

# The Rectrix

A Newsletter of the Missouri River Bird Observatory



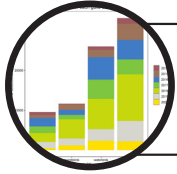
*rectrix* lek-triks/ noun. (pl. -trices) any of the larger feathers in a bird's tail, used for steering in flight.

# Our Mission



## Conservation

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



## Science

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.



## Education & Outreach

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



## Advocacy

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

## Staff

**Dana Ripper Duke**  
Director/Founder

**Ethan Duke**  
Director/Founder

**Marlee Dodson**  
Operations Assistant

Education Coordinator  
coming soon!

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Cover photo by Mark Ramsey



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# Greetings from the MRBO Directors

Dear MRBO supporters and friends,

Happy Holidays to all!

It's common at this time of year to reflect on the months that have just passed and prepare to turn the calendar page. For us, the end of 2022 is even more introspective than usual due to the clear urgency of conservation issues such as climate, water quality, continued proliferation of toxins, and increasing biodiversity loss. Here at MRBO we are assessing challenges and successes more critically than before. We are looking forward to a new era at MRBO in 2023, to which we bring the motivation and ambition to build on the organization's 12-year-old foundation within Missouri's exceptional conservation network.

MRBO supporters may remember the unveiling of our strategic framework in the fall of 2019. We had just returned from a national conservation meeting in Milwaukee and were highly energized. The two of us, along with Education Coordinator Paige Witek and Field Project Leader Erik Ost, spent several intense days brainstorming and documenting thoughts and ideas about MRBO's current and future activities. We clarified focal areas and discussed the organization's core values – the ethical fabric that is incorporated into all we do. Over the course of this exercise, we developed the imagery of eggs to represent the MRBO strategic framework. We thought of our ideas as being nurtured by time and work and, eventually, those ideas would hatch, fledge, and take flight.

The focal areas we identified were Quality Habitats, Bird-friendly Communities, People in Nature, and Feeding the Flock. The first three are fairly self-explanatory; the latter refers to restoring our landscapes with truly sustainable agriculture to feed both people and wildlife. You can read the details of MRBO's eggs on the next page.

As 2022 draws to a close, we are assessing how successful we've been over the past three years at working within that strategic framework and addressing the conservation priorities laid out in late 2019. While the pandemic necessitated some shifts in methodology, here are a few ways in which we "nurtured our eggs" over the past three years:

- Quality Habitats – provided assessments of bird populations on >80,000 acres of prairie and wetland, resulting in adaptive management shifts on at least 10,000 acres.
- Bird-friendly Communities – successfully encouraged the placement of native plantings, nest boxes for breeding and wintering birds, and window treatments to reduce bird strikes, at >50 residences and commercial buildings in central and western Missouri. Worked with local conservation partners to reduce plastic waste in communities.
- People in Nature – hosted thousands of people of all ages at outdoor programs and provided virtual programs empowering even more people to explore nature independently.
- Feeding the Flock – worked with state and national partners to restore or enhance grassland habitat on >1000 acres of private farm and ranch land.

In 2023, with an expanded and strengthened Board of Directors and with assistance from independent natural resource professionals and nonprofit advisors, MRBO will be developing a multi-year strategic plan. We expect that this will result in expanded resources for the organization to achieve, and expand upon, its conservation goals. MRBO will continue to address the most pressing conservation issues through science, education, and advocacy, while remaining nimble and able to respond to shifting circumstances and partner needs quickly and effectively. We will also continue to reflect on input from our supporters about what you most care about and the areas in which you'd like to see programming. We look forward to updating you as the new year unfolds!



We are very grateful to MRBO's supporters, partners, board members, and current and former employees for everything you do for conservation. All of us working together in 2023 can make a real difference for the birds we cherish.

Warmest wishes for a peaceful holiday season and new year,  
Dana and Ethan Duke



# MRBO's Strategic Framework

## Quality Habitats

MRBO contributes to the conservation and continual improvement of the highest-quality habitats possible for birds and other wildlife.

1. Improve public and private habitat management quality.
2. Support increases in the occurrence and functionality of intact natural systems - e.g., watersheds, floodplains, grassland complexes.
3. Encourage/facilitate enrollment of private acreage in conservation programs
4. Decrease environmental pollutants - chemicals, plastics, emissions, other waste.

## Feeding the Flock

MRBO contributes to the improvement of local and regional food systems, which are integral to wildlife/natural resource conservation and to providing people with quality food.

1. Promote an agricultural system that is fair to both people and wildlife and that results in natural resource conservation.
2. Encourage people to choose food based on ecological conservation.
3. Promote local, bird-friendly food systems.
4. Work to make local, sustainably produced food available to as many people as possible.

## Bird-friendly Communities

MRBO works to build communities that provide the things birds need:  
Food and Water  
Shelter  
Safe Passage  
Places to Raise Young.

1. Reduce avian window collisions.
2. Proliferate the use of native plants in homes, schools, and all public places.
3. Reduce chemical use in home yards and public places.
4. Support initiatives to reduce populations of outdoor cats.
5. Promote/support the reduction of waste in communities, particularly single-use plastics.

## People In Nature

MRBO provides opportunities for people to experience, enjoy and understand the natural world, fostering awareness of the need for conservation action.

1. Increase the amount time spent outdoors by people of all ages and demographics.
2. Foster enjoyment of all parts of the natural world.
3. Increase understanding of basic ecology and ecological connections, including humans as part of nature.
4. Provide opportunities for volunteerism, internships, community engagement and other involvement in MRBO's work.

