George Miksch Sutton AVIAN RESEARCH CENTER

The SUTTON NEWSLETTER

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

Volume 46, Summer 2016

Sutton Center Changes

The Sutton Newsletter

Summer 2016 edition

Cover Photography by Dan Reinking.

Sutton Center Still Flying High!

We sincerely regret to report that due to the state budget crisis, the University of Oklahoma has found it necessary to terminate the Sutton Center/OU collaboration agreement. While we are sorry to see the Sutton Center/OU partnership ending, we are very grateful for the years of support from the University.

As a result of this change in funding the Sutton Center has gone through some reorganization, firmly focused on future work. The Sutton Center will continue projects that many of you have come to know such as bald eagle tracking and nest monitoring, and the Sutton Award which gives scholarships to Oklahoma's many artistically talented high school students. We are especially excited with progress on our new state of the art breeding facility for one of the most endangered birds in North America, the Attwater's prairie-chicken.

Unfortunately, the loss of support from OU means that we will no longer have funding for the *It's All About Birds!* education program. A total of nine full-time Sutton staff positions funded through the University ended June 30, 2016. Our long-time staff is still here, however, and we have new employees working at the Attwater's prairie-chicken breeding facility. Sutton Center's Executive Director March 2015-June 2016, Jeremy Ross, was offered a position with the University and moved back to Norman. Our Director of Education Ryan VanZant is now the Director of Hutchinson Zoo in Kansas, and educator Kimberly Lobit is the new events/docents coordinator at Woolaroc Museum and Wildlife Preserve, just down the road from us. We know that there are thousands of Oklahoma school children who experienced the wonder of birds thanks to these peoples' talents. We wish our former co-workers the best in the future, and we will all definitely keep in touch.

The Sutton Center's mission of "finding cooperative conservation solutions for birds and the natural world through science and education" continues as our primary focus. We will quote our board member Becky Dixon: "At Sutton, we're still working hard, still flying high, and still hopeful that the fruits of our labor will soar far into the future." Most of all, we are still fully committed to a healthy planet. Because of this change, now more than ever the Sutton Center is in need of your generous support. We hope you will please consider the Sutton Center both now and in your future plans.

Lena Larsson, Ph.D.
Acting Executive Director

Steve Sherrod, Ph.D.
Executive Director Emeritus

Attwater's Prairie-Chicken Facility Update...

by Bonnie L. Gibson

Here at the Attwater's Prairie-Chicken facility we have spent the last several months collecting/hatching Greater Prairie-Chicken eggs, feeding and caring for young chicks, and monitoring their development. As our incubators have emptied of eggs and our chicks have grown up, less special attention is necessary for the young birds. This has allowed us to shift gears and we can now begin to focus on the design and construction of new buildings! Construction of our Breeder Barn (where we intend to house our breeding adults) is almost complete. As time goes on our facility will continue to develop, allowing us to house and produce more and more prairie-chickens for release!

Above: **As a way to keep track of our chicks as individuals when they first hatch, each bird is marked with a specific color such as "Black left."**

Lead-ucation

The Sutton Center reaches out to hunters and outdoor enthusiasts

by Angela M. Myers

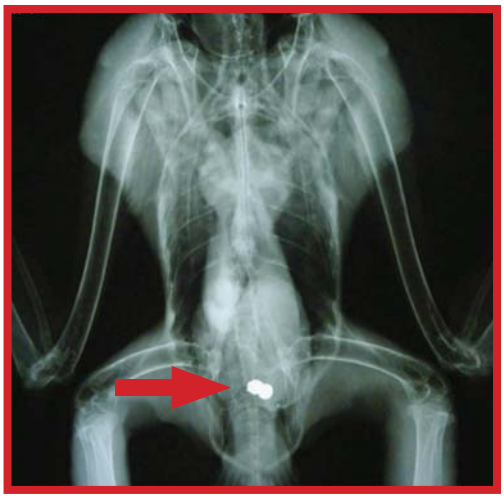
Above: **Angela created a booth geared toward educating hunters on the options available in non-lead ammunition, and the risks associated with using lead ammunition in areas that bald eagles frequent. She attended several venues including Tulsa Eagle Days in Jenks, Oklahoma.**

Winter is an exciting time of the year for those who participate in outdoor events such as deer hunting, although all of the excitement can hide a devastating effect for Oklahoma's population of bald eagles. Since the founding of the Sutton Center, we have prided ourselves and made our name through conserving our national bird. While the bald eagle was taken off of the Endangered Species List in 2007, it is imperative that organizations such as ours, and the general public alike, take the steps necessary to make certain that bald eagles never grace the Endangered Species List again. Our non-lead ammunition education program was founded to do exactly that.

