



NATIONAL AVIARY
PITTSBURGH, PA

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WHY BIRDS MATTER

They Make Us Curious

It's a funny thing how children can open their eyes in all sorts of ways. I asked my son Nathan why birds matter to him. He told me, "I love that they are colorful and fly. I like to learn their names and figure out what kind they are."

I like to watch herons catch fish with their beaks."

At this crossroads in American history I can't think of greater gift to give my children than an appreciation of the natural world. For me, there is nothing more exciting than finding a new caterpillar, spotting a new bird, or crossing paths with a wild fox — it gets my heart racing and my adrenaline pumping. Each new find gets my curiosity flowing.

At this time, as developers take our forests and electronic devices consume our children,

getting out into wilderness and appreciating everything that happens without human hands is refreshing and renewing to me. How DO monarch butterflies know to migrate to the forests of Mexico each year? How DOES the same hummingbird find my house every May and let me know it's time to put out my feeder? They do it without the help of the latest smartphone.

My family loves spotting new things — on vacations we learn about the new birds we may find and seek them out. We were recently in Nevada and my six year old wanted to spot a road runner in the wild. As a family we set out to find one — we were unsuccessful in that pursuit — but along the hike we spotted four big horn

sheep and spent three hours outside overlooking bright blue Lake Mead while taking in the desert surroundings — there is no app my kids can download for that!

If you have a passion for wild things, you will never be bored. There is always more to find, more to learn, and more to amaze you. The more you know, the more environmentally conscious you will be — maybe you'll forget the pesticide treatment this year, maybe you'll start to plant native plants and feed the birds — then you can sit back, relax, and enjoy the wildlife you're helping right outside your home. Funny thing is, you'll be the one thanking them! ■

Michele Rice
National Aviary member



ILLUSTRATIONS BY NATHAN RICE

CONSERVATION & RESEARCH UPDATES FROM THE NATIONAL AVIARY

flightpaths

SPRING 2018

Why Birds Matter...



In celebration of the 100th Anniversary of the Migratory Bird Treaty Act, the National Aviary has joined National Geographic and hundreds of bird conservation organizations across the country and the world to celebrate the Year of the Bird.

2018
YEAR OF THE BIRD



In an era where growing human populations, the use of fossil fuels, and increases in consumption of other resources threaten the health of our planet and the very well-being of humans, it is appropriate to pause and reflect on our natural world.

At the National Aviary, birds are the messengers whose intricate beauties, complex song, elaborate behaviors, and migratory feats provide us with thrills, awe, inspiration, and comfort. But birds should also remind us that we are all part

of an intricate natural system that is full of interdependencies, and upsetting any of those relationships is done at our own peril. Birds are an integral part of that system, and one of the best indicators of imbalance or stressors in ecosystems.

In this special issue of *FlightPaths* we focus on one of the central themes of the Year of the Bird — that is, why do birds matter? Here we have asked National Aviary staff, volunteers and research associates to share their perspectives on why birds matter to them. Some reflect on the uniqueness of birds, while others are deeply personal stories of how birds have touched their lives, or how they were inspired to act to help birds thrive. Help us make the Year of the Bird a cornerstone for conservation in the next 100 years! Throughout the Year

of the Bird we challenge all of our visitors, members, donors and others to use the #noticebirds hashtag to share bird content with the National Aviary! We'll also introduce challenges and activities throughout the year using #noticebirds. In addition, you can stay up to date with our latest activities at the National Aviary's Year of the Bird webpage (www.aviary.org/notice-birds) and at the Year of the Bird official web site (www.birdyourworld.org).

So, why do birds matter? For all the reasons given in the pages of this special edition of *Flightpaths*...and more! ■

Steven Latta, Ph.D.
Director, Conservation and Field Research

“It's no secret that the natural world has inspired art throughout human history. Perhaps no group of animals better realizes their aesthetic potential than birds. As a trainer at the National Aviary I am fortunate enough to see this artistry every day. Maybe it's the subtle beauty of a seldom seen but often heard bird, like the Screaming Piha; the banana yellow beak of a Green Aracari, or the pink plumage and long, curved bill of the Scarlet Ibis. Capturing these details has always been a fundamental goal of my photography. I'm captivated by birds, and through my photos I hope that others will share my enthusiasm for them.”

