

The Rectrix

A seasonal newsletter of the Missouri River Bird Observatory

Volume 4 No. 1 - March 2014



rectrix |rek-triks| noun. (pl. -trices) any of the larger feathers in a bird's tail, used for steering in flight.

Letter from MRBO's Assistant Director



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ON THE COVER
A Black-capped
Chickadee captured at
Birds-I-View in Jefferson
City. Sometimes
Carolina Chickadees are
captured there as well.

Dear Friends of MRBO,

This is my first letter in the Rectrix and so I feel a bit nervous about what topics to explore and how to best describe the results and import of your support. Each winter we make a shift from research and monitoring and focus more on education and outreach. In the past months, you may have seen us fostering an appreciation for birds in *Rural Missouri* magazine, on TV, in newspapers, or in our newsletters and social media. You may have encountered us presenting at meetings or conferences. Looking back on the last few months, we sure have been all over the map discussing birds at diverse venues.



On the topic of being all over the map, Dana and I took a journey to Ecuador last month. It was a biologist's dream to follow in the footsteps of Charles Darwin on several Galapagos Islands. Wildlife there seems tame, as one can stand within a couple feet of many species of animals. These species included giant tortoises, sea lions, Galapagos Penguins, Boobies, Finches, and Mockingbirds. This once in a lifetime trip was topped off with a week in the rainforest along a tributary of Napo River. Expert guides from the native Añangu community enhanced the experience and taught us about the ecosystem as well as the challenges the communities face in preserving it. We took many photographs and I recorded the songs and calls a range of species throughout Ecuador. I'm currently cataloguing recordings and will eventually post all of them on xeno-canto.org.

Back at MRBO, we find these experiences helped us develop greater understandings of worldwide conservation issues and further inspire us to continue our mission. With this in mind, we are excited about all that is in store for MRBO in 2014. As the observatory has matured, we have adopted refined and evolved approaches to the most pressing conservation challenges we face. Chief amongst these challenges is engaging an increasingly indoor youth demographic with the natural world. Our education and outreach focus remains a core part of mission thanks to the support of membership, which is the primary means by which we fund those programs.

Research and monitoring efforts have continued to grow as well. This work is mainly focused upon our most threatened habitats, grasslands and wetlands. We'll be covering more ground than ever this year and providing robust data and assessments on bird occupancy, density, and abundance directly to the expert managers, biologists, and landowners who wish to use this information to measure the results of their work and improve habitat conservation in Missouri.

The bulk of this years' monitoring is the result of a supportive and insightful partnership with the National Audubon Society and the Missouri Department of Conservation. Both organizations have the unique ability to create and execute long-term visions for maintaining natural communities that are essential for the well-being and survival of people and wildlife. We are making a difference together on working private lands and preserves as well as publicly owned lands to restore native plant and animal communities.

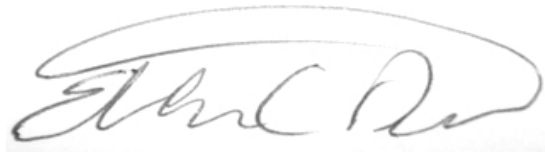
Dana and I recently attended an encouraging meeting centered on the Grand River Grasslands in Iowa and Missouri. The meeting was hosted and steered by biologists we have come to know and respect working with the Missouri Department of Conservation. Other staunch proponents and knowledgeable contributors to the discussion included individuals from The Nature Conservancy's Dunn Ranch, The US Fish and Wildlife Service private lands office personal, USDA NRCS private lands specialists, and counterparts from Iowa.

Following the grasslands monitoring model, we have selected 15 privately owned wetlands throughout the state to survey for marsh birds in 2014. All bird data will be given to the biologists and landowner stewards. As we document what and where bird species are found within these particular wetlands, we'll be searching for rare and secretive species such as King Rail, Black Rail, Virginia Rail, and their allies.

We have a few other projects slated for 2014 and we look forward to sharing those activities in future newsletters. Please enjoy the content of this winter issue of the Rectrix, as the past few months of work reflect on the support you have given.