HITTING THE HISTORY BOOKS

Lead poisoning was documented as early as the 1800s as having detrimental effects on wildlife, but the first known report of lead poisoning in a bald eagle wasn't documented until 1968 in Maryland. The problem has not only continued, it has escalated. A study conducted by the National Wildlife Health Center found that from 1982-2013, poisoning was the leading cause of death in bald eagles, with 62% of those deaths stemming from lead poisoning.

Over five hundred scientific articles have been published in the United States regarding lead poisoning in both wildlife and human populations. These studies have shown that there are no positive effects and many negative effects from consuming lead, whether the organism is a human or a bald eagle. To date, one hundred and thirty species have been identified as victims of lead poisoning, and lead poisoning in humans has made news headlines related to lead found in the water in Flint, Michigan.



Above: **This radiograph shows two pieces of lead buckshot that were ingested by a bald eagle.** ***Photo of radiograph courtesy of The Wildlife Center in Waynesboro, Virginia. Below:*** **A researcher at the United States Fish and Wildlife Service examines fifty eight bald eagle carcasses to determine whether lead exposure was a factor of mortality in the animals.**

FAST FACTS:

130 The number of documented species that have been affected by lead poisoning.

500 The number of scientific studies conducted in the U.S. researching lead poisoning.

BALD EAGLES AND LEAD

Secondary lead poisoning occurs when a bald eagle consumes a prey item that has been shot with lead, either in the form of lead pellets, or in the form of a high-powered rifle lead bullet that has fragmented upon impact. Typically, bald eagles acquire lead poisoning from consuming gut piles (the innards discarded from field dressed animals meant for human consumption) that hunters leave behind after a kill. Unfortunately, deer season in Oklahoma coincides with an elevated population of wintering bald eagles, as many northern bald eagles fly down from the Upper Midwest in search of food. There are three times as many bald eagles in Oklahoma during the winter months as during the summer, and these bald eagles face intense competition for food. A pile of abandoned entrails in a field is a tempting dinner for a hungry bald eagle.

Top: **Two #6 lead pellets are shown next to a penny for reference. This is the amount of ingested lead that can kill an adult bald eagle.** ***Photo by Angela Myers. Middle:*** **This photograph from the National Park Service shows two .270 Winchester rounds side by side. The fragmenting lead round is shown to the left, while a solid non-fragmenting copper round is shown to the right.** ***Bottom:*** **Barnes Bullets is a well known manufacturer of copper non-lead ammunition, such as this box of .308 rifle cartridges.** ***Photo by Angela Myers.***

AMMUNITION EDUCATION

After reading some of the previously conducted studies on secondary lead poisoning in bald eagles, the Sutton Center staff felt compelled to educate the public. In January a new program was established to reach out to hunters and other outdoor enthusiasts through shooting demonstrations and presentations in hopes of providing information that could potentially sway hunters to switch from traditional lead ammunition to non-lead ammunition. Many well-known ammunition manufacturers such as Hornady, Federal Ammunition, and Nosler produce solid copper rifle rounds, as well as non-lead shotgun pellets in such metals as steel, bismuth, and tungsten. Some companies such as Barnes Bullets only manufacture lead-free ammunition.

To date, the author and others at the Sutton Center have traveled to several expos across the state to reach out to hunters via a booth that includes photographs, visuals, and examples of ammunition (see photo above). In addition, we have presented our program to multiple associations in the greater Tulsa region including the National Wild Turkey Federation, the Tulsa Bird Dog Association, the Oklahoma Conservation Exchange, and area gun clubs. We hope to expand our outreach program in the months to come, and are looking for area groups who might be interested in presentations.

