George Miksch Sutton AVIAN RESEARCH CENTER

The SUTTON NEWSLETTER

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

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Sutton's Education Program ...

What's Inside...

See Page 2 for details...

Cover: Ryan VanZant with future stars of the new bird show: Banshee, a Barn Owl *(Photo by Katie Banker)* and *Inset*: Beaker, a recently acquired African Ground Hornbill *(Photo by Dan Reinking)*.

...is "Taking Off"!

The Sutton Avian Research Center's Educational Program is growing; the new and expanded version will be presented to school children in Oklahoma starting in January 2006.

The new show, "IT'S ALL ABOUT BIRDS!" involves live, trained birds that will fly down to the stage or otherwise perform in auditorium-styled, Disney-type presentations directed toward environmental conservation. By using the magic of live birds from the natural world, our show will compete with the gadgetry kids have today such as hand-held computer games and iPods, not to mention television 24/7. It really IS both entertaining and educational, AND the kids will be tested on the content.

Sutton Center Executive Director Steve Sherrod likens the lack of exposure to the natural world for kids growing up in America today "in a way" to Harlow's experiments in the 1950's in which he raised baby rhesus macaques with surrogate, cold, wire-framed mothers. Sherrod suggests that because we raise children today on the cold glass and plastic of televisions and computers, they have little contact with and thus little appreciation for the natural world. "They don't have the opportunity to raise a baby bird or baby squirrel or really even take the time to watch an insect to see what it is actually doing," he said. Our program is an attempt to bring real life to the school so the kids might absorb some of its excitement, something in addition to a picture in a text book or on a computer screen. Those who have visited us and have seen the training in progress have all come away very excited about this new opportunity for Oklahoma kids! One educator who recently visited our facility was so impressed at what we are developing that he cannot wait to schedule the new program at his own facility. He said this is exactly what is needed to get kids excited about math and science, and "your program will blow them away!"

Top: **Ryan works with Fiona, a female Bald Eagle that could not be released into the wild.** ***Photo by Katie Banker. Middle:*** **A group of Quaker Parrots will also be featured in the show.** ***Photo by Ryan VanZant. Bottom:*** **Kim Anderson holds a Red-shouldered Hawk as it assumes a sun bathing posture.** ***Photo by Ryan VanZant.***

As this program evolves, additional material related to environmental conservation as portrayed through bird-related subjects will be made available to teachers in each of the disciplines. Not only does the program discuss brids as barometers of a healthy environment or as indicators of disappearing habitat, but even the cockatoo putting dollar bills in the plexiglass box introduces the subject of economics and birds. This includes an $85 billion overall economic output in 2001 from birding, and $1.4 billion spent on hunting of migratory birds, as well as $28.9 billion on broiler chickens, eggs, and turkeys.

But that is not all. We have been working with the statewide OneNet educational teleconferencing system, and via this new tool we will be presenting programs to some schools unable to be visited during the year. Some presentations will be interactive, and others will be "observer only." In addition, we are in the process of placing Nest Cams (weatherproof cameras) on certain Bald Eagle and Red-tailed Hawk nests in the state so that students will be able to observe the daily life of these magnificent birds on a continual basis until the nests fledge young or fail. Typical behavior involves bringing prey and feeding the young, defending the nest from other predators, and parents simply brooding the chicks. People absolutely love this kind of opportunity, plus it can be used for avian behavioral research!

Over the past four years the Center has been presenting special environmental communicators from *National Geographic*, The Discovery Channel, and the PBS series *Nature* in person to give illustrated presentations to 7,000-10,000 northeastern Oklahoma school kids (geographic limits due to past financial constraints) and adults so that they can see what it is like to be an outdoor photographer/cinematographer. These speakers have shared their work with the kids and allowed the latter to ask questions and learn how hard work can be so rewarding. For 2006, we have invited as speaker, *National Geographic* photographer, Annie Griffiths Belt, who provided all the magnificent photographs illustrating Barbara Kingsolver's recent coffee table book, *Last Stand: America's Virgin Lands*. In addition, this year for the second season and with help from The F&M Bank in Tulsa, we are able to offer $14,000 in scholarships for young environmental communicators. We are proud of our new program and the end product will certainly be worth the wait for the school kids of Oklahoma!

