

# The Rectrix

A seasonal newsletter of the Missouri River Bird Observatory Volume 8 No. 3. Summer 2018



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



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**Our Mission**

To contribute to the conservation of Missouri's birds and their habitats through research, monitoring, education & outreach.

## Letter from Education Intern Klee Bruce

Dear MRBO supporters and friends,

It has been a busy summer for the observatory! I would like to use this space to share some of the wonderful experiences I had in the education department this summer, and thank all of you for making those experiences possible.

Paige and I spent the majority of our time this summer running the Young Explorer's Club (YEC), and as I write this we are gearing up for our last week of camp with our Young Explorers. It's hard to believe this camp is almost over, and our last days with the kids will undoubtedly be bittersweet. During the nine weeks of camp, I've seen some pretty fantastic things happening. I've seen a girl train her binoculars on a male American Goldfinch for the first time ever, and I've seen kids watch a flycatcher chase a Luna Moth out of a tree in broad daylight. I've seen Mississippi Kites swooping over Arrow Rock, and I've seen kids identifying Hairy Woodpeckers all by themselves. I've watched kids hone their observational skills while doing everything from chasing frogs to identifying trees. At our family camping night, the Young Explorers were so excited to share nature with their parents and younger siblings.



All these are just a few of the amazing experiences I had the privilege of sharing with our Young Explorer's Club campers. I would like to thank all of our amazing presenters who came and shared their knowledge and talents with our YEC kids, and I would also like to thank the Arrow Rock State Historic Site staff for their assistance, and their generosity in letting us use equipment and materials. I want to thank YEC campers and their families for their participation, because without campers there is no camp. I want to thank Paige, for her amazing dedication to YEC. In my nine weeks interning for Paige, her enthusiasm towards our campers never ceased to amaze me. She took the less glamorous parts of running a summer camp in stride, and somehow managed to make budgeting, buying snacks, and resolving issues fun. Whether kids participated in YEC for the whole summer or for only one day, I have no doubt we were able to impact them all and bring each one of them a little closer to nature.

In addition to the Young Explorer's Club, I assisted with many of MRBO's other summer education events. We were able to share the wonders of nest building with some very enthusiastic summer school students at Knob Noster Elementary School and met with hundreds of kids and their families at Runge Nature Center's Monarch Mania event where we showed examples of how hummingbirds are pollinators too. We brought bird migration to Missouri River Relief's River Academy and went hiking with a group of kids from Columbia's Youth Empowerment Zone.

Interning for MRBO gave me the opportunity to see their education efforts inside and out. MRBO is truly a valuable education resource for the whole state, and I am so happy to have been a part of it this summer. I want to give a huge thank you to MRBO's amazing staff for making me their youngest employee ever. (16 years of age is the record to beat, kids). This has been the most exciting summer I've ever had. I have learned so much about what it means to be an environmental educator, and how to share my passion for birds with other people. Lastly I want to thank all of MRBO's members, donors, and supporters for making all of this possible. Thanks to your ongoing support, MRBO is able to provide people like me with opportunities and cater to Missouri's bird education needs. Thank you for making this organization possible, I hope MRBO can keep doing what they do for years and years to come.

Sincerely,

Klee Bruce



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**Lawmakers, Lobbyists and the  
Administration Join Forces to  
Overhaul the Endangered Species Act**



A bald eagle, which the Endangered Species Act is credited with reviving, in Alaska. Critics of the act say that it has become a tool that limits people's livelihoods. Rick Bragg/Reuters





# Education & Outreach Update

by Education Coordinator Paige Witek

Since the last volume of *The Rectrix* the Education and Outreach Department has been busy, busy, busy! MRBO has had the opportunity to host and participate in a wide variety of exciting events all over Missouri. Read on to learn all about what MRBO Education has been up to!

## **Cavity- Nester Program with Great Circle**

***April 10<sup>th</sup> in Marshall***

Great Circle is an agency that provides a unique spectrum of behavioral health services to children and families. This spring we gave a program on cavity-nesting birds to a group of Great Circle students in the hopes of maintaining some nest boxes in the future!



## **March for Science Festival**

***April 14<sup>th</sup> in Kansas City***

Last year, MRBO attended the March for Science in Springfield. This year all the MRBO permanent staff members headed to Kansas City to host a booth displaying how MRBO's work contributes to science and scientific-thinking. It was a little chilly, but we prevailed!

## **Earth Day at Southeast Missouri University**

***April 18<sup>th</sup> in Cape Girardeau***

An environmental science club on campus put together an amazing Earth Day event which MRBO took part in by hosting a booth with activities!

Students explored what it is like to be a migratory bird by participating in "The Great Migration Challenge", a Flying WILD activity. They also got to test their bird ID skills with the Silhouette Match game, as well as learn about how to help birds and what MRBO does as an organization! It was a beautiful day and we got to talk with about 60 college students!

## **Friends of Arrow Rock Spring Programs – Natural History Hikes**

***April 20<sup>th</sup> – May 25<sup>th</sup> in Arrow Rock***

Each spring the Friends of Arrow Rock, a historical preservation and interpretation organization located in Arrow Rock, organizes Missouri History Programs for interested schools. MRBO does its part by leading the Natural History portion of the program. I led groups of students on a hike all throughout the town discussing the natural history of the area and how it is directly tied to the cultural history. This year has been a record year with one-third of the schools bringing classes with over 50 students! Student participation was up 28% and parent participation was up 16%. MRBO is delighted to be a part of such a great program.

## **Earth Day**

***April 22<sup>nd</sup> in Columbia***

This year we took part in the Earth Day celebration at Peace Park in Columbia, MO. We were able to spread the word about how to help birds and what MRBO does to conserve Missouri's birds and bird habitats. The best part was winning the **Grand Prize** in the Environmental Education Booth Display Contest! Our display included the Silhouette Match Game in which participants match up the bird species name with that bird's silhouette. It was a big hit!

## **Audubon Society of Missouri Spring Meeting**

***May 4<sup>th</sup> – 6<sup>th</sup> in Arrow Rock and the surrounding area***

It was truly a rewarding experience to host the Audubon Society of Missouri's Spring Meeting at our office in Arrow Rock this year! The meeting's theme was "Engaging Young in Birding and Bird Conservation". Field trips included visiting Grand Pass Conservation Area, Van Meter State Park, Swan Lake National Wildlife Refuge, Cole Camp Prairies, and a Missouri River Pelagics tour by Missouri River Relief! The meeting also included



presentations by young Missouri Birders and an afternoon workshop dedicated to launching the Missouri Young Birders Club, a new MRBO project that our members should look out for! It was truly a great weekend for both fun and friendships.

### **Arrow Rock Garden Show and *The Guardians* Screening** **May 12<sup>th</sup> in Arrow Rock**

The Arrow Rock Garden Show is an annual event that takes place at the Schoolhouse on Main Street, Arrow Rock. For the past couple of years, MRBO has teamed up Missouri Prairie Foundation and Missouri Department of Conservation to give away FREE native plant seedlings at this event! This year, we distributed around 130 native milkweed seedlings. We also took this opportunity to hold a screening of the documentary *The Guardians* in the Arrow Rock State Historic Site Visitor Center Auditorium. *The Guardians* is about an indigenous community in Mexico that confronts internal divisions and illegal loggers in order to recover the ancient forest they nearly destroyed. With brilliant cinematography, this film captures the struggle to save the millions of monarchs that call this forest home. We plan to hold future screenings, so stay on the lookout!



### **“Stewardship on the Missouri River” with Missouri River Relief** **May 23<sup>rd</sup> in Huntsdale**

Missouri River Relief, Job Point and AmeriCorps teamed up to hold this terrific event for students ages 15- 26 to explore and learn about the Missouri River. I hosted a station on land describing adaptations of various skulls of birds that inhabit the Missouri River and then led a hike in search of the birds themselves! It was a battle against the heat, but a great experience was shared among the students.

### **Lawless Descendants’ Tour** **May 26<sup>th</sup> at the office in Arrow Rock**

This spring MRBO staff had the pleasure of meeting about 20 of the many descendants of the Lawless family. They were invited for an in-depth tour of our office, aka the Lawless House, and were shown some of the historical documents that the Friends of Arrow Rock had put together about the property and the family. It was a great afternoon of meeting new people and exchanging information about birds and history!

### **Missouri Prairie Foundation Bio-Blitz** **June 3<sup>rd</sup> at Pleasant Run Creek Prairie in Southwest Missouri**

One of our favorite partners, the Missouri Prairie Foundation, held a fantastic Bio-Blitz this year on their Pleasant Run Creek Prairie, a 180-acre tract that includes 84 acres of original, dry-mesic sandstone prairie and prairie swale communities. MRBO took part by hosting a bird-banding station on Sunday morning. We weren’t able to band a lot of birds, but we did catch a Common Yellowthroat and a Bell’s Vireo, and did a lot of bird-watching with participants!

