

2018 ANNUAL REPORT

*You are helping the Cornell Lab of Ornithology
lead the way on the most important
conservation issues around the world.*



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COASTAL SOLUTIONS FOR A GLOBAL CHALLENGE

With incredible, twice-yearly, continent-spanning migrations, shorebirds exemplify the connectedness, wonder, and complexity of nature. In the Western Hemisphere, dozens of shorebird species fly from breeding areas in the Arctic to key wintering sites in Latin America, stopping at locations along the Pacific coast that provide critical habitat during these amazing journeys. Shorebird declines represent the number one avian conservation crisis in the world today, and to stem the tide, it is imperative to protect and restore these interconnected coastal habitats.

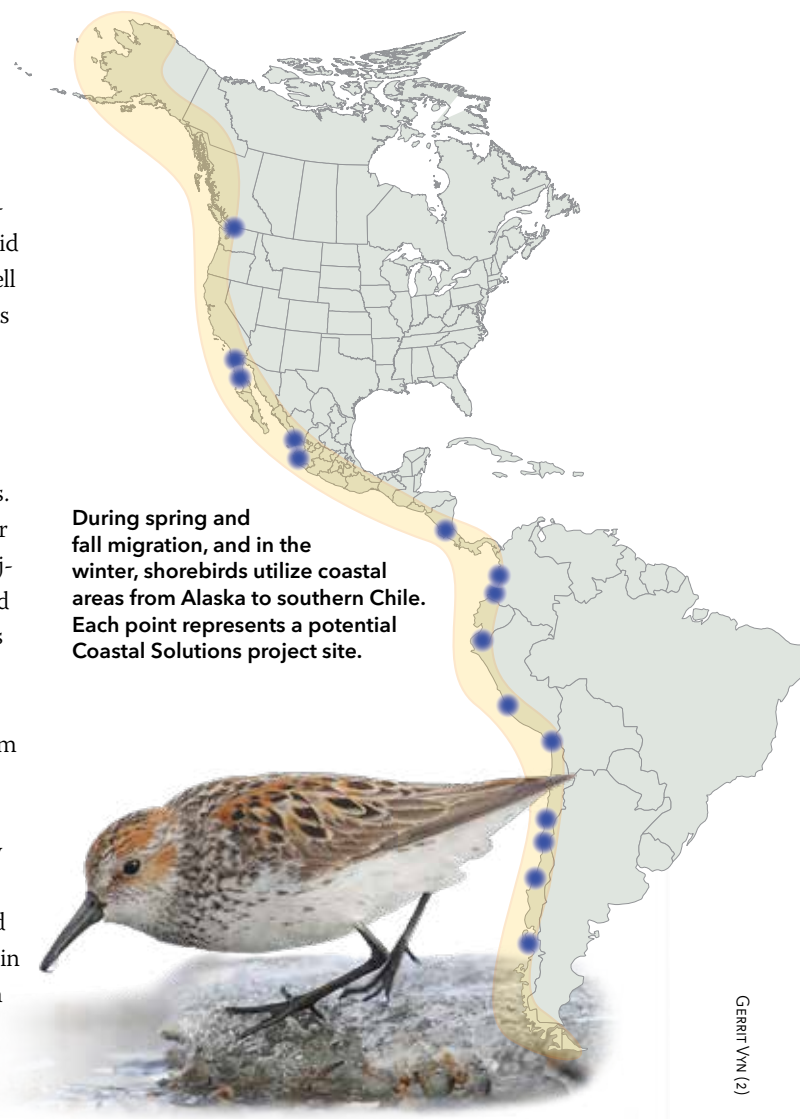
COASTAL SOLUTIONS FELLOWS PROGRAM ADDRESSES THE SHOREBIRD CRISIS

More than two dozen shorebird species around the world are threatened or endangered, partly because critical coastal stopover sites face threats such as unregulated development and climate change. In 2018, with the support of the David & Lucile Packard Foundation and individual donors, the Cornell Lab launched the Coastal Solutions Fellows Program to address the immense challenges facing these birds and their habitats.

Coastal Solutions—part of the Cornell Lab’s Conservation Science program—brings together a network of scientists, developers, and planners to address the issue of declining shorebirds and diminishing coastal habitat throughout the Americas. Over the course of six years, the program will fund 30 two-year fellows to develop and implement innovative conservation projects at key sites along the Pacific Americas Flyway. The Packard Foundation plans to support the program with matching funds if the Cornell Lab can raise the \$2.5 million required for this groundbreaking intercontinental initiative.

Already, the project has garnered nearly 60 applications from scientists and professionals throughout Latin America, and 16 finalists have been selected, from which six will form the inaugural group in 2019. Their proposed projects address the many threats to shorebirds using cross-sector research and collaborative partnerships. Coastal Solutions will bring on-the-ground conservation work to dozens of the most important bird areas in the Americas—turning science into action across a large swath of the Western Hemisphere.

ABOVE: AN AUTUMN MIGRATORY FLOCK OF WESTERN SANDPIPERS FLIES OVER AN ESTUARY IN WASHINGTON STATE. **RIGHT:** AN ADULT WESTERN SANDPIPER FORAGES IN ALASKA.



During spring and fall migration, and in the winter, shorebirds utilize coastal areas from Alaska to southern Chile. Each point represents a potential Coastal Solutions project site.

GERRIT VAN (2)



COASTAL SOLUTIONS
FELLOWS PROGRAM solucionescosteras.org

Q&A WITH OSVEL HINOJOSA HUERTA

Dr. Osvel Hinojosa Huerta is the Project Leader of the new Coastal Solutions Fellows Program. Dr. Hinojosa Huerta has 20 years of experience working in wetland conservation in Mexico and the United States. Most recently he was the director of the Water and Wetlands program for Pronatura Noroeste, a nonprofit in northwestern Mexico focused on restoring natural water flows to the Colorado River Delta.



OSVEL HINOJOSA HUERTA
BY AMARANTA DELGADO

Q: What is most exciting to you about working on the Coastal Solutions project?

