# The Klamath Bird

Newsletter of the Klamath Bird Observatory, Spring 2011

## Publishing for Bird Conservation

Nat Seavy, PRBO Conservation Science Pacific Coast and Central Valley Research Director and Klamath Bird Observatory Research Associate

Have you ever wondered how scientific information makes its way into the hands of natural resource decision makers? One time-tested way is through the process of peer review, in which scientists read and evaluate each others work and then publish scientifically defensible studies in peer reviewed journals. Peer reviewed publications represent the best available scholarship on a subject, and can be accessed by scholars, scientists, and decision makers who are working in the field.

Once the field work is completed, the data analyzed, and the results recorded, only then does the process of publishing a scientific manuscript begin. The first step is to format the manuscript for the journal it will be submitted to. With the formatted manuscript goes a cover letter to the editor explaining why the manuscript is a unique contribution to the field and why it will be of interest to readers of the journal.

After receiving the manuscript, the editor of the journal chooses several scientists (peers) to review the manuscript. Reviewers are asked to advise the editor on whether or not the manuscript should be published and offer suggestions for improvement. Months later, an email with a decision arrives from the editor. Even if a manuscript is accepted, it may go back and forth several times before the editing process is complete.

Once a manuscript is published, authors are responsible for page charges. Most journals charge between $25 - $250 per page. Today, some journals offer the option of publishing in "open access" format, meaning that anyone can download a manuscript from the journal's web site. Open access extends the reach of a manuscript, but can cost the author an additional $1,000 or more. So why publish, you might ask? Why invest in a process that is slow, labor intensive and expensive? There are several important reasons. First, the peer review process ensures the quality of published work. It is a process that scientists across many disciplines understand and respect. Publishing in a peer reviewed journal carries with it a stamp of approval that is difficult to obtain any other way. Second, publishing a manuscript makes it available to the scientific community. It is an opportunity to present your most important ideas in a format that allows them to leap from the pages of journals and into the conservation world, where these ideas can change the way we do our work. In the world of science, our ideas are tall because they stand on the stacks of publications from scientists who have gone before us.

KBO staff actively publish in the scientific literature. Our publications appear in a variety of journals:

- *International Journal of Wildland Fire*
- *Forest Ecology and Management*
- *Northwest Science*
- *Ecological Applications*

...and many more. For a complete list and links to KBO's publications, visit our Publications page online at www.KlamathBird.org/publications.

Unfortunately, the strength of the publication process also presents a challenge. Scientific publications are often so specialized that they may fail to communicate ideas to a larger audience. For science to effectively inform conservation, we must ensure that the information in scientific publications can be communicated to a wider audience. While decision makers ask that our results be vetted through this scientific publishing process, they also need the information delivered in formats that relate the results directly to the challenges that their decisions must address. This is where Decision Support Tools come in—see "Advancing Bird and Habitat Conservation through the Delivery of KBO's Science" in this *Klamath Bird* to learn more.

Elsewhere in this *Klamath Bird*, we will detail some of the recent manuscripts published by the Klamath Bird Observatory and its affiliates and partners. We will also discuss how these ideas are being communicated to a larger audience of decision makers to inform bird conservation.

**Inside this Publications Issue:**

# The President's Perch

Dick Ashford, KBO Board President

Those of you who end up in my car when carpooling for a KBO Hawk Trip have to put up with (at least) two things: first, my iPod playlist (sorry) and second, my bragging about KBO's reputation in the bird conservation community (definitely not sorry).

I am, of course, not objective in my evaluation of KBO's work. However, others are. These "others" are distinguished members of the scientific and bird conservation communities, and guess what? They come to the same conclusion that I do: KBO does good science. In fact, my bragging is based on their evaluations. How do they arrive at their conclusions? Peer review of KBO's scientific papers and reports.

Peer review does the same thing for KBO's work products that the "inspected by #107" sticker does for your fleece pullover. It provides the confidence that someone who knows what they're doing has double-checked it. In our case, peer review is the evaluation of KBO's work by other professionals in the bird conservation and scientific communities. They know what they're doing and are able to make a more impartial evaluation than those of us closer to the work.

Why should you care? Simply stated, peer review provides credibility to KBO's science, which in turn provides the credentials needed for decision makers to apply our findings, which leads to bird and habitat conservation outcomes.

Which brings us to the fact that bird and habitat conservation is what KBO is all about. Good science means good decisions means the birds benefit. Thanks for your continued support of our work. The birds need it and deserve it.

Cheers,

Dick

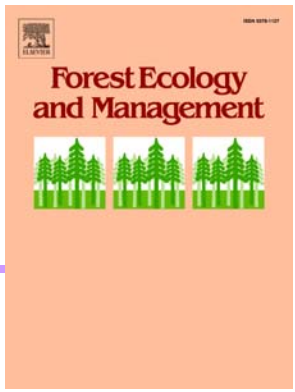
Dick Ashford

# Note from the Executive Director

John Alexander, KBO Executive Director

2011 is turning out to be another very exciting year at KBO! We already have two peer reviewed publications for the year. Both of these papers further our efforts to identify opportunities to implement fire hazard reduction projects in ways that meet bird and habitat conservation objectives. Jaime Stephen's paper, published in *Forest Ecology and Management*, describes the effects of fuel reduction on bird density and reproductive success in mixed-conifer riparian areas. Nat Seavy's paper, published in *Journal of Wildlife Management*, describes how changes in forest structure and composition have combined effects on bird distribution, information that adds to our ability to manage forests in ways that benefit birds of conservation concern. See a complete list of KBO's publications at www.KlamathBird.org/publications.