Mike Faix
Education Trainer



PHOTOS BY MIKE FAIX

Top, left-right: Screaming Piha and Green Aracari.
Above: Scarlet Ibis.



NATIONAL AVIARY

The National Aviary inspires respect for nature through an appreciation of birds.

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WHY BIRDS MATTER

They Inspire Us

I'd never given birds much thought. I was drawn to the National Aviary because I wanted to make a difference for the health of the planet... so my children could camp, and hike through national parks, and feel the wonder of wide-open spaces. And I wanted to make a big difference for a nonprofit organization. The birds were just a side note, really — a means to an end.

About eight months into my career here I took my first hike with the other directors. I assumed it would be like any other walk in the woods. Instead, it entirely changed my perspective.

As we're hiking along, Steve says suddenly, "did you hear that?!"

I continue walking, looking around, straining my ears for some unusual noise.

"Hear what?" I ask.

"That," he replies.

"What?" (I'm not getting it). There's a pause.

"That," says Steve.



Cedar Waxwing

PHOTO BY DANA NESITI

"Oh, *that*? Yeah, I hear that,"

It was a bird call. I don't remember the bird name. What I remember is what happened next.

"It's right there." I could not fathom how Steve managed to point out that small bird in a not-so-nearby tree and know exactly what and where it was just from hearing the call.

Later that day I saw a Cedar Waxwing. I was able to use binoculars (after much effort, mind you) to see it up close. And I discovered that Cedar Waxwings are beautiful. Then I learned that they are a bird that's been around me all my life.

I also saw a Golden-crowned Kinglet. And I decided to try and remember that name because it would be fun if I ever saw one again.

And that day opened my eyes to an entirely new world. It was as if I'd never walked in the woods before. There was a whole new realm of life all around me that today I'm embarrassed to say I'd just never noticed before.

That's where it began for me five years ago. And now I know why birds matter. I know them as complex, intricate creatures. I've been fascinated by their feather structure and how incredibly their bodies work. I've pondered the marvels of migration. I've met intelligent birds with distinct personalities. And I've come to learn that there's much more to the "Canary in the Coal Mine" story that I learned in school. That expression bears a much deeper meaning than birds in cages warning miners of toxins. I've understood that for many reasons and in many ways, birds are our best indicators of environmental change. Yet there are many people, who like me before, might not be noticing.

Birds matter because they inspire. They inspire wonder; they inspire concern. They inspire delight and awe. They've inspired me, and they do the same for any who has the opportunity to discover them. And I hope everyone gets that chance. ■

Robin Weber
Senior Director,
Marketing & Community Relations

WHY BIRDS MATTER

They Provide Essential Ecosystem Services

If humans were to cause birds to virtually disappear, as we have tragically seen on some islands, what would we lose? What would you miss?

Management and policy decisions about natural lands involve weighing the costs and benefits of those decisions and changes. However, true costs from the loss of ecosystem services following the extinction or declines in bird populations are rarely factored into the equation. So, ecologists have joined with economists to estimate the dollar values of lost ecosystem services — not surprisingly, quantifying those costs often affects the cost-benefit analysis.

Most directly, birds provide us with food. Whether domesticated or wild, birds are an important component of human diets around the world. In addition, birds inspire us through their beautiful songs, elaborate displays, and fantastic plumages. From Audubon to Warhol, and classical music to jazz, birds appear again and again.

Birds also support a multi-million dollar industry of bird watchers and photographers. A 2016 U.S. Fish and Wildlife Service study found 45 million Americans watch birds, and joined other wildlife watchers in contributing more than \$75 billion to the U.S. economy!