Hurricanes and Prairie-Chickens: the things about which you never think

by Steve Sherrod as related through Terry Rossignol, USFWS Attwater's Prairie-Chicken Recovery Team Leader

Traffic jam headed south from the path of Hurricane Rita (photo taken from van carrying APC from Texas City to Texas A&M). *Photo by APCHNWR staff.*

On September 20, 2005, over one hundred North American grouse biologists who comprise the Prairie Grouse Technical Council, were meeting for four days in Valentine, Nebraska. Included were several individuals involved with the Attwater's Prairie-Chicken (APC) recovery effort, Dr. Mike Morrow, USFWS APC biologist and APC Recovery Team Member from Eagle Lake, Texas; Dr. Nova Silvy, APC Recovery Team Member from Texas A&M; Dr. John Toepfer, APC Recovery Team Member from the Society for Tympanuchus Cupido Pinnatus in Wisconsin; Don Wolfe, Sutton Center Senior prairie-chicken biologist; and myself (also an APC Recovery Team Member). On that date and with images of Hurricane Katrina's severely destructive onslaught of New Orleans fresh in the minds of most Americans, Hurricane Rita was mustering up even more power and was heading directly toward Houston and Texas City.

Seventeen young-of-the-year Attwater's Prairie-Chickens, a partial crop produced from laborious captive breeding efforts, had already spent a bit under two weeks in acclimatization pens at The Nature Conservancy's APC Preserve near Texas City. These young chickens were just ready for release so they would have time to become used to the habitat there before the raptor migration resulted in a bevy of newly visiting birds of prey. Attwater's personnel teetered back and forth between releasing the chickens for the reintroduction program ahead of the raptors and retrieving them from the acclimatization pens to move them elsewhere for safe keeping until after the hurricane. Since prairie-chickens are such "high strung" birds, this is more easily said than done safely. With the latest prediction of impending doom from Rita's scheduled impact to be September 24, and with much conferring back and forth between Texas and Valentine, Nebraska, the final decision was made to move the birds to a safer spot on Wednesday, September 21.

That morning, wildlife biologist Donna Roach of the USFWS APC National Wildlife Refuge along with Wes Hoyer, Student Conservation Association intern, boarded a van and headed from Eagle Lake to pick up the young chickens in Texas City about 9:30 AM. They carefully captured the 17 APCs from the acclimatization pen there, placed each bird in a 1'x 1'x 2' individual wooden transport box where it would be continually monitored for overheating, and began their road trek to the Texas A&M University holding pens in College Station about 2PM. Unfortunately, they had not counted on, nor had most others on the road, the mass exodus of vehicles heading north to escape the impending storm. By 4AM the next morning after a continual nocturnal road creep, they were only partly there and close to running out of gas. Keeping the A/C going was essential in order to keep the birds from overheating in their confined transport boxes. A cell phone call to APC Refuge Assistant Manager and Donna's husband, Justin Roach, set a rescue plan into action…one of more gasoline. While Donna and Wes had been under strictly directed traffic control, Justin was able to maneuver through back roads and finally reach the chicken-bearing van with supplemental cans of gas, the need for which was never anticipated initially for the normal 3 ½ hour drive from Texas City to College Station. With the new fuel, however, the van began sputtering, stuttering, and frequently dying, and the filter, fuel pump, or "bad gas" were deemed responsible. Therefore, all the chickens in boxes were transferred to the extended cab of Justin's pickup so the biologists could try and initiate a second leg of the journey via various back roads. Finally, at about 3:30PM or 25 ½ hours after the (3 ½ hour trip) began, the chickens arrived at the holding pens in College Station. With constant vigilance and care, all 17 arrived in good shape and were unloaded successfully. Luckily, Rita swerved from her originally predicted course as well as defused in power to a significant extent. After a week in their new quarters at A&M, Mike Morrow moved all 17 APC back to the acclimatization pens at the Texas City Preserve (again a 3 ½ hour drive this time), and the birds were released on October 13. This was not the best timing with regard to raptor migration, but there had been no choice.

Photo by APCHNWR staff

Dr. Mike Morrow, with help from Donna Roach, prepares to unload 17 young APC once returned to the Texas City APC Preserve from Texas A&M holding pens following Hurricane Rita.

I write this article to inform our readers about the difficulties and sometime extra lengths necessary to succeed when working with endangered species. It seems that Murphy's Law always applies. I could tell literally hundreds of similar stories related to Peregrine Falcon and Bald Eagle reintroduction efforts from The Peregrine Fund and the Sutton Avian Research Center. Dedicated people are absolutely essential to the success of any endangered species program along with funding, knowledge, planning, hard work, and a little luck. With APC, we have the rest, and we are now hoping for funding and luck.

Conditions can change minute-to-minute while surveying birds for the Oklahoma Winter Bird Atlas, as shown by the aftermath of heavy ice fog at this Cimmaron County roadside table. ***Photo by Doug Tozer.***

Warm Weather, Woodcocks, and Wild Boars:

Oklahoma Winter Bird Atlas Adventures, Canadian Style, Round Two

by Doug Tozer

You may recall my article in the summer 2004 issue of The Sutton Newsletter, entitled "Coyotes, Catfish, and Cowboy Boots: Oklahoma Winter Bird Atlas Adventures, Canadian Style," where I described my time conducting surveys throughout Oklahoma for the first winter of the atlas. In that article, I gave a farewell, thanked the Sutton Center for providing me with such a wonderful opportunity, praised the private landowners of Oklahoma for offering superb hospitality while I was searching for birds on their lands, and made it sound as if I were returning to my hometown of Huntsville, Ontario, Canada for good. Of course, I couldn't resist doing it all over again, so I came back for round two!

