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Ruby-throated Hummingbird by Dan Reinking

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Your generous donation helps us with our mission of “finding cooperative conservation solutions for birds and the natural world through science and education.”
Join us in protecting our natural heritage for the next generation!

George
Miksch
Sutton
AVIAN RESEARCH CENTER

The
SUTTON
NEWSLETTER



REMEMBERING
STEVE SHERROD

"finding cooperative conservation solutions for birds and the natural world through science and education"



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ON THE COVER:

Steve Sherrod installing cameras on artificial eagle nest platform in 2007.
Photo courtesy of OG&E

A Letter from the Executive Director

Dear Sutton Center friends,

We begin this newsletter with a note of mourning and remembrance. Sutton Center's founding executive director, Dr. Steve Sherrod, passed away May 26, 2024 at 76 years old. He was diagnosed with Parkinson's disease several years back, but it started to really impact his well-being in early 2024. Although he officially retired in 2020, he continued to tirelessly advocate for bird conservation; remained on the Attwater's Prairie-chicken Recovery Team; was active on the North American Grouse Partnership as a founding board member; participated in all of Sutton Center's board meetings; and worked diligently authoring his book about falcons of the world until the very end. Steve was a huge personality, and his legacy will live on in all the people and wildlife he impacted. The Summer 2021 Sutton Newsletter (available on our website) was a tribute to his legacy, and he joked that each issue should be like that one. So, here is another issue with Steve on the cover - we miss him, as well as the chance to tease him about it!

In 1984, when Steve became the executive director, he wanted to honor his former professor and world-renowned ornithologist by naming the organization George Miksch Sutton Avian Research Center. In this time, the Sutton Center has helped remove the bald eagle from the endangered species list; continually performed ground-breaking research; published in popular magazines, scientific journals, and books; and reached hundreds of thousands with our conservation education programming for both children and adults.

We are proud to share more details about a few of our achievements in this issue. Most endeavors have been supported by the expertise of our senior biologist Don Wolfe, who also started working for the Sutton Center in 1984. Congratulations on your 40th anniversary, Don! Don has amassed such a wealth of experience and insight over these years, and his knowledge and passion for the birds is clear anytime he speaks on their behalf.

As we consider all that has been accomplished these 40 years, we also look to the future and the work that lies ahead. We are happy to share that we have been awarded funding from the US Fish and Wildlife Service to help support the Attwater's prairie-chicken and masked bobwhite programs the next three years. The grant supports personnel costs, but does not fully fund the programs, which is what makes your support so essential. We hope that you will consider helping to ensure that there are supplies, feed for the birds, and equipment critical to our work. One way to support the Sutton Center is to come to the greatest party ever hatched - Wild Brew! Join us on August 24, for a fun filled afternoon at the Cox Business Convention Center in Tulsa. We will have live music, a silent auction, games, birds, and many, many choices of delicious food and libations. We look forward to spending the evening with you all!

In addition to celebrating Steve's life and legacy, this issue of the newsletter gives you a few tidbits about what we have been doing this year. As a nonprofit, we would not be able to do this work if it wasn't for supporters like you. Thank you so much!

Lena Larsson, Ph.D.
Executive Director



Photo by Joel Sartore

Remembering Dr. Steve Sherrod

The Sutton Center is deeply saddened by the passing of Founding Executive Director Dr. Steve Sherrod. The organization would not be what it is today, 40 years later, without Dr. Sherrod's unwavering dedication and significant contribution to the Center and its mission. His work ethic was unmatched; and his tenacity and passion for wildlife conservation were truly admirable.

He will not only be remembered as an inspirational leader to the Sutton Center, but also as a great friend to all of us.

"I'm very sad to hear of Steve's passing and am very thankful to have been able to meet him and talk about these special birds, their recovery, and to learn about all he has given to the conservation of our wildlife and wild places... deepest condolences."

- Brooke Burrows,
Attwater Prairie Chicken National Wildlife Refuge Manager

Steve's passion for conservation was evident throughout his life and it continued throughout his final months with us. His life made us all better stewards of this Earth. He will be missed."

- Jim Mueller, Attwater's Prairie-Chicken Recovery Team Leader

"Forty years ago, Steve took a chance on me, with little to offer except enthusiasm. Words can't come close to describing his guidance, mentorship, and friendship. His dedication was incredible. Seeing his physical body deteriorating was tough, and his passing even tougher. It is hard to put into words how much of an influence he has been to me and to so many others having had the honor of working with him."

The conservation world has lost a real champion."
- Don Wolfe, Sutton Center Senior Biologist

"Steve was one-of-kind, with an inspiring passion for birds and conserving the natural world. He will certainly be missed by many."

- Dan Droege



Steve Sherrod with falcon Photo by Cheryl Cavert



Steve Sherrod & Ryan VanZant

“If I could turn back time, I would have said this right out loud, right to his face: Steve Sherrod, you were a monumental figure in my life.

Oh, I’d implied as much to him over the years, but he’d just laugh it off and change the subject. But the truth is, he was critical in getting my first National Geographic Magazine story off the ground. It was a profile on Sutton’s success breeding southern bald eagles, and he made sure I was put in front of one great shooting situation after another. He absolutely would not allow me to fail, so in typical Steve fashion, he micro-managed the entire affair. I didn’t care. I was getting good pictures.

The story was a success, and I’ve been with NG for more than 30 years now. I have Steve to thank for that.

But beyond him lighting that fuse, I’ve looked up to him ever since, again and again, not just for all he accomplished, but for being a driven, passionate person who, through his sheer force of will, made all of us better.

I miss him already.”
- Joel Sartore, National Geographic Photographer

“Some people are just supposed to meet. Call it what you will, perhaps fate, cosmic connection, or destiny. Life experiences took me down a path which led to first employment and ultimately a lasting friendship with Steve. It’s no secret Steve and I share a love of falcons. For me it started when I was a teenager growing up in Fort Wayne, Indiana, where I spent several summers as a volunteer watching newly released, captive-bred, peregrine falcons learn to be wild as part of their reintroduction to the eastern United States. One falcon in particular, a female with a yellow and red marking on her right wing, named Speedwing, stood out to me. I do not really know what was special about this particular bird, but she definitely grabbed my attention and inspired a life with a falcon on my fist. This early experience made such an impression on me that I dedicated my life to working with birds and animals.

Several years after completing my undergrad at college, I applied for a job at a place called the Sutton Center in Bartlesville, Oklahoma. The description of the job was to create a program using trained birds to fly over school children and to teach students about the importance of birds and the natural world by tying this concept to the math, art, science, writing, literature, and music required to be taught in schools. I remember my first conversation on the phone with Steve where he gushed about a “top-notch” free flight bird program he had watched at the Tulsa Zoo the summer before and how he wanted to bring that same type of program to Oklahoma school children. He went on to tell me how he remembered a gentleman coming to his school when he was a

child with live birds of prey and how much of an impression it made on him. I still remember the energy which came to the conversation when I let Steve know it was actually me doing the bird show in Tulsa that past summer, and before I knew it I was on a plane out to Oklahoma the next day.

Steve picked me up at the airport and while driving back we started to talk about falconry and other common interests. He then said I’m going take you to a place you are really going to like. So instead of going up to the Sutton Center for my interview we spent the rest of the day driving through the Tallgrass Prairie Preserve talking about the vision for the job, the Sutton Center, falcons, prairie chickens, the call of the upland sandpiper, conservation, and Oklahoma ecology. Several weeks later I moved to the Sooner State and spent the next 12 years working closely with Steve on the It’s All About Birds! program, climbing into eagle nests, visiting various prairie bird and raptor research sites, helping to build the prairie-chicken facility, traveling to Africa and many other adventures while under Steve’s tutelage. His pushing me to further my education and his mentorship gave me the confidence and expertise to branch out on my own and lead other conservation non-profits after my time at the Sutton Center.

