

Our Mission



Conservation



Science



Education & Outreach



Advocacy

Ethan Duke

Director/Founder

Data Analyst/Science

Jelisa Oliveras

Communicator

Survey Technician

Alan Moss

To contribute to the conservation of Missouri's migratory and resident birds through scientific research, community outreach, and education.

To gather information about avian communities and habitat use that will assist state, federal, and private natural resource managers in their efforts to implement conservation programs.

To provide opportunities for Missourians of all ages to learn about species and their habitats.

To advocate for sound, science-based conservation policies that benefit birds, other wildlife and environmental quality.

Staff

Dana Ripper Duke Director/Founder

Erik Ost Field Project Leader

Paige Witek

Education Coordinator

Brittney Cade Assistant VNS Developer

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Theresa Enderle Independence, Missouri

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Front cover: Owl in Early Morning Glow by Kathleen Henrikson



Letter from MRBO Director Dana Ripper



Hello MRBO supporters, friends, and colleagues!

This newsletter is a little late coming to you (I really wanted to get it out in September). There is a lot of variation in life and work going on right now, and I believe this issue of the Rectrix reflects that. There is much work ahead of us in conservation; I think everyone who works and volunteers in this field is feeling that. I've worked in conservation for more than 20 years and it's easy to recognize that we're at a crucial point in time for climate and biodiversity action. I'm not going to start listing

the threats to all things in nature
– MRBO supporters know them
already or can easily research on

their own. I do want to encourage everyone to keep doing as much as they can for conservation individually, as well as put pressure on those who have more power than you – business and community leaders, corporations, and elected officials.

Over the past few months since we last wrote, the MRBO staff has grown a bit and we have been up to some exciting endeavors! In August, Ethan Duke and I were delighted to be a very tiny part of the Brown-headed Nuthatch reintroduction effort. We went down to Arkansas and caught exactly one (1) nuthatch for translocation to Missouri. The awesome crew assembled by State Ornithologist Sarah Kendrick and her University of Missouri colleagues have safely and successfully translocated more than 100 from west-central Arkansas forests to the Missouri Ozarks over a two-year period. You can read more about this on page 7 of

this newsletter. This is just one example of a program that involves many different partners working together to

produce positive outcomes for species.



MRBO has made exciting strides recently with our BirdSafeKC program. We've engaged several new, influential partners in the Kansas City metro area over the past few weeks, and developed a program to recognize sites that are working towards reducing bird strikes on their windows. BirdSafe cooperators will have two potential levels of involvement: a Participating Site allows intensive surveys at their building, while a Certified Bird-Friendly Site is taking tangible steps to reduce bird collisions. The project is getting more recognition and our surveys are becoming known across parts of the City!

Bird Safe KC
PARTICIPATING SITE

In closing, as always I would like to give thanks to all of you – those

who support not just MRBO but conservation in general in so many different ways. You do it by volunteering, by giving of money or time, by being advocates for birds, by spreading the conservation message to folks you know, and by supporting individual conservationists with your friendship.

Wishing you a great autumn, Dana

Join in our fun online auction October 31st - November 6th!



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A warm welcome to new staff members!

K-12 programs.

Brittney L. Cade is currently a Human Dimensions of Natural

Resources Doctoral student at the University of Missouri-

Screwbean Mesquite Tree decline throughout the North

American Southwest using community science. She's a southside native of Chicago, Illinois where her passion for

human-nature deficit disorder throughout the country,

Columbia, where she's researching the possible cause(s) in

conservation developed after witnessing the harmful effects

urbanization had on wildlife and the environment throughout

her childhood. She aspires to one day decrease generational

through the development and implementation of educational

and interactive natural resources and wildlife conservation



Brittney Cade - Assistant Developer of MRBO's Virtual Nature School

Alan Moss grew up in a rural area in the Florida Panhandle. Despite always having a scholarly interest in nature and birds in particular, he did not become a birder or even start doing outdoorsy things until attending college. After graduating from Florida State University in 2012, he started out on the field work circuit, working as a technician on many different ornithological projects. He has done many varied types of bird-related work, but he has the most experience with multi-species surveys and banding. During his travels for work and between jobs he has made it to all of the Lower 48 states and a few other countries, including Jamaica, The Bahamas, and Canada. Now in his ninth year of travel, he has joined MRBO for the fall as a grassland bird surveyor in his 24th field season.



