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

# George Miksch Sutton

The

SUTTON

NEWSLETTER

Volume 40, Spring 2013

# It's just an empty nest...

Or is it?

What's Inside...

 An Eagle's Nest
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*Cover:* A Bald Eagle nest located at the Sequoyah National Wildlife Refuge. Note the nest camera on the upward branch above the nest *Photography by Ryan A. VanZant.* 

# An Eagle's nest... Home and Reststop

by Steve K. Sherrod, Ryan A. VanZant, and Dan L. Reinking

Above and Right, Above: Weeks after this nest failed and breeding adults had deserted, a subadult (about 4 years old) was spotted in the nest where it rearranged nest lining mate-

rials during a 30 minute visit. Right: At another time, a juvenile eagle stops by to check out the view. Photography by Dan L. Reinking (via nest camera).

During our careers, members of our staff have worked with and around a variety of eagle nests ranging from hundreds in the Aleutian Islands to hundreds more in Florida but including others sprinkled here and there throughout the world. We happen to have special pride, however, in the more than 130 active Bald Eagle nests that now exist in the Sooner State where in 1984, none were to be found.

It can be especially interesting to think about different aspects of the "lives" of eagles' nests, just a few of which are discussed in this article. Since we began to install nest cameras in Bald Eagle nests in 2006, we have become acutely aware that eagle nests in Oklahoma, no matter their bulk and structure, can be successful "homes" for living families but can also be less than stable structures. In this state, nests are usually comprised of sticks of varying lengths,

slightly less than 1/2 inch to an inch or more in diameter, with the nests being approximately 3-7 feet in diameter, and they include a recessed nest cup that is lined with grasses or other soft material. Fresh greenery found in nests throughout the nesting season is variously surmised to act as invertebrate repellent, to advertise occupancy by the resident birds, and to provide evaporative cooling for nestlings.

A single pair of Bald Eagles often builds or repairs more than one nest (called supernumerary nests) in a given territory each year. In some areas where breeding populations are saturated, multiple nests perhaps advertise to other eagles that the territory is "well occupied." Multiple nests also allow a type of rotation among them so that there is a "rest period" between years to allow for attrition of nest-associated parasites.

Bald Eagles and their nests are found only in North America, and in Oklahoma all known, current nests are built in trees, often cottonwoods along waterways. While dead trees are frequently used for nesting by Bald Eagles, live trees are utilized as well. Cottonwoods are brittle, and, depending on angles of branches, can break easily when climbed by humans; dead cottonwoods in particular are extremely brittle. With Sutton staffers and a number of dedicated volunteers keeping watch on at least some of the Oklahoma nests, we find that a few of the nest trees, and/or, nests succumb each spring during the "stormy season" that produces lightning, hail, high winds, and rain. We have reported in the past on our efforts to save youngsters displaced from eagle nests that ended up on the ground because the nests' increased weight when waterlogged by heavy rains (with some nests reportedly weighing "tons"), perhaps along with high winds, were more than their supporting trees could stand. Other dead trees under our watch that were supporting eagle nests have been split in half by lightning, and entire dead trees with nests in them sometimes have simply fallen over, exposing massive root balls. In one case, the incubating adult eagle was actually hit by lightning, killing the bird and knocking the nest out of the tree that was charred from top to bottom. Adults can continue to feed older nestlings on the ground after they have been displaced from their downed nests, unless the youngsters are killed in the fall or a hungry mammalian predator intervenes. OG&E has worked with the Sutton Center to help build a nest pole structure, currently the subject of our eagle nest camera, that replaced a downed nest tree at Sooner Lake some years ago. The Sutton Center has also helped design a more elaborate substitute nest tower structure for Bald Eagles in Texas.