In addition to publishing results from our studies, we are gearing up for another full field season. In 2011 we will continue contributing to west-wide colonial nesting marsh bird surveys through the Oregon Aquatic Bird Monitoring Program. KBO contractors, biologists, and student volunteer interns will also be counting birds to measure the effectiveness of habitat restoration projects, and using bird banding to understand how reproductive success and over-winter survival drive population changes.




Jaime Stephen's paper, "Effects of fuel reduction on bird density and reproductive success in riparian areas of mixed-conifer forest in southwest Oregon," was published in the January 2011 issue of *Forest Ecology and Management*.

As we continue these important field efforts, we will also be offering many opportunities for our community to enjoy the birds of our region, and to learn about how KBO's science informs the conservation of our shared ecosystems. This spring, K-12 students are taking part in our field studies and learning all about birds and ecology, and this summer we will be offering five KBO summer camps in partnership with ScienceWorks Hands-on Museum. We will also be offering many bird walks, field trips and workshops for the public, including a Birding By Ear workshop in early June (see the Special Events Calendar on page 10). As always, our work and progress is made possible through the support we receive from our partners and our contributors—THANK YOU!

Last, but certainly not least, on September 17th we will be celebrating the continued success of our broad scientific and education partnerships at our 4th annual Wings and Wine Gala at Historic Hanley Farm in Central Point, Oregon. Save the date!

# New to the KBO Family!

Annie Kilby, KBO Education and Outreach Program Manager

Over the past several months, we have welcomed three new staff and student volunteer interns to the KBO Research and Monitoring team. **Jeff O'Connell** joined KBO as the Research and Monitoring Intern in the fall of 2010 from Furman University, where he received a degree in Philosophy. As part of his internship, Jeff is busy with KBO data management tasks and will be providing field support for the Oregon Coordinated Aquatic Bird Monitoring Program during the spring and summer field seasons. This spring, former KBO banding intern **David Hodkinson**, from the United Kingdom, returns to KBO as the senior student volunteer banding intern. With twelve years of avian and vegetation survey experience and having banded over 12,000 birds, David is well qualified to train and supervise the 2011 banding crew. **Ian Ausprey** has also returned to KBO after interning with the banding program in 2005, and running that crew as a senior intern in 2006. Ian recently completed his master's degree at the Ohio State University, where he studied the survivorship and movements of fledging Northern Cardinals and Acadian Flycatchers within the context of an urbanizing landscape. As a Research Biologist with KBO, Ian is working on translating KBO's data into results that inform land management planning.

We are excited to have Jeff, David, and Ian at KBO. Welcome!

*New KBO staff and student volunteer interns, left to right: David Hodkinson, Ian Ausprey, and Jeff O'Connell.*

# Bird Bio: Golden-crowned Sparrow

Bob Frey, KBO Biologist and Banding Project Leader

Remember Flower Power – a slogan used as a symbol of passive resistance and non-violent ideology in the 1960s? The Golden-crowned Sparrow (*Zonotrichia atricapilla*) is a big believer— flowers are very nearly all it eats! Studies have found that plant material makes up 95% to 97% of this songbird's natural diet, with flowers comprising up to 50% of this.


*The Golden-crowned Sparrow is known for its distinctive golden crown stripe. Photo by Jim Livaudais © 2011.*

This large sparrow of the north country nests exclusively in Alaska and western Canada, on the ground in habitats above the treeline. It is found in western California, Oregon, and Washington only during the winter, spring, and fall seasons. The Golden-crowned Sparrow is a common feeder bird, though preferring to forage on the ground, often flocking with other sparrows. Dark-streaked brown upperparts, light-brownish underparts, a long tail, and a distinctive yellow (golden) crown distinguish it from others in the lowland brush or field edges it frequents. The yellow crown is bordered with dark stripes and is most bright in mature individuals.

The scientific genus name *Zonotrichia* is Greek for "bird with bands," an allusion to the crown stripes – from *zone* for band (or stripe), and *trichias* for small bird. The species name *atricapilla* is Latin for "black hairs", coined from *ater* or *atri* for black and *capillus* for hair, referring to the black bordered crown.

Although there is some evidence of this species increasing in number, there is concern that not enough is known, and that monitoring is insufficient in its northern range—an important challenge for researchers and land managers. The data that KBO collects from Golden-crowned Sparrows captured in the Klamath-Siskiyou Bioregion during the migration and winter seasons contribute greatly to our understanding of this species' conservation status in North America.

**Sources:** Marshall et al., eds. 2003. Birds of Oregon: A general reference. Oregon State University Press, Corvallis, Oregon; Gruson 1972. Words for birds: A lexicon of North American birds with biographical notes. Quadrangle Books, Inc., New York, New York; Martin et al. 1951. American wildlife and plants: A guide to wildlife food habits. Dover Publications, Inc., New York, New York; Rich et al. 2004. Partners in Flight North American Landbird Conservation Plan. Cornell Lab of Ornithology, Ithaca, New York.

