

Project Summary
Rocky Mountains Cooperative Ecosystem Studies Unit

Project Title: Lake McDonald Fishery Investigations
Type of Project: Research
Funding Agency: National Park Service, Glacier National Park
Effective Dates: September 10, 2002 - June 30, 2005
Funding Amount: \$60,315
<p>Investigators and Agency Representative: UNIVERSITY CONTACT: Dr. Christopher S. Guy, Assistant Unit Leader, Montana Cooperative Fishery Research Unit, Montana State University, Department of Ecology, Bozeman, MT 59717; (406) 994-3491; cguy@montana.edu NPS CONTACT: Dr. Leo Marnell, Glacier National Park, West Glacier, MT 59936; (406) 888-7995; leo_marnell@nps.gov</p>
<p>Project Abstract: The indigenous fishery of Lake McDonald in Glacier National Park has been radically altered by a succession of habitat disturbances and ecological manipulations dating from the early 1900's. Park managers are particularly concerned about the welfare of the bull trout, a native char recently placed under the protection of the Endangered Species Act (ESA) as a <i>Threatened</i> species. The native westslope cutthroat trout, a "Species of Special Concern" in Montana, is also imperiled in the lake. Field surveys and angler censuses carried out during the past 70-years have documented declines of both species' in Lake McDonald, mainly due to the entry of lake trout into the basin. Four other nonnative species are also present in the system. The movements, spatial relationships, and habitat utilization of lake trout and the native species, especially bull trout, are poorly understood. A comprehensive assessment of damage to aquatic and riparian habitats in the Lake McDonald basin has not been made. Information about the condition of historic spawning habitats is also lacking.</p> <p>This project addresses many of these information gaps. The proposed work is mainly investigative, but entails elements of experimental manipulation aimed at mitigating some of the damage that has been inflicted on the system. Since nonnative fish populations cannot be removed from the lake with existing technology the goal is to develop strategies that will enable native fish to co-exist more successfully with invasive and introduced species. Findings will contribute to the development of a strategic plan aimed at restoring to the extent possible the ecological integrity of the Lake McDonald ecosystem. Knowledge gained is expected to yield recommendations aimed at preventing the further decline of native fish populations in the basin. Findings will be applicable to several other large lakes on the west side of the park that are similarly impaired. Knowledge and mitigation techniques that evolve from this work will also benefit other mountain Natural Area parks in the western U. S. that are dealing with introduced and invasive fish issues.</p>
<p>Outcomes with completion dates: The Cooperator will submit an Investigators Annual Report for work completed during the 2003 field season via the NPS Science web site on or before January 31, 2004. A final report will be forwarded to the NPS PI upon completion of the work on or before June 30, 2005.</p>
<p>Keywords: Glacier National Park, Lake McDonald, westslope cutthroat trout, bull trout</p>
<p><i>For Administrative use only:</i> <i>Date Annual Report Received:</i></p> <p><i>Date Final Report Received:</i></p> <p><i>Publications, etc. on file:</i></p>