RM-CESU NEWS & EVENTS

RM-CESU Announces the Annual Competition for Student Award: The Rocky Mountains CESU annually recognizes outstanding students through an awards program.

The RM-CESU Student Award recognizes “above and beyond” accomplishments by students involved in Rocky Mountains Cooperative Ecosystem Studies Unit (RM-CESU) projects. Nominations may be submitted by any representative of the federal agency that sponsored the RM-CESU project, or by the student’s RM-CESU university.

Nominations for Student Award are due July 15, 2015. The Award winner(s) will receive a citation and give a presentation on their project results at annual RM-CESU Fall Meeting in September. For nomination instructions, go to the RM-CESU web site at: http://www.cfc.umt.edu/CESU/files/Announcements/CESU_Student%20Award.pdf. For more information contact Lisa Gerloff, RM-CESU Executive Coordinator, at 406-243-6936, lisa.gerloff@umontana.edu

MSU Undergrad Awarded Jerry O'Neal Fellowship for Bat Research in Glacier National Park

Cheyenne Stirling, an undergrad at Montana State University in Biological Sciences, is the recipient of a 2015 Jerry O'Neal National Park Service Student Fellowship. Cheyenne will use her fellowship to support “Bats in Buildings: Assessing Human Structures as Roost Sites in Glacier National Park.” The objective of this study is to document the locations and types of roost sites occurring in human structures throughout Glacier National Park (GNP). This information will aid biologists in GNP on the impacts of white-nose syndrome should it arrive here. Study data will also help expedite the compliance review process for projects that seek to remodel, restore, or repair buildings by informing managers about whether the structure is, or has been, occupied by bats. If bats are using a structure, this study will provide park staff with the necessary information to develop mitigation measures to protect bats.

The Jerry O'Neal National Park Service Student Fellowship is named for the former deputy superintendent at Glacier NP, in honor of his dedication to science and research in the NPS. The Fellowship is for work in Glacier National Park, Grant-Kohrs Ranch NHS, or Little Bighorn Battlefield NM. The competition is facilitated through the Rocky Mountains CESU and is open to students at all of the RM-CESU universities. For more details contact Lisa Gerloff, Executive Coordinator of the RM-CESU at the University of Montana, at lisa.gerloff@umontana.edu.
2015 George Wright Society Conference on Parks, Protected Areas, and Cultural Sites

GWS2015 welcomed more than 700 registered participants to their Biennial Meeting in Oakland, California, March 29–April 3, 2015. The GWS is unique among professional organizations because it encourages dialogue and information exchange among all the people needed for protected area conservation, from historians to biologists, managers to researchers, public agencies to private organizations, academics to field personnel.

During the recent Biennial meeting, many of the presentations, posters and panels included representatives from agency and University partners in the Rocky Mountains CESU.

Abstracts of the papers can be found at http://www.georgewright.org/gws2015_abstracts.pdf

Three videos from the GWS2015 Plenary Sessions are now available on the GWS YouTube channel: https://www.youtube.com/channel/UClGyRKajJF3Z5A0CH66LmDg

At the gala awards dinner, recipients of the GWS Awards were presented:

- **George Melendez Wright Award for Excellence**: Alan Latourelle, chief executive officer of Parks Canada, received the Society’s highest honor. He has led Parks Canada Agency since 2002 and is being cited for his key role in increasing the size and coverage of the Canadian national protected area system, and for retooling the agency so it is more collaborative and inclusive.
- **GWS Social Science Achievement Award**: James Gramann, for his work developing the social science program of the National Park Service
- **GWS Cultural Resource Achievement Award**: Mark Michel, for his leadership of The Archaeological Conservancy
- **GWS Natural Resource Achievement Award**: Karen Treviño, for her work building the National Park Service Natural Sound and Night Sky Division
- **GWS Communication Award**: Kurt Repanshek, for original news reporting on his influential website “National Parks Traveler”

There were notable contributions by RM-CESU partners in the following areas:

Presentation and information table by Washington State University, Social and Economic Science Research Center. Dr. Lena Le represented the Center with a presentation on her social science survey work titled: *We Listened, We Learned, We Acted: Lesson learned from engaging diversity at George Washington National Monument*