But beyond these direct impacts, birds are an intimate component of ecological services. Birds consume enormous numbers of pest insects such as mosquitoes and forest-killing caterpillars, and reduce our need for dangerous pesticides. Vultures, like the Andean Condor, scavenge animal carcasses, removing carrion and potential disease vectors from the environment.

Birds also serve us by acting as critical pollinators, not only of beautiful flowers but also fruit and other plants we depend on. While hummingbirds are the best known of these avian pollinators, many other species also play this role, especially in the tropics.

Fruit-eating birds also are important dispersers of seeds. After consuming a fruit and its seeds, birds may travel long distances before defecating the seeds. Bird-dispersed seeds are important in reducing competition, increasing plant diversity, and reforestation.

Beyond these frugivores, many carnivorous hawks and owls feed on pests like rats and mice. For example, in cacao

plantations — the source of chocolate — Aviary ornithologists have documented the importance of owls in controlling rats which are a major source of damage to cacao fruit.

So as you sit down to your next meal, or walk through a garden, or turn on your radio, take a moment and thank a bird! ■

Steven Latta



Black-and-white Warbler feeding on a small insect larva.

PHOTO BY DAX ROMANE

They Make Us Passionate

In 2014, the West Liberty University Geography department announced they were taking a trip to Iceland. When my friend, Laken, and I heard this, we knew we had to go. After begging our families to help us pay for the trip (since we were obviously poor college students), we had enough money to go and booked our spots. After flying 2,895 miles in a plane that was very small, we finally landed.

The next day we set out on our first day of whale watching and birding. Super excited to see both of these things, we couldn't wait for the bus to stop moving! Finally, the bus stopped near the edge of a huge cliff, and our guide instructed us to step quietly out of



PHOTO BY LAKEN LAMBERT

the van with our binoculars. As we walked to the side of the cliff, I gasped! There were hundreds of Puffins lining the cliffs all around us. I had never seen anything like it in my life. After crying from pure joy (and the seawater in my eyes, of course), I finally really started looking at them through my

binoculars, and I can confidently say that this was the moment when I became a birder. I had always enjoyed watching birds at my parent's feeder or learning about them, but I had never felt a passion to see more species in the wild. Now, I am a bona fide bird lister, and I watch my own bird feeder daily to mark down what species are visiting.

Truly, this trip to Iceland is what made me as passionate about birds as I am today. ■

Caroline Schooler
Lead Interpretive Educator

WHY BIRDS MATTER



National Aviary teen volunteer, Henry Burdett, photographing a Golden Pheasant in the Tropical Forest.

Because Our Children Do!

Children are born with an inherent fascination for the living world. The children who visit with us at the National Aviary have that enviable sense of wonder about birds. They enter our habitats wide-eyed and filled with a hunger to learn.

Some have discovered species only in books or online, and are getting the chance to see their favorite species live and in person for the first time. Others, with a love for birds so strong, have already decided to be “bird scientists” or “bird doctors” when they grow up. These budding ornithologists and avian veterinarians impress even the veterans with their knowledge and passion. There’s no doubt that the birds will be in good hands in the future.

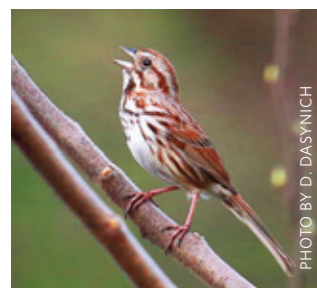
During the summer, our educators get the chance to engage with some incredible summer campers who have a passion for birds and nature. One of our campers, Henry, has attended a variety of programs here at the National Aviary. His father described Henry at ten years old as a “bird guy” who was certain that he wanted to be an ornithologist when he grew up. Henry’s father said that the National Aviary team fed Henry’s love of birds, teaching him even

more than he already knew, and helping him to understand possible education and career paths.

Henry explains, “the summer camps have allowed me to learn more about the birds and how they impact their ecosystems.”

Now a National Aviary Teen Volunteer, Henry is sharing with our guests his own love of birds and the knowledge he has collected over the years. Some of these guests are wide-eyed ten year olds, like Henry was, fascinated with birds and longing to know more about them. Who better than Henry to help connect them to the birds they love and possibly to a future career path!