FOR MORE INFORMATION:

http//:www.suttoncenter.org/lead

#1 Above: **A copper-jacketed .308 caliber lead bullet (left) was compared to a solid copper bullet with a polymer tip (right) during a shooting demonstration designed to illustrate to hunters the advantages of using copper ammunition.**

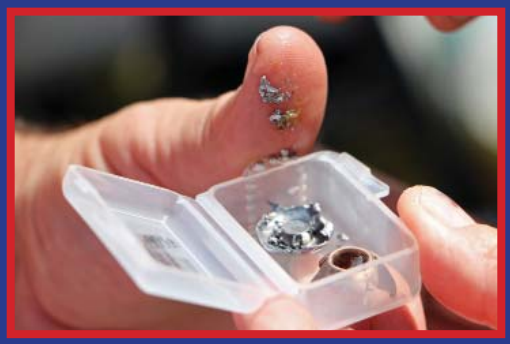
#2 Above: **Shane Rencountre volunteered to perform the shooting while Tulsa World Outdoors Editor Kelly Bostian and interested hunters at Red Castle Gun Club look on.**

#3 **A rain barrel demonstration uses a row of water jugs inside a barrel to contain any bullet fragments that result from a bullet striking the target, enabling spectators to compare ammunition and see the results firsthand.**

Red Castle Gun Club Demonstration

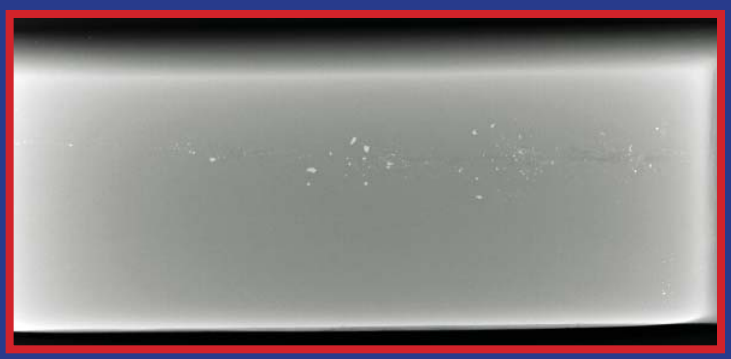
by Don H. Wolfe
Photography and Captions by Dan Reinking

On 4 June, we conducted our first shooting demonstration to educate hunters on the issues of lead ammunition and non-toxic alternatives. This was held at the Red Castle Gun Club outdoor range on the Zinc Ranch, near Lake Skiatook. Don Wolfe gave a brief overview of the issues and the benefits of copper bullets, also pointing out that the very area was one of our release sites for our very successful Bald Eagle reintroduction. Shane Rencountre (husband of GMSARC Acting Executive Director Lena Larsson) shot both lead and copper bullets into water jugs and ballistic gel to show how much lead fragments upon impact. Most observers were impressed and shocked by the amount of lead fragments that shear off and contaminate meat as well as potentially poison eagles and other wildlife that may scavenge remains. The x-ray photo below shows the "wound channel" (from right to left) and the hundreds of tiny lead fragments scattered throughout a block of ballistic gel.



#4 **Straining any remaining water and carefully cleaning out the rain barrel reveals how many small fragments result from a lead bullet striking a target. In contrast, the copper bullet is largely intact.**

#5 **Blocks of clear ballistic gel were used in a second demonstration to illustrate the same principle of contrasting performance by lead versus copper ammunition. The bullet's path through the front gel block is visible as the block is thrown from the table at the bullet's impact.**



#6 **The copper bullet remained largely intact and is shown here on top of the path it took through the gel block. The lead bullet fragmented into hundreds of small particles as revealed by an x-ray. Particles such as these could be distributed through the meat of a deer harvested with a lead bullet, resulting in human consumption of lead or causing poisoning of eagles or other scavenging wildlife. The Sutton Center encourages the use of lead-free ammunition for hunting.** ***Radiograph courtesy of Bent Arrow Veterinary Hospital.***

