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The

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

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Undiscovered Country



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*Cover: An adult Bald Eagle (Inset) de-
fends her two young eagles. Photography
by M. Alan Jenkins.*

THE 2009 OKLAHOMA NESTING BALD EAGLE SEASON

Story and Photography by M. Alan Jenkins

The 2009 Oklahoma Bald Eagle nesting season is not yet over, but we wanted to tell you about the major milestone we passed, arbitrary though it might be. We—I keep typing “we,” but it was the eagles that accomplished this feat—exceeded 100 Bald Eagle nests in Oklahoma this year! We (the Sutton Center) cheated a little, but the results are encouraging, and very gratifying.

As usual, I started doing the nest censuses in January by joining U.S. Fish & Wildlife Service Regional Pilot, Jim Bredy, in his Partenavia from which he conducts his annual aerial waterfowl survey in the area of the Sequoyah National Wildlife Refuge near Vian, Oklahoma. Joining us was the sharp-eyed refuge manager, Jeff Haas. Jeff spotted nests Jim and I would have missed because we were looking for the same nests we have always seen, and because we were always on the lookout for powerlines and towers that might otherwise interrupt a pleasant day of flying. At the low survey altitudes we flew, there was also potential for a bird strike; so, Jim and I were craning (an unforgivable pun) our necks to spot birds in the air. Over the years, the waterfowl survey has expanded to include more and more areas of good Bald Eagle nesting habitat, so this type of survey is very efficient. In only 3 hours of flight time Jim can save me about 3 days of driving, walking, and kayaking to check nests. In addition to those methods of surveying, I also get phone calls from people who know about eagle nests and are willing to share those with me. Sometimes, however, the person calling mistakes a Red-tailed Hawk or Osprey nest for a Bald Eagle nest, but that is rare. I can sympathize with them because I am only human too. Jim and I saw a large nest new to us on the upper Illinois River that we labeled as an eagle nest, but when I traveled there in early May it contained two large Red-shouldered Hawk nestlings! Fortunately, for me, the nest was near a road, and I didn't have to kayak or hike to discover my error.

As you will remember, the Bald Eagle spent many years on the government's list of endangered species; in fact, its perilous status was a major reason and impetus for the Endangered Species Act. The U.S. Fish & Wildlife Service upgraded its status from endangered to threatened, and finally they took it off the list altogether. As part of this “delisting,” the Service is required to review the status of the Bald Eagle at least every 5 years for 20 years. This year, 2009, was the first 5-year review, so the surveys

I did were especially important—was the nesting eagle population holding its own, and was its delisting still justified? Those questions were asked nationwide, so Oklahoma's results were only part of the answer.

Now for my confession on the cheating part. Because of his diligent work, Kevin Stubbs with the Tulsa area office of the U.S. Fish and Wildlife Service, found some extra money to fund additional flights this year during the eagle incubation period, primarily the period of January through February. So, Jim, who was already passing through Oklahoma back to his base in Albuquerque, New Mexico, stopped and spent 8 hours with me one day flying parts of major rivers, excellent Bald Eagle nesting habitat, that I had never censused. We flew portions of the Arkansas, Verdgris, Grand/Neosho, and Illinois Rivers in northeastern Oklahoma. We found many “new” nests. Of course, we don't know that the nests are new, and it's unlikely that they were all new this year; they are new only in the sense that they are new to me. In wildlife census work it's not kosher to expand the count area and then claim the population is larger. So that's what my cheating amounts to—changing the survey method. This makes it less valid to compare with previous census results, so I won't do that explicitly; but I will state that the results are greater than previous years'. The expanded survey was part of the 5-year census review for the Endangered Species Act delisting process. Similar eagle surveys are being conducted nationwide.

The grand and amazing total of Oklahoma Bald Eagle nests we know for 2009 is 105! I have not been able to re-check all these nests after first finding them. Because most land in Oklahoma is private, I must find who the landowner is and get that person's permission to go onto the land. Remarkably (or maybe not considering the kindness of



Two Bald Eagles and their nearly fledged young.



Two adults perch near their nest in a tree situated in a pasture near Fort Gibson Reservoir.

Species Profile: American Woodcock

Story and Photography by Dan L. Reinking

Timberdoodle, night partridge, and bog sucker are a few of the colorful nicknames by which the American Woodcock (*Scolopax minor*) has been known. Beyond the apparent contradiction of a shorebird that lives in the woods, there are many interesting aspects to the woodcock's life and behavior. It is a migratory species, one of the first birds to move north in the spring, and one of the first migrants to begin nesting each year. It was once well known for its early spring courtship displays, although in today's hustle-bustle-indoor world, fewer people are probably familiar with this fascinating spring ritual. From the ground in a woodland clearing or open field at dusk and dawn, the male gives a series of vocalizations that are often described as buzzy “peents”, before flying upward in a spiral pattern. As he climbs, a twittering sound is produced by air flowing through his outer primary feathers (the flight feathers at the outer edges of his wings). He then dives rapidly in an erratic pattern while emitting a series of chirps before alighting near a female and repeating the entire sequence. Males often gather in loose clusters for display, and sometimes return to the same display areas in subsequent years.

The woodcock's anatomy is noteworthy as well. It has a chunky shape with a long bill and a very short neck. Its eyes are set far back on the sides of its head, so much so that it actually has binocular vision to the rear. While children may feel that their mother has eyes in the back of her head, the woodcock can literally see 360 degrees around itself, and straight up and down, all without turning its head. Its long bill is used to probe for earthworms in moist soil, and has a specialized, sensitive, flexible tip on the upper mandible that can be opened and closed independently of the rest of the bill. This allows it to locate and grab worms from deep within the soil.

The female woodcock makes her nest in a shallow depression among fallen leaves on the ground, and typically lays four eggs. The brown, black, gray, and tan earth-tone patterns of the woodcock's plumage provide excellent camouflage in forest leaf litter for both incubation and foraging. Females are sensitive to disturbance early in the incubation period, and may abandon a nest. If all goes well, the eggs typically hatch in three weeks, and the young leave the nest within hours. Unlike many other shorebirds which are able to feed themselves soon after hatching, young woodcocks must be fed by the female for the first week before learning to probe for food on their own. The young become independent about one month after hatching. Woodcocks are known to have lived up to eight years, but that is an unusually long lifespan. Predation, hunting, and droughts which can reduce earthworm abundance are all potential mortality sources, and habitat losses continue, although the overall woodcock population remains large.



