

The Rectrix

A seasonal newsletter of the Missouri River Bird Observatory Volume 6 No. 3 - August 2016



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 MRBO Board Member Steve Byers

16 Reasons to Support MRBO in 2016

As a member of the Missouri River Bird Observatory board of directors, I want to be able to explain to people why it's such a worthwhile organization. So I put together this list of 16 reasons to support MRBO in 2016:

1 - What's good for birds is good for Mother Earth. Bird population health is an excellent barometer for the health of the environment. So preserving and restoring habitats for birds—especially those that are shrinking in extent such as prairie and wetlands—is good for ecosystems and helps to slow global warming.

2 - Dana and Ethan are really cool people.

3 - MRBO runs on a shoestring budget, so I know my contributions have an impact.

4 - Birds are supremely photogenic, as evidenced by our upcoming Images of Hope contest for amateur photographers. Check out information on the back of this issue and enter your own favorite photo.

5 - Education is core to the mission of MRBO. This is especially important for today's kids who don't spend as much time out in nature as previous generations.

6 - Alfred Hitchcock's *The Birds* was a very scary movie, so this is one way I'm trying to stay on their good side.

7 - The MRBO staff is passionate about what they're doing and their passion is contagious.

8 - MRBO's research and monitoring efforts are providing vital information. Good conservation practices depend on good data.

9 - An alarming number of bird species are endangered. MRBO staff works tirelessly to prevent more from becoming extinct.

10 - MRBO puts on fun special events, like the Images of Hope party coming up on November 11. Mark your calendars and don't miss it.

11 - MRBO works cooperatively with private landowners. Since most land area in Missouri is in private hands, encouraging best practices in private land management is vital to conservation efforts.

12 - Think of all the important documents and letters that have been written with quill pens. The most famous document in American history, the Declaration of Independence, was signed with a quill pen thanks to an anonymous goose that donated a flight feather for the effort.

13 - Bird banding not only provides useful information, it is fascinating to watch. Seeing a northern saw-whet owl up close is something you will not soon forget.

14 - Birds are highly symbolic. A dove evokes peace. The bald eagle makes patriotic pride swell within us. MRBO is working to ensure that no other birds go the way of another symbolic bird—the dodo.

15 - MRBO provides excellent learning experiences for its seasonal employees. They are helping to train a new generation of leaders in environmental biology, wildlife management and related fields.

16 - We are stewards of the earth and all of God's creatures, of which I am confident that birds are among His favorites. So hey, it's biblical.

These are just a few of the reasons I support MRBO. I could list many more. Maybe some of these will resonate with you as well and you probably have some of your own. Whatever your reasons, I hope that you will continue to generously support MRBO in 2016 and beyond.



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Upcoming Events

August 19th and 20th in Columbia – The annual Missouri Bird Conservation Initiative (MoBCI) meeting. Join conservationists from a variety of organizations for presentations and discussions on the most important issues facing Missouri's birds. For more information, see: www.mobci.net.

September 17th outside El Dorado Springs – The first ever Wah'Kon-Tah Prairie Day! Join biologists from the Missouri Department of Conservation, MRBO, The Nature Conservancy and other organizations for a day of celebrating prairie life. Wah'Kon-Tah Prairie Conservation Area is one of Missouri's premier grassland habitats and supports a suite of prairie-obligate wildlife. All are welcome at this free public event, 11 a.m. – 4 p.m..

September 22nd in Arrow Rock – Arrow Rock Childrens' Craft Festival. Bring your 3rd – 6th graders for a unique learning experience. At Childrens' Craft Fest, kids can experience living history as the handicrafts and arts of the 1800's are practiced at demonstration stations; there are lots of hands-on activities, too. MRBO will be discussing the craft of bird-house building and the history of Missouri's wildlife. For more information on this event, see: <http://friendsofarrowrock.org/childrens-craft-festival/>. 10 a.m. – 2 p.m.

