THE COMMUNICATOR

NEWS FROM THE NEBRASKA COOPERATIVE FISH & WILDLIFE RESEARCH UNIT

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New and Changing Faces

We welcome Rebecca (Becca) Bevans, Jessica Burnett, Michelle Lute, Caleb Roberts, Victoria (Vicki) Simonsen, Erica Stuber, and Zac Warren to the Coop Unit.

Becca, a M.S student, is working on testing the functional resilience of high and low-diversity prairie communities to paired disturbance. Becca is advised by Craig Allen.



Jessica and **Caleb** are both Ph.D. students working on global change, vulnerability and resilience: management options for an uncertain future. Jessica is advised by Craig Allen. Caleb is coadvised by Craig Allen and Dirac Twidwell.





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Vicki, a M.S. student, is working on climatic constraints on bobwhite quail populations along their northern extent. Vicki is advised by TI Fontaine.

Zac, a M.S. student, is working on range and habitat preferences of northern long-eared bats in Nebraska. Zac is advised by Craig Allen.



Erica and Michelle are both Post-docs advised by TJ Fontaine. Erica is working on local and landscape constraints on habitat management for upland birds. Michelle is currently working on evaluating the value and efficacy of agricultural conservation programs for landowner and conservation practitioners. In January she will be working on the Swift Fox citizen science project.





In addition to the numerous new graduate students, the Coop Unit has several employees, **Adela (Addie) Annis, Caitlyn Gillespie**, and **Mike Winkler**, who have changed jobs within the Unit.

Addie was a research technician and is now a full-time project manager for the implications of hunter harvest and wildlife-friendly agricultural practices on pheasant behavior and population dynamics project.

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Caitlyn is a recent Coop Unit graduate who is now a research communications specialist.

Mike was a research technician for several Coop Unit graduate students and is now working full time as a project manager with Lindsey Messinger on the hunter survey project.

A search is in progress for a new coordinator for the creel project. We hope to make an announcement very soon. ❖

Research Highlight

Use and Satisfaction of Public Hunting Opportunities

By: Caitlyn Gillespie

On a clear, chilly morning this past October, the distant cackle of pheasants greeted hunters arriving at Conservation Reserve Program (CRP) fields signaling the return of the upland bird season in Nebraska. They may also have seen Lyndsie Wszola, a master's student in the Coop Unit who is studying how pheasant hunters and pheasants interact in the fields they share.

"One of the premises of this research is that people are predators," Lyndsie explains. And just like any other predator, hunters don't necessarily walk in perfectly straight lines through vegetation. While some fields may be open and easy to walk through, others have denser, taller grass and forbs, which can make traversing them more difficult. What that means is that, even though every hunter moves through a field slightly differently, hunters tend to walk through parts of some fields more than other parts.



To figure out how hunters use different kinds of fields, Lyndsie first assesses the vegetation structure on several public-access

CRP fields in her SW Nebraska study site, where Coop Unit researchers have been radio-tagging and tracking pheasants since 2012. She then recruits volunteer pheasant hunters to wear a GPS-enabled wristwatch during their hunt, which tracks the route hunters take through a field. Ultimately, she'll have data that shows how both hunters and pheasants are using the same places.

Why does it matter? Lyndsie is curious to learn whether pheasants respond differently depending on how many hunters are using fields and where people are walking. And a bird's response to hunters may even be different depending on the structure of the vegetation within that field.

"To us, it may not seem very different if five hunters walk through one hectare of this field versus another hectare in this field," but she explains that things may look very different from a pheasant's perspective. For example, in places where when the vegetation is denser, there's more cover for pheasants to hide in as hunters walk by. That may make them less likely to move to a new field to avoid predators.

This fall, Lyndsie collected data from more than 70 pheasant hunts. She'll use this information to figure out where most hunters typically walk in each of her study sites, and whether those patterns reflect how the birds are also using those fields. From a management perspective, she hopes that her research will provide insights that will help both hunters and pheasants alike. "We really need to consider the behavioral ecology implications of how we manage these fields and what really draws people," she says.