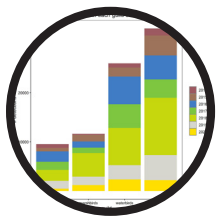
## The values and philosophy that pervade all areas of MRBO's work

### MRBO's Core Values

- Robust data and scientific integrity
- Time- and cost-efficiency and use of technological innovations
- Fostering the formation of partnerships
- Embracing and encouraging equity, diversity and inclusion
- Empowering and providing opportunities for young people







# Science

To contribute to 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.

## Guest Article: The Irruptions of 2022

Mary Nemecek, Burroughs Audubon Society Conservation Chair

The current news of the volcano Mouna Loa roaring to life for the first time in almost 40 years reminds us of the harsh side of the word "eruption" where people's lives and homes can be devastated by nature. In the bird world, we experience a what sounds the same but is a more frequent and welcome side of what nature can bring. The term "irruption" for birds refers to when a large number of birds move out of their normal range, typically due to low food availability. This type of irruption is highly anticipated by bird watchers as it brings colorful birds, not frequently seen, to feeders and natural areas, brightening the cold months between fall and spring migration.

Irruptions often occur when there is a poor tree and conifer seed crop in northern areas forcing birds south of their normal winter range in search of food. Each year the Finch Research Network asks volunteers to rate the seed crops in their area as poor, fair, good, excellent or bumper. This is used to assemble a map of seed crops. Predictions are then made as to which of eight individual species may move outside their normal range. These species are: Pine Grosbeak, Purple Finch, Red Crossbill, White-winged Crossbill, Common Redpolls, Hoary Redpoll, Pine Siskin and Evening Grosbeak. The report forecasts movement of northern irruptive



Purple Finch in the Snow By: Amy Watts

species to Ontario and adjacent provinces and states. The much-anticipated report is kept under wraps until its release in September.

This fall the predictions came for big movements of Evening Grosbeaks and Purple Finches. Especially of interest

in Missouri are Evening Grosbeaks, which in decades past had major irruptions, or "flight" years, where hundreds of birds were reported in the state. The last such year was 1985-86. Since 1990 there have only been a handful of winters with any birds reported in the state and most often it was only one or two individuals.

It is important to overlay the stark decline in population this species has experienced with the drop in irruption frequency. Since 1970, Evening Grosbeaks have declined by 92% and is now a species of Conservation Concern. Its numbers have fallen so far it is also one of the 91 species listed as being on the brink of endangerment by the recently formed Road to Recovery (R2R) Initiative focusing on recovery of species with severe population declines. This severe population decline makes the sightings we have had in Missouri already this fall all that much more impressive, and birders are hopeful that more will find their way to the state as winter sets in.

In a recent blog post the Finch Research Network site, Matt Young requests recordings of Evening Grosbeaks researchers can determine which types are on the move. This helps scientists know from what areas

they are moving from and where they are going. Uploading your recording to your eBird checklist is a great way to get the information to researchers.



A pair of Evening Grosbeaks By: Randy O'Hara

Purple Finches are also on the move this year. A bumper crop of Spruce Budworm in parts of the eastern boreal forest promoted a good breeding season. Additionally, the emerald ash borer continues to take its toll on ash trees of the northeast.

Another species popping up in Missouri is Red Crossbill. So far all recordings have been of Type 2 from the west. This was also predicted in the Winter Finch Report. More may find their way into the state as the Western seed crop dwindles. This is another species that it is important to record their calls and either upload to your eBird checklist or email to Matt Young ([may6@cornell.edu](mailto:may6@cornell.edu) or [info@finchnetwork.org](mailto:info@finchnetwork.org)) for identification.

Lastly, while not a finch, Red-breasted Nuthatches will often follow finch irruptions, and this has been a very good year for them so far in Missouri. The poor cone crop in the eastern boreal forest had them moving as early as July and that movement has continued to push them south. Listen for their nasal 'ink ink ink' call around conifers. They are attracted to feeders, especially black oil sunflower seeds, suet and peanut feeders in yards. Clean, unfrozen water is always welcomed by birds, especially during harsh weather. Irruption years can be great fun at the feeder and out on the trail. Here are some helpful links to help identify what is in your area:

2022 Winter Finch Forecast:

<https://finchnetwork.org/winter-finch-forecast-2022>

eBird information on species and species map:

<https://ebird.org/explore>

Information on bird species and identification:

<https://www.allaboutbirds.org/news/>

### References

Hoar, T., 2022, Winter Finch Forecast 2022-2023, Finch Research Network, accessed 28 November 2022 < <https://finchnetwork.org/winter-finch-forecast-2022> >

Robbins, M., *The Status and Distribution of Birds of Missouri*, 2<sup>nd</sup> Edition, University of Kansas Libraries, 2020

[www.ebird.com](http://www.ebird.com) accessed 11/28/2022

<https://r2rbirds.org/on-alert-species/>



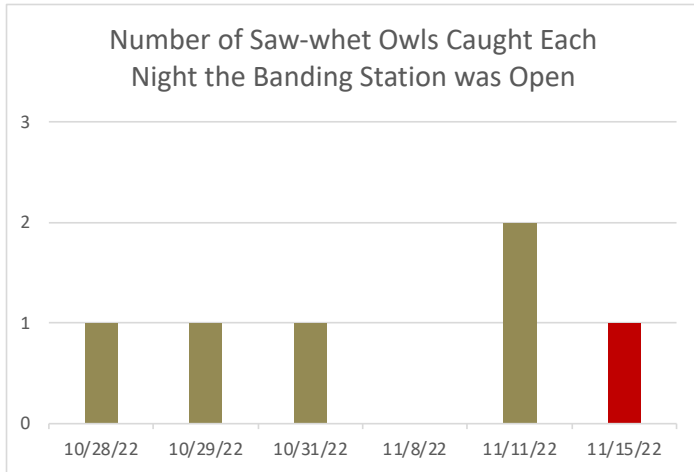
## 2022 Northern Saw-whet Owl Season

Marlee Dodson, MRBO Operations Assistant

2022 was to be a fairly slow year for MRBO's Northern Saw-whet Owl banding station. We captured just five owls over six nights of operation, plus re-captured one owl on a subsequent night. This capture rate can be compared to seven owls over two nights in 2021, and 34 owls over 11 nights in 2020! We expected the north front that swept down

