

Project Summary

Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: Trophic Downgrading at Rocky Mountain NP

Type of Project: Technical Assistance
Discipline: Natural Resources
Funding Agency: National Park Service
Other Partners/Cooperators: University of Montana
Effective Dates: 8/1/2013 - 12/31/2015
Funding Amount: \$1449

Investigators and Agency Representative:

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Project Abstract: Trophic Downgrading of Planet Earth (Estes et. al. 2011) was published in *Science* and has become a keystone article summarizing the implications of not having apex predators in an ecosystem. Dr. Berger is one of the more senior authors of this paper which has twenty four authors, and will be best suited to providing technical assistance on this topic in an ecosystem type he is familiar with.

The objectives of this project are as follows:

1. Technical assistance visit to include:
 - a. Presentation to park staff on Trophic Downgrading
 - b. Informal workshop to determine:
 - i. how the concept of trophic downgrading relates to RMNP
 - ii. A preliminary research strategy to address the issue

Outcomes with Completion Dates: July 31, 2016 - Provide final thesis, all GIS data, reports, additional publications created, maps, copies of field notes, etc. to NPS.

Keywords: trophic downgrading, apex predators, ecosystem, implications, Rocky Mountain National Park, University of Montana, Division of Biological Sciences