

The Rectrix

A seasonal newsletter of the Missouri River Bird Observatory

Volume 7 No. 4, Winter 2017



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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Front cover:

"Perched Pair"

by Ryan Steffens

Right:

Northern Saw-Whet Owl

by Steve Garr

Seasons Greetings from the MRBO Directors!

Dear MRBO Members and Friends,

Happy Holidays!

In honor of the Season, we would like to share with you the Top 10 Things We Are Most Thankful For.



*Dana & Ethan with friends
Orange-crowned Warbler and
Brown Thrasher*

1. MRBO's supporters. Not just those who contribute financially, although that is essential to keeping the organization afloat, but also those who support us in less measurable ways. All of these people remind us that what MRBO does is important, which is especially needed at times when the going is tough - in the middle of a sleep-deprived field season, during a particularly stressful public event, or when we get our 50th grant rejection letter of the year.

2. MRBO's 2017 field crew. Our field projects were all under-staffed this year - we needed at least six qualified technicians and only found three. However, the three who were with us went above and beyond with their dedication and hard work, and amazingly, everything got done.

3. MRBO's Educator, Paige Witek. For the first time, we have someone who is on staff (almost entirely) year-round to coordinate MRBO's education program. It is amazing what that has allowed us to accomplish already, and having Paige provides us with the ability to further develop and diversify all aspects of the organization.

4. Missouri's Landowners, Ranchers and Sportspeople. Many of the properties that MRBO surveys are privately owned by cattle producers and/or hunters and fishermen. Their superior stewardship of many thousands of acres of grassland and wetland results in crucial high-quality habitat for birds and other wildlife.

5. Missouri's 2017 Summer. As cold weather people, we are very thankful for the relative coolness of this past summer. But even more importantly, it seems that the moderate temperatures were kind to many of our breeding birds. We witnessed larger late-summer flocks of species such as Common Nighthawks and Barn Swallows than we have seen for several years.

6. Migratory Bird Habitat in Central America. If you check out page 10 of this issue, you will see that we were able to spend some time in Belize recently. It was incredibly heartening to see high quality habitat that our migrant birds can call home for several months each year. Migration is perilous, and to see that many of Missouri's breeding species made it to Central America and its abundant resources was a comfort.

7. The Cuteness of Northern Saw-whet Owls. Enough said.



8. Other Bird Observatories. In October, we had the opportunity to attend the 2nd International Bird Observatory Conference at New Jersey's Cape May Bird Observatory. We were grateful to be a small part of this meeting where representatives of more than 50 observatories from six continents were present. The best part was interacting with a group of people who work tirelessly not for personal recognition or financial gain, but for on-the-ground bird conservation and education.

9. Missouri's Conservation Agencies and NGOs. Whether Belize or New Jersey, whether speaking with someone from the U.S. or elsewhere, we can always speak proudly of the Missouri Department of Conservation, Missouri State Parks and the conservation NGOs that operate in our state. From the apolitical structure of the MDC and the way it manages land to the landslide vote for the Soils, Parks and Water Tax with which Missourians chose to continue supporting our Parks, it is a honor to be a part of the Missouri conservation community.

10. The Resilience of Birds. We are thankful that we still have birds - despite habitat loss, outdoor cats, window collisions, road collisions, insecticides, pesticides, extreme weather and every other threat out there. Sometimes it's hard to believe that wildlife can withstand the myriad and increasing changes to their world. Perhaps life really will prevail!

VIPs of the Missouri River Bird Observatory



We would like to recognize and give thanks to MRBO volunteers **Sherry Leonardo** (left) and **Michael O'Keefe** (below). They are not just "Volunteers of the Year", they have been our two most reliable volunteers for the years that MRBO has been in existence. Both are Master Naturalists and highly skilled birders who bring years of outdoor experience to MRBO. Michael and Sherry are a part of every education event we do in the Kansas City area, as well as many events each year in other parts of the state.

Sherry began volunteering with MRBO in 2009, when MRBO consisted of a small migration monitoring station at Grand Pass Conservation Area. She continued to assist there until we closed the station in 2013 while also working at our prairie MAPS stations from 2010-2015 and at numerous education events over the years.