into Missouri over the course of November 12<sup>th</sup> – 15<sup>th</sup> to bring more of these little migrants, but no such luck.

Fortunately, although the season was low on birds it was successful on outreach with a total of 73 visitors coming out over four nights. Almost every visitor this year saw an owl. Please see Ethan's recap on the following of the education programs at the saw-whet station, and stay tuned for next autumn!



\*The red bar indicates a within-season recapture.



## A Decade of Backyard Banding

Dana Ripper, MRBO Director/Founder

Many readers of the *Rectrix* will remember MRBO's Backyard Banding project, which ran from late 2010 to early 2020. The methodology consisted of color-banding 10 common species that were captured by mist-netting at bird-feeders; each individual bird would get its own unique color combination. Homeowners and volunteers then documented the color combinations they observed as birds returned to their feeders and submitted this data to MRBO. This banding project was conducted at nature centers, businesses, and private homes across Missouri, almost always as a public education program. In fact, we color-banded birds at over 80 locations and had more than 2,000 people attend Backyard Banding events over the years! We had some truly dedicated observers at some of the locations, which over time provided us with hundreds of resightings of color-banded birds. You can see the full project report in the *Rectrix* Volume 11, No. 2 (mrbo.org/newsletters).

As part of data collection for Project Feederwatch (feederwatch.org) at Burroughs Audubon Society Library, MRBO volunteer Sherry Leonardo still resights color-banded birds. She recently provided us with several color-band combinations that allowed us to search MRBO's archive for the original banding dates. Here's what we found!

### Tufted Titmice

Resighted November 18<sup>th</sup>, 2022 and December 2<sup>nd</sup>, 2022:

- Blue over red bands on left leg, metal on right - **banded December 8<sup>th</sup>, 2018**



Resighted December 2<sup>nd</sup>, 2022:

- Metal over white bands on left leg – **banded November 1<sup>st</sup>, 2015**
- Dark green band on right leg - only the right leg was seen, so this could be two different birds depending on what band(s) are on the left leg or if a second band on the right leg fell off over time.

**Possible banding dates:** November 3<sup>rd</sup>, 2012 or November 12<sup>th</sup>, 2017. Seems more likely that this bird was banded in 2017, but it could be 10 years old! The longevity record for a Tufted Titmouse, according to the Bird Banding Lab, is 12 years.

6 /



### Downy Woodpecker

Resighted December 2<sup>nd</sup>, 2022

- White band on left leg.

Again, this bird could be one of several based on left leg bands and whether a band is missing. There are four **possible original banding dates:**

November 1<sup>st</sup>, 2015  
March 5<sup>th</sup>, 2016  
February 4<sup>th</sup>, 2017  
March 4<sup>th</sup>, 2017

No matter what, this little woodpecker is at least five years old!

### Black-capped Chickadees

Resighted December 2<sup>nd</sup>, 2022

- Red band on left leg, dark blue over metal bands on right *and*
- Red on left leg, light blue over metal bands on right.

**Both birds banded December 9<sup>th</sup>, 2017**

- Orange band on left leg

MRBO banded so many chickadees at Burroughs Audubon Library that we used almost 200 color combinations. Seven of them had an orange band on the left leg. This particular Black-capped Chickadee could have been banded as early as February 2013, or as late as November 2017.



Thank you to Becky Wylie for all three of these photographs!





# Education

*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.*

## Education Program Update

Ethan Duke, MRBO Director/Founder

MRBO's education work this fall started with off big with the launch of the Arrow Rock Nature School pilot program. MRBO staff, volunteers, and Missouri Department of Education interpreters hosted Glasgow Elementary students for three days in September. Programs focused on food webs, the Missouri River, and the cultural history of Arrow Rock. Students enjoyed activities in great outdoors with that meet state learning standards. Activities included navigating with a compass, measuring trees, a museum scavenger hunt, and fishing! The events kept on coming with many hosted and partner happenings throughout the fall.



### Franklin's Gull

- Three cycle gull
- Migrates completely thru continent interior
- Notice:
  - Wide eye arcs
  - White on primary tips
  - Trailing white edge to wing in flight
- Main confusion would be Laughing Gull



We continued to grow and coordinate the Missouri Young Birders' Club, adding several new faces to our monthly meetings. This fall's topics included Shorebirds, Native Plants, and Gull Identification. MYBC mentor Levi Mattingly gave a stellar presentation on native plants and guest speaker Mary Nemecek was kind enough to share her passion with a wonderful Gull presentation. Several field trips were held by chapters across the state, including an owl prowl in St. Louis with Mark Glenshaw.

### Speaking of owls...

MRBO teamed up with Dr. Vayu Gokhale, Assistant Professor of Physics and Astronomy at Truman State

University, and his students for an "Owls Under the Night Sky" in mid-November Attendees from poured into Arrow Rock to enjoy MRBO's Northern Saw-whet Owl banding as well as stargazing through telescopes. We also hosted our traditional election day owl banding as well as a Saturday evening event in October with about 30 participants.