September 24th at Prairie State Park – the 5th Biannual Prairie Jubilee! Booths, games, storytellers, hay rides, pioneer life re-enactments, bison-viewing and bison-eating...fun for all ages! Biologists and historians from many different agencies will be on-hand to share their expertise. MRBO will be providing prairie bird walks and avian ecology information. <https://mostateparks.com/event/61370/prairie-jubilee>
10 a.m. – 4 p.m..

October 8th and 9th in Arrow Rock - Arrow Rock Heritage Craft Festival. For "kids" of all ages. Heritage Craft Fest offers many vendors of historical arts and crafts selling their wares, several dramatic or musical performances daily, and Civil War re-enactments. All vendors and actors dress in period clothing to add to the historical ambiance of Arrow Rock. MRBO's booth is always located at 4th and Main. <http://www.arrowrock.org/events.php>. Saturday 10 a.m. – 5 p.m., Sunday 10 a.m. – 4 p.m..

Approximately October 24th – November 4th in Arrow Rock – MRBO will present Northern Saw-whet Owl banding demonstrations at our office just outside the Arrow Rock State Historic Site. Mist-netting of Saw-whet Owls will take place on nights with light north winds and no precipitation, from 45 minutes after sunset for about three hours. Attendees welcome to stay the entire time or for shorter periods. Please call first to make sure we will be open. 660.837.3888. Owls are never guaranteed but sometimes we get lucky!

November 5th in Blue Springs – The kick-off of our Sixth Annual Winter Banding Series at Burroughs Audubon Library. Join fellow bird-lovers for discussion, bird-watching and viewing of MRBO's banding demonstration. Banding will take place the first Saturday of each month from November – March. Learn more about the Library at: <http://burroughs.org/its-free/nature-center-bird-sanctuary/>. 10 a.m. – 1 p.m.

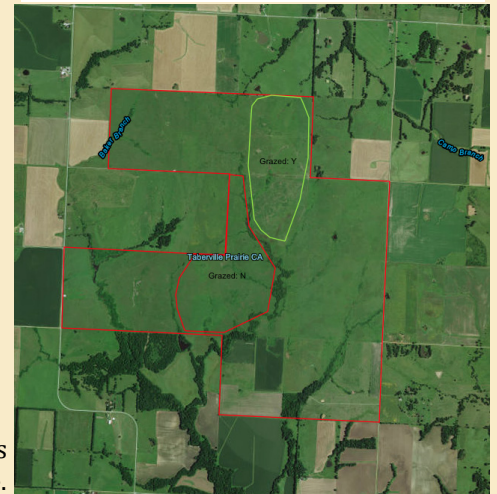
November 11th in Kansas City – MRBO's Images of Hope fundraising event. Join us for the culmination of our bird photo competition at a wonderful evening event in Kansas City's Historic West Bottoms. Tickets are \$75 and include a reception, buffet dinner, and silent auction. All proceeds benefit MRBO's education and outreach programs. See the back page of this newsletter for more information.

Monitoring Nesting Success at Taberville Prairie

By Matt Sim

2016 was the pilot year for the Missouri River Bird Observatory's nest-searching and monitoring project at Taberville Prairie Conservation Area. Taberville is a public property in southwestern Missouri that is being studied by the Missouri Department of Conservation for effects of prescribed fire and grazing. Being the first year of this nest-searching project, it continually developed and progressed as the breeding season went on and will continue to evolve in the years to come. The focal species for the project include grassland-obligate birds such as Dickcissel, Henslow's Sparrow, Eastern Meadowlark, Bell's Vireo, and Grasshopper Sparrow. The long-term goal of the project is to determine the effects of different habitat management practices on breeding success of these birds.

