



The Glade

*Newsletter of the Missouri Chapter of
The Society for Conservation Biology:*

Volume 15 Winter 2012 - 2013



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ANNUAL MEETING AT MNRC!

The Missouri Chapter of the Society for Conservation Biology will hold its annual meeting on Wednesday, January 30th at 3:30 pm in the Redbud Room at Tan-Tar-A Resort in Osage Beach. Our meeting is just prior to the “Speed Networking” session and Student Job Fair at the [Missouri Natural Resources Conference](#). This is a new meeting time, so as not to conflict with the chapter meetings of the MNRC organizing Societies. Join us!!



Society for Conservation Biology

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The Missouri Chapter of the Society for Conservation Biology

is pleased to announce the Ninth Annual

Student Poster Competition

At the [Missouri Natural Resources Conference](#)
6:30 – 8:30 p.m. Wednesday, January 30, 2013

The Missouri Chapter of the Society for Conservation Biology encourages and recognizes quality student research that has explicit conservation applications. For the past eight years, we have sponsored a student poster competition at the Missouri Natural Resources Conference (MNRC).

The competition is open to all undergraduates, graduate students, or recent graduates whose posters are accepted for MNRC 2013. **The student must be the first author and the designer of the poster.**

Judges will rate each poster during the Wednesday evening poster session. Posters will be evaluated on research quality, presentation quality, and **conservation relevance**. **The poster should explicitly state the conservation applications of the research.**

First Place: \$250 cash to support your studies and research

Second Place: A one-year membership in the Society for Conservation Biology, including online access to the journals *Conservation Biology* and *Conservation Letters*.

Both students will be invited to write an article for our chapter newsletter *The Glade*.

To enter the competition, email your MNRC-accepted abstract, school affiliation, email address and telephone number **by January 18th, 2013** to:

Amy Buechler, amy.buechler@mdc.mo.gov. For more information contact Amy at 573-751-4115

Nominations sought for MOSCB 2013 Board of Directors

Beef up your CV! The following offices are open for nomination. Terms of office begin one month after the election (March 1, 2013) and are for one year. All MOSCB officers must join the Society for Conservation Biology. Other than that, we are simply looking for dedicated, organized individuals to serve in the following roles:

- **President:** responsible for overseeing day-to-day operations of the Chapter, organizing and presiding over meetings, representing the Chapter to SCB, and submitting required annual reports to SCB.
- **Vice-President:** performs the duties of the President when the latter is absent and coordinates the annual Silent Auction.
- **Secretary:** records minutes, administers correspondence between the Chapter and the Society, oversees elections, and maintains a roster of members.
- **Treasurer:** collects dues, maintains accounts, and collects and distribute funds for Chapter activities. The Treasurer reports on the financial activities and status at Chapter at meetings and coordinates the annual student poster contest.
- **Chair of the Conservation Committee:** seeks submissions to and edits *The Glade*, the twice-yearly Chapter newsletter.

ELIGIBILITY TO VOTE

Are you a VOTING member of MOSCB?

In order to be a *voting* member of the Missouri Chapter, you must join the larger Society for Conservation Biology (SCB). Join now: <http://www.conbio.org/membership/become-a-member>. Annual dues for the SCB are \$80 for working professionals and \$20 for students/retirees.

Submit nominations (you may nominate yourself) to MOSCB Secretary Gopala Borcherlt gopala@trlwq.org by January 22, 2013.

Elections will be held at the MOSCB Annual Chapter Meeting on January 30th at 3:30 pm in the Redbud Room at Tan-Tar-A Resort in Osage Beach, Missouri. Ballots will be emailed to voting Chapter members on approximately January 23rd, one week prior to elections. **If you cannot attend the meeting at MNRC, you may vote via absentee ballot by emailing your completed ballot to Gopala by 5 p.m. Tuesday, January 29th.**

EDUCATIONAL OUTREACH IN SMALL AND FRAGMENTED NATURAL AREAS

Stephanie Schuttler

The students at Two Mile Prairie (TMP) Elementary School in Columbia, Missouri have rarely been to their outdoor classroom. Built 30 years ago, it is roughly an acre-sized plot of land consisting of a forest, pond, and remnant native prairie from its original two-mile squared size the school is named after. Fifth grade teacher Robert Allen would ask the students how often had they been to the outdoor classroom. “Once, maybe two times,” they would say. “Last year?” he would respond. “No. In our lives.” Allen wanted to see that change, and being part of the GK-12 program would help make that change.