OSVEL: The design of the project. We need to find solutions to restore these important coastal sites, and just knowing the biology is not enough. We need to work with planners, developers, architects, lawyers, economists, and others. And because the issue affects such a wide area, we will be creating the capacities to implement this kind of conservation at scale.

We are building a community of amazing young conservationists from Latin America who are all working on protecting shorebird habitat. [Throughout the project] the community becomes stronger as more and more fellows come on board.

Each year, almost 2 million birds use the Upper Panama Bay (above)—a site of hemispheric importance for shorebirds during their epic migrations. These wetlands face increasing pressure from coastal development, threatening the ecological stability of one of the most important stopover sites in the Pacific Americas Flyway.

Q: How will Coastal Solutions go about solving these problems?

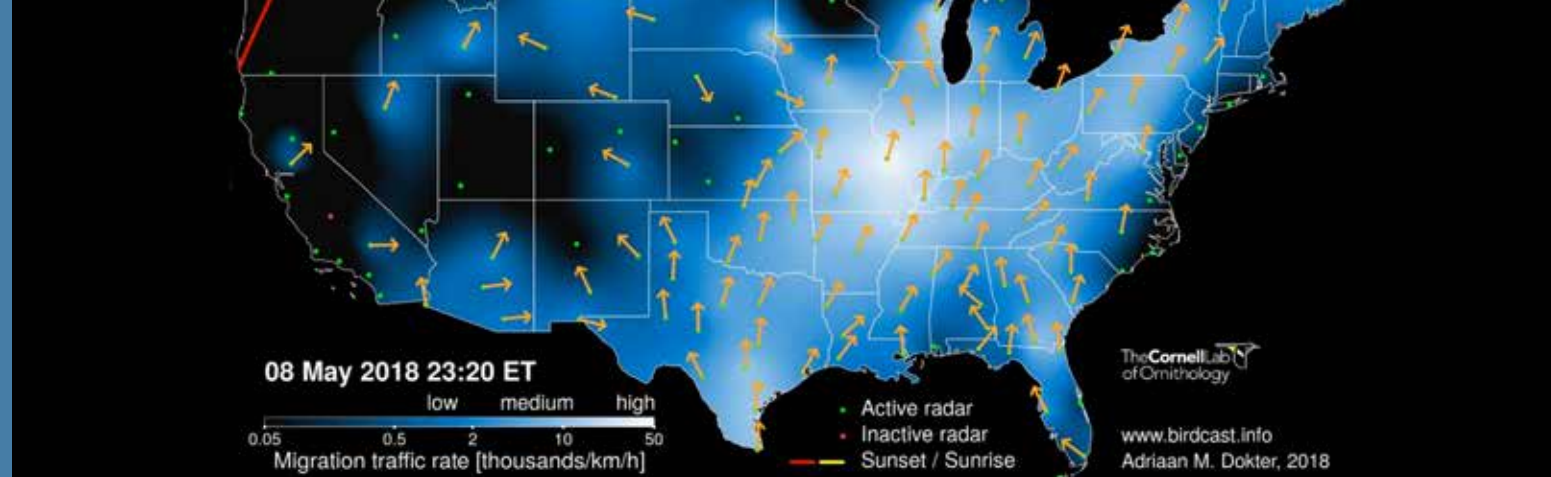
OSVEL: We are developing a whole new conservation model. We will ask the applicants for the fellowships to identify a clear threat—whether it’s losing birds, losing wetlands—and to define their project based on evidence. We are starting with priority sites as identified in the Pacific Americas Shorebird Conservation Strategy, developed by a team of scientists from National Audubon, BirdLife International, U.S. Fish and Wildlife Service, and dozens of other partners throughout North and South America.

One key will be sitting down with people from different sectors—getting a biologist to work with an engineer and a developer, for example, to work out how to protect the habitat for birds in a way that works for the human communities as well. It will be all about cross-sector collaboration. And of course, each project will have clear plans for implementation, monitoring, and measuring success.

EBIRD EMPOWERS SHOREBIRD CONSERVATION

Alison Johnston is an ecological statistician—she uses mathematics and computer modeling to guide and improve on-the-ground conservation work. Previously a postdoctoral researcher at the Cornell Lab, Johnson is now analyzing the large-scale data from eBird, adding habitat information to eBird maps to refine distribution and abundance models. This work, funded by the Packard Foundation, will help scientists pinpoint the most important shorebird areas across the Western Hemisphere.





IMPACT ECOLOGY

By observing and learning about birds, we are taking the pulse of the planet. Thanks to the support of thousands of donors, including key gifts from individuals, the Cornell Lab is using new technologies and innovative research techniques to read the planet's vital signs with great precision. Scientists are now using this information to prescribe solutions to conservation challenges around the world—from mitigating hazards in cities for long-distance migrants, to securing protection for an elusive California songbird.

SHEDDING NEW LIGHT ON DARK SKIES

Doppler radar—those traveling blobs of color featured in almost every TV weather broadcast—can tell us more than just the conditions for a weekend cookout. Recent advances in computing power and radar capabilities have allowed researchers at the Cornell Lab of Ornithology to create innovative ways to track and predict bird movement across the continent. Thanks to the BirdCast project, anyone can access, interpret, and use radar data to look for, learn about, and help birds.

The BirdCast team—which includes project leader Andrew Farnsworth, along with Adriaan Dokter, Kyle Horton, and Cecilia Nilsson, three of the Cornell Lab's Edward W. Rose Postdoctoral Fellows—is at the forefront of the emerging field of aerology: the study of how airborne organisms interact with an ever-changing atmosphere. Collaborating with top institutions, such as UMass Amherst and Oxford, and with support from the Leon Levy Foundation, the team has quickly made discoveries in understanding migratory behavior and the causes of mortality such as artificial light at night.

BirdCast uses radar data to predict migratory bird “clouds” during spring and fall migration. These forecasts can do everything from letting bird watchers know the best time to refill backyard feeders, to informing industries and municipalities of critical times to power down wind turbines or turn out lights in office buildings to keep birds safe on heavy migration nights.

Birders can visit birdcast.info during peak migration to get predictions of bird movement up to three days in advance, so they can plan which morning will be the best one for catching an incoming wave of migrants in their area.



