

# The Natural Enquirer



FORT HAYS STATE UNIVERSITY DEPARTMENT OF BIOLOGICAL SCIENCES

Volume 10, Issue 1

Fall Semester, 2011

## Biological Sciences Office Manager Retires after 17 Years



Sheila Pfeifer (left) and Karen Diehl (right) together at their retirement party

Sheila Pfeifer, Senior Administrative Assistant for the Biological Sciences Department since August 1994 retired October 28<sup>th</sup>, 2011. Ms. Pfeifer, who was born and raised in Beloit, KS,

made her home in the Great Bend, KS, area until she settled in Hays with her husband Ray in 1994.

Ms. Pfeifer states that she misses the department, the people, and the challenge of creating systems that lead to efficiency in running the department behind the scenes. She does have much to look forward to in her retirement including travel to see her grandchildren and other family, mosaic crafting, and

“the freedom to do whatever I want.” She and her husband Ray remain die-hard FHSU fans and plan to continue attending sporting events as often as able.

After seventeen years as the face of the Biological Sciences Department, Ms.

Pfeifer says she is most proud of the fact that “I feel like I kept the Biology Department on top of things and was able to absorb all of the changes over the years. I incorporated them into the Department and made them work.” Most of the Department was unaware of how much she was doing behind the scenes, which indicates what a great job she did; she made it look easy!

The Department appreciates her 17 years of service and misses her smile and efficiency, but wishes her good luck and happy retirement!

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## Albertson Hall Custodian retires after 11 years

Karen Diehl, Albertson Hall custodian for 11 years (and FHSU employee since 1996) retired on September 16<sup>th</sup>, 2011. Since she arrived, Karen’s smiling face and optimism have become a fixture of the Biological Sciences Department and are missed by faculty and students alike.

Ms. Diehl was born and raised in Hays, graduated with honors from Marian High School (now Thomas Moore Prep) and continued her education at FHSU studying Elementary Education for two years. Marriage to her husband, Ron, changed her priorities, and Mr. Diehl’s career (marketing and retail) provided the couple with many relocation opportunities throughout the

Great Plains. During this period, Ms. Diehl continued her career in facilities care in hospitals, homes for the disabled and other locations. In 1996, they returned to Hays and their permanent home. Ms. Diehl began her FHSU tenure in Sheridan Hall in 1996 and moved to Albertson Hall in 2000. Throughout her career, she maintained her professional demeanor and work ethic, but focused her positive energy, charisma, and kindness on making a difference in the lives of the people with whom she worked. Her optimistic attitude buoyed many a graduate student and faculty member on late-working nights, and she is missed by the Department.

Ms. Diehl

“misses the interaction with students and the people in the department,” and would like to “thank the Biology Dept. for making me aware of the environment and the beauty of nature. I learned a lot about biology.” In her retirement, she looks forward to more time with her husband (she is actually home for supper now!), family and friends, volunteering at church, walking the dog, spending the time outside, reading, and stitching. The Department misses Karen Diehl and her shining smile, but wishes her a happy and relaxing retirement!

# Your New BFF: A Celebration of the Endangered Black-footed Ferret

By Andrée Brisson

On November 7<sup>th</sup>, The Sternberg Museum hosted an all-day event to celebrate the 30<sup>th</sup> anniversary of the re-discovery of the endangered black-footed ferret, as well as the 20<sup>th</sup> anniversary of its reintroduction. As almost 1,500 guests viewed a live black-footed ferret on display, the event is chronicled as record-breaking for the most people in one day to see a bff! Event highlights included presentations by wildlife biologists Dr. Dean Biggins and Travis Livieri, both of whose life work is in ferret recovery.

The black-footed ferret, or *Mustela nigripes* (family *Mustelidae*) is endemic to the Great Plains region. It was thought to be extinct in the 1970s until a small population was found in 1981 near Meeteetse, Wyoming. The population declined precipitously soon after its re-discovery due to sylvatic plague and canine distemper, and so the last 18 remaining individuals were captured and moved to a captive breeding facility.