### **Monarch Mania at Runge Nature Center** **June 9<sup>th</sup> in Jefferson City**

It was all about pollinators at the Monarch Mania event put on through MDC at Runge Nature Center! MRBO participated by talking about how hummingbirds can be pollinators too! We gave away Hummingbird stickers, provided a coloring activity and a fun “How hummingbirds pollinate plants” demonstration.

### **Knob Noster Elementary Summer School Nest Program** **June 11<sup>th</sup> in Knob Noster**

Last summer I met the 2<sup>nd</sup> grade teacher at Knob Noster Elementary at an unrelated event at Knob Noster State Park and set up a program at their summer school! The tradition continued with Klee Bruce and I giving a presentation on woodpeckers and their different types of nests! Then the students got the chance to make their own nests and they were quite a creative group!





## **Columbia Rotary Club Presentation**

***June 20<sup>th</sup> in Columbia***

MRBO Directors Dana and Ethan were invited to give a presentation to the Columbia chapter of the Rotary organization. They discussed wildlife conservation challenges and what MRBO does to contribute to conservation in Missouri. It was also enlightening and heartening to hear about all the many worthwhile projects and volunteer services Columbia Rotary is engaged in. This presentation led to a Rotary member bringing a group of kids to Arrow Rock for an education event!

## **Missouri River Academy**

***July 10<sup>th</sup> in New Haven***

Missouri River Relief holds an awesome summer camp for high school aged students to fully immerse themselves in everything about the Missouri River. Eighteen high school students watched and learned about birds, examined bird skulls and discussed bird migration. The students got to experience the struggles of a migratory bird by playing, "The Great Migration Challenge." We are looking forward to next summer's River Academy!

## **P.E.O. Presentation at Brown's Chapel**

***July 12<sup>th</sup> in Arrow Rock***

MRBO was invited to provide a program for a local chapter of the Philanthropic Educational Organization (P.E.O.) Sisterhood. Dana gave a short presentation about why and how MRBO works to conserve Missouri's birds and their habitats. The presentation was well-received and there were many questions and subsequent discussion about local conservation opportunities!



## **Youth Empowerment Zone Program**

***July 23<sup>rd</sup> at Arrow Rock State Historic Site***

The Youth Empowerment Zone helps children and families in Boone County by providing comprehensive support, offering exceptional education and social services to stabilize families, prevent homelessness and promote healthy lifestyles. MRBO had the pleasure of giving a program to their K-5 class this summer. We took the kids on a birding hike and spent time exploring the Big Spring in Arrow Rock. The kids saw a Mississippi Kite and many species of flycatchers! They also found frogs and crayfish in the spring! It was fun for everyone.

***And last, but certainly not least.....***

## **YOUNG EXPLORERS' CLUB!**

***May 29<sup>th</sup> – July 28<sup>th</sup> in Arrow Rock***

This year was the second summer of our day camp, the Young Explorers' Club! The club takes place on Tuesdays, Wednesdays and Thursdays from 8:30 am – 11:30 am. We had a total of 15 kids (ages 8-11) participate throughout the summer! Even though our attendance numbers weren't as high as we hope they will be in future years, the quality of our programming increased greatly. This is in large part due to the addition of our Education Intern, Klee Bruce. Klee is an amazing young woman who has had a passion for birds and nature her whole life and she helped tremendously with improving the Young Explorers' Club and many other events this summer. We are so lucky to have her!

This summer's camp was filled with a variety of fun and educational experiences for our campers. Some highlights were banding birds at the office birdfeeders, exploring the language of birds, a bird beak adaptations activity called "Fill the Bill", making window decals, exploring the concept of camouflage, bird worm relay, hikes to the Big Spring and the Missouri River, a food web activity, exploring symbiotic relationships, food chain tag, learning to make observations about the Missouri River, exploring sediment, learning how to save the Pallid Sturgeon, a music program by Bruce Phillips, nature yoga, netting macro-invertebrates, fishing in Big Soldier Lake, a casting accuracy game tournament, a pollinator relay, making bee magnets, practicing using an atlatl and darts, learning all the items trees provide for us, identifying trees, exploring beaver adaptations by dressing up like a beaver, a Black Bear vocalizations obstacle course, scavenger hunts, learning about



population dynamics, learning how to press flowers, examining seed dispersal methods, making bird feeders, searching for frogs in the Big Spring, exploring vulture adaptations, holding live Missouri snakes, taking a Cultural History tour of Arrow Rock and enhancing our observational skills! We did all this and more.

Some new things this year were our Young Explorers' Club t-shirts and our Family Camping Night! The camping night took place at the Arrow Rock State Historic Site Campground and it was a lot of fun! We went on a treasure hunt, made crafts, learned Missouri owl calls and went birding in the morning. We also ate a delicious dinner and breakfast with all local meats!

Our campers had a good deal of fun and got to go home with new knowledge and new friendships. This summer's camp has been an amazing experience to run and we consider it a great success!



We would like to give a HUGE thank you to all of our guest presenters who took time out of their day to come to camp and teach our campers something new. We truly appreciate the time and effort it takes to put on the quality programs you gave. Thank you to Kristen Schulte and Claire Hassler from Missouri River Relief, Bruce Phillips, Cynthia Green from MDC Sedalia, Eric Fuemmeler from Van Meter State Park, Roxanne Stockdall and Elizabeth Duckworth from Missouri Master Naturalists, Dianne Van Dien, Bonnie Ricord, and Elaine Breshears, Mandy Dorrance, and Sandy Selby from Friends of Arrow Rock. Also, a huge thank you to the amazing staff, particularly Cindy Imhoff, Terry Cobb and Mike Dickey, at Arrow Rock State Historic Site for loaning us materials and giving us space to explore! Young Explorers' Club would not have been possible without all of you!





# Healthy Habitats....For Humans

by Education Intern Klee Bruce

*How birds improve the lives of people, and enrich the pursuit of happiness in an unhappy world.*

There is a question that many people who are passionate about birds ask themselves at some point: *Why should people care about birds?* I have spent over half of my life in the pursuit of birds. I grew up with birds, and I've benefited from them greatly: I've received awards, been presented with countless opportunities, met wonderful people, and even been employed because of birds. It's easy to see why I care about birds, but what about other people? Why should they care about birds? Why should my friends, my family, my co-workers, and the guy that took my order at Taco Bell care about birds? And more importantly, how do I make them care?

It's very easy for me to answer the question *why do birds matter?* Birds matter because they are an important part of the ecosystem, they are essential links in the food chain, and they are loud and clear indicators for the habitat they're in. I.e. it's much easier to monitor the quality of a prairie by observing its birds than say, investigating its mycorrhizal fungi. Ask any naturalist the same question about their favorite part of the natural world: *Why does \_\_\_\_\_ matter?* And they will probably be able to tell you without hesitation. So, when we ask ourselves the question *why should people care about birds?* The answer can be the same as it was for why birds matter: they're important. They play an essential role in the world we live in. We can satisfy ourselves with this answer; we can look at the science and clearly see why people should care about birds. And yet... It is still so hard to convince people to care.

People in today's world just don't seem to be satisfied by science. People want to know they will be immediately benefit from their actions. We can try to explain how birds, or any part of the natural world will benefit them. "You need oxygen, right? You need water, food, and shelter, right? Birds tie directly into those things. So do reptiles, and amphibians, and mammals, and plants..." communicating that we need the natural world to survive on even the most basic level seems impossible sometimes. Humanity appears to have an appetite for destruction, made evident by the violent, consequential things happening every day. The political, social, environmental, and economic events of recent times have made the phrase "some people just want to watch the world burn" disturbingly real. People don't seem to care about the world they live in, and they don't want to make it better. Right now, in order to answer the question *why should people care about birds?* we have to go beyond science. We have to tap directly into how people think and feel.

Birds can make people feel things. They are creatures that are so completely different from humans, yet we still find ways to relate to them. I have never met anyone who didn't want to know what it would be like to have wings. Birds, and more specifically bird watching, can improve people's lives through happiness and enjoyment alone. My own story is filled with examples of how birds can enrich people's lives in "unconventional" ways.

When I was 8, birds started to become a bridge between two things I loved: reading and exploring. Being bookish and being outdoors seemed like completely separate entities until I started noticing that there were lots of books, with interesting pictures, written about birds. After reading them, I could go outside and investigate the shapes and colors of birds myself.

In 2010, when I was about 8 and a half years old, I was at the library checking out books for school. It was time to learn state capitols and there was one book that I just couldn't leave without. It presented U.S. history using... you guessed it, birds. State birds more specifically. It was called *The United Tweets of America* by Hudson Talbot, and I blame it largely for my bird obsession. Each state bird walked you through the state they represented, from the state's capitol to famous residents and historic landmarks. I never did learn all my state capitols but I did learn all 50 state birds, and picked up some interesting facts along the way. Birds are eye catching and easy to focus on. They can become incredibly helpful educational tools when employed in the right way.