MEGHAN HURYN/FLAP CANADA

More than 2,800 birds killed by building collisions were collected around the city of Toronto in 2017.

Cities are already using BirdCast to make flyways safer. This spring, Houston Audubon issued “Lights Out Action Alerts” to encourage building occupants to turn off their lights on nights that were forecast to have moderate or heavy bird movement.

“Collisions with lighted windows, and to a lesser extent wind turbines, are a major cause of bird death,” says Kyle Horton. “But migrants come through on a few nights each year, meaning that minor, temporary adjustments could save huge numbers of birds.”

ABOVE: THE LATEST MAPS FROM BIRDCAST SHOW BIRD MIGRATION IN REAL TIME.

CORNELL LAB ATTRACTS THE BEST AND BRIGHTEST THROUGH THE ROSE POSTDOCTORAL FELLOWSHIP

This year, the Cornell Lab of Ornithology welcomed five of the world's most exceptional early-career scientists to Sapsucker Woods for two-year appointments through the Edward W. Rose Postdoctoral Fellowship program. Edward “Rusty” Rose was a long-time friend and enthusiastic board member of the Cornell Lab. Upon his passing in 2016, the Cornell Lab established this program to host Rose Fellows who pursue independent, innovative research with the goal of furthering the institution's mission to “interpret and conserve the earth's biological diversity through research, education, and citizen science focused on birds.”

The annual competition for Rose Postdoctoral Fellowships has helped position the Cornell Lab as a destination for postdoctoral researchers, many of whom decide to come with their own external funding. Thanks to the spark from the Rose Fellowship, there are now more than 25 postdocs at the Cornell Lab—a vibrant and growing community for research and bird conservation.

Rose Postdoctoral Research Associate Victoria Martin is studying ways to increase engagement in citizen-science programs by working closely with hundreds of Project FeederWatch participants. “Being awarded a Rose Postdoctoral Fellowship has enabled me to work with some of the leaders in the fields of citizen science, science communication, conservation, and ornithology,” said Martin, a native of Australia who came to the Cornell Lab in mid-2017. “Thanks to the support provided by the Cornell Lab, I am conducting several pieces of research concurrently, working at a scale that would otherwise be difficult to achieve. The outcomes of these projects will make important contributions not only to my field, but to public engagement with the Lab.”



DIANE L. TESSAGLIA-HYMES

Adriaan Dokter, Cecilia Nilsson, and Kyle Horton (left to right) are three Rose Fellows working on BirdCast.



TERRY BROWN

Rose Fellow Victoria Martin studies ways to increase participation in citizen-science programs.

SCIENCE TO ACTION: EBIRD DATA CONVINCE CALIFORNIA TO PROTECT TRICOLORED BLACKBIRD

When scientists first proposed adding the Tricolored Blackbird to the California endangered species list in 2004, they had a problem. Tricolored Blackbirds nest in large colonies that can move from year to year, and because the locations of these colonies in any given year may not be known, existing survey data were not enough to convince the California Fish and Game Commission to approve the listing.

In 2015 the species was again under consideration for protection under the California Endangered Species Act. This time, however, our partners at California Audubon were armed with new information, thanks largely to the work of Dr. Orin Robinson—a Cornell Lab Postdoctoral Fellow

in Conservation Science who has been studying Tricolored Blackbirds for the past two years. Robinson's work combined data in eBird with survey data from partners at UC Davis to develop new trend estimates for the state's Tricolored Blackbird population.

By combining these data sets, Robinson developed a statistically reliable population model showing Tricolored Blackbirds declined more than 33 percent during just the past 10 years. Robinson's research was the key piece of evidence cited by the State of California to approve state Endangered Species Act protections for Tricolored Blackbirds this past April.

TRICOLORED BLACKBIRD BY NIGEL VOADEN/MACAULAY LIBRARY AT LEFT, AND ABOVE, ORIN ROBINSON WITH ONE OF HIS STUDY SUBJECTS.



CHRISTY WYCKOFF





INTERNATIONAL REACH

The Cornell Lab may be based in Ithaca, New York, but the impact of our people and projects has always transcended the region, the continent, and even the hemisphere. Through international partnerships, workshops, and global research opportunities for students, our work to conserve birds and biodiversity ripples through communities around the world.

SUPPORTING WOMEN AT THE GUATEMALA BIRD FAIR

Research shows that the empowerment and engagement of women are key to the success of conservation efforts throughout the developing world, because women are often the primary workers in related fields such as agriculture and education. In 2018, thanks to donor support, the Cornell Lab sponsored nine women to attend a Community Forum on Avitourism at the Guatemala Bird Fair along the shores of Lake Atitlán. The women, along with 40 other community monitors from all regions of Guatemala, spent a week sharing experiences, attending workshops, and gaining insights to bring back to their communities in this critically important country for migratory birds.

The Cornell Lab sponsored a panel discussion entitled “The Role of Women in Avitourism in Guatemala” as part of the Community Forum. The Cornell Lab’s Lilly Briggs, a postdoctoral researcher in environmental education, and Viviana Ruiz-Gutierrez, a quantitative ecologist from Costa Rica, participated in the panel, which included women from academia, avitourism, education, and conservation.

ABOVE: RAMIT SINGAL ATTENDED THE SOUND RECORDING WORKSHOP IN JUNE 2017, AND HAS SINCE ARCHIVED MORE THAN 500 RECORDINGS IN THE MACAULAY LIBRARY FROM HIS NATIVE INDIA. PHOTO COURTESY OF RAMIT SINGAL.

“The world of ecotourism and conservation in Latin America is still largely dominated by men. To see women from all backgrounds and experiences speak passionately about their experiences with birds highlighted the need to make sure all women in these fields have support.”

—Lilly Briggs

The people and activities supported by the Cornell Lab made a significant contribution to local efforts to highlight the importance of women in bird conservation and education, and demonstrated

how bird monitoring can be combined with resources such as eBird, Merlin, and BirdSleuth International to address conservation needs for their communities, and for birds.



Community-based monitors who received scholarships to attend the Guatemalan Bird Fair.