Today, black-footed ferrets have been released at 19 reintroduction sites in North America,

and approximately 1,000 individuals now occur in the wild in Kansas and other states. Captive-bred ferrets have been reintroduced in their former range in Wyoming, South Dakota, Montana, Arizona, New Mexico, Utah and Colorado. They have also been released in former native habitat in Canada and Mexico.

The decline of the black-footed ferret can be traced to numerous causes. The primary prey of the black-footed ferret, the prairie dog, has been the target of widespread poisoning since the early 1900s. Without a food source, the ferret cannot persist. Habitat loss and disease have further plagued both predator and prey.

The poisoning of prairie dogs continues in Kansas. Statutes allowing local governments the right to enter private property to eradicate prairie dogs have been in place since 1901.



Black-tailed Prairie dogs (*Cynomys ludovicianus*) in western KS.  
Photo credit: Trey Towers

These statutes can be read at [http://kansasstatutes.lesterama.org/Chapter\\_80/Article\\_12/](http://kansasstatutes.lesterama.org/Chapter_80/Article_12/). Petitions to repeal these statutes may be posted at <http://repealer.ks.gov/>. To learn more about the black-footed ferret, visit [www.blackfootedferret.org](http://www.blackfootedferret.org) and [www.prairiewildlife.org](http://www.prairiewildlife.org).

**“SCIENTISTS  
KNOW WE MUST  
PROTECT SPECIES  
BECAUSE THEY ARE  
WORKING PARTS  
OF OUR LIFE-  
SUPPORT SYSTEM.  
~ PAUL EHRLICH .**



Black-footed ferret (*Mustela nigripes*)  
Photo credit: Trey Towers

# Graduate Student News



## Congratulations to MS Candidates Passing their Oral Examinations!

- Jake Olsen
- Victoria Cikanek
- Amanda Cheeseman
- Weston Fleming
- Jordan Hofmeier



## Congratulations to MS Students Successfully Defending their Thesis!

- **Trey Towers:** Alarm-calling and response behaviors of the black-tailed prairie dog in Kansas
- **Justin Anderson:** Influence of habitat heterogeneity on small mammals in the Central Platte River Valley, Nebraska

Justin Anderson(above) and Trey Towers pose with their advisor, Dr. Elmer Finck

### Awards:

Jake Olson received grants from the Kansas Native Plant Society and the Grassland Heritage Foundation. Congratulations Jake!

# Undergraduate Student News

THE UNDERGRADUATE RANGE MANAGEMENT EXAM AND RANGE PLANT IDENTIFICATION TEAMS ARE AGAIN PREPARING TO COMPETE AT THE SOCIETY FOR RANGE MANAGEMENT ANNUAL MEETING IN SPOKANE, WA IN FEBRUARY. TEAM MEMBERS ARE ANDREW PETTIBONE, BRIAN SERPAN AND STASYA BERBER, CO-COACHED BY DR. JORDGE LAFANTASIE AND GRADUATE STUDENT JESSICA CASEY.



Biology Club serving roasted corn and soda at Oktoberfest, 2011. Pictured from left are Andrew Pettibone, Jessica Casey, and Brian Serpan.

## Biology Club ~ Brian Serpan, President

Biology club had a good semester overall. Recruitment was higher than ever and we had many new faces at the meetings. There was a relatively high attendance rate for meetings and people actively participated. General activities this semester included once again selling corn at Oktoberfest, planning activities and

fundraisers, and discussing future opportunities. The club helped with both the Eco-Meet and the Black-footed Ferret Day at the Sternberg Museum of Natural History. Future endeavors planned include the plant sale, possible volunteer help, elections, and much more!

# Undergraduate Feature

## Kyle Broadfoot

Kyle Broadfoot, a junior in the Biological Sciences Department, is originally from Bel Aire, KS. He began his college career at Butler Community College and will complete his studies in Conservation at FHSU. He has always been interested in science and nature; much of his childhood was spent outdoors at the Great Plains Nature Center in Kansas, or with his grandfather in both Indiana and Wisconsin. He determined that biology would be his course of study when he was 14 and had an opportunity to feed stingrays at Sea World. He has not strayed since then.

