

BIRDCONSERVATION

The Magazine of American Bird Conservancy

Fall 2016



A Life Shaped By Migration



The years have rolled by, leaving me with many memories touched by migrating birds. Migrations tell the chronicle of my life, made more poignant by their steady lessening through the years.

I still remember my first glimmer of understanding of the bird migration phenomenon. I was nine or ten years old and had spotted a male Yellow Warbler in spring plumage. Although I had passing familiarity with the year-round and wintertime birds at home, this springtime beauty was new to me. I went to my father for an explanation of how I had missed this bird before. Dad explained bird migration, a talk that lit a small fire in me that has never been extinguished.

A decade later, in 1971, I crawled on hands and knees up a grassy North Dakota hillside, trying to sneak up on Whistling Swans (as they were called then) with numbered neck collars. These collars—used decades before today's tiny geolocators (see story, page 12)—were the best available way to piece together the migration story for swans. Suddenly the sky was filled with Sandhill Cranes; thousands of them, wings set for landing across the hill. I no longer remember what collars I read that day, but I do remember watching the cranes arrive for more than an hour, and remaining another hour listening to the

haunting calls of the cranes and swans together, just out of sight.

The years have rolled by, leaving me with many memories touched by migrating birds. Tracking a Golden Eagle with a radio on its back through downtown Milwaukee. Walking down the Cape May beach each afternoon to watch the Least Tern colony. The thrill of seeing “our” migrants leave Colombia to pour back north. And, on a recent summer evening, standing outside my home in Virginia to listen to the Wood Thrush songs slowly change to call notes, followed by the silence that comes with dusk. Migrations tell the chronicle of my life, made more poignant by their steady lessening through the years.

So, here I am at ABC, doing my small part to keep alive the world's most astounding migration phenomenon. We all know the threats: mostly loss of habitat due to unsustainable population growth, compounded by overconsumption, geopolitics, and sometimes indifference. The articles in this issue of *Bird Conservation* reflect the challenges. Will our beach-breeding specialists survive the increasing pressure on beaches (page 22)?

Will the historic development of improved relations between the U.S. and Cuba nonetheless result in the loss of habitats so important to species such as the Black-throated Blue Warbler (page 18)? And will Congress strengthen or weaken the Migratory Bird Treaty Act (page 27), America's most important law protecting migratory birds?

We must address each of these concerns and a thousand more, but we cannot be daunted by their complexity. Though I haven't space here to explain ABC's bold new plans to bring back the migratory birds, know that we are working in key areas—which we call “Birdscapes,” short for critical bird landscapes—and that we will succeed simply because we must.

Thanks for being part of the ABC team, and stand by to hear much more in the months ahead.



George H. Fenwick
President, ABC

ABC is the Western Hemisphere's bird conservation specialist—the only organization with a single and steadfast commitment to achieving conservation results for native wild birds and their habitats throughout the Americas.

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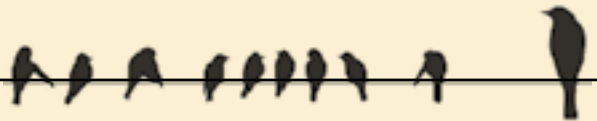


Cuban Tody by Alfred Yan

TOP: Palm Warbler by Mark Johnson

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Rare Parakeet Gains More Protected Habitat in Ecuador

The Ecuadorian nonprofit Fundación Jocotoco, with the support of ABC and U.K.-based international conservation group World Land Trust, has acquired 233 acres of critically important cloud-forest habitat in Ecuador, home to a rare parrot—the El Oro Parakeet—as well as the El Oro Tapaculo and other endangered species. This acquisition expands the existing Buenaventura Reserve from 5,583 acres to 5,816 acres and contributes to the creation of an ecological corridor that will connect Buenaventura to three proposed government reserves, encompassing an area 56 miles long.

“This corridor is vital because Buenaventura, although a haven for numerous endangered species, was becoming isolated within a vast expanse of cattle ranches,” says Wendy Willis, ABC’s International Conservation Program Officer.

“This is a crucial addition to Buenaventura Reserve,” says Martin Schaefer, Executive Director of Fundación Jocotoco. “Most important, the newly acquired property includes one of the last remaining forests in the area. Protecting it allows us to reduce the largest nonforested gap in the southern distribution range of the El Oro Parakeet.” Pastureland that is also part of the acquisition will be allowed to regenerate, restoring forest cover for the rare parakeet and other birds.

“Until 1999, when Fundación Jocotoco stepped in, none of this important habitat was protected,”

says Roger Wilson, World Land Trust’s Director of Conservation. “Fundación Jocotoco is to be congratulated on successfully expanding this protected area and safeguarding the future of its endangered species.”

The colorful, highly social, cavity-nesting El Oro Parakeet was only discovered in 1980, and its range is limited to a few areas on the western slope of the Andes in southwestern Ecuador. The Buenaventura Reserve, a stronghold for the birds, is the only place where they are protected.

ABC and World Land Trust each raised half the money to cover the purchase of the land and related legal costs. More than 200 donors supported the Buenaventura expansion, including David and Patricia Davidson, David Harrison, Barbara Rizzo, and a matching contribution by The Robert W. Wilson Trust. ABC also raised an additional \$15,000 to cover management costs for the new property, which includes guard salaries, fencing, and marking boundaries.

The acquisition enables Fundación Jocotoco to fill in some gaps in a landscape increasingly threatened by habitat loss. Less than 10 percent of the original forests in the area remain, putting both the El Oro Parakeet and the El Oro Tapaculo at risk.

“More than 14 years of intense research have shown that the genetic diversity of both species suffers from ongoing fragmentation and isolation,” Schaefer says.



“This corridor is vital because Buenaventura, although a haven for numerous endangered species, was becoming isolated within a vast expanse of cattle ranches.”

*Wendy Willis,
International Conservation
Program Officer, ABC*

That makes the expansion of the Buenaventura Reserve and the creation of an ecological corridor essential to the conservation of area’s unique species.

El Oro Parakeets by Dušan Brinkhuizen



HELP SAVE MIGRATION

In a single year, Red Knots will twice traverse the entire hemisphere from Patagonia to the Arctic and back. Some birds, such as tiny Ruby-throated Hummingbirds, cross the Gulf of Mexico. Others island-hop across the Caribbean. Millions upon millions more pour north over Central America in spring, then fan out across North America—and then head south again in late summer and fall.

Migratory birds have been making these epic journeys for millennia. **But many of these species are in serious decline and need our immediate help. You can help today with your extra gift to ABC!**

Loss of breeding, wintering, or stopover habitat is the most threatening issue migratory birds and conservationists face. That's why ABC is working to tackle the decline of migratory birds on a scale never before attempted. **Your support is crucial for this effort.**

We must recover and save the extraordinary phenomenon of bird migration in the Western Hemisphere. With your help, we can succeed!

Please use the enclosed envelope to make a gift, or give online at abcbirds.org.

Threatened Birds Recovering Thanks to Endangered Species Act Protection

Seventy-eight percent of the birds listed as threatened or endangered under the Endangered Species Act (ESA) have populations that are now stable, increasing, or have recovered enough to be delisted, according to a report published in July by ABC. "The Endangered Species Act: A Record of Success" analyzed population trends and recovery success for all U.S.-listed birds, including those in the Hawaiian Islands and U.S. territories.

"Thanks to Endangered Species Act protection, twice as many populations of listed birds are increasing as are decreasing," says Steve Holmer, Senior Policy Advisor for ABC and the author of the report. "Meanwhile, species such as the Bald Eagle, Peregrine Falcon, and Brown Pelican have rebounded sufficiently to be taken off the list of endangered species."

"This is a strong signal that the ESA works," Holmer says.

But the report also shows continuing problems for listed Hawaiian birds, many of which face severe threats. Nine listed Hawaiian bird species are currently in decline. Overall, the ESA recovery success rate for Hawaiian birds is 52 percent, only two-thirds of the recovery rate for mainland birds.