Jelisa Renee Oliveras is a biologist from New York City who studies animal movement patterns using Geographic Information Science (GIS) and R(code). She has an MS in Biology concentration in Ecology, Evolution Biology, and Behavior from The City College of New York. Jelisa has worked with a wide range of animal species, such as the Asian elephant from Thailand, black and white ruffed lemurs from Madagascar, and humpback

Jelisa Oliveras - Data Analyst/Science Communicator for MRBO's Research & Monitoring Projects



Alan Moss - Field Biologist on MRBO's **Grassland Bird Fall Migration Surveys**

whales in the New York Bight area. In addition, Jelisa worked with the New York Botanical Garden on several projects and spent time teaching in NYC schools about conservation. Recently, Jelisa joined the MRBO team as our Science Communicator and Data Analyst. She is working remotely from the Bronx.

Upcoming Events





Hope is The Thing With Feathers
The Missouri River Bird Observatory's

Sixth Annual Missouri Bird Photography Contest November 1st - December 31st, 2021



Plus: programs in development

Dates to be announced soon! Watch your email for invitations from MRBO to virtual programming on:

PFAS - Panel discussion on Forever Chemicals with guest speakers from Missouri and the upper Midwest region

Artificial Light at Night - ALAN's effects on birds and people - with biologists and astronomers from around Missouri

Our Missouri Drinking Water -

with guest speakers from Missouri Coalition for the Environment and other water quality orgs!

https://mrbo.org/events/

Landmark. https://fortosagenhs.com/event/birds-at-fort-osage/

October 30th. Birds at Fort Osage National Historic

October 31st – November 6th. MRBO's Fall Auction. https://www.32auctions.com/MRBOFall2021Auction

November 1st - December 31st. Sixth Annual Bird Photography Contest. \$2400 in cash prizes sponsored by Wood & Huston Bank of Marshall! https://mrbo.org/photocontest2021/

November 3rd @ 4:30 p.m. MRBO's Grassland bird studies - with the Missouri Prairie Foundation.

https://moprairie.org/event/mpf-webinar-for-the-birdsmonitoring-grassland-bird-populations-why-it-matters/

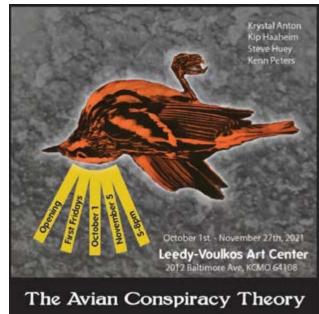
November 6th. Missouri Young Birders Club field trip -Rock Bridge State Park.

https://www.moyoungbirders.org/event/field-trip-rockbridge-state-park/

November 12th @ 10:30 a.m. "Built For It! Missouri's Woodpeckers" – with the Daniel Boone Regional Library. https://events.dbrl.org/event/5714973

November 15th @ 6:30 p.m. Missouri Young Birders Club meeting. This month: PARROTS!

https://www.moyoungbirders.org/event/all-about-parrotsmonthly-meeting/



Don't miss this exhibit! BirdSafeKC contributing partner Krystal Anton and her fellow artists have put together a multi-media gallery showing that expresses bird migration and its many dangers.



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To contribute to the conservation

by gathering information about avian communities and habitat use that will assist state, federal, and private natural resource managers in their efforts to implement conservation programs.

Highlights to date from Fall Migration '21

MRBO is it is 8th season of studying fall migration on Missouri's grasslands.