Over the years, Steve and I became great friends. We went on many escapades flying falcons, making observations about the state of the natural world, visiting with friends, and sometimes just trying something for the life experience (like learning to build Bois-D’arc tree furniture from an octogenarian Norwegian immigrant in Belleville, Kansas). Steve was always interested in and provided needed prospective to whatever project I had my hands in at any given time, and always wanted to know how my children and family were doing at the things that interested them as well. Even though he and I lived hours apart for the past almost 10 years, we stayed in nearly weekly contact, where he often called, humorously introducing himself each time as whatever grandiose self-title he had come up with for the day, for my thoughts and input on the various “irons in the fire” he had going on.

More than twenty-five years removed from my summers watching falcons on hack and several years after I had left at the Sutton Center, I was reminiscing while looking at a scrapbook I had put together, which followed the news of those falcons from my teen years and their progeny. At this time I was for some unknown reason inspired to look up my favorite falcon, Speedwing, on the Midwest Peregrine Society’s database to learn more about her beginnings. Imagine my surprise when I came to learn this falcon had been bred by Steve himself in his personal falcon breeding project and he had donated this bird to be released as part of the peregrine reintroduction effort! It certainly feels like our paths crossing was fated and his legacy will certainly live on through me and my work on behalf of the natural world.” - Ryan VanZant



Lesser prairie-chicken Photo by Noppadol Paothong

2024 Oklahoma Lesser Prairie-Chicken Surveys

by Dr. Michael E. Morrow

Before my retirement at year-end of 2022, I spent nearly my whole career, 35 years to be exact, working with the endangered Attwater’s prairie-chicken (*Tympanuchus cupidoattwateri*) and occasionally with the closely related greater prairie-chicken (*T. c. pinnatus*). While I was familiar with the lesser prairie-chicken (*T. pallidicinctus*) through the scientific literature, presentations at scientific meetings, pictures, and videos, I never had the opportunity to work with or observe them in the field. Therefore, when Don Wolfe, Senior Biologist at the Sutton Avian Research Center, called me in February to ask if I might be interested in helping with their lesser prairie-chicken survey project in Oklahoma, I did not hesitate to answer in the affirmative even though it meant missing out on the beloved spring wildflowers in my Texas lawn which I have nurtured through the years, and not being able to plant a garden (I am going to miss my fresh tomatoes come late May!). But the opportunity to see lesser prairie-chickens performing their annual spring courtship ritual on their leks (a.k.a. “gobbling grounds”) was one I could not pass up.

The Sutton Center conducts these surveys each year under contract with the Oklahoma Department of Wildlife Conservation. A different area is surveyed each year, with a return interval of five years. Surveys within an area consist of multiple 23-mile routes distributed across the survey area. Each route is surveyed at least two times by different crew members over the 2-month survey period by stopping at designated points spaced at one-mile intervals along the route, and listening for the distinctive sounds of male prairie-chickens performing their elaborate courtship display.

Little did we know though, that prairie-chicken populations in the area to be surveyed this year had undergone a drastic decline since the last survey was conducted. As of the time of this writing (mid-April,

the historic peak of lesser prairie-chicken lekking activity in this area), our crew consisting of four people in the field, have been unsuccessful in detecting any displaying prairie-chickens within the designated survey area (Woods, Woodward, and Harper counties). Area landowners indicate they have seen very few prairie-chickens in this area since a multi-year severe drought that ended in about 2016, followed by subsequent droughts of shorter duration. It should be noted that drought is not unusual for lesser prairie-chicken habitat — much of its historical range occurred in the “dust bowl” of the 1930’s. To say that we have been disappointed in not detecting prairie-chickens would be an understatement. However, in retrospect I see some parallels in the challenges that Attwater’s and lesser prairie-chicken populations are facing. I offer some of those observations here.

Lesser prairie-chicken biologists have classified remaining lesser prairie-chicken habitat into four ecoregions: Short-Grass Prairie/Conservation Reserve Program Mosaic (Kansas, Colorado), Sand Sagebrush (Colorado, Kansas, Oklahoma), Mixed-Grass Prairie (Kansas, Texas, Oklahoma), and Sand Shinnery Oak Prairie (New Mexico and Texas). The area surveyed this year is located within the Mixed-Grass Prairie ecoregion, and represents some of the eastern-most lesser prairie-chicken habitat. In fact, after expressing my disappointment in not detecting any prairie-chickens early in the survey, Don characterized this area as “fringe” habitat for lesser prairie-chickens in Oklahoma. That is not to say that no habitat remains in this area. To the contrary, there are thousands of acres of beautiful grasslands in this survey area, and not observing prairie-chickens there boggles my mind. However, according to Sue Selman, owner of the Selman Ranch, these grasslands looked much different a year ago. Last year, the area was in the throes of one of

the droughts this area experiences all too often. Grass cover was in short supply then, but subsequent rains last spring and summer allowed the grass that we see now to return.

Prairies provide notoriously unstable environments for species that live there. Weather extremes from extreme drought to floods, blizzards to wildfire are “normal” conditions for the prairie environment. That constant cycle of good versus bad habitat conditions is a real problem for species like prairie-chickens, especially when their habitat starts to disappear and become more fragmented. Many species, prairie-chickens included, have evolved “boom or bust” life histories that have allowed them to survive in a variable environment. When conditions are bad, their populations can decline precipitously — annual mortality of prairie-chickens averages about 50%/year. But because they have large clutch sizes, when conditions are good, they are able to increase their populations quickly, *assuming* populations do not decline to 0 during the bad times. For lesser prairie-chickens, drought is the usual culprit for creating “bad” conditions. For Attwater’s prairie-chickens, it is usually too much rain since the Attwater’s lives in a much higher rainfall belt and because its Texas coastal prairie habitat is notorious for receiving multi-inch rainfall events. Research suggests that these harsh conditions, be it drought or deluge, usually have the most impact on the population when they occur during the reproductive season. And for prairie-chickens, if reproduction is poor, then population numbers can be expected to drop by approximately 50% for that year and subsequent years for as long as drought or wet conditions prevail.

To prevent population trajectories from intersecting 0, *enough* habitat must be available on the *landscape* to support remnant populations capable of repopulating the area after harsh conditions moderate. Having *enough* habitat is intuitive — a given parcel of habitat has an upper limit on the number of prairie-chickens it can support, so having more birds means more habitat is needed. However, having that habitat distributed across the *landscape* is just as important. Weather events often have uneven impacts across a landscape. Some areas may receive more or less rainfall than others, for example. Thus, if habitat is distributed across a relatively large landscape, hopefully pockets of better conditions will remain to support the remnant populations necessary for repopulating diminished habitats after harsh conditions pass. While we do not know how big that landscape needs to be, it is probably much larger than we think. As I mentioned previously, there are *thousands* (easily tens, perhaps more) of acres of beautiful grasslands in our three-county survey area. However, apparently that was not enough to sustain lesser prairie-chickens during the “bust” period(s) they have experienced in recent years. I should note that just because we have not detected prairie-chickens on our survey routes, does not necessarily mean that they are completely gone from

the area. Our survey routes are confined to public roads, and there are large expanses of inaccessible habitat they may harbor “remnant” populations. However, it is clear that if prairie-chickens still remain in this area, they are few in number.

I mentioned earlier that Sutton Senior Biologist Don Wolfe characterized our current survey area as fringe habitat for lesser prairie-chickens. That is another point of commonality with the Attwater’s prairie-chicken. The Attwater’s is the southern-most representative of the grouse tribe (Tetraonini). Thus, in some respects, Attwater’s prairie-chickens occupy the ultimate fringe habitat. Occupying fringe habitat is not a good place to be. Stronger pressures occur there than would be expected to occur within the heart of a species range. Being on the eastern fringe of lesser prairie-chicken range as our survey area is, means that these areas receive more rainfall on average than habitats further west. That in turn means that woody species like eastern red cedar and deciduous trees are able to gain a foothold in grasslands. Indeed, with more rainfall, nature is pushing these grasslands to become woodlands (i.e., not prairie-chicken habitat). Fire used to keep woody species invasion of grasslands in check, but as we all know, fire is much less prevalent on the landscape today than it once was. As a result, a substantial amount of former lesser prairie-chicken habitat in our survey area has been invaded by woody species, rendering this habitat of marginal quality *at best* to lesser prairie-chickens. Although the woody species are different, the same thing has occurred in Attwater’s prairie-chicken range. In addition, several wind farm complexes and associated distribution lines have been placed in some of the best remaining habitat within our lesser prairie-chicken survey area, further fragmenting and reducing habitat quality for prairie-chickens.