Peregrine Falcon by Chris Hill, Shutterstock

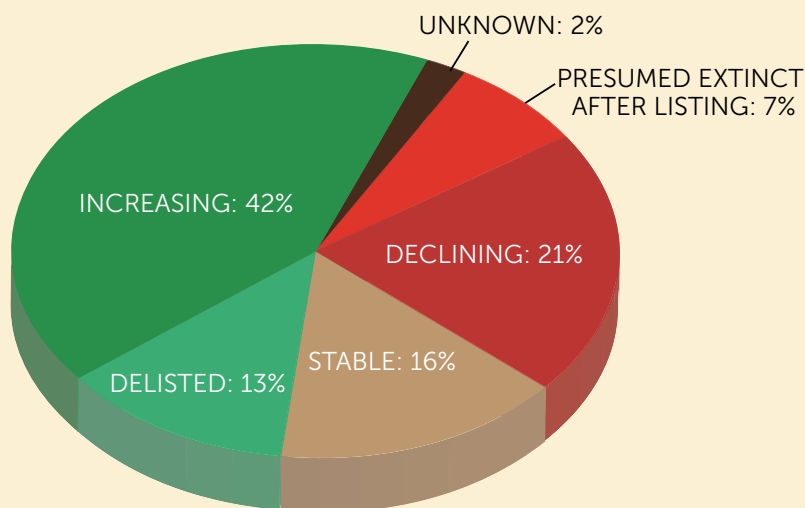


Brown Pelican by David Osborn, Shutterstock

The dire situation for Hawaiian endangered birds is in part a result of inadequate recovery spending. Hawaiian birds account for more than 25 percent of all listed birds, but received only 6.7 percent of federal recovery spending for birds in 2014. The U.S. Fish and Wildlife Service has been working diligently to increase its recovery efforts in Hawai'i and is now spending 18.4 percent of its bird recovery funds on Hawaiian birds, but the population trends indicate still more needs to be done to reverse current declines.

The report also reveals that both mainland and Hawaiian bird populations can recover when adequate resources are made available. Endangered Species Act protection has brought about population improvements among Golden-cheeked Warbler, Black-capped Vireo, Steller's Eider, Millerbird, and Hawaii Creeper since 2006, when ABC produced a similar report on the ESA's effectiveness.

To read the report, visit abcbirds.org and search for "Endangered Species Act."



Population Trends of All U.S. Bird Species Since Listing

Proposed Eagle Management Plan Could Have Deadly Consequences

A new eagle management plan proposed by the federal government would give wind energy developers 30-year permits to “take” or incidentally kill protected Bald and Golden Eagles, without requiring the industry to share mortality data with the public or take into consideration such critical factors as proper siting. The rule, proposed by the U.S. Fish & Wildlife Service (FWS), puts many thousands of the nation's protected Bald and Golden Eagles at unacceptable risk.

ABC successfully sued the government over a previous version of the rule, and last year a federal judge agreed that the way in which FWS

had formulated and approved the previous rule violated federal environmental laws. Unfortunately, the updated rule is just as problematic.

In a letter sent to FWS in June, ABC spelled out serious concerns about the revised rule. It would increase the number of eagles that can be killed by wind energy and other facilities. It's based on insufficient data and doesn't require energy companies to be transparent about the effects of wind energy on our nation's ecologically significant birds and bats. The rule doesn't call for proper siting and regulation of wind energy development. And it allows for 30-year take permits without giving the public and

conservation groups a voice in periodic reviews.

All of those flaws will put eagles and other wildlife in serious jeopardy if the rule is adopted. “Eagles are our nation's symbol and are protected by law,” says Dr. Michael Hutchins, Director of ABC's Bird-Smart Wind Energy Campaign. “In the end, the new rule differs little from its previous incarnation and allows wind energy companies to continue to kill our nation's iconic eagles with little or no consequence.”

ABC supports the development of clean, renewable sources of energy such as wind and solar power to address climate change, but believes such development must be done responsibly. When it comes to wind energy, proper siting is the most important consideration.

The proposed rule is especially worrisome for Golden Eagles. Uncertainty about Golden Eagle populations—especially the small Eastern population of the birds—and the lack of knowledge about their behavior, migratory movements, and habitat use are, in ABC's view, the rule's biggest weaknesses.

The rule spells bad news for Bald Eagles as well. Bald Eagles have just recently come off the Endangered Species List and are nowhere near their pre-DDT numbers. As wind turbines go up near freshwater lakes and large river systems and on- and offshore in marine coastal areas, however—all areas heavily used by the birds—Bald Eagle mortality is certain to increase.



Golden Eagle by Pat Gaines

Endangered Nēnē at Risk from Disease Spread by Feral Cats

A study published in the *Journal of Wildlife Diseases* has documented evidence of “widespread contamination of habitat” in Hawai‘i caused by feral cats. This latest research has alarming implications for endangered Hawaiian Geese (Nēnē) and other animals found throughout the Hawaiian Islands.

The peer-reviewed study evaluated the prevalence of infection with *Toxoplasma gondii* among Nēnē, Hawai‘i’s state bird. *T. gondii* is a protozoan parasite that causes toxoplasmosis in humans and wildlife and is the most commonly encountered infectious disease in Nēnē, the study reports.

T. gondii relies on cats to complete its life cycle and is excreted into the environment through cat feces. A single cat may shed hundreds of millions of infectious eggs.

Nēnē on the island of Moloka‘i had the highest infection rate (48 percent), followed by 23 percent on Maui and 21 percent on Kaua‘i. According to the authors, the higher rate on Moloka‘i may have been due to “a conspicuously consistent presence of feral cats.”

Hawaiian Geese are not the only Hawaiian wildlife to test positive for *T. gondii*. Other birds, such as the endangered Hawaiian Crow (‘Alala), and mammals, such as endangered Hawaiian monk seals, are susceptible and have died from infection.



Nēnē by Steve Oehlenschlager, Shutterstock

“Although we appreciate cats as pets and acknowledge the important role pet cats play in many people’s lives, it is clear that the continued presence of feral cats in our parks and neighborhoods is harming people and wildlife,” says Grant Sizemore, Director of Invasive Species Programs at ABC.

Wind Turbines on the Great Lakes Threaten Migratory Birds

A study released in July by the U.S. Fish and Wildlife Service (FWS) provides stark evidence that wind turbines on the Great Lakes pose an unacceptably high risk to migratory birds and other wildlife. Yet the region of New York at issue in the study has been targeted for enormous wind energy projects, including the proposed Lighthouse Wind facility—one of the nation’s 10 worst for birds, according to an earlier ABC report.

The FWS study monitored four sites using radar along the shore of Lake Ontario, scanning 24 hours a day in vertical and horizontal planes to capture movement. At all sites, the radar recorded high levels of bird and bat activity in or near the “rotor-swept zone” that wind turbines would occupy if built along the lakeshore. Activity was



Wind turbines on the Great Lakes pose an unacceptably high risk to migratory birds and other wildlife.

especially high at night, a finding that largely invalidates the use of daytime visual surveys often used by wind energy developers to assess risks to birds.

The FWS currently recommends that no wind turbines be built within three miles of the Great Lakes’ shorelines. However, this new radar study suggests that the minimum should be extended even farther, perhaps as far as 10 miles. Unfortunately, the wind industry is eager to build in these sensitive areas. If the Lighthouse project is approved, up to 71 turbines would be built along the south shore of Lake Ontario in the middle of a migratory corridor used by millions of birds annually. The 570-foot-tall turbines would extend 4.5 miles inland along a 12-mile stretch.

Given the findings of the FWS radar study, ABC remains highly concerned about the size and location of the proposed Lighthouse project, and will continue to monitor the situation closely.

Rapid 'Ohi'a Death Threatens Habitat for Hawai'i's Forest Birds

Hawai'i's native forest birds are in danger of losing a key-stone tree species in most of their remaining habitat as a virulent disease wipes out tens of thousands of acres of mature 'ohi'a trees.

The disease, known as rapid 'ohi'a death, is caused by the fungus *Ceratocystis fimbriata*. The current infestation has so far affected 34,000 acres on Hawai'i Island—also known as the Big Island—and has killed more than 100,000 'ohi'a trees. Scientists suspect many more trees are infected but haven't yet died.

The 'ohi'a tree, also called the 'ohi'a lehua tree, has deep roots in Hawai'i's history and culture, and plays a key role in its ecosystems. The tree and its lehua flower are precious to the Hawaiian people; even plucking the flower from the tree is taboo in accordance with Hawaiian folklore. Many consider it to be the most important tree in the state.