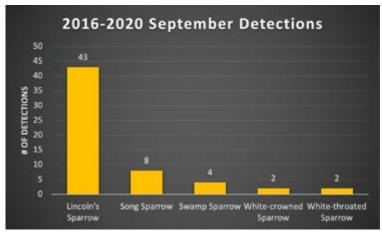
Since September 3rd the MRBO field crew has been monitoring fall migration on Wah'Kon-Tah Prairie and Linscomb Wildlife Area in southwest Missouri. In September, a total of 144 species were detected during surveys. The most common species detected during this September include American Goldfinch (1253), Common Yellowthroat (1109), Indigo Bunting (839), Dickcissel (632), Bell's Vireo (561), Gray Catbird (494), Field Sparrow (476), and House Wren (425).

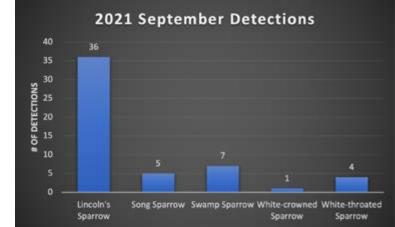
September is the busiest fall month in terms of neotropical migrants moving through Missouri and this September did not disappoint! Warblers such

as Nashville, Orange-crowned, Wilson's, Ovenbird, and Mourning were all detected on the prairies. Flycatchers were consistently detected in September with Least Flycatcher being the most numerous.

Highlights have included documenting a Prairie Warbler (which is surprisingly a hard species to find on the prairie, despite the species' name), one survey with more than 50 Gray Catbirds, and seeing multiple Barn Owls that stayed until the end of the month! Other highlights included a vocal detection of a Veery, watching a Swainson's Hawk soar over the prairie, and flushing up a couple Sora one morning.

Some interesting observations include the relatively high abundance of Rose-breasted Grosbeaks that are being detected this fall compared to previous falls. The field crew was detecting them almost every day during the month of September, while in previous years they have been scarce. Another interesting observation, which many Missourians have experienced, is the early arrival of our migrating and wintering sparrows. Usually, the first week of October is when sparrows like Swamp and White-throated start showing up. This year, we've detected more in September than usual. The most dramatic difference has been seen in Lincoln's Sparrows numbers. Combining the data from the 2016-2020 fall survey seasons, Lincoln's Sparrows were detected 43 times. Compare that to results from September 2021, in which Lincoln's Sparrows were detected a whopping 38 times! Very interesting!







Brown-headed Nuthatches Return To Missouri

Article by Sarah Kendrick; photos by Noppadol Paothong (except forest photo)
Missouri Department of Conservation

The Missouri Department of Conservation, in partnership with the University of Missouri and the U.S. Forest Service Mark Twain National Forest (MTNF) with support from Arkansas Game and Fish Commission, has reintroduced a small population of Brown-headed Nuthatch to Missouri shortleaf pine woodlands in Mark Twain National Forest from Arkansas' Ouachita National Forest. Forty-six nuthatches were translocated in August-September 2020 and 56 in August 2021.

Brown-headed Nuthatches are pine-woodland obligates that had the previous official status of extirpated in the state, meaning they used to exist in Missouri but no longer. With the removal of nearly all shortleaf pine woodlands across Missouri's Ozarks in the late 1800s and early 1900s, the species may have left the state around this time. Now, after extensive restoration of pine woodlands in Mark Twain National Forest, habitat exists

to bring the birds back. These birds are resident (non-migratory), fairly sedentary, and weak fliers, so their dispersal north without connecting shortleaf pine habitat is highly unlikely. Partners at the U.S. Forest Service (USFS) Northern Research Station and University of Missouri have also shown that under various climate change scenarios, shortleaf pine becomes the dominant tree species in the Missouri Ozarks 100 years into the future with woodland management practices, providing support for nuthatch habitat.