In addition to rigorous coursework in biology, Kyle has invested considerable time in research. He currently focuses on research in stream ecology

with graduate students Bryan Sowards and Ryan Pinkall searching for mussels, crayfish, and snails.

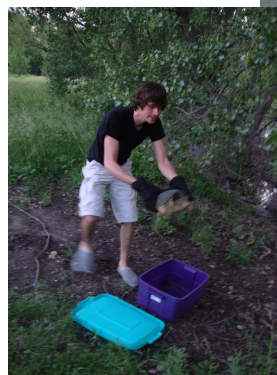
Kyle is well informed regarding the diverse field of biological sciences and has many interests therein. In fact, he advises incoming and younger students in biology to “take a lot of courses that don’t necessarily have to do with your major but that you find interesting. That will help you rearrange your priorities and help you to pursue the direction that you really want in life rather than aligning your interests to a defined ‘major.’” Kyle is following his own advice, and while he is not sure of the details of his direction following graduation, he plans to continue his education and service via an MS, an internship on a

sustainable farm, and work with the Peace Corp and/or academic research in ecology or animal behavior.

Kyle suggests to other biology students that they “read as much as possible” and to engage in research activities, as “the more you can experience the research process the better off you will be throughout your career.”



Kyle Broadfoot working in the field.



**“IF YOU KNOW WHAT YOU’RE INTERESTED IN, FIND FACULTY WITH THE SAME INTERESTS AND GET TO KNOW THEM.” ~ JEFF CARTER, UNDERGRADUATE STUDENT**



Jeff Carter in the field.

## Jeff Carter

Born and raised in Westminster, CO, Jeff Carter continues to cultivate his life-long curiosity about biology as he works toward completion of his BS in Biology (Zoology) at FHSU. As a kid, he states, he was always fascinated by insects. In high school he expanded his biological experience by volunteering at a parrot shelter in the Denver metro area for two years. After attending CSU with a major in microbiology for a period of time, his passion for conservation and behavioral ecology of birds led him to FHSU.

Since his move to Hays, Jeff has become immersed in both his coursework and research.

He has worked for several graduate students on their research, and collaborates with Dr. Greg Farley on his own undergraduate research projects. He recently presented some of his results at the Kansas Ornithological Society Annual Meeting in a presentation entitled “Decline of Black-Capped Chickadee over the Last Decade.”

Jeff has both short- and long-term plans for the future. He plans to begin his MS thesis research at the FHSU Bird Banding Station in collaboration with Dr. Farley prior to his BS graduation, and hopes to disseminate the results of some of his previous research

at the North American Ornithological Conference in Vancouver, BC. Upon completion of his MS, he plans to work toward his PhD focusing on behavioral ecology with birds.

This successful and ambitious student suggests that new undergraduate students work hard to discover their talents and formulate goals. “If you know what you’re interested in, find faculty with the same interests and get to know them. If you don’t know what you’re interested in talk to your advisor or graduate students.”

# Faculty and Student Outreach and Presentations

## Kansas Freshwater Mussel Populations of the Upper Saline and Smoky Hill Rivers with Emphasis on the Status of the Cylindrical Papershell (*Anodontoides ferussacianus*) ~ Jordan Hofmeier

Shea Bergman, graduate of Fort Hays State University (M.S. 1998), conducted a freshwater mussel survey of western Kansas for his thesis. During this survey, he collected one live cylindrical papershell mussel (*Anodontoides ferussacianus*), a thin-shelled, fast-growing species of mussel, on the Saline River and two recently-dead shells from the Smoky Hill River. The species occurs throughout the north-central United States and southern Canada. Kansas and other states have experienced recent declines in the range of cylindrical papershell.