# in the Sky

Elsewhere on this continent, Bald Eagle nests can be found in conifers or in various species of deciduous trees (in addition to cottonwoods) as well as on cliffs and human made structures, etc. In the mostly treeless (except for dwarf species) Aleutian Islands where large numbers of our national bird exist, Bald Eagle nests are often built right on the ground. Many are built on seastacks, or columns of rock and soil that once existed as island peninsulets but have been cut off from the mainland by the eroding actions of the sea. Even peninsulets that have not been entirely split off by the sea, are desirable sites for nest building. On Amchitka Island where foxes were once introduced by the Russians to exist as self-sustaining populations for fur farming, these carnivores feed primarily on seabirds and their nest contents as well as on rodents (also introduced). While Bald Eagles are large enough to capture Arctic Foxes, these small canids working in pairs from different directions can eventually sneak in and steal eagle eggs, chicks, and the bountiful prey supply that is found in the eagles' ground nests. Thus, isolation of the eagles' nests on seastacks or on peninsulets that can be approached on land from only one direction is key for protection.

Bald and other eagle nests can be home to more than the primary eagle family that is associated with the structure. A look at some Oklahoma Bald Eagle nests from the past two years well exemplifies this fact. At Sequoyah National Wildlife Refuge near Vian where the Sutton Center released a majority of the young eagles that were reintroduced into Oklahoma between 1985 and 1992, the nest on which we have another camera trained has been active for several of the last few years.

This nesting season it was initially occupied by Bald Eagles and contained two eggs. What appeared to be (out of sight of the camera, but reported by eyewitnesses) one or more "rogue" Bald Eagles repeatedly invaded the occupied territory, and apparently disturbed the resident pair enough that the two eggs were eventually abandoned about halfway through incubation, with one being broken. Within a couple of weeks, a pair of Great Horned Owls appeared and commandeered the abandoned eagle nest; the female owl began incubating the remaining, unattended (and dead) eagle egg. Great Horned Owls do not build their own nests, but take over unused nests of other, large avian species such as eagles, hawks, or even crows. By February 11, about a week subsequent to the owls' arrival, the female owl laid her



A long distance view of the nest at the Sequayah National Wildlife Refuge. This nest is located about 90 feet above the ground in a cottonwood tree. *GMSARC file photo* 



*Left:* The two Great-Horned Owl eggs lie next to the failed Bald Eagle egg (note the size difference). *Right:* The female owl stayed on her eggs through a snow storm that nearly buried her. *Photography by Dan L. Reinking (via nest camera).* 

own two eggs in the eagle's stick nest, and she then began incubating all three eggs, with occasional visits by her mate visible mostly at dawn and dusk. The eagle egg soon disappeared, likely exploded due to gases resulting from bacterial invasion of the dead contents through eggshell pores. A hail storm captured on camera on February 18 pelted the female owl relentlessly, and the next day, one of her own eggs was seen to be broken. On February 20, the incubating female stayed put during a snowfall which nearly buried her. Within a few more days, she gave up incubation and

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*Left:* A couple of Ospreys that considered "renting" the unused space. *Photography by Dan L. Reinking (via nest camera). Right:* An example of Scissor-tailed Flycatchers building their nest inside the mass of sticks that make up a Bald Eagle nest. *Photography by Ryan A. VanZant.* 

her second egg disappeared also. She and her mate revisited the nest over the next week, but eventually disappeared. With the nest empty for some time, we were surprised on April 5 to suddenly find a female Osprey sitting in the nest, soon to be accompanied by what must have been her mate. These birds stayed off and on for approximately an hour before taking flight. They returned briefly on another one or two occasions, and we were hoping for a third nesting attempt (by a third species) in this nest for the season, but the Ospreys were soon gone for good.

Last year when we were mounting a nest camera at another Bald Eagle nest site, it became clear that we were not exactly welcome at that location. The eagles were gone, but a grey squirrel continually chattered at our climbers and excitedly ran in and out of a hole on the bottom side of the intertwined mass of sticks. This was apparently the entrance to where the squirrel had made its own home. Halfway around the nest, a Carolina Wren was protesting angrily as it also came and went from another hole among the entangled stick matrix. Still a third species, a pair of House Sparrows, was busy scolding our climbers as these birds also frequented an opening that apparently led to their nesting location. These other inhabitants of the eagle nest (grey squirrel, Carolina Wren, and House Sparrows), all gained an advantage from becoming close "neighbors" with the nesting eagles. The Bald Eagles will defend their nest against other predators such as climbing mammals and climbing snakes, and by extension the squirrels and small birds will also receive protection. In addition, the wren can forage on and consume some of the insects that are invariably drawn to the decaying food in the eagle nest, and the squirrel might also eat some of the wasted meat from the nest. We have also observed Scissor-tailed Flycatchers similarly inhabiting the pole nest at Sooner Lake.