Dressed in shades of brown, gray, and black, the American Woodcock's plumage provides excellent camouflage on the leaf-littered forest floor where it rests and forages.

Continued from page 2

most rural Oklahoma landowners), I have never been refused entry. Some landowners were reluctant to let me on their property because they want to protect the eagles; but, after explaining that all I wanted to do was to look at the nest through my trusty, and rusty, spotting scope, they acquiesced. But, some landowners are unreachable. This year we have had at least 2 weeks of solid rain and near flooding conditions; this has closed a couple of roads to me, and the high water has made me turn back from kayaking on the river a couple of times. A few times, even with a GPS unit, I was unable to find nests I saw from the air because the leaves obscured it so well. Some of these un-findable nests may also have fallen down in the high winds associated with the many thunderstorms we had. Lastly, some nests are so remote that I couldn't check them. It is more efficient to check nests that are concentrated together rather than drive all day there and all day back for data on a single nest in the panhandle. So, I am well armed with excuses.

In recap, the season so far, yields 105 nests I can document; of 102 nests I have checked, 69 were occupied by adults (67.6%), and 63 of 101 nests I checked (62.4%) were “active”, meaning they held eggs. Forty-two of 93 nests checked so far (44.2%) produced young eagles to near the fledging (flying) stage. Those 42 nests produced 63 young in total. The productivity data may increase as I finish my surveys. There are a couple of very late nests to check, and I am awaiting data from cooperators who watch some nests for me, but who haven't reported the results yet.

It has been a rewarding survey year, our 19th, both gratifying and exhausting! One can only wonder how many other undiscovered nests there might be in the state if only...

Unknown	635616
USA Educational	24746
United States	22759
Canada	10676
USA Government	7045
USA Military	2991
United Kingdom	2608
Netherlands	1900
Australia	1180
Germany	732
Hungary	727
Tuvalu	673
Portugal	721
Denmark	391
Mexico	308
Czech Republic	272
Switzerland	259
France	249
Poland	205
Japan	186
Sweden	163
New Zealand	165
Ireland	181
Belgium	165
Cocos (Keeling) Islands	170
Argentina	132
Italy	149
Finland	120
Singapore	96
Norway	92
Brazil	57
Austria	40
South Africa	67
Estonia	41
Romania	20
Bermuda	34
India	29
Turkey	25
Costa Rica	20
Israel	21
Samoa Islands	25
Russian Federation	15
Iceland	18
Greece	13
Peru	14
Spain	11
Indonesia	13
Thailand	11
Lithuania	8
Croatia	12
China	7
Cayman Islands	7
Uruguay	8
Trinidad and Tobago	8
Turks and Caicos Islands	4
Nepal	3
Dominican Republic	4
Bahamas	4
Yugoslavia	4
Aruba	5
Netherlands Antilles	5
Venezuela	5
Morocco	3
Macedonia	4
United Arab Emirates	4

2009 BALD EAGLE NEST CAMERA PROJECT

by M. Alan Jenkins
Webcam Photography

**We would like to express our sincere thanks to our sponsors, without whom this project would not have been possible; OG&E, Atlas Computers, Inasmuch Foundation, NatureWorks, Newfield Foundation, OneNet, U.S. Fish and Wildlife Service, The Anne and Henry Zarrow Foundation, The John Steele Zink Foundation and the Oklahoma Biological Survey at the University of Oklahoma's College of Arts and Sciences.*

We hope you have been able to follow the events of the 2009 Bald Eagle nest camera project, if only so that you don't feel lonely; all the rest of the world seems to be online and watching the intimate events of the Sooner Lake Bald Eagle nest. As you can see from the table of statistics (right), we have had over 3.75 million hits this year on the nest cam site, so far.

And, while most of the visitors are from the U. S., we have had visitors from MANY countries, some very obscure; unless you are a stamp collector or a geography whiz, for example, you might never have heard of places such as Tuvalu. The table at left lists the hits that can be attributed to specific countries around the world.

We had the same problems (mainly HARD work) getting new cameras up on the nest platform this year too, but several visits later we had two new nest-mounted cameras and a repaired (thank you, Atlas Computers) pole-mounted camera ready to go. While doing this work, a new wrinkle appeared when we saw the cable which connects the nest-mounted camera to the power source. If you remember, last year the nest camera went out; we hypothesized a possible lightning strike, and we were left with only the pole-mounted camera for video. Because of that, we never knew if more than two eggs of the historic 4-egg clutch hatched, and we missed many hours of the early life of the two eaglets which later fledged because to be visible they had to grow large enough to be seen over the rim of the nest. Back to the cable—it had been severely chewed into many pieces. Beavers were our prime suspects owing to the fact that the chewed part of the cable was un-

Month	Number of hits
March 2009	676,708
April 2009	523,964
May 2009	228,994
June 2009	2,224,963
Through July 6	130,393

Weather and equipment problems in May reduced viewership numbers temporarily, but we are thrilled to report nearly four million hits on our eagle nest camera website this season. Soon the eagles will leave the nest area, giving us a chance to repair equipment for next year.



Continued from page 4

derwater. To avoid that this year, we strung the cable through the air and over the water. If beavers want to sharpen their incisors on our cable this year, they will have to fly!

This year we used a wireless radio to send the camera's video signal to the nearby pole where it was then radioed to OG&E's Sooner Lake Powerplant and then on to the internet via OneNet's system. The cameras worked better this year, but not perfectly. One time the eaglet, flapping her wings, hit one of the cameras and knocked it cockeyed. It ended up aimed so that it couldn't show a decent view of the whole nest surface, so we turned that camera off the internet and relied on our back-up nest camera. Additionally, that camera is at the limit of distance to which we can send power, so it sometimes has to be restarted and is very touchy.