When I was 9, I discovered my local Audubon chapter, The Greater Ozarks Audubon Society (GOAS). I walked the shores of Stockton Lake on my first Audubon field trip and watched the hobby I had created turn into an entire world. By the time I was 10, bird watching had become a source of enjoyment for my whole family. Going on field trips with the Audubon society was an entertaining, educational, and relatively inexpensive way for my family to spend time together.

In middle school, birds were my escape from the awkward, mundane happenings of everyday life. Bird watching became soothing and meditative. When you're looking through binoculars, everything except the object in focus disappears into a



black void. You can't see problems with your friends or arguments with your family in binoculars. But you can see a really nice Indigo Bunting.

I grew to love birdwatchers as much as I loved birds. I found a family in GOAS, and a community in the surrounding world of birding. I found a place where it was safe to make friends, and express ideas. Being part of a community is powerful, and communities of birders are often wonderful places to be. Birders have a natural inclination to be environmentally conscious, aware of their surroundings, and supportive towards youth. If everyone belonged to a community where those virtues were shared, the world would be a better place.

By the time I reached high school, birds were my most reliable happy place. I could turn to birds when nothing else was making me happy, and I thought about birds even when I wasn't outside with my binoculars. Nothing could cure depressive episodes and mood swings faster than watching Red-bellied Woodpeckers dangle off suet bricks with my mom, or listening to Woodcocks "peent" with my dad, or chasing cross-state rarities with my birder friends. Bird watching can easily become a coping mechanism, and a release from the stress of everyday life.

Today, I'm a junior in high school and birds are fully integrated into my everyday life. There are bird stickers on my laptop and bird pictures on all my social media. I wear shirts with birds on them and I recently took a nine week internship at the Missouri River Bird Observatory. Having unusual interests doesn't necessarily interfere with having friends; identifying birds in random TV commercials can be a cool party trick.

Before wrestling with the question *why should people care about birds?* First ask yourself *why do I care about birds?* Often times, that answer will go beyond the basic science of why birds are necessary. I care about birds because they make my life better. And I truly believe they can do the same for other people.

There are seven major benefits that people gain from making bird watching a regular practice. This is not an end all, be all list of the positive side effects birding, these are just several points I have noticed from my own experience:

#### 1. Community

The sense of community among birders becomes one of the most appealing things about bird watching itself. In my experience this is a very positive and safe community, which is difficult to find in today's atmosphere and therefore that much more refreshing. As birders, we should strive to maintain a welcoming attitude.

#### 2. Educational insight

Birds often become a gateway into many other aspects of natural science. This is partly because in a community of bird watchers there will likely be several Master Naturalists and a few herpetologists, maybe some entomologists, and several people with a vast knowledge of native wildflowers. In addition to this rich knowledge base, interest in any part of an ecosystem will likely spark interest in another, because all things in nature are so closely tied together. Birds can be a great way to learn about the natural history and geography of a region; many birders become local history buffs. Birding in the 21<sup>st</sup> century is aided by all sorts of amazing technology, from public databases to sound recording equipment to interactive maps and mobile field guides. Birds can be used in the classroom to illustrate all kinds of concepts, from weather patterns to the food web. All of this is just the tip of the iceberg. The educational benefits of birding are truly limitless.

#### 3. Routine

Being in tune to the migration patterns, nesting seasons, and feeding habits of the birds in your area creates a reliable and comforting routine. When you are aware of birds, you always have something in the past to reflect on, something in the future to anticipate, and something in the present to observe.

#### 4. Improved mental health

The soothing, meditative benefits of activities that take place in the natural world are incredibly powerful, and bird watching is no exception. Birding is something you can do to exercise your mind literally every time you step outside. The combination of active visual search and careful listening keeps the mind sharp, and in tune with the body. Bird watching often finds us in a completely different environment, performing completely different tasks than what is normal for us. Experiencing nature in this way is incredibly refreshing, and gives people a chance to experience something positive no matter how negative their normal situation may be. Dana Ripper, director of the Missouri River Bird Observatory, and I





recently had a conversation about a possible niche to be filled by using bird watching and outdoor activities in general to aid social work. We thought that nature based activities and environmental education could contribute to a person's good health and well-being. After a quick search on the internet, it became clear that we were not alone in our thinking. In Social Work Today's 2011 article titled "Environmentalism and Social Work, the Ultimate Social Justice Issue" author Claudia Dewane states that "The social work profession, although governed by the "person-in-environment" principle, has long neglected the environment-in-person. This environment includes not only social and economic contexts but also the natural world." She later writes that "Although social work previously considered involvement with improving the natural world to be for environmentalists, this exclusion is no longer acceptable. If social workers know that context is a prime determinant for quality of life, the deteriorating natural world must become part of social workers' concern." Quality of life

is determined by quality of environment, no question about it. A heightened awareness of the natural world can directly lead to an improved state of mind. Bird watching can and does provide this awareness to all walks of life.



#### 5. Improved physical health

Bird watching is as physically strenuous as you make it, and is therefore an ideal activity for any fitness level. In my own experience, coming from a family with intermittent health restraints, birding was always something we could continue to do together. For more advanced individuals, there is always a steeper hiking trail to walk and a bigger mountain to climb. The beauty of bird watching is that there are birds everywhere, in every environment. If you want a relaxed outdoor atmosphere or an intense one, birds will be there for you to see.

#### 6. Family time

Bird watching is a very family friendly activity, due largely to the welcoming community birders so often create. Children enjoy getting out on the trail in nature, even if at first they scare more birds than they watch. Observation skills are honed, nature is appreciated, and memories are made while searching for birds.

#### 7. Career opportunities

There are countless job, internship, and volunteer opportunities to be found outdoors. Birding is a fantastic introduction into many of these fields. Networking in the birding community can establish connections with wildlife refuges, fish hatcheries, non-profits, conservation agencies, and many other organizations that could turn into future places of employment.

These are all things that can and should be focused on when asking the question *Why should people care about birds?* If people experience the benefits of birds firsthand, they are more likely to care about them, and remember them on their way to the polls, the grocery store, and the family reunion. Making people care is more important now than ever, and the positive feelings that birds have the ability to evoke can be harnessed and used to preserve and protect the natural world. Part of my life's mission is bringing a conservation message to all types of people. In addition to that, I believe in bringing happiness to all types of people as well. Birds are miraculous, in their ability to connect people with nature and bring immense joy to anyone who observes them. That is something we should all care about.

*Right:* Klee explains the ecology of migration to Young Explorers. Displaying the results of the Great Migration Challenge game, she discussed the complex factors that affect survival, including the perils of free-roaming cats, building collisions, extreme weather events and loss of stopover habitat. Klee also detailed the many ways kids and their families could help migrants, from providing cover, food and water sources to marking home windows in ways that prevent bird strikes.





# Reflections on the Grassland Bird Breeding Season

by the Grasslands Crew



Erik Ost  
Field Project Leader

This newsletter marks the end of my third consecutive spring and summer season with MRBO. I thoroughly enjoy my contributions to this organization and have come to appreciate Missouri's beauty from my extensive time working and traveling all across the state. Being part of a lot of MRBO's projects, I have become familiar with a great deal of Missouri's bird life and natural environments. It may sound comical but working on the grassland projects has made me develop a connection with some of the more common species. I would estimate I have counted thousands of Dickcissels and many hundreds of the typical grassland species such as Bell's Vireo, Eastern Meadowlarks, Field Sparrows, and Henslow's Sparrows over the course of my surveying. All of these species have been banded in my presence and I have monitored their nests. Considering all of the time observing these species, I feel like I have an intimate relationship with them. Despite my presumed amicable relationship, I am still treated like an unwelcomed stranger when visiting their nests - rude! Maybe I will have to try presenting the parents with a gift of a tasty invertebrate to

gain their trust!

Most of the field technicians that I have met work in new places every season and rarely return to work for the same employer. There are many opportunities to conduct field work and they range around the world. A new environment and new birds to see and study are popular reasons seasonal jobs have high employee turnover rates. Even though this is the pattern for most of my former colleagues, I have stuck with MRBO over the years for a few reasons. The utmost reason is that I enjoy the work. Combining my enjoyment with the low-stress style of work that my position entails makes for a positive livelihood that I value tremendously at this point in my life. Another reason I have continued to work with MRBO is for deeper comprehension of Missouri's ecology. Not only is it fun to be able to identify Missouri plants and animals, but it is also rewarding to be able to experience temporal changes in population numbers of particular species in response to land management or lack thereof. Even between two years there can be significant changes in bird populations at a single natural area. There are also areas where I have seen very few changes.