After what has been a rather cold, dreary, and mostly silent winter, the birds are starting to sing again. There is a Song Sparrow that perches outside my bedroom window, and he is the most pleasant alarm clock I’ve ever had. As winter white gives way to spring green, he



Song Sparrow.

daily sings after dawn arrives, gently lolling me from sleep. He can actually put a smile on my face even before I’ve had my coffee! Just hearing him on late winter mornings brings joy to my entire being.

I know he is a Song Sparrow because, as a child, a trusted adult once taught me how to distinguish the Song Sparrow’s song from the songs of other birds. I didn’t even know to ask the question — this person simply shared their knowledge, and I was so fascinated and hungry to learn, it stuck.

Rachel Carson once said, “If a child is to keep alive his inborn sense of wonder, he needs the companionship of at least one adult who can share it, rediscovering with him the joy, excitement, and mystery of the world we live in.” In my experience —

both as a child and with the National Aviary — I know this to be true. ■

Trisha O’Neill
Director of Education

WHY BIRDS MATTER

They Are Fragile

Felled nest trees, an accidental window or car collision, an eagle creating a fatal connection between powerlines through its wingspan. There is no pit deeper in the gut of those who love birds than seeing what we, as humans, do to them and the places they call home while sharing our lives on this planet.

The path to becoming a wildlife or avian veterinarian is often littered with tales of recognition of that love and loss. Choosing avian or wildlife medicine as a career is not only of benefit to the avian patient; in some ways, it’s therapeutic for the practitioners.

Birds are awe-inspiring in all their living color. They shape our poetry, our art, our imaginations. They shape our landscape with the ecosystem services they provide in pollination and seed dispersal. They clean up carrion and prevent the spread of diseases. Many we have taken as companions and pets in our homes, for our own benefit and delight. Independent, intelligent, and even enigmatic, it comes as somewhat of a jolt even now to be presented with birds when they are not in their full form: when their



The author and Tim Beichner examining a juvenile Black-chested Buzzard Eagle.

when they spend time at a rehabilitation facility, wildlife center, or veterinary practice. Each individual bird is beautiful and important, full of lessons, and worthy of our support.

As a veterinary student, part of the medical oath I take reads, “I will strive to promote animal health and welfare, relieve animal suffering, and protect the health of the public and environment.” Part of protecting the environment is making sure that the wonder and balance birds bring to our lives and ecosystems are around for future generations. When the weeks and efforts pay off for a bird that broke its wing or was a victim of wildlife trafficking, and we settle on a release site and date, the moment the carrier doors open and the patient flies out is more than just a small redemption for the humans behind the moment. It’s a gift of life and hope that keeps us working towards a world with more than enough space for birds and us both. ■

Nikki Becich
Former Veterinary Intern

feathers are tarnished or broken, their power for flight is gone, and they are vulnerable. It is a guilty wonder to hold them in gloves or under anesthesia to try to help them in these moments: stitch the wounds, give the drugs, repair the broken bones hollowed for flight or thickened for ocean diving. To try to keep their stress low in the brief overlap of the space we and they occupy in this world

They Deliver Important Messages

For a century or more, birds have served in a life-preserving role for human beings. Coal miners depended on their canaries in a cage to be sensitive and accurate barometers of air quality in poorly ventilated underground mine shafts. In the era of heavy DDT use in the decades following World War II, Bald Eagles, Peregrine Falcons, and Brown Pelicans all suffered nearly catastrophic population crashes. Luckily for them (and for us), a brilliant and dogged advocate for the environment, Rachel Carson, dedicated her life to educating us about the hidden chemical dangers of organochloride pesticides that the birds themselves were revealing. Her seminal book, *Silent Spring*, showcased the critical role that birds can play as bio-indicators; that is, if we are willing to listen to what they can tell us.