Volunteers of the Year: Michael O'Keefe & Sherry Leonardo

Michael began volunteering with MRBO when we started doing banding events at the Burroughs Audubon Library in Blue Springs in early 2011. He is now the operating bander at all Library events as well as at banding demonstrations at Burr Oak Woods Nature Center, where he coordinates events for MRBO and at which he volunteers several hundred hours each year.

Sherry and Michael have become essential to MRBO's education efforts in the greater Kansas City area, especially since we do not usually have a staff during the period of November to March. Both of these volunteers devote many days each year to assisting with MRBO education programs and they do an exceptional job of maintaining order and organization during events that can be demanding and somewhat high pressure. They not only help us convey ecology and conservation messages to event attendees, they help everyone remain focused on the most important guests, the birds.



Photo courtesy of Andy Tann.

Our thanks to long-time MRBO staff member, Veronica Mecko



Veronica Mecko, better known as "V", is leaving MRBO after six years of service. V joined us as a volunteer in 2011, and since that time has filled a wide variety of roles within the organization. She has been an outstanding surveyor on all of MRBO's field projects, assisted with many education events and supervised MRBO's migration and MAPS banding efforts. She was instrumental in coordinating and overseeing the most logistically challenging of MRBO's monitoring projects, the grassland bird surveys and nest-searching and monitoring. In addition to her excellent bird ID skills, talents at coordination, and extensive passerine banding experience, V is one of only two permitted hummingbird banders in the state of Missouri and she also operates her own Northern Saw-whet Owl capture stations.

V will be greatly missed as an MRBO staff member, but we look forward to working with her on a volunteer basis in the coming years.



Conservation Focus: Lead Poisoning in Bald Eagles



"Mount up on wings of Eagles"
by Susan Abbott

By MRBO Education Coordinator Paige Witek

Many readers may already be aware of the current issue facing America's national bird but still may not know the full story or that little has been done to solve the problem. Bald Eagles, and many other species, are affected by the use of toxic shot for hunting. This article will focus on Bald Eagles, but I encourage readers to explore the effects on other species as well. All of you are familiar with the Bald Eagle as a symbol of the United States of America. It has been the national emblem since 1782, but it has been a spiritual symbol for far longer than that. To many native tribes, the eagle symbolized strength, balance, leadership, courage and was often depicted as a great warrior with both healing and hunting powers. Many people, when they witness an eagle soaring high in the sky, describe it as "majestic".

However, the Bald Eagle wasn't always thriving. Forty years ago, our national symbol was in danger of extinction. There were many factors that played into this, including habitat destruction and degradation, illegal shooting, and contamination of food sources. I want to focus on the last listed factor, because it contains an interesting story with an inspiring ending. Shortly after World War II, dichlorodiphenyltrichloroethane (DDT) was brought forth as a new pesticide to

control mosquitoes and other insects. However, DDT and its residues washed into nearby waterways where aquatic plants and fish absorbed it. Bald Eagles were then poisoned when they ate the contaminated fish. This affected the eagles' ability to produce strong eggshells and, as a result, their eggshells were so thin that they often broke during incubation or failed to hatch. The species was struggling to reproduce and their populations were declining rapidly. By 1963, there were only 487 nesting pairs of Bald Eagles remaining and the species was in grave danger of extinction.¹ As the dangers of DDT became known, in large part due to the 1962 publication of Rachel Carson's book *Silent Spring*, the Environmental Protection Agency (EPA) took the historic, and, at the time, controversial step of banning the use of DDT in the United States. That was in 1972, and it was a huge step towards the recovery of the Bald Eagle. In 1978, following the enactment of the Endangered Species Act of 1973, the Service listed the Bald Eagle as endangered throughout the lower 48 states, except in Michigan, Minnesota, Oregon, Washington, and Wisconsin where it was designated as threatened. In July 1999, the Service proposed to remove the Bald Eagle from the list of threatened and endangered species. Based on the most recent population figures, the Service estimates that there are at least 9,789 nesting pairs of bald eagles in the contiguous United States. Thus, on June 28, 2007, the Service announced the recovery of our nation's symbol and removed it from the list of threatened and endangered species. This is an American success story. We realized our national symbol was in need, took action, and achieved great results. Although the journey was long, difficult and, at times, controversial, it led to the successful application of environmental legislation with significant results.

