



photograph Bryan Tapp

Mary K. Oxley Nature Center

January - February 2019 Newsletter

Why on earth would Charles Darwin complain to a colleague "The sight of a feather in a peacock tail, whenever I gaze at it, makes me sick!"? What could have been so troubling to Darwin about the existence of a feature of an animal's phenotype which actually makes them more likely to struggle (whether through increased likelihood of predation or costly energy expenditure)? You will know the answer after you read Alyssa Rodriguez's fascinating piece below about Sexual Selection.

The Cardinal Rules of Finding a Mate

by Alyssa Rodriguez



Imagine you could login to a dating website, look at a few pictures, and reliably tell from someone's hair color who would have the nicest home and be the best parent. Finding soulmates would be whole a lot simpler for most of us. For that ubiquitous red bird at your feeder, this luxury is a reality. Like many other male birds, male northern cardinals have evolved a way to communicate their suitability as a potential mate to females. Males with brighter red plumage are healthier, occupy better territories, and contribute greater parental care--and the females know it.

But how can they manage to survive with such an ostentatious display of color? Though their color does make them more conspicuous to predators, the real determining factor in whether a trait persists across generations is not whether it promotes survival, but whether it promotes reproductive success. This is where sexual selection comes in. Sexual selection is the process by which traits evolve to promote the passing of genes. So long as a sexually selected trait does not interfere with the ability to survive long enough to reproduce, these traits can be valuable enough to exist. Sexual selection is not only responsible for beautiful red cardinals, but also for more extraordinary colors and behaviors like the tail of a peacock or the shape-shifting dance of the vogelkop superb bird of paradise.

So why doesn't every cardinal sport the most perfectly rouge plumage? And how do females know that brighter really is better? Cardinals get the pigments necessary to produce their brilliant red plumage from their diet. These pigments, called carotenoids, also play a role in the immune system. So a bird facing a heavy parasite load or disease will use their dietary carotenoids to fight disease rather than to produce brilliant plumage. Because males must have access to a food source as well as good health to produce the best plumage, there's no way to fudge the signal: only the best can be the brightest.

So the next time you're at Oxley, sit by the fire and marvel at our avian visitors. Our best and brightest are taking big risks to put on a show!



photograph Heidi Walker

Naturalist's Notebook: The Oxley Christmas Bird Count

December 15th, 2018

by *Karen Harris, Volunteer Naturalist*

Every bird count is exciting to me because I never know what we will find. There is randomness

in nature and observations are by chance. I suspect I get the same wash of dopamine from seeing a relatively rare bird as a gambler gets from hitting the jackpot. Will we run the table on woodpeckers this year by finding the elusive Hairy? Can we possibly get a trifecta of owls? With anticipation, I met the others at 8:00am in the Zoo parking on another cold and clear bird count morning. A big flock of Snow Geese high up and small flocks of Canada Geese much closer flew overhead and a Pileated Woodpecker sounded off from the woods. I thought these were signs of a lucky day. We split into two groups scouring the water's edge and the scattered trees in front of the zoo. Pretty quiet, but the birds might have been waiting for things to warm up. Moving toward the golf course, we started to see more birds near the lagoons and brushy areas. The morning light was just right to make a small flock of bluebirds into spectacular aquamarine jewels. Things seemed to be picking up.

We moved on to the prairie and hopefully flocks of mixed winter sparrows. We saw a couple of Song Sparrows and a few birds too far to identify accurately. By that time fingers and toes were cold to approaching numb and we quickened our pace to the water. Lake Sherry was sparkling and beautiful but made it hard to identify the few ducks swimming away to the opposite bank in spite of how quietly we approached. We took turns at the two big spotting scopes finding a few Gadwalls, Mallards, and Mergansers and watching a Grebe dive and bob back up. A couple of Cormorants and Great Blue Herons appeared overhead but most of the lake remained quiet. We began to speculate why we were not seeing as many birds as in previous years. Was it the relatively warm beginning to December or the week's heavy rains? Did the recent strong winds keep them down somewhere North of here?