Historically, the species occurred in much of the Kansas, Missouri, Republican, Smoky Hill, Saline, and Solomon river drainages. Based upon Bergman's results, they are currently thought to be relegated to the upper Smoky Hill and Saline rivers. Graduate students Bryan Sowards, Weston Fleming, Jordan Hofmeier, and Ryan Pinkall sought to expand this research on the cylindrical papershell in an independent research project. They received funding from Kansas Department of Wildlife, Parks, and Tourism and sampled through the spring

and summer of 2011. (see *Cylindrical Papershell*, page 9)



From top, counter clockwise: Cylindrical Papershell, Four species of freshwater mussels, Quantitative Sampling and Qualitative Sampling. Photos courtesy of Wes Fleming and Bryan Sowards



"IT'S A LOT OF FUN BEING OUT THERE WITH THE STUDENTS AND CATCHING AND ID-ING STUFF. IT'S ALWAYS FUN." ~ DR. RICH PACKAUSKAS

## BioBlitz at Quivira National Wildlife Refuge

Biological Sciences Students and Faculty participated in the 2011 BioBlitz at Quivira National Wildlife Refuge. Organized by Barry Jones (FHSU volunteers by Dr. Greg Farley), the objective of the event is to find and catalog as many species on the refuge as possible in one 24-hour period (October 14-15).

Participants included Biological Sciences faculty (Drs. Greg Farley, Rich Packauskas, Bill Stark, Jordana LaFantasie, and Elmer Finck), graduate students (Jessica Casey, Chris Baroody, Nina Haro, Brad Bott, and Scott Schmidt) and undergraduate students (Keri Caudle, Kyle Broadfoot, Ryan Cox, Jeff Carter, Brian Serpan, Ryan Shofner, and Adam Rusk). USFWS, Sterling College, other members of the FHSU staff and the general public also participated in the collaborative effort that yielded a species list including 17 herps, 12 mammals, 69 birds, 94 plants, 13 fish, and 80 invertebrates. "It's a lot of fun being out there with the students and catching and ID-ing

stuff. Its always fun," said Dr. Packauskas.

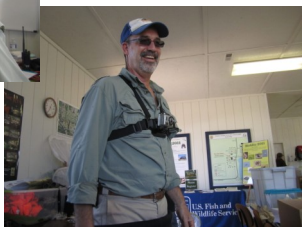
Jeff Carter (undergraduate, zoology) noted that "surveying species in the Quivira NWR shows that there is much greater diversity in Kansas than many people expect."



Chris Baroody (above) and Brian Serpan, Keri Caudle and Jessica Casey identify plant specimens at BioBlitz Central



Dr. Packauskas (above) and Dr. Bill Stark (right, equipped with waders and waterproof camera) ready for a day of biological fun.



# Faculty and Student Outreach and Presentations

## American Society of Mammalogists, Portland, OR, June 2011

Cheeseman, Amanda and Elmer J. Finck. Temporal diet analysis of a declining mesocarnivore, the eastern spotted skunk, (*Spilogale putorius*).  
Also attended by Brian Tanis and Brian Gaston

## Evolution 2011 Meeting, Norman, OK, June 2011

Tetreault, H., C. Rodewald, M. Mendola, R. Goad, J. Olsen, E. McCrea, N. Bello, T. Morgan, R. Wynia, S. Baer, B. Maricle, and L. Johnson. Phenotypic variation of big bluestem ecotypes across the Great Plains precipitation gradient.

## Botanical Society of America Annual Meeting, St. Louis, MO, July 2011

Olsen, Jake T., H.M. Tetreault, R.K. Goad, M.L. Mendola, L.C. Johnson, S.G. Baer, and B.R. Maricle. Photosynthetic variation of big bluestem and sand bluestem influenced by ecotype and precipitation.

Caudle, Keri L. and Brian R. Maricle. Responses of respiration and photosynthesis to spilled oil in coastal wetland grasses.

## North Central Division of the American Fisheries Society Technical Meeting, Davenport, IA, July 2011

Fleming, Weston and Bill J. Stark. Assessment of Aging Structures and Recruitment of Walleye in Cedar Bluff Reservoir.