With thanks,

Ethan



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MRBO In Ecuador: A Tale of Diversity



In January, Ethan and I had the great fortune of traveling to Ecuador for three weeks and experiencing three of the four major ecosystems of the country. The trip was a gift from my mother, who shares our love of nature and has been endlessly supportive of our personal and professional conservation goals. Though the trip was not work-related per se, we felt it would be remiss of us from a birding, conservation, and philosophical perspective to not share our experiences with MRBO members.

Not only was three weeks a very long time to be away, neither of us had ever been South America so the experience was one of unique biological and cultural learning. We began in the Galápagos, a stark and sometimes forbidding landscape of young volcanic islands. Immediately upon arrival at the small airplane hangar at San Cristobal, we heard a semi-familiar sound and saw a little yellow shape flitting above our heads in the Quonset hut that served as the immigration area. It was a Yellow Warbler!

According to the field guides we immediately pulled out, it was the same Yellow Warbler species as we find in Missouri each year! But, this fellow sang quite differently, and had the bright rufous cap that characterizes the Mangrove subspecies of Florida. We were soon to find that the little Yellow Warbler, exuberantly singing his song, was to be found on every island we visited no matter the harshness of habitat.

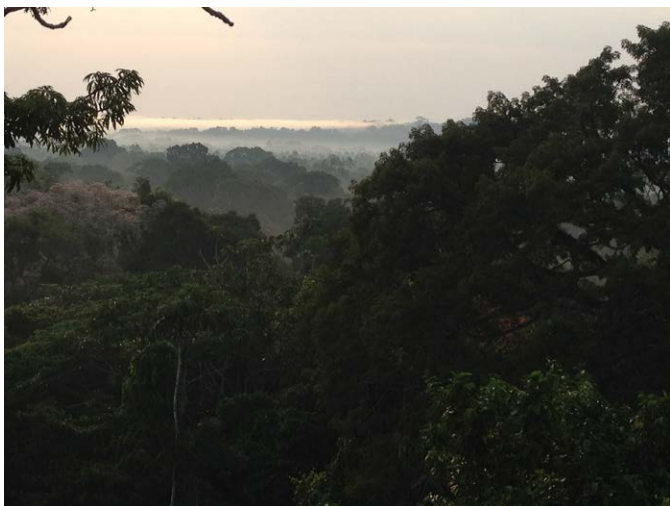
After two days in port, we set sail at night from San Cristobal, and the very next day we were viewing Red-Footed Boobies, Red-billed Tropicbirds, Great and Magnificent Frigatebirds, and Galápagos Flycatchers. We spent six days at sea (which was somewhat challenging for normally land-locked folks like ourselves), stopping at six different uninhabited islands. To be literally following in the voyage of Charles Darwin was both humbling and exhilarating. If you've never been there, the Galápagos Islands are exactly like you think. The birds and reptiles that inhabit the islands have no fear of humans and go about their daily activities as if you were not there. We snorkeled with Galápagos Penguins, watching them catch fish underwater. We watched Frigatebirds and Swallow-tailed Gulls (*photo right*) courting, exchanging places on eggs, and feeding young. We were inevitably side-swiped by Yellow Warblers everywhere, as they chased each other without thought to the lumbering creatures that appeared in their presence.



The Parque Nacional Galápagos, established by the Ecuadorian government in 1971, does an outstanding and enviable job of protecting the unique ecosystem. Tourist traffic is very strictly regulated, with groups allowed in only a few designated areas and under a rigorously controlled schedule. No one is allowed even in the designated areas without a Parque-trained Naturalist Guide – which not only confers control over human activities, it enhances enormously visitors' understanding and appreciation of the ecosystem. At this time, the main conservation issue in Galapagos is the increasing amount of people who want to visit the area, and the associated increase in population, as Ecuadorians desire to move to the islands in support of tourist services and infrastructure. Guides, locals, and in the end, us tourists, generally feel that the Parque Nacional has the highest possible conservation ethic in mind and will continue regulating any potentially harmful growth. How nice to hear some good conservation news!

Upon leaving the Galápagos, we had a brief overnight in the city of Quito before flying to Coca, a petroleum town perched at the very edge of the Ecuadorian Amazon forest. Here we embarked on a four hour journey down the Napo River, a tributary of the Amazon that is about the size of the Missouri River – before it was channelized. Our destination was the Napo Wildlife Center, a lodge operated by the local Kitchwa Añangu community in support of both the local economy and environmentally sustainable use of the Amazon rainforest.

