

COLORADO RIVER RECOVERY PROGRAM
FY 2008-2009 SCOPE OF WORK for:
Identification and Curation of Larval and Juvenile Fish

Project Number: 15

Lead agency: Larval Fish Laboratory, Colorado State University
Submitted by: Kevin R. Bestgen, Project Manager
Darrel E. Snyder, Principal Investigator
Larval Fish Laboratory
Department of Fishery and Wildlife Biology
Room 33 Wagar Building
Colorado State University
Fort Collins, Colorado 80523-1474
Phone: (970) 491-5295
Fax: (970) 491-5091
E-mail: DESnyder@WarnerCNR.ColoState.edu

Date Last Modified: 4/19/2007 3:26:00 PM

Category:

- Ongoing project
 Ongoing-revised project
 Requested new project
 Unsolicited proposal

Expected Funding Source:

- Annual funds
 Capital funds
 Other

I. Title of Proposal:

Identification and Curation of Larval and Juvenile Fish by Colorado State University Larval Fish Laboratory.

II. Relationship to RIPRAP:

General Recovery Program Support Action Plan

- V. Monitor populations and habitat and conduct research to support recovery actions (research, monitoring, and data management).
V.A. Measure and document population and habitat parameters to determine status and biological response to recovery actions.
V.B. Conduct research to acquire needed life history information.
V.E. Provide for long-term care, cataloging, and accessibility of preserved specimens.

III. Study Background/Rationale and Hypotheses:

This project provides Larval Fish Laboratory (LFL) taxonomic services for Project 22F, Yampa and Middle-Green Colorado Pikeminnow and Razorback Sucker Larval Abundance.

The project also provides ongoing curation (maintenance and management) of the growing Upper Colorado River Basin (UCRB) portion of the LFL Collection. LFL currently maintains over 3,268,000 UCRB specimens in over 96,500 taxon-specific lots as voucher for Recovery Program and earlier and related UCRB investigations. These collections are an invaluable, long-term, historical resource for future reference and research. Some collections are over quarter century old, dating back to 1976. New collections are cataloged and added to the LFL Collection as they are received or processed by LFL. As the holdings of the LFL Collection become better known, we expect use of UCRB collections will increase substantially, both within and outside the Recovery Program.

As part of the curatorial effort, we continue to pursue arrangements to help ensure collection permanency. In part through the efforts of the principal investigator, preliminary plans continue to develop for administratively and physically consolidating most of the university's Natural History Research Collections (including the LFL Collection) to provide better long-term recognition, support, and facilities for those collections as a functional unit of Colorado State University.

IV. Study Goals, Objectives, End Product(s):

Goal—

- To provide taxonomic and curatorial services for the Recovery Program.

Objectives—

- Support Recovery Program researchers by processing, cataloging, and curating preserved fish in specifically designated sets of collections submitted to LFL under this project, currently collections from Project 22F.
- Provide limited taxonomic services and consultation on taxonomic or collection handling matters to other Recovery Program projects and researchers.
- Catalog and incorporate in the LFL Collection other preserved UCRB specimens deposited by Recovery Program projects and researchers.
- Continue curation (maintenance and management) of all cataloged UCRB specimens in the LFL Collection.

End Products—

- Annual project reports.
- Collection data for Project 22F researchers.
- Other determinations of specimen identity and related.
- Incorporation of processed Project 22F and other deposited UCRB collections in the LFL Collection and catalog.
- Continued maintenance and management of, and access to, the growing cataloged collection of preserved fish which serve as voucher for Recovery Program investigations and provide a long-term resource for future Recovery Program, and other public, reference and research.

V. Study Area:

The Recovery Program collections identified, processed, and curated by LFL were or will be collected from cool to warm-water reaches of the UCRB, generally exclusive of the San Juan River subbasin.

VI. Study Methods/Approach:

Taxonomic Services—We will identify preserved specimens (mostly larvae) collected under Project 22F and process, catalog, and curate those collections as part of the LFL Collection. Limited taxonomic services and related consultation for other Recovery Program projects and researchers will be provided as needed.

Ongoing Curation—The LFL Collection will continue to serve as the depository for larval and other small fish from preserved Recovery Program collections. Methods for receiving, accessioning, cataloging, maintaining, and managing use of these preserved specimens are provided in our draft "Larval Fish Laboratory Collection Policies and Procedures Manual" (Appendix II, Snyder 1996), as adapted for our SPECIFY Collection management system. We will respond to internal and external requests for collection information and use of specimens; Recovery Program approval will be required for any destructive use or transfer of endangered or rare species. We will continue our effort to ensure collection permanency, in part through planned consolidation of Colorado State University Natural History Research Collections.