There are still new and exciting parts of this job I get to experience, such as seeing new bird species. This spring I have seen a few new bird species including American Golden-Plover, Black-throated Green Warbler, Hudsonian Godwit, and Semipalmated Plover. This spring MRBO detected an unusually high number of Virginia Rails and it was such a joy to hear and get great looks of them! One especially pleasurable experience was hearing a King Rail during a grassland survey at Shawnee Trail Conservation Area! There are typically new or different sites I get to survey too so that keeps the job interesting as well. Even areas I have surveyed in the past can have new elements that make the experience unforgettable. Just like earlier this season when I re-surveyed a wetland in the bootheel while there was snow on the ground!

With these thoughts and experiences in mind, I am going to continue working for MRBO this fall with migration surveys occurring at Wah'Kon-Tah Prairie and Linscomb Wildlife Area and remain with the organization in 2019! Additionally, I have been admitted to Northwest Missouri State University's GIS Master's program and will be taking courses in conjunction with work as a MRBO employee.

MRBO Grasslands Field Crew days can be split roughly into two categories: short and long.

In the first quarter of our season, we would conduct 6 transect point-counts per day, per person, starting 15 minutes before sunrise. Each of our transects take roughly half an hour, give or take a few minutes for transit between transects, and for relatively shrubbiness of the area. Typically, that puts us in the field from 5:45-8:45 am, not including driving time. In the last quarter of our season, we would spend anywhere between 3 and 6 hours on the prairie at Taberville engaged in nest monitoring. We use various nest searching methods to find as many grassland bird nests as possible- often we simply spread out over a given area and walk around, either seemingly random directions, or toward productive-looking areas for certain birds (we have the best luck with Bell's Vireos around stands of sumacs with a dense understory, for instance; best luck for Dickcissels in short grasses with tall, straight bushes coming up). These are our "short days".



Carl LaRicca  
Grasslands Technician



Our long days occurred in the middle two quarters of season. During this time, we would get up and drive to our transect locations, do our 6 transects, and then drive back to our field house for a 15-30 minute break (okay, usually it would wind up being an hour). Then we would go out and check nests and search for new ones - anywhere between 2 and 4 hours, depending on driving time and heat index - we tried to leave ASAP when it was supposed to be "95, feels like 118"!

Personally, I enjoyed our long days more than our short days. Despite sometimes driving for hours before transects and back before nest searching (we went all the way to Diamond Grove Prairie Conservation Area from El Dorado Springs!), the transects were a way to break up the sometime-tediousness of nest searching. In fact nest searching was fairly average for me....it was the transects which held my best and worst moments.

My worst two transects were bad for different reasons. At Bushwhacker Lake Conservation Area we were surveying some odd areas; some were crop fields, some seemed pre-restoration areas, and others were beautiful prairie. But one transect stands out in my mind: I had been walking along next to a dry creek for about 100 meters, weaving through the undergrowth of a forest. It was fairly picturesque. Then, the trees ended and the shrubs began. For about 75 meters, I trudged through shrubs so dense, an easy path through might as well be the proverbial needle in the haystack. It was certainly a mistake, but I kept hoping it would thin out after my next step. It did quite the opposite however; after what felt like the point of no return, a wall of blackberry bushes and other briars, eight feet high, towered over me. Having navigated the maze of shrubs, now behind me, I knew that I had no choice but to continue onwards. So after trying in vain to find a way around, I gathered my wits and plunged in. After forty-five minutes of tenderly pushing vines of inch-long thorns up and down and side-to-side, and realizing that I definitely just voided the return policy on my new boots, I made it through.

This is only half different from the second worst time- the shrubs were about half as bad (they were much shorter) but just as infuriating. I had been walking through these hedge rows of locust trees and tall sumacs, overgrown with blackberry and grape vines. Between these hedgerows were 30 meter stretches of ankle high grass and flowers. It was shockingly bad for finding birds - nothing wanted to be in the sumacs, and nothing was in the too-short grass. (All right, maybe I was making enough noise to wake the dead- we'll never know). But after coming out of my second-to-last hedgerow, I had pushed mightily through some grape vines in my way, and needed to catch my breath. I figured I'd text my coworkers and see how close we were to finishing at the same time. Right about then, my heart sank - I realized my phone wasn't in my pocket where it should've been! After losing my mind and searching where I thought I may have come out from the hedge, I decided that I would skip the last hedge, and sprint though my last transect, since it was getting late and the birds, silent. I managed to catch one of my coworkers coming to pick me up. After spending another half hour looking, and then picking up our last coworker, then search again for a half hour, I decided we should go to the other side of the hedge and try to track myself from an hour ago. With my mother calling my phone repeatedly and Jarrod tracking me like a deer, we found my phone face up about 30 meters from the edge of the hedgerow where I realized I lost it. I can only assume that I dropped it while holding it with my iPad..



Despite these trying transects, my best couple make up for it. At Frank Ranch and Pawnee Conservation Area, I had some amazing times: At Pawnee, I had been rummaging through a pretty shrubby transect. About halfway through, it thinned out a bit, and had some trees, fairly well dispersed so that I didn't get any of their shade. It was not a fun transect. But right before it ended, and I had to walk a half mile to the other half of Pawnee, something flushed from the grass and nearly gave me a heart attack! It had flushed about six feet ahead of me when I stopped to check my maps. After the initial shock, and fighting the urge to find where it flushed from (since it was already too late to see), I became confused... How could a Northern Bobwhite get that big?! And after that brief moment, I realized what I had just seen. It was my very first Greater Prairie-Chicken! That made the rest of shrubs and briars and all the hiking worth it.

Lastly, at Frank Ranch, I had been walking through some lower quality habitat. It had been about 800 meters (about a transect and a half) of this thick forb monoculture, with no birds except Red-Winged black birds when I came across a small pond. Walking by it, I almost paid no mind because mostly they held nothing of great interest- usually nothing at all, or some Red-Winged. I stopped to check my map, and I looked up and around, and saw something on the pond! Since it was the first bird I'd seen on the pond this season, I was pretty curious and more than a little excited, even though I expected a wood duck. Instead, what I saw was a Pied-billed Grebe! At first I hadn't been very excited- they're fairly common in places I've spent most of my time, but I was told later that it was very unusual to see them in the middle of the breeding season here. That find made me feel pretty proud and even a little special.





Jarrod Messman  
Grasslands Technician

I was a grassland technician for MRBO from the beginning of May until the middle of July. In this position, I had the opportunity to survey grassland bird species in many different habitats all over Missouri as well as monitor their nests in the Taberville Prairie in southern Missouri. Because of the large scale of this project we spread our time between our field house in El Dorado Springs and camping near our survey sites. This position did not just deal with birds and grasslands, but it also had a role in informing the public and landowners about what we were doing and why.

When I finally met up with Dana and Ethan on the 9<sup>th</sup> of May for training I found that they were exactly what I wanted in a supervisor. They had previous years of field work and also started this grassland survey project. They knew exactly what the field conditions were to be expected, and they had walked across the same transects that I would end up doing later in the season. With over 480 transects that needed to be done before June 30<sup>th</sup>, Dana and Ethan also pitched in to help complete the work load before the deadline. This came in very handy when we were out camping for a week and wanted to get back to a shower and air conditioning.

After training we jumped right into a week of camping at our southernmost survey sites. The first day was very exciting because I was not quite sure what to expect, but once the morning started I knew I was going to love this job. The first day was a perfect morning to start on, it was cool, all of the birds were singing, and the sunrise was flawless. The 400-meter transects seemed to fly by as the grass was short, and there was little shrubbery to drag me down. This perfect first day did not mirror every day of surveying. The start of the day was always perfect in the predawn air, but some of my transects would run right into a long stretch of briars, poison ivy, a deep creek, or thick woods. Luckily it seemed I would always end my day on an easy tract of grassland and I would forget everything I just went through. These difficult areas did have their perks though; they held a different variety of bird species to listen to and count. The birds found in the woodland and shrubby areas came as somewhat a relief from the repetition of the grassland birds that we saw and heard every day. The camping for these survey areas had to one of my favorite parts about traveling to a new area. We managed to have good weather for most of the days we were in a campground. I have always enjoyed camping and being able to do it for work was a huge bonus.

The other half of my job included nest searching and monitoring at Taberville Prairie. This prairie was only a fifteen-minute drive from the field house and covered over 370 acres of searchable area. I loved nest searching because it was more hands on, and we could see the progress and growth of the chicks from eggs to fledge. Finding nests in June was not much of a problem because we could flush the mothers off their eggs using a method called rope dragging. The rope dragging involved a 15-meter rope with cans dangling below to cause a disturbance in the grass causing birds to flush. As the season grew longer and we worked into July nests became harder to find. Many species were starting to close out their reproductive season, so this led to nests occupied with chicks and all nests were harder to find. When the chicks hatch the parents no longer sit on the nest full time. To find these late-season birds we needed to change strategies from rope dragging to stakeouts. When we staked out a bird we would wait until we saw the parent with food or nesting material and then get low in the grass and watch from a distance to see where they would go down into the grass. When the parent departed we would rush over and try and find the nest. At the beginning of the nest checking in June I preferred to use the rope drag method because I found that we located more birds in a short amount of time. By the middle of July though, I found that staking out a bird was far more thrilling and somewhat less labor intensive than rope dragging.