Evan Wolf and David Cooper from Colorado State University were co-authors on a poster titled: *Restoration of pre-disturbance conditions to severely eroded montane wetland at Halstead Meadow, Sequoia National Park*. They also contributed to a presentation by NPS scientists on *Repairing legacy grazing impacts in Sierra Nevada wetlands*

Patricia Taylor from University of Wyoming was a co-author on an oral presentation: *Bear Viewing and Visitor Compliance with Park Rules in Yellowstone NP.*
Climate Change issue of Yellowstone Science Features RM CESU Cooperators:
The March 2015 special issue of Yellowstone Science is titled, Ecological Implications of Climate Change on the Greater Yellowstone Ecosystems, put together by Guest Editor Ann Rodman, Yellowstone NP. The topics covered in this issue include natural and cultural resources research results, and a social science short article on how to measure visitors’ support for Yellowstone NP. The RM-CESU cooperators whose results are featured in this special issue include, NPS, USGS, USDA-Forest Service, University of Montana, Montana State University, University of Wyoming, Colorado State University and University of Colorado Boulder. The issue can be downloaded at [www.nps.gov/yellowstonescience](http://www.nps.gov/yellowstonescience).

RM-CESU “SPOTLIGHT”

CSU researchers help National Park Service map sound of silence

By Andrea Leland, Source, Colorado State University

Researchers at Colorado State University are helping the National Park Service study the impact of noise pollution on wildlife and park visitors.

Mahmood Azimi, a professor in the Department of Electrical and Computer Engineering, and his team are developing novel software, firmware, and hardware solutions to enable long-term, continuous, and unattended monitoring of natural sounds in national parks, as well as man-made noises that aren’t so peaceful such as the rumble of motorcycles or the whir of air traffic.
In the past, NPS scientists collected more than a million hours of sound using heavy, power-hungry recording devices that required extensive post-processing and data analysis to identify the sources of sounds. While findings from these devices allowed the NPS to create a preliminary map of the loudest and quietest areas in the country, it was just the first step in addressing the problem of noise pollution.

“The National Park Service wanted to broaden their reach to include the most remote places of our national parks and extend the duration time of their data collection, but they were limited by the existing systems,” Azimi said. “In addition, NPS scientists were spending hours and hours trying to crunch the data and identify the source of each sound.”

**Developing a solution**

The new solutions developed by Azimi and his team create a network of sophisticated sensor nodes that are cheap, lightweight, and intelligent with onboard processing capabilities.

Outfitted with solar panels and batteries, the nodes can be deployed to far-off corners of the National Parks for months at a time to gain a comprehensive picture of the noise distribution. Featuring a variety of communication capabilities, the sensor nodes are programmed to work together, forming a network that monitors, collects, processes, and classifies the sounds with tremendous accuracy.

Summary results are then wirelessly transmitted in real-time to a park station, eliminating the need for in-depth post data analysis in the laboratory.

“This development is a huge step for us as we strive to expand the scope of our work and provide answers to the problems associated with unnatural sounds in our Parks,” said Kurt Fistrup, senior scientist for the NPS. “I'm impressed with the innovation of the research team at CSU. Their work advances our mission while saving us time and money.”

Because sound can be turned off, the wonderful thing about noise pollution is that it's susceptible to improvement. Fistrup added, “Our collaboration with CSU will ultimately provide tremendous benefits for the integrity of ecosystems and protection of wildlife in our national parks, and that’s the most important duty for all of us.”

The cutting-edge systems developed at CSU also can be equipped with multiple sensing capabilities for use in other applications such as early fire detection or locating poachers.
Other collaborations

Azimi also is working with NPS scientists on another project to design and build low-cost, low-power ultrasonic recording devices for monitoring bat activities. The devices, which are ready for field testing, will help scientists understand why bats leave their caves during hibernation.