The banning of DDT in 1972 was a direct result of Rachel Carson’s tireless efforts to investigate, educate, and communicate about the environmental messages that she

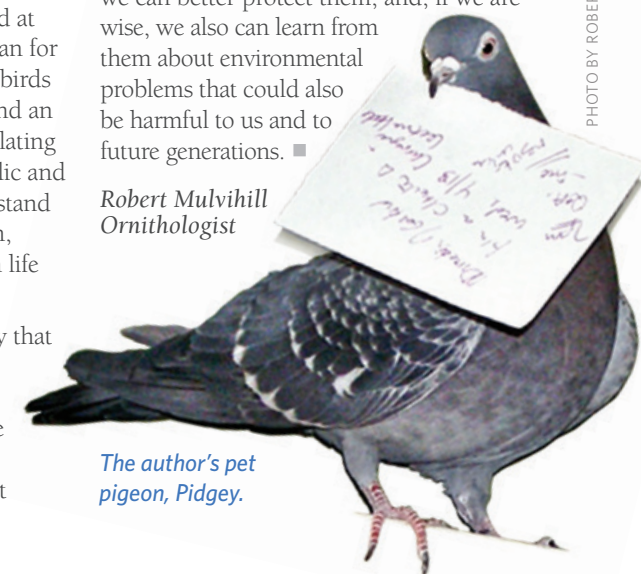
and other scientists could read through DDT’s terrible effects on birds. Of course, it was not just birds she was hoping to protect — it was human beings, too. As a scientist, she understood that their specialized anatomy, physiology, and ecology made birds particularly susceptible to the effects of DDT and other synthetic chemicals; and at much lower levels and more quickly than for humans. But it was not just her love of birds that elicited in her a sense of urgency and an unflagging devotion to the task of translating nature’s messages in terms that the public and governmental bureaucrats could understand — it was love for her adopted grandson, Roger, and the knowledge that her own life was being shortened by cancer.

The National Aviary believes strongly that an appreciation of birds will inspire a respect for nature, and it strives to educate visitors to be more aware of the two-way connection between birds and people: birds are affected by habitat

destruction; introduction of invasive species; air, land, and water pollution; human over-population; and our over-consumption of natural resources.

Through diligent study and monitoring of the effects that human actions have on birds, we can better protect them; and, if we are wise, we also can learn from them about environmental problems that could also be harmful to us and to future generations. ■

Robert Mulvihill
Ornithologist



The author’s pet pigeon, Pidghey.

WHY BIRDS MATTER

They Change Our Lives

Riding buses can change people's lives. Just think of Rosa Parks, Ken Kesey and his Merry Band of Pranksters, or Miss Frizzle and her adventurous students!

As a kid living in a log cabin 15 miles from the nearest neighbor and 35 miles from town, I spent a lot of time on buses. And at 5 years old, a school bus and a bird changed my life.

Bundled in a heavy coat and snow pants, I clambered aboard for the long silent ride on the empty bus. The early morning peace reflected the stillness of the snow as we traveled out the Pigeon River Rd, passing jack pine stands and abandoned fields, the old power line clearing where last fall we'd seen the elk herd, and my "hometown" — the ghost town remnants of Corwith, the logging camp when white pine was king.

The Snowy Owl sat perhaps 10 feet up atop an old phone pole, surveying its winter wonderland. The bus lumbered to a stop as the white-haired

driver pointed out the owl to me. "White," he said, "To camouflage himself. Came all the way from the North Pole, I think, to hunt our mice and voles."

The next weekend I became the guide, directing dad along the very same route, through the forest, the clearings, and into the abandoned pasture lands, mile upon empty mile. "Turn here," "Turn there," "Now follow these poles, and he should be riiiggghhhhhh there!"

The owl looked down and blinked. After minutes that stretched into a lifetime, it spread its wings, flapped briefly, then glided low and silent across the snow.

There would be diversions and wayward years, but my path was set that day on the bus by an elder driver, and a ghostly white owl lighting up a winter landscape for me. ■

Steven Latta

An immature
Snowy Owl.