Finally, it is of interest to note that when eggs from another eagle nest we were monitoring were deserted by the incubating adult eagle, a short time later Turkey Vultures were in the nest, fighting among themselves over the prey remains that had previously been brought back to the nest by the male eagle.

While these are only a few examples of how other creatures besides eagles may share use of the latter's nests, such observations do not take into account the thousands of invertebrates and microbes that also inhabit these large stick structures built by our national bird. Nest sites are an important resource for birds and other animals, and often serve multiple roles for multiple species.



4 The Sutton Newsletter



"I See You" by Kassidy Bennett

"Feeding Frenzy" by Janet Fernandez

"Endless Happiness" by Sungeun Kim

Once again, the Sutton Award scholarship program was a great success! In our eight years of holding this student art and research competition, we have many achievements to celebrate. In 2013 we had the largest turnout for applicants thus far with 118 entries from twenty schools statewide!

The Sutton Award is for conservation artists in the 10th, 11th and 12th grades across Oklahoma. In addition to the artwork that is submitted, each student is also required to submit an essay that explains how his or her work communicates information about a current conservation issue. Five judges spent many hours studying all the pieces and reading the corresponding essays, and we are truly grateful for their help in this endeavor. This year's judges included: David Nunnely with NatureWorks; Kris Koepsel with Riggs, Abney, Neal, Turpen, Orbison and Lewis and the Sutton Board of Directors; Deborah Burke with Gilcrease Museum, Ted Theban who is a retired principal and art teacher, and Steve Sherrod, Executive Director of the Sutton Center. Twenty students were selected to receive scholarships, and the top ten winners, in addition to some honorable mentions, had their pieces displayed in the NatureWorks Art Show in March.

The Sutton Award booth received a great deal of attention at this year's NatureWorks Show. Each year we are overwhelmingly impressed with the displayed talent of our Sutton Award applicants. This makes our judges' jobs very difficult, albeit especially rewarding when they get to see the final grouping admired at the show. All of the student scholarship winners came to the show this year to discuss their art and get the chance to mingle with the other artists who had flown in from all over the world to the event. We heard several remarks from students regarding how this was an amazing opportunity for them.

Michele Archambo, a senior at Metro Christian Academy, received first place for her talented work titled "Saber-toothed Cat: Who's Next?". Michele has an incredible talent for working with charcoal, and this intriguing piece featuring the skull of a Sabertoothed Feline was truly eye catching. Her essay and research were well beyond her years, and we know she has an amazing future ahead; she will attend the University of Oklahoma this fall. We congratulate her on her achievement and wish her success.

The Sutton Center is especially grateful to its sponsors, including NatureWorks, Riggs Abney Neal Turpen Orbison & Lewis, Bama Pie Corporation, and The Mayo Hotel for providing a space for us to again showcase the artwork for the public to view! If you would like to make a contribution to the Sutton Award for 2014 or would like to learn more about how your student can apply, please contact Hillary Parkhurst at hparkhurst@riggsabney.com. Make sure to visit the NatureWorks Art Show and Sale next year so you can see the amazing talents of Oklahoma's youth!

"Grande Asian Elephant" by John Voth "Mountain Top Removal" by Elaine Wilson

"Saber-toothed Cat: Who's Next?" by Michele Archambo





Oklahoma's major rivers and lakes are concentration points for eagles during the winter months. The first winter eagle on the left, photographed in January, has a dark head and tail and white wing linings. It will be several years older and will have gone through a number of molts before it attains the familiar adult plumage that the birds on the right are nearing.