# Advancing Bird Conservation through the Delivery of KBO's Science

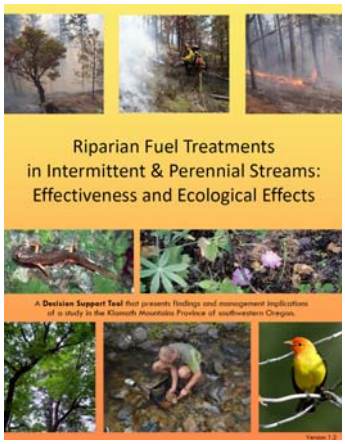
Jaime Stephens, KBO Research and Monitoring Director

At the core of KBO's mission is the delivery of scientific results to the people who can implement bird conservation on the ground. We share this information in a number of ways, from one-on-one field trips with our partners to publishing manuscripts in renowned scientific journals. The momentum behind many of KBO's scientific studies is to improve our understanding of bird populations and how different natural events and anthropogenic activities affect those populations. The results of such studies can help support land managers' decisions and projects that benefit birds and their ecosystems.

We have found that a three tiered approach to sharing our scientific findings is most effective in advancing bird and habitat conservation. We begin by writing a peer reviewed paper (Tier 1—see "Publishing for Bird Conservation" on the front page of this *Klamath Bird*). We then incorporate the results into a Decision Support Tool (DST) (Tier 2). KBO's DSTs are generally short documents, ranging from two to ten pages, and they include pictures and graphics that make information easy to read and understand. Our DSTs include summaries of research, often multiple studies, presented in the context of bird conservation and land management objectives. They link key research findings to Partners in Flight conservation priorities, and often to one or more pressing land management questions. The scientists and educators at KBO collaborate closely on the development of DSTs to create user friendly documents for various audiences. Finally, we focus on the effective delivery of peer reviewed papers and DSTs. With both products in hand, KBO staff visit with our partners or host workshops or field trips to address how our science can be applied to various scenarios (Tier 3).

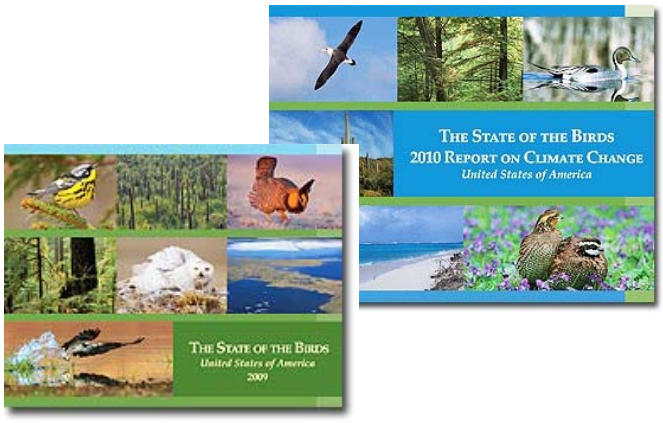
**What is a DST?**
A Decision Support Tool (DST) is an instrument used for conveying scientific information that informs decision-making through synthesis and interpretation of quantifiable and repeatable scientific data.

On the next two pages you will find an example of a Decision Support Tool recently published by KBO: "Birds in mixed-conifer hardwood forests: Managing fire-adapted ecosystems in southwestern Oregon." This DST is based on the *Partners in Flight Conservation Strategy for Landbirds in Coniferous Forests of Western Oregon and Washington*, two recent KBO publications, and ongoing work studying fuel reduction and ecosystem restoration efforts occurring in the Ashland Watershed. This DST was designed to provide information to land managers facing difficult decisions about how to manage the fire-adapted mixed-conifer hardwood forests that are prevalent across the landscape in southwestern Oregon and northern California.




KBO worked with a number of partners, including the Medford District Bureau of Land Management, on the development of a Decision Support Tool about fuel reduction treatments in riparian areas of coniferous forest. This is a unique DST because it incorporates findings from a diverse array of studies implemented at the same study sites. The study was designed with input from land managers, with the goal to determine whether such treatments are effective in reducing risk associated with wildfire and to quantify treatment effects on vegetation, hydrology, marcoinvertebrates, birds, and herpetofauna.

To learn more and to access all of KBO's Decision Support Tools, visit www.KlamathBird.org/publications.




KBO contributed to the *State of the Birds 2009* report and the *State of the Birds 2010 Report on Climate Change*. The 2010 report is the first Decision Support Tool aimed at identifying bird conservation priorities in the context of climate change. Both reports were developed as part of the North American Bird Conservation Initiative. Check www.stateofthebirds.org in May for the release of the 2011 report.

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# Birds in Mixed-conifer Hardwood Forests

*Managing fire-adapted ecosystems in southwestern Oregon*

**Decision Support Tool**
DSTs present relevant information from regional research and monitoring efforts and applicable literature in support of land management decisions.

**DST Framework**
Klamath Bird Observatory DSTs convey science-based information to stakeholders who can implement strategies that benefit birds and their habitats. Our DSTs identify links between management challenges and bird conservation objectives.

**Why Birds?**
Birds are excellent ecological indicators. Their habitat associations are well known and they respond quickly to changes in habitat. Many species can be easily and inexpensively detected using standard monitoring methods. Partners in Flight has identified conservation focal species that are strongly associated with important habitat attributes. These focal species demonstrate measurable responses to management that alters their habitat attributes. Therefore bird monitoring can be used as a cost-effective tool for evaluating the effectiveness of management actions within an adaptive management framework.

