Rocky Mountains Cooperative Ecosystem Studies Unit

NEWSLETTER
Winter 2021

RM-CESU NEWS & EVENTS

The Rocky Mountain CESU Kicks Off Its First Seminar Series
This series will take place every spring semester. Seminar presentations will highlight the region's best scientific talent and scholarship to help manage our public resources across social, cultural, economic, political, and environmental arenas.

The 2021 Seminar Series topic is ***Justice, Equity, Diversity, and Inclusion: Opportunities through the Rocky Mountains CESU***. Justice, diversity, equity, and inclusion are critical issues that cross all aspects of science, scholarship, and resource management. This series will explore how CESU partners are approaching these areas to foster positive change.

Join us **February 18 at 3 PM MST** for **Cooperative Eco-cultural Restoration of American Bison to Native Americans.** The Wolakota Buffalo Range was formally established in October 2020 with 100 bison released onto the Rosebud Sioux Tribal Lands. Join Dr. Brendan Moynahan (Science Advisor, National Park Service), Wizipan Little Elk (CEO, Rosebud Economic Development Corporation), and Dennis Jorgensen (Bison Program Lead, World Wildlife Fund) for active discussion on how partnership can simultaneously support conservation, cultural renewal, economic development, and food security and sovereignty. **To register for the Feb.18th presentation, click here and receive your Zoom Webinar invite.**

National Park Conservancy – Jerry O'Neal Student Research Fellowship -2021 Call
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 17, 2021. **Application Process**

Glacier National Park | Grant-Kohrs Ranch NHS | Little Bighorn Battlefield

***Earth's Future* Highlights RM-CESU Researchers' Projections of Wolverine Denning in the Rocky Mountains.** Researchers from The University of Colorado Boulder, the North Central Climate Adaptation Center and US Fish and Wildlife Service joined together to model how the loss of snowpack in the Rocky Mountains may affect wolverine (*Gulo gulo*) populations. They used modeling domains near to Glacier NP and Rocky Mountain NP to look at the future of spring snow-covered periods by the mid-21st century. These model projections indicate that snowpack in April will be declining by mid-century. However, the Rocky Mountain NP study area may be more resilient to snow loss than the Glacier NP montane ecosystems. The citation for this article is: *Barsugli, J. J., Ray, A. J., Livneh, B., Dewes, C. F., Heldmyer, A., Rangwala, I., Guinotte, J. and Torbit, S., 2020. Projections of mountain snowpack loss for wolverine denning elevations in the Rocky Mountains. Earth's Future, 8, e2020EF001537*.

Another Research Paper on Wolverine Landscape Genetics Is the Work of Multiple RM-CESU Scientists: Researchers from the following RM CESU partners: USDA Forest Service, Wildlife Conservation Society, University of Idaho and Montana Fish Wildlife and Parks, collaborated on a study of wolverines inhabiting Montana, Idaho, Wyoming and the northern border with Canada. The model demonstrated the importance of terrain ruggedness and housing density for predicting broad-scale wolverine gene flow. The citation for this article is: *Niko Balkenhol, N., M.K. Schwartz, R.M. Inman, J.P. Copeland, J.S. Squires, N.J. Anderson, and L. P. Waits, 2020, Landscape genetics of wolverines (Gulo gulo): scale-dependent effects of bioclimatic, topographic, and anthropogenic variables, Journal of Mammalogy, 101(3) : 790-803*

***International Consortium Investigates Pronghorn Migration Routes in Montana, Alberta and Saskatchewan*:** The University of Calgary, University of Montana, Montana Fish Wildlife and Parks, and several wildlife advocacy organizations investigated the migration of pronghorn (*Antilocapra americana*) as they moved across the international border of the Northern Sagebrush Steppe Region. Another RM-CESU partner, the Bureau of Land Management, contributed funding to the study, along with numerous government, non-governmental and industry funders. Some of the pronghorn in this study (173 GPS collared individuals) were seasonally migrant (in spring and fall) and some were resident in the prairie ecosystem. The researchers used environmental and anthropogenic variables to determine relevance to migrating pronghorn. The migration habitat in the US and Canada is about 50% in public ownership and

50% in private holdings. The modelling and mapping used in this study indicate the importance of connectivity for pronghorn migration, the need for protection of prairie habitat and the need to facilitate movement across human barriers, such as roads and well pads. The citation for this article is: *Jakes AF, DeCesare NJ, Jones PF, Gates CC, Story SJ, Olimb SK, et al. (2020) Multi-scale habitat assessment of pronghorn migration routes. PLoS ONE 15(12): e0241042*

JOB OPPORTUNITIES

Assistant Professor of Natural Science, Missoula College, Missoula, MT (Application review begins 3/21/2021)

Post Doc Research Associate (with interest in natural capital accounting, ecosystem services modeling and applied research in the areas of natural resources economics, policy, management), Haub Scholl of the Environment and Natural Resources, University of Wyoming, Laramie, WY (Application review begins 2/28/2021)

GIS Analyst, Center of Environmental Military Management on Military Lands, Colorado State University, Position Location: Scott Air Force Base, Belleville, IL (closes 2/22/2021)

Botany Technician, Center of Environmental Military Management on Military Lands, Colorado State University, Position Location: Fort Polk, LA (closes 2/22/2021)

Environmental GIS Analyst, Center of Environmental Military Management on Military Lands, Colorado State University, Position Location: Fort Collins, CO (closes 2/22/2021)

Native Student Program Manager (Recruitment and Retention), College of Agriculture's "Growing and Sustaining Pathways in Agriculture," Montana State University, Bozeman, MT (closes 2/122/2021)

Forestry Technician, Center of Environmental Military Management on Military Lands, Colorado State University, Position Location: Fort AP Hill, VA (closes 2/15/2021)

Database and Web Developer, Colorado Natural Heritage Program, Colorado State University, Fort Collins, CO (closes 2/15/2021)

Natural Resource/Compliance Specialist, Center of Environmental Military Management on Military Lands, Colorado State University, Position Location: Oahu, HI (closes 2/15/2021)

Hydrologist Specialist, Department of Geosciences, Colorado State University, Fort Collins, CO (closes 2/15/2021)

Research and Monitoring Crew Leader, Colorado forest Restoration Institute, Colorado State University, Fort Collins, CO (closes 2/15/2021)

Research Associate – Plant Pathology, Montana State University, Position Location: Eastern Ag Research Center, Sidney, MT (closes 2/16/2021)

For details on these job opportunities, visit the Jobs Page

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.