GK-12 is a National Science Foundation program that integrates graduate level scientists into K-12 classrooms. The ShowMe Nature program is based at the University of Missouri under Dr. Candace Galen and Dr. Anna Waldron and matches scientists with teachers in 4th and 5th grade classrooms. A unique feature of the ShowMe Nature program is that it allows the elementary students to write their own “mini-grants” for any long-term research project with expenses up to \$1,000. At TMP, the choice was obvious to do something outside. I was lucky enough to be the scientist at this school and we developed the idea to use remote wild-



A bobcat using one of the natural trails in the forested habitat.

life cameras to study the animals that use the outdoor classroom.

The students quickly got to work developing their proposal. Both classes of approximately 25 students each worked in small groups. Each group contributed to the

EDUCATIONAL OUTREACH (CONTINUED)

writing of different sections of the mini-grant proposal. A research associate at the University of Missouri, Abby Isabelle, who used wildlife cameras for her Masters research, visited the school so the students could interview her. They held a “press conference” and asked her questions about camera costs, quality, set-up, and experimental design. The students decided to request six infrared cameras in their proposal so that two could be placed in each type of habitat; pond, prairie, and forest. They decided against flash cameras so that any animals would not be scared away.

The project was funded, and in December of 2011 right before holiday break, the cameras were all set up. Being a scientist, I was skeptical as to the types of animals we would detect.

While the students thought we would capture exciting photos of mountain lions chasing deer, I was a little more reserved. I thought our cameras would yield quality data on squirrels, Eastern cottontails, white-tailed deer, and other more common animals. However, I was wrong and was really surprised by what species we did find in these habitat fragments. Over the course a year, we did detect those common species, but also found red and grey fox, coyotes, a bobcat, opossums, and a mink. We also found several species of birds including impressive aggregations of red-winged black birds and European starlings.

What I was most surprised and impressed by was how many learning opportunities existed from such a small patch of different habitats. When sorting through the photos, the students learned to develop their eye towards detail. They would pay close attention to the date and time the photos were taken to make sure they were identifying separate individuals. They have learned the difference between Inference and evidence and are no longer guessing what the animals are doing, but using evidence from the photos to support their statements. They are learning how to organize, enter, and analyze large amounts of data. This project has extended beyond sci-



A female white-tailed deer investigating our camera near our pond.

EDUCATIONAL OUTREACH (CONTINUED)

entific learning to other subjects, including writing, reading, and math; it could be extended to art (drawing animals and nature) and geography (understanding animals' ranges) among other subjects.

As a conservation biologist, the aspect of this project that I find most satisfying is that it opens doors to understanding conservation biology and having respect for the natural world. The students tend to favor the larger animals, especially carni-



A coyote stands stoically in front of the prairie habitat.

vores, but often have less of an understanding on the smaller species. By working with the cameras in the outdoor classroom, the students have a better understanding of the ecological role of each species.

They may really like coyotes, but now understand that the prey species that the coyotes hunt live in the prairie grass which provides protection for those prey animals. They are excited by each new species seen, regardless of how large or small. They are learning

to take care of their outdoor classroom by not littering and by picking up trash they find when they change the memory cards in the cameras. They learn about native and invasive species (such as the European starlings), and have even begun restoration in their prairie this year through burning and re-seeding with native grasses and wildflowers. Most importantly, they are learning that there is a hidden world of diverse species that live in a small area right next to their school where hundreds of kids spend the day.

ABOUT THE AUTHOR

Stephanie Schuttler is a postdoctoral fellow in the Department of Fisheries & Wildlife at the University of Missouri in Columbia. Her research interests include conservation biology, animal behavior, and molecular ecology. Contact her at schuttlers@missouri.edu

THE GULF COASTAL PLAINS AND OZARKS LANDSCAPE CONSERVATION COOPERATIVE

John Tirpak

Landscape Conservation Cooperatives (LCCs) are applied conservation science partnerships that address large-scale natural resource challenges which transcend political and jurisdictional boundaries. The 180-million-acre Gulf Coastal Plains & Ozarks LCC centers around the lower Mississippi Alluvial Valley and the north Gulf Coast, including all of Arkansas and Mississippi and parts of 10 additional states.

