

MISSION

The Missouri River Bird Observatory is a 501(c)3 non-profit entity dedicated to the conservation of Missouri's migratory and resident birds through scientific research, community outreach, K-12 education and conservation policy advocacy.

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This Issues' Photography Credits

Front Cover, with full photo on this page: Weathering the Storm Together by Lisa Hostetter.

The Inspection, page 3 - David Seidensticker.

Northern Saw-whet Owl, page 7 - Chelsea Mostellar.

Rusty Blackbirds, page 8 - Conor Gearin. New Construction, page 8 and Song Sparrow, page 9 - Tom Tucker.

Delft Winter, back cover - Julie Brown Patton.

All other photos taken by MRBO staff and volunteers or retrieved from Cornell Lab of Ornithology, National Audubon Society or Wikipedia.

Letter from the Directors

'Tis the Season of Giving Thanks

Dear MRBO supporters and friends,

As the second decade of the 21st century draws to a close, we are hopeful about the direction of conservation in Missouri and globally. Though in the past several years there have been seemingly insurmountable threats to our environment and natural resources, recently we have observed an exciting convergence of talented, motivated people who are committed to addressing conservation challenges. We feel honored to work with those people and to be connected with you, the supporters of MRBO. This feeling inspired our choice for this issue's cover photo "Weathering the Storm Together".

As an organization, MRBO is within a period of growth and strategic expansion. We have been carefully studying

the successful frameworks of other conservation groups and learning from experienced strategist. As individuals, we are more committed than ever to conserving birds and their habitats and to introducing people to the joy and fulfillment that can be found in nature. Please know that you have our deepest appreciation for your support of MRBO's mission and activities.

> Wishing you the happiest of holidays and a New Year, Dana & Ethan Duke



New and Renewing Supporters Since the publication of MRBO's fall newsletter

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With special thanks to:

The MRBO Board of Directors for their continuing support LaCrosse Family Foundation's Warren and Denise Loveland Family Fund

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What's Up With Wacky Fact Wednesday?

by MRBO Education Coordinator Paige Witek

Hey MRBO supporters! If you follow our Facebook page you probably have seen our weekly posts about birds that do some "wacky" things. This post series is titled "Wacky Fact Wednesday" and it began in January of 2018. We were looking for an idea for regular posts that would keep our page active and fun on Facebook. Naturally, this task was assigned to the Education Department (a.k.a. me!). "Hmmmm....", I thought. And then it came to me! Birds do some fun, weird, interesting and WACKY things during their time just being birds. So, I decided to feature some birds from all around the world with a strong emphasis on Missouri's birds. I started out wanting to share with our Facebook audience some interesting, or wacky, facts they may not know about the birds they see and hear around them. And, of course, I wanted to add some of my own wacky writing flare to the posts in addition to showing some neat photos of the birds. Sometimes I worry that I will run out of wacky facts to share, but then I remember that almost all birds do something a bit out of the ordinary and there are around 10,000 birds in the world so I think we are set for a while. The Wacky Fact Wednesday posts are all about sharing how awesome birds are to help foster a connection between people and birds everywhere. They are about fun and connection! I'll let the posts speak for themselves from here. Stay birdy and Happy "Wednesday"!

If you are already following our Facebook page and have enjoyed the posts, that's great and you are awesome! If you are not yet following and are interested, our facebook page is: www.facebook.com/moriverbirdobs. Please enjoy our most popular posts from 2018 and 2019!

Posted Feb. 7th, 2018

"Hi fellow bird nerds! It's...Wacky Fact Wednesday! This week....the American Kestrel! You may have seen these small falcons hangin' out on powerlines while you drive down the road. One of the many cool things about kestrels is their... NOSTRILS. Cone-shaped projections in the center of their circular nostrils slow down the air flow to allow insanely fast flight without damaging the bird's lungs. Jet engines have a similar structure and are actually modeled after a falcon's nostril! Once again, human invention turns to animal adaptation. Stay birdy and Happy Wednesday!"