Just over 100 birds were translocated from Ouachita National Forest in Arkansas to pine woodland sites on the Mark Twain National Forest that have been managed with tree thinning and prescribed fire for over 20 years. Brown-headed Nuthatches are common across their range, which extends from Arkansas south through the open pineries of the southeastern states. All birds were banded with a federal aluminum band and a unique color combination to aid in resighting individuals. Half of the released birds were fitted with a radio tag to track survival post-release for about 30 days, and monthly surveys have been conducted. Six

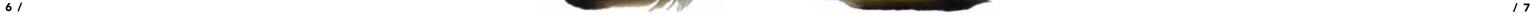
nest cavities were monitored in spring of 2021; four nests were successful. Monthly surveys will continue for the next year and nests monitored again in spring 2022.

The topic of Brown-headed Nuthatch reintroduction has been discussed among conservation partners for a decade and this effort has been three years in the making communicating with state and federal partners in Arkansas and Missouri and the Central Hardwoods Joint Venture. Nuthatch reintroduction is an option because of the restoration of shortleaf pine woodland—an ecosystem that was almost totally removed by human hands in Missouri. The reintroduction is one relatively low-risk, low-cost step toward the shortleaf pine woodland ecosystem's recovery and one way that we can work to repair a heavily impacted landscape.











To contribute to conservation

by providing opportunities for Missourians of all ages to spend more time outdoors and to learn about species and habitat conservation.

Back in action at in-person events! As Covid cases decrease in Missouri, we have been hosting and taking part in more in-person, outdoor events

across the state. Here are a few highlights from the past couple of months.



Women in Nature at Knob Noster State Park - August 14th

The excellent interpretive crew at Knob Noster held this weekend-long skill-building event for women who were new to the outdoors. MRBO Director Dana Ripper led a birding workshop for about 20 women, beginning with basic binocular use and how to choose a field guide. The group got to see and hear Eastern Wood-Pewee, Pileated Woodpecker, Eastern Bluebird, Yellow-billed Cuckoo and more over the course of a very pleasant couple of hours. We then returned to base camp for coffee and a campfire breakfast!

Prairie Days at Dunn Ranch - Sept. 11th There is nothing like getting out on the prairie to observe birds and educate people about the amazing birds that inhabit Missouri's grasslands. Once again,

we joined the Missouri Department of Conservation and the Nature Conservancy for Prairie Days at Dunn Ranch. This event is all about connecting people to the prairie ecosystem through information booths, native plant sales, and bison tours! This year we saw a great increase in participants as compared to previous Prairie Days.



Ozark Prairie Master Gardeners Field Day - Sept. 18th

MRBO Education Coordinator, Paige Witek, joined the Ozark Prairie Chapter of the Missouri Master Gardeners for their annual Field Day at Britton Farm. There were several stations focused on various aspects of gardening and enjoying the outdoors. MRBO's station was on 'Bird Language' and taught participants how to enjoy their garden through listening to bird sounds. Other stations included information about how to cultivate mushrooms, bats in Missouri, native plants, and more. This event is always a delight for MRBO to be a part of, making connections across various organizations.

Missouri Young Birders Club Field Trips

Since July 2021 the Missouri Young Birders Club (MYBC) has been meeting

in person with outdoor field trips to various birding locations across the state. These field trips are a great way for MYBC members to interact, get to know one another a bit better, and (of course) go birding! As a group, the MYBC has visited Peers Prairie run by Magnificent Missouri in Marthasville, Burr Oak Woods Conservation Area in Blue Springs, Bennet Springs State Park near Lebanon, Anita B. Gorman Discovery Center in Kansas City, and Knob Noster State Park in Knob Noster. We have had tasty snacks, played a bird version of "headbands" or "celebrity", and had some great bird sightings. If you know someone (ages 8-17) who might be interested in becoming a MYBC member, you can point them toward our website moyoungbirders.org.



Arrow Rock Nature School gets funding support! MRBO's first grant in direct support of the Nature School was received in mid-October. Thanks to the

Patterson Family Foundation, our rural place-based learning center is about to become a reality!