Birds and many other species depend upon the 'ohi'a tree to survive. It provides food and nesting sites for many of Hawai'i's forest birds, including federally endangered species such as the Hawai'i 'Akepa and Hawai'i Creeper. With the majority of Hawai'i's endemic birds at risk of extinction, losing the dominant tree from their remaining habitat makes these birds even more vulnerable, particularly if the fungus spreads to additional islands.

As this disease wipes out 'ohi'a trees, an integral part of Hawaiian ecosystems, non-native invasive weeds most often take their place, says Chris Farmer, ABC's Hawai'i Program Director.

"Hawai'i's birds have already suffered massive habitat loss, and most are now confined to small fragments of remaining native forest," he says. "Since 'ohi'a makes up approximately 80 percent of our native forests, replacing that with



Hawai'i 'Akepa in 'ohi'a tree by Jack Jeffrey

invasive trees and shrubs would cause the loss of many birds, snails, arthropods, and other native plants found nowhere else in the world."

Scientists don't know how rapid 'ohi'a death got to Hawai'i, and there appears to be no cure. The main objective now, experts say, is to stop the spread of the disease before beginning to restore the ravaged forests.

The Hawai'i Department of Agriculture has imposed a quarantine that prohibits movement of all 'ohi'a plants or plant parts, and is also advising landowners to cut down infected trees.

Rapid 'ohi'a death is yet another challenge for Hawai'i's birds, along with non-native predators like cats, pigs, goats, and sheep; avian diseases; and the effects of climate change, ABC's Farmer says.

"There are strategies and solutions for all these issues, and ABC is working hard with our partners across the state to address the threats facing Hawai'i's endemic birds," he says. "We can save the remaining birds, and ABC is committed to making it happen."



A stand of trees devastated by rapid 'ohi'a death. Photo by JB Friday, University of Hawai'i

New Trail Opens in Hawai'i to Celebrate Palila

The Palila, a highly endangered Hawaiian honeycreeper, is one of the world's most isolated birds. It lives only in a small area of māmane forest on the western slope of Mauna Kea volcano on Hawai'i Island. But now, with the opening in late July of the Palila Forest Discovery Trail, visitors will have a better chance of seeing Palila and other native species that call this distinctive ecosystem home.

The Hawai'i Department of Land and Natural Resources' Division of Forestry and Wildlife's Mauna Kea Forest Restoration and ABC teamed up to build the trail. This was possible thanks to the generous support of the Laura Jane Musser Fund Environmental Initiative Program and other community sponsors and volunteers.

The mile-long loop takes hikers through Mauna Kea's unique, high-elevation dry forest. Four informational kiosks provide historical, cultural, and ecological information about what makes this forest so special. In addition, 20 small identification signs with QR codes are distributed at key locations along the trail. Hikers can use their smartphones to learn more

about the area's plants and animals as well as threats and efforts to protect them.

Palila were once found across the state, but habitat loss and invasive species have decimated their numbers. Only about 2,000 of the birds remain, all on Mauna Kea. "As with many of Hawai'i's unique species, not enough people are aware of the Palila's precarious situation and the need for urgent action," says Chris Farmer, ABC's Hawai'i Program Director.

"Educating people about the importance of this species, and raising awareness about the threats we are managing today, will build local and national support for the actions necessary to preserve this bird for future generations," Farmer says.



An interpretive sign along the trail. Hawaii DLNR



Some of the first hikers using the Palila Forest Discovery Trail, August 2016. Photo: Hawaii DLNR

White-winged Cotinga's Presence Indicates a Patch of Brazil's Atlantic Forest is Recovering

A Brazilian ornithologist has recorded two White-winged Cotingas at northeast Brazil's Serro do Urubu reserve, heralding great news for this threatened Atlantic Forest habitat. The birds' presence in Serra do Urubu signals that the forest there, heavily disturbed before the area was protected, is recuperating.

The ornithologist, Dante Buzzetti, spent a week at the reserve last November, drawn there by the chance to study birds found in the area. Run by ABC partner SAVE Brasil, Serro do Urubu protects one of two remaining healthy fragments of Atlantic Forest in this part of Brazil.

Over time, as the Atlantic Forest became fragmented and degraded because of intensive sugarcane production and other human activity, Serro do Urubu has emerged as a last stronghold for many species, even those once thought common. It's home to 260 bird species, 10 of them globally threatened, including Golden-tailed Parrotlet, Orange-bellied Antwren, Pinto's Spinetail, Buff-breasted Tody-Tyrant, and Seven-colored Tanager.

In the last 15 years, SAVE Brasil has coordinated with many ornithologists and bird-watching



The birds have been using areas of Atlantic Forest that were once highly disturbed—more evidence that protecting sensitive habitat and allowing it to regenerate can be an effective way to bring back threatened birds.

groups who have visited the reserve. No one had ever seen the White-winged Cotinga there. Males of this large, fruit-eating bird sport distinctive white wings and contrasting purplish-black plumage. The species is listed as endangered by the IUCN and requires healthy Atlantic Forest habitat to survive.

The White-winged Cotinga isn't the only species to have established a presence at Serra do Urubu. In the last seven years, SAVE Brasil has recorded many bird species, several of them threatened, moving into the recuperating forest. The birds have been using areas of Atlantic Forest that were once highly disturbed—more evidence that protecting sensitive habitat and allowing it to regenerate can be an effective way to bring back threatened birds.

ABC supports SAVE Brasil's conservation work at Serra do Urubu. Together we're exploring the possibility of expanding this critical protected area for the long-term benefit of its unique biodiversity.



(LEFT) Pinto's Spinetail; (RIGHT) Seven-colored Tanager. Photos by Ciro Albano

(TOP) White-winged Cotinga by Ciro Albano

To Catch a Warbler



His breath visible in the early-morning spring air, Doug Raybuck ticks off the names of furtive forest residents with ease: Chestnut-sided Warbler. Scarlet Tanager. American Redstart. Distinct birdsongs surround him, suggesting the whereabouts of migratory birds just recently arrived from Latin America.

He pauses and listens. A faint “zee zee zee zizizizi eet” whispers through the trees in this corner of Pennsylvania’s Allegheny National Forest. Binoculars raised to the sky, Raybuck searches for the source.

A Cerulean Warbler wearing a geolocator. Photo by Aditi Desai, ABC



Tiny songbirds are helping scientists unlock the secrets of migration

By Aditi Desai

America to his summer residence in northwestern Pennsylvania. He makes this epic journey twice every year, in the spring and in the fall.

Until now, Elmer's migratory route and winter destination had been a mystery. Only sporadic data and observations connected the dots. But technology is finally catching up with nature. Soon Elmer and others like him will help unlock the secrets of migration.

In May 2015, Raybuck and researchers from Arkansas State University and Indiana University of Pennsylvania (IUP) attached tiny tracking devices called geolocators to Elmer and 18 other Cerulean Warblers in the area. Weighing less than half a gram, they harnessed the geocator to Elmer's body like a miniature backpack housing a personal warbler-sized computer. The device records light data that helps researchers map Elmer's journey across states, countries, and oceans.

Warblers tend to come back to the same nesting sites year after year, giving researchers an opportunity to relocate the birds and recover the devices. Now, a year later, Raybuck and Morgan Slevin, both graduate students in biology at Arkansas State, are on a mission to recover that device and the precious data it contains.

Having spotted their bird, Raybuck and Slevin spring into action. Tackle box—check. Net—check. Portable speakers—check. The two researchers roll down their sleeves in deference to the chilly temperatures and get to work.

To untrained eyes, the slight movement of birds flitting between tree branches could be mistaken for leaves rustling in the breeze. Thick forest cover and deep shadows hide the birds' bold plumage. But Raybuck knows what to look and listen for. With ears tuned to nature's podcast—the spring edition—he spies his guy.

The bird he calls Elmer is back. And Raybuck plans to catch him.

The Mystery of Migration

Named after the elm tree in which researchers found him nesting, Elmer is a Cerulean Warbler. He weighs less than two nickels, and yet this small songbird flies thousands of miles from his winter home in Latin



Doug Raybuck, a graduate student in biology at Arkansas State University, puts up a mist net to recapture Cerulean Warblers returning to their nesting habitat in Allegheny National Forest. Photo by Aditi Desai

Raybuck embeds a telescoping pole into the moist forest ground. Slevin sets up another pole about 20 feet away and quickly attaches a mist net between the two. They hope this structure, not unlike a volleyball net, will catch Elmer. Now all the scientists need to do is lure him in.