The Oklahoma Winter Bird Atlas is a survey project which aims to document the distributions of all bird species present in the state during winter. The project will survey birds for five years, ending in the winter of 2007-2008. Given that winter conditions can vary considerably—some winters may be colder or warmer than average, some may have more food available for birds (especially seeds and fruit), some may harbor more migrants of certain species from farther north—it is important to survey across several years, rather than just one particular year, because different winters can have dramatically different effects on bird distributions. A multi-winter approach not only results in a more complete "picture" of winter bird distributions, but it also provides enough time for personnel and numerous volunteers to survey the 583 survey blocks (three by four mile rectangles scattered randomly across the entire state) that will provide the data to produce a map for each species.

The importance of multiple years came clearly to mind while surveying on a very warm evening in Three Rivers Wildlife Management Area, McCurtain County, extreme southeastern Oklahoma. The sun was just sinking below the horizon, frogs were calling, the warmth of the day's heat was still hanging in the air, and the pungent smell of springtime filled my nostrils-despite it being early January; winter was the farthest thing from my mind. PEENT! I stopped dead, my ears poised, my senses locked on the bird I had just heard. Again, PEENT! Then twirling wings, higher and higher into the growing twilight, round and round, then down like a rock to the ground. I was in the midst of a group of displaying male American Woodcocks whose mate-attraction display calls are described by biologists as "peents". And not just a small group, but 12! I observed 24 more displaying birds at 5 locations on the following three mornings and evenings when the temperature was between 59°F and 68°F. During the first winter of the atlas, only five woodcocks were reported from the entire state, and only one of them was displaying. This winter was obviously different; I had located 720% more woodcocks than the first winter, plus, volunteers observed another two, for a total of 38 woodcocks in the second winter.

Leonard Hamilton

Long before a lasting spring thaw, American Woodcocks can be found displaying in moist woodlands of eastern Oklahoma.

American Woodcocks are mysterious, nocturnal sandpipers that feed on land, usually in forests, where they probe moist soil for earthworms and other invertebrates using a long, thin bill with a flexible tip (that they can open while the rest of the bill remains closed tightly), and they have several entertaining, colloquial names, such as bog borer, timberdoodle, and bog sucker. It is believed that the majority of wintering woodcocks in Oklahoma do not breed here prior to migrating northward, despite the large effort that males put into mate attraction displays on warm nights; however, a female with a brood and a chick that were each banded in early spring in Alabama were harvested by hunters in the fall in Michigan later the same year. This shows that late winter breeding does occur in southern states and suggests it may occur in Oklahoma more often than we think. Also, that males actively display on warm nights throughout mild winters (like I witnessed first hand) suggests there is a significant payback for their effort and that breeding may be occurring. Unfortunately, woodcock nests and females with young are extremely hard to find. In fact, none were located during the Oklahoma Breeding Bird Atlas, a project aimed at producing distribution maps of every nesting species in the state that was completed by the Sutton Center and published by the University of Oklahoma Press in summer 2004.

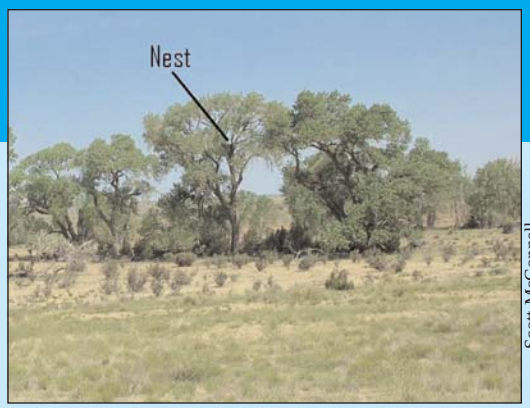
In addition to woodcocks, the second year of the winter bird atlas is revealing important information on several other species that is not reflected in the first winter data. Upon discovering that secretive, wetland-dependent Virginia Rails respond extremely well to vocal imitations of their calls in the dead of winter (because I did not have a tape recorder to broadcast their calls), I single-handedly located 16 individuals at 7 cattail marshes with open water (only 4 individuals from 2 locations in first winter). I also found a Sora, a rail with habits similar to the Virginia, which is very rare in the state in winter (none reported in winter one; two located by volunteers elsewhere in winter two). Plus, several irruptive northern migrants that were observed in lower numbers in winter one were seen more regularly in winter two such as Red Crossbill (1 report in winter one versus 6 in winter two), Northern Shrike (1 vs. 5), Red-breasted Nuthatch (1 vs. 5), Pine Siskin (5 vs. 22), and Purple Finch (45 vs. 89).