During my time with the Missouri River Bird Observatory team I learned a lot of valuable field skills and got to see some very cool bird behavior. Whether it was the landowners, citizens around El Dorado Springs, or the people I worked alongside, they all made a large impression on me and gave me advice about future wildlife work and conservation strategies.



# Grassland Breeding Season Surveys and Concern for Grasshopper Sparrows

by Project Leader Erik Ost

Our annual grassland breeding bird survey project has come to an end. This season, we surveyed 43 properties, predominately public lands but also several that are part of the Audubon Conservation Ranching program. The public lands are managed by several entities, primarily the Missouri Department of Conservation, The Nature Conservancy and the Missouri Prairie Foundation. The MRBO Grasslands Crew completed nearly 600 line-transect surveys this season. Our grassland project technicians (Carl, Jarrod and myself) completed a large proportion of these surveys, but the directors (Dana and Ethan) and Mark from this season's wetland project helped out tremendously.

Most of the grassland units are localized in the southwest part of the state, residing in counties such as Barton, Dade, and Vernon. There are also some in the west-central part of Missouri such as Saline and Pettis counties. The other main survey area is near the Iowa border in Harrison and Putnam counties. Since these counties range from the extreme northcentral and southwestern extents of the state, you can imagine the diversity of prairie systems that would have been here historically, prior to settlement. It is currently estimated that we have less than ½% of our native prairie ecosystem left, and this drastic change in environment has naturally led to profound population decreases in biota that use prairies for their niche.

It is well known that Greater Prairie-Chickens have suffered major declines but it may surprise readers to know that other prairie-obligates, such as Loggerhead Shrike, the subject of this issue's Species Profile, have also been diminishing in Missouri. One species that may not be getting enough conservation attention in Missouri is the Grasshopper Sparrow. The breeding range for Grasshopper Sparrows extends throughout much of the continental United States, from Texas to Washington and across the Midwest into Canada and the Northeast and Southeast. Grasshopper Sparrows winter in Mexico and Central America as well as the southern United States. In Missouri, Grasshopper Sparrows prefer habitats of tall-grass and mixed-grass prairies that have patchy areas of bare ground. Referring to the North American Breeding Bird Survey database, Grasshopper Sparrow populations have declined about 75% from 1966 to 2014. Their nationwide conservation status is listed as "Common Bird in Steep Decline" by the 2014 State of the Birds Report. Similar to most of our current biota, habitat loss and degradation are main causes for declines. Less universal causes for Grasshopper Sparrow declines are habitat fragmentation, insecticides, shrub/woody vegetation encroachment and increases in non-native grasses/forbs.

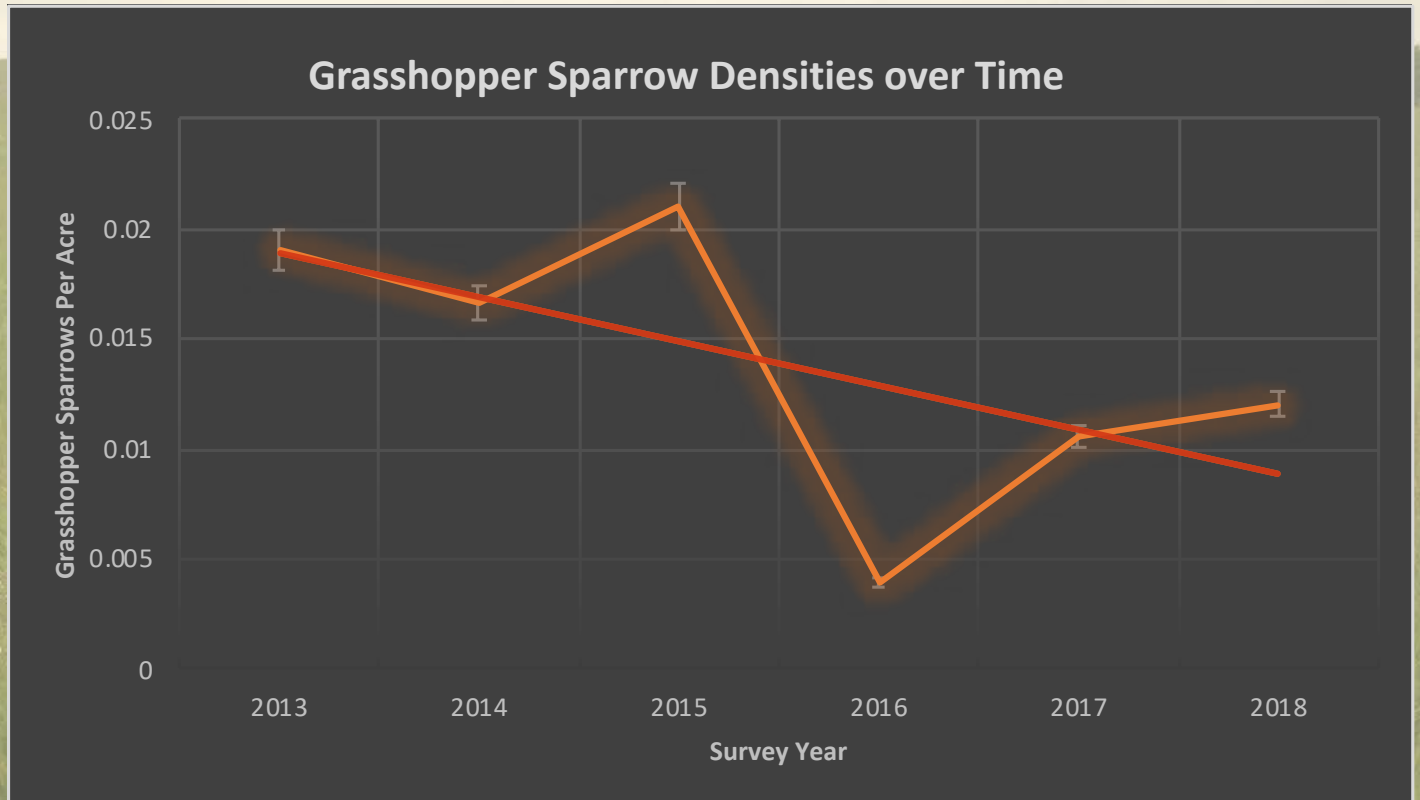
Some states have seen dramatic population reductions since 1966 such as Minnesota which has lost ~97% of its Grasshopper Sparrows. In the Northeast, most states have them listed as "Threatened" while Maine classifies them as "Endangered". For the overall North American population of Grasshopper Sparrows, these states' breeding populations do not contribute much in terms of numbers and so their importance may be overlooked. However, many states do not have an official species status for Grasshopper Sparrows, including Missouri. This lack of status doesn't mean populations haven't decreased significantly. As mentioned earlier, Missouri has less than one half of 1 percent of native prairie left. Think of the abundance of Grasshopper Sparrows that would have existed here historically!

In 2015, The U.S. Fish & Wildlife Services published a thorough status assessment and conservation plan for the Grasshopper Sparrow nationwide and included various information on Missouri's relationship with the bird. It is listed that Missouri has no state wildlife action plan for Grasshopper Sparrows despite having an annual population decrease of 2.1% (1966-2012) and 2.4% (2002-2012).

MRBO has been collecting data on grassland bird populations via transect surveys since 2012 and has logged numerous Grasshopper Sparrow detections that can be useful for determining population trends over time. The graph below depicts Grasshopper Sparrow detections per acre over the years 2013-2018. Data from 2012 were omitted due to significantly less area surveyed than the rest of the years. The average area surveyed each year in 2013-2018 was 32,286



acres, ranging from 22,675 (2017) to 38,830 (2013) acres. The number of individual Grasshopper Sparrows detected ranged from 142 (2017) to 739 (2013) and averaged 443 per year. From the graph, you can see there is an overall negative population trend over time represented by the red line. Additionally, percent change between 2013's density and 2018's density is **-58%** (indicated by the red trendline on the graph). This change is significant but it is important to keep in mind that MRBO doesn't survey the same exact sites every year, so the density each year is influenced by which sites are surveyed as some areas are consistently more conducive to Grasshopper Sparrow presence than others.



The reason I am focusing on Grasshopper Sparrows in this article is because I have noticed there are areas that I have surveyed that I would have bet money on seeing or hearing Grasshopper Sparrows but they weren't detected. Bushwacker and Comstock Prairies, in Vernon and Barton County respectively, are such examples where habitat looked prime but yielded zero Grasshopper Sparrows. Both of these conservation areas hosted Grasshopper Sparrows in years past. One trend I have noticed just from my two seasons surveying grasslands is how much vegetation growth there has been. Comparing the same survey sites between 2017 and 2018 often demonstrates extensive shrub and woody plant growth. Since Grasshopper Sparrows prefer areas with relatively sparse vegetation and patchy bare ground, it is no surprise that they are extirpated from areas with thicker plant communities. Wah'Kon-Tah and Taberville prairies in Cedar County are also good examples of areas with excellent vegetative diversity that are hypothetically too thick in structure for Grasshopper Sparrows. More intensive management - controlled burns, grazing, woody and invasive plant removal - *should* result in the habitat structure to which Grasshopper Sparrow populations respond positively. However, even within Missouri Prairie Foundation properties - which often contain sparser vegetation and less woody cover than many public sites - there are sites that, surprisingly, do not contain Grasshopper Sparrows. Therefore, there may be factors other than habitat suitability playing into this species' decline.