In November, I gave a presentation on Missouri Owls and their adaptations to 50 students at Grant Elementary in Columbia. If you know of a class that would like a presentation on birds, please have them reach out to MRBO at [education@mrbo.org](mailto:education@mrbo.org).



Autumn is also the time for the annual "Band with Nature" program at Columbia Audubon's Nature Sanctuary in Columbia. This was MRBO's 8<sup>th</sup> year with the event. I shared a "Sound Science" program exploring the sounds in nature with 1,400 second graders from Columbia Public Schools over three days. Dana helped out on day one, Lottie Bushman on day two, and Edge Wade anchored the third leg.

In the Kansas City area, MRBO co-director Dana Ripper and I presented at the Missouri and Kansas Environmental Educators' Conference on the topic of environmental injustice history and also conducted a session on Ornithology for the new Osage Trails

Master Naturalist class. Both presentations were attended by approximately 40 people, who we hope will go on to spread the joy of birds, nature, and making sure all people are involved in the outdoors. We also traveled to Springfield and presented at the Missouri Department of Conservation Partners' Roundtable on the topic of the Comprehensive Conservation Strategy and the collective impact of conservation organizations working together.

Dana has continued to present virtually on plastic pollution to groups across the state and country. MRBO's status as an affiliate of Beyond Plastics means that she keeps busy advocating for significant reductions in production and use of these environmental contaminants. Be sure to check out and subscribe to MRBO's YouTube channel ([YouTube.com/moriverbirdobs](https://www.youtube.com/moriverbirdobs)) so you don't miss those presentations or any other content.

We hope to see you at our upcoming events!



Ethan presenting to students at Grant Elementary School in Columbia.



# Little Nestlings Corner

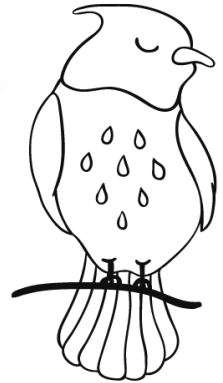
Tammy Gillespie, MRBO Volunteer



## Build a Bird's Nest Word Search



BARK	BRANCHES	CATTAIL
EVERGREEN	FEATHERS	FUR
GRAPEVINE	GRASS	LEAVES
lichen	MILKWEED	MOSS
MUD	ROOTS	SALIVA
SPIDERSILK	SPIDERWEBS	STICKS
TWIGS	YARROW	



### MATCHING GAME

DRAW A LINE FROM THE BIRD NAME TO THE CORRECT NEST



Draw a picture of your habitat here.

### Choose a bird and create its habitat!

For this activity, choose any bird and look up its habitat. A bird's habitat is the area in which it lives. For example, your habitat is your house or apartment because it is where you live.

You can make your habitat out of anything you would like. A few suggestions are listed in the Word Search list.

My bird is a \_\_\_\_\_. It lives \_\_\_\_\_.

This bird's habitat is made of \_\_\_\_\_.







# Advocacy

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

## Initial BirdSafeKC Results 2022

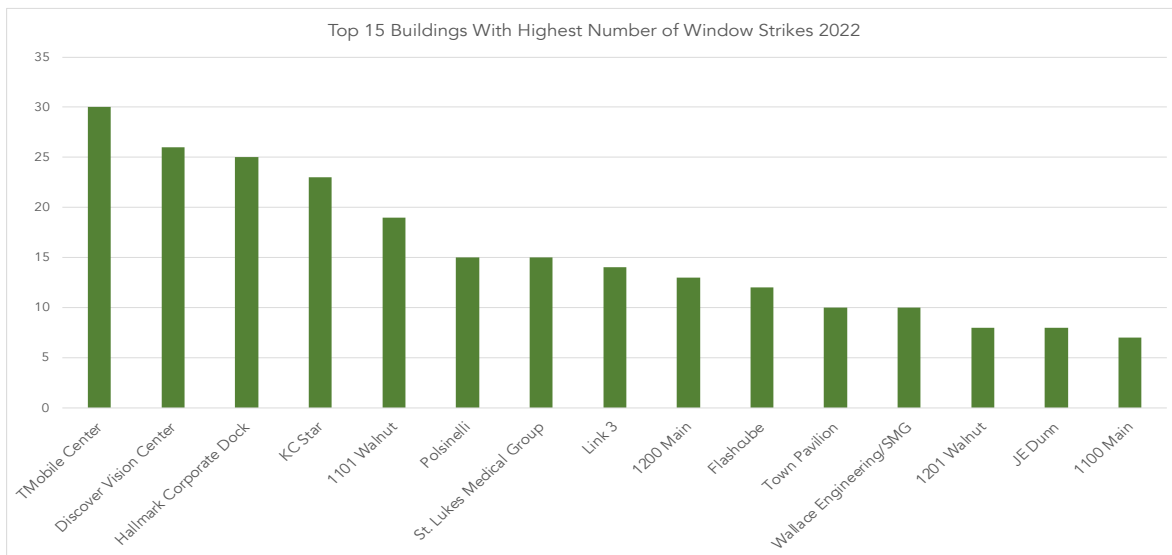
Dana Ripper, MRBO Director/Founder

Fall of 2022 marked the finish of the fourth year of BirdSafe Kansas City surveys, aimed at documenting and addressing window collisions on a sample of 25 buildings in the KC metro area. The project's volunteers logged 162 carcasses this fall over the course of 102 surveys. Once again this year, window strikes were highest during the peak migratory period of late September to early November. Of the buildings surveyed, those with the highest amount of window collisions were the T-Mobile Center, the former KC Star building, and 1101 Walnut, followed by a few other downtown buildings; the Discover Vision Center in Independence, which varies significantly in the amount of strikes per season; and the Hallmark Corporate building's Gillham Road dock. Fortunately, we are working with Hallmark on window treatments for the dock as well as other structures in Crown Center.