## Gordon Research Conference on Ecological and Evolutionary Genomics, Biddeford, ME, July 2011

Tetreault, H., M. Gray, C. Rodewald, M. Mendola, R. Goad, J. Olsen, E. McCrea, L. Wheeler, N. Bello, T. Morgan, M. Knapp, P. St. Amand, E. Akhunov, K. Garrett, G. Bai, S. Baer, B. Maricle, L. Johnson. Phenotypic variation and population differentiation of *Andropogon gerardii* along the Great Plains precipitation gradient.

## Ecological Society of America Annual Meeting, Austin, TX, August 2011

Goad R.K., S.G. Baer, L.C. Johnson, B.R. Maricle, H.M. Tetreault, and J.T. Olsen. Patterns in aboveground net primary productivity of an assembling tallgrass prairie.  
Tetreault, H., C. Rodewald, S. Baer, B. Maricle, T. Morgan, R. Goad, J. Olsen, and L. Johnson. Local drought adaptation of the ecologically dominant prairie grass big bluestem *Andropogon gerardii*: Contribution of genotype and environment to phenotypic variation.

## Grasslands in a Global Context Symposium, Manhattan, KS, September 2011

Bryant, J., A. De La Cruz, K. Price, N. An, H. Tetreault, B. Maricle, J. Olsen, K. Caudle, S. Baer, and L. Johnson. Use of chlorophyll fluorescence analysis to detect plant performance in common gardens of big bluestem ecotypes across the Great Plains.

Goad R.K., S.G. Baer, L.C. Johnson, and B.R. Maricle. Patterns in aboveground net primary productivity in prairie reciprocally restored with dominant grasses from across a precipitation gradient.

Goad R.K., S.G. Baer, L.C. Johnson, and B.R. Maricle. Patterns in aboveground net primary productivity in prairie reciprocally restored with dominant grasses from across a precipitation gradient.

Also attended by Jessica Casey, Elmer Finck and Jordana LaFantasie

## Kansas Ornithological Society, Kansas Wetlands Education Center, September, 2011

Jeff J. Carter and Greg H. Farley. Apparent Population Decline of Black-capped Chickadee in Kansas Beginning in the 1980s.

Schmidt, Scott and Elmer J. Finck. Understanding the birds and the trees: Where does quality habitat come from? (Co-winner, Student presentation award)

## Central Plains Society of Mammalogists, Doane College, NE, October, 2011

Calderon, Brandon, Elmer J. Finck, and David Dahlgren. Mesocarnivore use of guzzlers in western Kansas.

Oyster, Jared, Tom S. Smith, Steven T. Partridge, and Ian E. Martin. Assessing black bear (*Ursus americanus*) response to human activity at Kenai Fjords National Park, Alaska.

Cheeseman, Amanda and Elmer J. Finck. Stable isotope analysis of the diet of Kansas Mephitidae.

Also attended by Brad Bott, Nina Haro, Brian Tanis, Brian Gaston, Brian Zinke, and mammalogy class.

## Kansas Herpetological Society meeting, Wichita, November 2011

Talbott, Katie and Greg H. Farley. Sexual selection dynamics in a High Plains population of *Crotaphytus collaris*.

Schmidt, Curtis, WE Meshaka, KM Talbott, and SE Trauth. Reproductive ecology of the eastern collared lizard (*Crotaphytus collaris*) at the northern limits of its geographic range.

## 9th Annual Ecological Genomics Symposium, Kansas City, MO, November 2011

Gray, M., H. Tetreault, C. Rodewald, P. St. Amand, S. Baer, B. Maricle, T. Morgan, N. Bello, R. Goad, J. Olsen, L. Wheeler, E. Akhunov, K. Garrett, G. Bai, and L. Johnson. Evidence for local adaptation and genetic differentiation across *Andropogon gerardii* (big bluestem) tall grass ecotypes occurring along a precipitation gradient.

Bryant, J., A. De La Cruz, K. Price, N. An, M. Knapp, H. Tetreault, B. Maricle, J. Olsen, K. Caudle, R. Goad, S. Baer, and L. Johnson. Remote sensing to detect plant performance in common gardens of big bluestem ecotypes across the Great Plains.

## Annual Meeting of the Entomological Society of America, Reno, NV, November 2011

Packauskas, Richard J. Some bionomics of jumping bristletails (Microcoryphia) and discussion of a new species (*Hypomachilodes forthaysi*) from Kansas.