An eagle "scrapbook" if you will. These photos document the life of the eaglet from hatchling to fledgling. Note the "eagle deli" provided by the male in the top picture.



We first saw Bald Eagles on the nest via the cameras on 16 January this year, although they probably had been there off and on all along. The adults spent their time repairing the nest and making it larger. Increasingly, the adults spent more time on the nest sitting in the incubation posture, until February 6th, when we spotted the first egg. The first egg for this pair, but of all the Oklahoma eagles that I checked this year, they were the last pair to initiate egg laying. Subsequently, two eggs were laid on the 9th and 13th of February, a hoped for 4th egg never materialized—maybe next year.

Meanwhile, public interest in the Sooner Lake eagle cameras increased; two local TV stations asked to carry a link to our video as did a station in Oklahoma City. One station was showing the eagle video on a website while also broadcasting video of a pair of nesting Red-tailed Hawks that were squatting in front of their weather video camera on a tower in suburban Tulsa. The interest in that nest added to the total viewers who were watching our nest camera. That TV station's website also carried a live chat session; now THAT was interesting! People who had never viewed the details of Bald Eagle nesting behavior would fill in the details for themselves. Those are usually based on human motivations and behaviors and not necessarily avian ones. This meant there was a great opportunity to teach. Various SARC employees would be online and inform the viewers what was going on in biological terms. For example, the fact is that the male's role is to be away from the nest to catch food and bring it there, and it is not to be at the nest to keep the female company. Viewers now know more about how eagles conduct their lives. The video also generated many e-mails here asking why the eaglet was dead/injured/missing when it wasn't dead/missing/injured, but only awkward acting (in human terms) or sleeping. A community was formed around the nest camera video.

A major phenomenon the viewers saw was when the first egg hatched, and the male stocked the nest with up to six prey items stacked around the larder on the nest edge, an "eagle deli." The total weight of



Our national symbol, the Bald Eagle, and our state bird, the Scissor-tailed Flycatcher coexist comfortably in the Oklahoma prairie. The eagle looking for fish in the lake and the Scissor-tail attracted by the insects drawn to the eagle nest.

Steve Sherrod

Continued on page 5

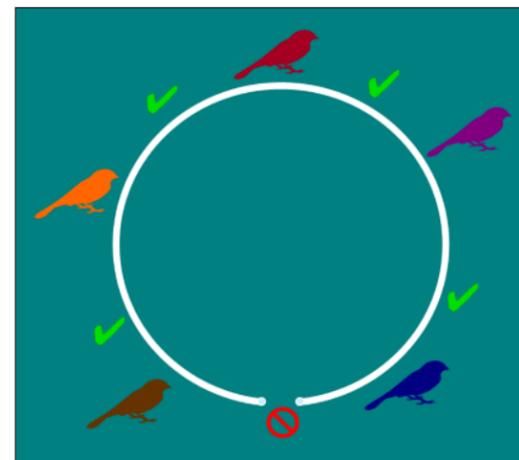
Continued on page 7

Der Rassenkreis

by Michael A. Patten

In 1929 the German ornithologist Bernhard Rensch coined the word rassenkreis to describe a phenomenon long recognized but as yet unnamed. A literal translation of the term is “race circle,” but this phrase conveys little information, and it needlessly conflates the terms race and subspecies, a real problem for scientific communication (Patten 2009, *Nature* 457:147). Therefore, as with words like *zugenruhe* (migratory restlessness) or *schadenfreude* (taking pleasure in the suffering of others), the German often has been used in place of the clumsier English translation. That said, a perfectly serviceable English term—the “ring species”—has been used repeatedly and has gained much traction in the scientific literature.

Regardless of which word we choose, perhaps appealing to a personal innate penchant for the cosmopolitan (thus rassenkreis) or the Anglophilic (thus ring species), the phenomenon itself is both of great interest and of great importance to our understanding of organic evolution. But before defining the term let us take a quick aside to review what a subspecies is. Subspecies are “diagnosable clusters of populations of biological species occupying distinct geographic ranges” (Patten and Unitt 2002, *Auk* 119:26–35). Subspecies of a given species typically are arranged rather haphazardly with respect to one another, and where subspecies ranges meet it is expected that these subspecies will interbreed (if they did not, most biologists would treat the taxa as species rather than as subspecies). Boundaries between subspecies often correspond to a geographic feature such as a river or mountain range, but the spread of subspecies across the full geographic range of the species almost always exhibits no discernable pattern.



A ring species, by contrast, is a single polytypic species—a species comprised of multiple subspecies rather than one—whose connected geographic ranges form a circle or ring. This definition means that there is a pattern to how the subspecies are arranged relative to one another, but in and of itself it may seem uninteresting or unimportant, for as with the more “standard” situation described above the subspecies interbreed where ranges meet . . . with a critical and perhaps surprising exception: another key element in the definition is that subspecies at opposite ends of the ring behave as if they were good biological species. They do not interbreed where their ranges meet, meaning if biologists knew only of these two taxa then they would not hesitate to claim that two species occurred in the region! However, this cannot be so because as one moves in either direction around the ring it becomes clear that subspecies connecting the endpoints grade into each other in a continuous set of intermediate (and interbreeding) forms (see the figure).

I hope all readers thus far find a ring species to be an exceedingly interesting phenomenon. Yet its importance to evolutionary theory likely exceeds mere interest. The pattern of geographic variation observed in ring species, coupled with the cessation of gene flow at the endpoints, demonstrates clearly that within-species variation can be great enough to lead to the origin of species. Put another way, we should not be making a distinction between differences among individuals and differences among populations and differences among species. All such differences likely arose by means of microevolutionary divergence; the extent of difference is only a matter of degree.