## Mixed-conifer Hardwood Forest

Ecological diversity is high in mixed-conifer hardwood forests of southwestern Oregon. Some of the dominant tree species in this habitat are Douglas-fir, true firs, ponderosa pine, oaks, and Pacific madrone. This forest type is found at elevations from sea level to ~6,000 feet. Unlike the wetter climates in much of western Oregon, the climate conditions in parts of southwestern Oregon tend to be much milder and drier as characteristic of a Mediterranean Climate.

## Conservation Concerns

Partners in Flight has developed a series of regional bird conservation plans that identify habitat conservation objectives for birds that are associated with specific habitat types. The Oregon-Washington Partners in Flight plan titled *Habitat Conservation for Landbirds in Coniferous Forests of Western Oregon and Washington* identifies important conservation issues and needs in the mixed-conifer hardwood forests of southwestern Oregon's Klamath Mountains:

*Mixed-conifer hardwood forest in the Klamath Mountains of southwestern Oregon.*

- This habitat supports the highest coniferous forest bird diversity in all of western Oregon and Washington.
- This biodiversity is associated with structural complexity and a high diversity and abundance of hardwood trees.
- This diverse forest composition and structure, historically maintained by frequent mixed-severity fires, has been altered by a combination of timber and fire management.

## Conservation Focal Species and Habitat Objectives

The Oregon-Washington Partners in Flight coniferous forest conservation plan identifies focal species that are associated with important habitat attributes in functioning coniferous forest ecosystems. By managing landscapes for habitat attributes that are important for these species, many other species and elements of biodiversity benefit. Habitat objectives for focal species that occur in mixed-conifer hardwood forests of southwestern Oregon include a mix of the following attributes.

- Mature forest conditions including:
  - ◊ large snags
  - ◊ deciduous canopy trees
  - ◊ mid-story tree layers
- Younger stands including:
  - ◊ closed canopy
  - ◊ open mid-story
  - ◊ deciduous understory
  - ◊ forest floor complexity
  - ◊ deciduous canopy trees
- Sapling/seedling habitats including:
  - ◊ residual canopy trees
  - ◊ snags
  - ◊ deciduous vegetation
- Mixed forests including:
  - ◊ pine-oak canopy/subcanopy
  - ◊ dense shrub understory
  - ◊ shrub-herbaceous interspersion
  - ◊ forest canopy edges
  - ◊ post-fire conditions

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**Monitoring**
As management in mixed-conifer hardwood forests is implemented, bird monitoring can be used to evaluate the ability to meet multiple land management objectives within an adaptive management framework. Bird monitoring provides information about species composition, abundance, and fitness (e.g., productivity). Monitoring the response of birds to land management allows us to evaluate its effectiveness. Results can be used to inform future management and identify opportunities to tie bird conservation objectives with priority management objectives, such as fuel reduction.

**Sponsors**
Joint Fire Sciences Program

National Fish and Wildlife Foundation

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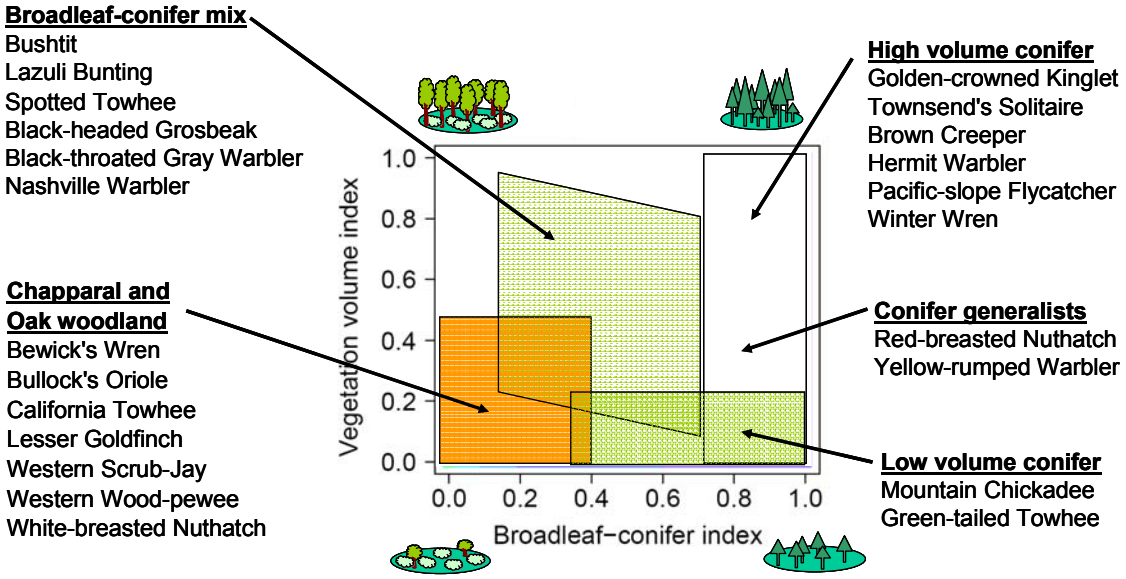
**Partners in Flight** is a voluntary coalition dedicated to "keeping common birds common."
www.partnersinflight.org

## Land Management Challenges and Conservation Opportunities

The mosaic of structurally diverse mixed-conifer hardwood forests in southwestern Oregon was historically maintained by frequent mixed-severity wildfires. A century of fire suppression has increased the risk of uncharacteristically severe wildfires. To address this management challenge various projects involving a variety of forest treatment prescriptions are being implemented to restore these fire adapted forest ecosystems and reduce risks associated with stand replacing fires.