While others walked old Mohawk Boulevard, I took the Bird Creek trail hoping to spot Wood ducks or a Bald Eagle. No luck. A few Chickadees and a pair of Downy Woodpeckers were all I could add to the count. Fortified by our lunches and warmed by the Oxley fireplace (and Dot's delicious desserts) we headed back out to check out the marsh and Coal Creek. As the temperature rose and we shed gloves and jackets, we picked up one Yellow-rumped Warbler, two Song Sparrows, a White-throated Sparrow and a couple of noisy Carolina Wrens, but few other birds. Where were the usual flocks of Robins rustling the leaves on the floor of the woods? What about the usual ubiquitous Cardinals and the rest of the winter sparrows I had reviewed in preparation for the count? More speculation and a little worry crept into our conversation along with appreciative words for the beautiful calm and warm afternoon. By the time we finished the loop back to the parking lot, Rusty and I were the only counters remaining. We decided to drive over to the trail past the horse barn and check the brush and open weedy patches for goldfinches and other seedeaters. Nothing. We crossed the road to the pond and checked the edge of the woods. As the sun warmed our backs and lit up the branches a tiny speck of a bird popped out displaying its thin white wing bar, black and white face and finally flaring its yellow crown. A Golden-crowned Kinglet! Now to veteran bird watchers on a normal Christmas bird count, this observation would not be so special. But to us it was a winner. On a day when the ornithological dice didn't seem to roll our way, that little Kinglet was a golden jackpot.

For information about the 2018 National Audubon Society Christmas Bird Count Totals follow this link: <http://www.tulsaaudubon.org/christmas-bird-count>

Mary K. Oxley Nature Center - Programs in January

5 January "Saturday Morning Birding" Ages: All; Saturday, 8:00-9:45 a.m.; Free, Registration not required; Join us for birding at Oxley. All skill levels are welcome. Bring binoculars if you have them.

12 January "Junior Naturalists" Ages: 8-12 years; Saturday, 10:00-12:30 p.m.; Registration is required; Free for Members, Non-members \$5 per session; Meet at the Fawn Grove at Oxley. Come join the Junior Naturalists at Oxley Nature Center for a morning of adventure and nature connection! Guided by the changing seasons and our own curiosity, we will hike, journal, tell stories, play games, craft, learn wilderness skills, and practice good park stewardship. Come to all our meetings or the one that fits your schedule.

12 January "Woodworking for Pre-teens" Ages: 6-12 years; Saturday, 10:00-noon; Registration is required; \$12 for Members, \$15 for non-members. This class will be hands on and instructional. Students will learn about a few traditional non-electric hand tools and their uses. Using a shaving horse (a bench clamp) students will use a drawknife and spoke shave to construct a hammer handle and fit it to a hammer head.

14 & 28 January "Natural Babies: "Winter Weed Walk" Ages: 1-5 + caregiver; Monday, 10:30-11:30 a.m.; Registration is required; Free for Members, Non-members \$5 per session. What changes have taken place in plants and trees of Oxley? Where is the green? Where are the flowers? We will walk through the wildflower beds and collect seed heads to create a beautiful bouquet to take home.

20 January "Super Full Wolf Moon Walk" Ages: All; Sunday, 7:00-8:30 p.m.; Registration is required; \$3 for members, \$5 for non-members. When a Full Moon is near its closest approach to Earth, it is called a Super Full Moon. The point of the Moon's orbit closest to Earth is called perigee. This Full Wolf Moon will appear late tonight but will be hidden by a full Lunar Eclipse!

26 January "Botany Walk" Ages: All; Saturday, 10:30-noon; Free, Registration not required. Join us for a botany walk at Oxley to see what surprises we might discover.

