



# Rocky Mountains

Cooperative Ecosystem Studies Unit

Research, Education & Technical Assistance

## NEWSLETTER

November -December 2017

### RM-CESU NEWS & EVENTS

**National Academies of Sciences, Engineering and Medicine releases report titled, "Revisiting Brucellosis in the Greater Yellowstone Area", with Contributions from RM-CESU investigators** An increase in brucellosis cases in

the Greater Yellowstone Area has alarmed cattle and domestic bison producers and spurred new scientific analyses to determine the factors involved. Brucellosis in the Greater Yellowstone Area (GYA) is a disease caused by the bacteria *Brucella abortus*. Brucellosis was first detected in Yellowstone National Park bison in 1917 and has been present ever since. Brucellosis can be transmitted from one species to another. The hallmark of the disease in

cattle, bison, and elk is abortion or birth of nonviable calves. Although it is not considered a major public health threat in the United States, brucellosis can have serious economic consequences. States must maintain brucellosis class-free status, among other criteria, to sell and move live cattle. The Greater Yellowstone Area is the last known U.S. reservoir of *Brucella abortus*.



Recent evidence indicates control efforts should focus on reducing risk of transmission from elk, which are now viewed as the primary source of the infection in new cases occurring in cattle and domestic bison. The report lays out several management options that can help reduce transmission such as reducing the elk population by hunting, contraception trials in elk, and testing and removing brucellosis infected elk. Another potential tool is the incremental closing of supplemental feedgrounds for elk where brucellosis is known to spread.

Members of the special committee on *Brucellosis in the Greater Yellowstone*, who helped write the report, include RM-CESU partners, Michael Coughenour, Colorado State University and Paul Cross, U.S. Geological Survey, Northern Rocky Mountains Science Center.

Reviewers of the report include the following RM-CESU partners: Francis D. Galey, University of Wyoming; Robert Garrett, Montana State University and N. Thompson Hobbs, Colorado State University.

The report can be found on the [NAS website](#).

## Studying Glaciers in Rocky Mountain National Park

Dan McGrath is a research scientist in the Geoscience Department at Colorado State University. Last year Dan started a project examining the mass balance of glaciers in Rocky Mountain National Park (ROMO). Alpine glaciers and perennial snowfields are connected to both their immediate alpine and broader downstream ecosystems through the physical and chemical characteristics of the runoff delivered to them. Recent warming and changing precipitation patterns has led to significant changes globally, thereby altering the glacier-ecosystem relationship. McGrath and his colleagues are taking a multi-faceted approach to develop a process-based understanding of modern glacier mass balance in ROMO. This understanding is being developed in the context of historic glacier responses and will be used to make informed predictions of future change for improved science-based resource management.

To find out more on the project, please check out [this short video and article](#) produced by CSU on Dan McGrath's project. This project is funded by NPS through a RM-CESU agreement.



## Glacier National Park Conservancy - Jerry O'Neal Research Fellowship -2018 Call

Thanks to generous support from the Glacier National Park Conservancy, the Jerry O'Neal NPS Student Fellowship has merged to become the Glacier National Park Conservancy - Jerry O'Neal Research Fellowship

Applications are now being accepted for the **Glacier National Park Conservancy - Jerry O'Neal Research Fellowship** for work in Glacier National Park, Grant-Kohrs Ranch NHS, and Little Bighorn Battlefield NM. The fellowship aims to provide educational assistance for students seeking to understand natural and cultural resources issues and how these interact with human values. Special consideration will be given to proposals that address the following:

1. natural resource issues such as aquatic ecology, terrestrial ecology, fire ecology, invasive plants, and climate change
2. cultural resource issues, such as history and architectural studies, cultural landscape reports, ethnographic research and archeology
3. social science that informs resource management about a natural or cultural topic and/or that addresses visitor impacts to park resources

Competition is open to graduate students or superior upper division undergraduate students at RM-CESU universities and colleges only. Awards range from \$1000-5000. Applications must be submitted electronically by February 19, 2018. [Application Process](#)



Glacier National Park



Grant-Kohrs Ranch NHS



Little Bighorn Battlefield

## PARTNER NEWS & EVENTS:

**Montana State University: MSU graduate recognized for work in returning buffalo to Wind River Reservation**  
A Montana State University graduate's successful efforts to bring buffalo back to Wyoming's Wind River Indian Reservation has earned him a place in the national news, including the cover of a national research magazine.