No two places could possibly be as different as the rainforest and the volcanic islands from where we had just come, and we were in for an adventure of a very different sort. At Napo, the landscape was lush, green, and bursting with life. The forest floor was almost dark due to the density of the canopy. And even though it was the “dry season”, we experienced tropical rains almost every day and could feel the life-giving water everywhere. Neotropical Palm Swifts, White-winged Swallows, and Yellow-rumped Caciques were everywhere! Within the forest, as with most deciduous forests and all rainforests, birds and other wildlife were difficult if not



impossible to see. But with the help of a Naturalist Guide (a young woman highly educated in ecology) and a Local Guide (a young man who had grown up in the forest and had amazing senses), we were able to view birds like the Spangled Cotinga, Yellow-tufted Woodpecker, Yellow-browed Tody-Flycatcher, White-breasted Toucan, Many-banded Aracari, and Bare-necked Fruitcrow. During our time at Napo, we arose every morning before 6:00 a.m. and hiked or canoed most of each day. The first morning, we climbed to a canopy tower before dawn to view the forest waking up. It was there that we saw many of the bird species that one would never catch a glimpse of at ground level. On another day we were able to visit a clay lick and view Yellow-Headed and Mealy Amazons and Blue-headed Parrots taking their daily dose of minerals. We were also treated to several paddling trips in the creeks around the Napo Wildlife Center where we quietly searched for (and found) Rufous Tiger-Herons, Ringed and Green-and-Rufous Kingfishers, Silvered and Plumbeous Antbirds, a Blue-crowned Manakin, Great Potoo,

White-chinned Jacamar, outstanding looks at a Wedge-billed Treecreeper, and many Snail Kites. Indeed, we grew spoiled with Snail Kites, which were numerous and would perch just above the creeks and not move as we canoed by.

On the day we visited the clay licks, we also had the opportunity to spend time at the Kitchwa Añangu Community Center just on the edge of the Napo River. The center, a series of thatched-roof buildings built sustainably with materials from the forest, is staffed by women of the community. The women provided us with demonstrations of traditional building methods, cooking, tea and mead preparation, the making of handicrafts, and gardening. This womens' cooperative is complementary to the vocations of the community's male population, who serve as guides, builders, and staff at the Wildlife Center. Overall, the motivation and industriousness of the Kitchwa people in both keeping their community prosperous and conserving the natural resources of the rainforest were heartening and impressive.

There is, however, a cloud to the silver lining of life in the Ecuadorian Amazon. After stating for the past five years that it intends to conduct no oil and gas development in the national parks of the Amazon, the Ecuadorian government has recently announced that China has paid in advance for the 900 million barrels of oil that are supposed to lie under the forest. Drilling will almost certainly commence in the forest of eastern Ecuador. Not only would this result in the now-familiar clearing, road-building, and water pollution we see in petroleum operation the world over, it would also necessitate contact with two indigenous tribes who have declared themselves "non-contact" with the outside world (to date, this decision has been respected). Led by both locals and conservationists in the capital of Quito, the Ecuadorians of the Amazon are presenting a referendum to the government seeking to halt any future oil development. The local and naturalist guides we spoke with at Napo were not overly optimistic about the outcome – money talks, and big oil money is loudest of all.

Finally, just before leaving Ecuador we were able to spend a little bit of time in the Andes near Quito. Once again, we experienced a wonderful habitat, totally different from the Galapagos or the rainforest. The *paramo* habitat of the highlands is something of a shrubby grassland, fed by glacier creeks and cool, wet weather. It reminded me somewhat of the palmetto savannahs of the southeast, though with less tree cover. The floristic diversity was awesome and supported a totally different guild of birds than we had seen yet. Most of them acted like our grassland sparrows outside of the breeding season – quiet, skulky, and allowing us glimpses only as they flew a short distance from one grass clump to another! We were, though, able to get very nice views of Carunculated Caracaras, Bar-winged Cinclodes, and Black-billed Thrush.