Currently, the Bald Eagle is facing another problem: lead poisoning. In the 1970s and 1980s, lead poisoning in eagles appeared to be related to the ingestion of lead poisoned waterfowl, which were poisoned due to lead shot. In 1986, federal law banned the use of lead ammunition for waterfowl hunting. This law was not only put into place to benefit eagles, but various other wildlife as well.

The problem appeared to be resolved.

However, nearly a decade later in 1997, the University of Minnesota College of Veterinary Medicine and the Minnesota DNR performed a study analyzing eagle admissions to their raptor rehabilitation clinic to determine whether banning lead shot for waterfowl hunting had reduced the number of lead poisoned eagles. Surprisingly, the study showed that the prevalence of poisoned eagles didn't change even though there was documented evidence of good hunter compliance with the ban. This suggested that the eagles were being poisoned from another source of lead. Upon further examination they noticed that there were noticeable spikes in admission of lead poisoned eagles beginning in mid-November and continuing through winter. This pattern led to the hypothesis that wounded deer and deer gut piles left in the field by hunters could be the source of lead. Eagles are known to scavenge heavily on deer remains in the winter. The raptor center started another research study to examine this other possible source of lead. Their results strongly support the hypothesis that spent lead from ammunition is an important, primary source of lead exposure for bald eagles. The University of



"Survival of the Fittest" by Mark Ramsey



X-ray of Eagle showing lead bullet fragments.
Photo courtesy of REGI.

Bald Eagles

Missouri Raptor Rehabilitation Project states that lead poisoning can be found in all species of raptors (including ospreys and vultures), but eagles are the birds that most commonly suffer. It is estimated by The Center for Biological Diversity that hunters in the US shoot more than 3,000 tons of lead into the outdoors each year, and that as many as 20 million birds die annually from lead poisoning.

While many wildlife and hunting organizations are open to these findings and work to spread the important message that toxic shot is poisoning Bald Eagles, there is resistance to this knowledge. The National Rifle Association (NRA) has put effort towards resisting bans on lead ammunition, claiming that the proposed bans are an assault on “traditional” hunting and hunters’ rights. Many hunters argue that non-toxic ammunition is more expensive and often difficult to get or hard to find. To an extent, this is true, but it is important to compare prices carefully. If you are comparing ammo loaded with a less expensive soft-point lead bullet against ammo containing a premium lead-free bullet, you will find that the lead-free ammo costs anywhere from 50% to 100% more. However, if you compare factory ammo loaded with a premium lead-core bullet to ammo loaded using a premium lead-free bullet, you can expect to pay about the same. Many hunters feel that the cost of their ammo represents a small percentage of the total costs involved in a hunt, but the bullet’s performance will influence how quickly and humanely your quarry is killed; some claim that lead-free ammo simply is not as effective as lead based ammo. Researchers have not found this to be true. Copper bullets result in consistent, rapid expansion, excellent weight retention and penetration.³ Copper bullets also ensure highest quality meat from a harvest. Fragments from lead rifle bullets can peel off as a bullet passes through an animal and lodge in tissue as much as 14 inches from the point of bullet entry. That means that the lead from your ammunition is likely to be in the meat you will later consume. Just as lead is poisonous to eagles, it is harmful to humans as well.



REGI staff, including then-intern Paige Witek, examining a lead-poisoned Bald Eagle. Photo courtesy of REGI.



Bald Eagle found in Necedah, WI suffering from lead poisoning, starvation and head injury. Photo courtesy of REGI.