Bird monitoring efforts in southwestern Oregon have resulted in models that predict the occurrence of birds, including conservation focal species. Using simple forest characteristics, such as vegetation volume and conifer-hardwood composition, bird occurrence can be predicted across varying forest conditions. Forest characteristics can also be used to describe the diverse mosaics typically found in fire-adapted mixed-conifer hardwood forests, as well as forests that have become less diverse as a result of fire suppression.




Without fire, high volume conifer stands become more abundant. A variety of restoration techniques are being designed to simulate the effects of mixed-severity fire and increase lower volume mixed-conifer hardwood conditions across the landscape. These changes in vegetation can cause bird species composition to shift from a high volume conifer community to a mixed-conifer hardwood community. Black-throated Gray Warblers are expected to benefit from treatments that result in recruitment of broadleaf hardwoods into the forest canopy, while Hermit Warblers are less likely to use this habitat.

Combined with information from the Partners in Flight Oregon-Washington coniferous forest conservation plan, results from local bird monitoring efforts are being used to inform management planning associated with fuel reduction programs in southwestern Oregon. By predicting the response of focal species to management activities and then monitoring the results of various restoration techniques within an adaptive management framework, the ability of such projects to meet desired conditions and bird conservation objectives is being measured.

## References (Abbreviated)

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Altman. 1999. Habitat Conservation strategy for landbirds in coniferous forests. Oregon-Washington PIF
Betts et al. 2010. Thresholds in forest bird occurrence as a function of early-seral broadleaf forest. Ecological Applications
Seavy and Alexander. 2011. Bird Habitat in Broadleaf-Conifer Forest. Journal of Wildlife Management

# Data Capture and Release: From Field to Scientific Forum

Jared D. Wolfe, Louisiana State University and KBO Research Associate

Bird banders know that the dawn chorus compliments the taste of steaming coffee, and that freshly unfurled mist-nets inevitably bring them face-to-face with uniquely beautiful birds. Beautiful forested landscapes provide a scenic backdrop for our work and provide shelter for a dizzying array of migrant songbirds. Collecting banding data in the backcountry is a truly blissful pursuit, and many young *field* ornithologists scowl at *analytical* ornithologists who are often fastened to their computers archiving data, editing code, and analyzing statistical models in a digital world. Despite seemingly contradictory lifestyles, analysis and data collection are intrinsically linked. Imagine two figure skaters: when cooperating, an emergent beauty is on display, seemingly greater than the mere sum of the individuals. Data and analysis are similar—when properly paired, their emergent beauty are *results* and *inference*, which are on-display in well-read scientific journals.

*A well-organized banding operation like this one at a KBO field station will yield high-quality data that can be used to better understand bird populations.*

For example, the Klamath Bird Observatory and the US Forest Service Pacific Southwest Research Station's Arcata Laboratory have been training bird banders for over two decades. Many of our graduate bird banders go on to work for our monitoring stations in Costa Rica near the pueblo of Tortuguero. In Tortuguero, banders work tirelessly to monitor migrant and resident bird populations, provide unique environmental outreach to the local community, and train Latin American counterparts. Many banders inevitably ask: where do all of our data go? Data analysts would answer that within the past two years Tortuguero data have yielded *six* scientific papers, with two more currently in press. In addition to these achievements, our researchers have presented results from Tortuguero at more than a dozen professional meetings from Australia to Brazil, and from the Caribbean west through the United States.

In 2009, a paper based on Tortuguero data was published in the western hemisphere's premiere ornithological journal, the *Auk*. The paper describes relationships between physiological changes in migrant birds and the El Niño Southern Oscillation cycle. Essentially, the paper argues that dry periods associated with El Niño cause fruit shortages, which make it hard for fruit-eating migrants to acquire the energy necessary to complete migration. Armed with inference derived from Tortuguero data, scientists can forecast how warming trends may affect migrant birds in Central America.

In addition to statistical models that predict physiological changes when subjected to climatic events, KBO and partnering researchers have also used Tortuguero banding data to promote an entirely new ageing system for tropical birds based on recognizing annual molt cycles. The new methodology was described in the Journal *of Field Ornithology*, and subsequently won a "best paper award" from the Association of Field Ornithologists. Because the *Journal of Field Ornithology* is widely circulated, the new ageing system was subsequently adopted by Peru's national banding schema, and by several other ongoing monitoring efforts in Brazil, Argentina and Costa Rica.

This is just the beginning. KBO's domestic and international efforts have filled an important ornithological niche, positively affecting global avian research through promoting results in scientific journals. As banders continually enlarge datasets, analysts will continually provide statistical savvy to help interpret often cryptic biological processes. Results and inference derived from monitoring data will continue to be used to guide new monitoring activities and to inform conservation efforts in the on-going and beautifully intertwined dance of ecology.