Survey Team from Left to Right: Emily Curci, Kyle Thomas, Fumiko Sakoda, Laura Murdoch, Joseph King, Mariah Gaston, Dan Lipp, Meredith Miles, Edward Tiede, and Brandon Wolf. *Background photo:* Joseph King observing a Lesser Prairie-Chicken gobbling ground or "lek." *Photo by Dan Lipp.*

2016 LESSER PRAIRIE-CHICKEN SURVEYS

by Kyle Thomas

With Lesser Prairie-Chickens' (LPCH) population size at 5% of historical numbers and its distribution at only about 10% of its original range, it is very important for us to understand where they persist, and what areas are vital to their survival. This will help us more effectively protect these areas of highest importance. LPCHs need large expanses of open grassland and are very sensitive to barriers and structures such as roads, fences, trees, wind farms, and power lines. This habitat fragmentation has been deemed the number one threat to LPCH populations. Since it is impossible to stop all development in Northwest Oklahoma, we need to be able to understand where the areas of highest "prairie-chicken importance" are. To do this we must go out and conduct surveys, not only for the birds, but also for general habitat suitability in relation to LPCHs.

From April 15th to May 7th (Lesser Prairie-Chicken's prime breeding season) a crew of 10 field technicians conducted listening surveys and habitat assessments for Lesser Prairie-Chickens. We started the survey 30 minutes before sunrise each morning. From then we made a 5-minute stop every mile conducting a visual habitat assessment, and listening for the sounds of courting prairie-chickens. With the ten of us covering an average of 14 miles a day we could cover a lot of ground rather quickly.

The data from these surveys will help us better understand what areas should be protected from development.

LPCH are very easy to detect by sound. They have a very unique mating display that involves males gathering in a certain area every morning to dance, call, fight, and impress the females. These gathering spots are called leks or gobbling grounds and vocalizations can be heard from up to two miles away. It is really quite a spectacle to see around 15-20 of these football sized birds displaying their feathers, stomping their feet, chattering, booming, flying and fighting, all out in the middle

of a wide open grassland just as the sun is rising. I personally didn't find many leks though, only 3 out of my ~500 stopping points, but waking up before the sunrise and getting to hear and see all the active wildlife in the hours surrounding dawn is very peaceful.

Moving to northwest Oklahoma from the eastern side of the state makes it seem barren due to open spaces and fewer trees, but when you take the time to stop and look you will find that it is teeming with life and is home to so many unique and fascinating animals. What an amazing habitat that gives life to the Lesser Prairie-Chicken, Ringtail Cat, Swift Fox, Pronghorn, Golden Eagles, Porcupines, the infamous "butcherbird" or Loggerhead Shrike, and many, many others. Our grasslands are one of our fastest shrinking ecosystems. LPCH are considered an umbrella species, meaning they require several different habitats during their life cycle to persist. So this means that to protect the LPCH you need to protect several habitats, therefore benefiting other wildlife. Hopefully, our efforts will help direct human development to areas that will not be detrimental to LPCH populations, and we can continue to protect our fragile grassland ecosystems.

I'm a self taught birder and ornithologist always ready to set off on an extreme adventure through muck and hills to chase after birds. Some of the fondest memories I have are finding and observing the prairie-chickens north of Shattuck.
—Edward Tiede

MUSINGS OF A FIELD TECHNICIAN

by Dan Lipp

Surveying for Lesser Prairie-Chickens these last couple of months has been a unique experience for me. Coming to Oklahoma for the first time from the Midwest, it was hard not to notice how the comparative lack of trees affected the landscape. The winds whipped constantly, and the horizon was always vast and distant. When a storm rolled in, it could be seen 40 miles away. It was no wonder why such a spectacular species decided to call it home; the grass is just high enough to provide cover, but not so thick as to prohibit the free movement of a chicken. The dearth of trees naturally deprives hawks and eagles of perches from which to hunt the chickens, allowing these unique birds to perform their mating ritual. For someone who has never seen it before, this dance can qualitatively be described as bizarre. These birds, hopped up on their own hormones, gather in the exact same place with daily regularity and inflate their air sacs, raise their feathers, and generally strut their stuff in a show of dominance towards other males. This behavior is meant to get attention from females, and it does just that, but this showiness garners the attention of unwanted eyes as well; specifically, those of predators.

