especially because you are now attracting birds and making them vulnerable by adding this water source.

Use dying and dead wood in your garden. Again, ecological processes provide important food sources. Good-sized logs can be a nice feature in the woodland garden as they decay over time. If you have the space and room, leave some standing dead wood. Many birds will start feeding on the insects that colonize these snags.

Provide secluded places for cover and protection, using evergreens and massings of deciduous shrubs where birds can feed privately and quietly, and perhaps even nest.

Get dirty. Enjoy transforming your landscape. You will be rewarded with many new bird observations!

When we embrace our stewardship role to include all land and understand that every one of our actions has consequences to the ecosystem— good or bad—we engender a larger human engagement in conservation. I fear the conservation movement has become somewhat marginalized in my lifetime because we have drawn an artificial boundary that puts “nature” somewhere else other than where we humans are. Only when we radically change this framework so that concern for the environment becomes part of how we think as a society and the province of everyone—in cities, suburbs, rural areas—can we repair this damage and invite everybody to care. And birds are one of the best catalysts we can possibly have for this new worldview. They are fascinating, intriguing, beautiful, beguiling. So let us join together to create more habitat for these many species we so love. Let us reverse the trends of declining populations. *It can be done.* Along the way, we will be doing much for biodiversity as a whole on this planet, and even improving the prospects for *Homo sapiens* ourselves. 🐦

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Claudia Thompson is a nationally recognized leader in the native plant movement and the founder of Grow Native Massachusetts. Her career as an environmental educator has included roles as the Director of Education for the Appalachian Mountain Club, Director of Mass Audubon's Drumlin Farm and serving as a trustee for the New England Wild Flower Society. A sought-after speaker, she teaches a variety of workshops about landscaping with native plants across Massachusetts and New England. Her in-depth workshop devoted to this particular subject, “Landscaping for Bird Diversity,” will be offered in Waltham, Massachusetts, on Saturday, June 8, 2019 (9:30-11:30am). Check out the many free resources and educational videos on the Grow Native website <www.grownativemass.org> or register for Claudia's workshop at <www.grownativemass.org/programs/workshops>.

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