The Vision

MRBO's objective in establishing Arrow Rock Nature School is to create a placebased education center serving local school districts in our rural communities. This education center will serve students in Saline and surrounding counties with outdoor experiences that incorporate Missouri Learning Standards and Grade Level Expectations (GLEs) through local natural and cultural history perspectives. Students will be provided with experiences focused on nature explorations, community science, ecologically sustainable agriculture and commerce, and service learning. The Nature School will provide resources that would otherwise not be available locally.



Place-based learning is about students building an understanding of both the ecological and anthropogenic characteristics of where they live. The Arrow Rock Nature School is based on the models of the Teton Science Center (https://www.

tetonscience.org/about/place-based-education/) and the Boone County Nature School in development near Columbia, Missouri. Our ultimate goal is to instill students with local ecological and cultural knowledge coupled with a sense of civic duty to want to make their world better. The MRBO nature school will also serve as a model for developing place-based learning centers in other rural areas in Missouri.

The Location

MRBO has an ideal location at which to house the Nature School – the historic Lawless House and grounds in Arrow Rock, Missouri. This ca-1900 farmhouse and outbuildings are adjacent to a 30-acre prairie and provide a perfect location for students to explore the outdoors as well as cultural history. The site is owned by the Missouri Department of Natural Resources - Arrow Rock State Historic Site and leased in a partnership between MRBO and the Friends of Arrow Rock.

The Curriculum

We invite students to participate in two Nature School sessions of three to four days each. During the first session, three days will be used for place-based learning with discovery and explorations focused on natural, historical, and cultural perspectives. One day will be devoted to the Arrow Rock State Park and Historic Site facilities where historical explorations as well as cultural and art activities will take place.

Students will develop a project to work on at their school with assistance from nature school staff. Upon completion of projects, classes will return to Arrow Rock for a multi-day follow-up session. During this time, further place-based discovery and exploration will focus on local perspectives, reexamined with deeper understanding. This final gathering will culminate with students presenting and celebrating work completed on place-based projects in the community.







Welcome to the KnOWLedge Nest MRBO has a new learning center on Arrow Rock's Main Street!

How paramount the future is to the present when one is surrounded by children. ~ Charles Darwin





As many of our supporters and organizational partners are aware, education is one the three pillars of MRBO's mission statement. The entire MRBO staff along with the Board of Directors are pursuing the goal of providing our communities with the opportunity to understand the importance of mankind's relationship with nature.

"How to capture the imagination of children and young adults and inspire them to learn more and care more about nature?" is a question that is often put forward. As MRBO has evolved over the last ten years, so, too, has our ability to provide educational experiences for the community. When we moved into our new office and visitor center on Main Street in Arrow Rock (which almost immediately became known as the "BirdHouse"), we dedicated a space for a learning center. This learning center - the KnOWLedge Nest - is now complete.









This space is a diorama of the natural terrestrial habitats of Missouri. From caves to cliffs, glades to wetlands and the transition from forest to prairie, these natural communities can be experienced with a short walk through. The KnOWLedge Nest provides space for educational projects and handicraft work for children and families.

The KnOWLedge Nest will be another stepping stone in MRBO's education program as our projects evolve to share a deeper understanding of nature and all its wonders to everyone.

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To contribute to conservation by advocating for sound, science-based conservation policy that benefits birds, other wildlife and environmental quality.

MRBO continues to work and inform on the plastic pollution crisis It's really time to stop making and using so much plastic.