Our successful eagle tracking project continues as we follow the movements of 12 Bald Eagles through the first few years of their lives. Satellite transmitters record their location with GPS accuracy, allowing us to see exactly where they visit each day throughout the year. We provide location information for each bird using interactive maps on our website so eagle fans can stay up to date on the birds' movements. Placed on juvenile eagles while they are still in the nest, this technology offers an opportunity to see where young eagles spend their first few years before they become mature and begin nesting. We installed our first transmitters on two birds at a nest in Sand Springs, Oklahoma in 2010, and have now been tracking them for three years. While the information we obtain offers us unprecedented insights into eagle movements, we only receive satellite data once weekly to help minimize the cost. This means that we don't have "real time" location information and are always a few days to a week behind, reducing our chances of being able to physically locate and observe any particular eagle out in the field on a given day. We were therefore very interested to receive word that an eagle apparently wearing one of our transmitters was photographed along the Arkansas River near Bixby, Oklahoma in March of this year. Patty Smith-Clark was photographing eagles on a gray and wintery day and captured several images of an eagle that was clearly wearing a transmitter similar to the ones that we use. We waited for several anxious days for the next download of tracking data from the satellites before we could confirm which eagle it was, and it turned out to be the bird that we call "Sand Springs 2010 male" on our tracking website. While we know from the tracking data (in a somewhat abstract way) that each eagle is alive and well, Patty's photos were for us a fun and tangible reminder that "our" birds are still out there doing what eagles do, in this case fishing in the river on a cold, cloudy day. Her photos also provide a lesson in the physical appearance of a three-year old eagle. Eagles are variable and change plumage during their first five years. They start out mostly brown as juveniles, and having white wing linings. A gradually whitening head and tail develop over several years before the birds display the familiar all white head and tail, and dark body and wings of adults. As is typical for a three-year old bird, the head of the bird at the right is mostly white, but retains some brown feathering, especially behind the eyes. Its tail is both brown and white. Its flight feathers and wing coverts still contain some white feathers, and will yet darken with additional molts. We have placed transmitters on nestling eagles in 2010, 2011, 2012, and 2013, and we invite you to vicariously experience their journeys with us at suttoncenter.org.



This 2010 photo shows two of these three nestlings from Sand Springs, Oklahoma wearing transmitters attached by Sutton biologists. One would later be photographed near Bixby in 2013 (see below).



This three-year old eagle wearing a Sutton satellite transmitter has been tracked on our website since 2010. Tracking data confirmed which of our marked eagles was photographed near Bixby, Oklahoma in March of this year.

## Grouse News....

## **Update on Lesser Prairie-Chicken efforts**

by Don H. Wolfe and Lena C. Larsson

As we have previously shared with our supporters in newsletters and on our website, we began a large-scale study on Lesser Prairie-Chickens (LPCH) in 1999. This was partially in response to various agencies and private individuals that had noticed a drastic range-wide decline in LPCH populations. This decline led to a petition submitted to the U.S. Fish and Wildlife Service in 1995 requesting consideration of the species as "Threatened" under the Endangered Species Act. The U.S. Fish and Wildlife Service issued a "Warranted but Precluded" status in 1998, meaning that LPCH would be a candidate species unless future evidence showed the population was recovering (in which case it would be removed), or the threats and population decline continued causing the status to be elevated to "Threatened" or "Endangered." In 2008, the candidate status was elevated to a "Level 2 Priority Ranking" status, acknowledging that the threats were continuing and that a listing decision for the species would have a higher priority than many other species' on the candidate list. In 2011, the U.S. Fish and Wildlife Service began the procedure of preparing a listing decision, and the recommendation was issued in November 2012 that the species be listed as "Threatened." A final decision was expected by this spring, but added rules resulted in delaying the final listing decision, now expected in March 2014.

Reverse and forward to our ongoing efforts. From 1999 until early 2010, we trapped and radio-tagged close to 1000 LPCHs. This effort has resulted in 2 Master's Degree theses, various reports and articles, and numerous peer-reviewed publications and presentations at scientific conferences. Also, our research findings have led to on-the-ground conservation efforts for this and several other related species. We ceased trapping and radio-tracking in early 2010, but our efforts with the species continued with extensive surveys throughout the entire range in Oklahoma, fence marking and removal efforts in Oklahoma and Texas, and consultation with various state and federal agencies to develop sound conservation plans.