Lest this ring species concept seem little more than an academic argument or a theoretical construct, we need to bear in mind that ring species have been documented or claimed in various species of mice, salamanders, millipedes, butterflies, and trees. Moreover, a number of species of birds have been said to be ring species (Mayr 1940, *American Naturalist* 74:249–278), although many of these examples have been disputed or are ill supported (Irwin and Irwin 2002, *Auk* 119:596–602; Liebers et al. 2004, *Proceedings of the Royal Society of London B* 271:893–901; Päckert et al. 2005, *Biological Journal of the Linnean Society* 86:153–174). That said, a solid example among birds can be found in the Greenish Warbler (*Phylloscopus trochiloides*) complex of eastern Asia (Irwin et al. 2001, *Nature* 409:333–337), and another ring species was documented recently in the Crimson Rosella (*Platycercus elegans*) complex of eastern Australia (Joseph et al. 2008, *Proceedings of the Royal Society B* 275:2431–2440).

But we need not look to exotic lands so far afield. Our extensive analysis of patterns of geographic variation in the Song Sparrow (*Melospiza melodia*) across the whole of its range—most of North America—culminated in a detailed description of a species ring in the Southwest (Patten and Pruett 2009, *Systematics and Biodiversity* 7:33–62), which built upon multifarious evidence that subspecies at the endpoints behave as biological species where their ranges meet (Patten et al. 2004, *Evolution* 58:2144–2155). That a ring species could be discovered in so familiar a bird in so well-studied a country underscores the value of careful field research in “our own backyard.” What additional striking discoveries await?

Nest Camera Project (Continued from page 5)

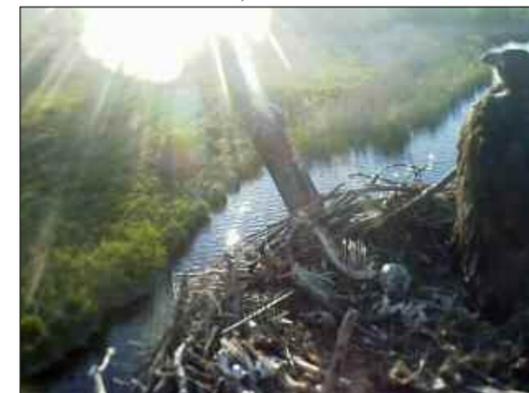
all the prey at once was many times more than the 3 ounce newly hatched eaglet. The main food item in the beginning of the nestling period was a plump marsh bird called an America Coot (*Fulica americana*) but later, as the coots migrated from Sooner Lake, or became scarce as they sneaked into the cattails to breed, the eagles began catching fish almost exclusively.

Two of the eggs didn’t hatch, and based on its time of hatching, the one that did probably was the last one laid. One common e-mail question was, “What will happen to the unhatched egg.” We didn’t know. I guessed it would be broken when the hatched eagle got larger and trampled it, or it might become buried under the nest lining and debris. Then a very strange thing happened, the video clearly showed that one of the unhatched eggs became stuck to the breast plumage of the adult female, and when she flew from the nest, it went with her, still stuck, but only for a while. The video showed the frame where the egg became free of her feathers and fell away to almost certainly end in the lake. Learning such things is an interesting sidebar from the nest camera project.

The other egg, whimsically named “Egbert” by some of the viewers, was left in the middle of the nest and was on the verge of being covered over with nest lining when for some reason it came loose and ended up on the nest edge. At 17 weeks old, the egg was surely completely desiccated and lacking moisture. Then, when an adult brought in food once in early June, and it was charged by the hungry and overly enthusiastic eaglet, the egg got broken.



Above: The sun rises behind the roosting eagles. **Below:** Dusk envelops the eaglet at Sooner Lake north of Stillwater, OK.



Personally, I enjoyed working the controls for the cameras, especially the pole-mounted camera with zoom capability. I was able to zoom in/out, and to pan the camera to see interesting features of the area, as well as finding a view of the adults when they were not on the nest. There were some very magical scenes to record such as mornings with water vapor rising from the water’s surface during a windless dawn; there were nights during full moons that allowed a view of the eagles on the nest in the pale light; and then there were the sudden and instant flash views of eagles brooding their youngsters at night illuminated by lightning bolts (both scary and fascinating); also visible were views of the Scissor-tailed Flycatcher that perched under the nest and

took advantage of shade and the abundance of insects drawn to the eagle nest; then again there was the narrow beam of the sun’s blasting rays setting behind the edge of a perched eagle.

On June 9th, at 11.5 weeks of age, the eaglet ‘branched’ to the crossbar on the nest platform, which is to say that she jumped/flew to the crossbar and fledging was imminent. She continued to gain strength by flapping her wings. Then, on June 16, suddenly the young bird took off toward the shore. What remains for her to do is to be fed by the adults while she matures and learns how to catch her own meals, which may take a month or more. After the birds leave the nest area and the young eagle is independent, we will go there and take down the old cameras and repair or replace them for next year. We hope you will be there to watch.



“When it was obvious that the dead tree (in Sooner Lake in which the initial nest was placed by the eagles) was rotting and about to fall over, Alan Jenkins provided information to OGE about artificial nest structure designs for eagles that have been used successfully elsewhere, and OGE constructed the pole tower in order to give the birds another alternative for nest placement. Within two years, the original nest with the dead tree fell into the water. The food source for nesting eagles is very good there, and no other good trees worthy of nest use by the eagles were present. In other words, a stable nest site was the limiting factor. This is one of the most successful eagle nests in Oklahoma and has fledged 25 young in its 13 year history.”

Steve K. Sherrod



Left to Right: Steve Trent, Mike Morrow, H.E. Mohammed Al Bowardi, and Steve Sherrod dining at the Emirates Center for Wildlife Propagation, Missouri, Morocco.