So why, then, are there so few chickens remaining? Conventional wisdom would tell us that that ubiquitous human structures indirectly ward off the chickens because they serve as raptor perches. To a chicken, what's the functional difference between a tall tree and a high voltage line? A hawk can perch on one just as easily as the other; best to avoid it then. Before humans, the only such perches were well-placed cottonwoods and a few snags. But today, wind turbines, silos, power lines, and a whole host of other tall structures dot the plains landscape, leaving scarcely a patch of prairie

Joseph King searches for signals from radio transmitters carried by Lesser Prairie-Chickens. *Photo by Dan Lipp.*

out of sight of an opportunistic predator. Expecting a chicken to just mate under the shadow of a 10-story pole is equivalent to expecting your cat to get into a full bathtub just because you want it to. Every fiber of its being will tell it not to.

But I don't think that's the whole story. Through the course of my work, I had the opportunity to speak to a good many ranchers and farmers about various topics (evidently, seeing a car pulled off to the side of a poorly used county road with an out-of-state license plate is reason enough to assume that the driver is either lost or broken down. I had quite a few drivers stop and ask if I needed help or directions, which naturally led to friendly conversation.) Many would tell me of the great numbers of prairie-chickens they would see on their property every day some 30-odd years ago, but that they hadn't seen any (or maybe one or two, at best) in the last ten years. One recurring theme that caught my attention was the change in growing milo for feed to growing grass. I had

Musings Continued...

no fewer than five farmers tell me that prairie-chickens used to congregate around the location where they stored their milo several decades ago. They would come in at dusk in the dozens and fill themselves on the spilled seed. Even a meager spill would still sate a small chicken. After they had filled their bellies, they would disperse to wherever they roosted and lekked. I'm told that farmers have since trended away from milo and towards grass, which just doesn't pack the same nutritional punch for a chicken. Could the disappearance of this food source have contributed to the decline of chickens in recent years? Perhaps, perhaps not; it wouldn't be scientific to declare it so with nothing more than anecdotes. But with prairie-chicken numbers still trending steadily downward, it may be worth investigation.

I believe that interacting with wildlife is inevitable. Whether or not we're trying to, animals react to our behavior. Undoubtedly, some suffer from our actions, being displaced, hunted, or outcompeted. The examples are numerous, and you can probably think of some on your own. On the flip side, some animals likely benefit from us. Look no further than the white-tailed deer. Despite hunting them, we've also hunted their competitors like bison nearly to extinction. We've nearly extirpated all of their natural predators like wolves and bears. And let's not forget the ample corn and other crops we've brought with us on which deer love to feed. In my home state of Michigan, it's now estimated that deer are roughly six times as abundant as they were 150 years ago.

I hope it doesn't seem like I'm going off on a tangent. I'm simply stating that our interactions with wildlife can be good or bad. If we can continue to study these wonderful birds and their behavior, we may be able to more accurately identify the effects of our actions and separate the good from the bad. I hope that explaining the plight of these birds to those who don't regularly encounter them will engender respect and admiration for them. I felt very fortunate to be part of a project that sought to identify the tendencies of Lesser Prairie-Chickens, and I sincerely hope the data we derived can be used to help secure a place for these birds for generations to come.

I am thrilled to be working to help conserve such a species of special interest, and I hope the data collected helps the species in the very near future.