The mission of the GCPO LCC is to create a shared vision for sustainable natural and cultural resources in the face of a changing climate and other threats, and to foster the achievement of that vision with evaluation and refinement over time.

The GCPO LCC network of science and land management partners is working to leverage, complement, and coordinate conservation action across a huge landscape. The GCPO LCC provides a forum and the communication capacity to integrate its many conservation partners and to build a common conservation vision for its landscape and, in collaboration with neighboring LCCs, for the entire Southeastern United States. The LCC builds upon existing efforts whenever possible, promoting consistency and standards for scientific information, and avoiding duplication of effort.

The GCPO is currently identifying knowledge gaps that hinder conservation of large functioning ecosystems and developing the information most needed to improve natural and cultural resource management. In particular, the LCC is focusing on development of down-scaled climate change data, future urbanization projections, consistent land cover classifications, and vulnerability assessments that will be shared via a common Conservation Planning Atlas. Eventually the GCPO will promote use of these and other data by developing decision support tools for resource managers, planners and others.

MORE INFORMATION

[Gulf Coastal Plains and Ozarks LCC](#)

[GCPO Factsheet](#)

[Nov/Dec 2012 GCPO Newsletter](#)

[National LCC Network](#)

ABOUT THE AUTHOR

John Tirpak is the Science Coordinator for the Gulf Coastal Plains and Ozarks Landscape Conservation Cooperative. He lives and works in Lafayette, LA. Contact him at john_tirpak@fws.gov

A RIVER RUNS THROUGH IT: HYDROGEOMORPHIC RESTORATION AND PUBLIC-PRIVATE PARTNERSHIPS BUILD A FUTURE FOR THE BIG MUDDY

Ashley Spratt

Cutting edge research funded by Landscape Conservation Cooperatives (LCCs) in the Midwest, coupled with on-the-ground conservation and management through public-private partnerships, is building a future for the lower Missouri River.

The [Plains and Prairie Potholes LCC](#) and [Eastern Tallgrass Prairie and Big Rivers LCC](#), charged with identifying priority science needs to combat landscape scale natural resources threats, joined forces this year to support the *Lower Missouri River Hydro-geomorphic Restoration and Management Project*. This project will inform more effective conservation and management across 670 miles of the Missouri River from Decatur, Nebraska to St. Louis, Missouri.

The lower Missouri River, the largest free-flowing river reach in the United States, encompasses nearly 1.5 million acres of bottomland habitat for fish, wildlife and plants, while providing commercial transportation and recreation opportunities. Since European settlement, the Missouri River has been highly altered due to upstream reservoirs, water control and flooding events.



During the extended flood of 2011, flood waters seeped into farmlands which were once historic channels of the Missouri River. Results of this research will help land managers identify areas readily connected to the river that could provide critical shallow water habitat for a diverse range of aquatic animals from freshwater mussels to the federally endangered pallid sturgeon. Photo by USFWS.

"We are gathering the data in layers, piecing together the geology, soil structure, topography, and finally, the hydrology of the river. What was the nature of the river before it was altered, including its dynamics, and seasonal and long-term patterns?" said Mickey Heitmeyer, lead researcher for the LCC project. "Once we have that data, we map it, layer over layer, and compare it to current day conditions."

A RIVER RUNS THROUGH IT (CONTINUED)

On-the-ground private landowners and natural resource managers, like those representing the U.S. Fish and Wildlife Service's [Partners for Fish and Wildlife Program](#) and [Missouri River Recovery Program](#), national wildlife refuges, state parks, and many others, will be able to use the data generated by this research to inform strategic land acquisition, land protection and restoration.

"For landowners who participate in the Partners for Fish and Wildlife Program, we explain that we are trying to restore historic habitats which have been lost to benefit migratory birds and resident wildlife," said Kelly Srigley-Werner, program coordinator in Missouri. "The hydrogeomorphic restoration project will really help us target strategic areas to get back what used to be on the landscape and will be a powerful tool we can use to effectively demonstrate and communicate with landowners."

