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Nature Research Center highlights FWCB work

ADDITION TO THE NC MUSEUM OF NATURAL SCIENCE FEATURES WORK OF NC STATE GRADUATE STUDENTS

The North Carolina Museum of Natural Sciences just completed a giant addition that includes the largest globe in the world and a new laboratory where FWCB faculty and students share their research with the eager eyes of museum visitors.

The Nature Research Center (NRC) is a new 80,000 ft² LEED green building in the heart of Raleigh. The centerpiece of the NRC is the Daily Planet, an immersive, high-definition, multi-media space that hosts amazing nature videos, as well as presentations by scientists to museum visitors and K-12 schools connected through the internet. Flanking the theater are five active research labs and four interactive labs. Museum visitors can enter the interactive labs and join hands-on activities ranging from microscopes to animal skeletons and the latest virtual reality visualizations. The research labs are not open to the public, but do involve dozens of students, interns, and volunteers in cutting edge science around five different centers: Biodiversity, Genomics, Veterinary Medicine, Astronomy and Paleontology. Each research lab has tight connections to North Carolina Universities, collaborating on research, teaching, and community outreach.

FWCB Professor Dr. Roland Kays is the director of the Biodiversity Lab, and has involved a number of wildlife students in his research on the ecology and conservation of mammals and birds. Students working in the lab have the opportunity to interact with museum visitors, who watch the lab work through a long glass wall that separates the working lab space from the museum exhibits. For example, FWCB undergraduates Rebecca Ovens and Allison Stewart helped volunteers run camera traps to survey backyard wildlife as part of the Great Chicken Coop Stakeout. Rebecca is continuing now on a study mapping color variation in eastern coyotes, along with FWCB student Summer Higdon. Also, wildlife graduate students are taking advantage of the premium lab space for their bench work, including graduate student Morgan Elfelt’s study of coyote diet and Steven Grodsky’s study of insects associated with various types of ground cover in managed forests.

Connections between the NRC and NCSU extend throughout the other fields of study as well. The center’s Director and forest canopy expert, Dr. Meg Lowman, and the Director of the Paleontology Research lab, Dr. Lindsay Zanno, both hold joint appointments in the Biology Department, while the center’s Director of Science Communication, Dr. David Kroll, is jointly appointed with the NCSU English Department. The Museum’s vet staff have a long history of collaborating with the NCSU Veterinary School, and students are often involved in the daily animal check-ups that can be seen in the Vet Research Lab on the second floor of the NRC.

The NRC opened on Earth Day of 2012 to a crowd of 70,000 and expects to host over 1 million visitors over the year. This is a great opportunity not only to show visitors the types of research being conducted by FWCB, but also to train our students how to communicate their science with the public.
Dr. Kays leads week of wildlife surveys in South Mountains

FWCB professor Dr. Roland Kays led a week’s of wildlife surveys in South Mountains State Park and Game Lands. The goal was to use distance sampling to estimate the density of deer to compare with simultaneous estimates from camera trapping. Night-drives cruised the park’s back-roads with spotlights armed by FWCB volunteering students Jason Whited, Tyler Moody, Joshua Bivens. Monica Chen, Meghan Lob-singer, Daniel Carlin, and Lindsey House. Although camera traps had recorded numerous wildlife species, the spotlighting revealed a low density of deer, and one opossum.

Spotlighting revealed a low density of deer and one opossum.

eMammal project uses citizen science to document wildlife

Camera traps are a fun way to explore the wildlife in any forest, and offer a photographic voucher of what species live at a specific spot. A new research project led by FWCB Professor Dr. Roland Kays, in collaboration with the Smithsonian Institution, is working with citizen scientists to run camera traps and contribute the data and images to a central repository that can be used to better understand the broad scale abundance and diversity of mammals. This new project, eMammal, started in 2012 with volunteers (including FWCB student Alix Robins and Michael Biggerstaff) running camera traps in South Mountains State Park and Game Lands, Stone Mountain State Park, and Thurmond Chatham Game Lands. In 2013, eMammal will be looking for additional volunteers to run cameras in Eastern NC (Spring) and the Smokey Mountains (Fall). Follow the project at www.facebook.com/eMammal.

Battling bucks.

