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# THE COMMUNICATOR

NEWS FROM THE NEBRASKA COOPERATIVE FISH & WILDLIFE RESEARCH UNIT

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Volume 6, Issue 1

February 2010

## New Faces

We welcome **Christopher Jorgensen**, **Ryan Stutzman**, and **Christina Hoffman**.

Joseph (TJ) Fontaine is advising three new graduate students effective January 1, 2010. **Christopher Jorgensen** comes to us from Iowa and is pursuing a M.S. degree. He will work on the research of assessing landscape constraints on habitat management of upland birds.

M.S. student **Ryan Stutzman**, from Montana, will work on avian conservation in the prairie pothole region “Understanding the links between climate, ecosystem processes, wetland management, and bird communities.”

**Christina Hoffman** came to UNL from California to begin a Ph.D. program under TJ. Christina received an assistantship through UNL's new “Resilience and Adaptive Governance in Stressed Watersheds” program, funded by a National Science Foundation IGERT grant. ❖

## NSF Assistantships

Two Nebraska Coop Unit graduate students received assistantships from the new National Science Foundation (NSF) IGERT project awarded to UNL this past August. IGERT is the prestigious Integrated Graduate Education and Research Training Program supported by NSF. The UNL IGERT is a five-year project that will support Ph.D. traineeships focusing on resilience in stressed watersheds. **Christina Hoffman** (advisor: Joseph Fontaine) and **Kristine Nemecek** (advisor: Craig Allen) were both awarded IGERT assistantships that began January 1, 2010. ❖

## New Research

### *Assessing Landscape Constraints on Habitat Management of Upland Birds*

Throughout the Great Plains, wildlife communities are increasingly dependent on the effective management of public and private wildlife reserves. Unfortunately, the efficacy of local management actions may ultimately be limited by landscape factors beyond the boundaries of any particular reserve.

**GOALS:** This project seeks to explore how the availability and distribution of suitable habitat across a landscape may constrain the management of pheasant and other grassland bird species at local wildlife reserves. Given the incredible costs of maintaining and enhancing wildlife reserves, understanding why populations and communities fail to respond to apparently suitable habitat improvements is imperative to not only sustaining wildlife populations, but also ensuring public support for wildlife programs.

**CURRENT STATUS:** This new project began in January 2010. Preparations are underway to initiate field research in April.

**GRADUATE RESEARCH ASSISTANTS:** Chris Jorgensen

**FUNDING:** Nebraska Game & Parks Commission

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## ***Avian Conservation in the Prairie Pothole Region: Understanding the Links Between Climate, Ecosystem Processes, Wetland Management, and Bird Communities***

Wetland ecosystems are important migratory and breeding bird habitats, and add significantly to local and regional biodiversity. These ecosystems are increasingly threatened by climate change, and the potential synergistic effects of increasing demand for water and invasion by exotic species.

**GOALS:** This project will examine the effects of climate and land use change on bird populations and their wetland habitats in the Prairie Pothole Region by examining the linkages between climate, hydrology, and the biological factors that influence riparian and wetland ecosystem resilience and migratory bird communities.

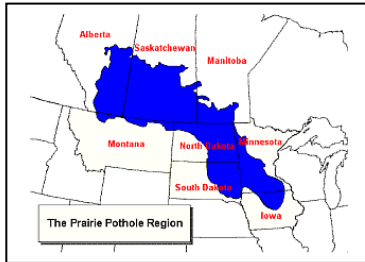


Image: USFWS

Ultimately, the findings of this project will assist managers and conservation professionals within federal, state, and nongovernmental organizations concerned with protecting migratory bird species and managing invasive species.

**CURRENT STATUS:** This new project began in January. Preparations are underway to initiate field research in mid-April 2010.

**GRADUATE RESEARCH ASSISTANT:** Ryan Stutzman

**FUNDING:** U.S. Geological Survey National Climate Change and Wildlife Science Center

## ***Missouri River Mitigation: Implementation of Amphibian Monitoring and Adaptive Management for Wetland Restoration Evaluation***

**GOALS:** This project will gather the data needed to determine what constitutes a successful wetland restoration, given the

desired goals of the U.S. Army Corps of Engineers.

Herpetofauna—primarily amphibians—will be used as indicators of wetland quality. This will be accomplished by quantifying the occurrence and recruitment of amphibians at existing mitigation sites. These models will be used by managers in future restorations and for adaptive management approaches to the design of new wetland restorations. This is a multi-institutional project involving the Iowa Cooperative Fish & Wildlife Unit and Benedictine College in Kansas. The project study area is the Missouri River corridor of Iowa, Kansas, Missouri and Nebraska.