One of the things that we enjoyed very much in our brief time in the Andean highlands was perusing a local fruit and vegetable market. I felt as though I was finally seeing produce the way it was meant to look – no GMOs, no preservatives, and no waxy sprays as we see on our own supermarket shelves. There were many fruits that we had never seen before and we tried them all. There were also meat stalls that displayed clearly that every single part of the cow, chicken, or fish is used, as well as spice stalls and people selling traditional medicinal teas. The Andean village culture is such that most families still live on very small farms and grow produce enough for their own use with a little to sell or trade at market. In our view, the diversity and bounty of food was incredible.

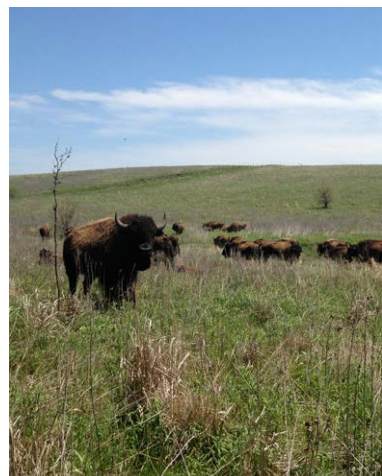


All in all, our visit to Ecuador was the trip of a lifetime. Not only did we see many birds we had never seen before, and were able to experience ecosystems vastly different from what we are used to, the trip also affected us philosophically. Both Ethan and I returned with a more focused, thoughtful approach to conservation and to our work at MRBO...as well as an increased appreciation of home and the birds we find every day in our own backyard.

Prairie Birds & Marsh Birds: Gearing Up for A Great 2014!

One of the things we here at MRBO sometimes struggle with is how to keep our readers updated on projects that are in the developmental stage. It's much easier to present you with data we have collected, photographs from the field, and stories of birds seen or habitats traversed. What is not often discussed is all of the background work that occurs the rest of the year. Who really wants to hear about meetings, data entry, map development, and conference calls? Nevertheless, these things are a critical part of the process and our conservation-focused field work would not occur without them.

Take meetings for example. We have attended a series of meetings this winter that were actually very exciting and fun to attend. Two of these were with MDC Area Managers in the northern and southern parts of the state. MRBO presented its grassland bird survey accomplishments to



Bison graze at The Nature Conservancy's Dunn Ranch in northern Missouri.

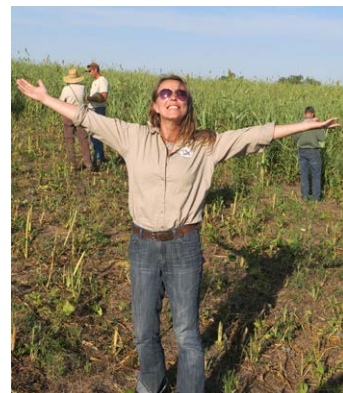
date, and requested a great deal of habitat and management information from the managers. In their turn, the managers were able to explore our bird data in the context of their own areas, and graciously agreed to provide us with the requested information. This information-gathering has been a lot of work for them - imagine an Area Manager who oversees 10,000 acres delineating every habitat type and management action (for example, when a 200-acre patch of native grass was burned) that has occurred on his or her area in the past few years.

What this information will allow us to do is thrilling – with thousands of bird observations across Missouri, we will be able to inform the managers what exact habitats and management practices result in the highest density of species of conservation concern. We will be able to tell, for example, that a native prairie grass planting with 30-50% forb component, burned three years ago, supports a higher density of Henslow's Sparrows than any other habitat type. We will also be able to examine, through pre- and post-management surveys, the exact effects of actions such as removing invasive cedars on our native prairie. Missourians concerned about the cost and effects of the MDC's extensive habitat restoration activities will have hard data showing the benefits to our native bird species, many of which are in dramatic decline.

Additionally, amongst the more than 70,000 acres of prairie coming under survey this year, we will be working on 10,000 – 12,000 acres in private ownership, which provides excellent outreach opportunities.

In 2014, we are also embarking on a brand-new and exciting phase of secretive marsh bird monitoring. The suite of marsh-dwelling rails – Virginia, King, Black, and Yellow Rails particularly – are in even steeper decline than our grassland birds. Previous attempts at determining fine-scale habitat use and populations of this guild in Missouri have been relatively unsuccessful. This year, we are employing a new survey protocol that involves far more coverage of wetland areas, the ability to document every bird species detected, and, most importantly, an extremely well thought-out site selection process. We are very pleased to be working with the state office of the Natural Resources Conservation Service (NRCS) in targeting the highest-priority private wetlands in Missouri. This field season we will hopefully uncover more secretive marsh birds than in previous survey efforts, and dramatically increase feedback to NRCS and private landowners regarding how the Wetlands Reserve Program is contributing to imperiled marsh birds in our state.

