RM-CESU NEWS & EVENTS

Glacier National Park Conservancy - Jerry O’Neal Research Fellowships Awarded to Two Graduate and Two Undergraduate Students to Work in Glacier NP this Summer

The Rocky Mountains CESU, Glacier National Park, Crown of the Continent Research Learning Center and the Glacier National Park Conservancy announced the selection of four students - two graduate and two undergraduate who received Glacier National Park Conservancy - Jerry O’Neal Research Fellowships for work in Glacier NP in the areas of ecology and river geomorphology during summer 2020.

The four students who received awards include:

- Amari Guardipee, Salish Kootenai College, undergraduate, with a proposal titled: “Bumble bee abundance and activity in relation to floral resources in Glacier National Park prior to bison reintroduction”
- Jeremiah North Piegan, Salish Kootenai College, undergraduate, with a proposal titled: “Habitat Use by Elk in Glacier National Park Prior to Bison Reintroduction”
- Claire Rawlings Gilder, University of Montana, Ph.D. candidate in Geosciences, with a dissertation proposal titled: “Multiscale interactions among groundwater, surface topography, and riparian vegetation in snowmelt-driven gravel bed rivers”
- Vladimir Kovalenko, University of Montana, MA Candidate in Communications, with a thesis proposal titled: “Keystone Mutualism in Peril: Clarks Nutcracker and Whitebark Pine in Glacier National Park, MT”

Amari Guardipee will provide baseline on bumble bee species, bumble bee activity, and floral associations at established vegetation plots within Glacier National Park prior to bison reintroduction. She will look at the influences on relative abundance of bumble bees. For example, she will compare bumble bee abundance in meadows with more diverse floral communities with more diverse plants generally (including grasses and forbs).

Jeremiah North Piegan will quantify elk pellet densities and collect fecal pellets of elk for metabarcoding. This data will be paired with data on plant communities to better understand elk summer activity and diets. Some
plants will also be collected for genotyping in Genebank. The project will also provide pre-bison baseline data that can be used to learn more about changes in elk activity and diets once bison are returned to the landscape.

Claire Rawlings Gilder will aim to understand complex interactions among groundwater, surface topography, and vegetation factors at the reach, subreach, and bar scale. Quantifying the processes and feedbacks that link these factors will improve predictions how disturbances on multiple spatiotemporal scales can propagate through a river corridor.

Vladimir Kovalenko, to inform Whitebark pine and Clark’s nutcracker restoration, will survey a representative sample of Whitebark pine sites, quantify blister rust infection in stands, assess mortality and cone production. Additionally, he will model Clark’s nutcracker population and habitat use in and around Glacier.

RM-CESU Announces the Annual Competition for Student Award: The Rocky Mountains CESU annually recognizes “above and beyond” accomplishments by student(s) 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 August 3, 2020. The Award winner(s) will receive a citation and give a presentation on their project results at annual RM-CESU Fall Meeting. For nomination instructions, go to the RM-CESU web site at Student Award.

Keck Foundation Grant to a Number of RM-CESU Partners will Investigate Subsurface Microbes in Yellowstone Thermal Pools: A prestigious $1 million grant from the W.M. Keck Foundation will help a team of researchers led by Eric Boyd, Department of Microbiology and Immunology, Montana State University answer questions about microbial life in the subsurface of Yellowstone National Park, including its extent and processes that allow it to thrive.

The Keck grant will support three years of research by Boyd’s interdisciplinary team and fund the design and construction of a specialized instrument triggered by earthquakes to collect samples from deep within existing boreholes. The research will bridge the gap between biology and geology to determine how Earth’s natural processes influence microbial life.

The project is based at MSU-Bozeman, but includes researchers from Princeton University, the University of Colorado, New Mexico Institute of Mining and Technology, the United States Geological Survey, the National Park Service, Salish Kootenai College, Diné College and the private engineering firm Class VI Solutions. Much of the
funding will support graduate research positions and summer research internships for undergraduate Native American Indian students.

For more information go to:
http://www.wmkeck.org/grant-programs/research/medical-research-grant-abstracts/science-and-engineering-2019

ROMO Research Conference Highlights Work of RM-CESU Researchers and Students:

Researchers and students from RM-CESU partners: Colorado State University, University of Wyoming, USGS, University of Northern Colorado, Utah State University, University of Colorado Boulder, Washington State University, Montana State University, Metropolitan State University of Denver, USDA Forest Service, National Park Service, presented their research results at the 2020 Rocky Mountain National Park Research Conference. This Conference, held on March 10-11, 2020 in Estes Park, Colorado, was hosted by ROMO’s Continental Divide Research Learning Center, with support from the Rocky Mountain Conservancy. The Keynote Lecture was delivered by David Cooper, Colorado State University, who is one of the “power users” of the RM-CESU agreement. He discussed the need for collaborative field research to conserve and restore wetland and riparian communities in the Rocky Mountains.

Dr. Chris Ray, CU Boulder, Receives Award at the ROMO Research Conference, March 10, 2020. Presenters included Superintendent Darla Sidles (right) and Chief of Resource Stewardship and Science Karen Nydick (left). Photo Credit, Ann Schonlau, Volunteer, Rocky Mountain NP

Special Awards were presented at the conference, including the “Stewardship Award” to Dr. Chris Ray, University of Colorado Boulder, for her work on the American pika and the species response to climate change. The “Pikas in Peril” project, funded by the NPS-Climate Change Program, was facilitated through the RM-CESU agreement.

During concurrent oral sessions and poster sessions, researchers discussed research on natural resources, cultural resources and social science. At the end of Day 2 of the Conference, the ROMO Management Team discussed “Challenges and Opportunities in Management Amid Changes”. For more information, see the Conference Proceedings booklet.

JOB OPPORTUNITIES

For details, visit Job Opportunities

Director of Undergraduate and Field Education, Wilderness Institute, University of Montana, Missoula, MT (closes 5/28/2020)

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.