So, while I am disappointed that I was unable to fulfill my hope of getting a good look at displaying lesser prairie-chickens (we were able to get a *distant glimpse* of a few males displaying outside our survey area, so at least technically I can say I have seen them in the wild), I was able to see a beautiful part of Oklahoma that I had never experienced before. In addition, observing the commonalities in struggles of lesser and Attwater’s prairie-chickens, which occupy very different environments, was very enlightening to me. But I am still going to miss my home-grown tomatoes!

2024 Lesser Prairie-Chicken Saturation Survey

by Fumiko Sakoda

This spring was our third year of the lesser prairie-chicken saturation survey in northwestern Oklahoma. With our untiring and dedicated technicians, we successfully completed our survey this year before the deadline of May 7, 2024. The survey result, however, ended in a deep disappointment and a great worry. We did not detect a single gobbling ground (lek) in this year’s survey area, which included the southeastern portion of Harper County, the western half of Woods County and the majority of Woodward County, where we had found a dozen leks when last surveyed in 2015 and 2016. On the bright side, during our surveys, we met several local landowners in all three counties who saw prairie-chickens in early spring and last year. Also, one lek was observed in Kansas just a few miles from our survey area. This gives us hope that it is possible to boost the number of birds in the region with better habitat management by working with local landowners. Next year, we plan to survey a remaining section of Woodward County and all of Ellis County.



Brayden Burke measures wind speed as surveying cannot be performed if above 12 mph
Photo by Kendall Van Zanten



The Sutton Center’s 2024 lesser prairie-chicken surveyors in Western Oklahoma
Photo by Kendall Van Zanten

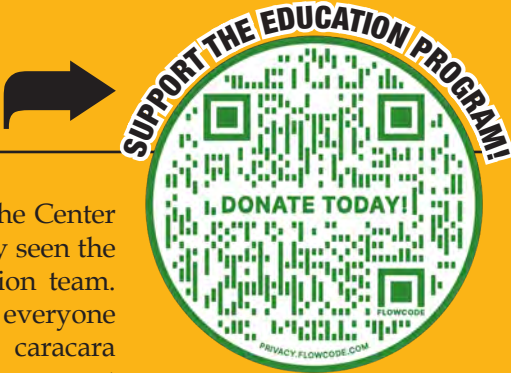
A New Bird in Town

by Daniel Harris



Cozca Photo by Dan Reinking

If you have been on a tour of the Center this year, you may have already seen the newest addition to the education team. We would like to introduce everyone to Cozca! Cozca is a crested caracara (*Caracara p. cheriway*) and the newest addition to our education barn at the Sutton Center. Cozca (pronounced ko:s.ka`) gets her name from the Nahuatl language, which is also the language of the Aztec people. COZCA-CUÅUH-TLI literally translates to necklace-yellow eagle-hawk. While the crested caracara is not new to the Americas, it is certainly relatively new to Oklahoma. You will not find them in the first Oklahoma Breeding Bird Atlas (1997-2001), and during the Oklahoma Winter Bird Atlas (2003-2008) they were mentioned as a rare sighting, but not recorded as breeding in the state. Today, they are nesting further north than previously documented and will be included as a nesting species in Oklahoma in the second Oklahoma Breeding Bird Atlas (2020-2024) currently underway by the Sutton Center!





CHEERS TO BEERS AND 40 YEARS OF THE SUTTON CENTER

Sip in support of the Sutton Center's ongoing wildlife conservation efforts at Tulsa's original craft beer and restaurant crawl festival!

Wild Brew is a **one-of-a-kind** indoor event that combines first-rate beers created by artisan brewers from Oklahoma and around the world with cuisine from Tulsa's best restaurants.

The annual event benefits the George Miksch Sutton Avian Research Center, a local, internationally-recognized, nonprofit wildlife conservation organization best known for its work with bald eagles.

Less than 20 years ago, bald eagles were on the endangered species list. Now, they are a regular part of our Oklahoma skyline.

And this year, the Sutton Center is celebrating its **40th Anniversary**, thanks to the many loyal supporters throughout the years and the thousands of past Wild Brew attendees!

Proceeds from the event allow the Sutton Center to continue conservation education outreach, as well as support its current recovery efforts for two of the rarest birds in North America – the Attwater's prairie-chicken and the masked bobwhite, both endangered species.

Wild Brew 2024 will feature hundreds of beers and the unique opportunity for guests to chat with brewers one-on-



FLOCK TOGETHER AGAIN at WILD BREW, Oklahoma's longest-running craft beer and restaurant crawl festival



SATURDAY, AUGUST 24, 2024, 5 PM – 8 PM
Cox Business Convention Center, Downtown Tulsa

one. In addition to the beer, several local wineries, distilleries, and artisans creating elaborate beverages will be there to offer tastings, as well as non-alcoholic options.

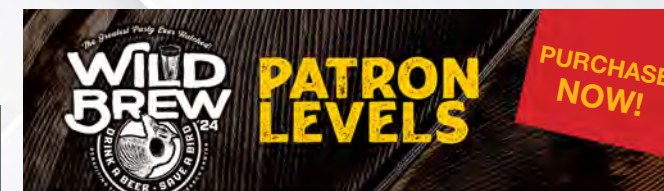
Live music, demonstrations from local artists, party photobooths and the many silent auction items up for bidding wars will keep the party hopping! And don't forget the meet and greet with some of our special feathered friends from the Sutton Center.

While a Wild Brew General Admission ticket allows **all-inclusive access** to hundreds of beers and delicious samplings from dozens of local restaurants from 5 p.m. to 8 p.m., Patron Level ticketholders can get a head start and begin sipping at 4 p.m. during Patron Hour.

To purchase tickets, visit www.wildbrew.org.
Sponsorship opportunities available.
Email wildbrew@suttoncenter.org for more information.



WIN BIG!



EARLY BIRD PATRON ADMISSION @ 4 pm
Dibs on all fabulous food and beverages!

EAGLE - "Bensar's Best" \$15,000

- 50 Tickets, including patrons-only hour
- Entrance into VIP Lounges
- Custom designed and featured Instagram and Facebook ads
- On-stage live recognitions and signage
- Website recognition
- Verbal and visual recognition at Wild Brew
- Pre-event and Post-event publicity

FALCON - "Speedy Lagers" \$10,000

- 35 Tickets, including patrons-only hour
- Entrance into VIP Lounges
- Custom designed and featured Instagram and Facebook ads
- Website recognition
- Verbal and visual recognition at Wild Brew
- Pre-event and Post-event publicity

HAWK - "IPA Intellectuals" \$6,500

- 25 Tickets, including patrons-only hour
- Entrance into VIP Lounges
- Custom designed and featured Instagram and Facebook ads
- Website recognition
- Verbal and visual recognition at Wild Brew
- Pre-event and Post-event publicity

OWL - "All Eyes for Ale" \$3,500

- 14 Tickets, including patrons-only hour
- Entrance into VIP Lounges
- Website recognition
- Pre-event and Post-event publicity

SCISSORTAIL - "Kingbird Keggers" \$1,500

- 8 Tickets, including patrons-only hour
- Entrance into VIP Lounges

FLOCK OF 4 - "Amber S-QUAD" \$700

- 4 Tickets, including patrons-only hour
- Entrance into VIP Lounges

PATRON - "Solo Flight" \$175

- 1 Ticket, including patrons-only hour
- Entrance into VIP Lounges

BID AT TULSA'S BEST SILENT AUCTION

WILD BREW 2024
AUGUST 24, 2024
5 PM – 8 PM
WILDBREW.ORG

All proceeds go toward the Sutton Center's wildlife conservation efforts!