Prairie-Chicken Breeding, USA

The Attwater's Prairie-Chicken (APCH) is the most endangered avian species in North America. While it has been considered by most to be a subspecies of Greater Prairie-Chicken (GPCH), recent genetics work by Dr. Jeff Johnson suggests Attwater's probably qualifies for status as a separate species. At least, Dr. Johnson's analyses suggest that there is as much difference between APCH and GPCH as there is between GPCH and Lesser Prairie-Chicken (LPCH). Efforts to re-establish self-sustaining populations of APCH in the coastal plains of its native Texas have taken place over the last 20 plus years. Such efforts have met with significant difficulties as this is certainly not a simple situation nor are those difficulties the focus of this article; and, relatively little funding has been afforded the effort up to this point. About 60 birds, plus or minus, make up the wild population that resides primarily on the Attwater's Prairie-Chicken National Wildlife Refuge near Sealy, and this population is supplemented each year by captive bred offspring produced in several facilities. Fossil Rim Wildlife Center has led the way in captive production of close to 300 birds last year, about 150 or so being released, followed by Houston Zoo, and other facilities including Abilene Zoo, San Antonio Zoo, Caldwell Zoo, and Sea World of Texas. An extensive genetics stud book must be kept on the captive-breeding remnant population and many of the offspring must be retained each year for future breeding stock. Survival of the young that make up broods produced in the wild is a significant problem currently under study. Producing enough young in captivity to "flood" the appropriate wild habitat with released poults as well as keeping plenty of potential breeders of the appropriate genetic variability in captivity is a parallel challenge.

In order to supplement the current APCH captive breeding efforts, it has been proposed by USFWS and the APCH Recovery Team that the Sutton Research Center build a dedicated breeding facility for this species between Tulsa and Bartlesville on private land belonging to the Little Ranch. Jean Little, who runs the ranch, is not only a rancher but a dedicated conservationist as well, and she has agreed to provide a lease that will allow construction of such a facility on 6 acres of her property.

Identifying the funds to build such a facility is currently in progress by various parties including National Fish and Wildlife Foundation and USFWS. But prior to undertaking such a project, and in order to review and inspect the most advanced captive bird breeding facility in the world, we were invited by my friend of over 20 years, His Excellency Mohammed Al Bowardi, Secretary General of the Executive Counsel, Abu Dhabi, to visit Emirates Center for Wildlife Propagation located in Missouri, Morocco. Mr. Bowardi invited not only me, but also Dr. Mike Morrow, Attwater's Prairie-Chicken biologist at the APC Refuge, Dr. John Toepfer of the Society for Tympanuchus cupido pinnatus, and Steve Trent, Sutton's construction foreman for the yet to be built, APC breeding facility.

For many North Americans, an immediate question might be "what is the Houbara Bustard (*Chlamydotis undulata*)?" Well, it is in some ways the ecological counterpart to our Sage-Grouse. It is a large, long-legged, -necked, and -winged (approximately

Left: Our party tours small section of the houbara breeding enclosures. **Center:** This is just a small part of the meal worm breeding facility. **Right:** An enclosure for raising Houbara for release.



Story and Photography by Steve K. Sherrod



Hawking Party in Moroccan desert. Left to Right: Steve Trent, Dr. John Toepfer, H.E. Mohammed Al Bowardi, Dr. Fred LaCroix and son, John Seabury, Dr. Mike Morrow, General Faris Al Mazourie, Dr. Yves Ingrat.

much the facility had grown since my last visit there with Dr. Ken Riddle in 1997. Dr. Fred LaCroix, Director, welcomed us, and we were educated during the following week by Dr. Yves Ingrat, Gwen Leveque, and Eric Lenuz. Utmost care was taken to guard against contamination by diseases such as coccidiosis, and even our vehicle went through a "tire bath" when it crossed the gate. In every part of the facility we entered an anteroom where we were required to don a lab coat and sandals before going through foot baths.

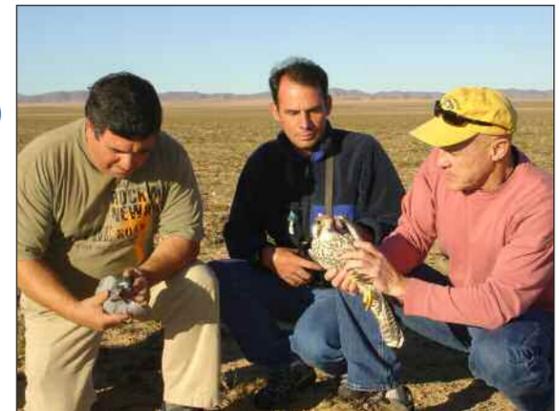
To describe the facility in detail would occupy an entire book, but it is safe to say that it is both professional and impressive as are the results being obtained at it. Raising and training houbara for breeders, that are imprinted on people, has become the most successful method of breeding production from this bird. It lays a normal clutch of 2-3 eggs but that can be extended to successive egg production of as many as 20 per female. Artificial insemination is used to fertilize the eggs. There are massive cricket and meal worm production facilities that measure their nutritious, monthly production in tons. This one facility is producing over 10,000 young per year, and in excess of 70% of the released females survive and reproduce in the wild. Seabury told me during our last conversation that they were getting 400 eggs/day out of the facility's breeding females, a thought that terrifies me when thinking about the responsibility of weighing and incubating so many daily! While the number of wild houbara is estimated to be 50,000-60,000, the world population will be increasing significantly. There are plans to build five more, houbara breeding facilities in areas of Asia and Africa.

We were invited to travel into the desert and watch the trained falcons hunt both sand grouse and houbara. None of the former were taken, but bands on the legs of the houbara revealed that the birds that were captured by the trained gyrfalcons had been living in the wild and reproducing there for 3 years, a confirmation of the successful survival of the captive bred bustards from the project. Of course there are vast areas where no hunting of any kind is permitted, and hunting seasons and limits have also been established so that houbara can have a safe haven both geographically and temporally. This scenario is not unlike what happened in the USA during the last century with hunting and North American waterfowl. Overall, our party learned a great deal during our visit that can be applied to the APCH recovery effort, and our hosts could not have been more hospitable. Even though all our bags were lost for the entire week we were there (later recovered) which made things somewhat inconvenient, none of us would have changed a thing. It was a great trip!

Houbara Bustard Breeding, Morocco

3kg or more males), omnivorous bird of the North African, Middle Eastern, and Western Asian scrub deserts classified in its own family, Otidae. Their relatively small feet with only three front toes fascinate me as they are plumply padded, much like an elephant's. They occupy expanded leks and display impressively with flared feathers when courting. Considered endangered from habitat degradation and over-hunting, these birds are the subject of very extensive captive breeding and reintroduction efforts by the Emirates Center for Wildlife Propagation of Abu Dhabi and other interested parties. They are a primary prey species for falconers in the Arab world, and it is this same group of hunters who have spearheaded the recovery efforts.