Yet, the threats continue to build. In recent years, there has been a massive demand for harvesting of natural resources, including oil, natural gas, and wind power in the LPCH range. As we are writing this, a new Extra High Voltage (EHV) transmission line is being erected through the heart of the Oklahoma LPCH range, and wind power development, which has hit a bit of a slowdown in the past couple of years due to lack of transmission capacity, will undoubtedly increase when the new transmission lines are completed. Additionally, a High Voltage Direct Current (HVDC) transmission line is in the late planning stages. This is projected to go through current prairie-chicken range, and will carry power from the Oklahoma Panhandle to Memphis, TN, where it will then be distributed throughout much of the southeastern United States. While we know that transmission lines can hinder movement of LPCHs (see Pruett CL, Patten MA, Wolfe DH, 2009. Avoidance behavior of prairie grouse: implications for wind and energy development. Conservation Biology 23:1253-1259), we can only guess the full impact of the new transmission lines. The avoidance concern, as well as a need to further understand LPCH nutritional requirements and possible disease threats, has led to a cooperative research effort between the Sutton Center/University of Oklahoma and Oklahoma State University that is being funded by the Oklahoma Department of Wildlife Conservation. This spring has once again seen our field personnel on gobbling grounds in early mornings, trapping prairie-chickens, taking blood samples, and attaching radio transmitters, so that we can continue gathering important data that may be helpful in managing and assuring the long term presence of this icon of the prairie.



**BMSARC** file photo

Making and setting up traps is time consuming, but necessary for our data collection.



Lesser Prairie-Chickens fighting on the gobbling ground.



Wind power facilities are being erected across much of the Lesser Prairie-Chicken range. We are hoping to assess the impact of these facilities as well as of the accompanying transmission lines within the range of Lesser Prairie-Chickens.

## Fly Fishing Film Tour 2013

Story by Hillary A. Parkhurst, Photography by Dan L. Reinking



After the overwhelming response to last year's Fly Fishing Film Tour event, we didn't want to wait until fall for a chance to see the new films! The Fly Fishing Film Tour is "fly fishing's most anticipated annual event" according to Stonefly Magazine. The tour is a series of short films shot all over the world in some of the most desirable places to fish. Last year's tour was shown in 110 places across the nation, and this year those numbers are expected to grow quite substantially as the word gets out about how exciting the films are to watch. The Sutton Center, due in part to some of our board members, was able to bring the tour to Green Country again this May to benefit the Sutton Award scholarship program. This program benefits Oklahoma high school students grades 10-12 who submit an art and research project with a conservation theme.

Fly Fishing Film Project Chairs Kristopher Koepsel and Jerry Parkhurst, Sutton Board members, worked diligently to make sure this year's fundraising event would be a huge success; the event was held in honor of dear friend of the Sutton Center and avid fly fisherman, Gary Neal, who passed away earlier in the spring. Gary's vision was to bring these films to the Tulsa area and to create a fundraising opportunity out of them; the Sutton Center is truly grateful to have been selected as the recipient.

This year's event took place at Five Oaks Lodge located in Jenks. Randy Imel, owner of Five Oaks, donated the space and an incredible buffet for our guests to enjoy. Local vendors including the Gadget Company, Spring Valley Anglers, and Ascent donated items for a door prize give aways. The films were shown on two large screens in the main room. Even though the weather was cold and rainy outside, the crowd seemed to truly enjoy the evening at the lodge with great company and a warm fire.

We would like to give a special thank you to our sponsors for making this program possible. Their support of the Sutton Center is truly appreciated, and we were thrilled to provide this exciting opportunity for the Tulsa area! For more information about the Fly Fishing Film Tour, please visit their website at www.theF3T.com and for event pictures, please visit our Facebook page at http://www.facebook.com/#!/FlyFishingFilmTourTulsa/.

Sponsors included: Riggs Abney Neal Turpen Orbison & Lewis, Attorneys at Law, Gadget Company, Ascent, F&M Bank & Trust, Bank of Oklahoma, Spring Valley Anglers, Holmes Organisation, Old Village Wine & Spirits, Dr. George Kamp, Dena and Dr. Bob Hudson, Hesselbein Tire, Dr. and Mrs. Mike Eimen, Bob Austin, and the K. S. Adams Foundation.