Deceased Cedar Waxwing photographed by Briana Anderson.

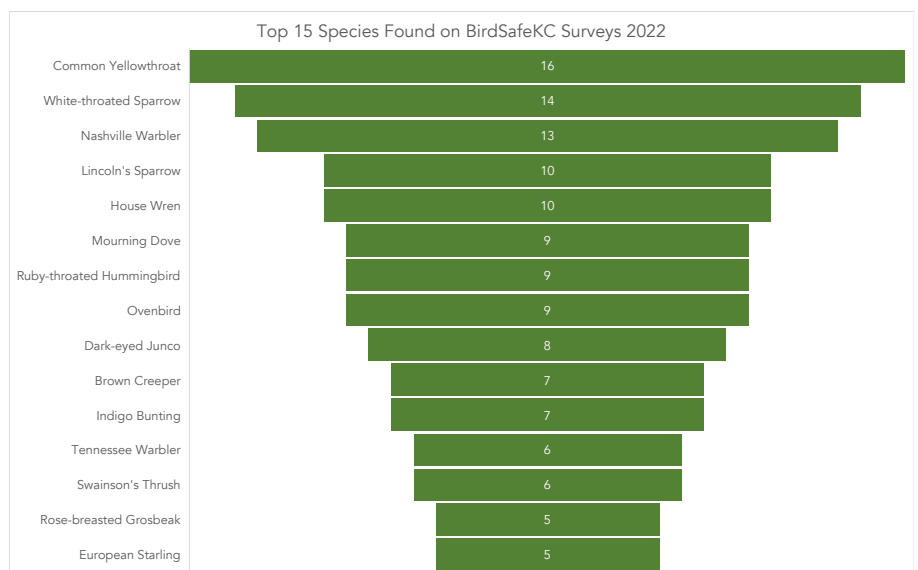
MRBO will publish a comprehensive report of 2019-2022 BirdSafeKC findings in January 2023.



### With gratitude for BirdSafeKC volunteers:

Briana Anderson  
Katie Boord  
Brett Creason  
DeAnn Gregory  
Nicole LaPlant  
Kathleen Pine  
Steve Rinne  
The Heartland Conservation  
Alliance Nature Action Crew

Thank  
You!



# Guest Article on Missouri's Food Systems

MRBO is supportive of family farms that engage in sustainable resource use and work to provide space for wildlife. Pasture raising cattle on native landscapes allows for better nutrition for the livestock and can provide habitat for native species. Birds, insects, rodents and small mammals can co-exist on working grasslands with thoughtful management. Independent farms provide a traditional, more sustainable alternative to industrial food systems. MRBO therefore tries to share guest articles from family farmers and their advocates in each issue of the Rectrix.

## News Tribune



### **The elephant in the room is destroying family farms, rural communities and our democracy**

Darvin Bentlage

June 9, 2022

I love farming and have been doing it all my life, but I told my kids not to come back to the farm, because there's no future in it. That's the sad truth. Over the last year on Capitol Hill, there have been multiple hearings and bills and even an executive order to address what is going on out here in rural America, but little to nothing is getting done. For the last three decades, roughly 40 U.S. family cattle operations have gone out of business every day. It's time to end the talk and campaigning and actually fix the problem. I'm 66 and a 4th generation cattle and grain

farmer from southwest Missouri. Even though it's sometimes difficult and dangerous work, I've always loved raising cattle and crops and making the land better for the next generation — and better for my kids and grandkids to come back to.

But, things have changed, and not for the better. They aren't changing because of inevitability or technological efficiency. There's a very large "elephant in the room" that's making it worse for all of us. The predominant system of agriculture I am working in now has been intentionally set up against me and current and future farming generations. Today's corporate controlled system is bad for farmers, bad for consumers, bad for rural and urban communities and economies, bad for our environment and our climate, and bad for democracy. We are in this position because the rules (laws, policies and regulations) have been written, and lobbied and paid for by corporate special interests. We are in this position because of corporate-written, bad Farm Bills and bad trade agreements (the main drivers of our farm and food system).

We are here because many of our elected "representatives" don't really represent us, their constituents or the vast majority of Americans. We're here because we have a democratic process controlled by that "elephant in the room"—billion dollar multinational corporations. A food system controlled by us, farmers and consumers, would not be putting multinational corporate profits over people, the environment and our national security. They are planning and implementing our demise. It's their business model. Without competition, they can push everyone else out of the market, then they win and take all the wealth (and land).

Some of the results: In 30 years, the U.S. has 25% fewer cattle farmers and Missouri has 27% fewer. In 30 years, nearly 90% of U.S. hog farmers were put out of business. And, the average age of a farmer is nearing 60 years old. We're importing billions of pounds of beef from around the world, and consumers are paying record high prices, while cattle farmers struggle. In 2021, the U.S. imported 3.35 billion pounds (with a "b") of beef and 1.8 million live cattle.