What all of this is going to entail on the ground is the use of some highly technical equipment (such as iPads outfitted with special mapping programs developed by MRBO's Ethan Duke), a great deal of traditional field gear (chest waders, hip boots, canoes, and maybe even inner tubes!), and sometimes a lot of exertion (walking miles in the Missouri summer sun, climbing barbed-wire pasture fences, and avoiding cottonmouths). We're not sure if the most exciting part of these projects is the extreme field conditions or the golden opportunity to work the people who own and manage Missouri's habitats. Stay tuned for the results of this great upcoming season!



Dana enjoys learning about a cover planting on a private ranch during a landowner/agency workshop.



Wading through wetlands is one of the best parts of the job!

The Surprising Yearly Cycles of Northern Saw-Whet Owls

The ever-mysterious Northern Saw-whet Owl....after four fall seasons of trapping these little guys, we're still not sure exactly what their peak migration time is, whether they move during particular moon phases as many theories suggest, and most of all, where they go after migrating through central Missouri.

2013 was considered a "crash year" by NSWO banders across the eastern United States. Stations in places like Ontario, Pennsylvania, and New York reported trapping about 30% of their average numbers, and in some places 10% of the birds captured in 2012. 2012 was described as an "epic year" by researchers at Whitefish Point Bird Observatory, a station that was staffed in 2013 by former MRBO assistant Brittney Cross.



MRBO Assistants Kalen Brady & Brittney Cross, here with a Saw-whet Owl captured in March 2013. Owls are very rarely captured outside of fall; this was an unusual event.

Because of her involvement at Whitefish, we were able to get a firsthand account of the conditions and numbers up north as well as here in Missouri. There are many hypotheses for this epic-to-crash cycle, ranging from reduced reproduction in some years to an abundance of prey up north that keeps birds from migrating south in search of resources.

In Fall 2013, due to a large number of commitments in the education and research realms, MRBO was unable to operate as many nights as we had in 2012. Nonetheless, owl numbers appeared to be down here in Saline County and we had many nights with zero owls in the nets. But, we also had a night (November 10th) with six owls captured, which is a record for us here in central Missouri!

One of the things we have tried to do over the past four years is set up at temporary sites around the state to get an idea of NSWO distribution. This year we again set up nets in the pine forest just south of Rolla. We captured two owls at this site in 2011, but were "skunked" this year and also in 2012. By all accounts and information about NSWO habitat selection, the Rolla site provides perfect habitat and we continue to scratch our heads about why these small owls are sometimes present and sometimes not. One would think that NSWOs migrating through central Missouri would be bound for wintering in the pine forests of the Ozarks.

Investigating this will require additional trapping attempts throughout the late fall and winter season. Luckily, educator Andrew Kinslow of Rogersville, MO and Professor Janice Greene of Missouri State University have started doing their own trials in southwest Missouri, and we look forward to seeing their results in the coming years. MRBO will also be operating as usual in Saline County and at several other sites in 2014.

We would especially like to thank our assistants Alie Mayes and Nic Salick who, amidst their early-morning education and grassland survey duties, operated most of the late-night NSWO trapping in 2013.

By the Numbers: The MRBO Saw-whet Owl Project from 2010 - 2013

	2010	2011	2012	2013
Number of New Owls Captured	10	22	45	13
Number of Nights	5	18	33	21
Total Net Hours	75	288	396	209
Trapping Dates	Nov 7th - 14th	Oct 25th - Nov 29th	Oct 23rd - Nov 23rd	Oct 21st - Nov 26th
Number of Sites Where Trapping Was Attempted	2	6	5	2
Sites with Successful Captures	2	4	3	1



Education & Outreach Report



Brothers help release a bird after watching it banded and measured at Wildcat Glades Audubon Conservation Center in Joplin.
Photograph from Chris Pistole, the Center's Education Director

Since we wrote in late October, MRBO has been very busy with a variety of education events! Our public events involved working with great partners such as Missouri Master Naturalists, The Friends of Arrow Rock, Missouri State Parks, and others. We also did several Backyard Banding sessions at private homes throughout Missouri. Here is a run-down of what we have been up to over the winter.