I have had personal experience with lead poisoning in eagles. Before I started working for the Missouri River Bird Observatory, I was an avian rehabilitation intern for the Raptor Education Group, Inc. (REGI) in Antigo, WI. I have personally seen up close the effects that lead can have on this magnificent bird. REGI cares for about 100 eagles per year. So far, this year, REGI has had 28 lead poisoned eagles. This means that over 28% of the eagles that are admitted have lead poisoning, which is a high percentage considering all other possible ailments. Rehabilitators look for several symptoms when examining an eagle for lead poisoning. The eagles are often found on the ground or low in a tree. They have weak or no flight capabilities and they have green droppings that stain their tail feathers. Another symptom is neurological impairment. Rehabilitators look for tremors or seizures, muscle weakness, stumbling, and mental confusion. Lead poisoning also causes organ failure which includes vomiting, anemia, liver failure and kidney failure.

Lead poisoning is fatal without intervention. The treatment includes chelation therapy to remove lead from the blood. Chelation therapy is a chemical process in which a synthetic solution, ethylenediaminetetraacetic acid (EDTA), is injected into the bloodstream to remove heavy metals from the body. When EDTA is injected into the veins, it “grabs” heavy metals and minerals and removes them from the body. It varies per year how many eagles are able to be released after treatment, but on average only half of the lead poisoned eagles recover fully. REGI estimates that treatment costs about \$1900 per eagle. This cost includes care for 6-12 months, EDTA medication, medication for infections due to weakened immune

system, x-rays, blood tests and a generous discount from the local veterinarian. Treating an eagle with lead poisoning is not cheap (even when every measure is taken to save money) and therefore is not a sustainable option for dealing with this issue. At REGI, they have what they call “Lead Poisoning Season”. This season occurs just after deer gun hunting season until the carcasses and gut piles are covered with snow and again in the spring when the snow melts and the carcasses are again exposed. Based on my research, REGI is not the only rehabilitation facility that hosts a “Lead Poisoning Season”. Raptor rehabilitators from all across the country, including the University of Missouri Raptor Rehabilitation Project, see an increase in their numbers of lead poisoned eagles around this time. I can tell you from experience that caring for these eagles can be mentally, physically, and emotionally exhausting. When you spend months caring for a Bald



Lead-poisoned Bald Eagle unable to hold up its head. Photo courtesy of REGI.

Lead Poisoning in Bald Eagles

Eagle unable to hold its own head up, it is hard to believe that using toxic shot is an ethical way to hunt.

This article has only begun to scratch the surface of all the issues surrounding lead poisoning. I urge readers to do their own research on this topic and inform yourself so you may inform others. Research concerning this issue has led to some legislation, including the federal law banning lead ammunition for waterfowl hunting. A phase-out of all lead ammunition and fishing tackle on federal lands was slated to take effect in early 2017, but the current Secretary of the Interior repealed that ban upon taking office. In the state of Missouri, non-toxic shot is required for shotguns on 21 Conservation Areas. According to the Missouri Department of Conservation website, waterfowl hunters in Missouri have used nontoxic shot since 1991. Missouri has such an inspiring history of conservation and I believe that Missourians have the ability to take the necessary actions to prevent lead poisoning.

Now for the call to action! I've been struggling with how to say this; how to phrase what I want you, as readers, to take away from this article because this is an issue that can make my heart heavy, my brain tired and my blood boil. It comes down to a choice. A choice between what is toxic and what is non-toxic. In no way am I pleading for a ban on hunting. As most conservationists know, without hunting, there would be very little left to conserve. Hunters are the backbone of conservation. What I want is another success story. For citizens to gain knowledge about a problem, work out the best way to alleviate it, and take action. Missouri, and the United States, have done this in the past with DDT and I'd love to see that part of history repeat itself. Encourage others to choose non-toxic shot and vote in favor of banning lead shot.

Resources

1. "Lead Poisoning." *Raptor Center – University of Minnesota*, 24 Feb. 2015, www.raptor.umn.edu/our-research/lead-poisoning.
2. "Lead-Free Ammo." *Lead-Free Hunting*, www.leadfreehunting.com/
3. U.S. Fish and Wildlife Service. "Bald Eagle Fact Sheet." *Official Web page of the U S Fish and Wildlife Service*, www.fws.gov/midwest/eagle/recovery/biologue.html.