## Wichita State University Seminar Series in Biological Sciences, Wichita, KS, November 2011

Maricle, Brian R. How do flooding, salinity, and drought influence plants? Themes from coastal marshes and the mixed-grass prairie.

## Midwest Fish and Wildlife Conference, Des Moines, IA, December, 2011

Weston Fleming and Bill Stark. Assessment of Aging Structures and Recruitment of Walleye in Cedar Bluff Reservoir.

Bryan Sowards, Ryan Pinkall, Weston Fleming, Jordan Hofmeier, and Bill Stark. Kansas freshwater mussel populations in the upper Smoky Hill and Saline rivers with emphasis on the cylindrical papershell (*Anodontoides ferussacianus*).

Robert T Angelo, M Steve Cringan, Eva Hays, Clint A Goodrich, Edwin J Miller, Mark Van Scoyoc, Bryan R Simmons (presented by Bryan Sowards). Historical Changes in the Occurrence and Distribution of Freshwater Mussels in Kansas.

## Publications

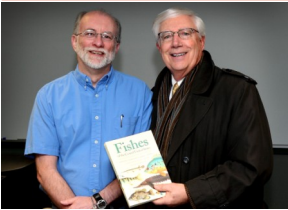
Maricle, B.R. and P.B. Adler. 2011. Effects of precipitation on photosynthesis and water potential in *Andropogon gerardii* and *Schizachyrium scoparium* in a southern mixed grass prairie. *Environmental and Experimental Botany* 72:223-231

Smith, J.J., B.F. Platt, G.A. Ludvigson and J.R. Thomasson. 2011. Ant-nest ichnofossils in honeycomb calcretes, Neogene Ogallala Formation, High Plains region of western Kansas, U.S.A. *Palaeogeography, Palaeoclimatology, Palaeoecology* 308:383-394.

Waring, E.F., and B.R. Maricle. 2012. Photosynthetic variation and carbon isotope discrimination in invasive wetland grasses in response to flooding. *Environmental and Experimental Botany* 77:77-86.

"IF WE KNEW  
WHAT IT WAS  
WE WERE  
DOING, IT  
WOULD NOT BE  
CALLED  
RESEARCH,  
WOULD IT?"  
~ALBERT  
EINSTEIN

# Faculty News



Mark Eberle with President Hammond  
Photo Credit: University staff

## Awards

- Mr. Mark Eberle was awarded the University Outstanding Faculty Research Award for the Fall, 2011 Semester! Congratulations!

- Dr. Elmer Finck was honored for 30 years of service to the State of Kansas! Thank you for your service, Dr. Finck!
- Professor Emeritus Dr. Joseph Thomasson was recently recognized for his contributions to science by Ad Astra Kansas, an affiliate of the Kansas Space Grant Consortium.



Mr. Mark Eberle and Mr. Joe Tomelleri sign books in front of the Sternberg Museum Gift Shop.

Photo Credit: Dr. Bill Stark

Fishes of the Central United States by Mr. Mark Eberle and FHSU Biology alumnus Mr. Joe Tomelleri was published and released in September by University Press of Kansas in Lawrence.

A book signing ceremony took place at the Sternberg Museum of Natural History on Saturday, November 12.

## Alumni News

Patrick Allen Casey (MS 2009) accepted a position as Assistant Manager-Soil Conservationist at the Elsberry Plant Materials Center, USDA-Natural Resource Conservation Service in Elsberry, MO

## Biological Sciences and Art and Design Collaborate on Ant Nest Characterization

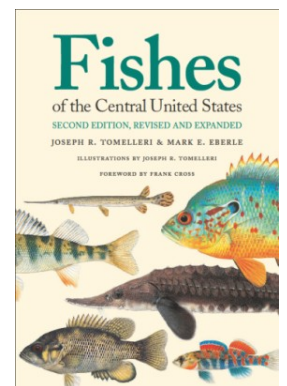
Drs. Richard Packauskas and Joseph Thomasson recently cast a western harvester ant colony; a project that was inspired by a recent publication of co-authored by Thomasson in the journal *Palaeogeography, Palaeoclimatology, Palaeoecology* (see Publications, page 6). “The great part in my opinion,” stated Dr. Thomasson, “was the collaboration we had with Toby Flores (Professor of Sculpture, Department of Art and Design) and his students in the art department. They did a fantastic job and the result was awesome.” This was a preliminary casting and the group may produce a larger cast in the future.



