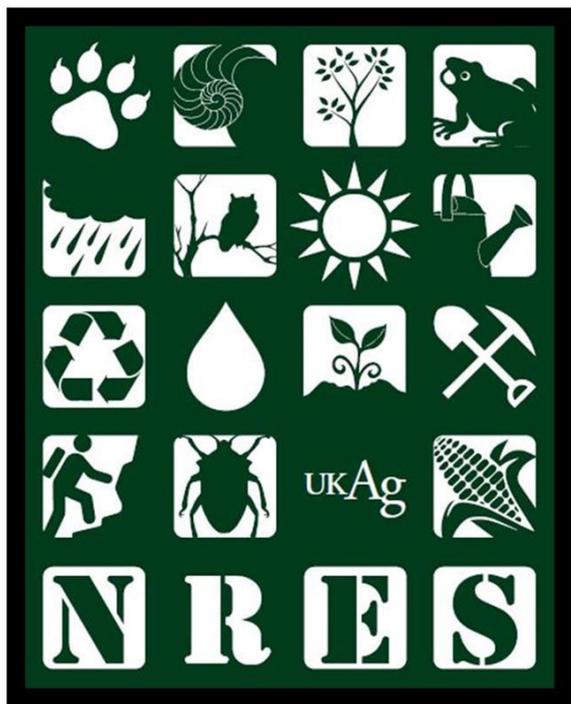


Natural Resources and Environmental Science

2014 Internship Forum

of
NRES Internships
and Research Experiences

October 9, 2014
E.S. Good Barn



UK[®]
UNIVERSITY OF
KENTUCKY[®]
College of Agriculture,
Food and Environment

NRES Internship Forum

Welcome and Introductions:

Dr. Jack Schieffer, Agricultural Economics

Presenters:

Rebecca Schwager, NRES major

Lexi Neukirch, NRES major

Dr. Jack Schieffer, Agricultural Economics

Poster Presentations for:

NRE 395 Independent Study in Natural Resources

NRE 399 Experiential Education in Natural Resources

Student Experiences

Lindsey Boone, Cooperative Extension Services (LaRue County): I had the opportunity to experience community involvement through Cooperative Extension Services in LaRue County this summer. Under the direction of Misty Wilmoth, I lived the life of an agent, completing work in environmental education with community members involved in 4-H/Youth Development. Beyond 4-H, I developed additional skills by working with other agents and staff around the office.

Jeffrey Buckles, [US Forest Service \(Daniel Boone National Forest\)](#): My internship this summer took place at Daniel Boone National Forest. I worked with the U.S. Forest Service as a Backcountry Ranger, and spent my time in the Red River Geologic Area. My two main responsibilities were to maintain the numerous trails and conduct censuses on the number and type of visitors to the area.

Shelby Fulton, UK: For my NRE 395 project, I conducted research with Dr. Luke Dodd and Dr. Rieske-Kinney. We studied the importance of riparian habitats to bats in the Bluegrass Region of Kentucky. I was responsible for deploying and operating acoustic bat detectors and insect black light traps at study sites, storing collected insects in the lab, and co-authoring a research paper for submission to a peer-reviewed journal.

Taylor Howlett, Zoo to You: This summer, I worked at a small rescue zoo in Paso Robles, California. I experienced what it is like to work as a zookeeper by caring for the 300+ animals that call Zoo to You their home.



Shelby Fulton

Mark Inbody, ABR Construction: This summer I had the opportunity to work with Darrin Darnell and Phillip Kidwell for ABR Construction. They converted a vertical drainage system to a horizontal drainage system. My main duties were to help lay the drainage system.

Ryan Kessler, Dave Leonard Tree Specialists: Over this past summer I completed an internship at Dave Leonard Tree Specialists. Most of my duties were fertilizing trees and shrubs, and treating ash trees for emerald ash borer control with systemic insecticide injections. I also used the Supersonic Air Knife to perform root collar excavations. Finally, I spent some time with a climbing crew doing urban pruning and removal.



Evie Kester

Evie Kester, Fish and Wildlife Service: This summer I had the opportunity to volunteer as an intern with the [Fish and Wildlife Service \(FWS\) in North Carolina](#). The major projects I worked on were monitoring an invasive grass species (Phragmites) and updating the FWS digital records system, Service Catalog

Jamie Keyes, Virginia Tech: I spent the summer conducting research at Virginia Tech with Associate Professor Akshay Sharma as part of the Interdisciplinary Water Sciences and Engineering NSF/REU located there. My research focused on the benefits of greywater systems in third-world countries.

Sean Kovanda, American Chemical Technologies: I interned this summer at American Chemical Technologies, a company that

produces materials for many industries. It is perhaps best known for manufacturing a fire-retardant hydraulic fluid used as an environmentally friendly option for marine transportation systems.

Mariah Lewis, UK Herpetology Lab: Since January 2014, I've been working with Dr. Price and graduate student Mickey Agha on box turtle research. My research project looks at how eastern box turtles (*Terrapene c. carolina*) utilize canopy gaps in a managed forest. I used micro dataloggers and radio telemetry to assess the habitat use and the thermal ecology of twenty one box turtles in Berea, KY.