Abby Rainwater of the MU Raptor Rehabilitation Project releases a Bald Eagle in Cole County, Missouri in March 2017. This female eagle was not a victim of acute lead poisoning, but of foot injuries of an unknown cause. She spent almost three months in the care of MU. Photo Missouri Department of Conservation.

Lead poisoning is definitely still a major issue in eagles. It can actually be found in all species of raptors, but eagles are the birds that most commonly suffer from this. However, any bird that is willing to eat fish or carrion is at risk of lead poisoning...so all raptors. But Osprey, Eagles and vultures are at the highest risk.

I would say that the vast majority, if not all, eagles that come into my care have some form of lead poisoning. This may not mean the levels are high enough to be toxic, but it is a standard at our facility to provide lead treatment and lots of fluids to help flush all eagles that come in.

This year we have only seen two or three with lead poisoning toxic enough to be lethal, but in years past we have had extreme cases. Some years, the majority of the eagles that come into our care pass away from lead poisoning.

While we do have medicines that can help remove lead from their systems, they are very expensive and can be hard to come by. We work very hard to make sure our eagles survive, but not all of them do.

However, on a brighter note, some eagles respond very well to treatment and are released! Much of it depends on the amount of lead that was built up in their system when found. Lead poisoning can lead to neurotoxicity - which causes them to be unable to fly and eventually for their brain to shut down. Many times it is not until their system is so poisoned they can't fly that we can actually catch them to help them.

-Abigail Rainwater, Coordinator



Adult Bald Eagle with acute lead poisoning. Photo courtesy of REGI.

Northern Saw-whet Owl Update



Since 2010 we have been attempting to catch Northern Saw-whet Owls in many places around Missouri. For the first couple of years, we traveled a great deal to areas with promising habitat to try one or two nights during the late fall and winter. Beginning in 2013, we operated owl trapping primarily at Indian Foothills Park in Marshall. In 2016, we moved our Northern Saw-whet Owl station permanently to the MRBO office in Arrow Rock. 2016 was a banner year, with 51 owls captured over 11 nights. In fact, we caught at least one owl every night the station was open! Even better, the MRBO office has a large, comfortable space for hosting visitors and we were able to show owls to many people from across the state who came to visit.

This year, we began trapping attempts on October 22nd and operated on nights of favorable weather conditions until November 15th. From correspondence with other Saw-whet banders across the country, we learned that migrating owl numbers were sparse throughout the eastern US this fall. This is likely due to an abundance of food and unseasonably warm temperatures in the north during the Saw-whet's peak migration period. Still, the MRBO Northern Saw-whet Owl station did fairly well - 29 new owls were captured over 18 nights of operation! We also recaptured one owl that had been banded in southeastern Minnesota in 2016.

Between all of the many locations around Missouri where MRBO has attempted to trap owls since 2010, the total number of owls banded is now 213. We have also captured five owls originally banded in other states and have had banders in Iowa, Wisconsin and Michigan capture owls that we had banded previously here in Missouri.

A Year-to-Year Comparison of Northern Saw-whet Owl banding in Missouri 2017: 18 nights, 2 locations, 196 net hours, 29 new owls banded

2010	2011	2012	2013	2014	2015	2016
Nights: 4	Nights: 31	Nights: 43	Nights: 20	Nights: 24	Nights: 11	Nights: 14
Locations: 2	Locations: 8	Locations: 10	Locations: 2	Locations: 5	Locations: 3	Locations: 2
Net Hours: 57	Net Hours: 605	Net Hours: 670	Net Hours: 235	Net Hours: 256	Net Hours: 119	Net Hours: 142
Owls Banded: 11	Owls Banded: 23	Owls Banded: 47	Owls Banded: 14	Owls Banded: 18	Owls Banded: 12	Owls Banded: 59

Ethan, Dana and Paige (left) welcomed visitors (middle) to MRBO's owl banding. (Right), Dana and Paige with the first owl of the season.



