



Is Your Bird Feeder Actually a Hawk Feeder?

By *Timothy C. Roth II*, Department of Biology, University of Nevada, Reno, and *Steven L. Lima*, Department of Ecology and Organismal Biology, Indiana State University

Since the ban of DDT in North America in the 1970's, there has been a major increase in raptor populations across the continent. In particular, the bird-eating Accipiter hawks such as Cooper's hawks (right) and its smaller relative, the sharp-shinned hawk (below), are increasing in abundance and are now observed more frequently than ever before at backyard feeders. Still, remarkably little is known about the behavior of these hawks. For example, we know very little about how frequently these hawks really hunt at feeders, when they hunt, or whether feeders are putting small birds at risk.

Tracking hawks

We studied the behavior of these two hawk species in west-central Indiana during the winters of 1999-2004. We caught wild hawks, fitted them with radio transmitter harnesses, and observed their behavior and movements from vehicles. Our goal was to learn more about the behavior of these hawks so that we might have a better understanding about how they influence the risk of predation in prey. Such information allows us to understand how prey and predators interact at different spatial scales, what these hawks need to survive, and what aspects of modern landscapes might influence their populations.

How frequently do hawks really hunt at bird feeders?

Perhaps surprisingly, both sharp-shinned and Cooper's hawks did not spend much time hunting at bird feeders. In fact, they did not hunt at feeders any more frequently than expected by random chance. This counterintuitive result suggests that bird feeders are no more risky for small birds than other areas in their home range. In fact, feeders may be quite safe for small birds as they tend to visit them in groups, making capture by hawks more difficult. We suspect that Accipiters purposefully avoid frequent attacks at feeders. Rather than hunting in just a few areas with many prey (feeders), scaring all of the birds there, and making them more difficult to catch in the future, hawks in our study appeared to move among many prey groups unpredictably in order to spread the risk around to many different areas. Thus, a small bird that saw a hawk one day had no way of knowing when that hawk would return.

When do hawks hunt?

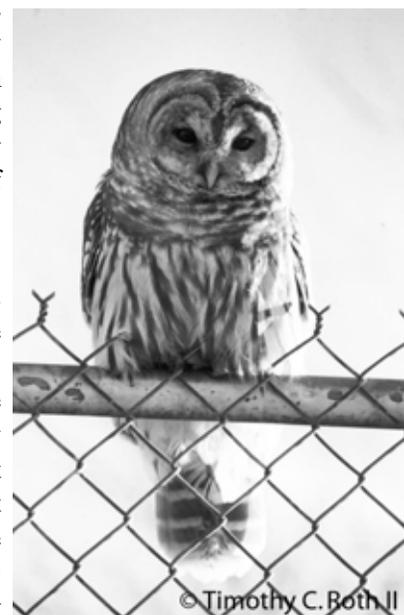
We also examined patterns of hawk activity within a day to see how hawks affect their prey through time. Theory predicts that predators should be active when their prey are active, and that is exactly what we found for Cooper's hawks: hawk activity followed the typical pattern of prey activity with a peak in the morning and another peak in the evening. However, sharp-shinned hawk activity did not follow that of their prey. The prey of sharp-shinned hawks were most active very early in the morning, when the hawks themselves were not even out of roost. Why? The explanation may be that the small sharp-shinned hawks are under the risk of predation themselves— from owls such as barred owls (right) and the great horned owl. In fact we lost 25% of our sharp-shinned hawks during our study to owl predation. While owls were a major threat to the sharp-shinned



Cooper's Hawk



Sharp-shinned Hawk



Barred Owl

hawks, the larger Cooper's hawks were not under as much risk of attack. Consequently, sharp-shinned hawks responded by remaining in roost until after sunrise and returning to roost well before sunset, whereas the Cooper's hawks were free to follow the patterns of their prey. This interaction of owl and hawk may then give the small bird prey of sharp-shinned hawks a window of opportunity to feed early in the morning in relative safety. So that early-morning pulse of feeding that you see at a bird feeder may be the safest feeding that those birds do all day.