Van Meter State Park, November 1st. 30 students from Immanuel Lutheran 1st grade through high school attended an outdoor program provided by MRBO, plus cultural programs conducted by VMSP staff.

Wildcat Glades Audubon Conservation Center, November 2nd. MRBO provided an afternoon banding demonstration and discussion of conservation topics to 30 kids and 25 adults who visited the Wildcat Glades Center.

Hillerman's Nursery & Florist, Washington, November 14th. Approximately 15 adults and 12 students attended this bird-banding demonstration. Attendees were engaged in a discussion of how to help backyard birds, including ways to reduce window

mortalities and cat predation.

Flying WILD workshop for non-formal educators, Van Meter State Park, November 21st. Four Missouri State Parks interpreters and one Columbia Audubon Society non-formal educator attended this training workshop, which gave them tools to incorporate birds into their programs in a fun but scientific way.

Arrow Rock State Historic Site, November 23rd. 20 adults and 10 children attended our presentation on Missouri's woodpeckers, with a banding demonstration following.

Hickory Homestead Community, Washington, December 2nd. MRBO staff presented a program on backyard birds and tips on how to help birds – such as keeping cats indoors – to 20 members of this retirement community.

Osage Trails Master Naturalist Training, Blue Springs, December 7th. We provided a two-hour lecture on bird identification and conservation to more than 40 Master Naturalists who attended this all-day workshop.

Burroughs Audubon Library, Blue Springs, December 14th, January 11th, and February 15th. Though our November banding session had to be cancelled due to weather, we have been able to provide three monthly sessions this winter at the Library. About 30 – 40 adults and children attend each session.

Winter Bird Workshop, Arrow Rock, January 4th. We had a great turnout at our first event of the new year. Participants learned about identifying their backyard birds and built a suet feeder or nest box to take home. The crowd of about 40 people of all ages was very engaged and we had fun answering questions and discussing Missouri's birds.

Birds-I-View Banding Demonstration, Jefferson City, January 10th. Almost thwarted by the now-common Missouri winter weather, it was touch-and-go opening nets on this day. Luckily, the rain stopped and we were able to treat attendees to several neat birds, including a surprise Yellow-rumped Warbler.

Interface Conference, Lake of the Ozarks, February 20th – 22nd. Thanks to an invitation from MDC Education Consultant Cynthia Green, MRBO's Dana Ripper co-presented a workshop on "Feathered Friends in Nature Unleashed", where elementary school teachers were given skills and ideas for incorporating birds into their curriculum.

The Homestead at Hickory View, Washington, February 24th. Amidst perfect weather, residents of this retirement community viewed a bird-banding demonstration and shared with us their memories of birds they used to see in Missouri, including Greater Prairie-Chicken.



A Carolina Chickadee eating suet and displaying its "metal on the right/light blue on the left" color-band combination.

Photograph from Becky Wylie of Wildcat Glades.

The Stars of MRBO's Backyard Banding Program

Since we began the Backyard Banding program in Winter 2010, we have color-banded birds at more than 50 private homes, nature centers, business, and other venues. The folks pictured here are the ones who do the real work - all of the re-sighting of banded birds and documenting their color combinations. Our appreciation goes out to these citizen scientists who have shown the dedication and commitment it takes to provide MRBO with the largest amount of re-sighting data collected in Missouri to date!



Chris Pistole, Education Director at Audubon's Wildcat Glades Conservation center in Joplin, re-sights color-banded birds with his staff year-round and with students during education programs.



Pat Perry of Rolla has hosted and assisted with many Backyard Banding and education events over the past four years. She submits backyard bird data to Cornell's Feederwatch as well as to MRBO.



Each month, Sherry Leonardo spends hours resighting the color-banded birds at the Burroughs Library in Blue Springs. She also volunteers with MRBO at many other research and education venues.

Backyard Banding



Mary Ann Keeney of Sweet Springs hosts groups at her home for Backyard Banding events, and documents her birds weekly.