Here are a few glaring results of corporate agriculture's stranglehold on farmers, consumers, our food system, economies and democratic process: In 2021, JBS's (a Brazilian corporation and the world's biggest meatpacker) net revenue was \$71 billion and their U.S. beef division reported a net revenue of \$27.18 billion; Tyson had a net profit of \$3.05 billion, up \$1 billion from 2020; Cargill reported its biggest profit in its 156-year history, netting almost \$5 billion; the WH Group, the Chinese corporation that owns Smithfield Foods, reported \$27.29 billion in revenue, up 6.7%. The fact is, during these challenging and unprecedented times, the few corporations that control our food system are raking in record profits. Consumers are paying record high prices, inflation is raging, family farmers are struggling to stay in business, and our economies (urban and rural) are becoming more and more impoverished.

What can we do? We need to demand that our elected representatives and our democracy represent us and not corporate special interests.

Within our food system, we need to demand laws that: decentralize control of our food, curb the undue economic and political power of multinational agribusiness corporations that aim to replace independent family farms with industrial factory farms, strengthen and enforce antitrust laws, stop public taxpayer dollars from funding corporate factory farms, restore supply management programs, grain reserves and price floors set at the cost of production, and ban meatpacker ownership of livestock and their use of "captive supplies."

A food system controlled by us, farmers and consumers, would not be putting multinational corporate profits over people, the environment and our national security. We'd be able to respond and help when things get hard, instead of seeing pandemics and war as opportunities for corporations to get rich. We can and must do better — for farmers, rural communities, consumers and our country.



MISSOURI  
RURAL CRISIS  
CENTER

<https://www.newstribune.com/news/2022/jun/09/elephant-in-room-is-destroying-family-farms-rural/>

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# 2022 Brand Audit Results

Marlee Dodson, MRBO Operations Assistant

In the fall of 2022 MRBO partnered with Missouri River Relief (MRR) to perform a plastics brand audit on the items MRR collected on river clean-ups in St. Louis and Jefferson City. At the St. Louis brand audit, MRBO had 12 volunteers help sort through plastic trash and categorized 1,672 pieces. We are estimated to have gone through 30-40 large bags of trash that day. At the Jefferson City brand audit, we had 16 volunteers help sort through plastic trash and categorized 3,223 pieces from 50-60 bags of trash.



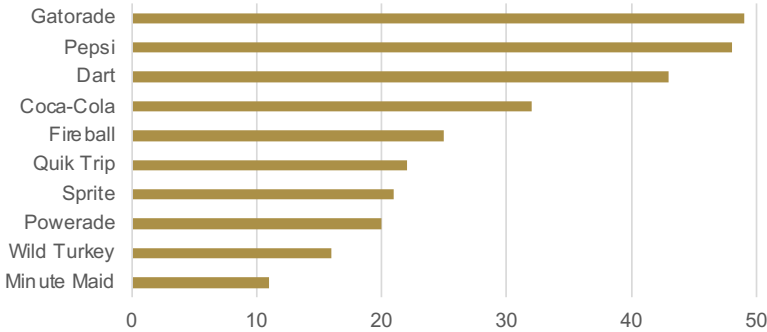
The highest numbers of items collected were pieces of styrofoam and broken, degraded plastic pieces. Following the unknown items the top ten brands of plastic trash from each audit are listed in the graphs to the left, with Gatorade being the highest at both sites. The Gatorade Company, along with Mountain Dew and others, are actually divisions of PepsiCo. We had very successful audits and are very appreciative to all of the volunteers that came out to help! We look forward to more brand audits in 2023!



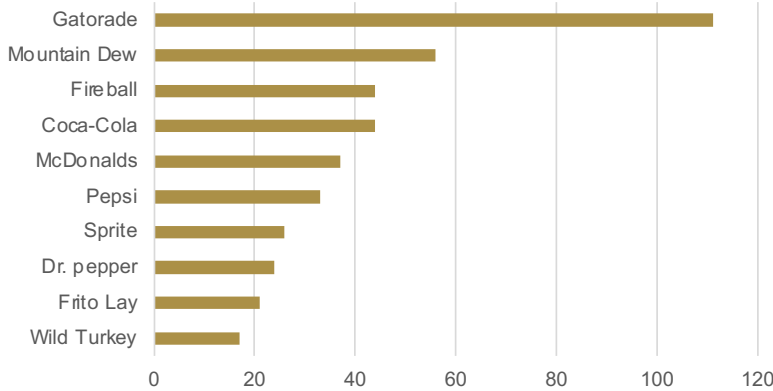
MISSOURI RIVER  
BIRD OBSERVATORY



## St. Louis Top 10 Brands Recorded



## Jefferson City Top 10 Brands Recorded



# Community News

## Board's Eye View

Theresa Enderle, MRBO Vice-Chairman of the Board

Warm winter greetings to all our friends and supporters,

With the end of each calendar year, the slowing pace of the natural world invites reflection - a lovely way to head into the quiet of a winter season. Browsing through memories not only from the past year but perhaps many years past, considering plans for the future, and contemplating life overall usually brings me right back to the present. Regardless of the highs and lows of life, there is so much that deserves my gratitude. That's true for Missouri River Bird Observatory, as well.

The staff and Board of Directors of Missouri River Bird Observatory are thankful for each one of you, our friends and supporters. We especially appreciate the opportunities we have throughout the year to connect with you in person, online, or through phone calls and emails; to share stories and see your photographs; to discuss birds, conservation, and the many other topics that bubble up in conversation. MRBO conducts important research and presents valuable programs, but our interactions with you give the organization life.

The MRBO Board is also grateful for the intelligence, tenacity, creativity, and spirit each staff member brings to their work year in and year out. This winning team, headed masterfully by Dana and Ethan, inspires me to learn more and to DO more, and I imagine they do the same for you.