The prairies of Missouri, and indeed of much of North America, have been significantly reduced in size and number. MRBO conducts surveys on breeding grassland birds at approximately 50 remnant and restored prairies each year. Taberville Prairie is one of the largest remaining tallgrass prairies in Missouri and as such is important habitat for a number of plant and animal species of conservation concern. For our nest-searching portion of this year's prairie bird project, we split our time between two distinct regions of Taberville Prairie: a northern portion which is subject to grazing by cattle, and a slightly more



Henslow's Sparrow, one of the target species of the nest-monitoring study, and the species with the most difficult nest to locate.

southern portion of the prairie which is not subject to the same grazing. An important part of the project is determining the differences in nesting success between the avian residents of these two regions of Taberville. As one might expect, the vegetation in the grazed portion is significantly lower and patchier than the portion which isn't grazed. This may contribute to nesting success and number of nests in each region, depending on the species in question, however it is too early to come to any definitive statements yet and it will take some years of data collection to truly determine anything conclusive.

After finding a nest, we would mark the location on our iPads and discreetly place small pieces of electrical tape on nearby bushes to help us locate the nest in the future. Return visits were made every two days for most target species, with the exception of Eastern Meadowlarks, which are particularly sensitive to nest disturbance. With non-target species and Meadowlarks, return visits were made once every three days. Each time a return visit was made, the nests were checked to determine fate and number of eggs or nestlings, if applicable. By doing this, we were able to determine success rates of the nests we

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About the Author: Grassland Project Technician Matt Sim



Matt Sim was born in Houston, Texas and raised in Calgary, Alberta, where he lived for 10 years. It was in Calgary that his passion for nature and wildlife began and he has been an active birder for nearly a decade. While he had a limited amount of professional field experience prior to this field season with MRBO, Matt was always keen to learn more about the natural world around him. He recently spent a short period of time in Costa Rica assisting with a feline monitoring project. Matt is currently playing soccer and studying Wildlife Biology in his second year at Keystone College in Pennsylvania.

Matt was with MRBO from early May until mid-July, and did outstanding work as a grassland bird surveyor and nest-searcher.

Nest Monitoring Project



Male Dickcissel carrying food to a nest.
This species was most commonly seen with katydids.

Continued from page 4 had found. Sometimes, however, we were unable to determine the fate of a nest due to a lack of sufficient evidence indicating a successful nest as opposed to a failed or depredated nest. In these situations, the nest cups were often empty, with no visible trace of the young having fledged; yet with the young sometimes close to the age where they should be fledging, it was possible that the nest fate could have gone either way. When this happened, we would mark the nest fate as unknown, rather than making an assumption that could very well be false. Making an assumption is risky and could ultimately contribute to inaccurate data, which would then alter the results of the entire nest searching project!

The nest-searching project at Taberville began at the end of May and continued until the end of July. Over the duration of this time period, we were able to find over 200 different nests of the various species. Dickcissels were by far and large the most abundant avian denizen at Taberville, and this was well represented in the statistics. Not only were they one of the most numerous species of bird on the prairie, but their nests were also

the easiest to find; we found 106 Dickcissel nests, which accounted for over 50% of the total nests that we discovered. The Dickcissel is a member of the blackbird (Icteridae) family, slightly smaller than a Cardinal. The male has a bright yellow chest and a black bib and sings loudly from any high perch available in these grassland habitats. The female look fairly similar, but lacks the black bib and is much less brightly colored than the male.

One of the reasons that the Dickcissel nests were so easy to find was their general placement. As opposed to some of the other observed species which hid their nests on the ground, the Dickcissels tended to nest a little higher, and their nests were often found in bushes or blackberry thickets. As the season progressed, we began to notice the obvious preference of Dickcissels for certain bushes, and thus their nests became significantly easier to locate. As we began checking such locations more thoroughly, we discovered some nests that were slightly older, but had managed to escape our detection during the early part of the season.

Another reason we were able to find so many Dickcissel nests is that the adult females would often lead us directly to them if we observed their behavior carefully. Whether they were building their nests or feeding their young, by remaining unseen and watching a female Dickcissel, we were often able to pinpoint the exact location of the nest. It also seemed that when building their nests, Dickcissels were much less cautious than when they were feeding young. While nest-building, the female Dickcissels seemed to be very driven to finish the task at hand. In comparison, when incubating eggs or feeding young, adult Dickcissels would take a much slower, more cautious approach, so as to avoid leading potential predators directly to the eggs or nestlings. While they were more cautious when feeding, the Dickcissel nests were still significantly easier to find than some of the other grassland obligate species.