Not only was it extremely warm for a few days in early January 2005, but also the entire month generally had less-severe temperatures than the same month the previous year. For example, the lowest January 2004 temperature at Oklahoma City was 7°F, compared to 13°F in January 2005. In my first winter of surveying, my water jug froze solid on at least a dozen nights, forcing me to make my morning coffee by boiling snow instead. This winter it froze solid only once as I slept in the back of my truck. My sleeping bag was actually too hot sometimes. But then again, this is coming from a Canadian who was hot once while winter camping in Ontario at -2°F.

During my travels last winter, I noted some weird behavior by Oklahomans that I rarely or never see in Ontario. I saw coyotes hung on fence posts, huge catfish heads strung here and there, and, perhaps weirdest of all, cowboy boots slipped over the tops of fence posts. This winter was no exception; however, I am proud to report an addition to my fence post list: a wild boar's head. Despite the welcomed distraction that these articles provided me during some quieter periods when there were few birds to observe, Oklahoma is anything but weird. Its all part of the local culture, which combined with a diversity of habitats, great winter birding, and some of the friendliest people in the south, makes Oklahoma one of the more fascinating states I have visited. I look forward to the production of the *Oklahoma Winter Bird Atlas*, so that when I return to Canada (I think we all know by now I'll be back here sooner or later, eh?), I can sit back and recall the many fond memories of winter birding in the "warm" south.

Bald Eagle Nesting Season 2005

by M. Alan Jenkins



Scott McConnell

Sometime last year I ran out of superlative adjectives to describe the continued, and frankly perplexing unanticipated, growth of the nesting population of Oklahoma's Bald Eagles. The reasonably mild winter of 2004-2005 and a lack of heavy ice storms probably allowed the eagles to be more successful than ever. I conducted the usual flight survey in mid-January to count the numbers of nests with attendant or incubating adults by hitching a flight with the U.S. Fish and Wildlife Service's Chief Regional Pilot, Jim Bredy, who is stationed in Albuquerque, New Mexico, aboard his Partenavia Observer aircraft. Jim conducts at least two annual waterfowl surveys along the Arkansas and Canadian Rivers where the majority of Oklahoma's Bald Eagles nest, and where numerous waterfowl species while away the winter. I count the eagles at the nests and record Jim's waterfowl counts for him. (By the way, you would be instantly mesmerized-astounded-slack-jawed-dumbstruck to see 40,000 Snow Geese rise from the ground and take wing in a coordinated flock.) Then I traveled by vehicle or kayak (buddied up with my favorite volunteer, wife Sally) to those nests that couldn't be covered during the aerial surveys. Additionally I phoned or e-mailed local people in various areas who are interested in eagles, and who volunteer their time and effort to check some of the outlying nests for me. Lastly, some members of the public phone or e-mail me about new nests. All these data added up to 55 eagle nests occupied by pairs of adults, the highest number yet. Fifty-one of the eagle pairs laid one or more eggs, again the highest ever.

This process was repeated in April through mid-June, resulting in 36 pairs of the above 51 nests with eggs producing at least one young to fledging age (ca. 11-12 weeks of age after hatching), the highest ever (do you sense any pattern here?). Those 36 pairs fledged 56 young, exceeding 2003's stunning production of 53 young. The capper on all this was the discovery of a nest in the far Oklahoma panhandle that fledged at least 1 young. There have been several reports of nests west of 98° longitude in Oklahoma; however, none of these has ever been productive, as far as is known. This is an Oklahoma first. This pioneering pair was called to my attention by Scott McConnell of Oklahoma State University. Scott provided me with some photos of the nest and the area, showing the habitat there. The habitat is more like where one would expect to find Golden Eagles, not Bald Eagles. One of his photos is reproduced here.

This is the Sutton Avian Research Center's 16th year of annual Bald Eagle nest surveys, and our plans are for it to continue for the foreseeable future. However, we felt that it was necessary to officially document the results of the first 14 years' results by publishing interim data in the scientific periodical literature. Steve Sherrod and I submitted a manuscript which was accepted for publication to the *Wildlife Society Bulletin*, a respected professional wildlife journal. The article, "Growth and recovery of the Bald Eagle population in Oklahoma," is expected to be published before the end of the year.

Wild Brew 2005 I

Mix the opportunity to sample more than fifty types of ales, stouts, porters, lagers and specialty beers, signature dishes from over twenty restaurants, and music from two bands, and you have a receipe for a good party. Wild Brew 2005 was held August 13, and a great time was had by all!