Steve and Regina Garr of Jefferson City provide us with a venue for banding demonstrations, presentations, and workshops as well as tracking their color-banded birds year-round.



Zack (left) and his mother Ginny Frey of Washington have been keeping track of their color-banded birds for two years. They have also been instrumental in organizing several public education events for MRBO in their area.

Family Corner: Activities For Home

While most Missourians are wishing that winter would just go away, we who love birds consider how much tougher winter is on wildlife. Food gets scarce, there are fewer hours of daylight with which to gather food, water, and warmth, and sheltering from temperatures in the teens or single digits is very difficult. With this in mind, we present a few activities that families can do together that are not only FUN but will help your outside birds!



✎ **Build and put up nest boxes.** “Nest” boxes aren’t just for nesting. Many species will use them in all seasons, but especially in winter, for nighttime roosting. A variety of boxes placed around your yard with different entrance-hole sizes can provide shelter for Carolina Wrens, Chickadees, Titmice, Eastern Bluebirds, and several woodpeckers.

✎ **Make feeders and keep them filled.** Easy access to a food supply makes the difference between life and death for many birds when it is bitterly cold. High-protein seeds such as black oil sunflower are great and not too expensive (compared to

niger seed and sunflower hearts), and blocks of suet will sustain not just woodpeckers but nuthatches, chickadees, and even goldfinches and Yellow-rumped Warblers.

✎ **Spread some seed on the ground.** Our wintering sparrows, such as White-crowned, Harris’, Fox, and White-throated Sparrows, Slate-colored Juncos, and year-round resident Song Sparrow, prefer to feed on the ground instead of on a traditional feeder. Spread some seeds on the ground or on your porch to attract these species, especially when there is snow cover. Don’t forget to keep your cat inside, since these ground-dwelling sparrows are more vulnerable to predation than birds on higher feeders.

✎ **Make a pile.** A brush pile! It helps birds and small mammals to have as much cover as possible during the winter. This helps with warmth and to protect them from predators. Brush piles and thick bushes provide a warmer, sheltered place to roost for non-cavity using birds such as the sparrows described above.

✎ **Watch what happens!** When you provide birds with life-sustaining resources, they will reward you with many hours of close-up viewing. Everyone’s winter day is brightened by seeing the dashing red of a male Northern Cardinal or seeing the diversity of sparrows that migrate to Missouri in the winter for a break from their Canadian breeding grounds!



White-throated Sparrow in Missouri in late fall. Photograph by Osage Trails Master Naturalist Linda Williams.



Many species use the cover and shelter provided by brush piles, such as these Northern Cardinals and Mourning Dove photographed by Chris Taylor of Lawrence, Kansas. See more at [Chris' excellent website](#).

Upcoming Events

March 4th in Carrollton. 6:00 – 8:00 p.m. “Get to know Missouri’s Winter Birds”, a learning opportunity offered by the Carrollton Area Career Center! Learn tips for identifying your backyard birds, and build a bird house or feeder! [Click here](#) for a flyer with more information.

March 7th & 8th at Prairie Fork Conservation Area. 5:00 – 10:00 p.m. & 8:00 – 5:00 p.m. [Flying WILD](#) certification workshop Friday night, and teacher training on Saturday! Learn to use our feathered friends as a unique part of your curriculum to pique students’ interests! For more information on these workshops that will be offered for graduate credit through Lincoln University, please email MDC [Education Coordinator Betsy Blake](#).

March 14th in Jefferson City. 2:00 – 4:30 p.m. Join us at the [Birds-I-View](#) store for an afternoon of banding in the Bird Garden! Some of the species we will see and hopefully catch are Downy and Red-bellied Woodpeckers, Carolina Chickadees, Tufted Titmice, and Carolina Wrens!

March 15th in Blue Springs. 10:00 a.m. – 1:00 p.m. Enjoy a banding demonstration and bird watching from the observation deck with friends at [Burroughs Audubon Library](#). All are welcome at this free event – come any time during the session. This will be our last banding opportunity at the Library this winter – we will resume monthly sessions in November!

