The Rectrix

A seasonal newsletter of the Missouri River Bird Observatory Volume 7 No. 1. Spring 2017

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

Meet the MRBO 2017 Crew!

Grassland Bird Technician Bethany Thornton is a Missouri native, and earned her B.S. in Wildlife Management and Conservation from Missouri Western State University. Originally a botanist, she began her career in prairie reconstruction and invasive species management. After four years of volunteering at a banding station in Saint Joseph, she shifted her focus to bird conservation, and has since spent her time monitoring migrations and conducting population surveys across the United States. Unable to forget her cherished grasslands and prairies, she is excited to find herself back in Missouri, working with MRBO, and plans to continue working with grassland birds for the foreseeable future.

Grassland Bird Technician Erik Ost grew up in northern Virginia and after high school attended Christopher Newport University in Newport News, VA. Raised in a family that advocated fun and appreciation for nature, Erik felt drawn to biological conservation work at an early age. Erik was a MRBO Wetland Surveyor in 2016 prior to spending time in Bolivia working with Blue-throated Macaws, and we are thrilled that he is returning for a second season. Erik plans on attending graduate school and afterward wants to return to South America to continue working on avian conservation projects.

Grassland Project Intern Laney Beaman is from Mindenmines, Missouri and was lucky enough to grow up less than five minutes from Prairie State Park where she spent a lot of her childhood. She graduated with a BS in Communication and a minor in biology. She has always had a passion for conservation and has volunteered with many organizations over the years, including: AmeriCorps, MO Master Naturalists and Lakeside Nature Center. She is excited to continue her volunteer work with MRBO on the grasslands project this summer.

Educator Paige Witek traveled a mere nine and a half hours from her hometown of Green Bay, Wisconsin in search of new adventures with MRBO. She graduated from the University of Wisconsin-Madison in May of 2016 with a B.S. Degree in Zoology and a Certificate in Environmental Studies. The origin of Paige's passion for conservation, birds and environmental education cannot be pinpointed to any one experience in her lifetime, but developed as a result of a hodgepodge of past experiences, including her work with zoos, wildlife rehabilitation and education centers, wildlife sanctuaries and studying abroad in Queensland, Australia. Paige is truly excited to gain invaluable experience with MRBO and continue to inform and inspire others.

Born in the lush birch forests of Saint Petersburg, Russia, **Wetland Surveyor Philipp Maleko** moved to the desolate concrete jungle of Los Angeles at age 7, and immediately realized the impact human society has on planet Earth. A bird nerd at heart, Philipp has a strong passion for ornithology and the conservation of wild birds. Philipp's ultimate career and life goal is to assist in the preservation of avian fauna in Alaska and eastern Russia, and he will work with passion and due diligence on any conservation project that is bestowed upon him by the tortuous path of life.

The MRBO staff works in Missouri's most imperiled habitats and with people of all ages and backgrounds.