Posted June 27th, 2018

"The Wacky Facts come on Wednesday and... it's Wednesday! This week is a pearly gray raptor called....the Mississippi Kite! These birds can be found here in Missouri flying high in the sky searching for prey. This time of year when they are not hunting, they are nesting! The wacky thing is that the kite's nest may be located next to, or possibly even contain, a WASP NEST! Scientists think that this probably helps the chicks against climbing predators. Well you know what they say... location, location, location! Stay birdy and Happy Wednesday!"



Posted August 1st, 2018

"Fellow bird nerds! It's Wacky Fact Wednesday!

No surprise there. This week's bird is the only completely red bird in North America...the Summer Tanager! The Summer Tanager is a bee and wasp specialist. It catches insects mid-flight and kills them by beating them against a branch. But before eating a bee or wasp, the tanager rubs it on a branch to remove the stinger! That's one way not to get stung! Stay bird and Happy Wednesday!"





Posted June 19th, 2019

"Hello and welcome to this week's Wacky Fact Wednesday! This week is a bird that

is named very directly after it's song... the Chuck-will's-widow! The what? You may have heard of the Whip-poor-will and this bird is VERY similar. What is wacky about this guy, besides a lot of things, is that the Chuck-will's-widow HIBERNATES during the winter! A common winter strategy that is not often adopted by birds (most migrate). Like most hibernators, the Chuck-will's-widow slows its breathing, stops digesting and drops its body temperature. How much? It drops its body temp. from 102 F to 65 F!! That's quite the drop! Stay birdy and Happy Wednesday!

Listen to the song by following the link below!

https://www.allaboutbirds.org/quide/Chuck-wills-widow/sounds"

Posted June 26th, 2019

"Let us introduce you to what might be the WACKIEST BIRD IN THE WORLD... the Hoatzin! That's right, it is Wacky Fact Wednesday and this week's bird is so wacky that we had to choose only two out of many wacky attributes. The Hoatzin, found deep in the Amazon jungle, is in a class all its own.

Wacky Fact #1: Baby Hoatzins have claws on the forelimbs of their stumpy little wings! Why?! Hoatzins build their nests on tree branches that extend out over water, which doesn't leave their chicks many exit strategies for when a predator approaches. Fear not, because the featherless chicks when feeling threatened will hop out of the nest and bellyflop into the water below. Once the danger has passed, they paddle to shore, and use their wing claws to climb back up the tree and into the nest!

Wacky Fact #2: Hoatzins have a cow-like stomach! Hoatzins are

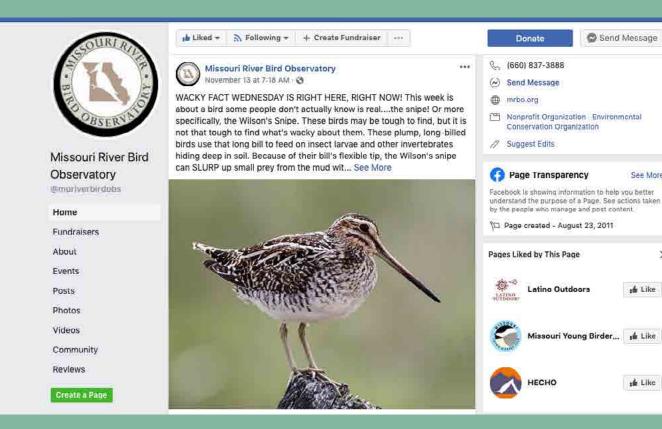
the only birds in the world that eat nothing but leaves. Compared to seeds and fruit, leaves aren't very nutritious, and are hard to digest. So to accommodate this diet, the Hoatzin has evolved a multi-chambered digestive tract with lots of little "stomachs," where the leaves can sit for a while and be digested by friendly bacteria, similar to cows and other ruminants!

Now that is a wacky bird! Stay birdy and Happy Wednesday! Read more about the wackiness of the Hoatzin by reading this linked article: https://www.audubon.org/news/hoatzin"



Posted August 28th, 2019 THIS WAS OUR TOP POST OF ALL TIME!

