When Birding and Ornithology Meet

During the four years that I have thus far devoted to my graduate studies, I have spent countless hours researching, handling, measuring, and simply observing birds. Along the way, there has been time for contemplation—how I got my start as a biologist, where I am right now, and where I am headed. The short essays that follow trace my inspirations and aspirations as a field ornithologist.

Evolution of a Birder

Looking through a family photo album recently, I found myself searching for my features in those of my distant ancestors. I thought I recognized the source of my cheekbones and maybe of my blue eyes, but what I definitely discovered was the allure of defining myself in relation to the world, past and present. Every day I make decisions about how to express my idea of "me"—how to represent my interior outwardly. Some aspects of my personality can be divined from my clothing, my art, my occupation and hobbies. If you asked me who and what I am, I would probably say the same things I have said for years: a musician, an

Caitlin Kight

213 Waller Mill Road Cottage Williamsburg, Virginia 23185 crkigh@wm.edu athlete, a birder. Did those traits arise from genes, like my cheekbones and my eye color? Because my father is

_____ a journalist and my mother a literature teacher, I al-

ways encounter surprise when I admit that I am pursuing an advanced degree in biology, studying conservation and birds. If proverbial nickels were actual currency, I would be a rich woman from all the times I have heard "Where did your interest in birds come from?" The repetition of this question over time eventually forced me to contemplate the topic, and the best I can do is identify two events that influenced this path of my life.

The first is actually connected to one of the faces I saw in my photo album: my great grandmother Mildred, whom I know only from a few Christmas pictures taken during my toddler years, just before she died. In our house, her legacy lives on in three objects (and, of course, my father-her grandson): a teapot, the sole glass Christmas bulb that I didn't break when I knocked over the Christmas tree at age four, and two bird identification books that somehow ended up on my bookshelves years ago. Their pages have a very tenuous relationship with their spines these days, but I still like to look through them and see the penciled-in comments written in Mildred's angular turn-of-the-century scrawl. "Saw today eating red berries" (American Robin). "Flew through yard. Very pretty!" (Eastern Bluebird).

I suppose that my great grandmother is the first bird enthusiast I knew, and that reading her birder's logs was one of my first glimpses into the rewards of learning about, watching,

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and admiring nature. Perhaps this is why, as a child, I would spend time in the yard making color-coded lists of the birds I saw (red for cardinal, gray for dove). Of course I was so young when all these events occurred that I can only speculate, but it is intriguing and somewhat comforting to think that I could be keeping a family tradition alive, perpetuating a love of birds that began with someone in those sepiacolored photos—or even before.

The second catalyst in my birding identity formation process seems so random (and bizarre) that I usually don't take the time to explain it. Sometime in middle school I was reading Stephen King's It and came across the passage where Stan, a pre-adolescent bird lover, is confronted with a terrifying situation. He begins reciting the names of all the birds he knows as a sort of mantra to both protect and distract him from evil-and it works! By that point in my life I had somewhat forgotten my interest in the great outdoors, but this story reminded me that I, too, liked birds. Perhaps in those angst-ridden middle school days I also felt that I needed a mantra of my own to buffer me from the evils of being a teenager; whatever the thought process (or lack thereof)-I began birding again. And never stopped.

In any case, I sometimes think that the important question is not how I became a birder, but why I remain a birder. I have a friend who thinks it's odd when people organize trips to go birding. "For me," he says, "I'm always watching birds-when I'm driving, when I'm sitting at my desk...why do I need to set up a special time to do so?" And I think he is right. There is something about the allure of the animals themselves, their movements and their distinct personalities, their endearing quirks. Once I learned to attach a name to the various chirps and songs, silhouettes and shadows, I found myself perpetually surrounded by friends. In the morning, I don't hear "birds" waking me up; I hear Mr. Chickadee and Mr. Mockingbird. I register each individual the way I can pick out the sound of my mother's voice from my grandmother's or my aunt's at a family gathering. In fact, when I left for college, I tried to calm my nerves by thinking how, even if I met no human friends, I would always recognize my avian pals!

Recently, a female poets' listserver, of which I am a member, was abuzz with conversations about birds in poetry. As many of the ladies observed, birds are not only omnipresent in verse since its earliest days, but they are also used as powerful metaphors and striking images. One woman asked, Ink on Bristol board. © Ray Nelson.

"What makes birds so fascinating and useful to poets?" I have had my

own theory on that topic for years; it's an answer I sometimes give when asked why I enjoy ornithology. For me, birds have a beauty and a grace so extreme that they are the kinetic versions of poetry; they do for me in motion and song what "Dover Beach" and "Thirteen Ways of Looking at a Blackbird" do in writing.

And, ultimately, I find myself watching birds the same way I was studying family portraits in my photo album. I identify with the spunk of the Blue Jay, I wish I were as delicate as the Dark-eyed Junco, and I certainly would love to think I sing like a Wood Thrush. Maybe all of us who love the outdoors—birds, mountains, stars, all of it—try to see pieces of ourselves in the objects we examine. Maybe we all think of evolution and family resemblances and how our similarities and dissimilarities place us in the universe in relation to each other. Perhaps if we look long enough, we believe these resemblances will allow us to define ourselves in space and time.