The Sutton Award: Inspiring Conservation Through Art

by Audra Fogle



Oklahoma Department of Wildlife Conservation Special Award Winner Cristen Bosch, with her beautiful scratch art piece titled “The Lesser Prairie-Chicken,” inspired by her art teacher Greg McClure from Alva Schools Photo by Kelly Bostian

In an era where many students have limited opportunities to interact directly with nature, the power of visual media becomes a vital link between young minds and the natural world. Our staff and board recognize the critical role that art and media play in environmental education. Through the annual Sutton Award, the Center encourages high school students to explore and communicate conservation topics creatively, fostering a new generation of environmental stewards.

The Sutton Award, now in its 19th year, is made possible through the generous support of NatureWorks, Inc., the Gerald H. Westby Jr. Foundation and other dedicated partners. NatureWorks, a Tulsa-based nonprofit, has created wildlife monuments and funded projects, which positively impact the Tulsa community and the conservation of Oklahoma wildlife. Their annual Wildlife Art Show & Sale, held at Tulsa’s Southern Hills Marriott, showcases some of the finest wildlife art in the nation, and provides a prestigious platform for the Sutton Award winners.

In 2024, the Sutton Award competition attracted entries from high school students across Oklahoma, from as far as Durant and Alva. Each entry, whether a painting, sculpture or drawing, is accompanied by an essay detailing the artist’s research and understanding of their subject. This rigorous requirement ensures that

students do more than create aesthetically pleasing works. They must delve deeply into the ecological and biological aspects of their subjects. This emphasis on research is crucial, as it enhances the educational impact of the competition by teaching students about the intricate relationships within ecosystems and the importance of conservation.

Jay Pruett, a Sutton Award judge and a Sutton Center board member, underscores the significance of this aspect. “Understanding your subject is critical,” he notes. “I love the idea of an essay with every piece of art. It allows us to do some outreach and education with these young artists. I think that speaks to the mission we have to help spread the message of wildlife conservation and the importance of nature.”

The impact of the Sutton Award extends beyond the students’ artistic development. It provides a unique opportunity for young artists to engage with professional wildlife painters, sculptors and carvers at the NatureWorks Wildlife Art Show & Sale. This interaction not only inspires them, but also helps them understand the professional and ecological contexts of their work. The top 20 entries are awarded scholarships and are prominently featured at the show, bringing their messages of conservation to a wider audience.

I want to emphasize the broader mission of the Sutton Award. One of our missions is to grow young conservationists. Our scientists work to save endangered species and inform the public about necessary conservation measures, and these young artists do it by telling their story through art. This holistic approach to conservation education is vital in today’s world, where people are increasingly disconnected from nature.

The success of the Sutton Award is a testament to the collaborative efforts of various partners. We extend a heartfelt thanks to NatureWorks for their financial support, which enables the awarding of up to \$20,000 in cash prizes. We also acknowledge the contributions of the Oklahoma Sculpture Society, Grant’s Frames, the Gerald H. Westby Jr. Foundation, American Heritage Bank and the Oklahoma Department of Wildlife Conservation. Their support has been instrumental in making the Sutton Award a significant event on the conservation calendar.

As we celebrate the achievements of this year’s winners, we are reminded of the profound impact that the Sutton Award has on both the participants and the broader community. By encouraging young artists to engage deeply with conservation topics and express their understanding through art, the Sutton Center and its partners are fostering a generation that values and actively participates in the preservation of our natural world.

The Sutton Award is more than a competition; it is a beacon of hope and a catalyst for change, nurturing the conservationists of tomorrow. Thank you to all our partners and supporters for making this possible. Together, we are making a difference.

CONGRATULATIONS TO ALL THE WINNERS FOR THEIR EXCEPTIONAL WORK AND DEDICATION TO CONSERVATION THROUGH ART.



1st Place Winner in the Photography Category:
Ashtyn Wichert, with “The Melodious World of Songbirds,” guided by her teacher Stacy Lee from Northwestern Technology Center in Fairview.



1st Place Winner in the 2D Category:
Micah Beeson, with a dramatic piece called “Hungry,” under the mentorship of Kelly Foshee from the Tulsa School of Arts and Science.



1st Place Winner in the 3D Category:
Destiny Hurst, with an outstanding bust “Mother Nature” as described by her teacher Brett Gray from Broken Arrow High School.

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Food for Prairie-Chickens

by Dr. John Hoolihan

The 2024 Attwater’s prairie-chicken (APC) breeding season started in early February with the pairing of the adult breeders. We started with 21 pairs and one additional male. With the first egg laid on 17 March, it was a little earlier than previous seasons. By the end of April, we had around 350+ eggs laid, and the chick rearing process was well underway. A combination of hand-rearing and fostering with adult hens is being used to raise the chicks.

We are often asked, “what do the prairie-chickens eat?” The short answer is – a lot of different things. We continually strive to improve diets to ensure we have healthy and robust birds. Specific objectives include efforts to ensure adults will reproduce and provide chicks that have a high survival rate.

So, how do we select what we are going to feed them? We rely on a combination of research that has been conducted on wild APC diet characteristics, and the knowledge provided by nutrition experts who have devoted their careers to determining optimum avian dietary needs. Replicating wild diets for captive populations is unrealistic in a practical sense. It is cost prohibitive and often impossible to obtain wild diet ingredients, particularly if the captive population is geographically remote from their native habitat. Therefore, alternate feed sources are selected that will provide the desired balance of vitamins, minerals, and other attributes.

Generally speaking, wild APC chicks rely heavily on insects. As they mature there is gradual shift to eating predominantly vegetation (including seeds). The types of insects and vegetation consumed can vary based on geographical and seasonal abundance. Wild APC are opportunistic feeders and will seek out the most abundant and easiest to obtain food, including planted seed crops.

At the Sutton Center, we are fortunate to receive voluntary guidance from nutrition experts when formulating optimal diets for our captive APC flock. They include:

Dr. Ellen Dierenfeld (Fig. 1), who is a comparative animal nutritionist, trained in Animal Sciences at Iowa State (BS Animal Science) and Cornell universities (Master’s and PhD with a focus on wildlife nutrition). She led the Animal Nutrition departments for the Wildlife Conservation Society (based at the Bronx Zoo)



Figure 1. Dr. Ellen Dierenfeld, Lead Specialist, Sustainable Feed Innovations, World Wildlife Fund.

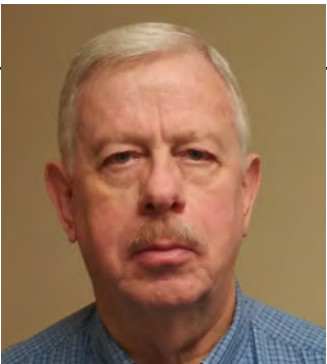


Figure 2. Dr. Al Hollister, Technical Services Nutritionist, Dawe’s Laboratories.

for 17 years, then migrated to head the St. Louis Zoo’s Nutrition program (2003-2008), feeding hundreds of species a variety of ingredients before joining the Research and Development and Sustainability groups at Novus International to manage the testing of their feed additive products with local livestock breeds, environmental conditions, and feedstuffs across the African continent. In 2022 she joined the World Wildlife Fund in as the Lead Specialist, Sustainable Feed Innovations on WWF’s Sustainable Livestock and Feed Systems team, where she continues interesting studies with insects, seaweed and reclaimed food waste as some of the sustainable solutions needed to minimize livestock’s feed impacts on our planet.

Dr. Al Hollister (Fig 2), a Technical Services Nutritionist at Dawe’s Laboratories, provides management and nutrition support to Dawe’s customers worldwide. Dawe’s provides nutrition-related products such as vitamin-mineral premixes, water dispersible vitamins, electrolytes, probiotics, hatchling supplements, specialty products and ration formulations for all poultry, livestock, aquaculture, pets and exotics. Al’s background includes degrees in biology, chemistry, animal science and poultry nutrition that included research with chickens, ducks, geese, turkeys and pheasants. Many years of industry involvement has provided the tools needed to design effective products and procedures to solve problems and help improve the production and quality of livestock.