"*whistle sound! It's Wacky Fact Wednesday and it is also the beginning of Fall Migration! When you picture bird migration, you probably picture large groups of birds flying high in the sky. But what about the flightless birds? Do they migrate? THE EMU DOES! The Emu is the second largest bird in the world and lives in Australia. They are usually solitary, but they can form enormous flocks when migrating for better food resources. Now, what you are (hopefully) wondering is how fast they can travel? Well... They can sprint at 30 miles per hour for a good distance! And they can travel very long distances at a fast trot. Want to know how your stride would compare? While running, an emu's stride can be 9 feet long!! Whoa. Stay birdy and Happy Wednesday!"





Like

Species Highlight: The Rough-legged Hawk

by MRBO Field Crew Leader Erik Ost



Scientific Name = Buteo lagopus
Alpha Code = RHLA
Order = FALCONIFORMES
Family = Kites, Eagles and Hawks (Accipitridae)

What's that soaring over the prairies? It's a Redtailed Hawk, it's a Northern Harrier, no wait, it's a Rough-legged Hawk! For this species highlight, let's talk about Rough-legged Hawks, which were first described in 1763 by Erik Pontoppidan, a Danish author, bishop, and historian. You can see this bird of prey during the winter across Missouri and most of the contiguous United States.



Appearance

This large and slender buteo has long, broad-tipped wings and a long tail. This species has two molt types: dark and light, and compared to other buteos of the United States, plumage pattern between sexes is the most dimorphic. The light

morph shows bold patterns on the underside with a dark belly and dark wrists (darker in females versus males); very pale wing feathers but dark-edged; white tail with a dark band towards the end; dark morph exhibits solid dark body and head with underside wing feathers and tail feathers pale, but overall less pale than light morph in these areas; Topside of dark morph is consistently dark with dark uppertail and white bands on tail. On the light morph, topside is more mottled than dark morph and tail has large white patch on the basal half of tail.

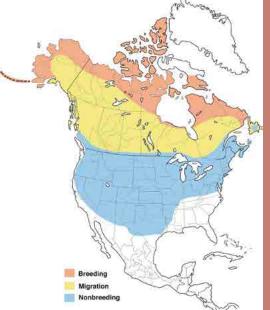
Vocalizations

Adults produce a loud, catlike mew repeatedly. Calls can be given while flying or perched. A whistling call that gradually ends in a hiss is produced by courting individuals.

Range/Habitat

Rough-legged Hawks nest on cliffs and outcroppings in tundra and taiga habitats of North America and Eurasia. They prefer open habitats but in years of abundant food sources some will venture south into forested taiga. Similar habitat

preferences are exhibited during the non-breeding season.



Adaptions and Behaviors

Rough-legged Hawks get their name because the term "rough-legged" refers to the feathered legs that extend all the way to their toes. Rough-legged Hawks are one of the three American hawks that have feathered legs that extend to their toes. Males choose the nest site and usually the site is completely exposed, opposed to an area covered by cliff overhangs. Nest site-selection is often the same site or a new nest close to a previous one but can also be in tall trees or on a manmade structure. Nests are a bulky mass of sticks from willows and other arctic woody plants but can also include caribou bones! The female spends 3-4 weeks building the nest using the materials that the male has brought to her. Rough-legged Hawks will hunt in the air or from a perch and usually hunt alone. However, during the winter, some will roost together in conifers or cottonwoods.

Diet

These hawks eat mainly small rodents like lemmings and voles but will prey on medium-sized mammals and some birds. They also can feed on carrion. Because their diet is mainly small rodents, their population follows similar swings in rodent populations. Adults will not breed if there is a lack of

abundance of food. Because their arctic diet is heavy in rodents they often have to venture south if rodent populations are low. This leads to an eruption of Rough-legged Hawks and these eruptions are often synced with Snowy Owls because they share similar dietary needs.

Conservation Status

These hawks have a low conservation concern status but this is in part because there is meager information on their population trends. Partners in Flight estimate around 500,000 individuals total. Factors known to affect their population are severe weather on the nesting grounds and winter car strikes when hawks are eating roadkill. Historically, up until the 1930s, farmers would hunt these hawks because they were considered to be a poultry threat. However, the impact of this hunting is unknown.

