

I. Project Title: **Green River Basin Colorado Pikeminnow Abundance Estimates**

II. Principal Investigator(s):

Lead Agencies: Larval Fish Laboratory, CSU, Utah Division of Wildlife Resources, U.S.
Fish and Wildlife Service

Jointly Submitted by: Larval Fish Laboratory, CSU, Utah Division of Wildlife Resources, U.S.
Fish and Wildlife Service

Utah Division of Wildlife Resources

Paul Badame/Michael Hudson

Moab Field Station

1165 South HWY 191 - Suite

Moab, UT 84532

435-259-3782/fax 435-259-3785

paulbadame@utah.gov/michaelhudson@utah.gov

U.S. Fish and Wildlife Service

Tim Modde/Frank Pfeifer

Vernal Colorado River Fish Project

U.S. Fish and Wildlife Service

1380 S. 2350 W.

Vernal, UT 84078

435-789-0354; fax 435-789-4805

tim_modde@fws.gov, frank_pfeifer@fws.gov

Larval Fish Laboratory, Colorado State University

Kevin Bestgen

Department of Fishery and Wildlife

Colorado State University

Ft. Collins, CO 80523

970-491-1848/fax 970-491-5091

kbestgen@picea.cnr.colostate.edu

III. Project Summary:

Sampling conducted during this project was designed to obtain capture-recapture data needed to estimate abundance of Colorado pikeminnow *Ptychocheilus lucius* in the lower Green River downstream of the White River. Abundance estimates of endangered Colorado pikeminnow are needed to better monitor population status and provide benchmarks against which progress toward recovery can be measured. Sampling was conducted spring 2001, 2002, and 2003. The U. S. Fish and Wildlife Service was responsible for the reach of the Green River from the White River downstream to Tusher Diversion and the Utah Division of Wildlife Resources was responsible for the Green River reach from Tusher Diversion downstream to the Colorado River. The Larval Fish Laboratory provided coordination, data checking, and data analysis assistance. Our primary goal was to capture, mark, and recapture as many Colorado

pikeminnow as possible on at least three different sampling occasions in each river reach. Sampling occurred prior to or during spring runoff and ended before pikeminnow spawning migration. Electrofishing was the only sampling gear used. Captured pikeminnow were scanned for the presence of a PIT tag, and unmarked fish were marked. Data we report here are for fish 450 mm TL or greater, which differs from past reports where all PIT-tagged fish were reported. In 2001, a total of 407 Colorado pikeminnow captures were recorded. In 2002, a total of 177 Colorado pikeminnow captures were recorded. In 2003, a total of 176 Colorado pikeminnow captures were recorded. These data were used to obtain abundance estimates for each river reach. Data were summarized in a draft final report which was submitted for peer and Biology Committee review. The authors are incorporating peer-reviewer and BC member comments into a new draft which is nearly finalized.

IV. Study Schedule: Initial Year 2001
 Final year 2004

V. Relationship to RIPRAP (*Version: March 8, 2000*):

- V. Monitor populations and habitat and conduct research to support recovery actions (research, monitoring, and data management)
- V.B. Conduct research to acquire needed life history information
- V.B.2. Conduct appropriate studies to provide needed life history information.

VI. Accomplishment of FY 2004 Tasks and Deliverables, Discussion of Initial Findings and Shortcomings:

Goal: Write a final report that summarizes Colorado pikeminnow capture-recapture data collected from 2000 to 2003 in the middle Green River and 2001 to 2003 in the lower Green River.

Task description and schedule:

- Task 3. After first year, analyze data, consult with statistician, and alter sampling design if necessary.
- Task 4. Data entry, data analysis, consult with statistician, write annual report.
- Task 5. Sampling team coordination, data entry, and analysis.

All tasks were met in year 2004. Data analysis and report preparation were the main tasks. A draft final report incorporating comments from peer reviewers and Biology Committee members is nearly completed.

VII. Recommendations:

Draft of final report will be submitted to the Biology Committee by the end of November 2004.

- VIII. Project Status:
Project completed except for submission of the nearly complete draft final report.
- IX. FY 2004 Budget Status
- A. Funds Provided: \$50,000
 - B. Funds Expended: \$50,000
 - C. Difference: \$0
 - D. Percent of the FY 2004 work completed, and projected costs to complete: 95% complete, no additional funds will be requested to finish project.
 - E. Recovery Program funds spent for publication charges: None
- X. Status of Data Submission (Where applicable):
- PIT Tag data files were submitted by individual agencies (USFWS, UDWR) in January 2004.
- XI. Signed: Kevin R. Bestgen 11-08-2004
Reporting Principal Investigator Date

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Table 1. Sampling dates and effort for lower Green River population of Colorado pikeminnow, 2003. Data are preliminary and subject to change. All fish reported here are 450 mm TL or greater.

	Dates	Days Sampled	River Miles Sampled	Total Effort (hours)			Number of Pikeminnow Captured ¹
				Trammel /Electro- fishing	Fyke Nets	Electro- fishing	
Deso-Grey							
Trip 1	March 24- April 2	8	246 -128	0	0	57	33
Trip 2	April 14 - April 23	8	246 - 128	0	0	53	22
Trip 3	May 5 - May 14	7	246 - 128	0	0	48	21
Trip 4	June 2 - June 6	5	248 - 128	0	0	65	41*
Total		28		0	0	223	117
Lower Green							
Trip 1	April 13 - April 23	9	120 - 0	0	0	91	16
Trip 2	May 6 - May 16	9	120 - 0	0	0	84	14
Trip 3	May 25 - June 4	9	120 - 0	0	0	78	29
Total		27		0	0	253	59

¹ Total number of Colorado pikeminnow (over 450 mm TL) captured includes recaptures.

* Includes ten Colorado pikeminnow assumed to be adult size for which no length data was available (lost data sheets).