

The Klamath Bird



Newsletter of the Klamath Bird Observatory, Winter 2018

SPECIAL EDITION: FOCUS ON KBO EDUCATION PROGRAMMING

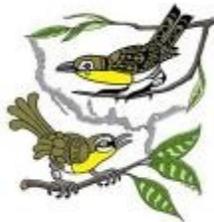
Klamath Bird Observatory provides information and learning opportunities about science-based bird and habitat conservation through our wide-ranging education programming. Our objective is to be an information resource for the community, educators, and conservation practitioners. This special edition of The Klamath Bird takes a look at how we are doing just that with a collection of vignettes about our many education resources and on-going programming. Readers will find more details regarding all of the resources highlighted here at the KBO website—www.KlamathBird.org.

Community Education

Our Community Education programming offers a diversity of learning opportunities that foster an appreciation for birds and an interest in conservation. These include our Talk and Walk series of classes, festival outreach, community conservation guides, and Avian Knowledge Northwest—a rich collaborative repository of bird and habitat conservation planning resources and data, plus a portal for citizen science projects.

Recognizing that conservation occurs across many fronts, KBO nurtures a conservation ethic in our education and outreach programs. Conservation Birding is at the heart of everything we do—encouraging anyone who has an interest in birds and seeing birds to be actively involved in the conservation of birds and their habitats by contributing time, data, or funding.

Avian Knowledge Northwest (AKNW), a regional node of the Avian Knowledge Network, is a data archive and decision support system focused on understanding the patterns and dynamics of bird populations of the Pacific Northwest. AKNW serves both communities and conservation professionals as host for citizen science projects and collaborations, bird conservation decision support tools, interactive resource tools, data archival, and a rich collection of bird and habitat conservation plans.



Avian
Knowledge
Northwest

eBird Northwest is the primary citizen science application of AKNW, nurturing engagement of northwestern audiences to advance bird and habitat conservation.

Professional Training and Information Exchange

Our Professional Training and Information Exchange programming is helping create the next generation of conservation practitioners in our world. Through internships, workshops, curriculum development, and international capacity building, we provide opportunities for technical skill training and leadership development for conservation professionals and students throughout the Americas.

This holistic approach to training and information exchange expands our conservation influence throughout the Pacific Northwest and beyond, as we work with partner-driven programs that protect birds throughout their full-life-cycle including the breeding, migrating, and wintering seasons.

Our **Student Volunteer Internship** program creates field-based training opportunities for young scientists in monitoring and research projects. These interns gain skills in bird identification, field biology, natural history, orienteering, survey methodology, data collection, and data management. Select internship positions focus on project management, organizational development, data management and analyses, and communications. KBO staff create an academic learning experience in which interns work toward specific learning goals for professional growth while contributing to KBO's science-based conservation efforts.

Since 1996, KBO has hosted 290 interns including 52 from outside the US (see **International Capacity Building** on Page 4). 35 of these young scientists have returned a subsequent year in a role with more leadership responsibility and trainer-experience opportunities.



2003-2004 banding intern
Viviana Cadena Ruiz

Community Education

eBird Northwest is a regional portal of Cornell Lab of Ornithology's international eBird program. It serves as the primary citizen science application of Avian Knowledge Northwest and provides content and services to bird-watching enthusiasts and natural resource managers alike throughout the Pacific Northwest.



eBird Northwest has the capacity to build broad regional and state partnerships, engaging the birding community, providing news and information, and make citizen science data available for conservation and education purposes. As more people engage with science and conservation through eBird Northwest, we build on these resources to support informed natural resource management, enhance recreational wildlife viewing, and increase the impact of citizen science efforts.

Citizen Science brings the expertise of the birding public and scientists together in a wonderful and very useful way. These community-driven investigations engage citizens with their natural world and contribute information that directly impacts conservation science.



The **Western Asio Flammeus Landscape Study** (aka WAFLS) is a citizen science project designed to engage the public in a large-scale Short-eared Owl population assessment. Results from this project will directly inform high-value conservation actions by state and federal agencies. Volunteers receive training and experience in critical observation, the scientific method, and data collection. They will collect data about this enigmatic, open-country species using a standardized survey protocol.



Short-eared Owl © 2018 Jim Livaudais

The **Sampson Creek Preserve Project** is a citizen science-driven effort created by KBO and the Selberg Institute. Its objective is to inventory and monitor birds that are using the variety of habitats within the Sampson Creek Preserve throughout the year. Nestled in the rising Cascades foothills northeast of Ashland, the Preserve includes meadows, oak woodlands, conifer forests, and riparian woodlands—and home to a diversity of bird denizens. The project's citizen ornithologists receive training in how to collect data and use eBird, and help complete monthly surveys.