It would be neat to think that while focusing my attention on birds and observing their mannerisms, and maybe even while working toward their protection and conservation, I will somehow experience a moment of enlightenment about myself and my purpose in life. I suspect, however, that just as I am still searching to find who bequeathed me my raucous laugh and my stubborn cowlicks, I will perpetually look for answers to those loftier questions about what defines Me. In the meanwhile, I will simply enjoy the presence of my feathered friends and delight in the color and music they bring to everyday life.

Never Sick of Birds

I knew a professor who loved tropical fish so much that she devoted her career to their study. Over the years, she spent so much time measuring and classifying the animals that her enjoyment of them started to wane. Someone who once visited aquariums to experience the beautiful creatures now regarded them in a cool, scientific light, and gladly left thoughts of them behind in her office and her lab when the working day was through. As a scientist, I am forced to wonder (and fret): Is this what years of study does to a person? After years in the field of ornithology, will I one day see a process or a condition or a body part rather than a feathered poem in motion?

I have many bird walks and much field research yet to come, but I am no novice. And yet, I find that birds-not to mention the many other animals and plants I routinely experience in the field-are constantly interacting and behaving in new ways. I observe something new almost every time I go exploring, which allows me to perpetually increase my understanding of, and connection with, the species I study.

For instance, prior to becoming a graduate student, I could count on one hand the number of times I had seen an active bird nest during the breeding season. But now that I've spent time in the field observing the flight patterns, vocaliza-

tions, and defense motions of breeding birds, I find nests everywhere I turn. On a single walk through the college woods, I observed an Ovenbird creating its oven, and a titmouse lining a cavity with moss. To think that the birds were busy with the task of perpetuating their genes not five feet from where I stood was inspiring.

Another thing I find amazing is how individuals of a

particular species have basically the same plumage, basically the same vocalizations, and basically the same behaviors, but always with variations. No two birds have exactly the same style of delivery or presentation, and if you watch long enough you can definitely distinguish personalities. Although that may sound unscientific coming

from a biologist, consider that when behaviorists describe a bird as "dominant" or "subordinate", they are stating the bird's social ranking in terms of how it perceives and reacts to the individuals around it.

Perhaps most importantly, no matter how minute a detail I find myself studying (chemicals, molecules, even atoms), I find it impossible not to relate it to the larger picture. Genes and proteins do not particularly interest me, but understanding how they work to influence the success of an egg or the reproductive ability of a parent bird does. That knowledge, in turn, allows me to better appreciate how bird "families" form a local population, how populations make up a community, how communities...well, you get the picture.

To think that we can begin by considering an atom and, working outward in an infinite process, understand an organism, an ecosystem, a solar system, and even a universe, is astonishing. The implications and possibilities of all research are mind-boggling and humbling. That I could become an expert of one facet of bird biology is feasible-nesting ecology, say, or how birds are affected by disturbance. But that I could ever truly understand it all is a laughable idea. This means that I could never run out of questions to answer!

Sometimes, though, I think that we scientists believe that, just because there are infinite questions, all of them should be addressed. When I

was an undergraduate, I attended an ornithological conference where I spent hours sitting in lectures and where birds were reduced to wing measurements, reproductive success rates, and biogeographical patterns. Cumulatively, these studies were probably funded by hundreds of thousands of dollars, and yet, what was the worth of their results? The answers our research yields are only valuable when they are as vivacious and beautiful as the creatures we study. For this to be the case, it is necessary to craft elegant, meaning-

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ful studies that aim to answer a specific question that is important on a grander scale.

Perhaps that was the problem of the woman and her fish—she was watching the animals and measuring them in some way, but not considering the importance of their role in a rigorous experiment. After all, the organisms we study are tremendously useful in allowing us to explore issues that affect such things as medicine, environmental law, and our conservation practices.

After handling hundreds of chicks every summer, I still find myself amazed each spring when I have the first bird of the year in my hand—so soft, so warm, so alive. And that is nothing compared to how I feel each time I see a newly hatched chick. It is simply incomprehensible to me that such a tiny, pathetically weak little being might survive. And perhaps this is why all the photographs and numbers and charts I deal with as a researcher are continually imbued with the essence of the intense freedom and beauty I see in the field. I could never grow tired of an organism that fights against the odds to survive—to survive from an embryo in an egg to a fledgling, to survive later as an adult on an increasingly crowded planet.

I suppose I will never tire of birds because, ultimately, they are miraculous to me. Perhaps it is just a property inherent in the birds themselves. Perhaps this is my own mindset, since most living organisms seem miraculous to me: a starfish's ability to regenerate, how desert plants manage to locate and hoard water, the way a bear can hibernate months out of the year, a bird's orientation process during migration. I am perpetually astonished at the persistence and adaptability of life, and unless living organisms cease to survive against all odds I will never be immune to their magnetism.