For additional information see:

Roth, T.C., S.L. Lima, and W.E. Vetter. 2006. *Determinants of predation risk in small wintering birds: a hawk's perspective.* Behavioral Ecology and Sociobiology 60:195-204.

Roth, T.C., and S.L. Lima. 2007. *The predatory behavior of wintering Accipiter hawks: temporal patterns in activity of predators and prey.* Oecologia 152:169-178.

Roth, T.C., and S.L. Lima. 2007. *Use of predictable prey hotspots by an avian predator: purposeful randomness?* The American Naturalist 169:264-273.

Prairie Patter

by Dr. Valerie Wright, Environmental Educator and Naturalist

Since September 2007 we have had a busy season. This fall 25 classes from USD 475 came to Konza for science activities and eight other USD 475 groups came for hikes and bison tours. This does not include USD 383 or other schools or visitors. No wonder we were so busy! Thanks to all of you who helped. There were a lot of you! The total number of docent-lead activities was 48 (20 were science activities). If we were counting each time a docent came out, the total would be 219 docents, with some individuals signing up several times. These people volunteered eight or more times during September and October: Diane Barker, Ann Murphy, Earl Allen, Karen Hummel, Sue Hunt, Nancy Goulden, Susie Johnson, Larry Loomis, Joclyn Baker, Nancy Calhoun and Bob Davis. From August to December 1,289 people visited Konza Prairie.



Of 110 docents on the active list, 56% guided groups in 2007. Including all types of participation, 85% of the 110 were active in some way. These include attendance at training, in-service events, workdays, and other specific volunteer tasks. Another 15% were not active.

Some of our docents have been active in KPBS research projects this year. Eighteen hardy volunteers worked on fire teams, brush removal, bison roundup, plant collecting, and chickadee research. We now have six new bird feeders, thanks to the chickadee project. Two are at Hokanson Homestead, two are near the gondola that crosses Kings Creek, and two are at a turn in the Nature Trail between Hokanson and the bridge.

Chod Hedinger is your new Docent Coordinator. As Chair of the Docent Committee, he replaces Earl Allen, a four-year veteran. I would like to thank Earl for his commitment to the docent program. He was always available for contact with docent trainees, was (and is) part of the docent-mentoring program, and spent many volunteer hours on behalf of the docents. I also thank Chod for taking on this task in 2008. He will be a great leader for the docent program in the future. Susie Johnson was elected to the Docent Committee for 2008.

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Docent Committee Chair's Comments

By Chod Hedinger

I wanted to let you know who is on the Docent Committee for 2008.

Chod Hedinger-Committee Chair

Earl Allen, Miles McKee, Bob Davis, Nancy Calhoun, Clyde Ferguson, Susan Johnson, Charlie Given (honorary), Annie Baker (ex-officio), Gordon Cunningham (ex-officio), Larry Loomis (ex-officio), Phoebe Samelson (ex-officio), Valerie Wright (ex-officio and EE)

These are the people that you can contact to make suggestions for in-service programs, voice your ideas or concerns as a docent, make suggestions to improve the program, etc. throughout 2008.

The New Docent Orientation is February 16, 2008 and if you know of a friend or someone else who might be interested in joining us, invite them to come out to the Hulbert Center to see what the program is all about. It will start at 9:00 AM, but encourage them to come out early.

There is one date that I would like for everyone to put on their calendar. I know that I might be just a little early with this but September 27 is Open House at KPBS and we can always use everyone's help.

If you haven't gotten your 2008 Friends of Konza Prairie calendar, there is still time to buy one at Claflin Books and Copy. The cost is \$13.95. All of the photos were taken on the Konza by docents, FOKP members, or staff.



Spotlight! on Jim Morrill

By Annie Baker

Since graduating from the Docent Program in 2002, Dr. Jim Morrill has been actively involved in many facets of KEEP. In addition to guiding over 100 groups, he regularly attends training and in-service sessions,

helps during workdays and special events, and served on the Friends of Konza Prairie Board. Jim fulfilled the Quality Docent Program two years in a row. In 2005, Jim received one of two Docent of the Year awards, and in 2007 was recognized as a Long-term Leader.