Sampson Creek Preserve in winter © 2018 Ellie Armstrong

KBO's popular **Talk & Walk classes** are core to our Community Education programming. These two-part classes include an evening presentation followed by a field trip. Birding experts, conservation professionals, authors, and artists donate their time as instructors and field trip leaders.



The donation-based class series' topics include songbird, hawk, and waterfowl ID, birding by ear, nature photography, eBirding, birding expeditions, bird-friendly gardening, and more.

The Klamath Bird

President's Perch

By Shannon Rio, KBO Board President

The 13th-century poet and theologian Jalaluddin Mevlana Rumi said "Let the beauty we love be what we do. There are hundreds of ways to kneel and kiss the ground." I feel KBO's education programming must count among those hundreds. Recently we hosted two events that certainly qualify. In January's **Romance and Wonder of the Sandhill Crane talk**, Harry Fuller took 30 of us on a journey of grand photography, fascinating facts, and anecdotal tales all related to the beauty of this special bird. The event transcended education and entered a profound realm of deep love of nature and of our shared wanting to experience, share, and protect this great love. The **Raptors of the Klamath Basin workshop** in February with Dick Ashford at the helm was absolutely filled with facts and beauty. The outing brought participants both detailed knowledge and a sense of wonder for these grandest birds of the sky.

Klamath Bird Observatory has little funding for our Community Education program. Consider a donation on this behalf, or perhaps hosting an outing or a dinner that includes an educational component. I look to nature for solace, enrichment, and inspiration. Please join me in my personal journey to inspire folks through nature education to protect this wondrous world. **Contact me shannonrio@aol.com with your ideas!**

Community Education

Festivals and Public Outreach

Festivals are a very human thing—a celebration of our commonality, whatever the occasion. When the occasion involves birds all the better! Each year KBO hosts a Mountain Bird Conservation event—from our acclaimed multi-day Mountain Bird Festivals to one-evening events with special guest speakers. KBO also regularly joins the Rogue Valley Bird Day festival, Oregon Country Fair, and Godwit Days.

These events are our most valued opportunity to reach out, share information, and celebrate birds with friends and neighbors!



KBOers Martin Lopez Aguilar and Taylor Alexander with fair-goer, Oregon Country Fair July 2017

Banding station visits offer a unique opportunity to observe birds in the hand up close and see KBO field biologists in action. Birds are captured in mist nets, and biologists identify and measure each bird, attach a uniquely-numbered metal band, and then release it back into the wild. The data collected from thousands of birds each year are used to track vital signs in long-term population trends and help identify times and habitats when birds may need the most help.

Visiting a bird banding station is a memorable and educational experience that provides incredible views of birds and a deeper understanding of how bird conservation science improves our stewardship of nature. We invite groups and individuals to contact us about scheduling a visit to a banding station and associated fees.



Banding station visitors enjoy a close-up look at a bird being measured before it is released © 2018 KBO

Words on the Wind A celebration of birds in literature

Dust of Snow

By Robert Frost

The way a crow
Shook down on me
The dust of snow
From a hemlock tree

Has given my heart
A change of mood
And saved some part
Of a day I had rued.

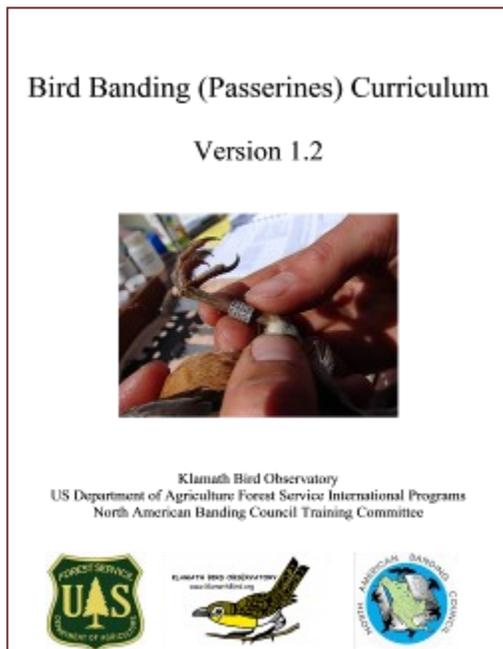
Editor's note: Frost warms the coldest day with a few words.