April 7th in the Cole Camp Prairies. Sunrise – 10 a.m. Opening Day for our spring grasslands migration station! MRBO Bander Veronica Mecko will once again lead this spring’s banding efforts on the prairie. Species anticipated in the nets throughout the season are Henslow’s and Grasshopper Sparrows, Dickcissel, Savannah Sparrow, and Sedge Wren. Our prairie banding stations are open to visitors, please call us to schedule your family or class! 660-886-8788.

April 10th in Camdenton. 6:30 – 8:00 p.m. We are pleased to provide a program to the **Lake of the Ozarks Master Naturalists** for the first time. We’ll be discussing Missouri’s winter birds, our backyard banding program, and what to expect in the soon-to-come spring migration!

April 12th in Warrensburg. 7 a.m. – 3 p.m. University of Central Missouri’s Bio-Blitz! All are welcome at UCM’s fourth annual Bio-blitz. Join students, faculty, and visitors as we take stock of not only birds, but plants, mammals, fish and invertebrates at Pertle Springs Park in Warrensburg.

May 3rd and 4th in Jefferson City. MRBO will join the Audubon Society of Missouri for its annual [Spring Meeting](#). Our friends at River Bluffs Audubon Society have invited us to be a part of the event, where we will be banding spring songbirds and discussing the wonders of migration.

May 10th at Weston Bend State Park. 9:00 a.m. – 3:00 p.m. The fifth annual [Wings Over Weston](#) festival. Join us as we celebrate International Migratory Bird Day at this outstanding public festival that has something birdy for everyone.

May 31st – June 1st in Kansas City. We are honored to be a part of the **Missouri Master Naturalists** Advanced Training Conference this year. The meeting, hosted by the Osage Trails Chapter, features “Celebrating Nature in the City” and includes a huge variety of training workshops. See more at the [Master Naturalists website](#).



MRBO Bander Veronica Mecko with a very unexpected visitor to the prairie nets at Mora Conservation Area in 2013 - a Merlin!

Please join the Missouri River Bird Observatory in conserving Missouri's birds and their habitats.

Your membership is a direct contribution to MRBO's avian conservation projects, environmental education program, and internship opportunities for young biologists in Missouri. MRBO membership provided the majority of funding for our education and outreach work, fall migration monitoring, and Northern Saw-whet Owl research in 2012, and allowed us to run at full capacity in all other projects.

Membership Level

- ☐ Student \$20
- ☐ Individual or Family \$50
- ☐ Supporter \$100
- ☐ Contributor \$250
- ☐ Steward \$500+

Includes

MRBO e-newsletter & water bottle

MRBO e-newsletter & hat or mug

MRBO printed newsletter
your choice of T-shirt, mug or hat

MRBO printed newsletter
your choice of MRBO item

all above gifts, plus custom field program
tailored to your interest.

Name: _____

Address: _____

Email: _____ Choice of MRBO item: _____

*Please send this sheet with check addressed to: Missouri River Bird Observatory
27331 Highway WW, Marshall MO 65340. Or join via Paypal at <http://www.mrbo.org/Pages/membership.html>*

Thank you to all of our members! This winter we have been honored to experience a substantial increase in membership. The following people and organizations have joined or renewed their membership with MRBO since the publication of our Fall 2013 newsletter.

Stewards

Burroughs Audubon Society of Greater Kansas City
River Bluffs Audubon Society of Jefferson City

Contributors

Friends of Arrow Rock, Arrow Rock MO
Steve & Regina Garr, Jefferson City MO

Supporters

Bruce Saterlee & Mandy Dorrance, Arrow Rock MO
Carol Davit, Jefferson City MO
Dr. Janice Greene, Springfield MO
Keith & Leslie Anderson, Arrow Rock MO
Meramec Hills Master Naturalists
in honor of Pat Perry, Rolla MO
Mary Ann Keeney, Sweet Springs MO

Individuals & Families

Andrew Kinslow, Fordland MO
Dennis Figg, Jefferson City MO
Donnie & Kim Nichols, Warsaw MO
Harley Winfrey, Wheatfield MO
Hillary Wakefield, Jefferson City MO
Dr. Jane Waller DVM, Nelson MO
Linda Melkersman, Columbia MO
Katie Koch, Negaunee MI
Mary Wight-Carter, Hale MO
Sherry Leonardo, Grandview MO

Students

Anna, Abigail, & Jonah Poe, Lee's Summit MO