Melting the aluminum (above), pouring aluminum into the ant colony (upper right), completed pour (right) and Tobias Flores (Art) with



## Mark Eberle Holds Book Signing



# Kansas Wetlands Education Center News

~ Curtis J. Wolf, Director

## A Busy Fall Semester for the KWEC

The Kansas Wetlands Education Center has utilized students in the Department of Biological Sciences for several events this Fall. Graduate Wetlands Assistants **Clint Helms, Scott Schmidt, Katie Talbott, and Brian Zinke** help with many of these events, but other graduate students also have donated their time to help make the events successful.

### Second Graders' Wetlands Day



Graduate Students Scott Schmidt and Ryan Pinkall address young students at Second Grader's Wetlands Day  
Photo credit: Art Baker

On September 1, more than 350 2<sup>nd</sup> graders from Barton County spent a day at the KWEC for the 2<sup>nd</sup> annual Second Graders' Wetlands Day. Students rotated through seven breakout sessions, including: Wonderful Wetlands, a Bird Migration Obstacle Course, a Nature Hike, Night Sounds, Water Cycle, a KWEC Scavenger Hunt, and a Hands-on station. Several Graduate Students helped lead several of the stations. **Scott Schmidt, Brian Zinke, Ryan Pinkall, and Megan Rohweder** all helped.

### Mad About Monarchs

Over 100 adults and kids chased monarch butterflies through the fields around KWEC on September 24, during the first annual Mad About Monarchs event. Many were successful, catching, tagging, and releasing about 60 monarchs.

Several Graduate Students helped with the event as Monarch tagging leaders, including **Clint Helms, Brian Zinke, and Victoria Cikanek**.



Graduate student Victoria Cikanek and a young student tagging a monarch butterfly. Photo credit: Pam Martin










### Kansas Ornithological Society Fall Meeting

The KWEC planned and hosted the annual Fall meeting of the Kansas Ornithological Society from September 30-October 2. Attendees were treated to an evening social, paper presentations, a silent auction, a banquet, and a keynote address by Chris Wood, program coordinator with Cornell's EBird. Undergraduate students, graduate students, and faculty that presented and/or helped during the event were **Elmer Finck, Greg Farley, Scott Schmidt, Jeffrey Carter, Victoria Cikanek, Katie Talbott, Brian Zinke, and Clint Helms**.

### Top 20 Birds of Cheyenne Bottoms ID Cards

The KWEC, in conjunction with The Nature Conservancy, received funds from the Chickadee Checkoff Program to develop and print a series of wildlife identification cards. In September, the first card, The Top 20 Birds of Cheyenne Bottoms, was printed. **Scott Schmidt** designed the card, an 8.5x11, laminated card that includes photos and descriptive text of common birds visitors might see while they travel through Cheyenne Bottoms. The cards are sold in the KWEC Wetlands Gift Store. Cards featuring other common wildlife are planned for future printings.

