

Project Summary
Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: Utilizing standard population analysis tools (e.g., Program MARK) to determine abundance and trends in ROMO boreal toad breeding sites incorporating 2016 data.

Discipline: Natural
Type of Project: Technical Assistance
Funding Agency: National Park Service
Other Partners/Cooperators: Colorado State University
Student Participation: Yes, Youth
Effective Dates: 7/1/2016-12/31/2017
Funding Amount: \$3,948

Investigators and Agency Representative:

NPS Contact: Mary Kay Watry Conservation Biologist National Park Service Rocky Mountain National Park 1000 US Highway 36 Estes Park, Colorado 80517 Phone: 970-586-1285 Fax: 970-586-1392 mwatry@nps.gov

Investigator: Dr. Larissa Bailey Colorado State University Department of Fish, Wildlife and Conservation Biology 1474 Campus Delivery Fort Collins, CO 80523-1474 Phone: 970-792-4084 Larissa.Bailey@colostate.edu

Project Abstract: The Boreal Toad (*Anaxyrus boreas boreas*) is listed as an endangered species in Colorado and New Mexico, a Tier I status species in Wyoming, and is petitioned for federal listing. A decision will be made by the US Fish and Wildlife Service by September 30, 2017 on whether to federally list the species as threatened or endangered under the Endangered Species Act. The Boreal Toad Recovery Team signatories are currently working on a structured decision-making (SDM) process to rewrite the conservation plan for the species. There is a need for data on the status and trends of existing breeding populations and progress made on recovery, in order to inform these efforts.

ROMO has implemented capture-recapture methodology for an extended timeframe allowing us to estimate parameters of interest, e.g., survival, skipped breeding opportunities and abundance, and most importantly trends; however, we have yet to analyze these data. In the summer/fall of 2016 staff and collaborators will be trained to organize and analyze data in Program MARK from previous years' data collection. This work is being completed under a separate task agreement. This task will continue this effort by providing QA/QC and technical guidance as staff independently work to organize and analyze the incoming 2016 field data.

The public purposes of this project are motivating youth participants to become involved in natural resource protection by teaching them data collection, entry and analysis techniques used to study endangered species using standard population analysis tools. These participants will gain "real world" experience outside of the classroom. As such, this project supports NPS Centennial and Call to Action Goals of engaging youth in NPS research and management. This study will also benefit the scientific community, other recovery planning teams and specifically those agencies on the Boreal Toad Recovery Team which include: NPS, FWS, USFS, BLM, USGS, the Colorado Natural Heritage Program and the states of Wyoming, Colorado, and New Mexico

Keywords: Boreal toad, population, breeding, Rocky Mountain National Park, Colorado State University