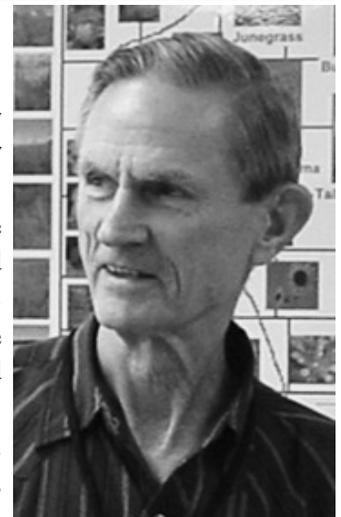
Jim's interests in agriculture and animal science began as a boy in Kentucky, where he grew up on a dairy and fruit farm started by his great-grandfather and still owned and operated by family. He earned his

B.S. in Agriculture, an M.S. in Animal Nutrition, and his Ph.D. in Dairy Cattle Nutrition. Jim had a 33-year career as an Animal Science professor at Kansas State. During this time, he started a consulting business, which he continues today.

With his animal science background, Jim offers a unique perspective guiding Bison Loop driving tours, and as retired K-State faculty, enjoys helping during Bison Round Up. Jim also volunteers internationally to teach sustainable agricultural practices to rural farmers. During a typical trip, Jim may travel to very remote areas where he begins by introducing the dairy cow, or work as a consultant for an established dairy herd operation. He has averaged three trips per year for the last 21 years, and has worked in about 25 different countries.

Locally, Jim volunteers as a tutor to school children with the Douglass Center Hand-to-Hand Program, is a driver for the Flint Hills Retired & Senior Volunteer Program (RSVP), and cares for his granddaughter and grandson after school. Married for 55 years, Jim and Nelda have four sons, one daughter, 13 grandchildren, and one great-grandchild living, in Kansas and Missouri.

Jim joined the Docent Program to learn about and enjoy the prairie as a volunteer. He enjoys guiding different types of groups of all ages on the Bison Loop and hiking trails. Jim feels, "The congeniality of the Docents and those we work with is amazing. Without exception I have found all the Docents I have met, those who lead us, and the Station staff to be very nice and fun to work with."



KEEP website has new look!

Thanks in large part to docent Nancy Calhoun who volunteered her time and expertise in 2007, the KEEP website has a new look! Read about the year-long process from her point of view.



Nancy Calhoun

One of my duties when I worked in K-State's Information Technology Assistance Center was teaching faculty and staff how to build web pages. When I retired in 2005, I offered to help with the KEEP website.

Dr. Valerie Wright and Annie Baker were interested in updating the website, but finding time to do it took awhile. In a preliminary meeting in February 2007, Annie and I started sharing design ideas and, with my experience, I could tell her if the designs she and Valerie wanted would work.

Things really started rolling last August, and we worked together until October to make a standard template for pages that would be consistent, handicap-accessible, and logically arranged so they would be easy to maintain. In addition, since I felt it was important to start using the new design right away vs. updating everything first, I devised a way to access existing web pages embedded in the new interface.

When the revised design went public in early November, only a few of the pages were totally new, but, since then, Valerie and Annie have reworked more and more material. Keeping web pages current is a never-ending chore, so I'm really pleased that Annie is able to use the template and update pages as her schedule allows. I am now basically "out-of-a-job" and very proud of the result.

A worthwhile project takes a lot of thought, planning, and execution, but the results are rewarding! We hope you enjoy using the KEEP website at <http://www.k-state.edu/konza/keep/>.

-- Nancy Calhoun, Docent



KEEP web site recognized again!

The new NISTAC (National Institute for Strategic Technology Acquisition and Commercialization) facility is a KSU affiliate responsible for licensing the university's intellectual property (<http://www.k-state.edu/tech.transfer/NISTAC/index.htm>). They have developed a display of innovation occurring at K-State and the Konza Environmental Education Program's website was selected as one of the innovations to showcase.