Fueling the Passion

As a graduate student at the College of William and Mary biology department, I conduct routine visits to our nearly 1,000 bird boxes. In the course of one breeding season, I may spend as many as 720 hours (thirty 24-hour days, or one solid month) in the field doing nest checks and observations. During this field time, I frequently meet other ornithology enthusiasts and curious passers-by.

Sometimes these chance encounters are educational for me. For example, a golfer at one of my sites informed me that he had hand-reared an abandoned mockingbird chick by feeding it moist dog food. I later used this information to feed a hungry grackle chick on its way to a rehab center. More often, though, I unwittingly find myself perceived as the local authority not only on bird boxes, but also on birds in general. Once, I was asked if I could identify "this one bird; it has some brown on its chest." Now, I may know my birds, but even Peterson would have needed more description to make that ID! Usually, I am asked easier questions, the answers to which I have often found in the pages of this and other bird magazines—What species nest in boxes? How close to a home can a box be installed? What should be done about snakes? What will entice birds to use boxes?

Others of these questions are at the forefront of current environmental science and have been discussed as yet only in the technical literature. One example is the issue of planting hundreds of "fake" nests for bluebirds. Some believe that these efforts continue to promote and increase the viability of the once-diminished bluebird population. Others, however, feel that this effort attracts the birds to territories where they might not naturally breed—territories where they may be subjected to human disturbance in the form of habitat alteration and disturbance.

These possibilities form the foundation of a growing field of study—in which I am involved—aimed at observing and quantifying the effects of human disturbance on wildlife. This research typically includes measuring how close birds in different areas allow humans to approach; tallying bird diversity and abundances; and measuring breeding success. These numbers are then compared across sites with different levels of disturbance to understand whether, and to what extent, human presence affects these characteristics.

Historically, much research has focused on seabirds, waders, and large-bodied flocking species (particularly those which can be hunted). Recently, though, many research labs have turned their attention toward passerines—especially the secondary cavity-nesters that are attracted to bluebird boxes. The current question is whether these species are breeding in areas that are "healthy", or whether the boxes attract them to territories where anthropogenic disturbance could decrease their reproductive output and ultimately lower their populations.

A prime example of such a territory is golf courses, where many scientists postulate that "disturbances" such as chemicals and human traffic may actually reduce breeding success, to the ultimate detriment of bird population numbers. To investigate this possibility, several lab groups are currently engaged in developing scientific studies comparing life history details and breeding success rates between golf courses and other sites. In my experience, course superintendents and athletes alike enjoy both the aesthetic DIMENSIONS

appeal of housing cavity-nesters and the feeling that they are contributing to a conservation effort. Little do most of them know that the boxes on their courses are involved in studies at the forefront of conservation biology research.

Nest box trails in general tend to be established in locations that are easy to reach: backyards, roadsides, parks. In most instances even the most remote box is fairly accessible at least by foot and often by car as well. One of my favorite examples can be seen while driving on I-64 west from Williamsburg to Richmond: There are half a dozen bluebird boxes arranged at a rest stop, not 20 feet off the four-lane highway—talk about proximity to disturbance!

Anyone who has watched adult birds at the nest has noticed the defensive behaviors they exhibit toward anything-or anyone-who comes too close to the box or who lingers too long in the territory. It may be that avian parents in highly trafficked areas expend excessive amounts of energy defending their boxes against human intruders. Raising nestlings is hard enough to begin with-who needs to use their free time performing divebombs and alarm calls? Additionally, parents have only a limited amount of time each day; if they are actively defending their young, they are not out hunting for food to feed the chicks. This could result in poorer-quality chicks that might have a harder time surviving until the next breeding season. There have even been theories about how the loudness of nearby human activities may interfere with communications such as chicks' begging sounds and parental contact or alarm calls. At some of my sites I have recorded decibel readings comparable to the noise made by a landing jet plane.

When I can, I attempt to explain my field of research to passers-by who ask why I am peeking into bird boxes or watching brood-rearing parents for hours on end. I hope that these current scientific queries are not a deterrent to bird lovers who hope to establish their own boxes or work with existing nest box trails. Instead, I anticipate that we researchers can develop a list of guidelines to help bird enthusiasts choose the perfect locations for their nest box trails. From what I have seen and read already, most scientists who study disturbance have shown with statistical analysis what common sense would suggest: The farther away the disturbance is from the box, the better. Also: Good predator guards are a must.

In general, I hope that scientists' sense of inquisitiveness spreads from our research community to all nature lovers. After all, our current world of hybrid cars and widespread curbside recycling was brought about when people stopped to ask how they were impacting the environment and then made lifestyle improvements accordingly. We still have a long way to go to undo the damage we have caused (and continue to cause), but it is important to know that, in a college or university near you, someone is trying to find out how it can be done.

So the next time you're out birding and run across a tired-looking student rummaging around a bluebird box, stop and chat a while—vocational bird scholars can learn from your questions and insights, and maybe even can pass on a few of our own. And for those of you who are looking for a more active way to help, many projects (such as my own) can benefit from having the energy, expertise, and the extra pairs of eyes that community volunteers have to offer.