—Brandon Wolf

Background photo: Brandon Wolf measures the wind speed during a Lesser Prairie-Chicken survey. Wind speed affects how far away the birds can be heard. *Insert:* Two fighting Lesser Prairie-Chicken cocks. *Photo by Noppadol Paothong. Right:* BEST group meeting at the Center on December 15, 2015. *Photo by Dan Reinking.*

Bald Eagle Nest Monitoring Results

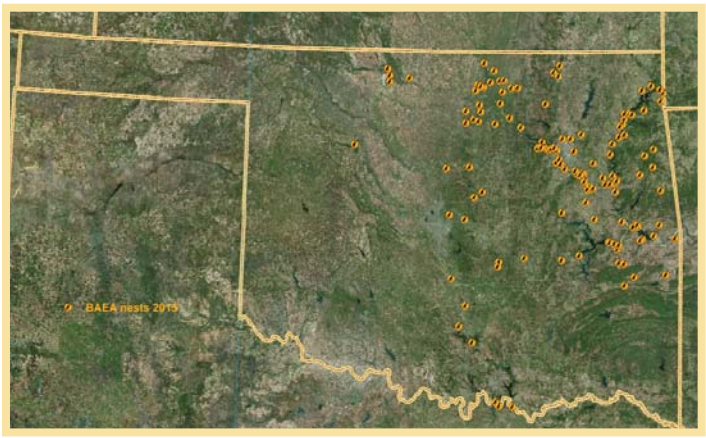
by Lena C. Larsson

For those of you unfamiliar with Sutton Center's bald eagle recovery contribution, the Center used innovative techniques to hatch, raise, and release bald eagles 1985-1992. Two hundred seventy-five young eagles were set free in five southeastern states, including 90 in Oklahoma. These eagles returned to nest near the area where they first took to the wing. The Sutton Center has been surveying Oklahoma bald eagle nests since this species returned as nesters in 1991. Current statewide nest monitoring adds to data collected previously, and volunteers are needed to help maintain an accurate database. Bald eagle nest monitoring provides a way to record up-to-date information. Involving volunteers as citizen scientists who help monitor the bald eagle population is both exciting and essential for success.

The Bald Eagle Survey Team ("BEST") volunteers help us continue keeping records of the number of eagles nesting in Oklahoma. The data gathered is important to learn about eagle population trends and needs, and since the Bald and Golden Eagle Protection Act prohibits interference, consultants and developers contact us to inquire whether we have records of nests close to their project areas. We can then inform them where there is a potential of disturbing nesting sites.

We have not completed the 2016 bald eagle breeding season data entries yet. But the map of the nests monitored in 2015 and the table comparing the monitoring results of the past three years illustrate the success of the recovery program and the efforts of the BEST volunteers. We are so grateful for their contributions. If you would like more information about volunteering with the Sutton Center BEST, please contact us to find out how you can be an important part of protecting the bald eagle.

Eagle parents attending their nestling in Wagoner County, Oklahoma. ***GMSARC file photo.***



Locations of bald eagle nests checked in 2015 (above), and a comparison of recent nest monitoring results (below).

	2013	2014	2015
# nests checked	96	122	131
# confirmed active	84	103	116
# confirmed productive	65	70	77
Confirmed fledged young	96-101	102-105	116-133

Sutton Art Award 2016

Story by Elizabeth A. Ross
Photography by Elizabeth Ross and Dan Reinking

In this 12th year of the **Sutton Award Scholarship** program, we had a whopping 133 high school students statewide submit astounding displays of their creative talent with a compelling conservation message.

Artwork submitted included work done in 2D or 3D displays of drawing, painting, sculpture, graphic design and photography. Additionally each submission was accompanied by an essay that gave the extra punch of urgency or hope in the conservation messages they were conveying. The essays included a description of the tie to that message in their art. With such a large cohort of entrants our judges had their work cut out for them. This year's extremely wonderful volunteer judges were comprised of 5 local art enthusiasts including Sutton Board Member, Educator, and Sutton Award Donor - Barbara Bates; Gilcrease Art Museum's Associate Curator of Youth and Family Programs - Sarah Wright; Hardesty Arts Center's Development Director - Hillary Parkhurst; Private Artist and Sneed/Lang Attorney - Mark Waller; as well as Dr. Jeremy D. Ross.

The Sutton Award Scholarships would not exist without generous donations from our following sponsors: NatureWorks Inc.; Barbara Bates; Rachel Wimpey and Willowbrush Studio + Gallery; Chocolatier - Christine Joseph from Nouveau; T.W.'s AFAB Catering; as well as Nothing Bundt Cakes of Tulsa. Thank you all and congratulations to this year's award winning young artists along with their parents, schools, and teachers for showing them support for their interests and talents!