Our trip took place from November 6 to 14. Arriving in Casa Blanca and driving some 5 hours to the wildlife propagation facility, we were met and were initially escorted by my friend John Seabury who hails originally from Montana. I was amazed at how



A trapped wild Lanner Falcon just before release. Left to Right: Juan Jose Cano Mora, John Seabury, Steve Sherrod.



Above: A wild Houbara Bustard. **Below:** A mounted courting Houbara.



Sutton/NatureWorks Awards:

by Margie T. Nolan



From left to right: Margie Nolan, Sutton Center, poses with award winners Nahee Kim, Stacy Rutherford, John Powell, and Cara Berberet at the NatureWorks Art Show. David Nunneley representing NatureWorks is on the far right.

This is my third year reporting on the success of the Sutton Awards. By now, you probably have a pretty good idea of how I feel about this project; it is one of my favorites here at the Sutton Center. I have a great time working with our partners at NatureWorks, especially David Nunneley, and our other sponsors. I enjoy my contact with the teachers, some new and some now familiar, who are so dedicated in their support of their students. And I am so impressed by the range of talent and the quality of ideas shown in the entries. Most of all, I love meeting the students! They are some of the brightest, most talented and inventive kids in the state, and they have creative and beautiful ways of communicating current conservation issues!

This year, I'm pleased to offer the views of two other participants in the Sutton Awards 2009. Cara Berberet is a senior at Union High School and our first place winner of \$3000. Jean Little, of Frisco Title as well as the Board of Directors of the Sutton Center, was one of our panel of four judges (other judges were David Nunneley, NatureWorks; Tom Sears, Sutton Board; and Steve Sherrod, Sutton Center Director). Jean is also an artist in her own right.

There were 78 entries this year, up from 46 last year! These entries came from 20 schools and 2 home schools from around the state. With the generous help of NatureWorks, AEP/PSO, Riggs Abney Law Firm, we gave \$15,000 to 16 students and 4 teachers. The winners' work was displayed at the NatureWorks Art Show and Sale with that of professional artists from all over the country.

Cara Berberet:: Student and First Place Winner

"I first heard about the Sutton Award through Mrs. Hulsey, Union High School's fine arts instructor. The information she relayed served to attract the attention of many of the students.

The Sutton Award's broad range of media categories, wide-open window for subject matter, and the simple fact that it is geared toward area high school students made it undeniably attractive. Moreover, the prospect of financial assistance was a shining beacon to those of us just beginning to navigate the sea of college education. I began to consider and develop ideas for my project. I researched conservation projects in hopes of finding one I was both familiar with and interested in. I quite quickly found and centered on projects related to the tallgrass prairie



Above: "Wetland and Waterfowl", Second Place: John Powell (Contreras Art Institute)



Above: "Trumpeter Swan", Third Place: Nahee Kim (Victory Christian School).



Above: "Melancholy", Fourth Place: Stacy Rutherford (Inola H.S.). Right: "Birds of the Tallgrass Prairie", First Place: Cara Berberet (Union H.S.).

Different Perspectives

Photography by Dan L. Reinking

Continued from page 10

due to the prairie's nature as the foundation of my own ecosystem. I chose to focus on the preservation of the birds of the tallgrass prairie due to both my personal interest and the context of the competition I was entering. My final work coalesced into an extended rectangle depicting two figures, the prairie, and seven birds—all natives of the prairie—in transparent watercolors, ink, and white acrylic on illustration board.

Now I get to talk about the show and how truly honored I was to be allowed to partake in the NatureWorks event. This program was, with all sincerity, an experience I will always treasure. I met so many kind, encouraging, funny, dedicated, happy, and astoundingly talented individuals. I was very privileged to have exhibited works with and met Nahee Kim, Stacy Rutherford, and John Powell, all of whom are brilliant and gifted artists. I was shocked to have placed amongst them and am grateful for the chance to consider them my artistic peers. I was floored to be able to see, on such a personal level, the works of the professional artists in the NatureWorks show, and in them found a source of both motivation and new goals to strive for. I am indebted to NatureWorks, the Sutton Center, and Margie Nolan, and would like to thank all those who participated for the incalculably positive impact this experience has had on my life, ambitions, and future."

Jean Little: Artist and Sutton Board Member

"I am fortunate to serve on the board of the Sutton Center whose primary purpose of preserving birds, wildlife and habitat is one about which I care deeply. Their involvement in the wildlife art show, NatureWorks, supports another objective I believe is important to the health and welfare of our society—the fostering of knowledge and passion for artistic expression in young people. I was pleased to act as one of the judges in the student scholarship competition.



Students from around the state were invited to submit works of art in several categories. The work was to have a wildlife or conservation theme and each piece was accompanied by an essay explaining the impetus for the work. The entries were judged first according to their visual appeal. We then read the accompanying essays in order to narrow the selections. Essays that conveyed a clear vision of what the artist was trying to convey were the most influential. At the end of the day all the judges had come up with similar results. I particularly loved the piece awarded first place, which was young girls looking out over the prairie watching a ribbon of various prairie birds flying off into the distance.

My hope is that by supporting young people in developing their artistic vision, we are also supporting the development of wisdom and depth in our society. As Robert Henri, a favorite artist of mine, 1865-1929, said "There are moments in our lives, there are moments in a day, when we seem to see beyond the usual. Such are the moments of our greatest happiness. Such are the moments of our greatest wisdom. If one could but recall his vision by some sort of sign. It was in this hope that the arts were invented. Sign posts on the way to what may be. Sign posts toward greater knowledge."

* Additional Honorable Mentions: Clint Shoemake (Bartlesville H.S.); Kyle Ressel (Comanche H.S.); Michael Frost (East Central H.S.); Eziquia Perez (East Central H.S.); Alex Ratcliff (Metro Christian Academy).



Above: "Get the Idea", Honorable Mention: Kortney Meek (Broken Bow H.S.).



