

LAKELAND AUDUBON SOCIETY



The Chat



April 2024

CHAPTER MEETING

Tuesday, April 23

7:00 PM

Lions Field House - 270 Elkhorn Road (Hwy 67), Williams Bay, WI

Free and open to the public!

Featuring the following Badger Talks event:

Conservation of a Recovered Population of Gray Wolves in the Great Lakes Region

By Tim Van Deelen



The recovery of gray wolves in the Great Lakes region is a conservation success story, although not without controversy. Tim Van Deelen will review the history of wolf recovery and talk about how our understanding of wolf biology changed during recovery and how research addresses both the conservation of the region's top predator and the controversies it generated.


BADGER TALKS

About the Speaker

Tim Van Deelen is a professor of wildlife ecology having worked as a researcher in several conservation agencies in the Great Lakes region. His teaching and research focuses on the conservation, management, and ecology of large mammals in the Great Lakes region with a special emphasis on white-tailed deer and wolves. Tim regularly advises natural resource agencies on policies that affect populations of large mammals.



The Greater Roadrunner *Beep, Beep*

April 2024

By Janice Bain

If you are of a certain age bracket, you may adore a crafty cartoon character, the roadrunner. The roadrunner was renowned for his talent at outwitting Wile E. Coyote. The cartoon was created by Chuck Jones and distributed by Warner Brothers. Although the cartoon character looks nothing like a real roadrunner, it is what sticks in our minds. Those not living in the southwest are often surprised to know there really are roadrunners. I suspect similar surprise when one first realizes that snipes are also real. Being from the midwest, and just finding my first roadrunner in Utah, I realized how little I knew about these curious birds. How clever are they? How do they survive with those hungry hawks, large owls, foxes and coyotes of the desert? What do they eat? Where do they sleep? As usual, I hit the books/internet to learn what I could.

The roadrunner basks in notoriety. Visit any gas station or souvenir shop in the southwest and you'll find roadrunners branded on a multitude of products; t-shirts, postcards and trinkets to name a few. Businesses capitalize on the species to promote their product, for example there is: "Road Runner Wireless Internet, "Roadrunner Freight" and "Roadrunner Realty."

What makes this bird so special? Let's start with the fact that roadrunners would prefer to run than fly, peculiar for birds that can actually fly. They top out at speeds of 20-26 mph but typically travel around 15 mph. Yes, that is the fastest running bird of all flying birds. The ostrich could zoom right past at 40 mph, but it is a flightless bird, apples and oranges. The coyote reaches speeds between 35-43 mph, which means that a roadrunner needs to use its quick acceleration, maneuverability, and (limited) ability to fly to evade such predators.



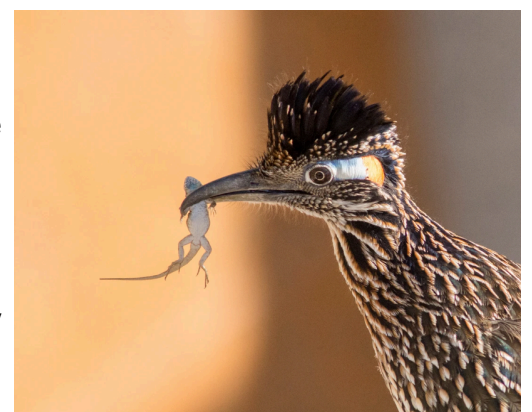
Photo by Donna Neshek

Parrots, toucans, woodpeckers and cuckoos are zygodactylous. The roadrunner resides in the cuckoo family, making it zygodactylous as well. That fancy word describes birds that have two outer toes pointing backward and the second and third toes pointing forward, essentially leaving an X-shaped footprint. This toe placement allows them to not only grasp, but to climb. The roadrunner is the only terrestrial zygodactyl bird in the U.S. So when you see a single-file line of X-shaped footprints, you know conclusively that it is from a roadrunner. Tracking down the location of a roadrunner is a fool's errand, since the X-shaped footprints conceal which direction the roadrunner is actually traveling.