PARTNER NEWS & EVENTS

Announcements:

**University of Colorado Boulder: CU-Boulder’s Elizabeth Fenn Wins 2015 Pulitzer Prize in History** The news of a lifetime reached Elizabeth Fenn, chair of CU-Boulder’s history department, around 1 p.m. on April 20, just as she sat at her desk to eat her lunch from the University Memorial Center. An email from a *New York Times* reporter caught her attention: It said she’d won a Pulitzer Prize. After a quick Google search, Fenn still didn’t fully believe it.

“I was quite shocked by what I found, and I wasn’t sure I was seeing things right,” she says.

Fenn, who goes by “Lil,” ran to the office of a colleague, who confirmed she wasn’t dreaming: Fenn had won the prize in the history category for her 2014 book *Encounters at the Heart of the World: A History of the Mandan People*, a 10-year project detailing the history of the Mandan people, a Plains Indian tribe who lived in what is now North Dakota. Read more: [http://www.coloradanmagazine.org/2015/04/22/elizabeth-fenn-pulitzer/](http://www.coloradanmagazine.org/2015/04/22/elizabeth-fenn-pulitzer/)

STUDENT OPPORTUNITIES

**Social Science Park Break - Great Sand Dunes National Park & Preserve**

**Dates:** October 11-16, 2015

**The opportunity:** The George Wright Society and National Park Service Social Science Program announce an exciting opportunity for graduate students. Applications are being accepted for participation in a social science focused Park Break Program at Great Sand Dunes National Park and Preserve (GRSA). The objective of this program is for students to understand a variety of applied social science methods to collect information about visitor activities, attitudes, and travel patterns in
GRSA, and how these results integrate into planning across a diverse landscape of grasslands, wetlands, conifer and aspen forests, alpine lakes, and tundra. The park unit is ramping up efforts to conduct a backcountry management plan in the coming years, and has initiated collections of visitor use and social science information in the summer and fall of 2015. As part of this program, students will understand protected area management issues and questions that exist in relation to resource protection and visitor enjoyment, and how social science information can benefit this planning effort to prescribe backcountry management direction into the future.

**What is included?** Park Break is an all-expenses-paid, park-based field seminar for graduate students who are thinking about a career in park management or park-related research and education. Park Break puts you in a national park unit for five days of field and classroom activities in close collaboration with park scientists and scholars, managers and administrators, and partner organizations.

**Who is eligible?** Graduate students (Ph.D. or Master’s level) who are studying in fields related to parks, protected areas, and cultural sites.

**Park Break puts you on the path to success:** Several Park Breakers have been hired by the National Park Service and the U.S. Forest Service. Other Park Break alums have embarked on Ph.D. programs. Park Break makes you and your skills visible!

**For more information and how to apply:** Visit [http://www.georgewright.org/parkbreak](http://www.georgewright.org/parkbreak) to learn more about the opportunity, and [http://www.georgewright.org/parkbreak_apply](http://www.georgewright.org/parkbreak_apply) to apply. **Deadline is May 15, 2015.**

**JOB OPPORTUNITIES**

**Wildlife Biology positions,** Center for Environmental Management of Military Lands (CEMML), positions located at Fairbanks Fort Wainwright, Alaska and Donnelly Training Area, Delta Junction, Alaska. (This pool expires 11:59 pm, July 15, 2015)

**Director of Academic Programs,** Haub School of Environment and Natural Resources, University of Wyoming, Laramie, WY (closes 5/29/2015)

**Web Application Programmer,** Center for Environmental Management of Military Lands (CEMML), Fort Collins, CO (closes 5/25/2015)

**Assistant District Forester,** Colorado State Forest Service - Steamboat Springs District, State Forest Field Office, Gould, CO (closes 5/14/2015)

**Geographic Information System (GIS) Program Analyst,** Center for Environmental Management of Military Lands (CEMML), San Antonio, TX (closes 5/10/2015)

**Research Faculty - Extension Plant Pathologist,** Plant, Soil, and Entomological Sciences, University of Idaho, Moscow, ID, (closes 5/8/2015)

**MEETINGS OF INTEREST**


If you would like to post an announcement in the next RM-CESU Newsletter or on the website, please contact the RM-CESU Coordinator at rmcesu@cfc.umt.edu.