During fall migration surveys in 2017, Rough-legged Hawks were uncommonly detected flying and hovering over Wah'Kon-Tah Prairie. The past two fall survey seasons there weren't any Rough-legged Hawks detected.

Sources. Allaboutbirds.org, Identify.whatbird.com, Thenatureniche.com



2019 Northern Saw-whet Owl Update



Each autumn, MRBO invites visitors to our office in Arrow Rock while we attempt to capture and band the mysterious little Northern Saw-Whet Owl. This owl migrates through central Missouri during late October and early November and may winter here. We have been banding Saw-whets since 2010, and have found that we only capture them on nights when there are weather fronts coming out of the north. This fall, we had relatively few of those nights but luckily we had both owls and visitors together on several occasions!

The numbers below show how 2019 compared to previous years of banding Northern Saw-whet Owls in Arrow Rock. Based on the cyclic ecology of this species, banders across the country anticipate numbers similar to 2016 in 2020. We hope so!

Nights in operation 2019: 10

Number of nights owls were captured: 7

Total number of owls captured: 12

Number of Visitors: 90

Number of owls captured in previous years:

2018: 10 owls in 12 nights of operation

2017: 29 owls in 18 nights of operation

2016: 51 owls in 11 nights of operation



Leave Your Leaves!

by MRBO Volunteer Theresa Enderle

Love wild birds? Leave your leaves!

As you bandage the blisters earned while raking your yard, consider this: there are people buying leaf litter for their exotic reptile, amphibian, and insect enclosures. Buying, as in paying real money for it. A one-gallon bag of 100% organic, mid-air catch oak/maple leaf mix ('the leaves never hit the ground!') is available from a major online seller for \$19.96 before shipping and taxes. Another seller offers live oak leaves allegedly picked directly from the tree for \$10.00 per bag, while magnolia leaves are



going for \$6.99. What do the buyers of leaf litter know that we don't know? They are familiar with the many benefits of leaf litter, which include providing cover, moisture, and helping sustain populations of invertebrates which serve as food for their resident animals.



If leaf litter is worth buying for captive frogs, geckos, and giant hissing cockroaches, imagine the benefits of this organic resource in its natural setting for our native wildlife. Birds, especially, could use a helping hand right now. According to a study reported recently in the journal *Science*, bird populations in the United States and Canada have decreased by 29% in the last 48 years. That's nearly three billion fewer birds now than in 1970. The number is staggering and begs a response. Our first thought might be that such a large problem requires an equally large solution, one involving various levels of government and the efforts of national organizations. While there certainly is a role for such players, this problem needs each of us to consider steps we can take to help reverse the alarming decline in bird numbers. What can any one person do to help? Plenty, as it turns out. First on that list is to keep housecats indoors, but

perhaps that's a topic for another day. And while not everyone has a cat there is one thing every homeowner can start doing to help birds immediately – today – and it takes no effort at all: stop raking and bagging leaves.

You may be thinking, 'Leave the leaves? But ... it's litter, isn't it? The word is right there in the name!' According to Merriam-Webster's dictionary, the word litter as it refers to leaves has its origin in the Latin word lectus, which means a bed to lie upon, which further means it has nothing to do with trash and everything to do with a place for rest and renewal. Imagine Queen Cleopatra relaxing in her chamber on a warm Egyptian afternoon or being ferried in a litter upon the shoulders of four strong men. Whether Cleopatra is resting in the palace or being carried down to the sea, her litter provides benefits, and so does the leaf litter in our yards.

For us humans, the advantages of leaving the leaves are compelling. Time spent raking and bagging leaves: none. Money spent on leaf bags, gloves, and rakes: zero. Blisters, aches, and pains from raking: a thing of the past. Leaving leaves where they lie is a win for people with allergies or asthma, for whom raking leaves may cause symptoms they'd

rather avoid. Leaf blower owners, your neighbors will thank you. And think of the hours you'll free up! You can hike a trail, start writing that screenplay you've had in your head for years, take a nap – whatever you choose. The time will be yours to use as you like.