Jason Baldes, the buffalo representative for the Eastern Shoshone Tribe, received both his bachelor's and master's degrees in land resources and environmental sciences from MSU. He is featured on the cover of the fall issue of Winds of Change magazine. The magazine is published by the American Indian Science and Engineering Society and supports Native people in science, engineering, technology and mathematics fields. **Read more: MSU grad helps return buffalo to Wind River Reservation.**

**University of Wyoming and US Geological Survey: New Mapping Tool Tracks Elk Migration to Reduce Brucellosis Risk** Wildlife managers and rangers in the greater Yellowstone ecosystem soon will have a new mapping tool for reducing the risk of brucellosis outbreaks in cattle. That's thanks to research by scientist at the University of Wyoming and the US Geological Survey. **Read more: Mapping tool to Reduce Brucellosis Risk.**

**Colorado State University: Rise of populism affects wildlife management in U.S.** Researchers at Colorado State University and The Ohio State University have found that a cultural backlash stemming from the rise of populism may limit opportunities for state fish and wildlife agencies to adapt to changing social values in the United States. The team reached this conclusion by analyzing more than 12,000 surveys from 19 states and studying ballot initiatives related to hunting.

Based on the new study, researchers found that in states with the largest change in social values, individuals who held traditional values had lower levels of trust in the state wildlife agency. In contrast to traditional values, in which people believe wildlife exists for their benefit, the researchers describe an emerging set of values, in which wildlife and humans are seen as part of a connected social community, as mutualism. **Read more: Wildlife Management.**

### **Calendar of Events:**

**January 8-11, 2018: Pathways Africa, Windhoek, Namibia,** Colorado State University and The Cheetah Conservation Fund are co-hosting the 2018 Pathways Africa Conference and Training (Namibia) in partnership with the Large Carnivore Management Association of Namibia and the Namibia Nature Foundation. **Conference Website**

**February 5-9, 2018: 65<sup>th</sup> Annual Meeting of the Western Section of the Wildlife Society,** Santa Rosa, CA. Our theme this year is Communicating Science. Communicating is a critical life and professional skill. Yet few of us have been trained in communication techniques. Consequently, many of our science messages fall flat, especially when presented to non-scientists. **The Western Section Conference Website**

**March 26-30, 2018: 83<sup>rd</sup> North American Wildlife and Natural Resources Conference,** Norfolk, VA. **83<sup>rd</sup> conference Website**

**April 10-11, 2018: Great Plains Grassland Summit,** Denver, CO. The objectives of the 2018 Great Plains Grassland Summit are to convene an opportunity for managers, scientists and stakeholders to learn about and contribute to ideas, knowledge, and plans for managing, conserving and restoring grasslands through collaborations across boundaries in the Great Plains. **Summit Website**

**April 23 - 26, 2018, 2018 National Outdoor Recreation Conference - Building Resilient Communities, Environments and Economies,** Burlington, VT. Outdoor recreation infrastructure and opportunities are now

acknowledged as the catalysts for engaging current and future land stewards, building strong local economies, and contributing to a sense of community and belonging. Our location of Vermont provides an ideal location to see how investments in local conservation and outdoor recreation have contributed to a thriving economy and vibrant community. [2018 National Outdoor Recreation Conference Website](#).

July 21-26, 2018: **North American Congress for Conservation Biology - Conservation Science, Policy, and Practice: Connecting the Urban to the Wild**, Toronto, Canada. [NACCB 2018 Website](#)

## FUNDING OPPORTUNITIES

### **Rocky Mountain National Park: [2018 Call for Park-Funded Research Proposals](#)**

The Continental Divide Research Learning Center (CDRLC) is seeking proposals for research, technical assistance, and education projects that aim to promote adaptive management and informed decision making at Rocky Mountain National Park. This year the CDRLC has funding available for projects that support park management needs.

The goal for these funds is to address identified needs for information, technical assistance or education on any topic of interest to park management. Projects can be identified by park staff, agency partners or university researchers. Park staff should route their projects through the appropriate supervisors. Park staff can identify a university or agency partner to work with directly to develop a proposal, or if you have an idea without an identified partner CDRLC staff are available to assist in finding the appropriate research partner. Universities within the RM-CESU and agency partners are encouraged to apply, particularly those showing in-kind support or other ways to leverage funds. Due COB January 11, 2018

The **U.S. Geological Survey (USGS)** released an RFP for the [Water Resources Research National Competitive Grants Program](#). Each year, the USGS has \$750,000 to \$1,000,000 to support these grants funded through the state Water Centers (National Institutes for Water Resources). Successful proposals go after issues of national concern, team up with USGS scientists, and help to train the next generation of water resource scientists.

In 2017, USGS received 153 pre-proposals, invited 30 for full proposals and funded 3 proposals. There is a pre-proposal process again this year; pre-proposals are due to the Montana Water Center on February 15th (see [https://water.usgs.gov/wrri/FY\\_2018\\_RFP\\_104g.pdf](https://water.usgs.gov/wrri/FY_2018_RFP_104g.pdf)). The national-level panel will then select 30 PIs to move forward for full proposals, for grants up to \$250K.

