

- I. Project Title: **Verification of stocked razorback sucker reproduction in the Gunnison River via annual collections of larvae.**

- II. Principal Investigator(s):
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- III. Project Summary:

Wild razorback suckers were last captured in the Gunnison River in the late 1970s (Holden et al. 1981), and in the Upper Colorado River in the late 1990's (from the Walter Walker Wildlife Area in 1998). Wild razorback sucker are virtually extirpated in these two river systems. Restoration stocking of razorback sucker began in April 1994 in the Gunnison River and has continued annually since that time (Burdick 2003). About 18,400 juvenile, sub-adult, and adult razorback sucker have been stocked from 1994 through 2002. Restoration stocking began in the Upper Colorado River in 1999 and is ongoing. To date, about 43,000 juvenile, sub-adult, and adult razorback sucker have been stocked.

To produce a self-sustaining population in a particular river system, stocked individuals need to 1) survive, 2) remain in the vicinity of release, or if displaced downstream, return upstream to spawn, 3) successfully spawn in either the Gunnison or upper Colorado rivers, and 4) progeny need to survive to adulthood and be retained in or return to the Gunnison and upper Colorado river so as to maintain an adult population there. Razorback sucker stocked in the Gunnison River near Delta, Colorado, have been recaptured upstream from the Redlands Diversion Dam subsequent to their release. Twenty of these, recaptured between 1997–2001, had been at large for more than six months post-stocking (Burdick 2003). Six of these fish were at large at least 18 months (17.9–50.2 months) following release. Five of these six were at least 300 mm when stocked. All six fish were >390 mm long when recaptured, and therefore presumably sexually mature. How many stocked razorback suckers have survived and remained in the Gunnison River is unknown, but those that have should be actively spawning if suitable spawning habitat exists. The capture of razorback sucker larvae provides verification that stocked fish have successfully spawned.

This project was initiated as a means to document the occurrence of razorback sucker larvae in the Gunnison River and thereby verify that successful reproduction is occurring. The methodology is to search for larvae in backwater and shoreline habitats during and immediately after the suspected spawning period for a period of about six weeks during May and Early June. The study area includes the Gunnison River upstream of the Redlands Diversion Dam near Grand Junction to Confluence Park in Delta, Colorado (rm 3.0-57.0). A combination of daytime shoreline seining and over-night light-trapping are used to capture larvae. This is a three-year field effort with a write-up phase in the fourth year. Field work for the first two years is now complete. In 2002 eight razorback sucker larvae were captured, seven with dip-net sampling and one with light-trap sampling.

IV. Study Schedule: 2001-2005

V. Relationship to 2003 RIPRAP:

Colorado River Action Plan: Gunnison River (pg. 38)

IV.A.2. Identify additional spawning sites of endangered fishes on the Gunnison River.

VI. Accomplishment of FY 03 Tasks and Deliverables, Discussion of Initial Findings and Shortcomings:

Tasks

1) Collect samples of larvae. This task was completed on schedule. Because dip-net sampling in 2002 resulted in the discovery of razorback larvae in areas that would not have been sampled with light-traps, we continued using dip-netting as the primary means to capture larvae in 2003. This provides coverage of the whole study reach allowing distributional information to be collected in addition to just presence/absence results. Sampling was done by a two-person crew boating down the river and sampling habitats with a fine mesh net set between two hand brailes. In addition, one backwater was light-trapped for one night (June 27) with five traps. A total of 116 seine samples and five light-trap samples were collected.

2). Analyze samples in the lab. This task is currently being conducted; about 25% of samples have been analyzed. To date, no razorback sucker larvae have been identified from the 2003 collections.

VII. Recommendations: Proceed with monitoring as before. Light-trapping effort in 2004 will again be contingent on water levels and availability of sampling sites. An amended scope of work was submitted to expand larval collections downstream into the Colorado River for 2004.

VIII. Project Status: Project is ongoing and on-track. Field work is scheduled to continue through 2004 and report writing and completion in 2005.

IX. FY 2003 Budget

A. Funds Provided:	31,000	
B. Funds Expended:	<u>31,000</u>	
C. Difference:	0	
D. Publication costs		0

X. Status of Data Submission: Data will be submitted to the database manager upon completion of the study in 2005.

XI. Signed: Douglas Osmundson, Fishery Biologist, Lead investigator
11/13/03

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