Professional Training and Information Exchange

We offer a variety of **bird monitoring methods workshops**. Most are focused on bird banding and offer an opportunity to learn or refresh banding skills. Banding workshop topics include age and sex determination techniques, bird and bander safety, public interaction and education at banding stations, and mist net maintenance. Banding workshops follow North American Banding Council (NABC) guidelines and are presented by NABC-certified trainers who provide seminars, demonstrations, and hands-on training. The workshops often take place at KBO's Upper Klamath Field Station during the spring and summer. Our banding workshops are also taken on the road and offered to partners on site.

KBO also periodically offers workshops focused on other field techniques including point counts, spot mapping, nest searching, and citizen science approaches.

The **Bird Banding Curriculum** is based on the North American Banding Council's (NABC) collection of training manuals, supplemental study materials, plus KBO original content. It consists of the Theory and Practical segments of the NABC Trainee Report Card. The curriculum was designed for use in a variety of training situations including group training, individual instruction, and self-study. Included are a user guide, topic outline, tutorials, quizzes, worksheets, and a trove of study materials.



The curriculum was compiled by KBO and many NABC partners with support from the US Forest Service International Programs, US Fish and Wildlife Service, and Environment and Climate Change Canada.

The **Online Banding Course** is a recording of a live webinar presented by KBO biologists based on the North American Banding Council's Bird Banding Curriculum. A complete recording and study materials are available online at the US Fish and Wildlife Service National Conservation Training Center website—easily accessed from our website. This course was developed by KBO with support from Environment and Climate Change Canada, North American Banding Council, and US Fish and Wildlife Service.

KBO's **International Capacity Building** fosters training and information exchange throughout the Americas. Our international programming includes recruiting student volunteer interns from outside the US for our banding training program, participation in international banding training projects, and research collaborations and technical support for bird observatories in Latin America and the Caribbean. Long-running partnerships with US Forest Service International Programs and Oregon State University make this work possible.

Our **International Internship Program** has hosted 52 young professionals and university students from 16 countries as interns in our long-term monitoring and training programming since 1999. Fourteen of these young scientists have returned in a subsequent year with increased training-experience opportunities and responsibility in field operations. All have returned to their home countries with increased skills and practical experience, empowered to make significant bird conservation contributions. Many have gone on to earn advanced degrees and are employed in teaching or research positions. Others are in management positions for conservation organizations. A few have even created new bird observatories in their home countries (see *Two Examples* Page 8).



Diana Velasco Rodriguez and Ana Gonzalez Prieto (both of Colombia) 2006 banding interns. Photo KBO © 2006

Bird Bio: Short-eared Owl *Asio flammeus* By Robert Frey, KBO Biologist

This quiet hunter of open areas is seen more frequently in the day-lit hours than other owls. The No-eared Owl might be more befitting (see below) as the short “ears” are really short! More conspicuous are its black-framed yellow eyes set in a pale and usually buffy facial disk. It is a medium-sized owl with a rounded head, breast with bold brown streaks and pale or buffy belly. In flight the pale underwing has a dark comma-shaped mark near the wrist, and the upper-wing shows a pale patch. As with other owls, the female averages larger, as well as darker and buffier than the male.



Short-eared Owl © 2018 Jim Livaudais

It may more easily be identified at a distance by location and behavior. This species will be found in grasslands, pastures, airports, and other wide-open areas coursing silently on broad, rounded wings, especially around dusk and dawn. They may often cover great distances in a crisscrossing or roughly circular route. Flying low over short vegetation, at times in an erratic pattern, they flap their wings with stiff beats giving their flight a moth-like and floaty appearance.

Although usually pretty quiet most of the time, during the nesting season, the male will offer what is described as a muffled poo poo poo call (really!). Both sexes will signal alarm with high nasally and wheezy cheef cheef and cheewaaay calls. Small rodents, including mice, voles, and pocket gophers, make up most of its diet. This owl nests on the ground, usually within a shallow hollow with vegetation

cover for the incubating female. Outside the nesting season communal roosts are common and they are known to move around to exploit local high rodent populations and spikes.

Its scientific name *Asio flammeus* is a melodramatic description of its appearance but a bit of a misnomer. *Asio* is a Latin word for “horned owl”—a reference to its forehead tufts of feathers that appear as horns (or ears), although these are not prominent or even at times visible. The specific epithet is Latin for “flaming” or “fiery-red”—a sensational way to describe the plumage, which varies widely but is mainly of shades of buff. Owl likely comes from the Old English “ūle” or “howl”, Swedish “uggla”, German “eule”, or similar terms from other early Eurasian languages—all apparently derivative of the Latin “ulula” or “ululate” which means to howl or to wail as an expression of strong emotion, typically in grief.