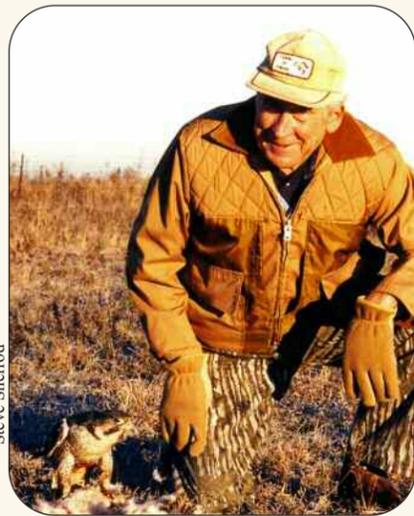
Above: "Strength and Grace", Honorable Mention: Joon Bum Lee (Victory Christian School).



Above: "Organic Gardening", Honorable Mention: Zia Bowles (home schooled).

Sutton Center Loses Good Friend

by Steve K. Sherrod



Steve Sherrod

Howard Burman with a falcon in an Oklahoma field.

Howard Richard Burman was born November 30, 1921, in Waverly, Iowa, where he grew up on a farm. I guess Howard's country beginnings were what caused him to be so captivated by the natural world, and he was indeed. In particular, Howard loved eagles, both as a patriotic symbol and as a fascinating bird of prey found throughout North America. But he loved other creatures as well, and when we would meet by chance, Howard would always call me over to the side with a twinkle in his eye and ask me to verify a little-known fact he had heard about some special creature. Usually, he was just testing me, but sometimes he would offer something completely new, at least, to me. Then he would always ask, "Steve, how are the eagles doing?"

He and his wonderful wife Billye were always the perfect couple, always interested, and always a great addition to any affair whether the finest cocktail party or out on the ranch. Howard had a "can do" spirit, and no matter what was happening in his life, if you asked him how things were going, his reply would be "doin' fine." The po-

sition from which he retired at Phillips Petroleum was supervisor of worldwide construction for the company. He joined the Sutton Board of Directors in October of '85 and served on Sutton's Buildings and Grounds Committee and on the Finance and Audit Committee. The first thing he wanted to do was to go with us to Florida in the motor home we used to collect eagle eggs. Howard wanted to help. This was a major job that required driving a thousand miles one way and extremely high stress once the egg collection began. Included were keeping the temperatures in the incubators within one-half degree F and turning the eggs every four hours—that meant all night long. Howard was there to take his turn whether driving or running incubators no matter what time of night, and he never offered a single complaint. I remember asking him if he was awake and feeling OK, and his reply was "doin' fine." And, no matter how tired, he was full of fun and jokes on the way home, too.

Howard went out to fly falcons with me several times and always wanted to go again. We were bow hunting buddies for turkeys as well, and I never tired of going out with Howard. We would walk and walk, as quietly as possible, before finding our spot. After a long morning that started a couple of hours prior to sunrise, Howard would creak and groan a bit when he got up from hiding in camouflage; but, when I asked him if he was hurting, he would always say, "doin' fine."

Howard and Billye have three sons, Richard and Roger in Texas, and James in California. With seven grandchildren and four great grandchildren, Billye has a lot to look after. Howard fought a brave battle before succumbing to cancer on October 28, 2008. I called him about two weeks before he lost this fight, just to check on him. I commented that it had been a while since we had last talked and asked him if he was doing OK? As usual, with a sparkle in his voice, Howard answered, "doin' fine."

Billye has since moved out of the beautiful house that Howard and she occupied for many recent years and into another location with more company. When I called her to verify some dates for this article, we talked a bit about some good memories with Howard, and then I asked her if she was OK. Her reply was, "Steve, doin' fine."

The Sutton Education Program goes "Greener"

by Ryan A. VanZant

Our education staff will be driving around more efficiently these days in the Sutton Center's newest vehicle, a 2009 Ford Escape Hybrid SUV. The large bird show van does our heavy hauling, but we needed something a little lighter duty and more efficient for some of our smaller programs and events to which we take our birds. The Ford Escape is the perfect solution. The Escape is a smaller SUV that comfortably fits 5 adults with several birds and gets good gas mileage for a 4WD vehicle in its class. The 2.5L 4 cylinder engine gets an estimated 29 mpg in the city and 27 mpg on the highway and meets the stringent Super Ultra Low Emission Vehicle and Advanced Technology Partial Zero Emissions Vehicle standards that are far better for the environment. Of course, it has been a rather confusing time economically as far as both brands and dealers go since we were not sure what would be in place tomorrow. So we took longer than normal to decide on exactly

Continued on page 13

Getting by with a little help from our friends...

Story and Photography by Jennifer N. Charles

Every year we try to reach out to schools in new areas of our state with our free flighted, educational, bird show, *It's All About Birds!* This past semester, our focus was on the central part of Oklahoma. Getting into the Oklahoma City area gave us the opportunity to reach many more students with our message of conservation.

Because the capital area was in many ways less familiar with the Bartlesville program—and as a result, the Sutton Center than Green Country has been, we have had to work harder to get our presentations into the region. Of course, it has also proven to be harder when schools are responsible for providing housing in which our birds can be maintained so far from home.

This year we caught a break! Thanks to the many "friends" of the Sutton Center, we were able to schedule a successful first series of shows in the Oklahoma City area. A fellow employee of OU at the Oklahoma Biological Survey, Dr. Jeff Kelly, generously offered to share his research facility on the Norman campus with us and our birds. We took over his small facility for a month with our large travel cages. I'm not sure he knew initially just what he was getting himself into, but he and Eli Bridge, a post doctoral research associate, were great sports. Jeff even put us in contact with his children's middle school in Norman, and hopefully next year we will be able to schedule a show there!

With a place to keep the birds out of the way, scheduling schools began to snowball. Former Sutton intern, Elizabeth Maupin, came through time and time again. She not only helped us set up for shows (no small feat!) and take care of the birds between her classes at OU, but she also recommended our program to her former middle school science teacher, Dan O'Hallorand, at Central Junior High in Moore, OK. Thomas Maupin, Elizabeth's dad, works for *The Oklahoman*, and he and photojournalist Steve Gooch attended our Moore show taking pictures that were published in the local paper!