## Sutton Center's BEST (<u>B</u>ald <u>E</u>agle <u>S</u>urvey <u>T</u>eam)

## by Kimberly A. Lobit and Lena C. Larsson

To witness our national symbol hatch from an egg a little larger than a tennis ball and then grow to nearly three feet tall with a wingspan of over six feet, is really fascinating! Through webcams and field surveys we are doing just that as we continue to monitor the success of the Sutton Center's first major project. To restore the southern bald eagle population, the Sutton Center released 275 captively reared bald eagles in Oklahoma, Mississippi, Alabama, Georgia, and North Carolina between 1985 and 1992. In 1991, bald eagle nests were again observed in Oklahoma. From zero bald eagle nests in Oklahoma in 1984 to well over 120 nests today is a huge leap, but we would not have these records if Sutton's founding Assistant Director, Alan Jenkins, (now retired) had not conducted annual surveys and checked on the nest reports over twenty years, by air, land, and water, to confirm eagle activities. With Alan's retirement, and eagle survey funds limited, our eagle nest inventories were scaled back in 2011 and 2012. Continued monitoring is very important though; the Bald and Golden Eagle Protection Act regulates that eagles may not be pursued, poisoned, injured, or disturbed. Consequently, we are consulted frequently regarding the presence of eagle nests relative to areas planned for development projects.

To the uninitiated, conducting searches for large nests over six feet wide and often placed in the top third of trees might seem like a simple task. However, it is anything but. Even from the air in a helicopter or airplane, or at ground level in boats or on foot, these nests can easily be missed, especially once the trees begin leafing out. The Sutton Center has been fortunate to have received help from nest monitoring volunteers, and they are called the "**BEST**" for the <u>Bald Eagle Survey Team</u>.

We frequently receive phone calls and e-mails about active and inactive nests, and we also have a page on our website where observations can be reported and pinpointed with the help of a Google Map. During the eagle breeding season, our volunteers take time out of their days to observe nests reported in their areas. If a new nest sighting is found and shared with us at the Sutton Center, a survey team member will scout out the nest to confirm that it is, in fact, an eagle nest and is active. Some bald eagle nests are reused from previous years, while others are newly built in existing or new territories. The **BEST** fills out a monitoring form to be sent to us at the end of the season. The monitoring form has been adapted from the Iowa Department of Natural Resources (IDNR) Volunteer Wildlife Monitoring Program. IDNR received a grant to produce a training video for citizen scientists to collect data on bald eagle nesting activity, and they are also working on standardizing bald eagle monitoring data collection. Their video "*Eagle Eyes: Working together for Bald Eagle Conservation*" can be viewed at http://vimeo.com/46365137.

The **BEST** collects important information for our records such as a nest description, timing and type of activity at the nest, how many eggs/chicks are in the nest, and whether raising of nestlings was successful. They are also gathering additional data regarding the quality of the nest and a description of the surrounding habitat. Most eagles choose their nesting territories distant from human activities, but some nests are located smack, dab in cities and right near highways.

Our **BEST** members are extremely devoted and passionate about eagles and our efforts to monitor them. These volunteers are scouting out nests because they enjoy it and can contribute, and we greatly appreciate their work. Without them, it would be hard for us to gather necessary data. 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 our nation's symbol, the bald eagle.



BEST team members, Betsy Stewart and Jan Duffy, checking the Turnpike nest on a beautiful sunny day!

**BEST** member, Judy Bryant: "Hi all, Wed: 4 eagles at Bayou Manard (2 adults, 2 half-grown chicks), Thurs: Leonard East: 2 adults, one in the nest. Judy's: 1 adult in the nest. Fri: Walked a half mile down a railroad track to view a new nest (named Marty's). 1 adult flying, one in the nest. Lynn Lane nest: 2 adults feeding young. Every nest is unique and beautiful. One of many reasons why I enjoy this so much! I don't know how the final survey numbers are going to come in, but I would say that in general, this season the eagles are doing fine. Luckily, we're getting lots of rain, and ponds are filling back up.



Sutton staff and BEST volunteers observing eagles. This photo shows a distant eagle in the sky (barely visible). Insert: Close up of the soaring eagle.

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## From Eaglet to Eagle

Sutton's eagle nest cameras provide Christie Malone's kindergarten class at Deep Rock Elementary School in Cushing, Oklahoma with an effective educational experience.