Cerulean Warblers are territorial. They defend their nesting sites from other trespassing ceruleans with fierce determination. Raybuck and Slevin are banking on these defensive characteristics to draw the bird closer. Raybuck places speakers on both sides of the net to play the call of a Cerulean Warbler. By tricking Elmer into thinking another cerulean is intruding on his turf, the biologists hope the bird will come after the supposed intruder and fly into the net—and into their waiting hands.

Not Easy Being Blue

Catching a warbler takes skill, time, and money. Why go to such lengths to figure out where a bird travels? Jeff Larkin, a professor of wildlife ecology and conservation at IUP, has a simple answer: conservation.

“If we’re going to bring back the birds, we need to know what those birds really need,” says Larkin, who also serves as ABC’s Eastern Forest Habitat Coordinator. “Where do they go? How do breeding and wintering populations connect? Where are important migratory stopover areas?” After synthesizing these research findings, Larkin says he and his team can then provide ABC’s on-the-ground partners with management guidelines or conservation recommendations that will help the birds most.

Cerulean Warblers are more selective than many other bird species. Not just any type of forest will do: To woo mates, nest, and raise their young, these birds need mature trees with openings in the canopy cover nearby. The housing market can be competitive as they jockey with other birds for prime nesting real estate.

Meanwhile, they also confront habitat loss and poor forest management, which limit their options even further. Along with threats during migration—including storms, collisions with glass and communication towers, and attacks from free-roaming cats—these birds have a tenuous existence. In the past 40 years, the Cerulean Warbler’s population has declined by

70 percent, making it one of North America’s most threatened migratory songbirds.

Larkin and Than Boves, an assistant professor of ecology at Arkansas State, are principal investigators of the study. They work closely with Raybuck and other researchers to collect data that, in the long-term, will inform critical conservation decisions.

Knowing where a bird is in the summer isn’t enough, though. Migratory songbirds such as Cerulean Warblers need protection in all of their different homes: north, south, and in between. Data makes it possible for conservation actions to be more strategic.

Technology and a small army of dedicated scientists, in fact, may be the best hope these tiny birds have to survive and thrive.

“We could create the best habitat in the world here, they could love it here, they could thrive here,” Larkin says of the Pennsylvania breeding grounds. But if they suffer during migration or experience declines on their wintering grounds, he says, “then ultimately, what we do up here is for naught.”

In the past 40 years, the Cerulean Warbler’s population has declined by 70 percent, making it one of North America’s most threatened migratory songbirds.

Other Warblers in The Wilds

The Golden-winged Warbler is also choosy about finding just the right nesting habitat. And like the Cerulean Warbler, it has also suffered a steep population decline in recent decades. It’s another priority species that will benefit from close examination of its flight patterns and needs.

Just as with the Cerulean Warbler, understanding the data from geolocators will be crucial to the golden-wing’s survival. On a crisp spring morning, Larkin, three graduate students, and a field technician head into The Wilds in central Pennsylvania. Poles over their shoulders and a tackle box in hand, from a distance they could easily be mistaken for a group of friends gone fishing.

The researchers head into scrubby, young forest dense with patches of prickly shrubs. Like a gentler version of barbed wire, the shrubs cut through them, leaving behind scratches and bits of clothing. Glaring sun and wind also make their jobs difficult. (Searching for warblers, it turns out, is quite different from fishing.)



One of the graduate students, Cameron Fiss, stops to listen. “Bee-bz-bz.” The unmistakable sound of a Golden-winged Warbler. Encouraged, the team checks out the area—this spot might work, this one won’t, not enough trees, too much sunlight—until they find a spot that will do.

The bird is trickier to catch than expected. Sun and wind make the mist net conspicuous, and the wary golden-wing isn’t falling for the recorded birdsong used by the researchers. After trying multiple times, the team decides to move the location of the net. Within minutes, the bird swoops in.

“Go get him!” Larkin shouts. Fiss runs to the net and gently extracts the warbler. Together he and the team gently snip off the geolocator and place it in a bag. That tiny device contains hope for the species. After recording the bird’s weight and a few other measurements, Darin James McNeil Jr., another graduate student, lets him go. “Good work, little buddy,” he says softly.



CLOCKWISE FROM TOP: A Golden-winged Warbler wearing a geolocator; Darin James McNeil Jr. releases a Golden-winged Warbler after removing its geolocator; Jeff Larkin and crew head into young forest in search of Golden-winged Warblers. Photos by Aditi Desai

Farther South, More Clues About Migration

by Audrey Goldfarb

As conservationists mobilize to create and protect rapidly disappearing Golden-winged Warbler breeding habitat, a crucial starting point for their work is more than 4,000 miles away, in the tropical forests of Central America.

The north-south coordination is critical, says Jeff Larkin of Indiana University of Pennsylvania. “It’s important to make sure conservation efforts on the wintering grounds and the breeding grounds align” in order for the species to benefit most, he says.

Earlier this year, researchers attached geolocators to 146 wintering Golden-winged Warblers in nine focal conservation areas in Panama, Costa Rica, Nicaragua, Honduras, Belize, and Guatemala. This fall, when the birds return, researchers will recover the devices and obtain valuable information about where the golden-wings spent their breeding season—and how they got there and back.



LEFT TO RIGHT: Researchers and students Fabiola Rodriguez (IUP), Dr. Amber Roth (University of Maine), and Kirsten Johnson (IUP) at El Jaguar. Photo by Jeff Larkin

On their wintering grounds, golden-wings can be found in a diversity of conditions from dense primary cloud forests to fairly open woodlands and agroforests, which are created by incorporating trees and shrubs into agricultural landscapes. One such site is an agroforest in Nicaragua called El Jaguar Reserve. Lili and Georges



El Jaguar, Nicaragua, provides crucial wintering habitat for Golden-winged Warbler and other neotropical migrants. Photo by Andrew Rothman, ABC

Duriaux remodeled their organic coffee farm to a shade crop to promote biodiversity. The ABC-supported reserve is now a sanctuary for the warblers and many other migrant and resident birds, as deforestation continues to deplete wintering habitat elsewhere.

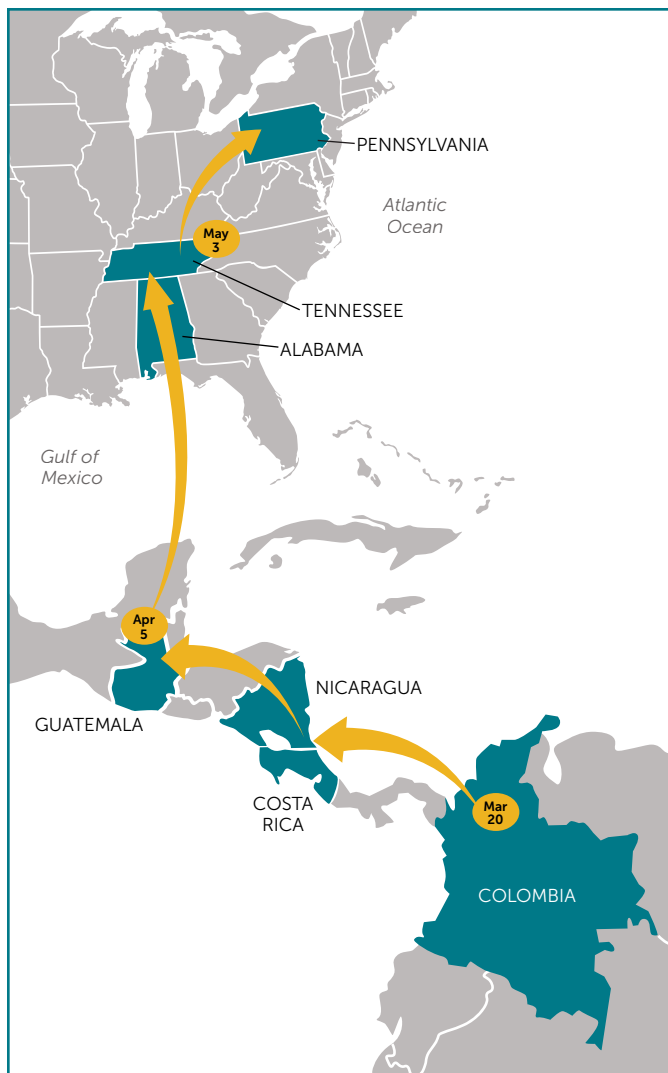
The landscape on the golden-wings’ wintering grounds is rugged, steep, and teeming with biodiversity. Dense vegetation is broken up by the occasional bean, potato, corn, or coffee crop. The calls of hundreds of species echo through the trees, producing an endless symphony.