(Photo from Audubon)

Prey

Roadrunners are carnivorous, putting them near the top of the food chain. Thirty percent of their diet consists of insects. While their favorite insects are grasshoppers and crickets, they also dine on cockroaches, black widows, and tarantulas. Road runners are not afraid to tackle noxious, venomous desert occupants. Scorpions, rattlesnakes and western coral snakes, members of the cobra family, are part of the roadrunner's diet. In the winter when the protein sources are gone, they will eat seeds, fruit, and prickly pear, totalling about 10% of their diet.



While most adult birds are too large to make a roadrunner meal, bird nestlings are fair game. Unfortunately, hummingbirds are a perfect size to swallow whole and are readily plucked midair for a tasty snack. Thankfully, only 2% of the roadrunner's diet is avian.

Roadrunners have binocular vision and can see prey directly in front of their beak. To achieve a strike, the roadrunner will raise its tail into the air and wave it side to side, it fans out its wings, creating visual confusion for the prey, while simultaneously protecting its own vulnerable parts. Using speed and agility, it will circle around the prey rushing in to stab the snake with its pointed beak. It continues to goad the snake with its feet and beak, striking when possible in hopes of stunning the snake. Playing defense, it will use its powerful legs to hop in the air to avoid the deadly fangs. When the moment is right, the roadrunner will seize the snake by the head and slam the snake to the ground. If it misses the head, it is doomed as head strikes prevent deadly retaliatory venomous bites.

It will slam the prey into the ground over and over until it is paralyzed or dead, this is called *prey beating*. Prey beating will result in multiple fractures to the vertebrae, increasing malleability and thus making it easier to swallow. Unlike raptors, roadrunners don't have sharp bills to tear apart their prey, so they must swallow their prey whole. The roadrunner will only choose prey that it can swallow whole. The roadrunner has a little trick for some large prey, take the tarantula for instance. The roadrunner will grab the spider by its leg, prey beating it until the leg falls off. It will continue this process until all the legs have been severed, then it happily eats the torso.



(photo from Adobe Stock with trial subscription)

Although roadrunners like to harass adult rattlesnakes by yanking on their tails, they are too large to swallow whole so they are not a roadrunner food source. They seek prey that is approximately a foot and a half or less and of a particular girth. Since a roadrunner's stomach is not large enough to hold an 18-inch-long snake or lizard, they are often spotted with excess prey dangling from their mandibles. When the roadrunner swallows the prey, it is done incrementally. The prey is forced into a spiral in the stomach bit by bit. When the stomach is at capacity, the roadrunner will find a shady spot with the excess still dangling from its mandibles and wait for the prey to digest. It will swallow an additional inch or so every few minutes until it is entirely consumed. This process could take a few hours.

Predators

Let's turn the tables. We know who is fearful of roadrunners, who does the roadrunner fear? Who are its predators? Avian predators are the most significant enemies of the roadrunner with Cooper's hawks and prairie falcons heading the list. If a roadrunner is aware of their presence, it will not become a victim. The only chance hawks have of capturing a roadrunner is a surprise attack. Hatchlings and fledglings are the most susceptible. Roadrunners are wary of turkey vultures and will hide under trees for at least a few minutes. Other birds like ravens and doves are carefully observed, then dismissed.

Roadrunners are diurnal, active during the daytime. The terrestrial predators, bobcat, fox, coyote are primarily nocturnal. This difference in timing may contribute to the fact that these terrestrial predators are not an important factor in roadrunner mortality. There are no records of terrestrial predators capturing an adult roadrunner. Their threat to roadrunners peaks during nesting season and poses danger to the young. To handle nest threats, roadrunners take a page from the killedeer's playbook and modify one detail. They feign a broken leg rather than a broken wing. They will glide to the ground, collapse and wiggle rapidly from side to side, shuffling over the ground away from the nest. It looks like they can hardly walk, much less run.