The intern working for us during this time was Kathryn Turner. Growing up, she attended Putnam City Schools in the Oklahoma City area. She helped us contact one of her former teachers who is now the principal at Western Oaks Middle School in the school district. Kathryn's parents showed up to help us set up our backdrop and also came the day of the show to help tear down.

Our other two shows in the area were at Elgin Middle School southwest of Norman and at Summit Middle School in Edmond. We received positive feedback from each of our shows and were able to reach nearly 3,000 students during our trips!

Many other schools contacted us once we were in the area, however, Jeff and Eli's research was picking up, so we decided to get out of their way and head home. Staying in hotels and traveling from Bartlesville to Norman and back every week for a month was definitely exhausting, but we are very pleased with how things turned out. Hopefully, the enthusiasm from these schools will remain high, the word will spread, and we will be able to return next year with another full schedule.

We want to extend our gratitude to Dr. Jeff Kelly, Eli Bridge, OU, OBS, the Maupin family, the Turner family, and Steve Gooch.



The travel cages were generously housed by Jeff Kelly inside his research facility at OU while a makeshift weathering yard was set up outside the building.

Continued from page 12

which vehicle to choose. Our final choice came from Doenges Ford-Toyota in Bartlesville, and we are especially grateful to the H.A. and Mary K. Chapman Chairtable Trust, Founders and Associates, the Newfield Foundation, and the Silas Foundation for the funding to help make more efficient travel possible for our education staff. Watch for us driving a little greener to our future education programs around Oklahoma!

Right: Jennifer Charles proudly poses with Elbie, the Red-Shouldered Hawk. This Ford Escape is much more convenient for smaller shows and talks than our cargo van.



Dan Reinking



Sutton Picnic 2009

by Steve K. Sherrod

May 31, 2009, marked the end of the month, the closing of Spring, and a near approach of Summer. It was also a beautifully sunny day on which we held the annual Sutton picnic to thank many of those who have helped support the Sutton Avian Research Center. Unlike in many years during which we had to keep watching the sky over our shoulders, hoping it would not rain, this special Saturday was perfect with blue skies and pleasantly warm temperatures.

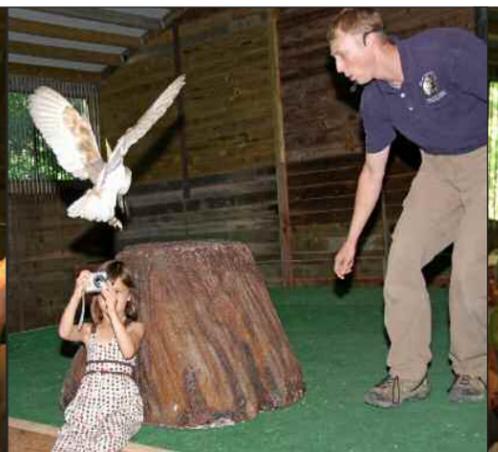
Margie Nolan and Dan Reinking helped line up Sutton employees and volunteers including the generous Canady family, and, along with a little help from our friend, Greg Stipp of OKC, worked together on the grounds for a couple of weeks as well as prepared the menu for all to enjoy. As has happened so often in the past, additional volunteers (Donna DeSimone, Russell Fisher, Bob Howard, Vaughn Iskanian, Don and Sharon Mentzer, and Michael

Womack) from Riggs-Abney law firm and from other avenues (Bill Bowles, Bill Kissack, and Dietrich Posch) helped drive vans to and from the parking area generously provided by the American Christian School located at road 2400 and Hwy 75. Kris Koepsel and his grilling buddies, Joe Wells, Nathan Cross, and Marty Martin, all Riggs-Abney colleagues, not only served as chefs for the cooking of delicious vittles over hot beds of charcoal, but also served as tortoise shepherds. Special kids' tables and gift shop volunteers, Midge Kissack, Linda Maholland, Laurie Marshall, Tasha Posch, and Rosemary Whitsun helped little ones make bird feeders and sold t-shirts and various other items.

Sutton senior biologist Dan Reinking kicked off the day by providing a fascinating, educational presentation about mist netting and banding with a variety of songbirds that he had captured earlier in the morning. Sutton staffers Ryan Van Zant, Jennifer Charles, and intern Ben

Daum along with Clayton McFarlane, junior birdman, and experienced bird show-er, Rebecca Renfro, put on an excellent rendition of the Sutton Center's free-flighted educational program, *It's All About Birds!* A great lunch of hamburgers and hot dogs was then followed with yet another presentation featuring live, native Oklahoma reptiles by Sutton staffer Josh Engelbert and his wife Melissa along with help from nephew Chase Hinkle. A few exotic reptile species were also included in this presentation, among which were a beautiful, 12-ft long, amelanistic reticulated python from Bob Clark of OKC and an Aldabra tortoise weighing over 100 pounds belonging to Steve Sherrod. Sutton Board Members in attendance included Chairperson Sam Daniel, Steve Adams, David Delahay, David Riggs, Tom Sears, Steve Sherrod, and Penny Williams. It was a great Saturday picnic, and we have received many letters expressing what a wonderful time was had by all!

Photography by M. Alan Jenkins, Dan Reinking and Mike Scribner.



SAVE THE DATE!

August 1, 2009

With summer just beginning, it is time to go to your calendars and mark Saturday, August 1, 2009, as the date for this year's Wild Brew! Wild Brew is the largest fundraising event for the Sutton Center, and it's great fun!

In this, it's 11th year, Wild Brew will be held again in the Central Park Hall at Expo Square from 5:00 p.m. to 8:00 p.m. As in the past, there is a special Patron's Only Hour from 4:00 p.m. to 5:00 p.m. during which time there will be a bird show and special tastings from some of the finest restaurants in Tulsa. Music will be provided by Mark Bruner and Shelby Eicher and by the Fabulous Mid Life Crisis Band.

To be a patron or to order general admission tickets you can go to the Wild Brew website at www.wild-brew.org or call the Wild Brew Hotline at 918-633-1308.

All tickets must be purchased prior to August 1, and you must be 21 years of age or older to enter.

The Greatest Party Ever Hatched!

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