This year's Wild Brew benefitted the Sutton Center, and we are extremely appreciative! The event could not be pulled together without an army of volunteers who are the true "heros" of Wild Brew, and we would like to thank each and every one of them. This year's committee heads were Cassie Barkett, Cathie Bashaw, Eric Beeson, Anne Bendel, Ketrin Boone, Tom Byers, Christine Cabanillas, Kevin Chrislip, Cara Crain, Doug Dixon, Frances Dodson, Kristi Engle, Sara Franden, Toni Garrison, Sarah Hansel, Gayelynn Head, Carolyn & Robert Hughes, Robin Johnson, Mark Lauinger, Pam Lucas, Ping & D. Michael McBride III, Ginny McCune, Bonnie Minshall, Melissa Minshall, Marilyn Morris, David Neff, Jill & John Powers, Carl Raynes, Aaron Riggs, Lisa Riggs, Renee Robinson, Carol Shaw, Dianne Siegfried, Susan Simmons, Michele Smucker, James Sneed, Cynthia Stall, Jamie Stewart, Mary Stewart, Kevin Tartar, Leslie Taylor, Mickie Taylor, Sandy & Rex Thompson, Rhoda & Charlie Transue, Paul White, and Brian Wilkerson. Jason and Nora Percy were the Wild Brew 2005 co-chairs, and Roy and Toni Bliss were the Honorary Chairs. We would also like to thank the following Sutton staff and volunteers for their participation: Steve & Linda Sherrod, Alan & Sally Jenkins, Michael Patten & Brenda Smith-Patten, Dan Reinking, Eyal Shochat, Karen Kilbourne, Ryan VanZant, Katie Banker, Bonnie Gall, Suzy Harris, and Rebecca Renfro.

Ryan VanZant, Sutton Center educator and bird trainer, brought BENSAR (a northern Bald Eagle) and Merlin, a Moluccan Cockatoo, to share with the crowd.

s A Great Success!

Both were enthusiastically received! BENSAR posed for pictures, and Merlin "collected the dough." Banners and a display board informed the attendees of Sutton Center projects and accomplishments. In addition to the sale of Wild Brew t-shirts, copies of the recently published *Oklahoma Breeding Bird Atlas* were available for purchase, and editor Dan Reinking was on hand to autograph copies. Sutton Center t-shirts and hats were also available for those who wished to purchase them.

Palates could be satisfied with a variely of offerings from sushi and mushroom bruschetta to queso and pizza. We would like to thank the following Tulsa area restaurants for their participation: Alberts G's Bar-B-Q, Baxter's Interurban Grill, The Brook Restaurant & Bar, The Catering Connection, Council Creek Cheese & Cuisine, Cowboy Sharkies, Domino's Pizza, Ford's Filling Station, The French Hen, The Grapevine, The Green Onion, Hideaway Pizza, In the Raw, Jazmo's Bourbon Street Cafe, Kilkenny's Irish Pub & Eatery, Ladyfingers Catering, James E. McNellie's Public House, Mexicali Border Cafe, Panera Bread Bakery-Cafes, Perfect Touch Catering by Jamil's, Te Kei's, Wild Oats, and Zio's Italian Kitchen.

Beers produced throughout the United States as well as around the world (Germany, England, Mexico, Belgium, France, Canada, Scotland, England, Japan, Italy, Australia, and Denmark) were presented to the attendees. Music from bands, Mid Life Crisis and Hurricane Mason, brought people to their feet and the dancing began. We would like to thank beer vendors from Glazers, Marr's Distributing, Paragon Brands and others for joining this event as well as the members of both bands that made the evening most memorable!

Photography by Dan Reinking

Sandhills to Pyrenees

Commonality between Continents

by Don Wolfe

Don Wolfe

Don Wolfe

Top: **Valentine National Wildlife Refuge, Nebraska, USA 42°N, 100°W.** ***Bottom:*** **D'Aiguestortes National Park, Catalonia, Spain 42°N, 1°E.**

What do the Sandhills of Nebraska have in common with the Pyrenees of France? Well to begin with, both are at 42° north latitude. Both include beautiful, although somewhat desolate, country spotted with quaint villages. Both are inhabited by native Golden Eagles as well as introduced Ring-necked Pheasants. Both are inhabited by two species of grouse, Sharp-tailed Grouse and Greater Prairie-Chickens in the Sandhills, Capercaillie and Rock Ptarmigan in the Pyrenees. And, both received a major influx of grouse biologists in September 2005. The 26th Biennial Prairie Grouse Technical Council Meeting was held 19-23 September in Valentine, Nebraska. The 10th Triennial International Grouse Symposium was held a mere 3 days later, 26-30 September, in Luchon, France (only 25 miles from Valentine, France), followed by a 4-day excursion into Spain and Andorra to see Capercaillie and ptarmigan habitat and management efforts.

I was fortunate to have the opportunity to attend and present some of the findings of our prairie-chicken research at both of these international conferences. Probably the most difficult aspect, however, was only having two travel days between them. Over 300 grouse biologists attended at least one of these conferences. Approximately 120 grouse folks from Canada and the USA were present at the Nebraska meeting, while nearly 200 grouse biologists from 27 different countries were present at the France conference. The close timing of the two conferences kept many people from attending both; several of the Prairie Grouse Technical Council "regulars" chose to forgo Nebraska in favor of the France conference.