**Turn the page to learn how another KBO affiliate, Humboldt Bay Bird Observatory, is using data to inform bird conservation...**

# 21 Years of Offshore Bird Data and Publications

Josée Rousseau, Humboldt Bay Bird Observatory Program Director
Linda Long, Pacific Southwest Research Station (PSW) Wildlife Biologist
C. J. Ralph, PSW Research Station Ecologist and KBO Research Advisor

Marbled Murrelets have a unique life history – they spend most of their time at sea, where they forage for fish by swimming underwater, and they travel inland to nest in old-growth forests. Understanding the status and health of populations of such a species poses unique challenges. The US Forest Service Pacific Southwest Research Station's Arcata Laboratory (the Lab), a long-standing KBO partner, began off-shore monitoring and research efforts in the late 1980's. Seabird monitoring efforts focused on Marbled Murrelets to address concerns over declining populations due to logging in old-growth forests. In order to monitor Marbled Murrelet population levels, the Lab developed what are now standard protocols for surveying these small seabirds on land and at sea. Maintaining a yearly survey program along the coastal waters of Oregon and California from 1989 to 2009, biologists from the Lab recorded all vertebrate species, both birds and mammals, observed during surveys. These efforts amassed more than 350,000 observations covering over 170 species! As a result of this research, more than 30 peer reviewed manuscripts and reports have been published about the behavior, distribution, and density of Marbled Murrelets. Combined with forest surveys, this research provides evidence for the critical link between this species and old-growth forests.

*An Arcata Lab crew conducts offshore Marbled Murrelet surveys in northern California.*

In 2010, the Klamath and Humboldt Bay Bird Observatories collaborated with the Lab to compile these offshore data into a common format to inform Pacific Gas and Electric Company's wave energy harvesting interests. The data were analyzed to obtain counts and densities for 14 species of birds. These results provided population information for grebes, loons, auklets, guillemots, murres, terns, cormorants, scoters, and other birds. This demonstrates the value of our efforts to archive and make available a variety of datasets through the KBO-RSL Avian Data Center. We are now planning to analyze species population information from these data as they relate to climate change, ocean habitat, and other ecological questions.

*Marbled Murrelet egg in nest. The Marbled Murrelet typically lays its eggs in mossy depressions on the branches of old-growth trees. Due to the bird's unique foraging and nesting behavior, the Marbled Murrelet nest was not described by ornithologists until 1974. Photo courtesy Nick Hatch, U.S. Fish and Wildlife Service.*

**Offshore Publications**

*The Redwood Sciences Lab and partners have published multiple publications from the offshore data collected through this project, including:*

Long, L.L., C.J. Ralph, and S.Miller. 2001. A new method for ageing Marbled Murrelets and the effect on productivity estimates. *Pacific Seabirds* 28(2):82-91.

Miller, S.L., C.B. Meyer, and C.J. Ralph. 2002. Land and seascape patterns associated with Marbled Murrelet abundance offshore. *Waterbirds* 25(1): 100-108.

**Two long-term PSW partners join KBO**

We are thrilled to announce that Kim Hollinger and Josée Rousseau, two longtime partners from The Pacific Southwest Research Station's Arcata Laboratory, have joined the staff at KBO. They will be working at KBO affiliate HBBO in Arcata, California. Kim has over 20 years of bird banding and training experience and was one of the original founders of the Klamath Bird Monitoring Network. Kim joins KBO as a Project Leader. Josée joins KBO as HBBO Program Director. Josée worked as an intern for RSL in 2004 and has since been involved with many collaborative Projects, including the development of the KBO-RSL Avian Data Center. Welcome Kim and Josée!

# Environmental Literacy in Oregon

Annie Kilby, KBO Education and Outreach Program Manager

Oregon is often thought of as being a leader in environmental initiatives. In October 2010, Oregon lived up to its reputation by becoming the third state in the nation to pass into legislation a state environmental literacy plan. This important publication focuses on "preparing students to understand and address the major environmental challenges facing the state and country." In order for the plan to succeed in integrating environmental education into every classroom, it needs to tie closely to Oregon's existing educational standards. To facilitate this process, the literacy plan task force has identified five key learning strands of environmental literacy.

**Five Strands of Environmental Literacy**

*The Oregon Environmental Literacy Plan task force has identified these five learning strands as key to environmental literacy:*

1. Understand the physical and biological world and our interdependent relationship with it
2. Understand and apply systems thinking concepts and tools
3. Sense of place, region, nation, and global community
4. Investigate, plan, and create a sustainable future
5. Understand and achieve personal and civic responsibility

The parallels between these five strands and KBO's approach to bird conservation are striking. Since Klamath Bird Observatory's beginnings, we have taken a holistic approach to education, using our science as a platform to teach students and community members about our relationships with the biological world and our place in the global community. Our education programs emphasize the importance of stewardship and ecosystem health as well as an understanding of local and global environmental issues. The literacy plan now provides an opportunity for KBO to use our science-based education approach to further Oregon's environmental literacy and outdoor education standards.

KBO's education team is working with many partners through the Southern Oregon Regional Environmental Education Leaders (SOREEL) network to advance the literacy plan in southern Oregon. With partners, KBO is developing a summer educator workshop focused on building capacity for educators to implement the literacy plan in the classroom and in the field. KBO also is working with statewide partners to align the strands to state and national content standards. Internally, KBO is aligning our own programs and curricula to the five strands and further integrating them into our K-12 and community programs. The publication of the literacy plan, and the partnerships that have emerged out of the working groups, represent another way in which publications can shape human attitudes and ultimately conservation outcomes.