PHOTO COURTESY OF BIRDZONE ATITLÁN

THE SOUND ANALYSIS WORKSHOP SPREADS TECHNOLOGY AND TECHNIQUE AROUND THE WORLD

The Bioacoustics Research Program’s Sound Analysis Workshop invites biologists from around the world to the Cornell Lab to learn the skills to help them unravel mysteries of animal communication. Participants’ work includes everything from shining light on evolutionary relationships, to discovering new species, to understanding impacts of human activities on wildlife.

For the first time this past year, the Sound Analysis Workshop offered scholarship assistance to biologists from developing countries thanks to generous support from Ecological Associates, Inc.

One scholarship went to Divna Djokic, a doctoral student from Serbia investigating humpback whale song in the south Atlantic and south Pacific Ocean basins. Humpback populations in the two oceans are separated by the South American continent during the breeding season, but in the austral summer both populations migrate to the same sub-Antarctic feeding grounds, where they could potentially hear each other’s songs. Djokic came to the workshop to aid her research into the exchange of song elements between the two populations.

She expects that the principles and techniques taught in the workshop will help her advance scientific understanding of non-human cultural evolution on our planet. “Before coming to the workshop,” Djokic writes, “I’d been using the Cornell Lab’s Raven



ANA VERAHAMI

Scholarship recipient Divna Djokic (second from right) and other participants in the Sound Analysis Workshop learn about the Cornell Lab’s Swift terrestrial recording units from postdoctoral researcher Yu Shiu (right).

software for eight months, and knew that there were some holes in my knowledge and skills. The workshop not only filled those holes, but also showed me how much I didn’t know, and what additional questions I needed to ask.” She hopes eventually to establish the first bioacoustics research group in Serbia.

IVY EXPEDITION EXCEEDS GOALS AND EXPECTATIONS

A team of Cornell students—Facundo Fernandez-Duque, Rachael Mady, Sarah Toner, and Christopher Sayers—traveled to the Mpala Research Centre in central Kenya in April on an Ivy Expedition. The Ivy Student Expedition Fund provides opportunities for student-led expeditions to gather audio and visual specimens and other information about species underrepresented in the Cornell Lab’s Macaulay Library and the Cornell University Museum of Vertebrates. Under the guidance of the

Cornell Lab’s Arthur A. Allen Director of Citizen Science David Bonter, the students designed and executed every aspect of this 10-day expedition to East Africa.

Prior to departure, they received training in sound recording and analysis, and in videography from Macaulay Library and Multimedia staff. At Mpala they were hosted by Cornell Lab alumna Shailee Shah, who is studying Superb Starlings in Kenya for her PhD at Columbia University.

The students captured video of 113 animal species underrepresented in the Macaulay Library collection, including 39 brand-new additions. They recorded audio of 66 underrepresented species, three of which are new to the Macaulay Library archive. Their efforts also resulted in a substantive increase in eBird data from the Rift Valley region. Researchers and the public have open access to these data and multimedia specimens, helping to shed light on East African ecology and biodiversity.



DAVID BONTER

Rachael Mady uses a microphone with a parabolic reflector to record a singing Von der Decken’s Hornbill (right).



DANIEL JAUVIN/
MACAULAY LIBRARY



THE BIRD CLASSROOM OF TOMORROW, TODAY

Discovering the wonder of birds can be the first step in a lifetime of caring about their conservation, so the Cornell Lab always seeks new opportunities to connect with learners of all levels and backgrounds. From the teachers and students using BirdSleuth in elementary schools, to the young birders and college undergraduates who encounter birds at Sapsucker Woods, to the lifelong learners flocking to learn with Bird Academy, the Cornell Lab offers opportunities to learn about birds and biodiversity at every stage of life.

BIRD ACADEMY EXPANDS CONTENT AND ENHANCES LEARNING OUTCOMES

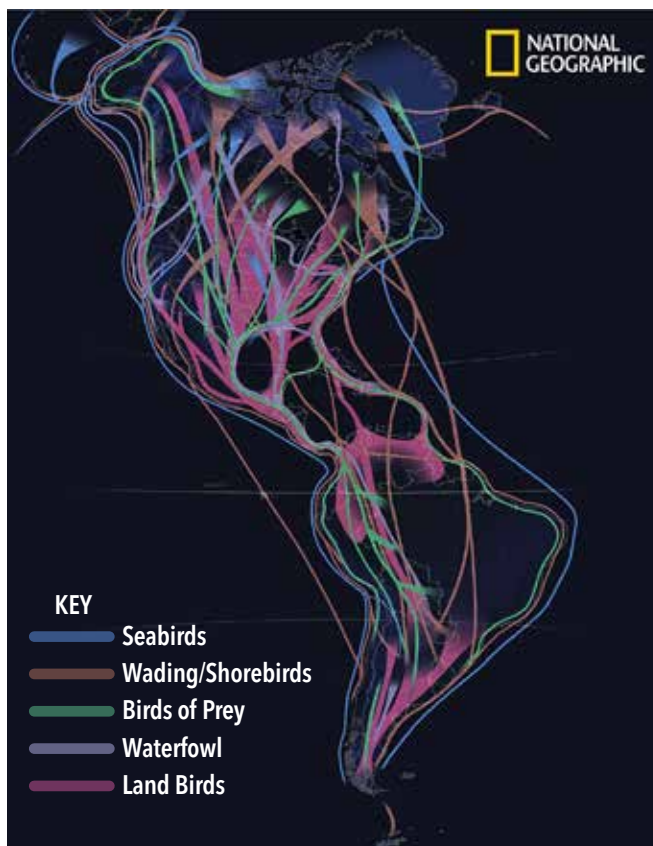
Since its launch in 2015, Bird Academy has enrolled more than 22,000 students in over a dozen courses and online tutorials, and has reached 1 million users of all ages and abilities with hundreds of free videos, interactives, and learning games. And the learners' enthusiasm is contagious—98 percent of students report that they would recommend their course to others.

Many of the people who take Bird Academy courses are using what they learn to spread a love and knowledge of birds throughout their communities.