**TOP 20 Birds of Cheyenne Bottoms**

<b>American Avocet</b> <i>Recurvirostra americana</i>  Length: 12" - 16" wingspan: 22" Habitat: Shallow wetlands, mudflats	<b>Killdeer</b> <i>Charadrius vociferans</i>  Length: 12" - 16" wingspan: 22" Habitat: Shallow wetlands, prairie grasslands, fields	<b>Ring-billed Gull</b> <i>Larus delawarensis</i>  Length: 12" - 16" wingspan: 22" Habitat: Open water, rocky shorelines	Some people call all gulls sea gulls, but the Ring-billed Gull is most at home around lakes and marshes within Kansas. This is our most common gull at Cheyenne Bottoms and this species may be found nearly every month of the year.
<b>Mallard</b> <i>Anas platyrhynchos</i>  Length: 17" - 21" wingspan: 30" Habitat: All water environments	<b>Northern Shoveler</b> <i>Anas platyrhynchos</i>  Length: 17" - 21" wingspan: 30" Habitat: All water environments	<b>Blue-winged Teal</b> <i>Anas diahalia</i>  Length: 12" - 16" wingspan: 22" Habitat: All water environments	This small duck migrates farther than most other ducks. Some spend the summer in the marshes of southern Canada and spend the winter in Central or South America. They have a pinkish-brown wing pattern and males have a distinct white crescent moon behind their tail.
<b>Canada Goose</b> <i>Branta canadensis</i>  Length: 24" - 30" wingspan: 40" Habitat: Marshes, fields, grasslands	<b>American Coot</b> <i>Fulica americana</i>  Length: 12" - 16" wingspan: 22" Habitat: Shallow wetlands	<b>Common Nighthawk</b> <i>Nyctaleus vociferans</i>  Length: 12" - 16" wingspan: 22" Habitat: Open areas, fields, grasslands	<b>Abundance Codes</b> a - abundant 100/day c - common 10-100/day u - uncommon 1-10/day n - not present <b>Seasons Key</b> Spring (March-May) Summer (June-Aug) Fall (Sept.-Nov) Winter (Dec.-Feb) <input checked="" type="checkbox"/>

At least 327 of 472 species of birds known to occur in Kansas have been recorded at the Bottoms. The Cheyenne Bottoms basin is a 41,000-acre wetland located in Barton County, Kansas. The protected lands consist of the 10,887-acre Cheyenne Bottoms Wildlife Area managed by the Kansas Department of Wildlife, Parks, and Tourism and the 7,850-acre Cheyenne Bottoms Preserve managed by The Nature Conservancy.  
© 2011 - Photos courtesy of Bob Jones. Text by Robert Penner and Curtis Wolf. Design by Scott Schmidt.

The Nature Conservancy  
KANSAS WETLANDS EDUCATION CENTER  
Kansas Department of Wildlife, Parks and Tourism

Cheyenne Bottoms ID cards are available in the KWEC Wetlands Gift Store. Look for more editions in the future!



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Phone: 785-628-4214

**We're on the Web!**  
[www.fhsu.edu/  
biology](http://www.fhsu.edu/biology)

## Range Plant Identification Fieldtrip ~ a photo essay



The field trip participants (Brian Serpan, Matt Nordgren, Jake Olsen, Chris Baroody and Scott Schmidt) with Dr. Jordge LaFantasie visited rangeland ecosystems throughout New Mexico and Southern Colorado in September



## Cylindrical Papershell (continued)



(continued from page 5). Qualitative samples were collected at 38 sites within the Smoky Hill and Saline rivers. Each site was selected by proximity to previous collection sites of cylindrical papershells or by presence of shell material. Five sites were sampled quantitatively based on higher catch-per-unit-effort of cylindrical papershells. Mussels were tagged and released to assume independent samples. A

lected in fine to coarse gravel substrates in run habitats near riffles, beaver dams, and lowhead dams. These surveys indicate a relatively small population of cylindrical papershells in the two rivers. Although few mussels were collected, representatives of various sizes indicated recent recruitment.

The results of this study will be presented at the Midwest Fish and Wildlife Conference, Kansas Natural Resources Conference, and Interior Highlands Mollusk Conservation Meeting. This research would not have been possible without the field assistance from the following FHSU biology students: Kyle Broadfoot, Ryan Cox, Jordan Voss, Matt Nordgren, Kaden Buer, Clinton Helms, Rance Shreibvogel, and Kevin Klag.



Cylindrical papershell on left, mapleleaf on right (top), Tagging a cylindrical papershell (center) and the sampling crew (bottom right). Photos courtesy of Bryan Sowards and Wes Fleming

total of 117 hours yielded 22 live individuals; too few to discern habitat associations. The majority of cylindrical papershells were col-