The bulk of APC feed used at Sutton Center is comprised of commercially prepared recipes of dried pellets produced in various configurations to address specific life stages. We use a breeder diet for adults during the reproduction season, and a maintainer diet the rest of the year. Chicks are fed a starter/grower diet for their special requirements. These feeds are produced at the IUKA mill located in Pratt, Kansas. Randy Dowling



Figure 3. Randy Dowling, vice-president, IUKA Feeds.

(Fig. 3), vice-president of IUKA Feeds (Kanza Coop) has been instrumental in producing high-quality feeds for Sutton Center’s APC flock.

In addition to the dried IUKA pellets, supplemental feeds are also provided to both chicks and adult APC. A variety of vegetation is offered to ensure that all necessary nutrients are available (Fig. 4, Table 1). Many of the items are purchased from local grocers, however we do grow many plants in-house to meet our needs. These include various sprouts (Fig. 5), clover, mixed greens, and dandelions. Other offerings include prairie grasses and sunflowers planted in outside enclosures.

Sutton Center also produces its own mealworms and crickets to supplement the APC diet. Insects are either scattered on the cage floor for chicks, or placed in a plastic container with a hole in it for slower, controlled feeding (Fig. 6). These are particularly beneficial in getting young chicks to eat, as their movement triggers a foraging response. The primary diet given to newly hatched chicks consists of wet and dry crumble, vegetables and GroGel. The GroGel supplement (Dawe’s Laboratories) has an elevated water



Figure 4. Hayden Ring, assistant-lead aviculturist prepping vegetables for Attwater’s prairie-chickens.

content for hydration, vitamins and minerals, probiotics, and is a bright green color to attract the chicks.

Successful propagation of captive APC is a laborious and often difficult endeavor. We are grateful for the efforts put forth by our dedicated staff, and highly appreciative of the assistance provided by the nutrition team and all other volunteers.



Figure 5. Sprout propagation.



Figure 6. Attwater’s prairie-chicken chick perched on slow feed insect container.

Fresh Vegetables	broccoli, kale, arugula, bok choy, yellow squash, zucchini, cucumber, mustard greens, turnip greens, lettuce
Frozen Vegetables	mixed carrots/green beans/corn, back eyed-peas, baby lima beans, lentils
Sprouts	kale, broccoli, mixed salad greens, lentils
Insects	mealworms, crickets
Attwater’s prairie-chicken chick food contains wet and dry crumble, vegetables, small mealworms, and GroGel.	



A View into the Eagles' Nest!

by Daniel Harris

Oklahoma is known for its summer storms, and last summer was no exception. After another successful breeding season for our famous eagle parents, two young left the nest in June. It was during this post-nesting period that the web camera stopped functioning. This particular camera was installed in the fall of 2021, to provide a live video feed of this nest located close to the Sutton Center near Bartlesville.

After the camera stopped broadcasting, we determined that it could not be repaired and had to be replaced. Technology changes fast, and the setup we installed just a few years prior was no longer going to be a good solution. This meant finding new equipment, and modifying or replacing the broadcasting system. We also needed to have everything installed before the adults began preparing for the next nesting season.

While many birds will be on the lookout for a new nesting place each year, eagles tend to be very territorial. They will defend their chosen area from infringing eagles and other birds of prey. This is necessary to insure there will be plenty of resources available when it is time to raise their next brood. The availability and management of food in their environment is one of the most important factors in determining how many, if any, of the chicks will survive to adulthood. We needed a working camera to share images of the eagles raising their young.

A call to action was sent out. We had the experience and a plan for installation, but the project still needed funding. With the generous support of members from our eagle-loving community and a special donation by the Duke Energy Foundation, we were able to commit to the camera and the new setup needed to run it remotely. The camera was installed in November. We knew from previous seasons that this is a pair that tends to breed later than many other eagles in Oklahoma. It is important to note that while eagles are territorial, they don't always use the same nest. This pair has used another nest in their territory, and could chose to build a new one if spooked by the installation. If they abandoned the current nest, the camera could be pointed at an empty tree all season. Although empty nests can be claimed by other occupants; it is not uncommon to find hawks, owls, or even geese taking up residence in abandoned eagle nests. Fortunately, we would not need to worry about squatters this year, as the eagles dismissed the new lump on the tree as mostly harmless. That isn't to say they didn't notice it; they just didn't seem to care.



Preparing the nest, Jan. 1, 2024

As they repaired and expanded the nest, we were able to remotely view them through the new camera. They bickered about branch placement through the end of January. Although relatively late compared to other couples, our eagles were in no rush and kept pace with what we've come to expect from them. Most female eagles will lay their first egg around the same time each year with each subsequent egg taking 2-5 days to produce, and each new egg will typically take longer to produce than the last. They will not delay incubation until the final egg, but will start the process as soon as the first egg is in the nest. Resource availability and predisposition of the female will impact the number of eggs produced as well as the timing between eggs. Spreading out laying and hatch times is thought to help to insulate the population against an acute weather event. The idea is that if egg laying is spread out, a major event might not impact every nest to the point of failure.



First eggs, Feb. 23, 2024

In early February, we started seeing softer nest lining material being brought to the nest. This is a sign that eggs will be in the nest in the coming weeks. On the morning of February 18th, we were able to see the parents' reaction to the first egg. From here out, there would almost always be one of the two eagles on the nest. They would work in shifts to keep the egg warm. Soon there were two eggs, then a third! Two is a good

number of eagles in a nest and three can sometimes be a crowd. As the first egg started to pip on March 24th, the eagle camera was live to the world. The morning of the 25th saw our first view of the new chick. A fish was brought and feeding would be the new priority for months to come. Siblings hatched on the 27th and 31st of March. By the time the last chick had hatched, the oldest chick had a six-day head start. This might not seem like a big difference in the beginning, but the amount of food needed to support three chicks is substantial. Having to compete for both food and parental attention are some of the biggest obstacles to overcome for these birds. As they begin to mature, the disparity in their sizes becomes more and more of a factor. This year, the divide was too great and the hunger and drive to survive left us with two growing eagles.

The two young eagles are gaining strength and their flight feathers are almost ready. They will be branching out further into the limbs and testing their resolve as they are soon expected to fend for themselves. These birds will leave the nest in much the same way that generations of eagles have been doing since the Sutton Center re-introduced them into Oklahoma, Mississippi, Alabama, North Carolina, and Georgia nearly forty years ago.

Every season is a struggle for a bird of prey, and this year was particularly difficult, but we believe that having a view into the nests of our native eagles is an educational opportunity that should not be missed. We continue to deliver an unfiltered view of the lives of Oklahoma eagles into homes, schools, and workplaces around the country. We encourage you take some time each day to connect with nature and we hope this view into the lives of our native eagles helps you feel connected from wherever you are.

You can view the eagle camera and see images from previous seasons at www.suttoncenter.org. Updates to this and all our programs can be found by following @suttoncenter on social media platforms.



Incubation, Feb 29, 2024



Hungry hatchlings, April 2, 2024



Month old nestlings, April 25, 2024



First flight feathers, June 1, 2024

‘BYE, BYE BIRDIES!’ Updates from the Masked Bobwhite Program

by Morgan Anderson and Lily Grant

Another transfer came and went for the masked bobwhite program! For winter releases, we sent quail out to the Buenos Aires National Wildlife Refuge in Arizona. This past February, 120 birds (90 females, 30 males) made the long-anticipated journey. Of the 120 birds, the majority were yearlings that hatched this past summer. We keep more young males behind at Sutton Center because many of them are intended to become foster dads during the breeding season.

Last winter, our big project was sand removal and replacement, and this winter’s big project was...sand removal and replacement! Recently we changed out the sand in all of quail building 2, a building we use during the summer to house more breeding pairs. Changing the sand regularly is necessary to mitigate dust and poor air quality. This allows for healthier conditions for the birds and staff. Sifting while cleaning also decreases the amount of substrate in each pen, so refilling the chambers to the proper level provides a cushion for the birds and the eggs they lay. We owe a huge thank you to Mohawk Materials for donating all of the sand for our building this year!