Dickcissel nest



Henslow's Sparrow nest

Of the other nesting birds we attempted to locate and monitor, the Henslow's Sparrow was undoubtedly one of the trickiest and most difficult to find. Even with careful observation and searching, we would often not find this secretive sparrow's nest. This is because the female Henslow's Sparrow will never go directly to her nest or flush directly off of her nest. Instead, she will land on the ground nearby and proceed to scurry to her nest, much like a small rodent. Therefore, when nest searching, we could not simply hope to flush the Henslow's Sparrows off their nests and locate them in that way. Instead, we would make a number of observations and determine likely locations of nesting Henslow's Sparrows. From there, repeated visits were made in order to attempt to pinpoint the exact location of the nest. The Henslow's Sparrow nest itself is often placed very low, or on the ground, and is very well concealed and difficult to see.

We were able to find three different Henslow's Sparrow nests this season, though we were all very aware that plenty more were nesting in the area. This species tends to nest in loose colonies. One study conducted indicates an average Henslow's Sparrow territory size to range

Nest Monitoring Project



Grasshopper Sparrow hatchlings at about 9 days old

from about 0.28 hectares to 0.3 hectares. We were able to observe several adults in a given area, and could thus assume that there were several Henslow's Sparrow nests in the area. In some situations we were able to observe adult Henslow's Sparrows bringing food back to the nests that were hidden in the grasses. Without being able to locate the actual nest, however, we were unable to effectively put this data to work. This is not to say there was a lack of search effort by any means. With each of the Henslow's Sparrow nests that we found, we diligently combed the surrounding area in hopes of finding more nests but on each occasion came up just short.

A close relative of the Henslow's Sparrow is the Grasshopper Sparrow. We only found one Grasshopper Sparrow nest the entire season, however this is not due to difficulty finding nests, as was the case with Henslow's Sparrow. With the Grasshopper Sparrow, we were aware of only a single breeding pair throughout the

entire research area. While Henslow's Sparrows were numerous throughout both portions of the nest searching area at Taberville, Grasshopper Sparrows were far less numerous. We located only a couple of singing males, one of which was part of the breeding pair whose nest we did find. Another singing male Grasshopper Sparrow was found in the southern portion of the nest-searching area, however it wasn't seen until July and was moving around quite a bit. This seemed to indicate that it was a male bird that was likely seeking a mate and was traveling around in order to do so. The Grasshopper Sparrow nest itself was relatively easy to find in comparison to the Henslow's Sparrow nests. After a short period of time observing the adult birds, we were able to determine an approximate location. Both adult birds were feeding young at this point and made several visits to the nest during the time we were watching. After we were fairly confident that we knew the general location of the nest, we moved in to try to find it. It only took a couple minutes before one of the adult birds flushed right from the nest, revealing its exact location and the young birds inside.

The most commonly found sparrow nest on the prairie was the nest of the Field Sparrow. During the nest searching project, we found a total of 22 Field Sparrow nests, all of which were placed fairly low, almost on the ground, and often in thorny blackberry bushes. These bushes seemed to offer sufficient protection and shelter for many nesting birds and thus were an attractive place for them to build their nests. Accordingly, it was always worthwhile checking out such bushes or clumps for nests. At the end of the nest searching and monitoring project, of the 22 Field Sparrow nests found, only four were successful, with three still active at the end of the season. Removing the three active nests from the equation due to the fact that their fate is unknown, this would translate to a 22% success rate. Overall, nest success rates of the birds we found were not high, though this was not extremely alarming as most cup-nesting passerines have nest success rates under 30%.



A typical, cave-like Eastern Meadowlark nest.