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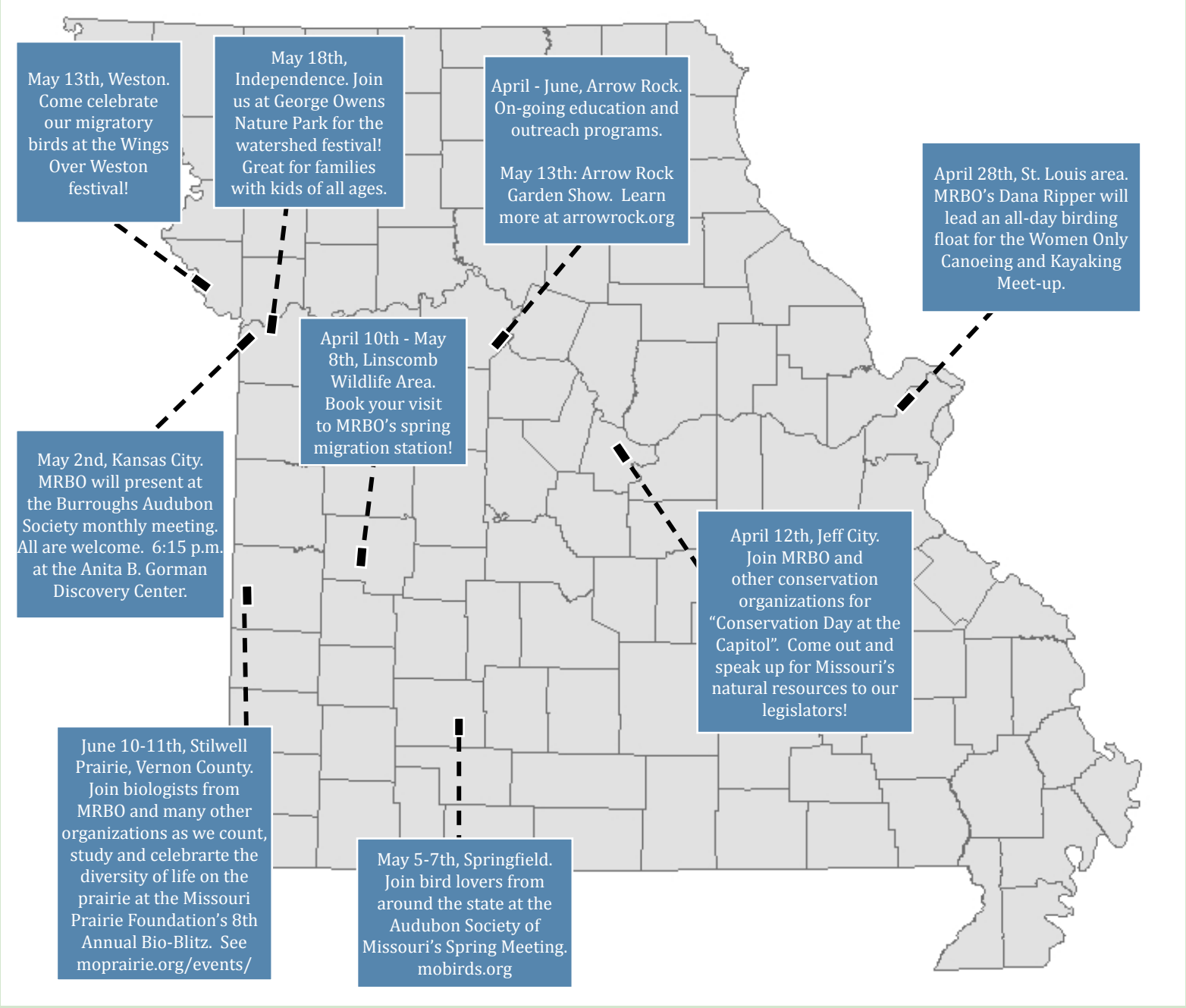
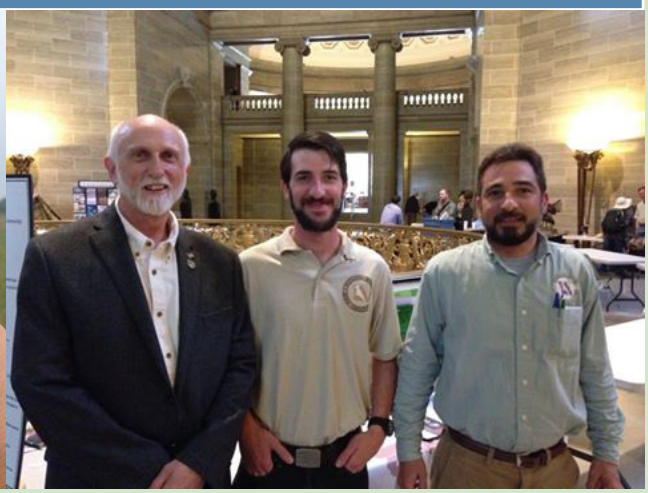
Our Mission
To contribute to the conservation of Missouri's birds and their habitats through research, monitoring, education and outreach.

Upcoming Events



Left to right: Students at Wings Over Weston; a Henslow's Sparrow at Missouri Prairie Foundation's Bio-Blitz; MRBO at Conservation Day at the Capitol.