Once researchers recover the geolocators this fall, they will download and analyze those data and share the information with the conservation community so that it can be put to use. With this new information on Golden-winged Warbler migratory connectivity, conservationists will be able to identify key wintering and breeding grounds linkages and important migratory stopover areas.

The research is already providing valuable data. A 2015 pilot project revealed that six Golden-winged Warblers traveled from El Jaguar, their wintertime sanctuary, to breed in northern Minnesota and Wisconsin—where ABC staff are working with partners to restore and maintain the young forest habitat this bird requires to nest.



Audrey Goldfarb was ABC’s writing/communications intern during the summer of 2016. She is currently an undergraduate at the University of Rochester, where she is pursuing a bachelor’s degree in molecular genetics.



The tiny songbird flew from Tennessee back to his elm tree in Pennsylvania—and into the waiting hands of scientists ready to map his migration and chart a brighter future for his species.

Elmer's Journey

Back in Allegheny National Forest, Raybuck and Slevin hide near trees on opposite ends of their mist net and play the call of the Cerulean Warbler. In an instant, Elmer moves down from the treetops to protect his patch of forest. Darting in to attack the pretend intruder, Elmer flies right into the net.

Like the Golden-winged Warbler team, Raybuck and Slevin remove the geolocator and measure and weigh Elmer. With the device safely in hand, Slevin releases the tiny bird. “I’m sure he feels a little bit lighter now,” Raybuck says. Holding the key to your species’ future must be a heavy burden.

Elmer’s geolocator will soon reveal his journey. But first, Raybuck needs to interpret the data. Connecting the geolocator to his computer, Raybuck runs the raw data of dates, times, and light levels through a software program. Based on daily sunrise and sunset times calculated from the light data, Raybuck can connect the dots and estimate where Elmer went using approximate locations.

This diminutive songbird took an epic trip. From his winter home in northeast Colombia, Elmer took off on March 20. His first stop: Costa Rica and Nicaragua, for a brief two-week respite. Around April 5, he visited Guatemala for three weeks before flying nonstop across the Gulf of Mexico.

After resting and refueling in central Tennessee for a week, Elmer set off on the final leg of his journey. On May 3, the tiny songbird flew from Tennessee back to his elm tree in Pennsylvania—and into the waiting hands of scientists ready to map his migration and chart a brighter future for his species.

Funding for these research efforts was provided by the Pennsylvania Game Commission, U.S.D.A. Natural Resources Conservation Service, U.S. Fish and Wildlife Service, U.S. Geological Survey, and National Science Foundation.

To watch a video about scientists’ efforts to understand migration, go to abcbirds.org/MappingMigration.



Darin James McNeil, Jr.

Aditi Desai is ABC’s Assistant Director of Communications and Senior Producer. She spent six days this spring with Jeff Larkin and other biologists braving the wilds of Pennsylvania to learn about warblers, migration, and advancing science through the use of technology. She also got to hold her first Golden-winged Warbler.

Travels in CUBA

A key site for migratory birds, the island is poised for still more visitors



By Libby Sander

In late summer and early autumn, the skies above Cuba become flyways for hundreds of thousands of birds migrating from their breeding grounds to points south. Cuba is the largest island in the Caribbean region, and its vast expanses of mountains, forests, wetlands, and low-lying coastal islands (known as cays, or cayos) make the country an important stopover site for migrating birds.

Cuba boasts 373 species of birds, most of them migratory; 26 are found nowhere else on the planet. Arturo Kirkconnell, Curator of Ornithology of the National Museum of Natural History in Cuba and author of *A Field Guide to the Birds of Cuba*, has spent most of his career as an ornithologist studying the island's birds. He also has led birding tours for nearly three decades.



Arturo Kirkconnell photo by Hannah Nevins, ABC
(TOP) Black-throated Blue Warbler by Frode Jacobsen

Now that diplomatic relations between the United States and Cuba are warming and the country is welcoming more visitors from the U.S., many conservationists are wondering: What will be the impact on Cuba's wildlife? We asked Kirkconnell to tell us more about Cuba's birds, and what Americans can do to support ecotourism and conservation across the island.

Libby Sander: How did you become interested in birds?

Arturo Kirkconnell: When I started my career, I had studied mostly invertebrates—mainly land snails. Then I asked a friend and colleague who studied birds to teach me about them. The first two birds I saw were Northern Parula and American Redstart, and this was enough. I was hooked. Some Cuban land snails are very colorful creatures, but nothing like birds. Their behavior, their calls, and their beauty—what else I could ask for? In my first year as a birder I was without binoculars, just watching with my eyes, till I got my first pair of old, heavy Russian binoculars!

LS: Where is your favorite place to go birding—and lead birding tours—in Cuba?

AK: My favorite place is the Zapata Peninsula, where you can see the greatest diversity of birds, about

260 species, and about 87 percent of Cuban endemic birds. The main goal of my tours is to watch the endemics and enjoy their beauty, but also to watch the many other colorful permanent residents and of course migratory birds, too. My field slogan is, enjoy the birds!

LS: Why is Cuba so important for migratory birds?

AK: Accounting for approximately half of all of the land in the West Indies, Cuba is also located immediately south of Florida and east of the Yucatan Peninsula. So it has huge areas of suitable wintering and stopover habitat right at the crossroads of major migration pathways.

For some migratory species, Cuba is their major wintering ground. For Palm Warbler, Black-throated Blue Warbler, and Piping Plover, Cuba is the most important winter quarters in the West Indies. Other migratory species that regularly winter in Cuba are American Redstart, Northern Parula, Black-and-white Warbler, Common Yellowthroat, Cape May Warbler, Prairie Warbler, and Indigo Bunting, among others. Bachman's Warbler, now believed to be extinct, wintered only here.

About a dozen neotropical species come to Cuba from southern regions to breed, too, including

Black-whiskered Vireo and Greater Antillean Nighthawk.

LS: What are some of Cuba's most important landscapes for migratory birds?

AK: Migratory birds occur in many different habitats. Landbirds—such as many species of warblers and vireos—are more abundant in semi-deciduous, evergreen, and swampy forests, and in dry coastal scrub.

Among the most important bird habitats are natural wetlands. Shorebirds, herons, and ducks make up the largest percentage of migrants in these aquatic ecosystems, which in Cuba include beach and coastline, mangroves, marshes, lakes, and reservoirs. Most mudflats are in the southern part of the Cuban archipelago, including Zapata Swamp.

Most of the large cays are crucial wintering grounds for nearctic waders [waders that nest in the United States or Canada and migrate south for the winter] and are important stopover sites for passage migrants as well. Rice fields are spectacular feeding sites for birds where many species gather in great numbers.

LS: Cuba has dozens of bird species that occur nowhere else in the world. Describe a few of these endemic birds for us.

Cuba has huge areas of suitable wintering and stopover habitat for birds like Piping Plovers.



Piping Plovers by Ed Konrad



Cuban Trogon by Arturo Kirkconnell

The Cuban Trogon is the country's national bird because its colors match the Cuban flag.

AK: The Blue-headed Quail-Dove is a very beautiful bird, and is rare and vulnerable. It is a ground dweller found in the dense forest. The Cuban Tody is another striking endemic and is common throughout Cuba. This bird emits a rattling sound with its wings in flight, which helps you find it among the green foliage. The Cuban Trogon is the country's national bird, because its colors match the Cuban flag. And the Bee Hummingbird is the world's smallest bird. Males like to sing in the highest bare twigs while flashing their red-pink gorgets to other males and females.

LS: What conservation threats do Cuban birds face?

AK: Habitat destruction, hunting, the introduction of exotic species, and illegal cage bird trade all have an adverse impact on Cuba's birds and their habitats.

The northern cays are among the most disturbed areas, mainly as a result of development for tourism. In these cays a few species occur only in small numbers and are therefore highly threatened, including the Bahama Mockingbird, Thick-billed Vireo, and Zapata Sparrow.

For sport hunting, there are official regulations regarding species, seasons, places, and bag limits, but both hunters and wardens frequently disregard these. Poachers persistently violate official restrictions and use not only guns but also several kinds of traps.