The Top 3 Awards:

1st Place - Bailey Lauren Denler Wyatt with *Eyes of the defenseless*, a series of drawings that include close-ups of an eagle, chameleon and a gorilla with their eyes as the dramatic focal point of each drawing.

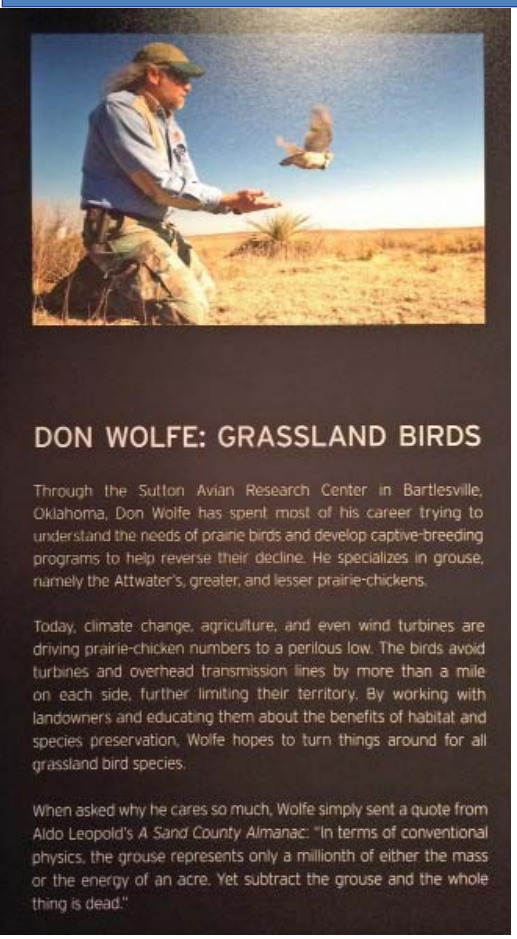
2nd place - Christopher Brandon Null, *A Delicacy – The True Cost of Luxury,* mixed media sculpture with clay shrimp posed on rusty metal cans to portray the effects of shrimp farms on the environment.

3rd place (Tie) - Kyra Gallagher's *Dances with Wolves*, color pencil drawing of wolves from a non-profit wolf conservation center **and Cassidy Brown**'s *Land Snail*, an extremely detailed clay sculpture of a land snail made large to represent the impact size on the environment.

Questions about participating in future Sutton Awards? Call the Sutton Center (918-336-7778) or email us at info@suttoncenter.org

We'd love to have you and/or your school join the competition next year to help spread a conservation message in a compelling way!

Photo Ark Exhibit



For the past 10 years, Joel Sartore, *National Geographic* photographer and long-time friend of the Sutton Center, has been working on documenting every species of wildlife that is in captivity to form a photo archive (Photoark.com). He has now photographed over 6000 species, and is still less than half way through. A story of his effort and some of his photographs were featured in the April 2016 issue of National Geographic Magazine. From 5 November 2015 through 11 April 2016, the National Geographic Museum in Washington, DC, held a multi-room exhibit on Joel's Photo Ark project. Included were some video clips of uncooperative subjects, explanations on how the photographs were taken, a room with nothing but species that have already been lost since Joel started this project, and a room with "heroes of conservation," which included eight biologists that Joel has worked with over the years and whom he felt have made or are making substantial contributions to conservation. Our own Senior Biologist Don Wolfe was included for this honor. Such recognition is greatly appreciated, and the impact that Joel has had over the years with his spectacular photographs and accompanying stories in *National Geographic* has done an incredible amount to increase awareness and conservation. Thanks, Joel, and keep up the great work!

Above: **Don Wolfe honored in the Photo Ark exhibit in Washington, DC.** ***Photo by Miri Wolfe.*** ***Right:*** **Sutton Center eagle displayed on Saint Peter's Basilica.** ***Photo by Joel Sartore.***

Join Us at Wild Brew!
Sutton Center's Main Fundraising Event

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