Beyond Scavenging: Taking a Closer Look at the Day-to-Day Life of the Turkey Vulture

text and photos by Dianne Van Dien, MRBO member and vulture researcher

If you go to a nature program on turkey vultures, you are likely to learn many things about these large, bald-headed scavengers. You will learn that the average turkey vulture weighs about four pounds, has a six-foot wingspan, and can soar at speeds of 30 to 70 mph. You will learn that their heads are naked because they stick them inside carcasses and being bald keeps them cleaner, as a feathered head would gather more blood and ooze. You will see that vultures have sharp, hooked beaks for tearing flesh, just as a hawk does. You will hear that vultures have great eyesight but the turkey vulture has the added and unusual ability to find carrion by using a highly developed sense of smell, often allowing it to be the first to find a carcass. And you will learn that vultures don't get sick when they eat things that have long passed their expiration date because vultures' stomach juices are as corrosive as battery acid. Pathogens such as those that cause rabies, anthrax, and botulism die as they pass through a vulture's digestive tract, and thus vultures help reduce the spread of dangerous microorganisms, making the world safer for the rest of us. At the program's end you will be keenly aware of how well adapted turkey vultures are for their scavenging lifestyle.

Turkey vultures have the biggest geographic range and live in the widest variety of habitats of any vulture in the world. They can be found from southern Canada to the tip of South America. Only some of the population migrates and you can find them in parts of the U.S. year round. Turkey vultures in northern Missouri migrate but some remain in southern Missouri all year.

These are indeed important facts to know about turkey vultures—key characteristics that help us understand them in terms of what they eat and how they function in the ecosystem. But what are turkey vultures really like? How do they manage their day-to-day lives? What do they do in their down time when they are not actively seeking out carcasses? These are among the questions I've been asking over the past few years as I've been routinely observing turkey vultures at a few roosts near my home in Jackson County, Missouri.

Since I can't follow the vultures as they traverse the sky, if I want to know them, the roost is a place I can count on finding them. Scientists aren't certain how a specific site is chosen, but once selected, vultures will return to it day after day, year after year.

Vultures are social animals and congregate every evening after their day's work is done. During the dark hours, they sleep in trees, taking shelter under the leafy canopy, but in the mornings, they move a short distance to perch out in the open on dead trees or on rocks, on the top of a billboard—anywhere they can comfortably catch the sun. They sit and preen and often pose with wings wide open to gather the sun's heat. The sun dries feathers that are wet from dew or overnight rain, and it also warms the vultures' bodies,

which drop a degree or two overnight to save energy. This daily morning routine of warming up and caring for feathers lasts for one to three or more hours. The birds sit and preen and look about, waiting.

They are waiting not only for their bodies to warm up before flying but also for the air to warm up and be ready to carry them. Vultures are not designed for much flapping flight. Their wings are long and broad, built for long-distance soaring. They travel on rising currents of warm air that form as the sun heats the earth's surface. Once aloft, vultures barely need to move their wings at all. In fact, for vultures, soaring burns no more calories than perching does. Since there is no guarantee that they'll find carrion every

day, vultures have evolved to use as little energy as possible, helping to ensure they'll make it from one meal to the next. And so they wait for pockets of rising air to form or for the wind to pick up before taking a few flaps to catch the current and sail off for a day of foraging.

I sit at a distance and wait with them, watching from sunrise until about 9:30 or 10:00 am—the time most of the vultures leave for the day, depending on the weather. Morning after morning I see them follow this same ritual of waiting for the sun's warming to take effect. Every day is the same and yet every day is a little bit different, giving me glimpses into the nuances of vulture life. Here's a quick look at some of what goes on.

The roosts I watch are in a park, on the edge of two different lakes. To avoid disturbing the vultures, I never go to the trees where they sleep but wait for them to emerge from the canopy. On each of my visits, I count how many are present. Over the course of a season, the number of vultures at a roost gradually increases with the arrival of late migrants and those whose nesting attempts have failed. Turkey vultures do not reach breeding age until they are 6 or 7 years old, so from the end of spring migration until late summer, most vultures at a roost are nonbreeders. Newly fledged turkey vultures and their parents join the roosts from mid-August to early September. The roosts I monitor generally start out with 35 to 40 birds in April and by September average 65 to 90. During fall migration there have been as many as 200 at a single roost.