The Short-eared Owl is one of the most widely distributed owls in the world. It is known to nest and/or winter on five continents and islands of three oceans. But its eruptive and nomadic movements confound typical survey methods. Because there is little accurate population information, and this species potentially faces climate-related change to critical nesting Arctic Tundra habitat and strongly associates with limited and declining North American grasslands, conservation scientists have recently raised concern about the Short-eared Owl. This owl has been identified by Partners in Flight as a Species in Sharp Decline (>50% population decline over the past 40 years) and Species of Continental Importance (for North America) in grassland habitat of the Gulf Coast, Lower Mississippi Valley, Oaks and Prairie, and Prairie ecoregions, and alpine tundra habitat of the Canadian Arctic ecoregion. Poo, poo, poo!

References: *All About Birds* <https://www.allaboutbirds.org/> website accessed 2/8/2018, *Words for Birds* (Edward Gruson, Quadrangle Books), *Birds of Oregon: A General Reference* (D. B. Marshall, M. G. Hunter, and A. L. Contreras editors, Oregon State University Press), *Partners in Flight Landbird Conservation Plan—2016 Revision for Canada and Continental United States* <http://www.partnersinflight.org/wp-content/uploads/2016/08/pif-continental-plan-final-spread-single.pdf>.

KBO has joined the Western *Asio Flammeus* Landscape Study (WAfLS)—as coordinator of Oregon state-wide surveys. WAfLS is an eight-state citizen science project designed to better assess the western Short-eared Owl population status, trends, and threats.

Visit <http://www.avianknowledgenorthwest.net/citizen-science/short-eared-owls> for more information about this exciting new project—including how to help!

Community Education

We have produced a series of **community handouts**--brief and informative guides and tip sheets for a variety of bird and habitat conservation issues. Some focus on our Klamath-Siskiyou Bioregion and others are general topics for our wider community.

Birdify Your Yard! Landscaping for Birds and Native Plants for Birds in the Klamath-Siskiyou offers several home landscaping suggestions for attracting birds and includes a list of bird-friendly native plants for the Klamath-Siskiyou Bioregion. People change landscapes and habitats quite a bit, but creating a bird-friendly habitat in yards featuring native plants is a great way to help.

Reducing Bird Collisions with Windows provides information about how to reduce bird collisions with windows. In the US alone, millions of birds die each year from colliding with windows. The guide includes several suggestions for simple solutions we all can do to help turn this problem around.

The **Birding Guide to Ashland and the Greater Rogue Valley** was created to help visitors and residents get outdoors and enjoy the natural wonder and splendor of the region and its birds.

Shared Birds of Ashland and Guanajuato celebrates the migratory birds that occur in both Ashland and sister city Guanajuato, Mexico. By embracing opportunities to conserve the habitats of our shared birds, together we can protect the health of the ecosystems that surround and sustain them and us.

Selective Bird Feeding—How to Safely Feed Birds offers several tips for safe and responsible bird feeding. Hanging bird feeders is a great way to get to know your avian neighbors, brush up on your birding skills, and help birds. However, it is important to make sure that you use the right type of feeder in the right location so you do not harm birds, bring about changes in species composition, or attract non-native species.

Cats and Wildlife—A Conservation Concern offers information about this problem and a how-to list for what can be done to help. Domestic and feral cats are a non-native predator that have an enormous negative impact on bird and other wildlife populations. Cats kill millions of birds each day in the US, amounting to over a billion each year—one of the greatest bird conservation challenges we face.

Creating Safe Nest Boxes—Fundamentals of a Good Birdhouse contains tips for safe birdhouse construction, placement, and maintenance. Unsurprisingly, different birds have different nesting needs and it's important to provide safe nest boxes appropriate for the birds you want to attract. Specifications for common box-nesting species and a list of additional resources are included.

K-12 Education materials KBO has created deliver curriculum and support programming in science and outdoor education that are aligned with state and national standards. Our K-12 Education Curriculum Library and Educator's Kits are designed to help educators meet learning objectives and academic standards while providing engaging, interactive, and place-based lessons for young learners.

These tools help students learn about birds as indicators of resilient ecosystems through science inquiry, interdisciplinary activities, and participation in citizen science projects. Our educational materials also address broad topics including math, language arts, geography, social science, policy, and stewardship.

The **KBO Curriculum Library** is searchable by grade level (Kindergarten through 12th Grade), activity type (such as audio, creative, journaling, observation, place-based, scientific method, service-learning, and more), by keyword, and by Academic Standard. All materials align with Oregon State Academic Content Standards (Science), Common Core State Standards, and Next Generation Science Standards. KBO educators developed this suite of state standards-based curricula over a decade of successful K-12 education programming.