Eastern Meadowlark Hatchlings

Bell's Vireo, another target bird of this project, had even lower success rates than the Field Sparrow. Of the 17 Bell's Vireo nests found, only three were successful, which is a success rate of just 17%. During the course of nest observation, we noticed that Bell's Vireos were especially susceptible to brood parasitism by Brown-

Nest Monitoring Project



Dickcissel from egg to hatchling to fledgling

headed Cowbirds. Cowbirds are nest parasites; they do not raise their own young and will instead lay their eggs in the nests of other birds. Often, the cowbird eggs will hatch before the host eggs, such as those of the Bell's Vireo, and the cowbirds will grow at a much faster rate than the host's young. This results in the young cowbird receiving more food and outcompeting the other young birds.

Dickcissels also had comparable success rates. While 106 Dickcissel nests were found, 26 were still active at the end of our season. Of the 81 that were no longer active, only 19 were successful: a 23% success rate. Even in the very unlikely scenario that every active nest remaining at the end of the project was successful, Dickcissels would still have a success rate below 50%. These success rates simply represent the percentage of young birds leaving the nest. This doesn't include, of course, the very high rates of predation before the young birds are fully independent. These percentages help to highlight the difficulties prairie birds face,

and this is just on the breeding grounds.

Eastern Meadowlarks were another species that had a relatively low success rate. Of the eight Eastern Meadowlark nests discovered, two were still active with eggs at the end of the project. Only one of the other six was successful, translating to just about a 16% success rate. Meadowlarks nests were fairly difficult to find. The nest is on the ground and is usually placed in grass, shaped almost like a small cave. Often, the only reliable way we could find Eastern Meadowlark nests was by flushing the adults directly from the nests. By searching using a haphazard walking technique, it was very likely that some Meadowlark nests went undiscovered. Even by walking back and forth across the prairie in straight lines we were still very likely to miss several Meadowlark nests. One method which might be used with more frequency in coming years would be to have several nest searchers walking parallel to each other in straight lines, several yards apart. The nest searchers could then carry a long stick

or pole and wave it across the tops of the grass and shrubs, which might flush more Meadowlarks and other nesting birds that might otherwise have stayed hidden on their nests.

Over the course of the summer, we were also able to find a number of other nests belonging to non-target species, including Mourning Dove, Brown Thrasher, Common Yellowthroat, Eastern Kingbird, Orchard Oriole, and Gray Catbird. While these species were not target species, finding their nests still provided plenty of enjoyment.

After having found and monitored over 200 nests over the past few months, the crew all felt that we had a fairly successful season. The data collected this year will help to establish an important baseline and starting point for future seasons of nest searching and monitoring.

Below, left to right: Bell's Vireo nest with one Brown-headed Cowbird egg, Brown Thrasher hatchling, Field Sparrow hatchlings



St. Joe State Park Survey Project



A woodland plot at St. Joe that has been thinned of understory hardwood trees, opening the canopy and allowing sunlight to reach the forest floor.

The MRBO staff was excited to engage in a new partnership this year with the Missouri Department of Natural Resources/Missouri State Parks. MRBO was invited to conduct all-species point counts during the breeding season at St. Joe State Park in St. Francois County. This work is part of a restoration project funded through Missouri Bird Conservation Initiative. The project, “St. Joe State Park—Glade, Woodland and Savanna Restoration” includes 1,345 acres within the park’s 8,200 acre area. The park is one of two state parks in Missouri that offers an Off-Road-Vehicle (ORV) trail system. The two designated areas for the project are 1) a 1,037-acre tract and 2) a 296-acre tract that lie west and southeast, respectively, of the ORV trails area and the two campgrounds in the park.

The project targets natural communities that show high potential for priority bird habitat management. These communities include open woodland, dolomite glades and a large component of shortleaf pine within dry chert woodlands. Management will include hardwood thinning, cedar removal and prescribed fire and will be done during the winter of 2016-2017 and spring of 2017.

The bird species of conservation concern that have been targeted as benefit from the restoration in the glade and woodland communities include Eastern Wood-pewee, Blue-winged Warbler, Eastern Towhee, White-eyed Vireo, Northern Bobwhite, Red-headed

Woodpecker and Prairie Warbler. Species to benefit in the shortleaf pine community include Pine Warbler, Chipping Sparrow, Yellow-throated Warbler and Yellow-throated Vireo.

