RM-CESU NEWS & EVENTS

The 13th Biennial Scientific Conference on the Greater Yellowstone Ecosystem Included Presentations by RM-CESU Cooperators, October 4-6, 2016, at Jackson Lake Lodge, Grand Teton NP

The theme of the 13th Biennial Science Conference was Building on the Past, Leading into the Future: Sustaining the GYE in the Coming Century. Natural and cultural resources science, management and interpretation were the focus of the meeting, with a strong emphasis on science communication and student involvement. A number of graduate and undergraduate students received scholarships to attend the meeting and present their research.

Many of the session chairs and presenters, and field trip leaders are involved with the Rocky Mountains CESU, including scientists and interpreters from the National Park Service, the USFS, the USGS, the FWS, and Colorado State University, University of Montana, Montana State University, Utah State University, University of Colorado Denver, University of Wyoming, Wildlife Conservation Society and University of Utah.

There were a number of "named lectures" presented at the meeting, with two of the awardees coming from the ranks of the RM-CESU partners: Dr. Bill Wyckoff, Professor of Geography at Montana State University and Dr. Bob Gresswell, Fishery Biologist at USGS and Montana State University. Dr. Bill Wyckoff received the 2016 Aubrey L. Haines Award which honors scholars in the cultural resources field. He presented a lecture on Archives, Images, and Fieldwork: Historical Geographies of the American West. Dr. Bob Gresswell received the A. Starker Leopold Award for exemplary work on behalf of science and conservation. His lecture was titled, Yellowstone and the Conservation of Native Western Trout.

There was a special panel on managing park visitors, which included studies of park visitors by Jake Jorgenson and Norma Nickerson of the University of Montana. The "local angle" on visitor management included discussion of the visitor surveys of uses of the Moose-Wilson Road Corridor in Grand Teton NP. The Visitor Use Planning exercise for the Moose-Wilson Road was described by Ashley D’Antonio, who completed her Ph.D. at Utah State University, and is now on the faculty of Oregon State University.

Major natural resources research topics included bison and elk disease management, restoration of whitebark pine in the Greater Yellowstone, fire ecology and studies of bird species, including loons, trumpeter swans, Clark’s Nutcrackers, golden eagles and great grey owls. The physical sciences were well represented by researchers who study rock glaciers, air quality, the Yellowstone Hotspot, and the hydrology of groundwater in the Norris Geyser Basin, Yellowstone NP.

For more information and the agenda for the meeting, please go to https://ww4.aievolution.com/ytc1601/
Annual Science Meeting of the National Atmospheric Deposition Network to be Held in Santa Fe from October 31–November 4, 2016: The NADP 2016 Annual Meeting and Scientific Symposium is taking place in Santa Fe, New Mexico at the La Fonda On the Plaza hotel from October 31–November 4, 2016. The theme of the 39th annual meeting is “Deposition: What Does the Future Hold?”. Highlights of this meeting include 2.5 days of oral presentations, a keynote address from Dr. Daniel Wildcat, a Native American faculty member at Haskell Indian Nations University in Lawrence, KS, a poster session and reception on Wednesday evening, and an optional field trip on Friday afternoon to an NADP, IMPROVE, and State of New Mexico monitoring sites at Bandelier National Monument.

The [meeting agenda](#) is now available on the NADP fall meeting website.

The week will start with committee meetings on Monday and Tuesday (October 31st and November 1st), and the conference will kick off on Wednesday, November 2nd. Sessions on the agenda include critical loads of atmospheric deposition, fire risk, and ecosystem change, urban atmospheric chemistry and deposition, influences of trends and climate change on critical loads, and air pollution issues on Native American lands. A number of the session chairs and presenters are involved with the Rocky Mountains CESU, including scientists from the National Park Service, the USFS, the USGS, and Colorado State University.

Call for Abstracts due November 27, 2016: Rocky Mountain National Park Biennial Science Conference, "People and Stewardship: Using Research for Management."

The Conference Committee for the 2017 ROMO Continental Divide Research Learning Center Biennial Research Conference is pleased to announce that the "[Call for Abstracts](#)" is open. The conference will be held March 1–3, 2017 in Estes Park, Colorado. The meeting will be held at the Estes Park Municipal Building 170 MacGregor Ave, Estes Park, Colorado.

The purpose of the conference is to highlight recent research and education activities conducted within the Park and/or projects outside the Park that are relevant to park management. This event will provide a forum for the NPS and associated researchers to share their discoveries with the staff, interested public, and other researchers. It will highlight stories relevant to present and future issues, such as visitor use and climate change, while creating opportunities for young professionals and scientists to engage researchers and NPS staff. The target audiences for this conference are land stewards, planners, natural and cultural resource specialists, science partners, conservation practitioners, student professionals, general park visitors, educators, and the interested public.

Researchers may choose a 20 minute presentation or poster. Abstract(s) are due [no later than November 27, 2016](#). Please see [2017 Call for Abstracts Conference Information](#). For additional information you may also email Scott_Esser@nps.gov. Scott Esser, Ecologist, Rocky Mountain National Park, 970-586-1394
Increase in energy production contributing to declines in sage-grouse

This story was written by the research team and communication officers from the U.S. Geological Survey.