The Blue-winged Teal and West Indian Whistling-Duck are among the species that are vulnerable to hunting and poaching.

Like other islands in the Antilles, Cuba is plagued by the accidental and intentional introduction of non-native species. Rats, feral pigs, cats, and dogs are now in the most remote and virgin forests, along with the mongoose. Walking catfish are the worst of all—a real ecological disaster. They have spread into many lakes and rivers in Cuba. In Zapata Swamp, they are eating everything, including native waterbirds, probably including the critically endangered Zapata Rail.

LS: As you mentioned, the domestic cage bird trade in Cuba is a major threat for birds. Tell us more about that.

AK: The Cuban Parrot is the species most affected by illegal commerce. Chicks are taken from the wild by felling their nesting trees and then reared by hand until they are fully developed. No doubt hundreds have been smuggled out of the country in a drugged state, simply hidden inside the pockets of travelers. Other species known to have been smuggled out of the country are the Cuban Grassquit, Cuban Bullfinch, and Cuban Parakeet.

The cage bird trade has become a way of life for some people. Several thousand birds are captured every year on the island, including the Painted Bunting, which is one of the most-wanted cage birds because of its beauty. This is a huge problem, and I do not see a solution in the near future to stop it.

LS: As Cuba begins to welcome more visitors from the U.S., what challenges and opportunities does this present for bird conservation?

AK: More visitors will bring more development, and more development will result in habitat destruction in pristine areas like the cays surrounding Cuba's mainland. Protecting these places is a big challenge for all conservation institutions and organizations. One of the species most affected is the Piping Plover, which likes quiet, pristine beaches as its wintering grounds. The number of Piping Plovers wintering in the cays is declining dramatically, undoubtedly due to human disturbance.

LS: Given the limitations under the ongoing embargo, how can people in the U.S. or U.S.-based organizations help Cubans with bird conservation?

AK: There are several ways to help. For starters, visiting the island will help to develop ecotourism and will encourage international conservation organizations and people to support bird conservation in Cuba. Supporting environmental education and crafting environmental agreements between both countries will help to minimize damage to bird habitats and stop the commercial trade of migratory and endemic species.

Also helpful would be providing funding and technology to try to eradicate invasive species, and cooperating in projects to recover the rarest and threatened bird species. Finally, by joining expeditions to study the natural history of Cuban birds, Americans can support bird conservation and help to develop Cuban science.

LS: This might be an unfair question, but do you have a favorite Cuban bird?

AK: My favorite bird is the Cuban Tody (*Todus multicolor*). It is easy to guess why—just take a look at its scientific name!

For more information on Arturo Kirkconnell's birding tours in Cuba, visit kirkconnellbirds.com or send him an email: a.kirkconnell59@gmail.com.



Cuban Parrot (left) is the species most affected by illegal commerce. Cuban Bullfinch (right) is also smuggled out of the country.

Cuban Parrot by Elliotte Rusty Harold, Shutterstock; Cuban Bullfinch by Sergey Uryadnikov, Shutterstock

Saving Gulf Coast Birds, One Beach at a Time

*From Florida to Texas, ABC helps
migratory shorebirds and seabirds
breed in safety*

By Libby Sander



Kristen Vale stands on the shore of the Gulf of Mexico, toward the end of the Bolivar Peninsula, trying to solve a dilemma. Wilson's Plovers and Least Terns come to this coastal area each spring to nest and breed after spending the winter in Central and South America. But high tides and too much rain have washed away the eggs that the birds had recently laid in the sand.

Her challenge on this day: to figure out where to replace the washed-out fencing that instructs beachgoers not to trespass into the birds' nesting territory.

Nearby, two or three Wilson's Plovers scamper about, keeping a safe distance from us and one another, watchful. One bird perches on a slight rise of sand to survey his territory like a pitcher on a mound. Acrobatic Least Terns chatter in the air, males offering females small, silvery fish in a gesture of courtship. Vale knows this behavior means the birds will lay their eggs any day now. She has to act quickly.

It's hardly a simple maneuver. She gauges tide lines, wrack lines, and the behavior of the birds. A matter of inches can determine whether the next round of eggs are protected from foot traffic and vehicles or likely to be smashed.

She settles on a spot and prepares to string the rope just below waist level, so people won't duck under. "I'm really nervous about these terns," she says, pounding a post deep into the ground. It's happened before where Vale has replaced all of the fencing after a washout only to discover, a day or two later, that the birds had chosen spots just inches beyond the unprotected side of the fence. If only

she could tell the birds, This side of the fence is safer. Lay your eggs here.

Vale, who is ABC's Coastal Program Coordinator for Texas, comes here to Bolivar Flats Shorebird Sanctuary every week during the breeding season. It's one of two sites on the upper Texas coast where she and a field technician collect scientific data on the birds, protect their nesting sites, and talk with beachgoers to explain how to give the birds the space they need to breed successfully.

Two fishermen approach, laden with gear, curious about what Vale is doing. She tells them she's putting up signs to protect the birds' fragile nesting areas.

"They're encroaching on my fishing!" says one of the anglers. It's hard to tell if he's serious or jesting. But Vale is firm. "Hey," she says, polite but no-nonsense, "we have to share the beach."

A Region in Recovery

Bolivar Flats is a spit of land right on the Gulf of Mexico. On this day in late April, two American Avocets and a Marbled Godwit pick delicately at the water's edge, in full breeding plumage. Flocks of Brown Pelicans feed on a school of fish nearby, splashing into the water by the dozens. Beyond them, large tankers and freighters crawl toward the Houston Ship Channel, a narrow body of water that separates the quiet peninsula from the city of Galveston and its crowded beaches.

Travel east along the Gulf Coast from Bolivar Flats and the scenery changes again and again. The packed brown sand of the upper Texas coast gradually gives way at the other end to beaches of



ABC's Gulf Conservation Program began in 2011 as a way to help bird populations—specifically Wilson's and Snowy Plovers, Least Tern, and Black Skimmer—recover from the twin traumas of the oil spill and its aftermath.

gleaming white fluffy sand dunes in Alabama and Florida. The color of the water shifts, too, from a dark, murky blue-green to vibrant turquoise.

Many of these coastal areas were devastated by the BP Deepwater Horizon oil spill in 2010. By some estimates, the millions of gallons of oil that spewed into the Gulf of Mexico killed 800,000 birds in coastal and offshore waters. But for beach-nesting birds, the cleanup efforts were disruptive at best. Vehicles, an influx of people, and heavy machinery descended on Gulf beaches in well-intentioned but chaotic masses just in time for nesting season, leading to dismal reproductive rates for these birds.

(TOP) Snowy Plover chick by Ray Hennessy, Shutterstock



Kristen Vale putting up a sign at the Bolivar Flats Shorebird Sanctuary in Texas. Photo by Libby Sander, ABC

ABC's Gulf Conservation Program began in 2011 as a way to help these bird populations—specifically Wilson's and Snowy Plovers, Least Tern, and Black Skimmer—recover from the twin traumas of the oil spill and its aftermath, says Kacy Ray, ABC's Gulf Conservation Program Manager.

"We're still trying to help birds recover from this disaster, but the

other main threat we address is the people threat," Ray says. "We're trying to strike the balance between protecting habitat for the birds so they can raise their young, and still providing access to the public to enjoy the beach. It's a real fine line."

The work got started with a grant from the National Fish and Wildlife Foundation's BP Recovered Oil Funds. As the program matured, its scope broadened. The goal to maintain or increase populations of beach-nesting birds is now three-fold: protect the birds during their critical breeding season; conduct scientific monitoring to obtain valuable data on these species; and educate beachgoers and local communities on the importance of sharing the beach with the birds.

The program now includes work at 21 locations in Florida, Alabama, Louisiana, and Texas. The sites are all over the map—busy beaches, remote barrier islands, sand flats, marshes, and pristine dunes. With financial support and strategic coordination from ABC, nearly 20 partner organizations such as the U.S. Fish and Wildlife Service,

Audubon Louisiana, Coastal Bend Bays and Estuaries Program, and Gulf Coast Bird Observatory carry out the work on the ground with field technicians and volunteers.

Dianne Ingram credits ABC's program with bringing some much-needed cohesion to the decentralized efforts across the region to help beach-nesting birds.