During late May, MRBO staff conducted 90 point counts in the project areas. Each point count had a radius of 125 meters and was timed at 10 minutes. Bird species commonly detected during the point counts included Summer Tanager, Eastern Wood-pewee, Acadian Flycatcher, Blue-gray Gnatcatcher, Tufted Titmouse, Indigo Bunting, Red-eyed Vireo and White-breasted

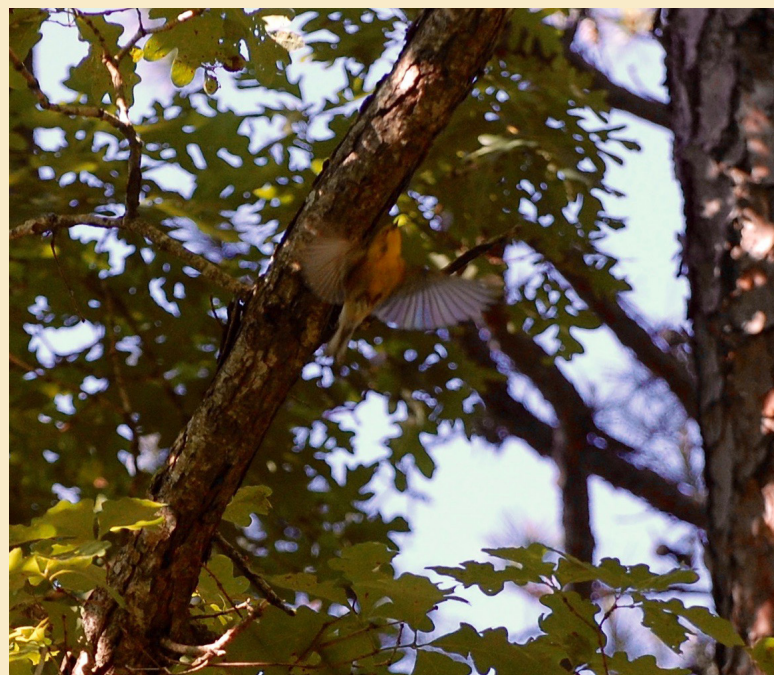
Nuthatch. Among the warblers detected were Black-and-White, Worm-eating, Pine, Yellow-throated, Northern Parula, and Yellow-breasted Chat.

The overall terrain of the park is long, steep sloping hills covered with hardwood trees or mixed hardwood and shortleaf pines with ravines in the valleys between the hills - very different than terrain covered in other MRBO survey projects! A few areas are thick with Eastern Red Cedars and the study area also includes The Pimville Prairie with a dominant native grass and forb component. MRBO surveyors expected that noise from the popular ORV trails might be a problem on surveys, especially in the study area directly adjacent to the ORV area, but no survey was ever interrupted by noise of any kind.

The project is funded for one year but hopefully funding will be available in subsequent years for continued restoration of the woodland communities in the park and also for monitoring the avian species after restoration occurs. MRBO would like to continue to be part of this important project to restore these valuable natural communities. St. Joe State Park is a gem of the Ozark forests and provides thousands of acres of high-quality forest habitat for our breeding birds.



A recently burned short-leaf pine stand



Pine Warbler in the northeast area of St. Joe State Park

Reflections on a Wet and Wild Experience as a Wetland Technician



Erik ready to start wetland surveys on a clear, cool morning.

By Erik Ost

For three months this spring and summer, I was part of a team who ventured into the private wetlands of Missouri to record the avian composition within. Together, my colleagues and I surveyed 58 properties. Each property was surveyed twice, once in the spring migration season (April-May) and again in the early breeding season (May-June). Including the repeated visit, a total of about 12,000 acres were covered during the course of the survey project.

Each morning, I awoke wondering what I might encounter during surveying. After some coffee and carbohydrates, I drove to the wetland with caution, avoiding nocturnal animals that ventured onto the fog-ridden dirt roads. Once I drove as far as I a road would take me, I pulled on my chest waders and made my way to the beginning of the first survey transect. At this point, the sun had not yet crested the horizon but illuminated the sky with pastels, providing enough light saturation to navigate through the fields and forests that usually bordered each wetland property.