When they have lured the predator a safe distance from their nest, the roadrunner will stand erect and run off at full-speed leaving the intruder bewildered and as confused as Wile E. Coyote — beep, beep.

One would think snakes to be a concern to the safety of roadrunner eggs since they are able to climb arborescent cacti and other armed plants. Common whipsnakes and bullsnakes reside within the same range and are thought to feed on bird eggs and hatchlings, yet this has not actually been observed. As of 1973, Robert Ohmart, an ecology professor at Arizona State University, found that nest predation was low or nonexistent in his study sites near Tucson, Arizona.

In “The Roadrunner,” author James W. Cornett states, “Without question, humans are the greatest threat to roadrunners. Car strikes, domestic cat predation and illegal hunting account for more adult roadrunner mortality than all other factors combined.” (Keep your cats indoors!)

Survival mechanisms under extreme conditions

A typical hot day in the life of a roadrunner would look like this: start hunting an hour after sunrise, hunt for about three hours, hide in the shade until mid- or late-afternoon, begin hunting again and roost about one hour before sunset. At peak heat, they can be found under desert willow, mouth agape, throat flapping rapidly with their wings drooped and away from their bodies. They look very stressed and yet they survive. How are they so successful?

Photo by Janice Bain



Roadrunners must obtain water. The bulk of any animal's weight is water and since the roadrunner is a carnivore, it can obtain all the water it needs through its food. If it finds enough animals to eat, its water requirements are satisfied. When food sources are slim, it must find a different source of drinking water. There are some desert streams, springs and potholes, but what appears to be a common choice is living near urban areas, where water is more likely to be found. Living around the margins of retirement communities in the southwest is the optimal location for roadrunners and where their populations are highest. Think about it, they are located in open flatlands for hunting traditional foods, insects, lizards and the like and also offer unique food resources such as cockroaches, snails, black widows, house mice and occasional human handouts. These communities provide large trees and shrubs for nesting and roosting. Most importantly, retirement communities do not have children and free-roaming cats, both considerable threats to roadrunners. Pet cats can

exterminate or at least drive away any roadrunner that might consider taking up residence in an area.

Conserving water in the harsh summer heat is the next issue. The obvious first step is to seek shade, but in the extreme summer heat, it is not enough. They have two main survival mechanisms/adaptations for conserving water, one for the extreme daytime heat and one for the extreme nighttime cold. If you've ever been to the desert, you know the air is hot and the ground is blistering, it can approach 200 degrees Fahrenheit in the summer. Hunting more nocturnally would seem like a smart option for the roadrunners, but their eyesight isn't even good enough to hunt in dim light. Instead, they rely on *evaporative cooling*. Some of the evaporation occurs on their skin but most occurs through *gular fluttering*, their version of sweating. Gular fluttering is similar to a dog's panting on hot days. A roadrunner rapidly moves the skin of their throat, forcing air over the moist tissues of their breathing surfaces. The water from the moist tissues in the mouth, throat and lungs evaporates quickly. The evaporating water then cools the blood in these tissues and the relatively cool blood is then pumped throughout the body. What an effective adaptation to tackle the danger of overheating. Other desert birds rely on the same technique.

Sadly, evaporative cooling comes with a price, it uses the precious water in their body. Fortunately, roadrunners have a physiological trait that minimizes water loss, it is their naturally high body temperature that helps them maintain water balance. Their body temperature is set at 104 degrees Fahrenheit, about 6 degrees higher than humans. Let me explain how this translates into significant water savings. If we were standing in the shade of a palo verde tree with a roadrunner, we would start sweating when the temperature reached around 80 degrees, but the roadrunner wouldn't start its gular fluttering (its version of sweating) for another two hours, at around 97 degrees. When the late afternoon rolled around and the temperature returned to 97 degrees, the roadrunner would stop gular fluttering, but we would continue to sweat for another two hours. In all, we would spend four extra hours sweating than the roadrunner would spend gular fluttering. You see, their naturally high body temperature requires a smaller window of time cooling off, reducing water loss, and in turn conserving precious moisture.