People have been talking about plastic pollution for a long time now ... decades really. And it isn't get any better, it's only getting worse. There are volumes of data on the subject and, actually, some answers. One of the major problems though is that most people are not listening, let alone hearing, about how the impact of plastic pollution affects us all. So let's say we stop verbalizing about plastic pollution and go for the visual shock:



You might have seen the video of ocean researchers removing a plastic straw from a sea turtle's nostril; the video has more than 30,000,000 views. Images like this may have caught the attention of some of the general public but not enough to stop the onslaught of continued purchasing and use of throwaway plastics. For example, in the US alone, people use about 500 million plastic straws every day. We also go through more than 70 million singleuse plastic water bottles and 270 million plastic shopping bags every day (yes, that's per day). If it strikes you that there's more plastic than there once was, it's not in your mind – though plastics were invented in the early 20th century, more than half of all plastic ever made has been made since 2005.

Those reading this article are most likely not contributors to the problem but are actively trying to be part of the solution. If you were not able to participate in MRBO's webinars on Breaking Free From Plastic or Everything You Ever Wanted To Know About Microplastics, you can find the links below to view the 45-minute webinars in their entirety. If you have already viewed the webinar, please pass this on to friends, family and every politician you have access to.

In the words of Heidi Wills, "We can choose to be affected by the world or we can choose to affect the world."

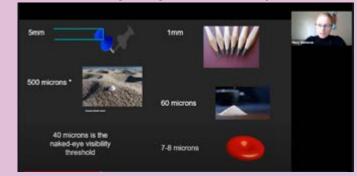
Check out our two recent webinars on plastic Watch at your leisure on YouTube

Breaking Free From Plastic



https://youtu.be/Ht2NA6Pa0Al With Dana Ripper, MRBO Director & Beyond Plastics Speakers Bureau Member

Everything About Microplastics



BEYOND PLASTICS Speake

https://youtu.be/ib4q3R9wMks
With Macy Gustavus, Utah State University
Graduate Student & Beyond Plastics
Speakers Bureau Member



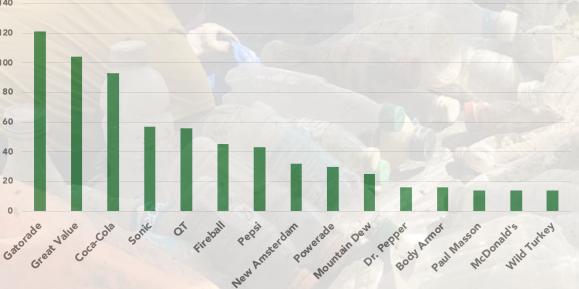


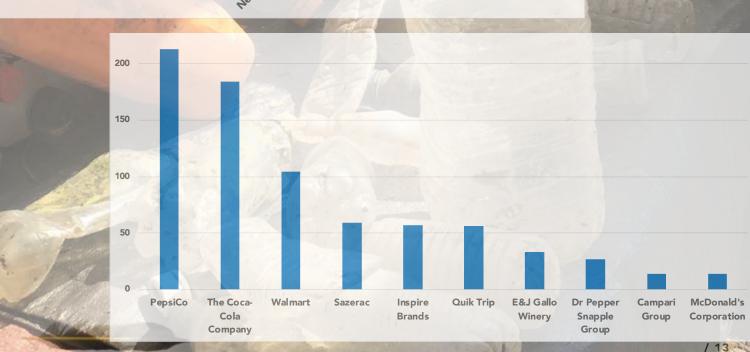


Plastic Brand Audit 2021

In September, MRBO partnered with our friends at Missouri River Relief (MRR) to conduct a plastic brand audit in conjunction with Break Free From Plastic's global data collection program. With a bunch of awesome volunteers, we spent the day at Waverly, MO sifting through the plastic garbage that MRR had pulled out the Missouri River that day. There was so much, even with 10 of us working for seven hours, we did not get through it all but we did collect a lot of data! Our data were submitted to Break Free From Plastic along with hundreds of other volunteer groups' audit data from around the world. Here are the brands and their producers that contribute to the most plastic waste in the Missouri River:







Community News

Bird Education at the 53rd Arrow Rock Heritage Festival

MRBO has been taking part in Arrow Rock's Heritage Festival for eight years, even longer than we've had our headquarters in the village! This year we had two booths, the FUN one described below run by our Board of Directors, and one titled "Woodworking for Wildlife" that was all about homes for birds and other critters. Woodworking expert Chris Egbert of the Boone's Lick Master Naturalist Chapter joined us to mentor festival-goers in how to build various types of wildlife houses. We also discussed birds and wildlife conservation with more than 200 people who stopped by the booth!