Our **Educator's Kits** contain organized packages of lesson plans designed specifically for birds and habitats in the Klamath-Siskiyou Bioregion. The Kits provide place-based, science, and natural resources lesson plans to encourage the study and conservation of local birds and habitats.

The lesson plans are aligned to academic standards and provide background information, clear procedures, teacher tips, supplementary extensions, fun fact side panels, and field trip ideas. Student journal sheets are provided with each lesson to advance critical thinking and scientific inquiry skills. Journal sheets from each lesson can be collated into personalized journal booklets that allow students to share their outdoor learning experiences with family and friends.

The Educator's Kits have been developed for the Klamath Basin Birding Trail, with additional special editions for Crater Lake National Park, Lava Beds National Monument, and Basin and Range; as well as for Klamath, Rogue River-Siskiyou, and Fremont-Winema National Forests.

Professional Training and Information Exchange

KBO works with partners to develop **Bird Conservation Decision Support Tools** (DSTs) that transfer science-based information to communities who implement strategies that benefit birds and their habitats. DSTs link priority natural resource management challenges and bird conservation objectives by communicating the best scientific information and interpretation of bird monitoring data in a format that is easy to use and relevant for specific audiences, such as land managers and conservation professionals.

Oak Woodlands and Chaparral: Aligning Chaparral-associated Bird Habitat Needs with Oak Woodland Restoration and Fuel Reduction in southwest Oregon and northern California informs land management decisions regarding how different fuel-reduction methods (i.e., mechanical or manual treatments). These decisions influence bird communities, because fuel-reduction sometimes requires removing chaparral, which provides important habitat for birds and other wildlife in oak ecosystems. Land managers concerned about the risk of severe wildlife often reduce chaparral shrubs to protect oak woodlands, but the size and arrangement of the remaining chaparral patches influences whether shrub-associated birds will use them.

Bird Monitoring as an Aid to Riparian Restoration: Findings from the Trinity River in Northwestern California provides an overview of the Trinity River Restoration Program, summarizes findings from bird monitoring conducted before, during, and after a large-scale restoration project (2002-2011). The findings are the foundation for suggested guidelines for land managers with respect to bird-habitat associations and riparian restoration.

Birds in Mixed-Conifer Hardwood Forests: Managing Fire-Adapted Ecosystems in Southwestern Oregon synthesizes KBO's research and monitoring results and links these to the Partners in Flight coniferous forest bird conservation plans. This DST shows that bird conservation plans and results from related research and monitoring efforts can be used effectively in management for certain habitat attributes. Informed management can benefit Partners in Flight focal species and many other species and elements of biodiversity in these forests.

Riparian Fuel Treatments in Intermittent and Perennial Streams: Effectiveness and Ecological Effects addresses an information gap regarding decisions to include riparian areas in fuel reduction efforts. Extensive fuel treatments implemented by land management agencies in the Klamath-Siskiyou Bioregion of southern Oregon and northern California have maintained no-cut buffer strips along riparian areas.

Bird Monitoring as an Aid to Meadow Restoration is based on a meadow restoration project implemented on the Rogue River-Siskiyou National Forest. This DST describes how bird monitoring can inform future restoration and contribute to the ecosystem conservation vision outlined by conservation policies in the US.

2018 | **YEAR OF THE BIRD**

The National Geographic Society, in partnership with National Audubon Society, Birdlife International, and The Cornell Lab of Ornithology have proclaimed 2018 as the Year of the Bird. The Year of the Bird marks 100 years of the Migratory Bird Treaty Act—the most powerful and important bird-protection law ever passed. The Year of the Bird will celebrate the wonder of our feathered friends and provide an opportunity for people everywhere to recommit themselves to protecting birds. The Year of the Bird will be 12 months of storytelling, science, and conservation aimed at heightening public awareness of birds and the importance of protecting them.

KBO, many other organizations, and people all around the world are committing to help protect birds today and for the next hundred years. Everyone can join in and be a part of the #YearoftheBird! National Geographic will be highlighting simple actions you can take part in each month to make a difference for birds—visit their website <https://www.nationalgeographic.org/projects/year-of-the-bird/> to read more about this special year. Another wonderful resource is the All About Birds website's "6 Resolutions to Help You #BirdYourWorld In 2018" at <https://www.allaboutbirds.org/6-resolutions-to-help-you-birdyourworld-in-2018/>. KBO will post news and updates of these actions and how to stay involved throughout the year through our Call Note blog and eBird Northwest.

As Thomas Lovejoy, biologist and "godfather of biodiversity" once stated:

"If you take care of the birds, you take care of most of the environmental problems in the world."