One of the first things I discovered is that turkey vultures are quite fearful of bald eagles. A pair of eagles nests on one of the lakes where the vultures roost and it wasn't long before I realized that when the vultures take flight before their normal hour, it is usually because a bald eagle is approaching. One eagle appears in the sky and all 50 or 60 or 75 vultures will move to a different spot. Sometimes the eagle is making a beeline to the vultures' morning perch (to sit there itself) but sometimes it is just making a sweep of the lake, looking for fish. Either way, it doesn't matter. All the vultures will take to the air. This has happened enough that now I know: vultures are up, look for an eagle. I've never seen an eagle actually go after a vulture, but eagles can take down geese and cranes; certainly one could catch a vulture. I'm sure it pays off to give them a wide berth.

While waiting for the right flight conditions, some turkey vultures will leave the main group in search of snacks. The park's picnic areas prove to be a regular source: pieces of hot dogs, potato chips, or macaroni salad under picnic tables; bits of chicken and hamburger stuck to a grill. The vultures pick through whatever morsels the raccoons didn't snatch the night before.

Fish parts, guts, and bait left behind by fisherman also serve as appetizers. Sometimes an entire fish will wash up on shore. The vultures stand quietly around the carcass, seeming to take turns eating. A social hierarchy exists, however, and one turkey vulture may displace another, but from what I've observed, the confrontations are brief, if one occurs at all. Usually one bird just steps aside when another approaches. Rarely have I heard any hissing, although the approaching bird may move in abruptly, or walk with an aggressive posture, keeping its head down or chest puffed out.

On hot days, especially if there has been no recent rain, turkey vultures take baths. That vultures bathe is no surprise; I just never expected to witness it. A vulture will step into shallow water along the shore and dip one shoulder and then the other, shake and splash around—not

much different from a songbird in a backyard bird bath.

Mornings become more animated when the fledglings join the roost. Young vultures are curious and restless. They pace about and explore, examining everything, while the adults sit quietly and preen. The youngsters pick up sticks, push around hedge apples or fishing bobbers, pull at grass, and saunter up to wild turkeys, Canada geese, and great blue herons. These other birds may chase the fledgling away, but 30 seconds later the young vulture will be back, sidling up to its neighbor again.

Juvenile vultures also scuffle with one another, working out their place in the social hierarchy. These squabbles last only seconds and if it weren't for a few lucky photos, I wouldn't have been aware of the maneuvers involved, particularly the use of their feet to push down an opponent. Despite the occasional skirmish, the young birds almost always hang out together in groups of 5 or more.

On still, humid summer days, the vultures will remain at the lake far past 9:30 and I am the one who leaves first to head off to work. But on most mornings, as the wind strengthens over the water, first one vulture and then another will spread its wings and rise into the air. Eventually 50 or more will circle above me, rising higher and higher before dispersing, often in different directions. One hundred vultures can disappear from view in less than ten minutes.

These birds may sail for hours, covering dozens of miles as they search for possums, raccoons, skunks, and other animals that have succumbed to old age or disease, or that have fallen prey to the tires of a Ford F-150. An estimated four million turkey vultures traverse the skies of North America. Each one eats about 100 pounds of meat in a year. Thus each year the population as a whole removes about 400 million pounds of potentially disease-ridden carcasses from our environment. Each of these vultures plays a part within the larger ecological community, and each one plays a part within its own smaller community of vultures.

Turkey vultures go about their business quietly. The birds and their roosts go mostly unnoticed—except when they try to take up residence in "human territory", where the odor of their droppings makes them unwanted guests. As more of our land becomes developed, parks and conservation areas will become increasingly important as places where vultures can roost. Considering that millions of animals die each day (estimates cite up to a million animal deaths per day in the U.S. from cars alone), we would surely notice if vultures weren't around. It seems only logical that we should make sure they have somewhere to live, somewhere safe to sleep and regroup at day's end.