Wetland Bird Survey Project 2017

Since 2014, MRBO has been surveying privately-owned wetlands enrolled in the Wetland Reserve Easement Program. Many of these are managed for waterfowl hunting by an individual or collective group of sportsmen. Our transect surveys are designed to document all birds present and occur once during the spring migration period and once during breeding season. In addition to providing information to our partners at the Natural Resources Conservation Service (NRCS) and Missouri Department of Conservation (MDC), the owner(s) of each property are provided with a comprehensive report on bird use of their wetland. It is exciting to provide this information to landowners who may only be able to visit their wetlands during hunting season and who are often unfamiliar with the many species for which their easement provides high-quality habitat. In turn, the NRCS and MDC use MRBO's bird data to assess the effects of wetland restoration and management. The map below is an example of the geographically-explicit data collected by MRBO surveyors. Similar to our grasslands project, the locations of each individual bird seen and heard are mapped on aerial imagery.

MRBO attempts to survey at least 50 wetland easements each year, but these surveys require technicians that are unusually skilled in bird identification due to the high diversity of species encountered. In 2017, we were only able to find one such qualified candidate, Philipp Maleko. Philipp worked tirelessly, seven days a week, from April to June to cover surveys across the state. When possible, he was aided by the rest of the MRBO staff, which meant that all of us got to occasionally enjoy this remarkable, magical habitat. MRBO surveyors walked a total of 90 miles of transects on 32 wetlands in 2017.

Wetland Bird Surveys By the Numbers

2015

30 easements surveyed
153 species detected
10,248 total detections:
8,123 during migration
2,125 during breeding season

2016

58 easements surveyed
193 species detected
24,523 total detections:
17,575 during migration
6,948 during breeding season

2017

32 easements surveyed
188 species detected
18,649 total detections:
11,715 during migration
6,934 during breeding season



Andrew Reago

A Note from the Tropics

By Dana Ripper

In late November, I had the great fortune of traveling with Ethan Duke to the small Central American country of Belize. We spent three and half days in the interior near the Guatemalan border and three and half days on an atoll in the Caribbean Sea. The inland portion of the trip was devoted entirely to bird-watching.

What we found most impressive about Belize was the extent and health of the native ecosystems. Approximately 70% of Belize's land area is under some form of protection, and ecotourism is an important economic driver. Coupled with the relatively low human population density (350,000 Belizean residents, less than 1% of the populations of nearby Guatemala and El Salvador), the state of conservation in Belize is heartening and inspiring. The success of Belizean commitment to preserving native species is evident in the rich bird diversity witnessed on even the most casual hike.

We saw many exciting and new (to us) indigenous species during our exploration of the forest. The Lineated Woodpecker was a wonderful representative of the *Dryocopus* genus, of which Missouri's Pileated Woodpecker is a part. We also had many sightings of the Pale-billed Woodpecker, which shared the genus *Campephilus* with the Ivory-billed. Their charisma was unmatched, except possibly by the trogon family, of which we viewed the Slate-tailed and Violaceous Trogons. Some species were not quite as easy to get eyes on, such as the Squirrel Cuckoo, a very large relative of Missouri's Yellow-billed Cuckoo.

One of the best things about birding in Belize during early winter was the diversity of migrants from North America. It was absolutely delightful to see "our" birds in non-breeding mode as they moved through the extensive and largely undisturbed habitat. Gray Catbird, Summer Tanager, Hooded Warbler, Wood Thrush, Magnolia Warbler and Black-throated Green Warbler were common throughout the forest.

While every country has its own conservation challenges, it was a rare gift to spend time in an area where the majority of people recognize and appreciate the value of nature. It is comforting to know that some of Missouri's long-distance migrants have a safe and bountiful place to spend their winter. We look forward to learning more about bird conservation in Central America, and supporting conservation efforts there in any way we can.

From top:
A rainforest trail
Mountain pine savanna
Owl butterfly (*Caligo* sp.)