Professional Training and Information Exchange

Two Examples of Professional Training and International Capacity Building Success!

KBO's International Capacity Building programming creates opportunities for professional training and capacity building throughout the Americas. A big part of this program involves recruiting young professionals from outside the US where specialized training in bird monitoring techniques and related practical experience is a challenge to find.

Two of the brightest examples of the value of such an experience are Luiza Figueira Rodrigues and Pedro Martins of Brazil. Luiza joined KBO as a banding intern for the 2015 field season and returned for 2016 with Pedro (they met in graduate school and have been together pretty much ever since). They led KBO's banding project in 2016 and 2017, helped improve several of our data management procedures and other protocols, and collaborated on multiple analyses. Along the way, they made positive impacts on other interns they trained and on colleagues. Also along the way, they have been making preparations for creation of a new bird observatory in the biodiverse Atlantic Forest, in their home state Rio de Janeiro (southeastern Brazil). Before their return to Brazil this past December, we asked about their KBO experiences.

You both have worked with KBO a considerable length of time—can you describe what you have gotten out of the experience professionally?

Luiza: During the almost three years working with KBO I acquired a lot of field and research experience that greatly improved my performance at several professional aspects. These include improving my abilities to safely handle and study birds and teach others to do the same, manage and analyze big databases, and to learn about the holistic work needed to promote birds and habitat conservation through science.

Pedro: I think the whole internship program was a good professional experience. During the field work I was able to master my banding technique, as well as crew leading and training skills. Later in the year, I had the chance to complete more administrative tasks, such as managing data and reporting to governmental agencies. These are important tasks in a bird monitoring program and learning how to properly do it was essential for my future ambitions.

How do you see your KBO experience influencing your careers going forward?

Pedro: I think there are two ways that my experience at KBO will influence my career. First, having in my CV that I worked with KBO is a big differential—especially due to the great

work the organization has done to improve bird conservation in the Americas. Second, this whole experience and all the incredible people we had the opportunity to interact with shaped my future goals and helped me to plan my short-term career goals, which include starting an organization in Brazil based on this KBO experience.

Luiza: My experience, both professionally and personally, with KBO was crucial for my next steps. When I first arrived to KBO I had some experience with bird banding, I knew I'd like to keep working with birds in the future. After working with KBO for two years more than I first planned, I am returning to my home country bringing so much of what I learned and experienced here ... and taking with me a model of research and conservation work that I saw was successful with KBO. The KBO model served as inspiration and guidance for OAMa, which is our next big step.

Tell us about OAMa.

Luiza: OAMa stands for Observatório de Aves da Mantiqueira, that is the Portuguese for Mantiqueira Bird Observatory, and it is how we named our fledging organization in the Atlantic Forest of Brazil. We are creating OAMa in a non-profit and non-governmental organization model to produce high-quality science that will help to fill gaps on our knowledge about tropical bird ecology. OAMa will be based in the Mantiqueira Mountains which are covered by the Atlantic Forest in the state of Rio de Janeiro, Brazil. The Atlantic Forest is a hotspot for biodiversity both by its species richness and the high intensity of habitat alterations. Similarly to KBO, the OAMa mission is to achieve birds and habitat conservation based on good science, collaborations, and education.

****Editor's note:** You can find more information about OAMa on their Facebook page <https://www.facebook.com/OAMAntiqueira/>.



Pedro Martins and Luiza Figueira Rodrigues

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Continued from Page 8—Two Examples

What has the experience meant to you personally?

Pedro: I am definitely a different person. Having met a different country, so many different people, and such a different culture made me change the way I see the world. It was also a good experience on improving my English (although there is a lot more to improve!).

Luiza: Being part of KBO family was a lot of learning with really good people working crazily hard for conservation at a caring working place. Sharing time with all my co-workers and seasonal interns and volunteers had noticeable impact on how I think and connect with people. Also, living and working abroad is such a mind-blowing experience that I couldn't be the same before and after living for these almost three years at KBO-landia.

What is your favorite KBO-landia bird?

Luiza: I can't decide between the Spotted Sandpiper and American Dipper. I love to see them foraging or just hanging around. Their constant tail dancing movement always makes me smile.

Pedro: Hard to tell, there are several which I could pick for different reasons. But I think the Sandhill Crane is the bird that impressed me the most. They are so elegant ... and different from anything I have ever seen in the tropics!

Anything else you would like to share with our readers?

Pedro: Just to say that I am really glad that I had the opportunity to be part of such a great program. Every little part of this experience was great and I learned a lot! Now it is time to keep moving forward on my career and, with the background I had here and the future collaborations with KBO, I am sure I will succeed. Thanks for everyone that have helped and keep helping KBO to offer such a great opportunity for young researchers from all over the world.