"Completing the course Ornithology: Comprehensive Bird Biology has allowed me to provide a more enriching experience for the people that join my bird walks," shared one recent Bird Academy student. "I am now able to go beyond identification and talk about ecology, basic biology, bird behavior, etc. Recently, someone wrote that a walk I led reignited their interest in birds, and I believe that [Bird Academy] material helped me to give a higher-quality experience for this person."



Bird Academy's Warbler Identification course includes dozens of fun "Snap ID" quizzes.



As part of the Year of the Bird partnership, Bird Academy collaborated with National Geographic to create a popular interactive online feature based on eBird data, which includes a series of dynamic maps showing bird migration across the Western Hemisphere. Check it out at bit.ly/CornellLabMigrationMap.

ABOVE: PHOTO OF H2, ONE OF THE RED-TAILED HAWKS THAT FLEDGED IN 2018, BY CINDY AND KAREL SEDLACEK

BIRD CAMS ENGAGES VIEWERS IN THE SCIENTIFIC PROCESS

For more than 20 years, the Bird Cams have given millions of people a unique window into the private lives of nesting birds. Now Bird Cams viewers will have a chance to actively engage with science research as they watch.

In 2017, Bird Cams received a National Science Foundation grant that will enable viewers to join with scientists to make discoveries using the cams. The project team will use the three-year grant to investigate what happens when Bird Cams viewers co-design citizen-science research projects from beginning to end, including formulating research questions, collecting and analyzing data, and com-

municating results.

During the first year of the grant, the team engaged hundreds of Bird Cams viewers to provide ideas for potential research questions, and to consider the feasibility of answering them using footage of the Red-tailed Hawk cam on the Cornell University campus. Possible research questions include: "How long does the female spend away from eggs and is it related to temperature?" "How does the frequency of aggression among siblings change with age?" And the winning question, "Do the hawks use different kinds of calls in different situations at the nest?"

In the coming year, a wider set of



Big Red incubating eggs on her nest atop a light tower on the Cornell University campus.

viewers will be able to join these live science investigations and help reveal new knowledge about birds and the natural world.

YOUNG BIRDERS: THE FUTURE OF ORNITHOLOGY

In July, the Cornell Lab, in partnership with Carl Zeiss Sports Optics, Princeton University Press, and Wild Birds Unlimited, hosted the 10th group of teenagers for the Young Birders Event—an annual four-day immersive learning experience for high school students with a passion for birds and an interest in pursuing a career in the field. In the past decade, 140 young birders from around the world have attended the event; 30 have enrolled as undergraduates at Cornell University and several alumni have already gone on to become leading early-career scientists. This year's cohort included teens from China, the United Kingdom, India, the Bahamas, and Brazil.



GERRIT VYN

ANDY JOHNSON: Young Birder class of 2009

"I particularly remember a warm, foggy morning we spent experimenting with audio recording equipment and a massive old video camera," recalls Andy Johnson, who attended the first Young Birders Event as a 17-year-old in 2009. "It probably weighed 50 pounds, but it could capture a small bird's every move from 50 feet away. I was hooked." At that inaugural event, Johnson also heard then-PhD student Nate Senner describe his research tracking the marathon migrations of Hudsonian Godwits—and his need for field assistants.

Today, Andy is an associate producer with the Cornell Lab's Multimedia Program. He spent part of the past summer on assignment on St. Matthew Island, Alaska—an uninhabited island in the middle of the Bering Sea—gathering the first-ever footage of nesting McKay's Buntings, a species that breeds nowhere else.



JESSIE BARRY

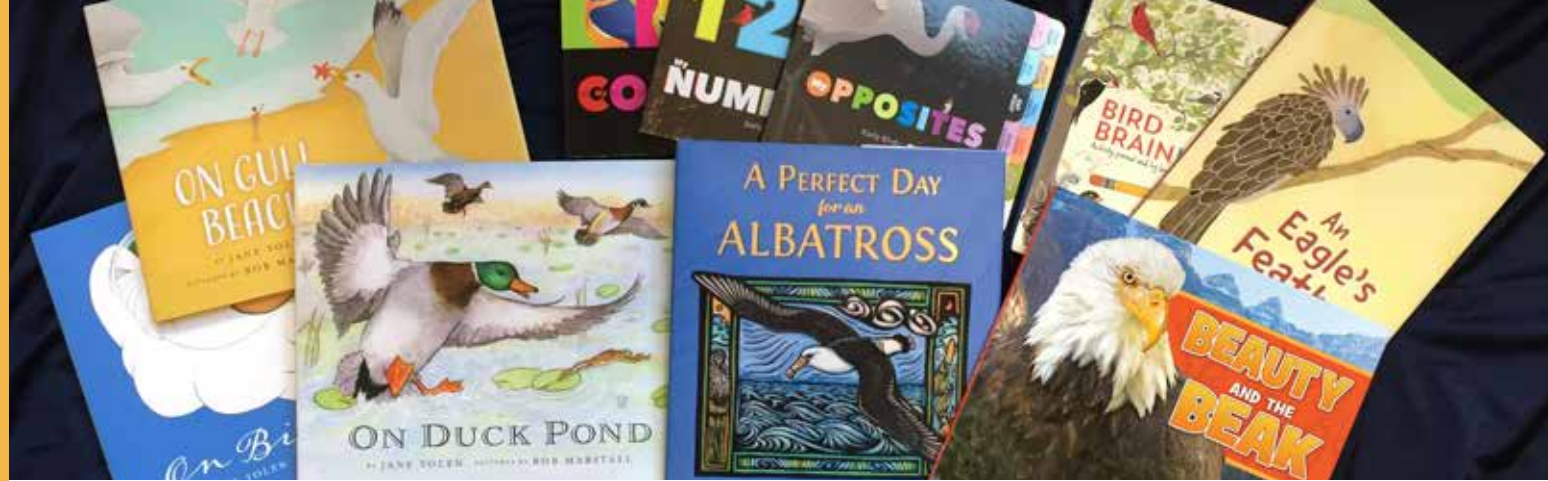
LORENA PATRÍCIO: Young Birder class of 2018

Lorena Patrício, a 16-year-old from Brazil who has been birding since age 10, has already ticked almost 1,000 species on her life list, and submitted more than 300 eBird checklists. Even more impressively, she recently co-authored a citizen-science-oriented field guide to the birds of her neighborhood of Demetria in São Paulo using all of her own photos and illustrations, such as the Musician Wren at right. Lorena crowdsourced more than \$3,000 so she could travel to the Cornell Lab for this year's event.

