



NRCM Alumni Honored

Dr. Craig A. Harper was presented with the 2010 College of Arts and Sciences Distinguished Alumni Award from the Department of Geosciences and Natural Resources. Craig grew up in Forsythe County where and is a 9th generation North Carolinian.

In presenting the award, Pete Bates remarked, "We always feel a sense of pride when our students go into the world and make a difference, and Craig has certainly done that. After graduating from the NRM program in 1990, he completed an MS in Biology at UNC Wilmington, and then a PhD in Wildlife Management at Clemson.

In 1998 he joined the faculty at the University of Tennessee, where he is currently a Professor and Extension Wildlife Specialist. While at UT, Craig has made his mark developing innovative programs for managing wildlife and restoring critical habitats. He has produced over 100 research and extension



Dr. Craig Harper (center) with NRCM Faculty Peter Bates (Left) and Brian Kloeppe (right)

publications, and is a leading authority on the restoration of native warm season grasses, quality deer management, and the use of prescribed fire to restore upland oak ecosystems.

As educators ourselves, we are particularly pleased by Craig's commitment to our youth. Craig remains active in 4-H where he has led programs for several thousand kids – instilling in them an understanding and respect for our natural world. Something that is becoming increasingly important in today's society.

NRMC Student Receives First Annual Arts and Sciences Student Engagement Award

In May, 2010, Wade Johnston was one of 4 recipients of the College of Arts and Sciences Student Engagement Award. This award was established to support student academic activities outside of the classroom and helped Wade continue field work on the effects of habitat fragmentation on the Eastern Box Turtle. Dr. Ron Davis has been overseeing the study since 2008. Field work entailed determining turtle locations weekly using telemetry equipment. Wade will be presenting the results of this study at the Undergraduate Expo in Spring '11, as well as at the



Eastern box turtle equipped with a radio transmitter

Southeast Partners in Amphibian and Reptile Conservation (SEPARC) conference in February.

Visit the NRCM Website

<http://www.wcu.edu/9558.asp>

NRCM Fall Field Trip a Success!

This fall, 40 students and faculty from NRM-210 went on a 3-day field trip to explore career opportunities in the conservation and management of natural resources. We were graciously hosted along the way by John Culp of Powell Industries, Kara Cassels with the Natural Resource Conservation Service, Ryan Jacobs from the North Carolina Wildlife Resources Commission, Mary Yonce (and many others) from the Sumter National Forest, and the Cradle of Forestry in America. This was a wonderful experience for our students, and we thank all who helped make it



Cast and Crew of the NRM 210 Fall 2010 Field Trip

Field Trip Highlights: NRCM Professionals in Action



Soil conservation and agriculture in western NC



Examining stream restoration structures at Hunting Creek.



Wetland habitat management in the Sumter NF



Visiting a forest thinning project on the Sumter NF



Camping near the Broad River in South Carolina

Check out the NRCM student field trip blogs on Page 3

NRM Students Blog about Field Trip Experiences

Dakota Cutshall

I believe this field trip was an excellent asset not only to the NRM-210 course but to the entire NRCM major. As an introductory course into the program, this field trip allowed all students to experience and “touch” the various duties we will be relating to in our careers. This trip was a good learning tool that reminded us of a few of the reasons why we strive to be successful in completing our degrees and in our futures. Examples are one of the best ways to learn.

Personally, the most valuable aspect of the entire field trip was the fact that some of the resource managers were alumni of the NRCM program, or similar programs from other universities. The stream restoration project was a valuable stop. We saw different implementations that were used to control water and rebuild the stream bed. The loose soils of the area caused massive amounts of erosion and that was

deposited into downstream watersheds during even moderate rainfalls. The idea of working with a team of people to complete this job included a lot of skills from planning and engineering to operation of machinery to constructing riffles. The US Forest Service is a hands-on management organization, which I believe is appropriate for today’s national forest.

Krishna Faw

As we loaded up the vans Thursday morning, I was excited about the trip ahead. I am new to the Natural Resource Conservation and Management Program, and was not familiar with many of the activities we were headed to. My 2 favorite stops on the trip were (1) the NRCS office in Waynesville and (2) the Hunting Creek restoration project on the Sumter National Forest in South Carolina.