In addition to changing sand in quail building 2, we now have a fan installed in the north end of the building. During previous season, we have had some difficulty maintaining good air quality and cooler chambers. This will assist in moving fresh air inside. Thank you to Green Country Home Repair for installing it!

All of these efforts help the masked bobwhite recovery program. The masked bobwhite is a critically endangered species, and without the aid of Sutton Center, they would be at an even greater risk of extinction. Quail may appear small and not significant, but their role in the environment should not be underestimated. They impact the food web and are indicators of a healthy environment. The Sutton Center will continue to advocate and travail for the reestablishment of the masked bobwhite in the wild.



Don Wolfe hands Morgan Anderson a crate with quail heading to Arizona! Photo by Daniel Harris



Transit parked in front of the BANWR sign Photo by Daniel Harris



Buckets filled with new, clean sand! Photo by Morgan Anderson



It's All About Perspective, OUR FUTURE

Charitable donations support many good causes, including the Sutton Center. But have you considered designating a gift from your estate? Wealth is not a prerequisite. Planning for the future health of our natural world and the people who rely on it by investing in a lasting gift to the Sutton Center can help ensure the kind of future you desire for the next generations.

A planned gift is one of the most impactful ways you can support the Sutton Center's critical conservation work while accommodating your own personal, financial, estate-planning, and philanthropic goals. With smart planning, you may actually increase the size of your estate and/or reduce the tax burden on your heirs and gain the satisfaction of knowing that you are helping to ensure the future of the Center and its many programs for generations to come.

Did you know? Even a gift in your will of 1% of your estate can make a difference.

Creating a legacy gift is a thoughtful process that will benefit from professional advice. A financial adviser can help you determine how best to accommodate the needs and priorities of you and your loved ones, as well as approximately how much you may be able to pass on to a charity like the Sutton Center and how best to do it. For more information, please contact us via email, admin@suttoncenter.org, or by calling the Center at 918-336-7778.

THANK YOU FOR YOUR SUPPORT



The Sutton Center has a four-star rating with Charity Navigator and is a GuideStar Platinum participant.



Photo by Dan Reinking



Migration and the Greater Sage-Grouse, Part 2

by Dr. Aaron Pratt

In this newsletter issue I am going to continue the series on greater sage-grouse migration behavior. A version of this article was previously printed in *Grouse Partnership News* (20th Anniversary Edition, Fall 2019, P28-31) and data presented are from multiple projects with multiple collaborators, especially the University of Wyoming.

Sage-grouse are known as partial migrants. Partial migration is where some, but not all, individuals in a population are migratory. Partial migration has been argued to be the most widespread form of migration found in all major taxa. Most people are familiar with annual to-and-fro migrations, where animals travel between breeding and non-breeding areas. Sage-grouse can behave like this. However, sage-grouse can also demonstrate round-trip migration among three different seasonal ranges. Sage-grouse generally have three distinct seasonal habitat requirements (breeding, summer, and winter) with any combination of one to three seasonal ranges for individuals to meet their needs (Figure 1). It is possible for residents and migrants to share any of the three seasonal ranges. In our sage-grouse studies, 26% of grouse were residents with just one annual range meeting all three habitat requirements; 1% of grouse moved between breeding range and a separate area used for both summer and winter; 16% of grouse moved between summer range and a separate area used for both breeding and winter; 18% of grouse moved between winter range and a separate area used for both breeding and summer; and 39% of grouse used three distinct areas to meet their three habitat requirements.

Sage-grouse breeding habitat generally includes large areas of sagebrush-dominated plant communities in the vicinity of strutting grounds that also include an herbaceous layer. Summer habitat can include a wide-variety of plant communities within sagebrush-dominated landscapes with a greater source of moisture that keeps plants from desiccating (e.g., riparian, montane sagebrush, wet meadows, and irrigated hayfields or pastures). Winter habitat occurs in mostly sagebrush-dominated plant communities, where sagebrush plants provide food and cover, particularly in areas where tall sagebrush or topography permit sagebrush to extend above snow. Seasonal movements for sage-grouse are tied to forage quality and availability on their ranges. This is demonstrated

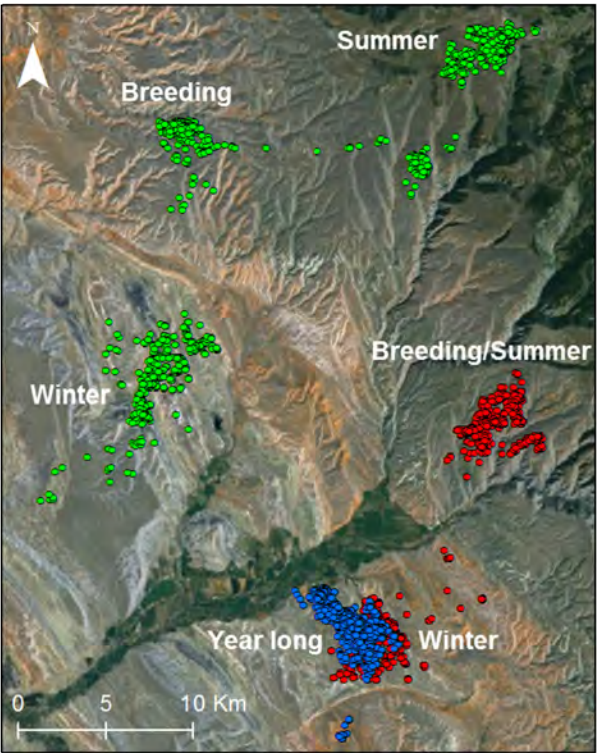


Figure 1. Locations over one year for three greater sage-grouse that exemplify different types of migration behavior where grouse use one (blue), two (red), or three (green) unique seasonal ranges to meet breeding, summer, and winter habitat requirements.

in Figure 2, which shows how the soil-adjusted vegetation index, a remotely-sensed index to the amount of vegetation greenness, varies during the year and how it relates to grouse presence on seasonal ranges. Grouse arrive on breeding range (Figure 2B) during spring green-up when the positive change in greenness is at its highest and food quality is at its greatest, supporting females while nesting and early brood rearing. After greenness peaks during the year, when plant biomass is at its greatest, weather becomes hotter and drier and vegetation starts desiccating, resulting in grouse transitioning to summer range (Figure 2C) because of decreased forage quality. Grouse summer range initially

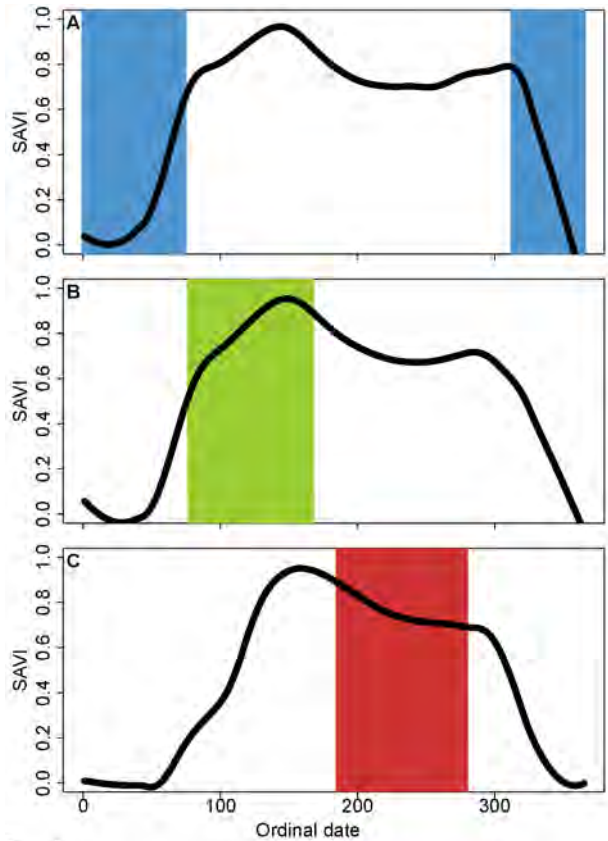


Figure 2. Timing of greater sage-grouse presence (shaded regions) on winter (A), breeding (B), and summer (C) seasonal ranges relative to plant phenology as demonstrated by a smoothed soil-adjusted vegetation index (SAVI) curve (bold black line) in Bighorn Basin and central Wyoming. Y-axis reflects the proportion of the maximum vegetation greenness for a seasonal range throughout the year.

greens-up more slowly in the spring because much of it is at higher elevations. Grouse summer ranges are characterized by more mesic habitat which slows desiccation of the vegetation, lessening the negative change in greenness. Grouse finally transition to winter range (Figure 2A) because of decreased forage quantity when snow limits availability, represented by the sharp decline in vegetation greenness. One can argue that there is also an autumn habitat requirement while transitioning from green forbs on summer range to sagebrush on winter range. However, our observations suggest that in most cases this does not create a fourth seasonal range. Instead, grouse start using sagebrush after forbs desiccate while still on summer range, at stopover locations while migrating between summer and winter range, or they arrive on winter range early, well before the arrival of snow. There were a few exceptions when grouse left summer range and went out of their way to spend a little time, usually back on their breeding range, before finally leaving for winter range.