Luiza: I am very grateful for all the real learning I had with this abroad experience. I would like to thank our sponsors and supporters who believe in KBO's work and make science without borders possible for this organization. Bird science and conservation must be an international effort—because the birds know no political borders. In this way, KBO has a real impact at a local, regional, and global scale. And thanks also for all the KBO'ers, working incredible hard to make of this work a success for birds, habitats, and people.

Did you know ... the State of Oregon's official motto is *alis volat propriis*—she flies with her own wings!

KBO's **International Capacity Building** and research collaborations and bird observatory support programming, we are advancing bird and habitat conservation in many places with many partners.

Observatorio de Aves de San Pancho (SPBO—San Pancho Bird Observatory) is a non-profit, non-advocacy organization based in San Pancho on the coast of southern Nayarit, Mexico. SPBO is dedicated to bird and habitat conservation in the region and uses an approach to conservation based on the integration of bird population monitoring, education, and ecotourism programs. SPBO partners with the San Pancho Birding Club in many local community and school education programs.



The KBO-SPBO partnership was forged when Luis Morales, SPBO's founder and Director and successful biologist and nature guide, trained with KBO in bird banding techniques and bird observatory management through our international capacity building program. Ongoing collaborations include a Yellow-breasted

Chat full life cycle study—a tri-national project with Environment and Climate Change Canada and University of British Columbia.

Observatório de Aves da Mantiqueira (OAMa—Mantiqueira Bird Observatory) was established in 2017 by former KBO interns Luiza Figueira Rodrigues and Pedro Martins. OAMa is a non-profit organization whose goal is to advance scientific knowledge in Brazilian ornithology and promote habitat and bird conservation in the Brazil's threatened Atlantic Forest.

OAMa will take the traditional bird observatory model a step forward by creating and hosting a virtual platform to facilitate connection and communication among researchers and students working on ongoing ornithological studies in the country. They also plan professional training and regional monitoring programs.

Observatório
de Aves da
Mantiqueira



Continued from Page 9—International

Professional Training & Information Exchange

Costa Rica Bird Observatories (CRBO) is a nationwide partnership that promotes bird conservation and education in Costa Rica. CRBO works in collaboration with the National Institute of Biodiversity, US Forest Service International Programs, Humboldt Bay Bird Observatory, and KBO.

Through these and a variety of partnerships across the country, CRBO gathers, preserves, and analyzes bird monitoring data and generates tools that enhance and promote bird conservation, serving as a model to be implemented across the Americas. Local efforts are integrated with local scientists, NGO's, decision makers, and schools. CRBO's operations are some of the longest running in Latin America.



CRBO's mission is to provide leadership for bird conservation in Costa Rica, through the establishment of successful field efforts that lead to strategic decisions for bird conservation at a regional scale.

The **Trinidad & Tobago Bird Studies Program** is comprised of the efforts of three former KBO international interns. Daveka Boodram, Caleb Walker, and Carl Fitzjames, Jr. provide fieldwork and technical support to University of West Indies research studies. They also present nature conservation interpretive programming to local school groups using mist netting and banding demonstrations.

Since 2004, our **International Training program** has sent KBO biologists and former international banding interns as instructors for techniques workshops and other banding training programs in Belize, Brazil, Canada, Colombia, Costa Rica, Ecuador, El Salvador, Ethiopia, Jamaica, Mexico, Peru, Trinidad & Tobago, and Turkey.



KBO's **Aquatic Bird Sites** is a collection of maps and resources compiled to identify important aquatic bird areas, help coordinate monitoring, and facilitate future studies. Available on Avian Knowledge Northwest, KBO has posted maps and descriptions for Important Aquatic Bird Sites within eastern Oregon, western Oregon, and northwestern California.

The site descriptions include information such as water level fluctuations, land ownership, access issues, visibility constraints, and aquatic bird species expected to be present.

Interactive Tools have been developed to assist land managers in the Pacific Northwest in the design and planning of conservation and restoration actions. OakBirdPop, Pacific Northwest Climate Change Avian Vulnerability Tool, and Avian Knowledge Northwest Data Exploration Mapping Tool serve as portals to rich databases and as supplements to conservation plans.

OakBirdPop: An Online Interactive Supplement to the Land Manager's Guide to Bird Habitat and Populations in Oak Ecosystems of the Pacific Northwest is an interactive tool to inform land managers and others in the Pacific Northwest in the planning and implementation of oak habitat management and restoration actions. The goal is to help assess the projected population response of 31 oak-associated bird species to oak habitat changes.

