

Project Summary

Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: Impacts of Beaver on Non-native Brook Trout Invasion, and the Consequence for Westslope Cutthroat Trout Growth, Survival and Sustainability

Type of Project: Research
Discipline: Natural Resources
Funding Agency: National Park Service
Other Partners/Cooperators: University of Montana, USFS, MT FWP
Effective Dates: 7/25/2008 - 7/24/2009
Funding Amount: \$10,000

Investigators and Agency Representative:

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Researcher: Magnus McCaffery, Doctoral Student

Project Abstract: The project examines whether the invasion of southwest Montana mountain ecosystems by brook trout is dependent upon major natural landscape disturbances, such as beaver and if so, what are the consequences for sustainability of our native trout. In the Rocky Mountains, exotic brook trout invasion has been implicated in the decline of native westslope cutthroat. Despite growing interest in the use of beaver as watershed restoration agents, there remain major gaps in our understanding of how beaver influence native fish that are struggling in the face of invasion. Beaver dams may have negative effects on native trout by facilitating exotic fish invasions. It has been suggested that the more pool-adapted and temperature tolerant exotic brook trout invade higher elevations and have a competitive advantage over native species in watersheds with beaver. However, other studies have shown that sensitive fish species native to western U.S. often benefit from beaver through the provision of habitat critical for juvenile rearing and first overwintering. Evaluating how beaver are implicated in this exotic/native salmonid interaction is critical due to declines in the distribution and abundance of cutthroat trout across their historic range. This study will aid in the formulation of management strategies that seek to promote healthy populations of native fish on public lands in MT.

Outcomes with Completion Dates: Results of this work will be disseminated via fisheries meetings, discussions with local biologist, and BLM, USFS, and MFWP biologist will receive copies of McCaffery's approved dissertation

Keywords: Beaver, mountain watersheds, native westslope cutthroat, exotic brook trout, BLM, University of Montana