Research Highlight continued on Page 3

ANNUAL MEETING

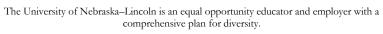
The 2015 annual Coordinating Committee of the Nebraska Cooperative Fish and Wildlife Research Unit was held Tuesday, October 13 on the University of Nebraska–Lincoln East Campus. Approximately eighty university and agency guests joined the Coop Unit scientists, staff and students to discuss unit progress and research programs. Presentations were given by eighteen students.

Editor, Caryl A. Cashmere

Welcome to the Nebraska Coop Unit newsletter! The newsletter will be distributed two or three times a year.

Questions or newsletter ideas can be directed to ccashmere2@unl.edu, or

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For more information on the project or to learn how to volunteer to carry a GPS unit during your hunt, visit: fishhunt.unl.edu/huntermovement.asp.

GOALS: What we learn about interactions between hunter movements and pheasant movements will inform improvements to managing pheasant habitat and public hunting opportunities in Nebraska.

CURRENT STATUS: A pilot field season started in fall 2014, followed by more intensive surveying this past fall. We will continue to monitor hunter and pheasant movements for this study through fall 2016.

GRADUATE RESEARCH ASSISTANT: Lyndsie Wszola

PROJECT COORDINATOR: TJ Fontaine

FUNDING: Nebraska Game and Parks Commission �

Invasive Species Updates

The Nebraska Invasive Species Program has a new employee who was credited with finding the first zebra mussel at Lake

Zorinsky in Omaha, NE. On November 9, 2010 Addison Krebs was a Boy Scout collecting litter around the lake and collected a beer can with a live zebra mussel on it. This was the first zebra mussel discovered in a publicly accessible Nebraska waterbody. Zebra mussels are an invasive species that filter



feed large amounts of nutrients from a waterbody competing with native species. Officials quickly reacted to Krebs's discovery by lowering the lake's water level by 17 feet. This exposed the mussels to freezing temperatures during the winter of 2010 thereby killing them. The lake reopened in 2012. Zebra mussel larvae and adults have not been found in the lake since the 2010 drawdown. Addison is a welcome addition to the Nebraska Invasive Species Program due to his experience with early detection and outreach to contain and prevent the spread of invasive species.

In early 2015, the Nebraska Aquatic Invasive Species (AIS) Program was created by the Nebraska Legislature with LB 142. The legislation was passed with the goal of preventing the introduction and spread of AIS in Nebraska through education and other activities. To fund this new program, LB 142 requires an Aquatic Invasive Species fee to be collected from boaters, both resident and non-resident. The new fee will be added to boater registration fees and goes into effect beginning January 1, 2016. For more information about this new program, visit: http://digital.outdoornebraska.gov/i/597534-boating-guide-2016/3. ❖

Honors and Awards

Nick Cole participated in SESYNC's Socio-Environmental Synthesis Research Writing Workshop in September. He received travel funding from the National Socio-



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Environmental Synthesis Center (SESYNC) to cover airfare,

accommodations, and food expenses for the workshop. The workshop provides students with introductions to SESYNC, socio-environmental synthesis research, team science, bridging natural and social sciences, and actionable science; networking opportunities with other students; and training sessions on the method, challenges, and strategies associated with writing successful proposals.



Lucía Corral received a School of Natural Resources Graduate Student Travel Grant which assisted her with travel expenses to attend The Wildlife Society annual meeting in Winnipeg, Manitoba, Canada.

Kent Fricke was selected as captain of UNL's Center for Great Plains Studies Graduate Fellows Program. In this capacity, Kent has organized



speakers and discussion groups, led the group on a group retreat to Calamus Outfitters near Burwell, Nebraska, and edited a bimonthly newsletter of the group's activities.

In July, Caitlyn Gillespie

participated in a workshop put on by the Organization for Tropical Studies designed to provide scientists with the necessary skills to communicate to diverse non-science audiences. With support from the Great Plains Landscape Conservation Cooperative and the Nebraska Game and Parks Commission, Caitlyn spent two weeks



working with expert science storytellers in every medium: writing, radio, photography, and film. By the end of the program, she had produced a science communication mini-portfolio focused on her research on shorebird migration. This fall Caitlyn led a workshop to share some of what she learned with students and other science professionals at the University of Nebraska–Lincoln.