26 January "Drawing and Painting the Animals of Oxley" Ages: 8-12 years; Saturday, 1:00-2:30 p.m.; Registration is required; \$3 for members, \$5 for non-members. Join us for a new monthly drawing and painting class for children with Claire Harkness. Students will learn to draw and paint the animals commonly found at Oxley. Art and animals lovers are welcome!

28 January "Natural Babies: Winter Weed Walk" Ages: 1-5 + caregiver; Monday, 10:30-11:30 a.m.; Registration is required; Free for Members, Non-members \$5 per session. This is the same class material that was held on January 14. What changes have taken place in plants and trees of Oxley? Where is the green? Where are the flowers? We will walk through the wildflower beds and collect seed heads to create a beautiful bouquet to take home.

Mary K. Oxley Nature Center - Programs in February

2 February "Saturday Morning Birding" Ages: All; Saturday, 8:00-9:45 a.m.; Free, Registration not required. Join us for birding at Oxley. All skill levels are welcome. Bring binoculars if you have them.

9 February "Junior Naturalists" Ages: 8-12 years; Saturday, 10:00-12:30 p.m.; Registration is required; Free for Members, Non-members \$5 per session.; Meet at the Fawn Grove at Oxley. Come join the Junior Naturalist at Oxley Nature Center for a morning of adventure and nature connection! Guided by the changing seasons and our own curiosity, we will hike, journal, tell stories, play games, craft, learn wilderness skills, and practice good park stewardship. Come to all our meetings or the one that fits your schedule.

11 & 25 February "Natural Babies: "Bluebirds are Returning" Ages: 1-5 + caregiver; Monday, 10:30-11:30 a.m.; Registration is required; Free for Members, Non-members \$5 per session. Where did the blue birds go during winter and why are they coming back? Let's look at some Blue bird boxes and see how they are made. Why are the entrance holes so small? We will go for a walk and check out the Blue Bird Trails where our boxes await their new families!

12 February "Volunteer Roundup" Ages: Adult (18); Tuesday, 10:00-noon OR 7:00-9:00 p.m. Please call to Register. Do we have a special volunteer opportunity that would suit you? Join staff and volunteer staff at Oxley for information, question and answer sessions, and refreshments. We would love to have you join our team!

19 February "Super Full Snow Moon Walk" Ages: All; Tuesday, 7:00-8:30 p.m.; Registration is required; \$3 for members, \$5 for non-members. Will there be snow on the landscape tonight, reflecting the glow from the Super Moon? It promises to be a magical evening. Dress warm in layers and join us at Oxley!

23 February "Botany Walk" Ages: All; Saturday, 10:30-noon; Free, Registration not required. What mysteries will reveal themselves to us today? Join us for our botany walk at Oxley to find out!

23 February "Drawing and Painting the Animals of Oxley" Ages: 8-12 years; Saturday, 1:00-2:30 p.m.; Registration is required; \$3 for members, \$5 for non-members. Join us for a new monthly drawing and painting class for children with Claire Harkness. Students will learn to draw and paint the animals commonly found at Oxley. Art and animal lovers are welcome!

25 February "Natural Babies: "Bluebirds are Returning" Ages: 1-5 + caregiver; Monday, 10:30-11:30 a.m.; Registration is required Free for Members, Non-members \$5 per session. This is the same class that was offered on February 11. Where did the blue birds go during winter and why are they coming back? Let's look at some Blue bird boxes and see how they are made. Why are the entrance holes so small? We will go for a walk and check out the Blue Bird Trails where our boxes await their new families!

Spring 2019 Lecture Series

Sponsored by Oxley Nature Center Association (ONCA)

Oxley Nature Center offers a rich resource for nature related studies by researchers from area schools. Three students currently studying at The University of Tulsa will be presenting lectures at Oxley this spring.

Free for Members, volunteers and students, \$5 for non-members
Please call 918-596-9054 to register

Date: Saturday, January 19, 1-2 p.m.