What about their nighttime adaptation? A roadrunner will roost in a tree or bush to avoid the nighttime predators and voracious owls. It uses its powerful legs and about three wing flaps to spring onto the branch of choice. Within 15 minutes it is in a deep sleep, a sleep so deep it won't hear you or respond to your presence. This adaptation is called *nocturnal hypothermia*, for roadrunners, this means about a 10-degree body temperature drop. This adaptation conserves enough energy during the night that its next day's food requirement is reduced by one lizard.

"Solar Panels" Photo by Donna Neshek



Unfortunately, this nighttime torpor comes with risk. In the morning, a roadrunner is lethargic and unable to run or fly, making it easy prey. So just after dawn, within the safe perimeter of its roosting site, it glides down from the roost and begins the process of warming back up. Rather than using food energy to reheat each morning, it pulls out its built-in "solar panels." It turns its back to the sun and droops its wings down to expose the large back feathers. It erects those feathers exposing the small black feathers and black skin of its back. These feathers are just the right color to absorb the radiant energy of the sun. It may take an hour or longer for the roadrunner to reach its normal high body temperature and resume the day's activities. During the cold winter months, roadrunners will use this energy-saving adaptation off and on throughout the day. It decreases their food requirement by one lizard or a few insects in a day, potentially a make-or-break difference in the winter months.

This process of warming up each morning is not possible without the safety of trees and bushes. If everything in a habitat is perfect for a roadrunner—available water, lizards, snakes, insects, etc.—but there are no safe havens, trees and bushes, the roadrunner cannot reside there. The safety of trees and bushes is as essential as food and water in the roadrunner's ability to survive.

Although the roadrunner gained much notoriety through a cartoon character, I must acknowledge that it deserves the recognition on its own merits. Its innate adaptations to handle extreme heat and cold are fascinating. Its ability to outwit and prey beat the most venomous of desert occupants is admirable. But the fact that it can hide in plain sight with its zygodactyl tracks cracks me up. Well done roadrunners, you have earned your fame on your own merits. I hope to see you again on my next trip to the southwest.

Sources:¹ The Roadrunner by James W. Cornett

[TPWD: Roadrunners, Cuckoos, and Anis – Introducing Birds to Young Naturalists](#)
[ASU remembers former Professor Robert Ohmart](#)

Picture Sources: As listed within the article

Lake Geneva's Purple Martin Project

It's a labor of love for the City of Lake Geneva's Purple Martin colony

By Sara McConnell

Our Purple Martin story begins like many others, a few volunteers hoping to make a big difference. Back in 2017 a Bird City speaker, Joni Denker, gave a talk at our Swift Night Out event highlighting the significant decline in the Purple Martin (PM) population. She stressed that this decline was accelerating due to habitat loss and that PMs are now dependent on humans to provide cavity dwelling housing. Our Avian Committee was inspired to make a difference.

Several problems quickly emerged as we began the PM project. We knew very little about becoming landlords for these birds and second was that the Avian committee had no assigned budget and each fully assembled Purple Martin house cost over \$1000. But we had determination.

The answers on establishing and maintaining PM colonies came from the Purple Martin Conservation Association (PMCA) and the Hoy Audubon Society, Inc. We were referred to experienced PM landlord, Helen Pugh, who described in rather graphic detail all that we would need to do. She also helped us find proper locations in Lake Geneva for our first houses.

Next, we raised \$5000. We applied for and received a grant from WE Energies to purchase three houses, an informational sign and establish a monitoring and data collection system. In addition, we took advantage of a PMCA "buy one get one free" offer to acquire two more houses.

Much to our joy, two of the houses had successful nests the very first year! These were near some old houses with established colonies. However, as we learned, there are no guarantees in nature and establishing PM colonies proves it.