Although not very surprising, there are many shared grouse concerns between the continents that were evident at the International Grouse Symposium. A most interesting presentation was given by Dr. Hiroshi Nakamura on how global climate change is contributing to population isolation in Japanese Rock Ptarmigan. Several presentations dealt with habitat loss and fragmentation, and genetic isolation of European grouse, especially Capercaillie. There were several presentations on the effects of increasing human disturbance on European grouse due to outdoor recreational activities. And, there were presentations regarding the effects of unnatural mortality causes (collisions with fences, power lines, and overhead cables) on European grouse, and the mitigation (or lack of) efforts to solve this problem. Best of all, however, were the countless hours of casual discussion on grouse issues over meals, in evenings, and on long bus rides. Oh yes, getting the chance to see Capercaillie, Lammergeiers, and many other incredible birds was pretty nice too!

The next Prairie Grouse Technical Council meeting will be held in South Dakota in 2007, and the next International Grouse Symposium will be held in either British Columbia or Yukon, Canada in 2008.

Dan Reinking

Distribution and Nest Success of the Brown Thrasher in Managed Tallgrass Prairie Plots

by Eyal Shochat, Michael A. Patten, Dan L. Reinking and Donald H. Wolfe

Like many other animals, Brown Thrashers (*Toxostoma rufum*) select where to live and breed in a process called "density dependent habitat selection". Although they may prefer one habitat over another, some birds will prefer to settle in secondary habitats when the most preferred habitat becomes too crowded. After all birds have settled, the final distribution is termed "Ideal Free

Distribution." Ideal because all birds are happy and have equal chances to find food, survive predation and reproduce and free because each bird is free to decide where to settle based on the amount of food, predator density and competitor density. This process is very similar to the way we make our daily decisions about choosing the best lane in traffic or the shortest queue in the supermarket (preferably with people who have few items in their baskets). Thrashers seek optimal conditions just like human beings.

The Brown Thrasher is a common and widespread summer breeder in sparse trees, bushes and shrubs throughout the tallgrass prairie of northeastern Oklahoma. Our 5-year study on bird populations revealed that this species almost exclusively avoids nesting in unmanaged (that is, unburned and ungrazed) plots. We tested whether Brown Thrashers are ideally free distributed by comparing their distribution and nest success between unburned-grazed (23 nests) and burned-grazed plots (70 nests). We also compared nest success in these two habitats to nest success in roadside vegetation within the same area (180 nests).

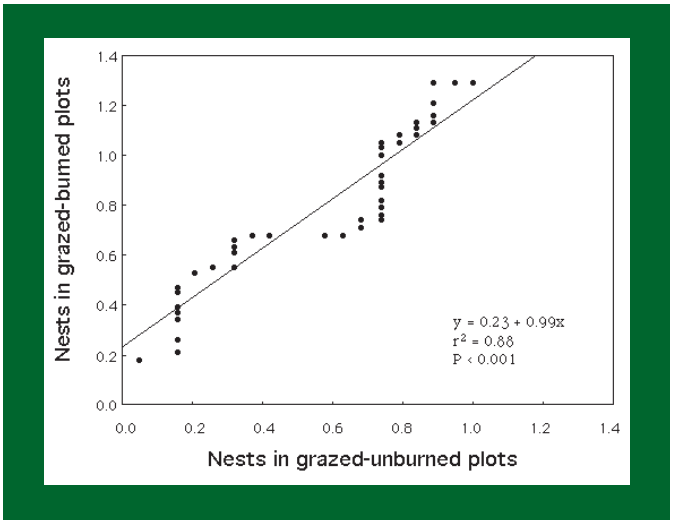


Figure 1. Density (number of nests per 40-acre plot) of Brown Thrashers in the burned-grazed habitat vs. the unburned-grazed habitat. Intercept of the model line indicates that the burned habitat is the preferred one. The slope of the line indicates that once the unburned habitat is used, birds enter both habitats at the same rate.

Brown Thrashers preferred the burned over the unburned prairie. They entered this habitat earlier and started nesting in it earlier than in the unburned grazed prairie. Yet, once birds started to use the unburned grazed habitat, they entered the two habitats at an equal rate (Figure 1).

There were no differences in nest survival rates between burned-grazed and unburned-grazed plots (Figure 2). Nest success in roadsides appears lower but did not differ statistically from nest success within the prairie.

