

Project Summary

Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: The invasive New Zealand mud snail versus the candidate threatened Jackson Lake spring snail in Grand Teton NP

Discipline: Natural

Type of Project: Research

Funding Agency: National Park Service

Other Partners/Cooperators: Washington State University

Effective Dates: 5/1/2007 - 12/31/2009

Funding Amount: \$49,767 [\$13,167 added in FY08]

Investigators and Agency Representative:

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Project Abstract:

In Grand Teton NP, The Jackson Lake spring snail (*Pyrgulopsis robusta*) is a narrowly endemic prosobranch snail that also occupies Polecat Creek. However, since the mud snail appeared in this creek, the spring snail has decreased. In addition, the spring snail was recently petitioned for a threatened status listing by the USFWS. This case is currently under review and the final decision has not yet been released. We propose to assess impacts of the mud snail on stream benthic communities and more specifically, to examine impacts on the potentially threatened population of the Jackson Lake spring snail. Objectives of this project include: (1) Measure spatial and temporal variation in community level impacts of the New Zealand mud snail; (2) Determine mechanisms contributing to competitive interactions between the New Zealand mud snail and the Jackson Lake spring snail.

Tasks to be included in this project are: collect benthic invertebrate samples in Marmot Spring and Polecat Creek ; collect benthic invertebrate samples and measure primary production across twelve streams; perform field experiments testing food preference of mud snails and spring snails; identify algal species composition from field experiments testing food preference; count and identify benthic invertebrate samples from Marmot Spring and Polecat Creek; count and identify benthic invertebrates from across eleven streams; submit annual accomplishment report and final report, with all data sets

Outcomes with Completion Dates:

There will be an annual accomplishments reports on October 1, 2007 and October 2, 2008; the results of this project will be delivered in a final report by April 30, 2009

Keywords: Jackson Lake spring snail, New Zealand mud snail, Jackson Lake, species distribution, Grand Teton National Park, Washington State University, invasive species