They Change Our Perspective

Jeremy Davit discovered birds and a more intentional pace of life while living in East Africa in 1996. This excerpt from a field journal he kept while in Kenya is a source of inspiration.

I usually enjoy looking up and around me, but it was too often the case that I only looked forward or down. Recently, after the discovery of birding, my eyes have been rewarded by not only the sighting of birds, but a different view of the world. Now, I continually look around me. Up, down, side to side, forward and backwards, you name it. So many other things come to my attention now. For example, one day while looking up through my binoculars, I saw some vervet monkeys — and one had a baby. They had been motionless and therefore hidden. Had it not been for a bird I was watching, I would never have seen them.

On another occasion while watching for birds, an enormous one caught my attention. In fact, it was a cloud in the shape of a vulture, something that I would have never noticed before.

Birding has also helped me to look inside myself. I used to do things quickly and I lacked patience. Birding requires one to move at a slow, calm pace and demands much patience. Lately, I realize I am doing just fine in the calm and patient realm of birds. Much has changed in my life, thanks to them. ■

Jeremy Davit
Director of Philanthropy

Jeremy Davit and his friend Sandika
in Samburu County, Kenya in 1996.



WHY BIRDS MATTER

They Bring Us Together

To me, birds are a bonding agent. I never would have imagined how powerful they could be, nor their importance in my life. I grew up around garden imagery, bird feeders, and bird seed. I never thought much of any of it, but backyard birds were a staple piece.

It was not until high school, and until my mother bought a camera, that I noticed a change in those backyard birds. They weren't just backyard birds anymore. They were robins and chickadees, juncos and jays, sparrows and nuthatches. I learned them all from my mom. She would take pictures from our front window during the day. As soon as I would get off the bus, she'd stop what she was doing, and she would tell me all about the drama and goings-on of the front yard birdfeeder. These tales were accompanied by many, many snapshots. In those after-school moments, my understanding of the world evolved as she passed her knowledge along to me. She taught me to hear, to listen, to have patience, and to pay attention to the little things — like our friends in the backyard.

With every snapped picture, my mother's photography improved. With every picture she showed me, I came to know more about our local birds. That hobby brought us closer.

Through her lens, her photos, I've learned so much about the natural world we share. Every bird song — be it a Wood Thrush or robin, reminds me of her. Birds give me a moment to pause and



Dark-eyed Junco photographed by the author's mother.

appreciate the relationship that I have with my mother. Every time I see her, I can always anticipate new photos and new stories. Through birds, my mother and I can learn together and share in a mutual love for all avian-kind. I'll forever be grateful to our backyard visitors and the pursuit of lifelong learning with her. ■

Stef McVeigh
Administrative Assistant, Volunteer & Intern Programs

They Open Our Eyes

I had never taken much notice of the birds with which I share my world. I go about my busy life simply trying to get from point A to point B without much care for what I see along the way. It wasn't until recently, on an Owl Prowl led by National Aviary ornithologist Bob Mulvihill, that my perception was completely changed.

As we trekked into the woods at North Park, my expectations weren't very high. There was a possibility we could see an owl; nothing was guaranteed. My skepticism was almost immediately dismissed. Within a few short moments of Bob turning on the caller, a tiny Screech Owl landed on a nearby tree; I was blown away! A short walk down the trail led us to a small clearing — and another two Screech Owls! Our next stop took us across the road and down a narrow path into the trees. We had only traveled a few yards down the trail when we heard something...and it wasn't coming from Bob. Upon hearing the recognizable call, a co-worker and I immediately looked at one another; we knew exactly who its owner was. Seconds later a dark shadow swooped overhead and back into the cover of the trees. It was a Barred Owl and easily the highlight of the evening. I knew then that this had been an experience I would never forget.



Barred Owl.

It was on that night that I began to notice. I had a whole new outlook on the birds with whom I share my corner of the world. I realized that it's not just in far off exotic places that we can experience nature at its finest; we can experience all its wonder right in our backyards each and every day. ■

Katelynn Campbell
Group Sales Coordinator