Dianne Van Dien is a Missouri Master Naturalist and avid bird watcher. She has worked for HawkWatch International, Hawks Aloft, Inc., Custer State Park, and the San Diego Zoo Institute for Conservation Research. Currently she is working on a book about turkey vultures.

Want to learn more about vultures?

Here are just a few of the resources available on-line.

Hawk Mountain Santuary's Vulture Chronicles blog. https://thevulturechronicles.wordpress.com

University of Utah UNews - Why Vultures Matter. https://unews.utah.edu/why-vultures-matter-and-what-we-lose-if-theyre-gone/

The Director of the Peregrine Fund Africa Program on TED Talks. https://www.ted.com/talks/munir_virani_why_i_love_vultures

National Geographic Kids - Vultures are Gross-ly Important. http://kids.nationalgeographic.com/explore/nature/vultures/

Vultures in Native American lore. http://www.firstpeople.us/FP-Html-Legends/How-Buzzard-Got-His-Feathers-Iroquois.html

Vultures (and other birds) in modern Christianity. http://www.christianitytoday.com/ct/2013/december-web-only/he-will-raise-you-up-on-vultures-wings.html?start=1

Education & Outreach: January - March 2017

18 programs

703 people reached

381 adults

322 kids under 16

Education Spotlight: Bird-banding at the Truman Elementary School Outdoor Classroom, Rolla MO

text and photos by Missouri Master Naturalist Helen Johnston

On March 2nd, several Missouri Master Naturalists and I had the opportunity to join local volunteer educators Bob and Pat Perry at Truman's Outdoor Classroom to help present a program for third and fourth graders. The program gave the children a chance to watch as Dana Ripper, Ethan Duke, and Veronica Mecko from the Missouri River Bird Observatory banded thirteen different birds from six different species…and what fun we all had.

The children were very engaged in the process, asking and answering many questions. They left the banding station having watched each bird that was caught banded with a very light weight metal band displaying a very specific number. They were impressed to learn that the number would identify each bird in the future, just as their own Social Security numbers would always identify each of them.

The children were also quick to answer when asked what they thought was the purpose of applying a band to a bird that would quickly fly away. Those ID numbers will help anyone who finds that bird in the future discover where it was banded, how far it had traveled, and how old it is. With the information gathered, scientists are able to determine an estimate of the number of birds of any species in a given area, compare it to records they already have, and then come to some conclusions about the health and well-being of different bird species in any environment.

Pat took the children down into the outdoor classroom to see how the banders catch the birds in very fine nets, demonstrating how they would be caught and carefully taken to the banding station. When the children worried that the birds might be scared inside their little cloth bags, Pat, Bob, and the banders assured them they would be fine, and would not be harmed in any way.

We had some funny moments, especially any time the banders were working with male cardinals. During this time of year, as the birds prepare to mate, the male cardinals are very territorial and very grumpy when they feel someone is intruding in their area…and they have a mean peck with their very strong beaks. The children giggled when the banders had to put a Q-tip in the cardinal's beak to keep it from biting Ethan. But I think the part they all enjoyed the most was watching as the bander let each bird fly out of a small tube that had held it as it was being weighed.

It was a fun day, and we can all be happy that we have dedicated people in our state who are so very interested in the welfare of our natural world…and that they are so excited to share it with our children.

Yellow-billed Cuckoo. "Welcome to Missouri" by Shiann Piekkarski

We are grateful to our new and returning members and donors.

Alie Mayes	Denver, CO
Anonymous via Fidelity Charitable	Unknown
Birds-I-View	Jefferson City
Bob & Pat Perry	Rolla
Burroughs Audubon Society	Greater Kansas City Area
Carol Davit	Jefferson City
Community Foundation of Central Missouri	Columbia
Donnie & Kim Nichols	Warsaw
Elizabeth Garrett	Columbia
Emily Burke	Kirksville
Jeff Cantrell	Neosho
Karen & Terry Stair	Lee's Summit
Kirby McCullough & Dan Auman	Arrow Rock
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Patricia Wilson	Raytown
Randy Haas	Joplin
Sherry Leonardo	Grandview
Steve & Regina Garr	Jefferson City
Timothy Donze	in honor of Gene Gardner & Liz Cook
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