HAVING FUN WITH FUNDRAISING

When Arrow Rock hosted its 53rd annual Fall Craft Festival on October 9th and 10th, MRBO literally took to the streets for a little fundraising activity. Just a few yards away from a more traditional MRBO booth where staff featured educational materials and hosted demonstrations, MRBO supporters oversaw a booth filled with gift items and MRBO branded apparel.

To added a little excitement, a Kermit the Frog display informed people "it's easy going green" and volunteers sold raffle tickets for a chance to win a very large jar of fresh greens ... green cash that is !!! This bought a lot of chuckles and also a lot of donations for MRBO.





On a more serious note, Tigger, from Pooh Corner, sat on a heap of trash and advocated for everyone to "say no to plastics". This opened the door for some very lively conversations as well as sales of MRBO stainless steel coffee mugs and water bottles and a give away of metal straws to kids with a little story about saving the turtles and fish in our oceans.

Many thanks to the volunteers who helped staff our booth!

MRBO's next fundraising opportunity begins soon with the kickoff of the online auction on Sunday, October 31st. This is FUN for everyone. There is no stress with an online auction as you can just view all the great items and experiences at leisure and bid from the comfort of your own home.

This year's experiences include a very upscale dinner in a Kansas City private residence with an amazing view of the city. There are also tickets for a Sunday matinee of the Kansas City Symphony at Kaufman Center. For a more rustic approach to life, there is a walkabout on a new prairie restoration with Dana and Ethan followed by a champagne brunch (and more bird watching) at Holly House or a behind the scenes visit to the Bird House at the St. Louis Zoo. The very diverse offering of auction items has great selections of wines, specialty meats, cheeses and candies as well sporting goods, home decorations and gift options. And, of course, FUN activities and games for kidsjust in time for the holidays.

The auction runs from October 31st to November 6th at 32auctions.com/MRBOFall2021Auction We hope that you will join in the FUN!





Thank you for your Support

The following individuals and organizations have provided support since the publication of our Summer 2021 newsletter. We give thanks to them and to all who have supported the Missouri River Bird Observatory! YOU make our work possible.

Margie Bauer	Camdenton	Evelyn Luecke	St. Charles
Sarah Beier Hobbs	Kansas City	Dan Burkhardt	St. Louis
Alpha Benedetti	Naperville, IL	Dayna McDaniel	Raytown
Kathy Borgman	Arrow Rock	Bill Moran	Leawood
Kalen Brady	Rolla	Caroline Pufalt	University City
Steven & Anita Byers	Nevada	Sarah & David Read	Columbia
Myra & Truman Christopher	Kansas City	Laura Robinson	Kansas City
Dan Curran	Ballwin	Steve Schnarr	Columbia
Vernon Elsberry	Warrensburg	Cindy Stevens	Marshall
Anonymous	Missouri	Dianne Van Dien	Blackburn
Susan Hazelwood	Columbia	Lyn Vreeland	Wellsville, NY
Donna & John Huston	Marshall	Mary Wight-Carter & Bart Carter	Midlothian, TX
Steve Johnson	Kansas City	Linda Williams	Liberty
Warren & Denise Loveland Family Foundation	LaCrosse, WI	Patterson Family Foundation	Kansas City
		Wood & Huston Bank	Marshall

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Enter MRBO's annual photo contest - contribute to conservation outreach AND win big prizes! https://mrbo.org/photocontest2021



Hope is The Thing With Feathers

The Missouri River Bird Observatory's Sixth Annual Missouri Bird Photography Contest November 1st - December 31st, 2021