From top:
Lineated Woodpecker
Slate-tailed Trogon
Squirrel Cuckoo departing
Black-throated Green Warbler.



Hope is the Thing With Feathers

a photography contest to benefit the Missouri River Bird Observatory's Education Program



**Back by popular demand - the Missouri River Bird Observatory's
second annual photo contest!**

We invite you to submit your favorite Missouri bird photos to our *Hope is the Thing With Feathers* photography contest. The contest runs from 1 November – 31 December 2017. The top 50 photos will be printed on canvas and displayed as an educational exhibit at the Arrow Rock State Historic Site Visitors Center in February and March, 2018. Canvases will be offered for sale at the Audubon Society of Missouri's Spring Meeting in May.

Contest entry fee is \$25 per photo for adults, \$10 for youth; all entry fees benefit the MRBO education program. The contest is only open to amateur photographers.

Contest Prizes, sponsored by:

Grand Prize: \$1000!

1st Place: \$500

2nd Place: \$200

3rd Place: \$100

Director's Choice: \$100

Youth (10-17 years of age as of 11/1/17): \$100



For all details, contest rules, and submission guidelines visit:

mrbo.org/hopehasfeathers

*Hope is the thing with feathers
That perches in the soul
And sings the tune without the
words
And never stops at all*

*And sweetest in the gale is heard
And sore must be the storm
That could abash the little bird
That kept so many warm*

*I've heard it in the chilliest land
And on the strangest sea
Yet, never, in extremity
It asked a crumb of me.*

-Emily Dickinson, 1830-1886

Upcoming Events

January 6th and February 3rd. Join us at Burr Oak Woods Nature Center for bird banding. In February, folks from the Great Missouri Birding Trail will be on hand to tell you about the exciting new trail in our state! 10 a.m. - 1 p.m.

New Year's Day, 2018
Meet us at the Arrow Rock State Historic Site for a First Day Hike! 8 - 10:30 a.m..
We will follow the River Landing Trail to the Missouri River, enjoying birds along the way.
<https://mostateparks.com/event/70431/first-day-birding-hike>

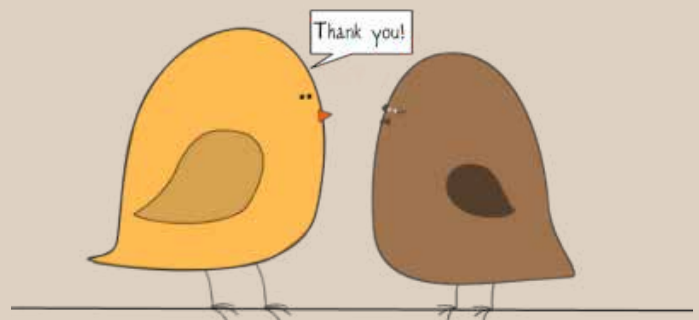
January 13th and February 10th. All are welcome at the Winter Banding Series at Burroughs Audubon Library, Blue Springs. Join us from 10 a.m. - 1 p.m!

January 11th at 1:30 p.m.; February 16th at 11:30 a.m.
Perk up a winter's day with bird banding and viewing in the Bird Garden at Birds-I-View, Jefferson City. Following the January banding event, MRBO will present on our education programs at the River Bluffs Audubon Society meeting at Runge Nature Center, 6:30 p.m. All are welcome.

January 27th. MRBO returns to the wonderful Springfield Nature Center for an afternoon of banding. This is a great place to learn about birds and every other critter in Missouri! 1-4 p.m.

Our Thanks to New & Renewing MRBO Members

Charles Linn, Kansas City MO
Whitney & Day Kerr, Prairie Village KS
Jean Leonatti, Columbia MO
Jim & Timmie Wiant, St. Louis MO
Rick Oddo, Lenexa KS
Charles Coker Jr., Bluffton SC
Joseph Bieksza, Fulton MO
Steve & Debbie Martin, Ozark MO
Don Sheldon, Raytown MO
Randy Haas, Joplin MO
Linda Williams, Liberty MO





"Please, anything but fish this time!"
by Tony Harris