"Shorebird work is all over the place," says Ingram, a biologist with the U.S. Fish and Wildlife Service's Alabama Field Office. "It all needs to come together into a big effort where everyone's aware and everyone's working toward the same thing." With this gradual coordination of regional partnerships, she says, "I feel like it's starting to happen."

'Expect the Unexpected'

The birds need the help. During the summer months, people unwittingly drive over nests and chicks; trample on them; or allow unleashed dogs to root around, destroying eggs and killing chicks and adults. In more remote locations, people are less of a problem, but an imbalance

of predators such as coyotes or feral hogs can wreak havoc on nesting sites. Climate change and seasonal flooding, meanwhile, add complexity nearly everywhere, affecting sea level and the severity of storms and flooding.

As a result, shorebirds are declining at a faster rate than many other species groups: The 2016 State of the Birds report indicates that migratory shorebirds are in steep decline, with a 70 percent reduction in populations since 1970. The Fish and Wildlife Service, meanwhile, considers Wilson's Plover, Snowy Plover, Least Tern, and Black Skimmer to be species of conservation concern.

The program takes a similar approach at every site—scientific monitoring, nest protection, and educational outreach—but the work is very much tailored to the needs of each particular spot. On the Alabama coast, for instance, the greatest human disturbance comes not from locals who regularly frequent the same beach spots weekend after weekend, year after year. It's a tourist area, and so every week in the high season comes a new batch of out-of-town visitors—some of whom have never been to the beach before. The education process often starts afresh with every conversation.

"Conservation is 80 percent about people," says Susan Heath, an Avian Conservation Biologist with Gulf Coast Bird Observatory, who with ABC support has been monitoring two sites on the Texas coast where Wilson's Plovers nest in relatively strong numbers. "So if we can't educate the public about what the birds need, it's just so much more difficult to get the job done."

Ray says her goal as the program's manager—she regularly travels from her home office in Florida to the opposite end of the Gulf and back again, making stops at all the sites along the way—is to foster a sense of agility that matches the tremendous variability that coastal ecosystems experience from one year to the next.

"We have to be dynamic like the coast is dynamic," she says. "We've got to be ready for a rainy season, or for an influx of predators. We've got to be ready on holidays to be out in numbers so we can educate people and protect the birds. We have to expect the unexpected."

The Quest for Data

The Louisiana coast is one of the program's most isolated stretches of habitat. This remoteness meant that for years, data was scarce on the birds that needed it most, says Erik Johnson, Director of Bird Conservation with Audubon Louisiana. "There are a lot of barrier islands out there, far away from the

universities in Baton Rouge and New Orleans," he says. "There was nobody really working on these birds."

This year, with support from ABC, Johnson and a team of three seasonal biologists are monitoring about 50 miles of beachfront in four parishes. Together, the 50 miles of beach encompass about 15 percent of the state population of Least Tern and Wilson's Plover, he says. Meanwhile, over the course of the past five field seasons of collaborating with ABC, the Wilson's Plover population on Grand Isle—Louisiana's only inhabited barrier island—has tripled, up to about 18 to 20 pairs from just five or six.

The consistent monitoring is beginning to pay off. "We're just now starting to get an idea of what the primary threats to populations are and where these threats are most severe," Johnson says. "We can really start to focus conservation efforts on the sites and the concentrations of birds that need it most."



Royal Terns on a Florida Gulf Coast beach. Photo by Levranii, Shutterstock

Six hundred miles away, in Corpus Christi, Texas, David Newstead has reached a similar conclusion. Newstead, who is the Director of the Coastal Bird Program at Coastal Bend Bays & Estuaries Program, Inc., has been collaborating with ABC since 2012.

The partnership with ABC, he says, has enabled Coastal Bend Bays and Estuaries to communicate more persuasively to landowners and managers about the need for protective measures for the birds. “We’ve got data now that we can rely on and point to, and we can make people understand that these sites need to be protected,” he says.

Data is becoming increasingly valuable in informing conservation work, Newstead says. During a year like this one, with “crazy” tides and flooding, for instance, data helps to quantify what biologists might already expect—that birds won’t be raising as many chicks. In years to come, still more data will allow conservationists to consider other key variables such as climate change and sea level rise, he says. “We’ll be able to incorporate these data and see if the birds will have a place to go.”

A Beautiful Transition

Across the channel from Bolivar Flats is Galveston’s sprawling East Beach. This is Vale’s third season working at the popular recreational site. Wilson’s Plovers nest on the beach and in the dunes, and in early spring Black Skimmers often congregate in the middle of a giant sand parking lot.

It used to be that Vale would arrive and wonder, Who’s going to cut the strings of the fencing? Who’s going



The partnership with ABC has enabled Coastal Bend Bays and Estuaries to communicate more persuasively to landowners and managers about the need for protective measures for the birds.

to be doing donuts around the signs? But this year, hardly anybody trespasses. “It’s been this beautiful transition where people are finally starting to catch on,” she says.

Still, Vale prefers the tranquility of Bolivar Flats. Quiet, with few people and plenty of space, she imagines it to be an earthy paradise for the birds. But even here the conditions are unpredictable.

The shoreline changes with every storm. In some areas, this actually creates better habitat for the nesting birds, as shifting waters deposit sand

and sediment in new places. And then, of course, there are the beachgoers. Every week Vale must weigh the needs of people—“all beaches are open to the public, and we have to respect this,” she says—and birds.

And so on this day early in the season, Vale works her way down the beach, finishing up the fencing as the terns and plovers supervise. We walk about a half-mile to the very end of the beach. This is new habitat created by the recent storm surge. Sand has washed over the beach grasses, creating ideal nesting spots.

“Storms create, storms destroy,” Vale says. “We just have to balance the natural disturbance with the human disturbance.” There will surely be more storms, more flooding, and more unforeseen challenges. But this storm, she says, was a blessing in disguise: at least no chicks had hatched yet.

Least Terns are still darting and flirting over our heads. The sun peeks out for a few brief moments behind rain clouds building in the west, turning the Gulf into a shimmering ribbon of gently lapping waves. Vale continues pounding the stakes into the sand. “I’m looking at all these Least Terns and I’m so happy,” she says. “This is a good spot for them.”

Learn more about this program: www.helpgulfbirds.org



Libby Sander is Senior Writer and Editor at ABC. A journalist for 13 years before joining ABC, she wrote news stories and award-winning features for The New York Times, the Washington Post, and The Chronicle of Higher Education. In April, she spent four days on the upper Texas coast, sharing the beach with plovers, terns, and countless other shorebirds.



A Pact that Transcends Borders

For 100 years, the Migratory Bird Treaty has brought countries together for conservation

By Jennifer Howard

In February 1886, a young New York ornithologist named Frank Chapman set out on an unusual birding expedition. Chapman did not head for meadows or forests outside the city. He staked out the wilds of uptown Manhattan, counting the number of ladies' hats adorned with feathers and other bird parts. Plumage was all the rage among fashionistas of the day, and wild birds of the Americas and elsewhere were paying the price.

His survey indicated how high that price was. "Chapman counted 542 hats adorned with 174 whole birds or their disembodied parts," Adee Braun wrote in a 2013



Plumage was all the rage among fashionistas of the day, and wild birds of the Americas and elsewhere were paying the price.

Lapham's Quarterly story. "The more flamboyant ladies flaunted not just feathers but also the eyes, wings, and in some cases, entire bodies of birds carefully arranged with other natural accessories like leaves and moss." All in all, Chapman counted 40 different bird species that had made the ultimate sacrifice for fashion.

Today it's more fashionable to watch birds than to wear them. But in the late 19th and early 20th century, the hunger for decorative plumage brought some species, including the Snowy Egret, to the brink of extinction. At the same time, the Passenger Pigeon famously met its fate, a victim of unregulated hunting.

Terrible as it was, the indiscriminate slaughter of birds led to one of the United States' earliest and most important environmental laws. The Migratory Bird Treaty Act of 1918, which turned a landmark 1916 treaty with Canada into federal law, has since proven to be a lifesaver for more than a thousand species of birds.

A century after the treaty was signed, the law continues to inform American Bird Conservancy's work to protect birds throughout the Americas. But, like the birds it was designed to safeguard, the Migratory Bird Treaty Act still needs our protection.

Birds on the Rebound

We have two Boston socialites, Harriet Hemenway and Minna Hall, to thank for the activism that eventually led to the Migratory Bird Treaty and halted the avian massacre. Once the two women learned about the impacts of unrestricted hunting, they organized a boycott among the chic set. Conservation groups, including early Audubon chapters, began to spring up.