Sage grouse use a combination of temperature and precipitation to properly time their movements

between seasonal ranges. In general, migratory grouse avoid more rapid plant desiccation in warmer breeding ranges and avoid higher snow accumulation in colder summer ranges with more precipitation than residents in the same population. Our study populations showed that the seasonal transition with the most (75%) individuals exhibiting migratory behavior was between summer habitat and winter habitat, closely followed by individuals (73%) transitioning between breeding habitat and summer habitat, and the lowest proportion (55%) of the population migrating between winter habitat and breeding habitat. Our observations also revealed that sage grouse spent more time on winter range than any other seasonal range. An analysis of the timing of arrival and departure to seasonal range for migratory sage-grouse from several populations across Wyoming showed that on average grouse spent 126 days (35%) in winter range, 94 days (26%) in breeding range, and 99 days (27%) in summer range, with the remaining 46 days (13%) in a state of transitioning between seasons. On average, the breeding season was 19 March to 21 June, the summer season was 7 July to 14 October, and the winter season was 7 November to 13 March. Figure 3 shows the proportion of the population in each seasonal range by date for one of these populations located in the Bighorn Basin. This shows that there is a wide variety of the timing of seasonal presence even within a population. Look around day 275 (1 Oct) and you can see that most of the population is in summer range but some individuals in the population could still be migrating to summer range, migrating to winter range, or even already in winter range. Much of this variation is from yearly weather differences, but it is also from spatial differences and what types of seasonal habitats are available to different birds. The late arrivals on summer range were birds that slowly migrated higher and higher up the mountain as plants desiccated. Those birds that left summer range early

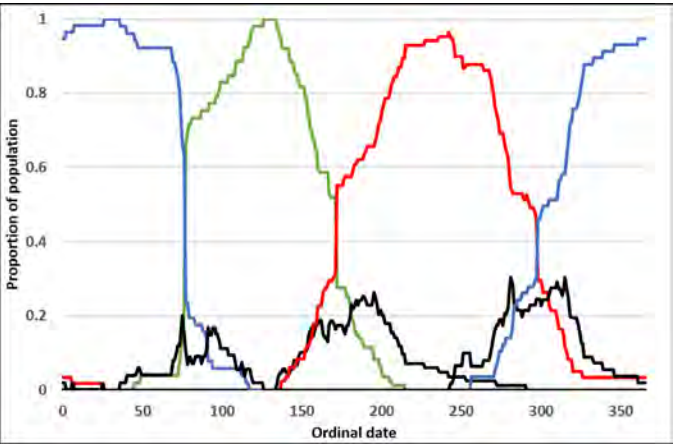


Figure 3. Proportion of the greater sage-grouse population in breeding (green), summer (red), winter (blue), and interseasonal periods (black) in Bighorn Basin, Montana and Wyoming.

were those that summered in irrigated hayfields, which do not have an alternative food source (i.e., sagebrush) when the forbs in the fields are no longer available in autumn.

Elevational gradients in the western US create conditions conducive for the consistent change of resources needed for migratory behavior to develop. Altitudinal migration is when animals move up and down in elevation. This is common with sage-grouse that move up in elevation to access more mesic sagebrush communities during the dry summer and then retreat to the valleys and basins to avoid deep snow during winter. Sage grouse also demonstrate another type of migration behavior that does not neatly fit into the classic forms of altitudinal and latitudinal movements because they are not directly tied to elevational changes or oriented north-south. This is common for sage-grouse that do not use mountain summer habitat, but instead go to irrigated hayfields and pastures. Irrigation, or natural riparian habitat in some locales, can also provide the added moisture to keep plants green during the dry summer months. Grouse that summer in these areas must leave for winter range during autumn if there is not enough quality sagebrush nearby.

Sage-grouse are known for their high fidelity to seasonal ranges, often returning to the same areas each year. This is true, but they have some flexibility as well. As a group, what makes grouse unique from other Gallinaceous birds are their cold climate adaptations. They combat cold temperatures with feathered tarsi and nares and by snow burrowing, aided by pectinate scales on their feet, which act like snowshoes. The lack of food available during winter is likely the most significant driver of migratory behavior in temperate wildlife. Grouse are adapted to a poor-quality winter food source, and this along with their other cold climate adaptations are why they are not a long-distance migrant like many other bird species. Their poor-quality diet adaptation only works if their food source is plentiful. A sage-grouse's winter diet is sagebrush leaves, which are usually plentiful under typical snow depths. Under deep snow conditions, sage-grouse must seek out new wintering areas if sagebrush is covered. Their flexibility in movement to different winter ranges is demonstrated by the locations of a sage-grouse in western Wyoming in Figure 4. She had three winter ranges depending on whether it was a mild winter, average winter, or a deep snow winter.

It is important for sage-grouse conservation to protect all seasonal habitat requirements including habitat used along migration routes. In our studies, we observed that grouse were frequently migrating through breeding habitat, so conservation actions focused on breeding habitat are also partially protecting migration habitat.

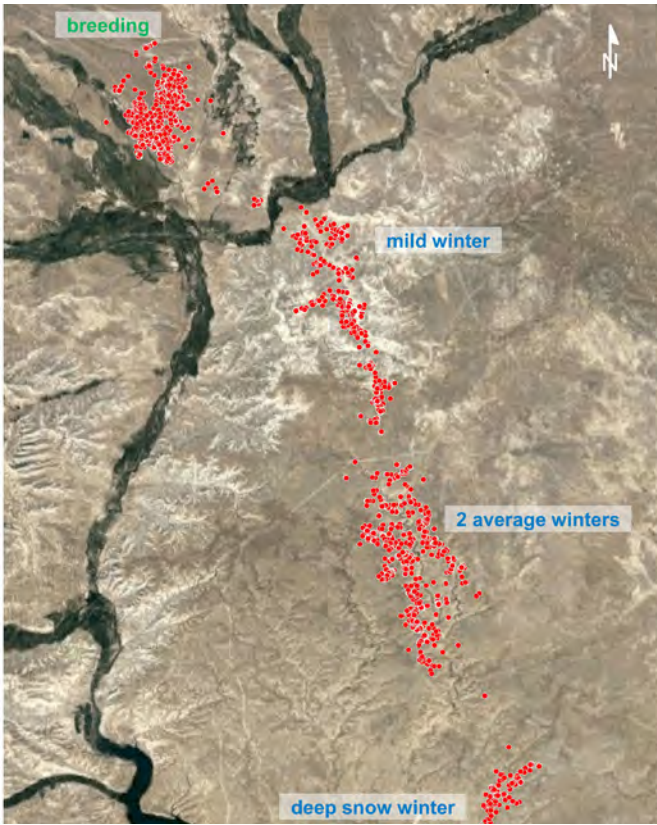


Figure 4. Locations from an individual greater sage-grouse over four years showing flexibility in location of winter range. Imagery from Google Earth.