VII. Task Description and Schedule:

Task 1: Taxonomic Services—As soon as possible after receipt of collections or requests for limited taxonomic assistance or advice.

Task 2: Ongoing Curation—As needed throughout each fiscal year.

VIII. Deliverables, Due Dates, and Budget by Fiscal Year:

FY 2008:

Deliverables and Due Dates:

- LFL will record and submit collection data to Project 22F researchers as soon as the collections are processed.
- Other taxonomic determinations and related information will be conveyed to the responsible researchers as soon as possible after it is requested.
- Annual report—November 2008.

Budget: ^a

Task 1 (Taxonomic Services)	LFL
Labor	
Principal Investigator/Taxonomist (\$6,527/mo. ^b ; 0.77 mo.)	\$5,025
Research Associates (\$3,144/mo. ^b ; 2.57 mo.)	8,076
Work-study Technicians (\$1,757/mo. ^c ; 0.3 x 1.5 mo.)	790
Supplies ^c	413
Task 1 Subtotal (Direct Costs)	14,304
Task 2 (Ongoing Curation)	
Labor	
Principal Investigator/Curator (\$6,527/mo. ^b ; 3.62 mo.)	\$23,620
Research Associate/Collection Manager (\$3,144/mo. ^b ; 2.57 mo.)	8,076
Work-study Technicians (\$1,757/mo. ^c ; 0.3 x 1.0 mo.)	527
Travel ^d	865
Supplies ^e	709
Task 3 Subtotal (Direct Costs)	33,797
FY 2008 TOTALS	
Total Direct Costs (all tasks)	\$48,101
Indirect Costs (15% on total direct costs) ^f	7,215
Grand Total	55,316

^a Annual estimated increases in fringe benefit rates (generally + 0.5%) and salary and other expenses (x 4%) are specified by the University Office of the Vice President for Research and Information Technology in its current Proposal Budget Spreadsheet.

^b Salary plus fringe benefits.

^c 30% of wages, rest subsidized by work-study program.

^d Annual UCRP Researchers Meeting, 3 nights, 2 persons, personal or lab vehicle.

^e 80% vials, jars; 10% preservative, labels, etc.; 10% computer and lab supplies.

^f Assumes continuance of current memorandum of understanding (MOU) through which Colorado State University and the Bureau of Reclamation agreed to a reduced indirect cost rate of 15% with the university waiving the remainder of its standard 46% indirect cost rate as its contribution to the project.

FY-2009:

Deliverables and Due Dates:

- LFL will record and submit collection data to Project 22F researchers as soon as the collections are processed.
- Other taxonomic determinations and related information will be conveyed to the responsible researchers as soon as possible after it is requested.
- Annual report—November 2009.

Budget: ^a

Task 1 (Taxonomic Services)	LFL
Labor	
Principal Investigator/Taxonomist (\$6,832/mo. ^b ; 0.77 mo.)	\$5,261
Research Associates (\$3,291/mo. ^b ; 2.57 mo.)	8,454
Work-study Technicians (\$1,827/mo. ^c ; 0.3 x 1.5 mo.)	821
Supplies ^c	430
Task 1 Subtotal (Direct Costs)	14,966

Task 2 (Ongoing Curation)

Labor	
Principal Investigator/Curator (\$6,832/mo. ^b ; 3.62 mo.)	\$24,725
Research Associate/Collection Manager (\$3,291/mo. ^b ; 2.57 mo.)	8,454
Work-study Technicians (\$1,827/mo. ^c ; 0.3 x 1.0 mo.)	548
Travel ^d	900
Supplies ^e	737
Task 3 Subtotal (Direct Costs)	<hr/> 35,364

FY 2009 TOTALS

Total Direct Costs (all tasks)	\$50,330
Indirect Costs (15% on total direct costs) ^f	7,549
Grand Total	<hr/> 57,879

Footnotes as for FY 2008.

IX. Budget Summary

FY 2008	\$55,316
FY 2009	<u>57,879</u>
Total	\$113,195

X. Reviewers: (Not applicable—ongoing project)

XI. References:

Snyder, D. E. 1996. Preserved larval and small-fish collections of the Upper Colorado River Basin: maintenance and cataloging of a valuable historical database. Final Report of the Larval Fish Laboratory, Colorado State University, to the Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River Basin, U.S. Fish and Wildlife Service, Denver, Colorado. (24 April 1996).