This article is mainly prompted by my and other MRBO staff members' observations that Grasshopper Sparrows have become increasingly uncommon on our Missouri surveys. It is not intended to be a criticism of current management practices but merely an attempt to encourage others to think about what they have observed and whether it parallels what MRBO has perceived through our own observations and data trends. If you have any inference or comments regarding Grasshopper Sparrow conservation in Missouri, please let us know. We don't want Grasshopper Sparrows to slip away from Missouri!

The background pictures for this article were taken at Monegaw Prairie Conservation Area, which typically hosts breeding Grasshopper Sparrows, particularly after controlled burns. This Area also provides habitat for Henslow's Sparrow, a species that prefers thicker vegetation and will tolerate some woody cover.



# Summary of & Reflection on the 2018 Nest-Monitoring Project

by Project Leader Erik Ost

This year's breeding season was the third consecutive year that MRBO contributed to the Missouri Department of Conservation's Resource Science Division's (RSD) 15-year study on the effects of patch-burn grazing (PBG) on prairie biota. As in 2016, MRBO field technicians concentrated their efforts at Taberville Prairie Conservation Area in St. Clair County. (Map, *right*, shows the Taberville boundary in red and the PBG study units in blue and yellow). This season at Taberville, we began nest-searching the 22<sup>nd</sup> of May and continued to search for and monitor nests until the 26<sup>th</sup> of July. We monitored over 200 nests this season, which is the most MRBO has monitored so far!

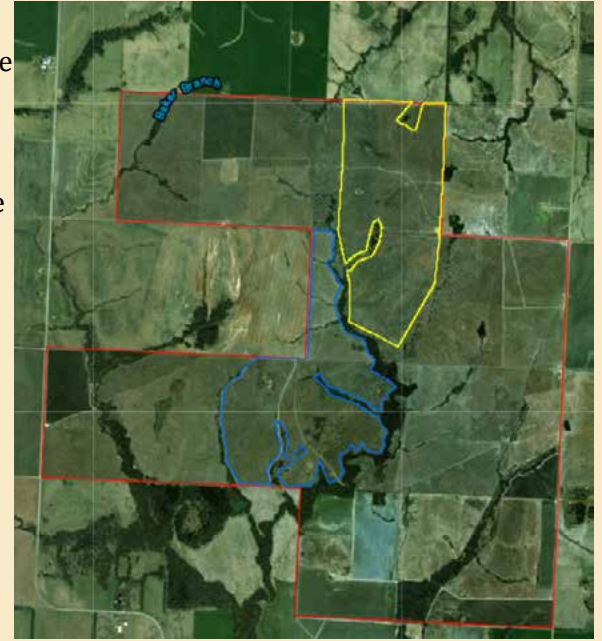


We found nests from 17 species this season. Two species, Northern Bobwhite and Wild Turkey, are unique to this season. Unfortunately, the turkey nest was predated, but the quail nest was a success! Strangely, the original 15 eggs the quail had laid were reduced to nine; only seven of the remaining nine remaining hatched (photo *left*). The six that "disappeared" were almost certainly consumed by a predator, but still a very successful brood!

The species for which we found and monitored the highest number of nests was once again Dickcissel. As in 2016, Dickcissels were prolific at Taberville Prairie and we found approximately the same number of their nests as in that first year. Interestingly, we were well short of finding a similar quantity of Dickcissel nests until late in the season. There seemed to be hotspot for Dickcissels that developed towards the end of June – a portion of the study area that had been previously burned and grazed. The species was present in that area all season but was not as densely populated in May and June as compared to July. One hypothesis is that when the farmland adjacent to the search area got hayed, the Dickcissels there moved into our search area. It is also possible that as vegetation growth started to fill in the patchy bare ground that had resulted from the prescribed burn, the habitat became even more conducive to Dickcissel nesting.

Now, with two full seasons of nest-searching under my belt, I have learned a lot about habitat utilization and the different substrates each species uses in nest-placement and construction. One interesting observation was how variable nest-placement can be within the same species. It is well documented that Field Sparrows build their nests higher off the ground as the season progresses, however, Dickcissels were observed to follow similar patterns and this phenomenon wasn't apparent in my literature review. Many of the Dickcissel nests in the earlier part of the season were conspicuously placed near the base of a burnt sumac or small bush, while later in the season they were higher off the ground. Interestingly, Dickcissel nest success was higher towards the end of the season, suggesting a relationship between nest success and nest height. The higher-placed nests were usually more obscured by overhanging foliage than the lower level nests, likely contributing to lower rates of parasitism and predation. Increased density of foliage also acted as a shade from the sun, possibly contributing to nest success.

Other interesting nest-placement observations are those of Eastern Towhees and Mourning Doves. Eastern Towhee nests (photo *right*) have been found on the ground, in bushes, and near bases of sturdier plants. This season we found an Eastern Towhee nest using the base of an eastern gamagrass plant. This was odd considering the plant doesn't provide too much structural support. It held the nest, but ultimately the nest failed due to predation (likely a snake). Mourning Dove nests, of which we found and monitored 11 this season, were even more intriguing. Most of these were on the ground and a few were in trees and bushes. Although Mourning Doves do construct nests, nest-building







was not ever observed during our project. For the nests on the ground, it looked like they just landed on a clump of grass and while it was matted on the ground beneath them they would lay, using the matted grass beneath them as the nest floor (photo *left*). The other nest locations were old nest remnants from other species. Mourning Doves will lay their eggs in other species' used nests and they could be any height off the ground up to about eight meters. We even observed Mourning Doves using old Gray Catbird nests that we had previously monitored earlier in the season! Another observation worth noting is how common it was for one Mourning Dove egg to not hatch. Most of the nests that had eggs were depredated before hatching could occur, but the ones that progressed into the nestling stage, or were found in the nestling stage to begin with, usually had an egg present that never hatched (photo *right*). Mourning Doves have a distinct laying behavior in the sense that they only lay two eggs, one in the evening and then the other one in the following morning.



One reason we found more nests this year than in the previous two years of the project is the implementation of the rope-dragging method. Last year, former employee Veronica Mecko and myself constructed a rope set-up that was about 14 meters long and had tin cans dangling from strings that were one meter long; these were spaced every ~1.5 meters along the rope. We walk the grassland and hold an end of the rope taut while the rope and cans would clank against each other and brush the top of the vegetation between us, causing birds to flush from their nest (photo *below*). We made this tool late in the 2017 breeding season and didn't have much time to use it. This year, we used the method copiously. We found about 60 nests using the rope-dragging technique. It became the go-to method when we wanted to find Henslow's Sparrow and Eastern Meadowlark nests, which prefer to nest in open grasslands and also have quite concealed nests. This method would be great for finding Grasshopper Sparrow nests, but unlike 2016 when there was one pair of Grasshopper Sparrows in the search area, this year there absolutely no Grasshopper Sparrows in the entire ~400 acre study area. Rope-dragging is exhausting and not very efficient when trying to cover ground that is shrubby or occupied with sumac. We would still try rope-dragging through these areas occasionally because there were scenarios that resulted in nest discoveries. The Taberville study area is 34% larger than the Wah'Kon-Tah study area of 2017; we therefore emphasized covering as much ground as possible.



Another technique I think contributed to our nest-searching is what I coined "stick swiping" which is using a long stick (>5 feet in length) as a wand and waving it back-and-forth while walking. The stick brushes the top of the vegetation



and essentially creates the same effect as rope-dragging. This method works for the same reason: often parental birds will hold extremely tight to their nests while they hear you approaching nearby and won't flush unless absolutely necessary. Therefore, by rustling vegetation around you using the long stick or rope and cans, it causes the same effect as if you were there walking but with less risk of dislodging the nest and no risk of trampling the nest. Dickcissels, Henslow's Sparrows, and Mourning Doves were species noticeably more prone to waiting until the last moment before flushing from a nest.



A nest is a success if at least one host species' nestling fledges. Nests were checked every three days but this spacing changed depending on the stage of the nesting cycle. Incubating nests were checked less frequently while nests closer to fledging would be checked more frequently. By modifying our monitoring frequency, I believe we were able to keep the negative impact our presence creates on nesting success to a minimum, while also maintaining a high degree of certainty concerning nest fate. More than half of the nests monitored were found within the first three weeks of the project (5/22-6/12), suggesting it may be beneficial to start even earlier - particularly since we were finding Eastern Meadowlark nests (photo left) with eggs as early as May 11<sup>th</sup> during training and transect surveys.