**CURRENT STATUS:** We are in the initial phase of implementing the monitoring program which will focus on tightly linking monitoring with hypothesis testing in an adaptive framework. The design consists of frog call surveys to determine occupancy rates for a large number of wetlands on numerous restoration properties, coupled with intensive sampling of frogs, turtles and salamanders to assess abundance and recruitment on eight restored wetland complexes in four states. The Nebraska Coop Unit focus is on wetland complexes in the Falls City to Omaha, Nebraska reach of the Missouri River.

**GRADUATE RESEARCH ASSISTANT:** Michelle Hellman

**FUNDING:** U.S. Army Corps of Engineers

## **Research Highlight**

### ***Monitoring, Mapping and Risk Assessment for Non-Indigenous Invasive Species in Nebraska (Nebraska Invasive Species Project)***

This project is transitioning to a new focus, thanks to additional funding from the Nebraska Game and Parks Commission.

**GOALS:** The first three and a half years of the project provided coordination of non-indigenous species management and research in Nebraska, and mapped the potential spread of many invasive species in Nebraska. In this new phase, goals will focus on providing outreach to, and facilitating communication among, stakeholders regarding biological invasions, and on developing management tools to better address the threats of invasive species.

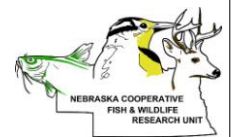
**CURRENT STATUS:** In October, the Invasives coordinator attended and presented at the Nebraska Game and Parks Commission's Wildlife Division Meeting at Fort Robinson, and

Research continued on page 3

Editor, Valerie A. Egger

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 vegger1@unl.edu, or 422 Hardin Hall, 3310 Holdrege, Lincoln NE 68583-0984.



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## OUR COOPERATORS:

U.S. Geological Survey, Department of the Interior  
University of Nebraska–Lincoln  
Institute of Agriculture and Natural Resources  
School of Natural Resources  
Nebraska Game and Parks Commission  
The Wildlife Management Institute  
U.S. Fish and Wildlife Service

*Research continued from page 2*

held a booth at the Platte River Symposium in Kearney. Both events increased awareness of the project and its goals.

In November, the coordinator presented at the weekly UNL Grassland Seminar series which was attended by UNL faculty, staff, and students, as well as individual community members. A guest lecture was also given to the School of Natural Resources' undergraduate course in forest ecology.

December began with the Midwest Fish and Wildlife Conference, held in Springfield, IL where a poster was presented on current and potential threats of invasive species. Another presentation was given for the Nebraska Association of County Officials Weed Superintendents' training meeting.

Throughout the past three months, the project has also been involved with several groups around the state in developing

education and outreach materials for display. We developed and completed an aquatic nuisance species hands-on activity and display for the Ak-Sar-Ben Aquarium which will be up and running soon. A station of activities and displays was developed for the February "Dinosaurs and Disasters" event at the UNL State Museum. Several hand-outs were created with invasive species information to be distributed at every outreach event in the coming year. Finally, the project, with the help of Nebraska Game and Parks Commission, developed and printed boat-ramp signs warning boaters of the risks of spreading aquatic invasive species. These will be distributed throughout the state at several reservoirs and lakes.

The Nebraska Invasive Species Council members continue to meet monthly and coordinate invasive species management and outreach. Efforts are currently underway to develop the Aquatic Nuisance Species Plan for Nebraska, with a meeting planned for January.

**GRADUATE RESEARCH ASSISTANTS:** Aaron Alai, Amy Williams, Justin Williams

**PROJECT COORDINATOR:** Karie Decker

**WEB SITE:** [snr.unl.edu/invasives](http://snr.unl.edu/invasives)

**FUNDING:** Nebraska Environmental Trust, Nebraska Game and Parks Commission ❖



## ANNUAL MEETING

The 2009 annual Coordinating Committee of the Nebraska Cooperative Fish and Wildlife Research Unit was held on Thursday, October 22 on the University of Nebraska–Lincoln east campus. Approximately 29 university and agency guests joined the Coop Unit scientists, staff and students to discuss unit progress and research programs.

## Conferences/Meetings/Workshops

December 6–9 2009, Aaron Alai, Craig Allen, Jason DeBoer, Karie Decker, Joseph (TJ) Fontaine, Kevin Pope, Sarah Rehme, and Amy Williams attended the 70<sup>th</sup> Midwest Fish & Wildlife Conference in Springfield, Illinois. The meeting theme was *Limited Resources, Unlimited Potential*. Jason gave an oral presentation entitled: *Irrigation and year-class strength of fishes: The importance of a species' spawning period*. Karie's poster presentation was entitled: *The Nebraska Invasive Species Project*. TJ gave an oral presentation entitled: *Improving our legacy: Implementation of adaptive management in state wildlife plans*. Kevin gave an oral presentation entitled: *Catching managers, anglers and fish*. Sarah's oral presentation was entitled: *Weak inference and management decisions: What's a manager to do?* Craig, Kevin and TJ organized the conference's adaptive management session.