Frank McCoy, Stantec Consulting: As an environmental science intern, I worked on a variety of projects. I spent some time working in the Geo-Technical lab, learning about the engineering properties of soils and the different tests used to describe those properties. I also worked on a stream restoration project and several other projects, including certification with the American Red Cross.

Wes Morris, UK Rhizosphere Laboratory: During the fall 2013 semester, I began work on a long-term research project investigating the effect of heavy metal hyperaccumulation in the tissues of *Noccaea caerulea* on the biomass of bacterial and fungal endophytes.

Katie Morrison, UK Hymenoptera Institute: This summer I had the opportunity to work with Dr. Eric Chapman and Dr. Mike Sharkey in the UK Department of Entomology's Hymenoptera Institute. Their project was applying next generation sequencing technology to estimate the number of species of arthropods in Berea College Forest. My job involved collecting and processing these samples.

Lexi Neukirch, School for International Training: I conducted independent research in [Iceland, at the School for International Training](#). My topic was renewable energy, and I studied a variety of issues in the implementation of wind energy technology, including economic sustainability, community development, and technological factors.



Lexi Neukirch

Becca Petry, Canoe Kentucky: I had the opportunity to plan a stream clean up event with Nathan Dapenbrock of Canoe Kentucky in Frankfort. The goal of the event was to inform the community about our local watershed and to stress the importance of taking care of our local rivers and creeks.

Ashlie Pool, UK Forestry: I worked on a research project with Dr. Price to look at the effects of urbanization on *Ambystoma barbouri*, the streamside salamander. We sampled several sites throughout central Kentucky, and I developed skills in collecting data from the field and analyzing it in the lab.

Chase Porter, Kamman's Farms: Over the course of this summer, I held the title of Assistant Operations Manager at Kamman's Farms. These farms contain over 1,000 acres of produce, including mostly watermelons, cantaloupe, and pumpkins. My job was to coordinate with Mr. Kamman on a daily basis for every step of the growing, cultivating, harvesting, and packaging process. I spent the majority of my time in the field with the employees, and learned a great deal about management.

Casey Pulliam, Louisville Gas & Electric / Kentucky Utilities: I worked for LG&E and KU in the Environmental Affairs Department. My main focus was with the Land Division of Environmental Affairs dealing with oil and chemical spill response, remediation and countermeasures, and regulatory compliance of hazardous and solid waste operations. I participated in environmental risk assessments at various LG&E and KU generating stations. I also worked on their Avian Protection Plan.



Casey Pulliam

Natalie Redish, Floracliff Nature Sanctuary: I interned at [Floracliff](#), a privately owned nature preserve in Fayette County. Although I was involved in many aspects of managing the preserve, my main project was photo documentation of the preserve's flora and fauna for presentation on the iNaturalist website.

Daniel Reed, UK / Griffith Woods: I worked at Griffith Woods, a state-owned wildlife management area north of Lexington. I contributed to a seedling study to determine the effects of small mammal browsing and herbicide treatments on the growth of bluegrass savanna seedlings.

Cody Richardson, Glasgow Water Company: This summer I had the opportunity to work as a Water Treatment Plant Intern at the Glasgow Water Company. My duties included shadowing water treatment plant operators to learn the functions of a water treatment plant, as well as sampling and performing hourly tests, including turbidity, pH, chlorine residuals, and other chemical feeding rates.

Becca Ruiz, Lucia's World Friendly Boutique: This summer, I had the opportunity to intern at Lucia's World Friendly Boutique in Lexington. During my time at Lucia's, I learned about fair trade-certified business practices, import/export methods, and retail in general. My favorite part of the internship, however, was my personal outreach on social media and in the community to educate people about fair trade. My independent project involved creating a photo documentary illustrating how Lexingtonians are "doing eco-friendly." It can be found on YouTube as well as the local Lexington fashion magazine, MOUR.

Rebecca Schwager, Colorado Ocean Coalition: I interned at the [Colorado Ocean Coalition \(COCO\)](#), a non-profit organization dedicated to promoting healthy oceans through education and community engagement. My main responsibility was planning an event to raise funds for a matching grant from the Jackson Johnson Foundation, one of COCO's partner organizations.

Philip Shutler, Hidden Pond Nature Center: This summer, I worked at Hidden Pond Nature Center, which is part of Fairfax County Park Authority. I helped with a fish survey in the park along the Pohick Creek. I also created an independent invasive species survey within the stream valley of the park. I found that that park had a severe problem with Multiflora Rose, an invasive species that was forming thickets several acres in area. I created maps for all my findings and am finishing up an article that should be published soon.



Clayton Willis

Shane Stiles, University of Louisville Biology: This summer I did research in Cherokee Park with Eric Moore, a master's student in U of L's biology department. We catalogued and noted the native and invasive plant species growing around Cherokee Park.

Clayton Willis, NOAA Fisheries Service: This summer, I had the opportunity to work with Jaclyn Daly-Fuchs and Pace Wilber of the [Habitat and Conservation Division of NOAA's Fisheries Service](#). During my time in Charleston, I researched the effects of roadside culverts, bridges, and impoundments on tidally influenced salt marsh ecosystems. My main objective was to collect data from the field that could later be used in future management and restoration plans.

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