The tiled images from the website under Science Adventures on Konza Prairie <<http://www.konza.ksu.edu/>> were arranged as a collage with a short write-up and included under the heading "...searching for innovative ways to enhance student education". Director Ruth Nellis encourages us to stop by the new facility (just off North Manhattan Avenue) to take a look at the display.

Docent in-service training: Greater Prairie Chicken Observation



Docents are invited to experience the booming of the prairie chickens as they celebrate the spring mating season. Join docent guides, Doris Burnett, Chod Hedinger and Hoogy Hoogheem, in the observation blind March 15 through April 15. We are limited to eight persons in the observation blind each morning, so get your reservation in early! If you bring a friend, their fee is \$15. Share this unique opportunity with friends and neighbors! Direct them to the KEEP website (Visit Us, Events) for full details.

Are you interested in joining Doris, Chod and Hoogy to help guide prairie chicken tours for the public? Sign up to shadow an experienced guide and give it a try this spring.

Contact Annie Baker for more information or to reserve your space, 785-587-0381 or keepkonza@ksu.edu.

Who do you GoodSearch for?

What if Friends of Konza Prairie earned a penny every time you searched the Internet? Now we can! Start using GoodSearch today for all your Internet searches and help raise much-needed funds.

GoodSearch is a Yahoo!-powered search engine with a unique social mission. Half of its advertising revenue, about a penny per search, is donated to non-profit organizations and schools selected by its users. Neither you nor Friends of Konza Prairie spend a dime!

The pennies quickly add up. For example, if 500 Friends of Konza Prairie supporters searched just four times a day, we would receive an estimated \$7,300 per year to help fund our programs which support Konza Prairie Biological Station and the Konza Environmental Education Program.

What's great is that you use GoodSearch just as you would any search engine and it's powered by Yahoo! so you get proven, high-quality results. Just go to www.goodsearch.com and be sure to enter "Friends of Konza Prairie" as the charity you want to support.

Make a difference for Friends of Konza Prairie simply by changing the way you search the Internet! The more people who use this site, the more money we'll earn, so please spread the word!



Is your New Year's resolution to become a Quality Docent?

The **Quality Docent Program** recognizes those docents who have completed training in previous years and returned for two in-service trainings and two regular training sessions during new docent training per year to learn more about KPBS/KEEP and tallgrass prairie ecology. Each year this training adds new information, new science activities for SLTER, and new methods to help you help students. To become a **Quality Docent** you may choose any sessions with topics of interest to you or that you know you have missed in the past. Your choices can be made from the schedule of training events that we send out each year or that you can find posted on the KEEP web site.



This year we are recognizing seven docents who fulfilled the Quality Docent requirements for the first time. They are Diane Barker, Clyde Ferguson, Paul Gleue, Garry Harter, Karen Hummel, Cindy Quinlan, and Page Twiss. For their commitment to KEEP, they will receive at the Docent Roundup the new KEEP grasshopper patch as a benefit of being a Quality Docent. The following docents have completed the requirements two years in a row: Earl Allen, Nancy Calhoun, Gordon Cunningham, Charlie Given, Nancy Goulden, Chod Hedinger, Ted Hopkins, Sue Hunt, Larry Loomis, Jim Morrill, and Ann Murphy. They will receive the new "Docent Excellence" button at Roundup. A total of 18 docents fulfilled the requirements in 2008. Another eight people missed the requirements by only one return training session. Five of these were Quality Docents in 2006.



Tallgrass Gazette

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Docent Roundup:

The Docent Committee, Annie, and I are planning a great 2008 Docent Roundup on **January 26. at 9.00 a.m.** our speaker will be Dr. Brett Sandercock. The title of his presentation is...

“The Effects of Wind Power Development on the Greater Prairie Chicken.”

After refreshments there will be announcements, slide shows, trivia quizzes, and give-aways. If you have a special vest or hat decorated with Konza or prairie stuff, wear it and win a prize! As our first “official” **Konza Quest** (you will hear more about this at Roundup), Chod Hedinger invites you to hike the prairie with him, so come prepared with proper clothes and a lunch. See you then!

=Valerie=