Thank you again for being an important part of the Missouri River Bird Observatory. We look forward to seeing you in 2023

With warm regards,  
Theresa Enderle



Theresa Enderle (right) with Dana Ripper at the MRBO Supporters Party in October





# Come See Us at Upcoming Events!



*Hope is The Thing With Feathers*  
The Missouri River Bird Observatory's  
Seventh Annual Missouri Bird Photography Contest  
November 1st - December 31st, 2022



**December 31<sup>st</sup>** - Last chance to enter this year's photo contest. Submit your best bird pictures for a chance to win up to \$1,000 in cash prizes sponsored by Wood and Huston Bank. Visit [mrbo.org/photocontest2022](http://mrbo.org/photocontest2022) to learn more and submit your entries!



**WOOD & HUSTON BANK**  
Personal Banking Since 1874

**January 16<sup>th</sup> @ 6:30pm** - MYBC Monthly Meeting



**January 24<sup>th</sup> @ 2pm** - Winter Birds Presentation hosted by the Daniel Boone Regional Library

**February 1<sup>st</sup> - 3<sup>rd</sup>** - Missouri Wetlands Summit at Lake of the Ozarks. <https://confedmo.org/wetlands/>

**February 7<sup>th</sup> - 9<sup>th</sup>** - Missouri Natural Resources Conference at Lake of the Ozarks. <https://mnrc.org>



**February 13<sup>th</sup> @ 12:45** - Missouri's Native Habitats and Conservation Presentation at the Rowena Clarke Garden Club, St. Louis

**February 20<sup>th</sup> @ 6:30** - MYBC Monthly Meeting

**February 21<sup>st</sup>** - National Association of Interpreters Field Trip to Arrow Rock

**February 21<sup>st</sup> - 23<sup>rd</sup>** - Midwest Climate Summit <https://midwestclimatecollaborative.wustl.edu/>

**February 24<sup>th</sup> - 26<sup>th</sup>** - Conservation Federation of Missouri Convention <https://confedmo.org/convention/>



See details about all MRBO events and register at: <https://mrbo.org/events/>



## Winter Learning Series

**Mondays @ 6pm CT January 9th - March 27th, 2023**  
All on Zoom - join us from anywhere!



### Part 1

- January 9th - Bird Conservation 101/Intro to the learning series - Dana Ripper, MRBO
- January 16th - Winter Sparrows of Missouri - Mark McKellar, Backyard Bird Center of Kansas City
- January 23rd - Why Prairie Matters: New Relevancies of a Vanishing Landscape - Carol Devor, Missouri Prairie Foundation
- January 30th - How the Missouri legislature works and current bills of conservation importance - Kyna Irwin & Zach Morris, Conservation Federation of Missouri
- February 6th - Avian flocking phenomena and ties to land use - Eric & Joanna Reuters



### Part 1

Registration



<https://bit.ly/winterlearning1>

### Part 2

- February 20th - Owls of the Midwest - Ethan Duke - MRBO
- February 27th - Prairie Grouse of North America - Seth Gallagher, National Fish and Wildlife Foundation
- March 6th - Cycled Energy: Wetland Communities, Processes, Alterations, and Ecological Services - Frank Nelson, Missouri Department of Conservation
- March 13th - Moteus Bird Tracking - Sarah Kendrick - U.S. Fish and Wildlife Service
- March 20th & 27th - To be announced!



### Part 2

Registration



<https://bit.ly/winterlearning2>



## Honey's Rescue: The Compassion to Care

Diane Benedetti, MRBO Chairman of the Board

It was a clear sunny day on November 23<sup>rd</sup> when Kim Borgman, a friend of MRBO and close neighbor to the Arrow Rock office, got in her truck to run a few errands. As she reached the end of her driveway bordering Highway AA, she noticed an owl in the grassy area next to the ditch. The owl did not fly off, which she thought was strange, so she got out to take a closer look. It didn't move as she approached. It could not move; it was seriously injured.

Kim got in touch with Dana at MRBO immediately to seek advice. Dana explained that MRBO does not have a license for assisting with injured wildlife. The best call to make would be to the Raptor Rehab Project at Mizzou. This Kim did and the rescue began.

Kim needed to bring the owl in for assessment. She recalls, "The owl could not move so I did not think this would be difficult. Seeing the talons on this creature though, I knew I had better get my heaviest work gloves." It took courage but the task was completed and Kim was off to meet a representative from Raptor Rehab. Chuck Parzych took possession of the Barred Owl, now affectionately called "Honey".

After her initial exam by Primaries Kaylee Motter and Amy Wilhelm at the Mizzou Veterinary Clinic, Honey was admitted and spent her first week in the University's veterinary hospital. The exam revealed head trauma but, fortunately, no fractures. The ophthalmology department assessment indicated some retinal scarring. On November 30<sup>th</sup> Honey was transferred to the Rehab Center where Kaylee and Amy continued to monitor her recovery.

On Sunday, December 11<sup>th</sup>, Amy and Chuck returned to Kim's property with their special cargo, Honey. Through the exceptional care of the staff at Raptor Rehab, Honey was able to make a full recovery and was allowed to go "home". As Honey flew to the tree line, there was a moment of quiet and then Kim was heard saying, "Best Christmas gift ever!".

For more information about the Raptor Rehabilitation Project of the College of Veterinary Medical at the University of Missouri please see: <http://raptorrehab.cvm.missouri.edu/>



MU Rehabber Chuck Parzych and Honey the Barred owl.



Honey, Amy and Kim just before Honey's release.