I am happy to say that this year we had better nest success rates than last year at Wah'Kon-Tah Prairie and about the same success rate as the 2016 pilot year at Taberville. As I am writing this in late July, there are still some nest fates unaccounted for and so the percentage may change slightly, but as of now we are around a 35% nest success rate.

Just like last year, it is saddening when the breeding season ends. Jarrod mentioned that nest-searching is addictive and I would agree! Getting paid to find and monitor nests is such a joy. Using your knowledge of birds' life history combined with observational skills and a little diligence you have the recipe for finding nests. Add in a little luck and you never know what you'll find in a morning's search! I was pleased to work with two great technicians that had a lot to contribute to this project. There was of course the obvious help finding and monitoring nests but they also assisted in honing the project's logistics. This summer was a hot one and there wasn't a steady breeze like there is most years on the prairie, so I commend the guys on being resilient day after day. Once again, I look forward to an even more productive nest-searching and monitoring project in 2019!



*Prior to European settlement, the vast expanses of tallgrass prairie were regularly "disturbed" by wildfire and grazing by ungulates such as bison, elk and deer. These natural disturbances kept prairies what they were - open grasslands. Tasked with maintaining the entire prairie ecosystem on a tiny fraction of its former acreage, land managers are experimenting with available tools - particularly prescribed fire and cattle grazing - to mimic historic ecological processes. MRBO's nest monitoring project is one of many studies that provide managers with feedback on how these methods are affecting prairie wildlife, so that management actions can be as broadly beneficial as possible.*



# Conservation Topic: Current Policy Trends at the Federal Level

by Director Dana Ripper

Dear Readers,

Believe me: I enjoy researching and writing about threats to conservation even less than you like reading about them. I don't blame you at all if you skip my "Conservation Topic" column in every newsletter. As unappealing as it is, Ethan and I have discussed at length that part of what makes us conservationists is a sense of duty and responsibility to remain informed about pertinent federal, state and local conservation policy. In some upcoming newsletters, I plan to vary this column to include some topics with simpler solutions that individuals can implement to support conservation in their everyday lives. But for now, there's just too much going on in the policy arena that warrants attention! There is good news and bad news; I'm going to start with the bad first, since it's always good to end on a high note.

## The Bad News

**Arctic National Wildlife Refuge:** The Department of Interior has placed the environmental review of oil exploration in ANWR (shown in background photo) on a fast track, with plans to open the long-contended 10-02 portion of the Refuge to lease bids beginning next summer. Exploration and extraction in ANWR will compromise the integrity of one of the last intact ecosystems in North America; amongst other diversity, ANWR provides breeding grounds for >100 bird species. About 50 of these species, including Canvasback, Mallard, Wilson's Snipe and Tundra Swan spend some part of their life cycle here in Missouri. I have worked in Prudhoe Bay, Alaska and seen firsthand the environmental footprint of extraction operations, which is extensive despite on-going corporate efforts to minimize impacts. With thousands of lease-acres still available in the National Petroleum Reserve closer to existing infrastructure, the push to open the untouched ANWR is perplexing and a hastened review process bodes poorly for mitigating negative impacts. .

**Endangered Species Act:** Enacted in 1973, the ESA is one of our most successful conservation laws. 99% of species listed under the act since its adoption have remained extant. In July, the administration presented a proposal that would disallow protections for threatened species, would allow economic opinion (as opposed to only science-based data) to be taken into account when determining protections, and would remove a requirement that federal land-use agencies such as BLM consult with biologists and federal wildlife agencies before issuing industrial permits (e.g. drilling, mining, logging). If passed, these provisions will render the ESA essentially non-functional. Congress has already hobbled the **Migratory Bird Treaty Act**, another critical piece of bird conservation legislation.

## The Good News!

**Farm Bill:** While the negotiation of the 2018 Farm Bill and its environmentally crucial Conservation Title (i.e. funding for programs such as the Conservation Reserve Program [CRP]) is currently on hold due to Congressional recess, there is indication that the Senate version of the bill maintains conservation funding at current levels. This would be good news for both farmers and wildlife. Farm Bill conservation programs are extremely popular with producers; the Farm Service Agency gets enrollment requests for far more acreage, particularly in CRP, than it can afford each year. Farm Bill programs have consistently demonstrated that they provide critical habitat for wildlife, especially in the Midwest, Great Plains, and Gulf Coastal states.

**Sage Grouse:** A victory was achieved during the recent National Defense Authorization Act (NDAA) negotiations. Congressmen had attached an environmental "rider" on the bill that undermined collaborative efforts to conserve Sage Grouse and Lesser Prairie-Chickens. Due to public input and the work of conservation NGOs, the rider was removed before the NDAA passed the House. Public agencies, NGOs, and private landowners in the West have worked together for many years to conserve native grouse species, particularly Sage Grouse, and have been successful in their struggle to keep the species from being listed as endangered.

**Monarch butterfly:** As we learned at a Missourians For Monarchs (M4M) meeting in July, the US Fish and Wildlife Service must begin considerations for listing the Monarch as threatened or endangered. Populations of this, our most iconic butterfly species, have declined by 90% in the past 25 years. The good news? M4M, the Monarch Joint Venture and many other collaborators





throughout the Monarch's range are working hard to implement on-the-ground habitat restoration to the tune of thousands of acres, and to roll out strategic plans that will bolster both short- and long-term Monarch conservation. These efforts will be taken into account in the USFWS listing decision.

Here are some good starting points for exploring the information above. All of these articles contain further lists of sources and/or direct links to sources.

**Arctic National Wildlife Refuge:** <http://www.sciencemag.org/news/2018/04/trump-administration-takes-first-steps-toward-drilling-alaska-s-arctic-refuge>

[https://www.washingtonpost.com/national/health-science/drilling-in-alaska-national-wildlife-refuge-to-get-fast-review/2018/07/19/f873c11a-8a98-11e8-85ae-511bc1146b0b\\_story.html?utm\\_term=.4979523a7eca](https://www.washingtonpost.com/national/health-science/drilling-in-alaska-national-wildlife-refuge-to-get-fast-review/2018/07/19/f873c11a-8a98-11e8-85ae-511bc1146b0b_story.html?utm_term=.4979523a7eca)

#### **Endangered Species Act:**

A rundown of ESA basics from the National Wildlife Federation:

<https://www.nwf.org/Educational-Resources/Wildlife-Guide/Understanding-Conservation/Endangered-Species>

Statement on current legislation from the Union of Concerned Scientists:

<https://blog.ucsusa.org/charise-johnson/the-endangered-species-act-is-itself-endangered>

#### **Migratory Bird Treaty Act:**

<https://www.smithsonianmag.com/smart-news/five-things-know-about-recently-changes-migratory-bird-act-180967646/>

#### **Farm Bill:**

Effects on wildlife: [https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/technical/nra/ceap/blr/?cid=nrcs143\\_014147](https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/technical/nra/ceap/blr/?cid=nrcs143_014147)

Current status of 2018 proposed legislation:

<https://farmdocdaily.illinois.edu/2018/07/conferencing-conservation-reviewing-title-ii-of-the-house-and-senate-farm-bills.html>

**Sage Grouse:** <https://www.audubon.org/news/audubon-sage-grouse-not-threat-americas-military>

**Monarch butterfly:** <https://monarchjointventure.org>, <https://www.facebook.com/MissouriansForMonarchs/>

I wrote a blog in February 2018 about some of these issues and a variety of others: <http://mrbo.org/while-we-were-sleeping/>. While some of the information is now outdated, the blog has a more in-depth discussion than I am able provide here, and ends with a more extensive list of resources.

## Species Account: Loggerhead Shrike

by Education Intern Klee Bruce



This issue's species profile highlights a bird of notorious habits and many nicknames: the Loggerhead Shrike.

To me, Loggerhead Shrikes have always been a bird of unique circumstance and interesting conditions. On bike rides near my home outside of Springfield MO, I could observe shrikes hunting and patrolling their territories at times of day and in weather conditions that seemed to drive other birds away. In the middle of August, in the late afternoon when the beating sun forced even Dickcissels and Meadowlarks into hiding, the shrikes I rode by were still sitting ever vigilant on their fence posts.

I associate shrikes with rugged conditions. Cracked pavement and rusted barbed wire, sweltering heat and bitter cold, desolate pastures, locust trees, and an absence of cheery bird song are all scenes that come to mind when I picture Loggerhead Shrikes. Despite this image of a tough, persistent bird that seems to dominate in unwelcoming conditions, Loggerhead Shrikes have been on the decline in recent years. It has been at least a year and half since I have seen one on a bike ride.