Because Brown Thrashers preferred burned over unburned prairie plots, whereas nest success was similar in these two habitats it appears that they are ideally free distributed between the burned and the unburned habitats. The similar nest success in roadside stretches suggests that Brown Thrashers may be ideally free distributed across the whole landscape of northeastern Oklahoma. Therefore, the Brown Thrasher differs from most other tallgrass prairie species. A five-year study in tallgrass prairie demonstrated that managed (burned and grazed) prairie plots are "ecological traps" for several other species of passerines (see the Sutton Center's paper in *Oikos*, which is listed on page 10). Whereas these species prefer the managed plots (based on their higher abundance of arthropods), their nest success is higher in unmanaged prairie plots, owing to the lower abundance of nest predators.

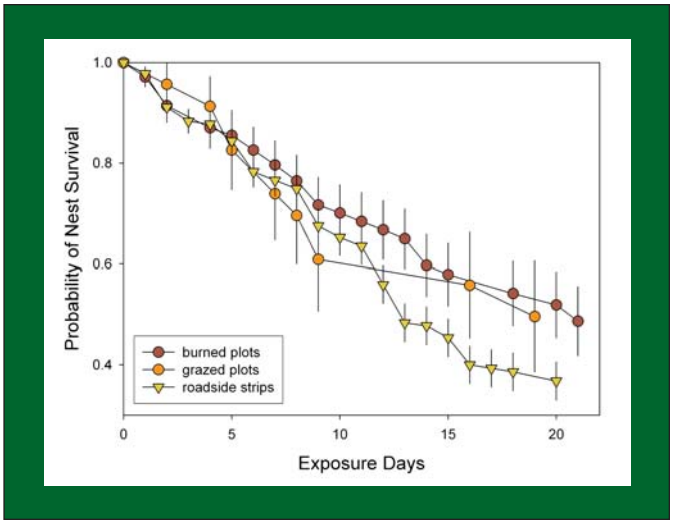


Figure 2. Nest survival rates of the Brown Thrasher in burned-grazed prairie, unburned-grazed prairie, and roadside stretches are statistically similar.

Grazing and burning can have various effects on bird populations. Burning opens the vegetation and facilitates movement of nest predators (reptiles and mammals) through the grass, whereas the lush vegetation in recently burned plots attracts arthropods that serve as important food resources for nestlings. Like burning, grazing might also increases arthropod abundance, but at the same time it might attract cowbirds. Brown Thrasher habitat preference is probably based on arthropod abundance, which is the highest in burned plots. Interestingly, Brown Thrashers avoid nesting in unmanaged prairie, which is the safest habitat. Yet, their nest success in managed plots appears higher than nest success of the average of all passerines in any of the three habitats, as well as from all tree nesting species, which have the highest nest success compared with shrub and ground breeders.

The results suggest that Brown Thrashers may enjoy the advantages of managed plots (high food abundance) without suffering from their disadvantages—high predation rates or brood parasitism. A summary of nest outcomes in the three habitats (see Table 1) supports this hypothesis. Of all nests studied just three nests in burned grazed plots were parasitized by cowbirds. As expected, in all three cases cowbird eggs were ejected soon after being laid. While nest predation accounts for most failures, its proportion is lower in burned plots, where both food and predator abundances are higher than in unburned plots. We do not know what causes the higher proportion of nest predation in unburned plots. Because most failures are the result of predation, it is likely that the three deserted nests and seven nests that failed owing to unknown reasons in the burned habitat failed because of predation, which would increase the proportion of depredated nests in this habitat to 0.43, a proportion close to that in the unburned habitat.

Continued on page 10

Brown Thrasher (Continued from page 9)

Altogether, the failure probabilities in these two habitats are similar. The high proportion of depredated nests in roadside stretches, where predator abundance was not studied, may account for the tendency towards the lowest nest success in this habitat. However, Brown Thrashers are very aggressive towards potential nest predators and intruders in general, including humans. If Brown Thrashers suffer less than other birds from parasitism and nest predation, they can base their habitat preference on arthropod abundance like other bird species, avoid nesting in unmanaged prairie plots, and prefer burned-grazed plots without falling into the ecological traps associated with the high predator and cowbird abundances found in these habitats.

With findings from previous research in the area, the ideal free distribution of the Brown Thrasher indicates that management of the tallgrass prairie may favor generalist species such as the thrasher but disfavor grassland specialist species for which the prairie becomes an ecological trap. Prescribed fires and grazing may therefore lead to substantial changes in local bird diversity in the long term. Understanding the ecological requirements of different bird species and careful management of the tallgrass prairie may contribute to the maintenance of species rich communities in this unique habitat.

TABLE 1. A summary of Brown Thrasher nest outcomes.

Nest outcome	Burned-grazed	Unburned-grazed	Roadside
Unknown	3		3
Fledged	40	13	71
Failed (Unknown reason)	7		11
Failed (Depredated)	23	11	110
Failed (Deserted)	3		5
Failed (Bad weather)			8
Total number of nests	76	24	208
Proportion of depredated nests	0.30	0.46	0.53

2005 Publications

Bolger DT, **Patten MA**, Bostock DC (2005) Avian reproductive failure in response to an extreme climatic event. *Oecologia* 42:398–406.