Leaf litter can help us with our yards, as well. It's a natural slow-release fertilizer, it helps hold soil in place, and can serve as mulch to keep soil warm and thwart the growth of weeds. Leaves are an important addition to compost due to nutrients in the leaves themselves as well as the organisms they attract. As leaf litter decomposes it helps aerate soil, increasing the availability of water to plants and animals.

How does leaf litter help birds? What we find beneath trees might more accurately be called tree litter. Twigs, fruit, nuts, and bark also drop from



trees to join autumns' leaves in providing nutrients and moisture essential for a multitude of life. Freshly fallen leaves are used to hide nut stashes, line nests, and provide cover throughout the year. Tree nuts, seeds and fruits among the fallen leaves are food for many animals. Earthworms, slugs, and other soft-bodied organisms along with insects and spiders living in leaf litter contribute to nature's buffet for wildlife including ground-foraging birds like towhees and sparrows scratching through leaves in search of their preferred foods.

Leaf litter feeds birds directly, and indirectly as well. Leaves allowed to remain in place transform rather than disappear. Small mammals, reptiles, amphibians, and carnivorous insects like wolf spiders dine along with birds in the mostly dry top layer. Leaves in the middle layer become more compacted, holding moisture and beginning to rot. Earthworms, bacteria, tiny insects like springtails,



and many fungi are among the decomposers that consume decaying plant matter, helping to break down the moist middle layer and creating rich humus below. That nutrient-rich layer nourishes new plant life, continuing the cycle. Throughout the process, leaf litter provides shelter, food, and moisture to countless organisms which in turn impact the health of the entire ecosystem.



Have you ever wondered how insects seem to appear on the first warm day of spring? It's no mystery: they've been there all along. The eggs and larvae that survive over-wintering in leaf litter become the caterpillars, insects and spiders many birds need to feed their young. Even birds whose adult diet is primarily something other than insects often feed bugs to their young, which provide higher levels of protein and fat to help them grow. Northern cardinals are generally seed eaters, for example, but bring insects to the nest for their young. Because of this feeding behavior, a ready supply of insects is especially important in the spring and summer months when nests are nurseries for a new generation of birds.

Leaf litter improves soil, retains moisture, reduces erosion, suppresses the growth of weeds, provides shelter and food for countless organisms, and helps feed birds. The benefits are many, but let's address a few concerns that might make us hesitate to

leave our leaf litter where it falls. In natural habitats leaf litter is part of the system. In our cultivated yards, maybe a neighbor doesn't want leaves blowing into their yard. Perhaps you want to be sure a heavy layer of leaves doesn't threaten the health of grass or gardens you've worked hard to maintain. The solution is almost as easy as not raking at all: gather leaves into a few piles in a little-used or hidden part of the yard. Or choose an area to serve as a compost pile, and rake leaves to that spot.

If you truly have more leaves than you can manage, see if a neighbor is interested in taking some of your leaves for compost. If you must bag leaves for pick up, try to be sure they are going to a community mulch site instead of a landfill where they take up precious space and contribute to the production of methane, a greenhouse gas.

And finally, if you're feeling nostalgic about the fun of jumping into a pile of leaves, go ahead and rake up a pile and play for an afternoon. After all, one as-yet-unmentioned benefit of fallen leaves is the pleasure we take in seeing them mark a change of seasons. When playtime is over, instead of filling bag after bag, leave those leaves. The birds will thank you.



Helping Birds in the New Year

by MRBO Director Dana Ripper

For all those who care about nature and other species, conservation issues can sometimes feel a little overwhelming. In the previous article, Theresa referred to the facts that presented in the journal Science earlier this year regarding the loss of almost almost a third of our North American birds in the past 50 years. This depressing news was reported in major newspapers across the country and was shocking to researchers and laypeople alike. In the face of such calamitous losses, what is an individual person to do? It turns out there are many things each of us can do that will contribute to bird conservation and, hopefully, to the recovery of some of the avian populations we've lost. In addition to the actions Theresa mentioned, here I will present a few more. The Cornell Lab of Ornithology, American Bird Conservancy, Smithsonian and others have provided all of us with a simple list of steps we can take to help birds - https://www.birds.cornell.edu/home/sevensimple-actions-to-help-birds/

