

**COLORADO RIVER RECOVERY PROGRAM
FY 2006 ANNUAL REPORT**

**RECOVERY PROGRAM
PROJECT NUMBER: Unsolicited**

I. Project Title: **Evaluation of Spawning Razorback Sucker in the Middle Green River.**

II. Principal Investigator(s):

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III. Project Summary:

The middle Green River razorback sucker population numbered around 950 adults in 1988 (Lanigan and Tyus 1989), but declined to between 250 and 500 adults in 1993 (Modde et al. 1993). These declines were tied to a senescent population limited in its ability to reproduce and recruit (Czapla 1999). To address these declines, the Upper Colorado River Recovery Implementation Program began a stocking program to restore the razorback sucker to this reach of the river (Wydoski 1996). Annual production targets for razorback sucker have increased over time and are currently at 14,895 juveniles annually.

In developing stocking plans for the species, a number of concerns were raised including chemoreception and whether or not hatchery reared fishes would spawn naturally without artificial chemical cues to imprint upon (Hudson et al. 1999). Despite these concerns, hatchery reared fishes were collected at Razorback spawning bar in 1999 (Tim Modde, USFWS-Vernal, personal communication; Kevin Christopherson, UDWR, personal communication). This spring, we conducted an evaluation of whether stocked razorback sucker use this spawning bar and the Escalante spawning bar whose location was recently confirmed in 2004. This project was scheduled only for FY2006.

IV. Study Schedule: Initial year - FY - 2006 Final year - FY 2006

V. Relationship to RIPRAP:

GENERAL RECOVERY PROGRAM SUPPORT ACTION PLAN

IV. Manage Genetic Integrity and Augment or Restore Populations (Stocking Endangered Fishes)

IV.E. Conduct monitoring to evaluate effectiveness and continuation of endangered fish

stocking.

- V. Monitor populations and habitat and conduct research to support recovery actions (research, monitoring, and data management)

GREEN RIVER ACTION PLAN: MAINSTEM

- IV. Manage Genetic Integrity and Augment or Restore Populations (Stocking Endangered Fishes)

IV.A.1.d Evaluate stocking success as identified in monitoring plan for stocked fish.

- VI. Accomplishment of FY 2006 Tasks and Deliverables, Discussion of Initial Findings and Shortcomings:

Task 1: Field Data Collection – Fyke netting and electrofishing

On April 26th and May 5th, 2006, crews sampled from the Split Mountain boat ramp down to the Jensen Bridge for Colorado pikeminnow abundance estimate work. During this sampling, crews captured six razorback sucker within one mile of the razorback spawning bar and six razorback sucker within one mile of the Escalante spawning bar.

The history of these razorback suckers is as follows:

Four fish were from the Ouray refuge: two stocked in 2003, one in 2004, and one in 2005. One fish came from a floodplain study conducted in 1999. Four fish had unknown histories. Four fish were not recaptures.

Crews went out multiple times specifically for this project on May 15th and 31st. No razorback sucker were captured during these efforts. These results indicate that razorback sucker were finished spawning by mid-May this year.

Mean daily temperature at the end of April and early May was between 11.5° and 13° C, which is consistent with staging and spawning temperatures for razorback sucker from past research. It is odd that no razorback sucker were captured on May 15th as mean daily temperature at that time was 16° C, which in the past has been associated with spawning razorback sucker (Tyus and Karp 1990).

Task 2: Data Management and Analysis

The data for this scope was predominantly collected through the Colorado pikeminnow abundance estimates and has thus been entered with the rest of the data for that project. No analysis will be done on this data through the razorback evaluation project.

Task 3: Report Preparation

Annual RIP Report (Nov 9, 2006) – complete

VII. Recommendations:

- Continue monitoring Razorback and Escalante bars for spawning razorback suckers every year or every other year to evaluate return on hatchery and/or floodplain stocking programs.
- Continue tracking the source of these fish to determine spawning occurrence of hatchery and floodplain fish.

VIII. Project Status:

Completed

IX. FY 2006 Budget Status

- A. Funds Provided: \$0
- B. Funds Expended: \$0 (covered under other work)
- C. Difference: \$0
- D. Percent of the FY 2006 work completed, and projected costs to complete: 100%
- E. Recovery Program funds spent for publication charges: \$0

XI. Signed: Trina Hedrick 10/17/2006
Principal Investigator Date

XII. Literature Cited

Czapla, T. E. 1999. Genetics Management Plan (Revised). Recovery Implementation Program for the Endangered Fishes of the Upper Colorado River Basin, U.S. Fish and Wildlife Service. Denver, Colorado: 48pp.

Hudson, J. M., K. W. Wilson, L.D. Lentsch, and K.D. Christopherson. 1999. State of Utah stocking plan for endangered fish species in the Upper Colorado River Basin. Utah Division of Wildlife Resources, Salt Lake City. Publication Number 99-27. 53pp.

Lanigan, S. H. and H. M. Tyus 1989. Population Size and Status of the Razorback Sucker in the Green River Basin, Utah and Colorado. North American Journal of Fisheries Management 4: 68-73.

Modde, T., K.P. Burnham, and E.J. Wick. 1993. Population status of the endangered razorback sucker on the middle Green River. U.S. Department of the Interior, Fish and Wildlife Service, Colorado River Fishery Project, Vernal, Utah. 20p.

Wydoski, R. S. 1996. Augmentation Plan For Razorback Sucker In The Middle Green River, 1996-1997, U.S. Fish and Wildlife Service: 12p.

Tyus, H.M., and C.A. Karp. 1990. Spawning and movements of razorback sucker, *Xyrauchen texanus*, in the Green River basin of Colorado and Utah. *Southwestern Naturalist* 35:427-433.