Faeth SH, Warren PS, **Shochat E**, Marussich WA (2005) Trophic dynamics in urban communities. *BioScience* 55:399–407.

Jenkins MA, Sherrod SK (2005) Growth and recovery of the Bald Eagle population in Oklahoma. *Wildlife Society Bulletin* 33:in press.

Patten MA, Wolfe DH, Shochat E, Sherrod SK (2005) Habitat fragmentation, rapid evolution and population persistence. *Evolutionary Ecology Research* 7:235–249.

Patten MA, Wolfe DH, Shochat E, Sherrod SK (2005) Effects of microhabitat and microclimate selection on adult survivorship of the Lesser Prairie-Chicken. *Journal of Wildlife Management* 69:1270–1278.

Reinking DL (2005) Fire regimes and avian responses in the central tallgrass prairie. *Studies in Avian Biology* 30:116–126.

Shochat E, Patten MA, Morris DW, **Reinking DL, Wolfe DH, Sherrod SK** (2005) Ecological traps in isodars: Effects of tallgrass prairie management on bird nest success. *Oikos* 111:159–169.

Shochat E, Wolfe DH, Patten MA, Reinking DL, Sherrod SK (2005) Tallgrass prairie management and bird nest success along road sides. *Biological Conservation* 121:399–407.

2005 Presentations

Katti M, Anderies JM, **Shochat E** (2005) Living in the city: Resource availability, predation, and bird population dynamics in urban areas. Poster, Central California Research Symposium, Fresno, California, 21 Apr.

Patten MA, Wolfe DH, Sherrod SK (2005) Consequences of habitat fragmentation on prairie-chicken populations. Invited oral paper, Society for Range Management, Ft. Worth, Texas, 10 Feb.

Patten MA, Wolfe DH, Shochat E, Sherrod SK (2005) Lekking and nesting response of the Greater Prairie-Chicken to burning of tall grass prairie. Oral paper, Prairie Grouse Technical Council, Valentine, Nebraska, 24 Sep.

Patten MA, Wolfe DH, Shochat E, Sherrod SK (2005) Lekking and nesting response of the Greater Prairie-Chicken (*Tympanuchus cupido pinnatus*) to burning of tallgrass prairie. Oral paper, Tall Timbers Fire Ecology Conference, Bartlesville, Oklahoma, 19 Oct.

Sherrod SK (2005) Management challenges and opportunities related to prairie grouse: a pictorial overview. Invited oral paper, Tall Timbers Fire Ecology Conference, Bartlesville, Oklahoma, 19 Oct.

Walters EL, Bolger DT, **Patten MA** (2005) Food vs. predators: What drives clutch size patterns in coastal sage scrub avian communities? Oral paper, Ecological Society of America, Montreal, Québèc, 09 Aug.

Wolfe DH, Patten MA, Sherrod SK (2005) Causes and patterns of mortality in Lesser Prairie-Chickens and implications for manage ment. Oral paper, Prairie Grouse Technical Council, Valentine, Nebraska, 23 Sep.

Wolfe DH, Patten MA, Sherrod SK (2005) Causes and patterns of mortality in Lesser Prairie-Chickens and implications for manage ment. Oral paper, International Grouse Symposium, Luchon, France, 27 Sep.

Wolfe DH, Patten MA, Sherrod SK (2005) Mitigating fence mortality in Lesser Prairie-Chickens by marking and removing fences. Poster, The Wildlife Society, Madison, Wisconsin, 28 Sep.

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Sutton Authors Featured at Bartlesville Area History Museum

by Brenda D. Smith-Patten

Three members of the Sutton Center staff have been featured in the Bartlesville Area History Museum's latest exhibit. Michael Patten (Director of Research), author of the book *Birds of the Salton Sea: Status, Biogeography, and Ecology* and scores of journal articles, Dan Reinking (Biologist), editor of the *Oklahoma Breeding Bird Atlas*, the forthcoming *Oklahoma Winter Bird Atlas*, and author of many papers, and Eyal Shochat (Post-doctoral Researcher), author of numerous scientific papers, are three of the featured authors in the Poetry, Prose, & Prattling in the Past exhibit. As its title implies, the exhibit also honors authors outside of science including poets, songwriters, novelists, and historians. Additionally, the exhibit recognizes members of the general public who are writing their own family histories to be included in the Washington County Family History Book, an upcoming museum publication. The exhibit ran until mid-November 2005. For information on upcoming exhibits call 918-338-4290. The museum is located on the 5th floor of the City Center building at 401 South Johnstone Avenue in downtown Bartlesville and is open Tuesday through Saturday 10:00 a.m. to 4:00 p.m.

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