"The Young Birders Event was a fantastic opportunity to be with other young people from all over the world who are passionate about birds and nature," said Lorena. "I learned a lot about the Cornell Lab of Ornithology and the research done there, and saw lots of new birds! Certainly this is going to drive my ambitions to pursue a career in ornithology in the future."



LORENA PATRÍCIO



CONNECTING BIRDS AND PEOPLE

Birders love to recount their “spark” bird—that moment that hooked them on watching birds for the rest of their lives. The Cornell Lab provides more opportunities for people to experience that spark—whether it’s finally identifying a mystery bird using an app, discovering a favorite book that a child turns to again and again, or spending an hour with an inspirational figure from the world of ornithology—because any moment could be the one that turns a bird enthusiast into the next great bird conservationist.

MERLIN EXPANSION MAKES BIRDS ACCESSIBLE TO MORE PEOPLE

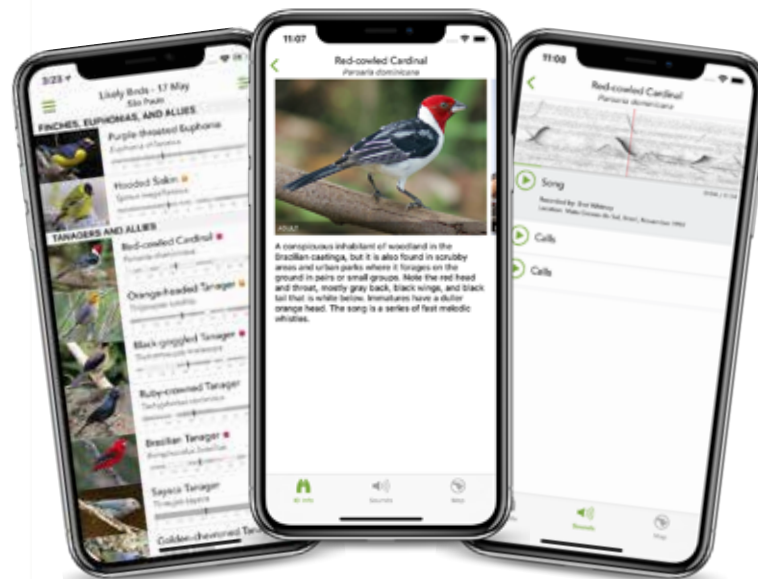
When the revolutionary free app launched five years ago, Merlin Bird ID could identify 285 species in North America. Fast forward to 2018 and Merlin is now capable of identifying more than 2,600 species on three continents. Drawing on the huge

volume of photo submissions to the Macaulay Library, Merlin’s AI-powered photo ID is capable of identifying nearly every regularly occurring species in North America (including Central America), plus parts of Colombia, Brazil, and Western Europe.

Cornell Lab education programs, such as Celebrate Urban Birds and BirdSleuth International, use Merlin as a teaching tool, enhancing students’ experiences and providing them with a free resource to continue learning about birds at home.



RED-COWLED CARDINAL
BY FERNANDO LOTTO/
MACAULAY LIBRARY



This year Merlin incorporated key features from eBird, so that users can access species lists and bird occurrence charts anywhere in the world where eBird data exist. Additionally, the audio player now includes spectrograms, so users can visualize sounds as well as hear them.

ABOVE: THE CORNELL LAB PUBLISHING GROUP’S BOOKS OFFER CHILDREN AN INSTANT PORTAL TO THE NATURAL WORLD.



CORNELL LAB PUBLISHING GROUP

The Cornell Lab Publishing Group (CLPG) continues to produce high-quality, engaging books about birds for all ages. The *Boston Globe* had this to say about the latest children’s book in the “On Bird Hill and Beyond” series by Jane Yolen:

“Yolen’s lively, rhyming story transforms the mundane into images of revelation and beauty...part of a series from the Cornell Lab of Ornithology, which works to get all ages interested in protecting birds—and the planet they inhabit.”

“Beauty and the Beak,” which was published by CLPG’s sister imprint Persnickety Press and includes Cornell Lab of Ornithology content, won the prestigious 2017 AAAS/Subaru SB&F Prize for Excellence in Science Books from the American Association for the Advancement of Science.

PAUL C. MUNDINGER DISTINGUISHED LECTURESHIP ENCOURAGES THE NEXT GENERATION TO “ASPIRE”

Paul Munding spent most of his career as a professor at Queens College, New York, studying the evolution of song and song learning in finches. He formed a strong attachment to the Cornell Lab of Ornithology during his PhD work at Cornell in the 1960s, when he spent many hours in the Library of Natural Sounds (now the Macaulay Library). Dr. Munding’s family created the Paul C. Munding Distinguished Lecture in his memory.

Munding’s son Thomas described the lectureship as a way to honor his father’s devotion to his students, and how he encouraged them to aspire to apply their work to improving the human condition. “It’s that word ‘aspire’—now that you’ve got the basics, go out and contribute,” Thomas says of Paul Munding’s attitude toward teaching.

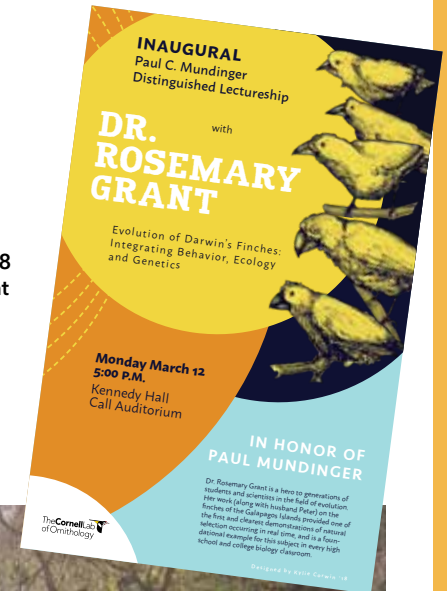
The inaugural lectureship in March of 2018 featured Dr. Rosemary Grant of Princeton University. Dr. Grant, with her husband Peter, stunned the world of evolutionary biology in the 1980s by showing just how quickly natural selection was working to alter the characteristics of bird species on the Galápagos Islands. The 600-seat Call Auditorium on Cornell University’s main campus was overflowing with a mix of students, faculty, staff, and community members for the lecture. Several hundred more tuned in through our website to watch the event live.