Karie Decker and Joseph Fontaine gave presentations to the Izaak Walton League annual meeting on January 24, 2010.

Amy Williams attended the Platte River Recovery and Management Symposium in Kearney, Nebraska, October 14 and 15. Amy gave a poster presentation entitled: *The effects of common reed (Phragmites australis) on river otter (Lontra canadensis) habitat use*.

Sarah Rehme's presentation at the Ecological Society of America meeting in Albuquerque in early August was listed incorrectly in the last newsletter. Sarah's oral presentation was: *Grassland songbird communities at national park service properties: Can small be useful?*

Kristine Nemec attended the August 10–12 Grassland Restoration Network workshop in Aurora, Nebraska. Field trips included a stop at her study site, where she talked to workshop participants about her research. At the October 14–15 Platte River Basin Science and Resource Management Symposium in Kearney, she co-presented a poster on a U.S. Army Corps of Engineers wetland and backwater restoration project in eastern Nebraska.

October 4–6, the Nebraska Coop hosted the USGS Cooperative Research Unit Regional Meeting in Nebraska City. Scientists, staff, and graduate students represented units from Colorado, Iowa, Kansas, Missouri, Oklahoma, and South Dakota. ❖

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## Graduate Student News

### Michelle Hellman

*M.S. Graduate Research Assistant, Wildlife*

Michelle formerly worked for the unit as a research technician and recently decided to pursue a M.S. degree in natural resources studying the success of wetland restorations along the Missouri River.

### Christina Hoffman

*Ph.D. Graduate Research Assistant, Wildlife*

Christina obtained a B.A. in International Relations from Rollins College in Winter Park, FL. Christina was fascinated with different cultures and far off places and wanted to explore how they interacted in society. A number of the courses she took focused on international environmental issues, one specific course being a sustainable development field study in the Dominican Republic. Experiencing firsthand how people's livelihoods are connected with the environment made her want to learn more. After a summer of environmental volunteer

work in Thailand and New Zealand, Christina decided to pursue a M.S. in environmental studies at Florida International University with a concentration in Geographic Information Systems.

During her master's graduate work, Christina was able to participate in two different internships at the US EPA in Washington, D.C., which eventually lead to a full-time temporary position as an Environmental Scientist in the Prevention Branch, Office of Ground Water and Drinking Water. After spending time in D.C., she was offered a position at the National Oceanic and Atmospheric Administration (NOAA) Coastal Services Center West Coast Regional office where she served as a regional coastal management specialist from 2007 to 2010. Christina's work focused on a variety of issues including marine spatial planning, land-use planning and water quality. One of her main roles while at NOAA was building partnerships among coastal agencies, linking partners with technical tools and trainings to build project capacity.

*Students continued on page 5*

## Christopher Jorgensen

*M.S. Graduate Research Assistant, Wildlife*

Chris obtained a B.S. in 2008 in Animal Ecology from Iowa State University. As an undergraduate, he was dedicated to his job as a wildlife rehabilitator at Iowa State University's Veterinary Medicine. Prior to heading to UNL, he spent several seasons as an avian researcher in the Midwest and Arizona.

Currently, Chris is developing his upland bird project located across southern Nebraska. February 5, he presented a poster at the Pheasants Forever habitat meeting this February in Kearney.

## Kristine Nemec

*Ph.D. Graduate Student, Wildlife*

Kristine traveled to Australia in December as part of the class "Resilience and Sustainability in Australia." After working as a biologist for the U.S. Army Corps of Engineers for seven years, she resigned in December in order to accept an UNL assistantship and focus more fully on finishing her Ph.D. requirements.

## Ryan Stutzman

*M.S. Graduate Research Assistant, Wildlife*

Ryan arrived at UNL after finishing his B.S. in Wildlife Biology at the University of Montana in 2008. He spent the past two field seasons working on a waterfowl study with the USFWS. He is in the process of further developing his project on how waterbirds use important migration stopover sites in the Prairie Pothole Region and will begin his first field season this April in Northeast Montana. ❖

## Teaching

This semester (Spring 2010), Craig Allen & Kevin Pope are teaching graduate level courses at the University of Nebraska.

Craig is teaching **Ecology & Biological Invasions**.

Kevin is teaching **Quantitative Fisheries Assessments**.

In the fall of 2010, Joseph Fontaine will teach a new graduate-level course, **Adaptive Natural Resource Management** ❖

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### *Our Mission*

*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*

*Provide technical assistance to cooperators*

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