Former master's student **Lindsey Messinger** (M.S, 2015) continues to work in a professional capacity coordinating the hunter survey project. Lindsey was one of ten participants chosen to attend the 2015 TWS Leadership Institute.

The Institute included a variety of distance learning projects over the summer, and concluded in October with intensive hands-on mentoring activities and leadership workshops during the 2015 TWS



Annual Conference in Winnipeg, Manitoba. An \$1800 travel award provided support for Winnipeg travel expenses.

Lindsey also received the 2015 School of Natural Resource Meritorious Graduate Student Award. This award "honors the best SNR students and recognizes their academic achievements, research, teaching contributions, leadership accomplishments, service and personal qualifications."

Outreach Activities

At the 2015 Nebraska State Fair, **Zac Warren** assisted with a booth to promote awareness and education about bats in Nebraska. By incorporating trivia, a bean bag toss, and actual bat specimens, he educated children ages 5-12 on the biology and importance of a critical yet often misunderstood animal. He also provided information and handouts to parents on ways in which they can help protect bats on their property through the installation of stock tank escape ladders and appropriately timed exclusion efforts if necessary.

July 2015, **Nathan Bieber** was a co-instructor for over-the-water and non-motorized boat training. Over-the-water and non-motorized boat training is required of any staff who conducts field research near a body of water, no matter how large or small the water body. ❖

Conferences, Meetings, and Workshops

TJ Fontaine gave a presentation to the regional pheasant working group in Brookings, SD, April 21-23. "Research on pheasants and pheasant hunters in Nebraska" was the title of his presentation.

"Severe weather impacts on an unpredictable system: Wetland dynamics and shorebird stopover decisions in a highly altered landscape" was the title of TJ Fontaine's presentation at the American Ornithologists Union and Cooper Ornithological Society Joint Meeting in Norman, OK, July 27-August 2.

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August 10-13, Lindsey Messinger and Lyndsie Wszola attended the annual meeting of The Central Mountains and Plains section of The Wildlife Society in Manhattan, KS. "Hunting in a modern landscape: A large-scale assessment of hunter use of publically accessible hunting lands" was the title of Lindsey's presentation. Lyndsie's presentation was titled "The influence of prey behavior and habitat structure on hunter movement."

September 29, Nathan Bieber, Kent Fricke and Dan Uden attended the Nebraska Natural Legacy Conference in Kearney, NE. "River otter distribution and abundance in Nebraska: A recovery story" was the title of Nathan's presentation. Kent's presentation was titled "Balancing conflicting ecosystem services: Adaptive management along the rangeland-woodland interface." Dan's presentation was titled "What is growing? Where? And why? Oak seedlings and tree communities in Indian Cave State Park."

Emma Brinley-Buckley, Lucía Corral, and Lindsey Messinger attended The Wildlife Society annual meeting in Winnipeg, Manitoba, Canada, October 16-22. Lucía's presentation was titled "Assessment of swift fox distribution in Nebraska." "Should we care about fear in wildlife populations" was the title of Lindsey's presentation.

October 27-November 1, Zac Warren attended the 45th Symposium on Bat Research in Monterey, CA. Zac's poster was titled "A scalable and reproducible acoustic site selection framework for the northern long-eared bat."

Dan Uden attended the Pine Ridge BUL meeting December 3-4 in Chadron, NE. "Pine Ridge BUL scenarios" was the title of his presentation.

Caroline Jezierski was a guest lecturer for several university courses. In July, she was a guest lecturer at the Iowa State University NSF Wind Energy research experience for undergraduates in Ames, IA. Caroline was also a guest lecturer at University of Nebraska–Lincoln, Environmental Planning and Policy class in October as well as the Human Dimensions of Natural Resources class in December.

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Train graduate students for professional careers in natural resources research and management

Conduct research that will create new information useful for management of natural resources

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