

Project Summary

Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: Utilizing standard population analysis tools (e.g., Program MARK) to inform a Structured Decision Making Approach to determine optimal management actions for the Endangered Boreal Toad

Discipline: Technical Assistance
Type of Project: Research
Funding Agency: National Park Service
Other Partners/Cooperators: Colorado State University, USGS
Students Involvement:
Effective Dates: 12/11/2015 - 3/15/2019
Funding Amount: \$6,500

Investigators and Agency Representative:

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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 a 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. This project would include training staff and collaborators to organize and analyze data in Program MARK from previous years' data collection and into the future. Additionally, funding will be used to develop a robust study design for implementing capture-recapture methodology at several ROMO sites while collecting covariate data of interest (habitat, disease, and other parameters) that can be analyzed in the future to inform reintroduction project planning. Finally, this project will fund a post-doc to incorporate these data into the ongoing SDM process. This project supports the larger effort to use an SDM approach to develop recovery objectives and determine optimal actions for the conservation of boreal toads in the Southern Rocky Mountains (SE Wyoming, Colorado, and New Mexico).

Keywords: Boreal Toads (*Anaxyrus boreas*), population tool, Program MARK, Rocky Mountain National Park, Colorado State University, post doc