**Appearance:** Loggerhead Shrikes are a thick bodied song bird, with an almost muscular appearance. Similar to Northern Mockingbirds in size and coloring, they have gray upper parts and pale gray underbellies. Wings and tail are black with bright white “flags” that are visible in flight. The head is large and distinctly patterned, with a white throat, thick black mask, gray forehead, and a heavy hooked bill.



**Range and habitat:** Loggerhead Shrikes prefer open habitat with relatively short grass and an assortment of sparse vegetation and thorny shrubs for building protected nests and impaling prey for later consumption. Prairies, savannahs, desert scrublands, and agricultural fields are all habitats that Loggerhead Shrikes make use of. Loggerhead Shrikes are the only shrike species endemic to North America, and can be found year round in the southern half the U.S. through a portion of Mexico. Migratory populations exist in the Northwest part of the U.S. extending into parts of Canada. The range of the Loggerhead Shrike excludes a large portion of the East Coast and the Great Lakes region, where it is replaced by its counterpart, the Northern Shrike.

**Migration:** Shrikes that live in the most northern part of their range will migrate to avoid intense snow cover, sometimes as far as the central portions of Mexico. These shrikes are solitary migrants, travelling alone and only during the day. Migratory Shrikes will often travel short distances each day and hunt for prey on the way to their destination.

**What’s in a name?** The name “Loggerhead” is a variation of the word “blockhead.” This bird has an abnormally large head, exaggerated in appearance by its heavy bill and thick black mask. “Blockhead Shrike” sounds pretty rude, leading me to believe that’s why a variation of the word was sought out. In addition to their common names, Shrikes are often referred to as “Butcherbirds,” due to the fact that they impale prey for storage. I have heard Shrikes called many nicknames in the birding community, some of my favorites being “bodybuilder birds” and “mockingbirds on steroids.”



**Adaptations and behaviors:** A Loggerhead Shrike is a raptor in the body of a passerine. Shrikes will prey on everything from large insects to small reptiles and amphibians, rodents, and other perching birds. Shrikes can carry prey equal to their body weight, with larger prey being transported in their feet and smaller prey being transported in their bill. Occasionally prey is eaten on the spot, but shrikes prefer to make “pantries” or “larders” out of thorn trees and stretches of barbed wire. Shrikes have very sharp, hooked bills but lack sharp talons, so impaling prey on thorns or barbs in these larders helps facilitate consumption. In addition to being practical, a well-stocked larder can be very attractive to a female Shrike during mating season. Shrikes hunt by perching and observing. When prey is located the shrike will hover over the area before going in for the kill. When food is scarce, Shrikes will use the flashy white “flags” on their wings and tail to startle prey out of hiding.

**Reproduction:** These vicious songbirds make very conscientious parents, building their nests deep in the same type of prickly thorn trees they store food in to deter predators. Both males and females care for the young, working tirelessly to stock their larder with food for the nestlings. Loggerhead Shrikes often raise two broods a year, and each brood contains 5-6 eggs. Incubation period is 15-17 days.

**Conservation status:** Loggerhead Shrikes have declined steeply in recent years. A quick scan of websites yields terms like “numerous, but population falling sharply” “steep decline” and “common, but declining.” Causes for this drop in population appear to be unknown. Even a bird as tough as the Loggerhead Shrike has a host of challenges to face, and it’s likely that many of those challenges are being caused by humans. Factors such as pesticides, herbicides, and brush removal could largely be at fault for Shrike disappearances. Loggerhead Shrikes are hardy, creative, and opportunistic birds that raise large broods. If causes for decline are identified and eliminated, populations could recover swiftly.





Upcoming Events

# You're invited to Join Us



## **September 13<sup>th</sup> in Jefferson City**

Presentation on MRBO's education programs for the River Bluffs Audubon Society meeting at Runge Nature Center at 6 pm. Everyone is welcome to attend, you do not have to be a member of RBAS!

## **September 15<sup>th</sup> in St. Charles**

Monarch Madness: A Pollinator Festival! MRBO will be hosting a booth from 10 am until 3 pm with fun activities related to Hummingbirds as pollinators! There will also be a screening of the documentary film, *The Guardians*.

## **September 25<sup>th</sup> in Arrow Rock**

Arrow Rock Children's Craft Festival! Children enjoy hands-on activities and visit with artisans and reenactors who bring the 1800s to life during this unique experience!

## **September 29<sup>th</sup> at Prairie State Park**

Join MRBO at the big Prairie Jubilee from 10 am – 4 pm. We will be hosting a booth about grassland birds!

## **October 6<sup>th</sup> in Arrow Rock - two events you won't want to miss!**

10 a.m. at the Arrow Rock SHS Visitors' Center. MRBO's Ethan Duke will present *A Natural History Perspective: a Glimpse into the Historical Bird Life and Habitats of the Arrow Rock Area* as part of the First Saturday Speaker Series! Then.... 5:30 p.m. The first-ever MRBO Members Party! Join us for a fun night of socializing and delicious food! See more details on the next page.

## **October 8<sup>th</sup> – 12<sup>th</sup> in Columbia**

Columbia Audubon Nature Sanctuary hosts all the 2<sup>nd</sup> Graders in Columbia to explore the world of birds! MRBO will be holding a bird banding station.

## **October 13<sup>th</sup> and 14<sup>th</sup> in Arrow Rock**

Come to the Arrow Rock Heritage Craft Festival! Go back in time to explore everything that history has to offer! MRBO will have a booth at Main and 4<sup>th</sup> from 10-5 on Saturday and 10-4 on Sunday.

## **October 13<sup>th</sup> in St. Louis**

Join us in promoting the Missouri Young Birders Club at the Pelican Days Festival at the Audubon Center at Riverlands from 10 am – 2 pm.

## **Approximately Oct. 25<sup>th</sup> – Nov. 10<sup>th</sup> in Arrow Rock (dates depend on weather fronts!)**

Northern Saw-whet Owl Banding! Please check out Facebook page as the end of October approaches, and feel free to call the office to confirm that we are operating on any given night! (660) 837-3888. This is especially recommended for folks who are driving a long distance ☺

## **November 3<sup>rd</sup> at Burr Oak Woods Nature Center**

## **November 10<sup>th</sup> at Burroughs Audubon Library in Blue Springs**

## **Dec. 1<sup>st</sup> at Burr Oak Woods Nature Center**

## **Dec 8<sup>th</sup> at Burroughs Audubon Library**

Join us for bird banding! All are welcome at these fun, family-oriented bird banding demonstrations. 10 a.m. – 1 p.m..

**Parents, teachers and interpreters!** Contact MRBO's Education Coordinator Paige Witek for custom programs that incorporate birds into your curriculum. [paige.witek@mrbo.org](mailto:paige.witek@mrbo.org).



# Announcing the MRBO MEMBERS' PARTY!

To express our appreciation for the members of MRBO, we are hosting a party in Arrow Rock on Saturday, October 6th! Come join other bird and nature lovers at this fun social event!

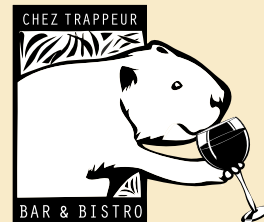
**Who:** MRBO Members attend free.  
\$50 for non-members, includes a year membership.

**When:** October 6th at 5:30 p.m.

**Where:** Chez Trappeur Wine Bar & Bistro, 406 Main Street, Arrow Rock

**What:** Wine & beer and plenty of heavy hors d'oeuvres. Featuring beef from the Audubon Conservation Ranching program amongst other yummy things. Plus, there will be good birdwatching at the backyard feeders and water garden!

**How:** Just **RSVP** to [dana.ripper@mrbo.org](mailto:dana.ripper@mrbo.org) or by calling the office at 660.837.3888



## And Back by Popular Demand - Our Bird Photography Contest!



### MRBO's Third Annual Photography Contest featuring the birds of Missouri



Save the dates! This year's photo contest will once again run from **November 1st to December 31st**. We will continue the tradition of cash awards for Grand Prize (\$1000), First Place (\$500), Second Place (\$200), Third Place (\$100), Directors' Choice (\$100) and Youth (\$100). Full details will be available on our website and Facebook page by mid-October; previous years' photographers will also receive notification by email.

#### Speaking of photos....

Page 2: Loggerhead Shrike - Linda Williams. Page 9: Indigo Bunting - Chris Valentine. Page 12: Greater Prairie-Chicken - Donnie Nichols. Page 19: Gunnison's Sage Grouse - Noppadol Paothong; Monarch butterfly - NFWF; Arctic National Wildlife Refuge - Audubon Alaska. Pages 21-22: Loggerhead Shrikes - Michael Allred, Steve Courson, Christopher Clark via Audubon.org. This page: Barred Owl - Betsy Garrett. Field Sparrow - Lisa Hostetter. Snow Geese on sunset - Mark Ramsey. Cerulean Warbler - Marvin DeJong. Pileated Woodpeckers - Marvin DeJong. American Bittern - Tom Tucker. All other photos taken by MRBO staff during field projects and education events.