Greater sage-grouse populations in Wyoming declined 2.5 percent annually between 1984 and 2008, with oil and gas development being associated with the decline. A new study from the U.S. Geological Survey and Colorado State University used the annual counts of male sage-grouse at communal breeding sites, known as leks, as a measure of population size over time. Sage-grouse population data in Wyoming were analyzed in relation to the density of oil and gas wells and the area of disturbance associated with these wells. The analysis also included information about the distance of wells from leks, the potential for a delayed response of sage-grouse populations following well development, characteristics of sagebrush habitat and amount of precipitation.

"Energy development continues to affect important sagebrush habitat required by sage-grouse and other species," said Cameron Aldridge, an associate professor in the Department of Ecosystem Science and Sustainability at Colorado State University who cooperated with the USGS on the research. "This analysis provides new information to managers on how sage-grouse populations respond to energy development, as they simultaneously work to implement conservation measures for sage-grouse and meet demands for additional energy supplies." Populations were stable when no wells were present near a lek and then began declining with the addition of the first well. Declines were not statistically significant until well density reached about 10.4 wells per square mile. At this well density, however, populations were predicted to decline 14 percent per year.

"This approach allowed us to look at long time periods, including years before the oil and gas boom, which gave us a better picture of how sage-grouse have responded to oil and gas development," said Adam Green, lead author of the paper and a former research scientist at Colorado State University. "We found evidence of decreasing populations in response to increasing oil and gas development. This response was apparent as far as four miles from a lek, and the response was strongest four years following development."

Global energy demand is expected to increase substantially in the next two decades, with fossil fuels accounting for more than one-third of that demand. Many studies have shown negative effects of energy development on wildlife, including declining populations, loss of biodiversity and modified behavior. Concerns over declining greater sage-grouse populations have led to the establishment of Sage-grouse
Priority Habitat Management Areas for conservation as protective measures to maintain suitable habitat and manage negative effects associated with oil and gas development and other disturbances.

“The four-year delay in the response after well development may be an indication that energy development is impacting the production of male sage-grouse in the breeding population,” said Steve Hanser, USGS sagebrush ecosystem specialist. “Male sage-grouse reach maturity after two to three years, so if development hinders recruitment there can be a delayed population response as adult males die and are not replaced by young males.”

The results of this analysis suggest that allowable well densities that average one well pad per 640 acres (with up to 64 wells per pad) within Sage-grouse Priority Habitat Management Areas, called Core Areas in Wyoming, may only be sufficient for limiting population declines to current rates, but not for reversing the trend.

While this study evaluated population trends from 1984 to 2008, this was prior to management changes associated with the Wyoming Core Area Policy. Thus, this paper does not assess the effectiveness of that policy.

Greater sage-grouse occur in parts of 11 U.S. states and two Canadian provinces in western North America. Implementation of effective management actions for the benefit of sage-grouse continues to be a focus of Department of the Interior agencies following the 2015 decision by the U.S. Fish and Wildlife Service that the species is not warranted for listing under the Endangered Species Act.

The research is published in the Journal of Wildlife Management.

This work was funded through a RM-CESU agreement.

PARTNER NEWS & EVENTS

Calendar of Events:

October 20-21, 2016: River Restoration Course, Big Sky, MT. Montana Water Center is teaming up with the Gallatin River Task Force to provide a workshop on river restoration techniques. This will be a hands-on, two-day classroom and field course. We will examine the science and application of dynamic river restoration concepts and techniques with an emphasis on willow identification, harvest, and storage. We will also specifically address the use of willow lifts in restoration and bank stabilization projects. CEUs will be offered through MSU Extended University for those interested. Registration and course details available Aug, 15th at: River Restoration Course
November 7-10, 2015: National Wilderness Workshop, University of Montana, Missoula, MT. The focus of this year’s workshop will be on carrying out the Implementation Plan for the 2020 Vision. Areas of focus will be as follows: Communications, Wilderness Character, Partnerships for the Future, Training Models, and Building Capacity for Stewardship through Fundraising. To see agenda and register, visit the Wilderness Workshop webpage.

JOB OPPORTUNITIES

For details, visit on Job Opportunities

Assistant Professor – Plant Sciences, Quantitative Genetics/Statistical Genomics, Montana State University, Bozeman, MT (screening of applications will begin 12/15/2016)

Assistant Professor, Geospatial Analysis of Environment and Society, Utah State University, Logan, UT (screening of applications will begin 12/5/2016)

Post-Doctoral Research Assistant, Human-Environment Systems Center, Boise State University, Boise, ID (screening of applications will begin 11/15/2016)

Assistant Professor of Agricultural and Resource Economics, Colorado State University, Fort Collins, CO (closes 11/4/2016)

Supervisory Forestry Technician - Wildland Fire program, Whiskeytown National Recreation Area, Whiskeytown, CA (closes 11/4/2016)

Assistant Professor, History-North American West, Utah State University, Logan, UT (screening of applications will begin 11/1/2016)

Postdoctoral Research Associate in Sensory & Community Ecology, Barber Sensory Ecology Lab, Boise State University, Boise, ID (screening of applications will begin 10/31/2016)

Ecologist (2 vacancies), National Park Service-WASO Natural Resource Stewardship Science, Fort Collins, CO (closes 10/28/2016)

Interdisciplinary Geospatial Ecologist, BLM - Wyoming State Office in Cheyenne, WY (closes 10/26/2016)

Assistant Professor in Sedimentology, Department of Earth Science, Montana State University, Bozeman, MT (screening of applications will begin 10/14/2016)

Assistant Professor in Igneous for Metamorphic Processes, Department of Earth Science, Montana State University, Bozeman, MT (screening of applications will begin 10/14/2016)

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.