Almost every morning there was a beautiful vista waiting to be gawked at. Fog lingering over pools of water, reeds of marsh grasses saturated with dew, lotus and water lily pads speckled across oblong ponds, silhouetted herons and egrets elegantly flying overhead or perched in the high branches of a nearby tree, and even raccoons chasing metamorphosing frogs. The cacophony of vocalizing frogs, cicadas, and of course birds could almost drown out the rustling and crunching produced by my own movement.

Since I was searching and surveying for birds everyday on land that was hardly ever seen or disturbed by humans, I saw nature in a pristine and raw state. Some instances were extraordinary. For example, one morning I was creeping through knee-deep water when I heard some thrashing

noises coming from the water's surface ahead of me. I shuffled stealthily closer to the action and could see something a few feet long writhing in the water. Initially, I thought it was an aquatic mammal but as I approached the scene closer I could make out the colors and patterns of a fawn. I followed the outline of the fawn and was taken back by what I saw. A snapping turtle had its mouth latched onto the baby deer and was voraciously chomping and gnashing at the skin of the fawn. I pictured a scene from the water holes of Africa, where crocodiles lurk around the water's edge waiting to strike at an antelope in need of a drink.

There were quite a few bird highlights from three months of morning surveying. The diversity of birds observed during the migration period was astounding. I remember one property, which had a large and exceptional wetland, fostered a high diversity of birds and the most Sora I encountered at a single site. These migrating gruiformes were a target marshbird species. I remember recording around 25 Sora at just that one property. Most of the time this species was detected audibly because of their distinctive sharp "whinny" call. Like most marshbirds, Soras are sneaky and hard to see, usually hiding amongst the marsh vegetation. Sometimes they startled me, waiting until I was one or two steps away before jumping up and fluttering into nearby cover. This same property had a number of other target marshbird species. Many Marsh and Sedge Wrens were heard chattering and seen darting from reed to reed. A Green Heron was observed perched on a low-hanging branch over a water-filled ditch. Even a Virginia Rail was heard amongst all the action. All of these wetland obligate species detections were in addition to the numerous passerines and waterfowl inhabiting the area.

Another highlight I had was when I helped a Great Blue Heron free its foot from a crook in a pond. I was attempting to get a close photo of this bird and due to how skittish they are this is often hard to do. This bird was not flying away so I kept inching closer and closer until it tried to take off. It could not even leave the ground because its foot was stuck under some rocks on the bottom of the pond. I calmly crept up behind the bird and



Reflections on a Wetland Survey Experience

extended my arm down to the bottom and felt around its foot, feeling for the problem. Right then, the heron rotated its neck and head around and tried to peck me! My body recoiled while my hand pulled away in synchrony, disturbing some of the sediment. The heron then broke free and flew away. I felt relief for the bird and for myself, knowing that I did not need to dodge the dagger-like beak again in a second attempt to free it.

As a relatively new birder with only a couple of years of birding experience when I started with MRBO, observing birds everyday with an intense level of focus bolstered my identification skills tremendously. Surveying during migration was notably more intensive as swaths of shorebird species chattered and chimed accompanied by the melodic tunes of warblers who passed through. Bird detections were logged spatially (spot-mapping) on an iPad with a Google satellite image overlay of the property. Often, the myriad of bird activity during migration presented a problem because constantly looking down to record detections would result in missing birds that quietly flew overhead or receded into a tree-line.

As I became more familiar with wetlands and marshbird preference of habitat, my ability to assess each wetland's likelihood to host our target marsh obligate species improved. Although the habitat required for marsh obligate species to be present is specific and narrow, I noticed that biodiversity was greater on properties that maintained more heterogeneous habitats. Amount and level of water present also influenced the diversity and composition of birds recorded.