Cornell University sophomore Jasmine Mack, a Biological Sciences major, told the *Cornell Sun*: “[Grant] performed her work over such a long period of time, and she stayed with it. It motivates me as well to keep pursuing research.”

The next lecture in the series, in October 2018, will feature Dr. Gail Patricelli, professor and Chancellor’s Fellow at UC Davis. Dr. Patricelli will share her research on acoustic and visual signaling in birds. The talk will be live-streamed and archived.

Right: The inaugural lectureship in March of 2018 featured Dr. Rosemary Grant of Princeton University.

Below: Paul Munding recording bird songs in the Canary Islands, ca. 1979.



MARY MUNDINGER

PARTNERSHIPS FURTHER OUR MISSION

The Cornell Lab is grateful for our partnerships with companies that provide resources to make a difference for birds, birders, and all life on Earth. With the help of corporate support, the Cornell Lab's programs and expertise continue to reach new and diverse audiences, ensuring there will always be people who care about the future of our natural world.

PENNINGTON CONNECTION STRENGTHENS OUTREACH TO YOUNGER AUDIENCES

Since 2011, the Cornell Lab and Pennington Wild Bird Feed have partnered to educate and engage diverse groups of bird lovers by expanding the reach of the Great Backyard Bird Count, creating the Feathered Friends program to distribute educational material at conferences throughout the country, and supporting the creation of the Merlin app for Android.

This year, Pennington also helped Cornell Lab Rose Postdoctoral Fellow Victoria Martin use social media to research ways to get younger adults interested and involved in Project FeederWatch. "Working with Pennington's team allowed us to interview a diverse set of young adults across the entire country," says Martin. "This increased the value of the research and enabled us to make sound decisions based on what the interviewees told us." The research found, among other things, that younger adults who feed wild birds are very interested in contributing to bird research, but they require a different approach to engagement with the Lab. The results are informing new experimental strategies for recruiting young adults to Project FeederWatch.



MEGAN BISHOP, BARTELS SCIENCE ILLUSTRATOR

ZEISS EBIRDER OF THE MONTH FUELS PARTICIPATION

The eBird partnership with Carl Zeiss Sports Optics gave rise to the popular ZEISS eBirder of the Month Challenge. Now in its fifth year, the eBird checklist challenge continues to generate excitement and bring in new eBird submissions by tapping into the competitive nature of birders. ZEISS has donated over 50 Conquest HD binoculars to winners, and participants have submitted a profusion of important data about species occurrence and abundance to eBird.

Brian Tinker of Cuyahoga Falls, Ohio, was the eBirder of the Month for January 2018. "I would like to thank eBird and Carl Zeiss



PHOTO COURTESY OF BRIAN TINKER

Sports Optics for sponsoring these monthly challenges," said Brian, who also volun-

teers with Lights Out Cleveland, rescuing and collecting birds that have collided with buildings. "In the past, I would actively try to complete the challenge each month, but now it's just second nature to get out there and bird anytime and anywhere I can—and track it all in eBird."



WHITE-THROATED SPARROW BY BRIAN TINKER/MACAULAY LIBRARY

SPONSORS

The Cornell Lab thanks our sponsors for their support in the past year.

Through these partnerships we reached out to new audiences to improve the understanding and protection of birds in backyards and around the world.

Thank you!

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For information about partnership opportunities, contact Mary Guthrie, Director of Corporate Marketing Partnerships, at msg21@cornell.edu.

Special thanks to all our members and donors



EMIN PIERCE

We are deeply grateful to our more than 100,000 supporters at every level, all of whom make it possible for the Cornell Lab of Ornithology to advance the understanding of nature and engage people of all ages in learning about birds and protecting the planet. We're pleased to include a list of our leadership supporters online at birds.cornell.edu/donors.

Photo: Golden-wing Society members join staff for a morning bird walk at the June 2018 "Weekend at Sapsucker Woods."



LEAVE A **LEGACY** FOR BIRDS

By including the Cornell Lab in your will, trust, or beneficiary designation, you can create a personal legacy that will have a lasting impact for birds, discovery, and conservation. We would be happy to help you make a plan that will benefit you, your family, and ultimately, the birds.

CALL: 607-254-2420 **EMAIL:** labgifts@cornell.edu **VISIT:** birds.cornell.edu/giftplans.org

EMPEROR GOOSE BY GERRIT VYN

The **Cornell Lab** of Ornithology



Dear Friends,

I'm so glad you share my passion for birds and nature. Thanks to you, the Cornell Lab of Ornithology remains at the forefront of science that drives conservation initiatives, educational programs, and citizen-science projects—at the Lab and for partners around the world.

This annual report includes amazing accomplishments that belong to all of us. With your continued support, the Cornell Lab will advance its mission with confidence and enthusiasm. I'm proud to be part of the Cornell Lab of Ornithology and thank you for being part of it, too.

With gratitude,

Linda R. Macaulay

Linda R. Macaulay
Chair, Board of Directors
Cornell Lab of Ornithology



BLUE-TAILED BEE-EATER BY
GUY POISSON/MACAULAY LIBRARY

2018 BY THE NUMBERS

MORE THAN 500 MILLION BIRD SIGHTINGS IN EBIRD

A Barn Swallow submitted by Jay Limparungpatthanakij in March tipped the database over the half-billion mark.

376,011 NESTING RECORDS IN NESTWATCH

Submitted over the past 30 years by citizen scientists.

128 PEER-REVIEWED PAPERS

Published by Cornell Lab staff and faculty in the past year.

2 MILLION MERLIN DOWNLOADS SINCE 2013 LAUNCH

Helping people around the world identify and learn about the birds near them.