To view the literacy plan online, visit www.KlamathBird.org/education and click on "Oregon Environmental Literacy Plan."

***What is Environmental Literacy?***

The Oregon Environmental Literacy Plan defines environmental literacy as "An individual's understanding, skills, and motivation to make responsible decisions that consider his/her relationships to natural systems, communities, and future generations."


*KBO's education programs use real-world science to help students explore the connections between science inquiry, ecology, sustainability, and stewardship. In the above photos, students visit a KBO ecological monitoring and bird banding station as part of the Songbirds, Science, and Schools program in Jackson County, Oregon.*

# Mark Your Calendars! Special Spring and Summer Events at KBO

## *Better at Birding By Ear Workshop and Field Trip*

**Friday, June 3rd and Saturday, June 4th, 2011**

Sharpen your birding ear! With a focus on intermediate to advanced skills, we will practice identifying warbler, finch and flycatcher vocalizations and will distinguish sound-alike species such as Western Tanager and Black-headed Grosbeak. Expert instruction in the classroom and field will be provided by John Alexander, KBO Executive Director.

**Friday Class: June 3rd from 7 to 9 pm at the Jefferson Nature Center in Medford.**

**Saturday Field Trip: June 4th from 7 am to 2pm. Location TBA.**

Advance registration required. Limited to 20 participants, so sign up today! Cost: $25 members, $35 nonmembers. To register, call 541-201-0866.

*The song of the Western Tanager (pictured here), Black-headed Grosbeak, and American Robin sound quite similar. Photo by Jim Livaudais © 2011.*

***KBO Summer Camps at Science Works!***

This summer, KBO will again be offering camps for 7-10 years olds in partnership with ScienceWorks Hands-On Museum. For full camp descriptions and to register, visit the ScienceWorks Hands-on Museum website at www.ScienceWorksMuseum.org.

**June 20th – 24th, 9 am– 12 pm: Eco-Adventures**
Hone your power of observation, learn how to use cool tools like binoculars, field guides and compasses, and explore the water, soil, plant, and animal life around Bear Creek.

**June 27th – July 1st, 9 am– 12 pm: Radical Raptors**
Did you know that the Peregrine Falcon can fly up to 240 miles per hour? Explore the fascinating world of Birds of Prey through games, crafts, and more. This camp is a hoot!

**July 11th – 15th, 9 am– 12 pm: Marvelous Mammals**
Explore mammal adaptations, practice your bat "echolocation" skills, learn about tracking and mammal prints, read and write animal poems and get to know our local mammals.

**August 1st – 5th, 9 am– 12 pm: Watershed Explorations**
From mayflies to salmon to people, we all depend on watersheds. Become a Watershed Hero as we measure water quality, sample aquatic insects, study the salmon life cycle, and more.

**August 8th – 12th, 9 am– 12 pm: Mysteries of Flight**
How did animals learn to fly? We will uncover the mysteries of flight through games and experiments and learn how dinosaurs, insects, birds, and mammals evolved to take to the skies.

**Saturday, June 18th, 2011: Wetland and Riparian Habitats of the Deer Creek Center**

Join KBO Executive Director John Alexander and Daniel Sarr, adjunct professor at Southern Oregon University, to explore the ecology, hydrology and wildlife of the wetland and riparian areas of the Deer Creek Center. We will learn about legislative efforts affecting these sensitive areas, and the conservation efforts employed for their protection in Oregon. To learn more and to register for this course, visit the Siskiyou Field Institute catalog online at www.thesfi.org.

Save the Date!

**KBO's 4th annual**
***Wings and Wine* Fundraising Gala!**

This year's celebration will be held on September 17th at Historic Hanley Farm in Central Point, Oregon, from 6—10 pm. Our 4th annual *Wings and Wine* Gala will again feature live music, delicious food, local wine, and a "Not So Silent" auction. We will also be showcasing winners of the 2nd annual *Best of the Bioregion* wine competition. Tickets are $45 and are available by calling 541-201-0866.

## *Membership & Contributions*

Your contributions help KBO advance bird and habitat conservation. Additionally, we are able to leverage dollars from matching grants and demonstrate public support when applying for new grants. Check out www.KlamathBird.org/donate to see how you can contribute through an in-kind gift, endowment, planned giving, or adopting a bird or day of banding.

Name _____ Address _____

Telephone_____ Email_____

Please select one and make your tax-deductible donation payable to KBO. Mail to KBO, PO Box 758, Ashland, OR 97520.

_____ Student Membership $15 _____ Regular Annual Membership $35

_____ Family Membership $50 _____ Supporting Membership $100 or more

□ Please contact me with more information regarding planned giving or endowment donations.