- Ensure that birds do not collide with your windows: window collisions are the second-biggest cause of direct avian mortality. Collisions can be stopped at your home or work by placing attractive decals on windows or even simply closing blinds at certain times during the day.
- Keep cats indoors: free-roaming cats are the number one contributor to direct mortality, not just of birds but also mammals, reptiles and amphibians. Domestic cats are not native to North America. Also, cats live almost twice as long when they are indoor pets.
- 3. Reduce monocultures (such as cultivated lawns) and plant natives: this is a fun one! There are thousands

- of beautiful native plants that provide better habitat for birds and the insects they need than traditional non-native ornamentals.
- 4. Avoid pesticides: this can be done in both your home garden setting and in regard to the foods you choose. Widespread insecticide use has caused severe declines in the invertebrates our birds need to survive.
- 5. Drink bird-friendly coffee: this is probably the easiest action on this list! There are a number of brands that offer bird-friendly coffee, which is grown in the shade of tropical forests habitats that hundreds of bird species use, including many migrants that breed here in Missouri.
- 6. Reduce the use of plastics: we've come to learn that recycling is not enough. In fact, only about 9% of the plastic ever produced has been recycled. Plastic waste often ends up in our waterways and oceans, where birds and other sea creatures ingest it mistakenly. This is a growing problem as manufacturers are currently increasing plastic production, not decreasing it in response to the global waste issue.
- 7. Watch birds! You can do this anywhere, can share the experience with anyone and can see for yourself the patterns in bird populations. Consider becoming involved in a citizen science project that contributes to our shared understanding of conservation solutions.

The new year, and the start of a new decade, can be a positive turning point for the birds we love. Happy 2020!



Upcoming Events

See more events as they're added at https://mrbo.org

Bird Banding @ Burr Oak Woods Nature Visitors Center

Dates: Jan. 4th, Feb. 1st, and March 21st

Time: 11:00 AM - 2:00 PM

Join MRBO staff and volunteers for our winter bird banding at Burr Oak Woods Nature Center in Blue Springs. See your favorite backyard birds up close while learning about a scientific method of study. MRBO staff will be there to band and answer any and all questions you may have about birds.

Bird Banding @ Burroughs Audubon Library

Dates: Jan. 11th, Feb. 8th, and March 14th

Time: 11:00 AM - 2:00 PM

Join MRBO for Bird Banding at Burroughs Audubon Nature Center in Blue Springs. Come see our resident winter songbirds up close. MRBO staff will band birds from the feeding area and answer your questions! Visitors may come and go as you wish and all ages are welcome. *If the weather is too cold, windy or wet for bird banding, we will have a program or educational games instead so don't miss out on this great opportunity to get birdy!

Bird Banding @ Anita B. Gorman Discovery Center

Date: Jan. 18th

Time: 11:00 AM - 2:00 PM

Join us and the Missouri Department of Conservation in our mission to conserve urban birds and their habitats by attending this bird banding demonstration in Kansas City! This is your chance to see birds up close and experience a method of scientific observation. Come and learn with us!

Bird Banding and Seminar @ Birds-I-View

Time: 10:30 AM – 2:30 PM Dates: Jan. 25th and Feb. 29th

Join MRBO for our winter bird banding at Birds-I-View store in Jefferson City! You will get to see your favorite backyard birds up close while learning about a scientific method of study. MRBO staff will be there to present a morning seminar followed by bird banding.

Winter in the Woods

Date: Sat., Feb. 1st

Time: 10:00 AM - 3:00 PM

To celebrate everything wintertime offers, the Missouri Department of Conservation is holding the Winter in the Woods Festival, Featuring Maple Sugar, at Rockwoods Reservation in Wildwood. MRBO will be at this free family event!

Don't forget!

Date: December 31st

MRBO's fourth annual photo contest entries are due. See: https://mrbo.org/photocontest2019/

AND ~ our first social media fundraising drive ends on this day. Please consider supporting MRBO's education, outreach and advocacy efforts during this Giving Season at: facebook.com/moriverbirdobs