City of Lake Geneva's Purple Martin House

We did everything suggested by the experts to lure PMs to the other houses. We smeared mud in the nesting boxes, we lined the boxes with beautiful white pine needles, we placed little mirrors near the openings, we attached decoy adult PMs on the perching rods, and even we played sweet Dawn song/Daytime chatter through speakers near the houses. Nothing. Eventually we had the houses moved to the lakefront and at last are getting nests.

During our first season PM expert Dick Nikola was also very helpful. We didn't even know what a PM nest looked like! After our houses had a few nests with young hatchlings, he drove down to band 20 birds and teach us the importance of frequent nest checks and destroying sparrow nests. He was great at getting us comfortable with being up close and handling these beautiful birds.

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Being a PM landlord is akin to having children. Lots of worry and watching. If the weather falls below 50° for any length of time, they will literally starve from lack of flying insects. There are some very dedicated landlords up north that will put hand warmers in the nest boxes and fling mealworms into the air for the scouts to eat. We will start looking for “scouts” to arrive early in April and just pray for good weather. These older birds will come back to a breeding area if they were previously successful and they then lure the subadults. There are web sites (PMCA's <https://www.purplemartin.org>) that track the martin arrivals as they migrate north so we have some idea when to start opening the houses.



Opening is carefully done. When scouts are in the area, we only open one or two South facing nest boxes. These will be the warmest boxes. If too many boxes are open, sparrows will quickly take over the house. Migration is long drawn-out affair with martins continuing to arrive over a course of 8-12 weeks. As we note the increase in Martins, we open more and more nest boxes.

Each year the committee gets concerned calls from the public worried that the birds cannot get into the houses. We even needed to secure the cranks with locks and chains because well intended people would crank down the houses and prematurely open the nest boxes! First of all, it is hard to see the small openings from the ground and secondly, we are trying to keep the sparrows out! English sparrows are an aggressive invasive bird, they will force the martins out, destroy eggs and kill nestlings.

As the subadults appear, frequent nest checking becomes vital to success. Once we see green leaves being placed on the pine needles, we know eggs will soon follow. Nest checks should take place every few days during egg laying. With each check we record nesting data for [Project Martinwatch](#), the only martin population monitoring in the state. While we are counting eggs and nestlings, we also check the health and the condition of the nest. If a nest has become too wet or infested, the nestlings are removed to a deep bucket while the nest box is cleaned and new nest materials are added.

The first few times we open the houses each spring, the martins will fly around and watch us closely but they quickly get used to our activities. Human protection over the centuries has led these birds to actually prefer nesting near human activity. The indigenous people created the first martin housing from dried gourds and hung them within their summer encampments to keep the flying insects at bay and their calls served as an early predator warning system

The nest box checking routine usually goes like this:

- Arrive between 10 am to 4pm with your key, your data collection sheets, extra nesting materials, gloves, little extension mirror for high nest boxes (or step stool), plastic bags to dispose of sparrow nests, and a can of DW40 to spray on any rusty parts.
- Greet the birds rather loudly as you approach so they get used to you and know you are coming. Unlock the security chain and slowly crank down the house. Remove the emergency brake only when the house reaches it, if the cable should break the house comes down fast and hard. Quickly check each compartment. Record exactly what you see-what kind of nests, stages of nest building, number of eggs or hatched young. Remove any sparrow nests. If an adult PM is on the nest, carefully lift the adult and check for eggs. Try to complete the entire house in 15-20 minutes.

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Once the nestlings approach fledgling stage, we shorten the check to a quick bird count. It helps to hold one hand in front of the nest box so they don't try to fly or fall out. We stop opening houses at the fledgling stage and just observe houses to see if everything seems ok. The houses will remain open until September to offer migrating martins a brief stop-over and allow them to hopefully remember good housing for next year. Finally at the end of season, the houses and nest boxes get a good cleaning so they will be ready for another spring.