Coyote captured on camera.
THE 2012 FREDERICK AND JOAN BARKALOW DISTINGUISHED CONSERVATIONIST LECTURE

DR. PAUL KRAUSMAN

“W4: WILDLIFE WARS IN THE WEST”

On 31 October 2012, Dr. Paul Krausman gave the 2012 Frederick and Joan Barkalow Distinguished Conservationist Lecture. The lecture was titled, “W4: Wildlife Wars in the West.” The lecture was well attended.

ABSTRACT

Before water was described as a limiting factor, wildlife managers and biologists in the arid Southwest assumed that the availability of free-standing water was a primary factor limiting the distribution, productivity, and recruitment of desert ungulates. As a result, wildlife management agencies and sportsman organizations invested significant time and resources in the construction and maintenance of water catchments. Recently, the efficacy of these catchments has been questioned and their construction and subsequent use by wildlife has become controversial. The presentation will outline the controversy water plays in the management of desert bighorn sheep and describe the results of an experiment in which water catchments were removed from an entire mountain range.

BIOGRAPHY

Dr. Paul R. Krausman is the Boone and Crockett Professor at the University of Montana and Past President of The Wildlife Society. He has received many awards, including the Leopold Medal from The Wildlife Society. Dr. Krausman has written 7 books, 5 monographs, 26 book chapters, and over 200 peer-reviewed articles. He has taught an array of wildlife related courses throughout his career and has accepted 7 Boone and Crockett Fellows working on mule deer, mountain goats, bison, caribou, wolves, and black bears.

Photos courtesy of Paul Krausman

Dr. Paul Krausman presented his lecture on October 31.

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Desert bighorn sheep.
Research Publications


Harris, J. E., and J. E. Hightower. 2012. Demographic population model for American shad: will access to additional habitat upstream of dams increase population sizes? Marine and Coastal Fisheries: Dynamics, Management, and Ecosystem Services 4:262-283.


**Book Chapters**


**Research Presentations**


Extension and Outreach


Popular press


ORGANIZATIONS AND OPPORTUNITIES

North Carolina State University Fisheries, Wildlife, and Conservation Biology students and faculty are active in a number of peer and industry organizations devoted to aspects of Fisheries, Wildlife, and Conservation Biology.

The Leopold Wildlife Club offers students the opportunity to network and learn from professionals in wildlife science and management. Meetings are held twice a month and typically feature speakers on a variety of topics. Past speakers have included falconers, fishing guides, taxidermists, decoy carvers and more.

The Student Fisheries Society is a sub-unit of the North Carolina Chapter of the American Fisheries Society. It encourages the exchange of fisheries and aquatic science information among students, faculty and regional professionals while also providing career guidance to students. The American Fisheries Society is the oldest and largest not-for-profit professional society for government, academic and industry scientists associated with conservation, development and management of fishery resources in North America.

The NC Chapter of The Wildlife Society provides a forum for wildlife professionals and others to interact to improve wildlife conservation and management while fostering high professional standards and ethics within all related fields. It is an acknowledged source of current scientific information and expertise and acts as a collective voice on matters relating to wildlife biology, management, education and policy.

SUMMER CAMP STUDENT ENDOWMENTS

Please consider giving to our two Summer Camp student endowments. These endowments help undergraduate students attend the Fisheries and Wildlife Summer Camp. For more information on how to contribute, contact Dr. Chris Moorman at 919-515-5578 or chris_moorman@ncsu.edu

PHIL DOERR ENDOWMENT FUND

Also, you may consider giving to the Phil Doerr Endowment Fund. The endowment, established with the North Carolina Natural Resources Foundation, will be used to fund an annual award to assist undergraduate or graduate student(s) in gaining valuable field experience. For more information on how to contribute, contact Dr. Chris Moorman at 919-515-5578 or chris_moorman@ncsu.edu

THE NEWSLETTER Compiled and edited by:

Christopher S. DePerno, Ph.D.
Associate Professor, Fisheries, Wildlife, and Conservation Biology
Department of Forestry
College of Natural Resources
North Carolina State University
Turner House, Box 7646
Raleigh, NC 27695-7646
919-513-7559 (office)

Steve Allen Fisheries, Wildlife, and Conservation Biology graduate student
design and editing
336-209-5093 (cell) stevecallen@nc.rr.com

Got a story idea or a great photo?
Send your article submissions or pictures of North Carolina’s native wildlife to stevecallen@nc.rr.com.