Hemenway and Hall's parlor movement became a political one, and Congress eventually took notice. In 1900, it passed the Lacey Act, the nation's first law to protect wildlife, which banned the illegal trade of wild animals, including birds. When the Lacey Act failed to shut down the interstate feather trade, Congress adopted the Weeks-McLean Migratory Bird Act of 1913. Ambitiously, the law sought to protect "all wild geese, wild swans, brant, wild ducks, snipe, plover, woodcock, rail, wild pigeons, and all other migratory game and insectivorous birds" from unregulated hunting.

The Weeks-McLean Act didn't survive challenges in court. But in August 1916, the United States and Canada entered into a treaty that spelled out uniform protections for many migratory birds, "in order to assure the preservation of species either harmless or beneficial to man." Two years later, in 1918, the Migratory Bird Treaty Act (MBTA) turned the treaty into law. The United States later struck similar agreements with Mexico, Japan, and Russia.

The act provides sweeping protections for many species, making it illegal "by any means or in any manner" to "pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase," ship, or receive birds or bird parts, nests, or eggs from listed species without a federal permit. (The list of protected birds is adjusted periodically and does not cover non-native species and resident game birds, such as Wild Turkeys or quail, which are managed directly by state wildlife agencies.)

With international protections in place, once-imperiled species began to rebound on both sides of the border. Snowy Egrets made a remarkable comeback once the feather trade came to a halt, even extending their historic range—though the species still faces threats from habitat loss and other factors today. And Trumpeter Swans, which had dwindled to a population of about 70 birds in the mid-1930s, recovered enough to be taken off Canada's endangered list in 1996.

"The Migratory Bird Treaty Act stopped the wholesale slaughter



If Harriet Hemenway and Minna Hall were alive today, they would join the ranks of bird lovers working to make sure the Migratory Bird Treaty Act remains strong enough to protect birds for the next 100 years.



of migratory birds for ornamental feathers and the unregulated hunting of waterfowl,” says Steve Holmer, Senior Policy Advisor for ABC. “As a result, populations of most affected bird species have recovered, and waterfowl hunting in the U.S. is now sustainable and benefits conservation.”

A Shared Responsibility

As bird populations began to rebound thanks to the law, bird conservation also began to flourish, taking on a cross-border importance it had earlier lacked.

The MBTA “really was the start of all the collaborative, cooperative work we do to conserve migratory birds,” says Emily Jo Williams, ABC’s Vice President for North American Birds and Habitats. “The recognition that birds are international resources or treasures established the basis for all of us to work together across international boundaries. It set the stage for that shared responsibility.”

Even though the MBTA has supported remarkable success for birds and bird conservationists, Holmer cautions that we can’t rest easy. “We need the act now more than ever to address the dozens of threats facing migratory birds,” he says. “Forty percent of all migratory bird species are in decline, so it is

urgent that we put in place practices we already know will save birds from needless deaths.” This includes capping open pipes that trap birds and other wildlife, for instance, and making sure that wind energy development avoids sensitive bird areas such as migration corridors.

If Harriet Hemenway and Minna Hall were alive today, they would join the ranks of bird lovers working to make sure the Migratory Bird Treaty Act remains strong enough to protect birds for the next 100 years. That means keeping pressure on Congress not to weaken the act through riders that make it harder to enforce.

Last year, for instance, the House of Representatives passed an appropriations amendment that would have kept the Department of Justice from enforcing the law. That amendment ultimately failed, but the threat remains. Keeping the act strong also means not allowing those who oppose it to make it difficult for federal agencies to limit the incidental “take,” or killing, of protected species such as the Bald Eagle.

Although many of North America’s migratory bird species owe their very existence to the Migratory Bird Treaty Act, relatively few people know about it—and that’s a serious threat in its own right, says Mike Parr, Vice President and Chief Conservation Officer at ABC.

“People interested in birds need to know that their government once cared enough about them—the value they bring to our lives and the ecological services they perform—to protect them with a federal law,” Parr says.

Migratory birds face enough natural challenges as they make their remarkable spring and fall journeys. It’s up to us to guard the birds and the law that protects them from human-caused threats. As we mark the centennial of the 1916 treaty and the law that soon followed, together we can make sure they protect our native birds for many decades to come.

Protect migratory birds and the Migratory Bird Treaty Act: support.abcbirds.org/ProtectMBTA



Jennifer Howard is Director of Public Relations at ABC. She was a writer and reporter with The Chronicle of Higher Education for 10 years and before that was a contributing editor and columnist with The Washington Post. Follow Jen on Twitter at @JenHoward.

Across the Hemisphere, We Go Where the Birds Go

By Andrew Rothman

By the time you read this, changes will be afoot in your backyard or local woods. Many birds have stopped singing. They've raised their chicks. The lucky ones have fledged and are poised to make their first long journey to their wintering grounds in Latin America. Many birds are already heading south.

Imagine packing up your young one to embark on a 3,000-mile journey. What will be there when these birds arrive? Will the forest in Honduras that was there last year await them again this year, or will the trees have been torn down to make way for a palm oil plantation instead? Will they find cover in a healthy mix of trees and coffee bushes or cacao trees in Costa Rica, or encounter a monoculture of pineapple?

The forests and farms of Central and South America can seem distant. But the goods produced there have a direct link to the birds who just left the feeder in your yard. The global economy plays out on a local level in places like Guatemala, Honduras, Costa Rica, and Colombia, affecting how land—bird habitat—is used. Coffee, chocolate, rubber, black pepper, beef, pineapple, palm oil, bananas, and more all impact the availability and quality of habitat for migratory birds during their non-breeding season.

To make sure our colorful visitors have a place to go after they leave our yards each year, we have to make production methods of these goods friendlier for birds. This is where

We identify the land-use changes and challenges birds face, and we put solutions into action where they will make the most impact—in new and creative ways.



ABC's Migratory Bird Program is headed. We go where the birds go. We identify the land-use changes and challenges birds face, and we put solutions into action where they will make the most impact—in new and creative ways.

In Nicaragua, for instance, we have worked with more than 200 land-owners to plant additional trees in their coffee plantations and in their cattle pastures to make better winter homes for birds. In Mexico, we have improved rotational grazing practices to ensure higher-quality grassland habitat for both livestock and birds. And in the Dominican Republic, we are using environmental payment incentives to support the protection of remnant habitat on small family-owned farms near protected areas.

In every case, to influence land use within targeted geographies, we have to know not just how

birds use certain habitats. We need to understand the economics, management, and market chains of products as well.

Migration—of the human kind—and the economy are hot topics in our current geopolitical landscape. Despite this, and the fact that geopolitics and the global economy directly affect their survival, migratory birds ignore borders. It's up to us to pay attention to our role in the global economy and make bird-friendly consumer choices if we want to help them.

Perhaps these natural gems offer us an opportunity to do more than simply admire their beauty. Maybe in the effort to conserve birds, we can find a harmony between our economy and the natural world. Not only do migratory birds depend on it, but our own survival might just depend on it too.



Andrew Rothman is a graduate of the University of Wisconsin-Stevens Point and holds degrees in Biology and Wildlife Management. Andrew was an international conservation officer for ABC from 2010 to 2013, and now serves as Director of ABC's Migratory Birds program.

Bay-breasted Warbler wintering in the El Paujil Reserve, Colombia.
Photo by Fundación ProAves

Your Living Legacy



Since the Migratory Bird Treaty Act was passed nearly 100 years ago, fashion has changed—thankfully, bird-feathered hats are no longer in vogue—but what hasn't changed is the need to be vigilant for birds. You can help protect birds for generations to come by including ABC in your estate plans.

Just as the Migratory Bird Treaty Act helped bring back Trumpeter Swans, Snowy Egrets, and many other birds from the brink of extinction, your estate gift can help ABC protect threatened birds for the next 100 years. In doing so, you will create your own legacy of bird conservation.

If you would like more information on how to join ABC's Legacy Circle with an estate gift, or if you have already included ABC in your estate plans, please contact Jack Morrison, ABC Planned Giving Director, at 540-253-5780, or jmorrison@abcbirds.org



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The Blue-headed Quail-Dove, a rare and elusive Cuban endemic.
Photo by Glenn Bartley