Title: The Impact of Life Cycle Shifts on Reproduction

Synopsis: Shifts in life cycle complexity have profound effects on reproductive cycles. Nuance differences in species' reproductive processes can have important implications for conservation. I use salamanders as a model to test how changes in life cycle complexity can impact the timing of reproduction. In this lecture I will address the mechanisms of salamander reproduction as well as my research on Oklahoma salamanders (*Eurycea tynnerensis*).

Madison Herrboldt is a Master's candidate with the Department of Biological Science at The University of Tulsa

Date: Saturday, February 16, 1-2 p.m.

Title: Exploring evolution and diversity across the salamander tree of life.

Synopsis: This lecture will explore the diversity of body forms and life cycles seen across salamanders, with a special focus on salamanders of Oklahoma and Arkansas. Using the salamander tree of life, I seek to answer the question: How do changes in life cycle drive patterns of limb evolution?

Nick Ledbetter is a Ph.D. candidate with the Department of Biological Science at The University of Tulsa

Date: Saturday, March 23, 1-3 p.m.

Title: Biology and Identification of Lichens.

Synopsis: Lichens are present in every ecosystem from wet rain forests to dry deserts, yet many of them are invisible to most casual observers. They are food and habitats for various organisms and perform essential services like regulating forest humidity. Come learn about lichens and understand the strange terms that lichenologists use to describe them. This lecture will open your eyes to these tiny organisms and cover everything you need to know to begin your own lichen collection and identify the species around you. A brief walk will follow the talk to put your new lichen skills to the test!

Zachary Muscavitch Herrboldt is a Master's candidate with the Department of Biological Science at the University of Tulsa studying the evolution of sexual and asexual algae. He previously worked at The New York Botanical Garden where he works with the lichen collection and described species new to science.

Lectures will be held at the Oxley Nature Center located at 6700 Mohawk Blvd. approximately one mile north of the Tulsa Zoo. To register, call Oxley Nature Center at 918-596-9054.

VOLUNTEER ROUNDUP

What gifts do you bring to the New Year?

Oxley Nature Center is sponsoring a volunteer roundup on **Tuesday, February 12, from 10:00-12:00 noon or 7:00-9:00 p.m.** Join us to learn about the many different volunteer opportunities we have to offer. We will have question and answer sessions, staff and volunteer staff to visit with, and refreshments. Afterward we'll go on a short trail hike. Have you got some time to share? Please call 918-669-6644 to register. We look forward to hearing from you!

A joy shared is a joy doubled -Goethe

Volunteer Naturalist Training Begins in March

Do you enjoy being outdoors sharing the experience of nature with others? We are offering Volunteer Naturalist training throughout March. We are looking for weekend, evening and weekday volunteer staff. During training you will become familiar with our trail system as you explore the prairie, wetland, and forested areas. We emphasize leadership skills and interpretive methods. Upon completion of training, you will join other naturalists, each guiding a small group of visitors on weekday, evening or weekend tours. Most tours are school field trips. If you are 18 or older, please call for more details about the training schedules. No previous experience is necessary.

Weekday sessions March 5- March 28 two days a week (Tuesdays and Thursdays) from 9:00 a.m.-12 noon. If **evenings and weekends** are more convenient, you may attend training on evenings and weekend days until requirements are met. Please call for details about the schedules. Training schedules are flexible, and dependent on number of participants.

Mary K. Oxley Nature Center Hours

Oxley and Redbud Valley will be closed on the following days in January: Tuesday, January 1 for New Year's Day and Monday, January 21 for Martin Luther King, Jr. Day

It costs \$2 per car from April through October to enter Mohawk Park on weekends unless you are a member of Oxley Nature Center or the Tulsa Zoo.

The Interpretive Building will be open Monday through Saturday, 10:00 a.m. - 4:30 p.m. and Sunday, noon - 4:30 p.m.

Gate and parking lot is open daily, 8:00 a.m. - 5:00 p.m. except most City holidays.

Hiking trails are accessible during Mohawk Park hours, 7:00 a.m. - 9:00 p.m.



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