## STUDENT OPPORTUNITIES

**Regional Visitor Use Management – Park Break 2018, Joshua Tree National Park & Death Valley National Park February 25 - March 3, 2018** Park Break is an all-expenses paid, field-based service learning opportunity for graduate students (Ph.D. or Master's level) who are studying in fields related to parks, protected areas, and cultural sites. We are also interested in students with an interest and/or understanding in protected area policy, ecology, communications (including social media), and marketing.

The George Wright Society, National Park Service and Kansas State University are now accepting applications for participation in the 2018 visitor use management focused Park Break Program at Joshua Tree National Park and Death Valley National Park (JOTR/DEVA). Deadline to apply: December 4, 2017. Visit [GeorgeWrightSociety.org/Students](http://GeorgeWrightSociety.org/Students) to learn more about the opportunity.

The **Conservation Leadership through Learning (CLTL) Program** at Colorado State University (CSU) is an 18-month innovative Master's degree which prepares leaders to address conservation issues around the globe. The program is built around principles of experiential learning, inter-disciplinary instruction, and applied approaches. Our students work closely with a network of practitioners and organizations throughout the program. CLTL is a great option for individuals seeking to make a difference in the lives and ecosystems of our planet. Application for Fall 2018 open until March 1, 2018.

The **Rocky Mountain Conservancy and Rocky Mountain National Park** are requesting proposals for the **Bailey Research Fellowship**. This is an opportunity for one graduate level student to spend three to four months conducting research in Rocky Mountain National Park. **Job Description:** This fellowship opportunity invites a broad range of research proposals to be reviewed and conducted in Rocky Mountain National Park, including wildlife management, vegetation and riparian studies, fire ecology, cultural sciences, archaeology and historic structures preservation, as well as other topics in botany, zoology, geology, history, ecology and ornithology. The graduate student awarded the Research Fellowship will work with Rocky Mountain National Park staff for a period of three to four months. Applicants must submit a preliminary research proposal and the chosen fellow will be expected to convey research finding to the general public as well as to professional audiences. **Wage/Salary:** Housing plus a \$8,000 honorarium and a \$3,000 support budget for incidentals. **Application Instructions:** Please email a cover letter, resume, transcripts, and research proposal to Rachel Balduzzi at [rachel.balduzzi@rmconservancy.org](mailto:rachel.balduzzi@rmconservancy.org) by February 1, 2018 for consideration of this fellowship.

## JOB OPPORTUNITIES

For details, visit **Job Opportunities**

**Wilderness/Rivers Job Available for Latino/Latina Environmental Advocate** The Forest Service has partnered with the Hispanic Access Foundation to employ a fellow in the Wilderness and Wild & Scenic Rivers Washington, DC. office. This person will have an opportunity to make important contributions and gain valuable experiences participating in rivers 50th initiatives, outreach and educational programs, and communications efforts. **Apply now!**

**Tom A. Alberg and Judith Beck Chair in Native Plant Regeneration**, University of Idaho, Moscow, ID (review date 1/18/2018)

**Associate Director of Science and Data**, Colorado State Forest Service, Fort Collins, CO (closes 1/16/2018)

**Assistant Professor - Evolutionary Developmental Biologist**, Utah State University, Logan, UT (review date 1/6/2018)

**Assistant Professor - Crustal Dynamics**, Geology and Geophysics, University of Wyoming, Laramie, WY (review date 1/5/2018)

**Assistant Professor of American Studies**, Montana State University, Bozeman, MT (review date 12/31/2017)

**Environmental Planner**, Center for Environmental Management of Military Lands, Fort Polk, LA (closes 12/17/2017)

**Lab Coordinator**, Natural Resource Ecology Laboratory, Colorado State University, Fort Collins, CO (closes 12/18/2017)

**Endangered Species, Technician**, Center for Environmental Management of Military Lands, Fort Polk, LA (closes 12/17/2017)

**Botanical Field Crew Leader**, Center for Environmental Management of Military Lands, Pohakuloa Training Area, Hawaii (closes 12/12/2017)

**Assistant Professor, Geographic Information Systems**, University of Denver, Denver CO (review date 12/10/2017)

**EPSOoR Project Director**, University of Idaho, Moscow, ID (review date 12/4/2017)

**Laboratory Manager - Entomology, Plant Pathology, and Nematology**, University of Idaho, Moscow, ID (review date 12/4/2017)

**Assistant Professor: Environmental Economist**, University of Boulder, Boulder, CO (Posted 11/3/2017)

**Assistant Professor - Renewable and Sustainable Energy Institute**, University of Boulder, Boulder, CO (Posted 11/3/2017)

**Senior Ecologist**, Montana Natural Heritage Program, Helena, MT (review date 11/27/2017)

**Associate Director of Cultural Resources**, Center for Environmental Management of Military Lands, Colorado State University, Fort Collins, CO (review date 11/27/2017)

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.umn.edu](mailto:rmcesu@cfc.umn.edu).