One of the greatest pleasures of having all of our houses next to the shore path of Geneva Lake is that every time we do nest checks, tourists from near and far will stop to ask questions and are just as excited as we are when there are nestlings to see. It is a fabulous educational opportunity to show how humans and wildlife can coexist in positive ways. We provide attractive houses and these beautiful social birds return to swoop in display, chatter happily above us and in the process, help to control those pesky bugs!

Upcoming Events

Local Nature themed activities abound this Spring.

World Migratory Bird Day 2024 - [Friends of Hackmatack National Wildlife Refuge](#)

Saturday, April 27

12:00 PM (Noon) – 4:00 PM

Lost Valley Visitor Center, Glacial Park - Route 31 & Harts Road, Richmond, IL

Sunday, April 28

12:00 PM (Noon) – 4:00 PM

Volo Bog State Natural Area - 28478 W Brandenburg Road, Ingleside, IL

Saturday, May 11

9:00 AM – 11:00 AM

Turner Tract (Hackmatack National Wildlife Refuge) - N541 County Highway H, Genoa City, WI

World Migratory Bird Day Bird Walk - [Friends of Kishwaukee Nature Conservancy](#)

Saturday, May 11

7:00 AM - 9:00 AM

Kishwaukee Nature Conservancy - 251 Elkhorn Road (Hwy 67), Williams Bay, WI

Annual Mother's Day Bird Hike at Price Park - [Kettle Moraine Land Trust](#)

Saturday, May 11

8:00 AM - 10:00 AM

Price Park Conservancy - N6418 Hodunk Rd, Elkhorn, WI

Spring Bird Walk - [Seno K/RLT Conservancy](#)

Monday, May 13

8:00 AM - 10:00 AM

Seno Woodland Center - 3606 Dyer Lake Road, Burlington, WI

Field Trip

Tuesday, May 14

9:00 AM – Noon

Adam Birding Conservancy – 1636 Findlay Road, Whitewater, WI (Town of Cold Spring)

Open to the public!

The Adam Birding Conservancy is a privately-held, 331 acre mix of prairie, wetlands and woods along the Bark River in Cold Spring, about three miles north of Whitewater, Wisconsin. Established in 2015, part of this e-Bird hotspot floods in the spring as the Bark River overflows its banks, creating an interesting habitat for migratory waterfowl. The 215 bird species place it in the top 100 most diverse birding sites in Wisconsin based on ebird. Trumpeter swans have bred in the blackbird pond in 2021 and 2023.

For more information about the property, visit the following website: <https://www.adamconservancy.com/index.html>

Meet at the parking area off of Findlay Road (look for the sign) prior to 9:00 AM. From there, we will follow the trails throughout the property on the lookout for birds during spring migration. Please contact us and let us know if you are interested in attending this field trip.

<https://lakelandaudubon.com/contact> Call or Text: +1 (262) 729-9702

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Bird Walks

Saturdays

11:00 AM - 1:00 PM

Big Foot Beach State Park

N1550 S Lakeshore Drive, Lake Geneva, WI

Meet in the main parking area to the right of the entrance station a little before 11:00 AM. A state park sticker (\$28, \$13 if age 65 or older) or daily pass (\$8, \$3 if age 65 or older) is required to enter Big Foot Beach State Park.

Sundays

11:00 AM – 1:00 PM

White River County Park

6503 Sheridan Springs Road, Lyons, WI

Get out and enjoy one of the best parks Walworth County has to offer. We'll walk the trails and be on the lookout for birds and other critters. We'll also watch for plant blooms and other interesting elements of nature. Meet at the kiosk by the parking lot a little before 11:00 AM.

Please contact us to let us know you are interested in attending a walk.

<https://lakelandaudubon.com/contact>

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The Chat is the newsletter of the Lakeland Audubon Chapter of the National Audubon Society, P.O. Box 473, Elkhorn, WI 53121. Subscription is \$15 per year for printed copies sent by US mail.