For the second year in a row, Christie Malone's class has observed the hatching, development, and growth of eaglets. Mrs. Malone assisted her youngsters in estimating the date that the eggs in Vian would hatch. A valuable on-the-spot learning lesson was provided when students asked why the eagles abandoned the nest. Possible reasons such as inadequate food and unsuitable weather were considered, which led into an in depth discussion regarding the long drought that Oklahoma has experienced and how it affects the local bird and animal inhabitants.

The Sooner Lake nest camera was very exciting for the class, even though the eaglets hatched over spring break. The students found that it took one egg a week longer to hatch so the eaglet was smaller than its siblings and was unable to survive. This experience led directly into discussions of stronger and bigger animals being better suited to compete for food.

Students were overheard enthusiastically using newly acquired vocabulary words in the correct context. What a thrill for the teacher! Some of these terms included "female, male, incubate, eaglet, and talons."

New knowledge was brought to life as kindergarteners learned that an eagle's beak must be quite sharp in order for the parent to tear the food for their eaglets. Students watched closely as eaglets in the nest were brought fish and coots. Classmates learned that a large female eagle can be over three feet tall, and to better comprehend the concept, students measured themselves and determined that an eagle can be as tall as some students in their class. The five and six year olds also found that an eagle's wingspan can be up to seven feet wide. In order to visualize firsthand exactly the span of seven feet, the students took it upon themselves to think of creative ways to illustrate this distance. They put together blocks, made a paper chain, linked paper clips, and joined pasta. Objects and tape measures were provided by the teacher, but students were the true authors of the plans.

Books, magazines, and the computer were utilized to provide information to the class, along with the opportunity to ask questions of the experts to gain information. Mrs. Malone's enthusiasm, research, and dedication for the eagle study have proven to be a hands-on educational experience that students will long remember. Mrs. Malone states, "This opportunity has been the best experience for the entire class. It has brought learning to life. How much more exciting for the students to actually be involved in the experience as it actually happens, rather than simply reading and watching videos about the subject. I have had the wonderful experience of utilizing higher level thinking skills and analytic questioning techniques to engage and monitor student learning. All was a great success! Currently the eagle questions have almost come to a halt, but we still watch. If a student asks another question, we head right back to our resources to find the answer. Thank you!"



## **New Babies**

### Story and Photography by Ryan A. VanZant

Three years ago the Sutton Center was lucky enough to acquire a pair of Southern Ground Hornbills (*Bucorvus ledbeateri*) from a private breeder in Florida. This species is very rarely bred in captivity and most of those breedings generally happen in zoos. For the past several years we have watched and waited for our birds to reproduce. The previous year we had two fertile eggs, but for reasons unknown to us, the eggs developed a bacterial infection inside and never hatched. This spring our luck changed. Our breeding pair laid 2 eggs in early March, and on April 13th the first hornbill ever hatched at the Sutton Center broke out of her egg, followed by her sister's egg 4 days later. These birds are growing extremely fast, gaining nearly 5 pounds in their first 30 days! We expect them to be fully grown (nearly 10 pounds) in the coming months, and we can't wait for them to become part of our education programs.

Southern Ground Hornbills are the largest species of hornbill in the world. They are found on the savannas of the southern half of Africa where they live in family groups. Their close cousin, the Abyssinian Ground Hornbill *(Bucorvus abyssinicus)*, is found on the savannas of northern Africa and has been a staple in our "It's All About Birds!" program since its inception. "Beaker" is a star performer and has educated over one hundred thousand people about grassland ecosystems since he came to live at the Sutton Center nearly 8 years ago. It has been a long wait to add the fun, excitement, and learning potential that these very impressive Southern Ground Hornbills will add to our programs.

Look to see these incredible birds in upcoming appearances for the Sutton Center and in "*It's All About Birds*!" starting in the fall!



## Save the Last Dance ...

As a sponsor of "Save the Last Dance" by Noppadol Paothong, the Sutton Center is proud to announce that the book has won a Gold Medal in the Mid-West Non-Fiction category of the 2013 Independent Publisher Book Awards. To celebrate this award, free shipping is being offered for the month of June. Don't miss out on this opportunity to own one of the best nature/photography books in its genre. Go to: http://www.savethelastdancebook.com/freeshipping



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#### Education Program/ Prairie-Chicken Study Prairie-Chicken Study Prairie-Chicken Study Prairie-Chicken Study Prairie-Chicken Study