However, there also appears to be much variation in behavior among populations, such as the proportion of the population that is migratory and the distances of migrations, so better understanding local variation in behavior may be necessary for conservation actions to be successful in protecting all seasonal requirements. Obtaining this detailed basic life history information requires the use of more advanced GPS and radio-tracking technology. We believe we all have a duty to conserve migratory behavior and migratory populations because of their intrinsic value. We have more to learn about our beloved grouse and hope you have obtained more appreciation for sage-grouse with greater understanding. We can also still appreciate the mystery that remains. Why are some grouse migratory while others are residents even if they live side-by-side for part of the year? Do they learn migratory behavior from other grouse, or is it intrinsic? Do grouse have a migratory gene? We hope the next time you experience the changing of the seasons and think about animals changing their behavior to acclimate to the changing environment, you will spend some time pondering migration and the greater sage-grouse.

When this newsletter is delivered the sage-grouse are mostly done nesting, most broods are at least a few weeks old, and many grouse are transitioning to their summer ranges where food will be more nutritious than near where they nested.

Breeding Bird Atlas Surveys Are Near Completion

by Dan Reinking

Volunteers and staff are fanning out across Oklahoma for the fifth and final field season of the second Oklahoma breeding bird atlas. The information being collected through these standardized surveys will enable comparisons of Oklahoma bird distributions today with the distributions determined from Oklahoma's first breeding atlas conducted 1997-2001. This long-term trend information will help inform conservation priorities by indicating which species may be declining in Oklahoma. It will also document the arrival and expansion of a number of species that have not historically nested in this state.

There are many examples of amateurs making contributions to various sciences throughout history. The link between birdwatching as a hobby, and ornithology as a science, is certainly one that has historically been strong, and continues to function today. In the case of breeding bird atlas projects, volunteers are essential to success. Oklahoma is almost 70,000 square miles in size, and we are surveying 583 randomly selected blocks of land statewide. Skilled volunteer birders helping with these surveys make this project practical to complete.

Given Oklahoma's relatively large size, and relatively small population of advanced-skill birdwatchers, this project also relies upon summer technicians hired to survey atlas blocks. These blocks are often in parts of the state far from the population centers where most of the birdwatchers live. While many of the summer internships and technician positions that the Sutton Center offers each year can provide on-the-job training, conducting surveys for the breeding bird atlas is different. Applicants must have already acquired strong bird identification skills by sight and sound before they start work, which only comes to those with a passion for birdwatching who want to take that next step into the ornithology workplace.

This summer, we have been fortunate to have help from four such technicians. Jenna is from Oklahoma, which of course provides some familiarity with Oklahoma's geography and its breeding birds. Kendall is from Iowa and returned this year for a second season of breeding bird atlas surveys. Jamie is from Florida, and is visiting Oklahoma for the first time, but has worked on wildlife projects in several places around the world. Noah, the last of the four came on more recently this past May and arrived from North Dakota. All have enjoyed years of birdwatching prior to working on this project, building their bird identification skills, and then looking for opportunities to put those skills to work for conservation. They spend Oklahoma's stormy spring and hot summer camping most of the time, while logging many miles of driving to reach areas selected for surveys.

With invaluable support from funders, volunteer help, and technicians on the road, we are almost to the finish line of this five-year bird survey project. Anticipation to see how Oklahoma's bird populations may have changed over the past 25 years keeps us focused, and the Sutton Center thanks everyone who has helped get us this far along!



Carrying nesting material is one behavior that volunteers and staff look for to confirm that a species is nesting within an atlas block Photo by Dan Reinking



Killdeer chicks are classified as precocial young, meaning that they are able to see, run around, and feed themselves soon after hatching. Songbirds and raptors have altricial young, which hatch blind and helpless and need constant care until fledging Photo by Dan Reinking

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Philip Alexander	Steven Furcich	Blake Lankford	Britt Robertson
Jeanne Allen	Ashton Gacsal	Dave Latham	Bonnie Rogers
Colten Almy	Sherry Gamble	Doug Latham	Maria Rojas
David Arbour	Aaron Galloway	Kirby Lehman	Mary Rounds
Tracy Armstrong	Neil Garrison	Arthur Lock	Coby Rouse
Kim Ashlock	Tom Gilbert	Wyatt Lowe	Rylee Ruddick
Ashley Ayers	Kelsey Gingerick	Linda Maholland	Damon & Nicola Sacra
Nate Barns	Cheyenne Gonzales	Carol Mabon	John Saltsman
Caleb Barnum	Justin Grace	Kathlene Marler	Gregory Septon
Barbara Bartlett	Wyatt Gudenkauf	Tytus Mason	Claire Sharp
Barbara Bates	Pat Gwin	Mike & Jeanne Mather	Keith Shelts
Abigail Bauer	Leslie Hamilton	Hope McGaha	Mike Shelts
Briah Bennett	Jenna Hansen	Nicole Meier	Lara Sheppard
David Biddinger	Warren Harden	Gary Meek	Linda Shuman
Mike Bingham	Jim Harman	Shannon Messenger	Ian Skor
Donna Bode	Vonceil Harmon	Coleman Miller	Feather Smith
Earl Boesl	Rod Harwood	Dale Mills	Randy Soto
Karla Boggs	Janet Hasegawa	Shobha Mirchandani	Armand Spurgeon
Kelly Bostian	TJ Hathcock	Daegon Moore	Laura Stanfill
Roger & Angela Box	Joe Haulman	John Mulhouse	Tyler Stephens
Valerie Boudreaux	Jeff Hawkins	Baylor Murray	John Sterling
Jim Bradford	John Hays	Patricia Muzny	Beth Stevenson
Dillon Brown	Katie Heiman	Charles Newling	Betsy Stewart
Dustin Browning	Brent & Susan Hemphill	Liz Nichols	Courtney Stookey
Craig & Judith Bryant	Diane Hendrickson	Kim Northcutt	Tammy Strimple
Judy & Gary Bryant	Glen Hensley	Amy Osborn	Hayden Taylor
Jessica Burke	Bruce & Michelle Horgen	James Otten	Kait Taylor
Amy Carnine	Tyler House	Noppadol Paothong	Rex & Sandy Thompson
Cheryl Cavert	Zara Howerton	Tina Parkhill	Sierra Thompson
Jason Childress	Mark Howery	Will Patton	Sarah True
Patty Clark	Steven Hufstetler	Harvey Payne	Les Vandever
Crystal Comer	Michael Husak	John & Linda Peaden	Nancy Vicars
Clay Cooper	Shi Ann Ingalls	Mark Peaden	Karsten Villanueva
Mike Corbett	Tara Inhofe	Don Pearson	Michelle Wagner
Steve Corbett	Shannon Jackson	Tony Peck	Bryon Waits
Phillip Crawford	Dave Johnson	Cathy Pennetti	April Wakefield
Priscilla Crawford	Cheryl Johnston	Cole Penning	Rasagna Wakka
Jim Culver	Jaron Johnston	Emma Perry	Lori Walderich
David Delahay	Sherri & Bob Kelley	Mark Peterson	Andrew Weber
Kevin Doggett	Norval Kennedy	Matalyn Phillips	Andrew Week
Melinda Droege	Esther Key	Ryan Pitts	Charlene Wells
Denise Epperson	Spencer King	Matthew Plett	Cindy & Justin Williams
Joel Erickson	Anna Kinder	John Porter	Howard Wilson
Christopher & Heather Fagan	Jake Kirkland	Lynn Pottz	Stephanie Williams
Rhonda Fair	Desiree Knott	Tamara Pratt	Nate Wolf
Joy Farris	Kristopher Koepsel	Jay Pruett	Di & Dave Wong
Levi Feltman	Jarrodd Kopp	Stephanie Rainwater	Jimmy Woodard
Brian Fennern	Willi Kopp	Travis Rakes	Dave & Sue Woodson
Craig Fink	Nathan Kuhnert	Holly Ray	Connie & Ron Yott
Kristen Fitzsimmons	Kurt Kuklinski	Cynthia Reese	Josh York
Pete & Pam Fowler	Holly Lackey	Jamie Reeves	
Larry Foster	Erin Laine	Lisa Riggs	