The **Pacific Northwest Climate Change Avian Vulnerability Tool** was developed by the North Pacific Landscape Conservation Cooperative to inform land management regarding effects of climate change on bird species found in western Washington, Oregon and California. This tool allows users to view spatially explicit projections of climate change impacts to 26 bird species, explore regions of high conservation priority, analyze changes in bird habitat and bird communities, identify new monitoring locations which can improve understanding of climate change impacts, and download model results for their own analyses.

The **Avian Knowledge Northwest Data Exploration Mapping Tool** allows exploration of Avian Knowledge Northwest databases in a variety of ways. Users can query bird or habitat distribution by county, watershed, or public lands for the Klamath-Siskiyou Bioregion of southern Oregon and northern California.

Professional Training and Information Exchange**Conservation Plans**

Working within the North American Bird Conservation Initiative, Partners in Flight, and other partnerships, KBO takes a leading role in developing strategic bird and habitat conservation plans and other technical publications. These plans are detailed and information rich, representing the collective efforts of numerous agencies and organizations. These plans support a proactive approach to conservation with recommendations for conservation and habitat management planning, guide government and NGOs on how to allocate limited conservation dollars, and outline priorities for future monitoring and research. The recommendations serve as the biological foundation for developing and implementing integrated conservation strategies for multiple species at multiple geographic scales. Comprehensive conservation planning helps ensure healthy populations of landbirds, indicating functional ecosystems.

Land Manager's Guide to Bird Habitat and Populations in Oak Ecosystems of the Pacific Northwest provides an overview of oak ecosystems and discusses threats to these environments with focus on the habitat relationships between birds and oak habitats. This information can be used to facilitate sound decisions to support bird conservation in the context of protection and management of the unique and threatened oak ecosystems of the Pacific Northwest.

Restoring Oak Habitats in Southern Oregon & Northern California: A Guide for Private Landowners describes how to apply conservation practices for Oregon white oak and California black oak habitats on private lands in southern Oregon and northern California. The Guide discusses the importance and history of oak habitats, and provides detailed guidelines for oak habitat restoration. Supplemental resources include a list of organizations that will assist with lands restoration and step-by-step instructions for monitoring birds to track the return of wildlife following restoration activities.

Informing Ecosystem Management: Science and Process for Landbird Conservation in the Western United States presents ten examples illustrating both the process and science behind bird conservation in the west. The articles describe integrating bird conservation and effectiveness monitoring into land management, and include case studies which highlight bird monitoring within the adaptive management framework. This US Fish and Wildlife Service Biological Technical Publication emphasizes both the science of monitoring and the process of its integration into land management because both are necessary in order for effectiveness monitoring to fully impact decision making.

Saving Our Shared Birds: Partners in Flight Tri-National Vision for Landbird Conservation presents a comprehensive conservation assessment of landbirds in Canada, Mexico, and the continental US. This tri-national vision encompasses the complete range of many migratory species and highlights the vital links among migrants and threatened resident species in Mexico. It points to continent-scale actions needed to maintain the landbird diversity and abundance that are our shared responsibility.

Coniferous Forest Bird Conservation Plan: A Strategy for Protecting and Managing Coniferous Forest Habitats and Associated Birds in California was developed to help guide conservation policy and action on behalf of coniferous habitats and associated landbirds throughout California. This conservation plan is a synthesis of the current state of knowledge concerning birds in California's coniferous forests and the problems they face. Recommendations presented here can be used by land managers to support viable populations of birds that depend on these forests for breeding.

Habitat Conservation for Landbirds in the Coniferous Forests of Western Oregon and Washington stimulates and supports a proactive approach to the conservation of landbirds in coniferous forests of western Oregon and Washington. This plan offers recommendations intended to guide habitat management planning efforts and actions of land managers, direct expenditures of government and non-governmental organizations, and stimulate monitoring and research to support landbird conservation.

Landbird Monitoring Strategy for Oregon and Washington offers a comprehensive approach to identifying and meeting bird monitoring priorities in this region. This strategy aligns with national monitoring goals of Partners in Flight and the North American Bird Conservation Initiative (NABCI), as well as with the priorities and guiding documents of numerous federal and state agencies, non-governmental organizations, Joint Ventures, and Landscape Conservation Cooperatives. This strategy will be useful in identifying links between organizational and regional priorities, assessing existing monitoring programs and developing new monitoring programs, and for scaling programs up to contribute to regional information needs.

Many other Partners in Flight bird and habitat conservation plans, as well as State of the Birds reports are available through Avian Knowledge Northwest—www.avianknowledgenorthwest.net



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