The lower Missouri River contains countless conservation properties and efforts maintained by local, state and federal agencies, nonprofit groups and private entities. National wildlife refuges,



Voluntary landowners that are part of the Missouri/Mississippi Rivers Confluence Conservation Partnership replace native prairie cordgrass on private properties restoring historic wet prairies. Photo by USFWS.

state parks, conservation areas and other publicly owned properties can use the maps that are developed through the hydro-geomorphic analysis to guide land acquisitions, and restoration efforts in the face of evolving natural resources challenges like climate change, energy development and shifts in agricultural practices.

This year the Missouri/Mississippi Rivers Confluence Conservation Partnership - a Partners for Fish and Wildlife collaboration- was recognized by the Department of the Interior as a signature demonstration of partnering for America's Great Outdoors Riv-

A RIVER RUNS THROUGH IT (CONTINUED)

ers Initiative, bringing together private landowners, conservation organizations, and public natural resources agencies to promote a balance between fish and wildlife habitat and agriculture and community development.

Since 2004, the Missouri/Mississippi Rivers Confluence Conservation Partnership has restored and enhanced more than 21,000 acres of private land, and protected more than 8,000 acres of wetland habitat on private land across Pike, Lincoln, St. Charles and St. Louis counties.

“Our property has great interest in habitat conservation for waterfowl and other wildlife. We have been fortunate to have a trusting relationship with Ducks Unlimited, the U.S. Fish and Wildlife Service and other partners to help design and improve our lands through the Partners for Fish and Wildlife Program,” said private landowner Warren Hager. “The support this partnership provides has enabled our habitats to be more diverse, and our relationships have allowed us to rely on expertise when we need it.”

Leaning on the results of this cutting edge LCC research will improve scientific understanding about the lower Missouri River and provide a tool for the conservation community to put the right conservation efforts in the right places, for the right reasons, ultimately allowing for maximum return on conservation investments.

MORE INFORMATION

[Missouri/Mississippi Rivers Confluence Conservation Partnership](#)

[Hydrogeomorphic Restoration and Management project](#)

[Eastern Tallgrass Prairie and Big Rivers LCC](#)

[Plains and Prairie Potholes LCC](#)

ABOUT THE AUTHOR

Ashley Spratt is a public affairs specialist with the U.S. Fish and Wildlife Service. She coordinates communications for Landscape Conservation Cooperatives across the Midwest region. Ashley is a graduate of the Missouri School of Journalism and has worked for the Service for 6 years in Minneapolis and Missouri. Contact her at ashley_spratt@fws.gov

MOSCB 2012 Student Poster Contest Winners at MNRC

First place of \$500 was awarded to Brittanie Selby of Lincoln University for her poster, *Effects of wick-applied herbicides on invasive sumac and desirable forbs in Missouri prairies*. Second place was awarded to Jake D.A. Faulkner of the University of Missouri-Columbia for his poster, *Effects of season on microhabitat selection of Niangua darters*. Jake received a one-year membership in the Society for Conservation Biology, including online access to the journals *Conservation Letters* and *Conservation Biology*.

Donate items for our annual Silent Auction

Our silent auction at Missouri Natural Resources Conference is our primary fundraiser. Please consider donating items (books, wine, framed prints or photographs, etc). If you are attending MNRC, you can bring your items to our booth in Wingate hall on Wednesday afternoon, January 30th. To arrange transport of items to MNRC, contact Stephanie Schuttler: schuttlers@missouri.edu

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SUPPORT MOSCB!

Annual membership in the Missouri Chapter is just \$5.00! Please send a check payable to MOSCB to Amy Buechler, Treasurer, MOSCB, c/o MDC, PO Box 180, Jefferson City, MO 65102.

Contact Amy with questions:
amy.buechler@mdc.mo.gov, 573-751-4115



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Students \$30
Others \$65/\$85

PARTING SHOT

Echinacea pallida by Kim Chojnacki



SOCIETY FOR CONSERVATION BIOLOGY AND THE MISSOURI CHAPTER

The Society for Conservation Biology (SCB) is an international professional organization of more than 5000 resource managers, educators, government and private conservation workers, and students world-wide. We promote the scientific study of phenomena that affect the maintenance, loss, and restoration of biological diversity. www.conbio.org

The Missouri Chapter of SCB promotes communication among conservation biologists throughout Missouri. Annual membership in the Missouri Chapter is \$5.00, and includes electronic delivery of *The Glade*. See page 11 for details.