1,032 SCIENTIFIC PUBLICATIONS

Used the Cornell Lab's Raven Sound Analysis software.

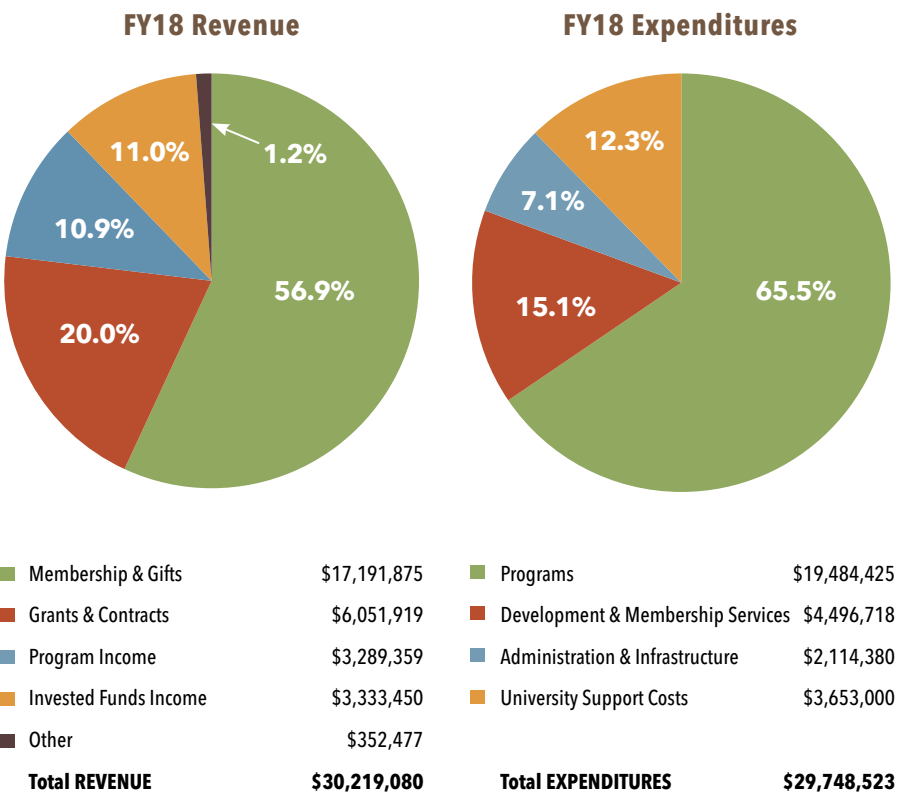
3.5 MILLION NEW IMAGES ADDED

The number of images in the Macaulay Library nearly doubled in the past year.

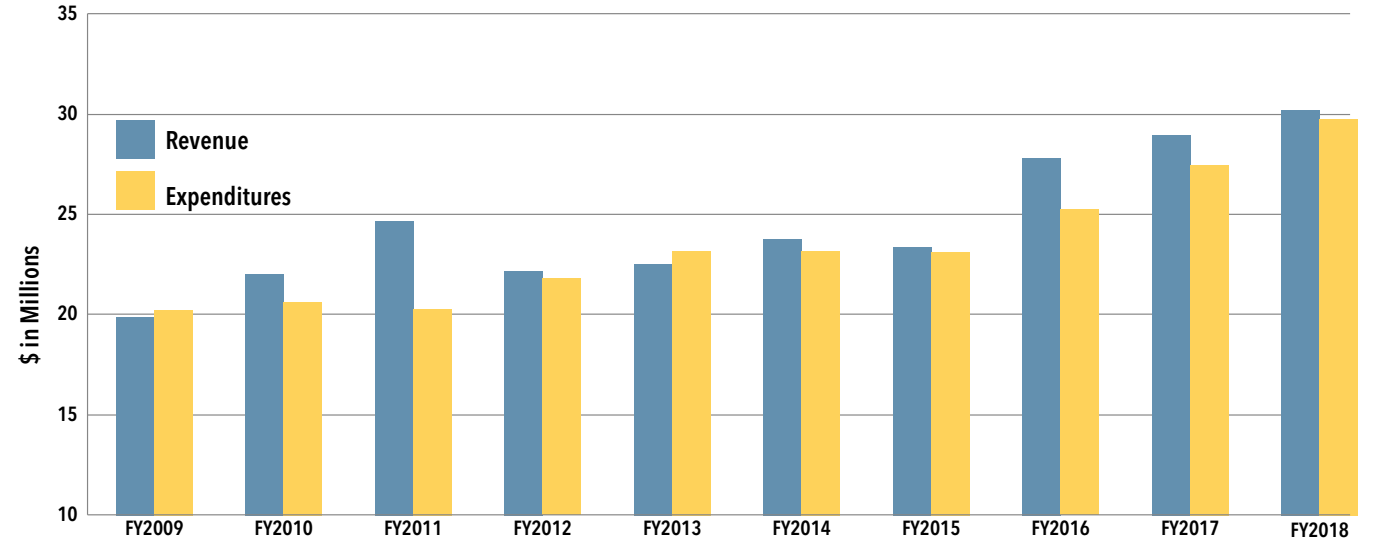
FINANCIAL REPORT

2018 FISCAL YEAR—JULY 1, 2017 TO JUNE 30, 2018

THANKS TO FRIENDS LIKE YOU, the Cornell Lab of Ornithology is a healthy and effective organization. Nested within the fabric of Cornell University, the Cornell Lab's strength lies in its unique institutional model that weaves together research and academics with outreach and conservation programs, and in the support of thousands of members and donors. As you can see from the pie charts, membership revenues and gifts are the single largest source of support for our programs and projects. Our members and friends provided 56.9 percent of our annual revenue, a total of \$17.2 million that fuels innovation, growth, and scientific excellence. The bar chart depicts healthy growth over the past 10 years with revenues exceeding expenditures, allowing the Lab to continually expand and strengthen our vital research, education, and conservation efforts.



Annual operating revenue and expenditures, 2009-2018



If you have questions, comments, or requests for the Cornell Lab's membership and development team, please contact Bramble Klipple at 607-254-1105, bck42@cornell.edu.