Project Summary
Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: North Coast and Cascades Biodiversity Leadership Academy - Engaging Young Scientists in Conservation of Park Ecosystems

Discipline: Natural
Type of Project: Technical Assistance/Education
Funding Agency: National Park Service
Other Partners/Cooperators: Colorado State University
Student Participation: Yes, Undergraduate and Graduate
Effective Dates: 09/12/2016 -12/31/2017
Funding Amount: **$38,305**

Investigators and Agency Representative:
NPS Contact: Regina M. Rochefort, Ph.D. Science Advisor Director of the North Coast and Cascades Research Learning Center North Cascades National Park Service Complex
810 State Route 20 Sedro-Woolley, WA 98284 Phone: 360-854-7202 Fax: 360-856-1934
Email: regina_rochefort@nps.gov

Investigator: John Moore Department 1499 Natural Resource Ecology Laboratory Colorado State University, Fort Collins, CO 80523 Phone: 970-491 5871 Email:jcmoore@colostate.edu

Project Abstract: The National Park Service has just entered its second century of stewardship of America's special cultural and natural places. In this century, NPS is recommitting to exemplary stewardship of national parks and programs to preserve these sites, connect people to parks, advance its education mission, and enhance professional and organizational excellence. A major NPS goal is to actively work to enhance diversity in its workforce and visiting public to fully represent the nation's ethnically and culturally diverse communities. This is a collaborative project between CSU and NPS to help achieve that goal by establishing, administering, and funding the North Coast and Cascades Biodiversity Leadership (NCCBL) Academy.

The NCCBL will recruit undergraduate and graduate students from underrepresented minorities in ecological sciences and first generation (in higher education) students to introduce students to professional natural resource management in national parks. Working with CSU and their existing program to recruit diverse students to ecology using an academy model, CSU and NPS will recruit a cadre of students who will be introduced to the NPS mission and policies, trained in design of field studies to inventory biodiversity, and use of Geographic Information Systems (GIS) and on-line data bases such as iNaturalist to attribute and analyze data. Training will be conducted by NPS and academic scientists with assistance from graduate students. Following training, the students will become a traveling field team and work with a graduate student leader to conduct projects within several parks of the North Coast and Cascades Network (NCCN). Field teams will conduct inventories and small scale research projects, present their project results to park staff and visitors, and write summary reports. The NCCBL students will learn about NPS resource management and gain experience in field ecology and communicating their results to public and staff audiences. These experiences will help students compete for seasonal and permanent positions in resource management with NPS and other organizations.

The NCCBL Academy will consist of a training session followed immediately by an internship project. For training, students will spend an intensive 3 to 5 day workshop learning science skills associated with collecting quality data during events such as BioBlitzes. BioBlitzes are public events to identify as many species of plants, animals, and other organisms as possible within a limited time for a selected area. The training will include geospatial tools (GPS and mapping skills), taxonomic identification, and use of citizen science tools (e.g., iNaturalist). Students will work in teams to learn how to conduct taxonomic inventories, and how to handle specimens and sampling protocols. Students receive training on collections protocols, permitting requirements and natural history collection standards. After students complete the training session, they will be assigned internships to complete detailed surveys of selected species at NCCN parks. The team may be based in one park and conduct sampling throughout the area and at other parks during their internship over the summer.

Keywords: North Coast and Cascades Biodiversity Leadership Academy, biodiversity, ecosystems, National Park Service, Colorado State University