Even though I’d worked for a branch of the USDA, I had not heard of the Natural Resource Conservation Service (NRCS) before this trip. I have an interest in both

agriculture and forestry, and this seemed like an even mix of the 2. District Conservationist Kara Cassels was very descriptive in what she accomplishes and the steps she takes. I like that she gets to help landowners come up with plans to make their property a better place. I would like to look into possible internship opportunities with them. I also enjoyed the trip to the Hunting Creek restoration project. We had deer jump out at our group and watched 2 red-tailed hawks fly overhead. It was cool see information we had just learned in our stream lab and see it applied in this project.

Stopping at the Cradle of Forestry on the way back was a nice way to end the trip. I wish we could have stayed there longer, but I know everyone was ready to get home. Overall I had a fun time with camping, singing songs in the van, meeting new friends, and just learning about NRCM career paths.

NRM 472 Students Conduct Research in GSMNP

Students in NRM472 (Geospatial Analysis) participated in a research project to quantify forest ecological structure in the Cataloochee Valley.

The purpose of this study was to determine whether historical land use prior to the formation of the park (circa 1934) impacts current forest ecological structure. Students camped and collected data in the Park for three days in September 2010 and preliminary results show a significant difference in forest composition between historically forested areas compared to other land uses. For example, Tulip Poplar distributions are different on land that was historically farmsteads (e.g., pasture, crops, orchards) compared to land that was forested.

Students will present their results and recommendations for future work to the project principle investigators (Dr. Ron Davis and Dr. Larry Kolenbrander) and Paul Super from the GSMNP in December, 2010.



NRCM 472 Fall 2010 Students in Cataloochee Valley. Front Row: Patrick Helm, Anna Huskey, Kindra Foy, Heather Roy, Kate Moses, Street Hamrick. Back Row: Wade Johnston, Andrew Lawson, Brandon Welch, Adam Bigelow, Austin Brooks



WESTERN CAROLINA UNIVERSITY
 Geosciences and Natural Resources
 331 Stillwell
 Cullowhee, NC 28723
 Phone: 828-227-7367
 E-mail: bates@email.wcu.edu

LIDAR Technology Used to Study Forest Structure

Western Carolina University faculty member Dr. Brian Kloepfel and three NRCM students have initiated a National Science Foundation funded project with Dr. Ryan Emanuel at North Carolina State University as well as faculty and students at three other North Carolina universities (UNC-Pembroke, Johnson C. Smith University, and Livingston College). Participants are learning how to utilize airplane collected LIDAR (LIght Ranging And Detection) data now available for the entire state of North Carolina to indirectly measure tree heights. North Carolina is the first state in the coun-

try with complete state-wide coverage of LIDAR data and scientists and resource managers are



Students collecting field data at Balsam Mountain Preserve (left to right): TJ Souther, Robbie Kreza, and Marcus Mentzer.

now learning how these remotely-collected data compare to traditional field-collected methods. All project students and faculty met in Boone, NC for a two-week workshop in May 2010 led by Dr. Ryan Emanuel to learn the LIDAR data analysis and field measurement techniques. The WCU team will be collecting and analyzing field and LIDAR data in nearby Balsam Mountain Preserve during the 2010-2011 academic year and will be presenting their research results at the 2011 Ecological Society of America Meeting in Austin, TX.

NRCM News and Events

NRCM Faculty Returning to the Frozen North

Dr. Joni Bugden-Storie has accepted a position in the Dept. of Geography at the University of Winnipeg and will be leaving WCU after the fall semester.

Joni came to the NRCM program in 2005 and has taught courses in introductory and advance remote sensing, environmental geography, and weather and climate.



Joni Bugden-Storie collecting field data in Jackson County NC

While at WCU Joni has been instrumental in connecting NRCM students with geospatial professionals in the region, setting up the departmental weather station, and establishing the new Landscape Analysis Lab. She has provided numerous opportunities for students to participate in field research within the region and even internationally.

We will miss her here in NRCM and wish her all the best in her new position.

NRCM Black Rock Trail Maintenance Draws Students and Community Members.



Trail maintenance volunteers rest on Black Rock peak.

The NRCM Black Rock trail maintenance trip took place in September 2010. It was a well attended trip this year drawing NRCM students, faculty and local hiking enthusiasts. Those in attendance were: James Bentley, Sarah Frymark, Thomas Pagels, Nathan Hough, Matt Yusckat, Ben Melton, Krisha Faw, Kris Bates, Ron Davis, Derek Tahquette, Angie McClure, Megan Eckardt, Hunter Arey, Debi Davidson, Darren Davidson, and Jonathan Barringer