## Did you know the BirdHouse gift shop is available to YOU 24/7, rain or shine?

If you missed the opportunity to do your holiday shopping during the days the BirdHouse was open this month, don't worry! MRBO's online store is available to you anytime. We have items for all ages from kids science toys, to childrens outdoors and bird books, adult and youth apparel, locally made soaps and scrubs, bird feeders, bird houses, and more. We now also have online gift certificates available! All items can be shipped to your doorstep or pickup can be arranged.



Have you ever wondered what MRBO does with the financial support from our gift shop? Purchases help support our ongoing education and outreach programs as well as support our day to day operations. Our regular education programs are almost solely funded by donations, the annual auction, and gift shop purchases. This means that all of the school programs we do are funded by purchases made by you! We can't thank our supporters enough for choosing to buy your items at the BirdHouse or in our online store. We hope you all have a wonderful Holiday Season!





# MRBO'S Volunteers: The Backbone of Our Organization!

Kathy Borgman



MRBO would be lost without our amazing volunteers! Kathy, Mandy, Tammy, and Karen put in many hours staffing the BirdHouse on summer weekends, giving tours to visitors and providing conservation education. Kim helps maintain the native flower beds along with helping us with construction projects inside and outside of the BirdHouse. Tammy is behind the scenes on almost every event we host whether it be working the BirdHouse, helping us prepare for Arrow Rock festivals, or assisting us with getting ready for the parties. We are also very grateful to all the folks who have volunteered at the MRBO booth during the spring Birds and Bees Festival and the autumn Heritage Festival.

We can not express how much all of you mean to MRBO! Thank you all and we look forward to more memories in the future!

Mandy Dorrance with Bruce Satterlee



Karen Avery Miller

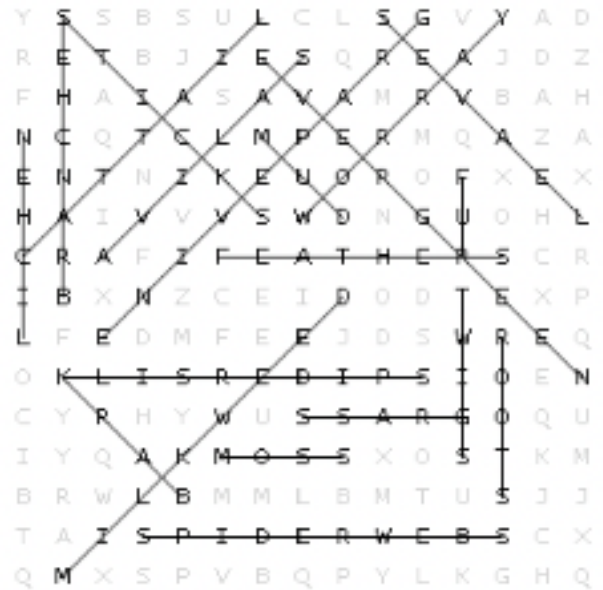
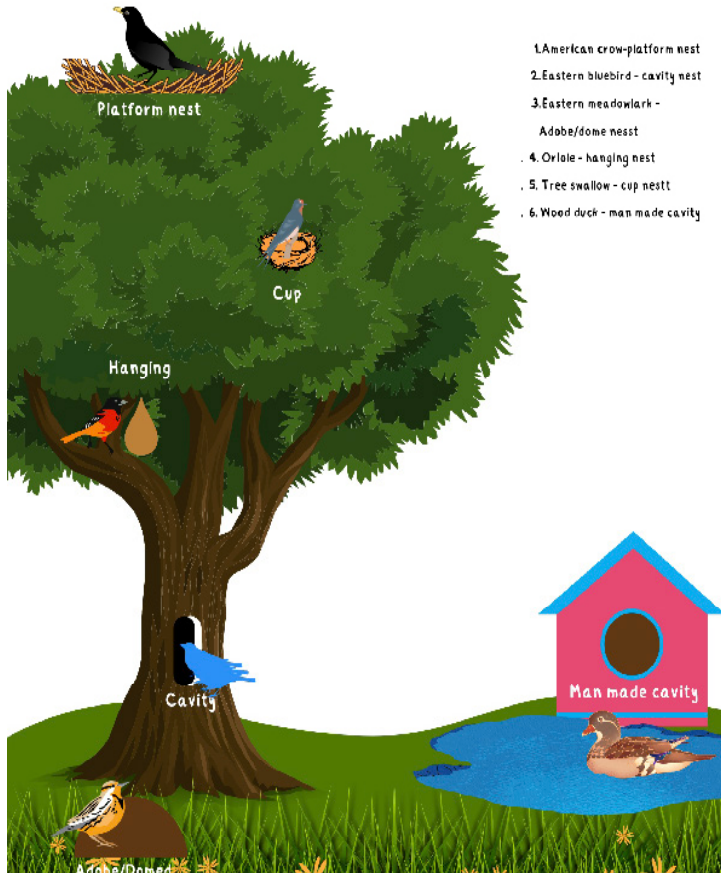


Kim Borgman



Tammy Gillespie

## Little Nestling's Corner Answers



BARK	BRANCHES	CATTAIL
EVERGREEN	FEATHERS	FUR
GRAPEVINE	GRASS	LEAVES
LICHEN	MILKWEED	MOSS
MUD	ROOTS	SALIVA
SPIDERSILK	SPIDERWEBS	STICKS
TWIGS	YARROW	







# Thank you for your Support

The following individuals and organizations have provided support for during the year 2022 along with many anonymous donors. We give thanks to all who have supported the Missouri River Bird Observatory! YOU make our work possible.

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	Monte Holder	Kevin Schanuel	
	Donna and John Huston	Randy Schiller	
	Nick and Leslie Huston	Steve Schnarr	





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