I am grateful to have this opportunity of promoting avian conservation through enjoyable tasks that included birding, hiking, and photography. Of course there was much adversity - such as thunderstorms, high heat and humidity, terrain, bugs, and cottonmouths to name a few! However, this pleasurable job could not be possible without the cooperation of the private landowners who gave their consent and provided assistance in our effort. All of the landowners with whom I talked and met in person were friendly



A Great Blue Heron that needed some help

and willing to go out of their way to help me if I needed navigational help. A few landowners gave me a tour of their wetland prior to my morning survey and gave me pointers on where to look to see certain species. One landowner even offered me a bed, breakfast, and shower at his own house! Most of the landowners were not as familiar with birds as I was and were eager to know how many and what kinds of species were present. Usually my report wowed them and I felt satisfied knowing that now these landowners might be more committed to preserving their wetland since they are more aware of how many species use it.

Overall, this experience was exciting and fascinating! I have a new found respect of wetland environments and their value to Missouri bird communities. Through continued management, the health of wetlands throughout the state will be noticeably restored. If the opportunity exists, I look forward to visiting these wetlands again. I would enjoy comparing the results, optimistic that the outcome would show an increase in biodiversity.



Education and Outreach Update



MRBO DELIVERED 33 EDUCATION EVENTS SINCE THE PUBLICATION OF OUR LAST NEWSLETTER IN APRIL. SO FAR THIS YEAR WE HAVE REACHED OVER 2,300 MISSOURIANS WITH CONSERVATION-BASED EDUCATION PROGRAMS; THIS INCLUDES 1,500 K-12 STUDENTS.

JUST A FEW OF THE HIGHLIGHTS FROM THE MOST RECENT PROGRAMS:

~SEVERAL HUNDRED 2ND - 8TH GRADE STUDENTS ATTENDED OUR "NATURAL HISTORY OF ARROW ROCK" PROGRAM TO LEARN ABOUT THE ECOLOGY OF MISSOURI PAST AND PRESENT.

~OUTDOOR PROGRAMS WERE CONDUCTED AT 17 OTHER LOCATIONS FOR A VARIETY OF DIFFERENT AGE GROUPS. 10 OF THESE LOCATIONS WERE NEW VENUES FOR MRBO.

~MRBO REACHED ALMOST 60 EDUCATORS WITH NATURE- AND CONSERVATION-RELATED ACTIVITIES THAT CAN BE DONE IN THEIR OWN SCHOOL SETTINGS.

~MRBO'S FIRST LANDOWNER WORKSHOP IN PARTNERSHIP WITH THE NATURAL RESOURCES CONSERVATION SERVICE WAS A GREAT SUCCESS, WITH 25 LANDOWNERS LEARNING ABOUT THE SUITE OF BIRDS SUSTAINED BY MISSOURI'S PRIVATE WETLANDS.





Images of Hope: The Birds of Missouri

a photography contest benefitting the Missouri River Bird Observatory



CALLING ALL AMATEUR NATURE PHOTOGRAPHERS!

Contribute to bird conservation in Missouri, reach a wider audience with your photography, *and* have a chance to win cash prizes! The Missouri River Bird Observatory invites you to submit your favorite bird photo to our *Images of Hope: the Birds of Missouri* photography contest. The contest runs from now until October 1st, 2016. The top 25 entries will be unveiled and auctioned at MRBO's fundraising event on November 11th, 2016; those 25 photographers will also receive a complimentary ticket to the event. Entry fee is \$25 per photo.

Contest Prizes

Best in Show: \$500

1st Runner Up: \$200

2nd Runner Up: \$100

People's Choice: \$100

Youth (10-17 years of age as of 1 October 2016): \$100

For all details, contest rules, and submission guidelines visit:
mrbo.org/images-of-hope-contest/

Save the Date!

Join us for an elegant reception and buffet, silent auction, and original conservation exhibits in Kansas City's West Bottoms, 6:30 p.m. on November 11th. Feasts of Fancy at the Hobbs Building, 1427 W. 9th Street. Event tickets \$75. Visit: **mrbo.org/images-of-hope-event**