# Calendar—Join KBO for Late Spring and Summer Events

**Saturday, May 7th: KBO Bird Walk & Wine Tasting in the Applegate Valley**
Join KBO for a birding and wine tasting tour in the Applegate Valley. We will bird the Applegate Valley for the first couple of hours, looking for Acorn Woodpecker, Blue-gray Gnatcatcher, Oak Titmouse, and more. Then we'll migrate to Cowhorn Vineyard (www.CowhornWine.com), a certified biodynamic vineyard, where we'll take a behind the scenes tour and learn about how biodynamic practices benefit wildlife. The tour will be topped off by a tasting of Cowhorn's award-winning wine. Meet at 8:00 am at the Northwest Nature Shop in Ashland. Leader: KBO Staff. To register, call 541-482-3241.

**Saturday, May 14th: International Migratory Bird Day celebrations in Ashland, OR; Klamath Falls, OR; and Yreka, CA**
**Saturday, May 21st: Tulelake, CA**
Celebrate this year's IMBD theme of "Go Wild, Go Birding!" by attending a celebration in your area. For more information visit www.birdday.org.

**Saturday, June 11th: Family-friendly Birding at the Jefferson Nature Center**
Join KBO Education Staff for this family-friendly outing. We'll learn how to use binoculars and field guides and about some of the bird species common to the Rogue Valley. Then we'll explore the habitats of the Jefferson Nature Center, looking for our feathered friends. All ages welcome. Meet at 10:00 am at Wild Birds Unlimited in Medford. Limited to 20 participants. To register, call 541-770-1104.

**Saturday, July 2nd: KBO Bird Walk to the Ashland Pond and Bear Creek Greenway**
Join KBO Bird Walk leader and Northwest Nature Shop employee Terence Philippe for a bird walk to the Ashland Pond and Bear Creek Greenway. We should see plenty of migrant warblers, including Common Yellowthroat and Orange-crowned Warbler. We may also see Western Tanager, Bullock's Oriole, Tree Swallow, raptors and possibly a family of river otters that frequents the pond. Meet at 8:00 am at the Northwest Nature Shop in Ashland. Limited to 15 participants. To register, call 541-482-3241.

**Saturday, July 9th: KBO Bird Walk to Soda Mountain**
Join KBO contractor, member and volunteer Frank Lospalluto for high-elevation birding along the Pacific Crest Trail near Soda Mountain. We will likely see many songbirds who breed at higher elevations, including Nashville Warbler, Warbling Vireo, Western Tanager, and Purple and Cassin's Finch. Pileated Woodpecker, Red-breasted Sapsucker, Red Crossbill, and Mountain Quail are also possibilities. Meet at 8:00 am at Wild Birds Unlimited in Medford. Limited to 15 participants. To register, call 541-770-1104.

**Saturday, August 6th: KBO Bird Walk to Howard Prairie and Hyatt Lakes**
Join Frank Lospalluto for a tour of the Howard Prairie/Hyatt Lakes area. We will start around Howard Prairie, looking for Sandhill Crane, Western Meadowlark, Western Bluebird, and Lark and Vesper Sparrow. Around Howard Prairie and Hyatt Lakes, we may see shorebirds and waterfowl like Northern Pintail and Green-winged Teal. Plan to bring a lunch—we'll eat by the lake and return to Ashland in the early afternoon. Meet at 8:00 am at the Northwest Nature Shop in Ashland. Limited to 15 participants. To register, call 541-482-3241.

**Saturday, August 13th: KBO Bird Walk to Agate Lake**
Join KBO's very own Karen Hussey (Research and Monitoring Program Manager) and Jeff O'Connell (Research and Monitoring Intern) for an exploration of this Medford lake that provides critical habitat for many Rogue Valley bird species. We will look for a variety of waterfowl, shorebirds and raptors as well as some early fall migrant songbirds. Greater Yellowlegs, Long-billed Dowitcher, Spotted Sandpiper, Lewis Woodpecker, Barn Swallow, and American Pipit are all possibilities. Meet at 8:00 am at Wild Birds Unlimited in Medford. Limited to 15 participants.
To register, call 541-770-1104.

**Saturday, September 3rd: KBO Bird Walk to Emigrant Lake**
Join KBO member and volunteer and Northwest Nature Shop employee Terence Philippe for an exploration of the trails on the backside of Emigrant Lake. We will travel to the east end of the lake and follow spur roads to the lakeside trails. During this early fall outing we may see interesting migrants like Pine Siskin, Black Phoebe, and Common Yellowthroat, as well as residents like White-breasted Nuthatch and Oak Titmouse, raptors, and a variety of waterfowl. Meet at 8:00 am at the Northwest Nature Shop in Ashland. Limited to 15 participants. To register, call 541-482-3241.

**Saturday, September 10th: Public Banding Demonstration**
Travel with us to Upper Klamath Lake to visit one of KBO's long-term ecological monitoring and bird banding stations. At the Seven Mile Guard Station on the Fremont-Winema National Forest, we will visit a KBO banding station, where we will have the chance to view many fall migrant songbirds up-close. We will also learn about how bird banding contributes to a better understanding of bird populations and informs on-the-ground conservation. Meet at 8:00 am at Wild Birds Unlimited in Medford. Limited to 15 participants. Cost: $25 non-members, $15 KBO members. Leader: KBO Staff. To register, call 541-770-1104.

*NOTE: School and community groups are invited to schedule a visit to a KBO banding station, a classroom visit, or a KBO presentation. For more information, email KBO@KlamathBird.org or call us at 541-201-0866.*

Klamath Bird Observatory

**PO Box 758**
**Ashland, OR 97520**

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Editor: Liz Williams