

SOUTHWESTERN NATIVE AQUATIC RESOURCES AND RECOVERY CENTER

September 2014 Monthly Activity Report



RGSM Tagging, USFWS PHOTO



RGSM Tagging, USFWS PHOTO

STAFF

Manuel Ulibarri	Center Director
Vacant	Deputy Center Director
Maria Bullard	Administrative Officer
Michelle Bell	Administrative Tech.
Vacant	Office Assistant
Vacant	Office Support (Student)
Vacant	Maintenance Mechanic
Vacant	Maintenance Worker
Vacant	Maintenance Worker

FISH CULTURE

Vacant	Hatchery Manager
William Knight	Supv. Fish Biologist
Vacant	Fish Biologist
Ian Paige	Fish Biologist
Garrad Poole	Fish Biologist
Vacant	Bio Science Tech.

RESEARCH

Vacant	Research Leader
Vacant	Fish Biologist (Research)
Wade Wilson	Fish & Wildlife Biologist
Renee Martin	Fish & Wildlife Biologist
Morgan Robinson	Fish Biologist (Genetics)

FISH HEALTH

Teresa Lewis	Fish Health Unit Leader
Marlene Rodarte	Fish Biologist
Jason Woodland	Fish Biologist
David Hampton	Fish Biologist
Linda Vannest	Fish Biologist
Ashlie Rademacher	Fish & Wildlife Biologist

RIO GRANDE SILVERY MINNOW TAGGING

Fall fish harvest began earlier than usual this year. Bonytail were harvested from three ponds, inventoried, graded by size, and PIT tagged for stocking into Reach three (Lake Havasu,) of the lower Colorado River in September. The fish were reared on behalf of the Lower Colorado River-Multi Species Conservation Program and contribute to the augmentation goal for the species in the lower river. The first of three tagging efforts of Rio Grande silvery minnow (RGSM) occurred this month. A total of 80,650 RGSM from the 2014 year class were Visible Implanted Elastomer (VIE) tagged with yellow material during the week of the 22-26. The multi-agency crew included staff from New Mexico Fish and Wildlife Conservation Office, Bureau of Reclamation and Dexter. The tagged fish will be release into the Middle Rio Grande Albuquerque reach in September.

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PARTNERSHIPS AND ACCOUNTABILITY



Linda at the Southwestern ARRC's exhibit, 2014 Dragonfly Festival, USFWS PHOTO

Center staff, participated in the 13th annual Dragonfly Festival held at Bitter Lakes National Wildlife Refuge on September 9. Approximately, 900 visitors of all ages visited the exhibit. Staff representing Fish Culture, Research, and Fish Health answered a wide range of visitor questions and provided the guests with hand-outs about USFWS and Southwestern ARRC's mission to protect imperiled fisheries resources. A living stream display was part of the exhibit allowing visitors to see razorback sucker, bonytail, and Colorado pikeminnow. Overall, it was a very successful outreach activity and fun for both the visitors and the staff.

Manuel Ulibarri, William Knight and Wade Wilson met with Josh Rasmussen, Fish Biologist from the Klamath Falls Fish and Wildlife Office, Region 8 and Dan Warren from D.J. Warren & Associates, Inc., to discuss conservation aquaculture strategies for shortnose suckers in the Klamath Basin, Oregon. The visit to Dexter is the initial phase of a feasibility study aimed at identifying the necessary components for a captive propagation program for the species. Center staff presented Southwestern ARRC's captive propagation strategies for razorback sucker and provided a tour of the facility. The session also included a lessons learned and genetics discussion.



Garrad at the Southwestern ARRC's exhibit, 2014 Dragonfly Festival, USFWS PHOTO



Renee at the Southwestern ARRC's exhibit, 2014 Dragonfly Festival, USFWS PHOTO

Fish Health collaborative research was presented at the 7th International Symposium of Aquatic Animal Health convened in Portland, OR August 31 – September 4. Twenty countries were represented at the meeting with 251 registered attendees. Teresa Lewis gave an oral presentation entitled “Amoebic Infection in the Endangered Rio Grande Silvery Minnow, *Hybognathus amarus*” coauthored by researchers from the Virginia Institute of Marine Science, Los Lunas Silvery Minnow Refugium, and the USGS Columbia Environmental Research Center Yankton Field Station. Results from the collaborative project “Isolation and Genomic Identification of a Novel Aquareovirus Detected in the Endangered Fountain Darter, *Etheostoma fonticola*” were presented by Luke Iwanowicz of the USGS Leetown Science Center, reporting work conducted or in progress in partnership with the San Marcos Aquatic Recovery Center and the Southwestern ARRC.

FISH DISTRIBUTION

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BTC	2,102	311mm	BOR	Lower Colorado River—R3, Lake Havasu, ! Z Mul -Species Conserva on Program

AQUATIC SPECIES CONSERVATION MANAGEMENT

Health inspections were conducted at three facilities this month. Samples from one lot of RGSM were collected at the Los Lunas Silvery Minnow Refugium in Los Lunas, NM for annual health testing and Health Assessment Index (HAI) examination on September 16. During the following week, samples were also collected for the annual health inspection of the Southwestern ARRC. Twelve lots were sampled on September 22, representing nine species (Rio Grande silvery minnow, razor-back sucker, bonytail, Colorado pikeminnow, Comanche Springs pupfish, Guzman beautiful shiner, Leon Springs pupfish, desert pupfish, and Big Bend gambusia). Testing for two lots of woundfin from Southwestern ARRC closed out this month; this species is generally sampled in August to meet Utah Department of Agriculture import permit processing requirements prior to leaving the Center each fall. Inspection of six lots of RGSM from the Albuquerque Biopark was initiated September 30. All RGSM captive propagation facilities will have had their fish tested prior to stocking in mid and late October.



Bonytail Stocking at Bill Williams NWR, BOR PHOTO

LEADERSHIP IN SCIENCE AND TECHNOLOGY

In September, Molecular Ecology Laboratory (MEL) staff, received, archived, and finished genotyping 198 West Fork Gila trout (*Oncorhynchus gilae gilae*) samples. The samples were genotyped using 13 microsatellite markers multiplexed in four primer sets. The 10% QAQC of these samples and secondary scoring was also completed. Mora NFH also provided Main Diamond and South Diamond Gila trout fin clip samples from the 2012 and 2013 year classes archiving and future processing and analysis.

MEL continued to genotype bonytail (*Gila elegans*) as part of a research study investigating biological controls and natural recruitment in ponds. Recruitment samples (N=291) from a variety of facilities including Uvalde, Achii Hanyo, and Dexter were isolated and genotyped this month. The purpose of this study is to determine the utility of natural recruitment occurring in the production ponds. At the request of the Bureau of Reclamation and LCR-MSCP the lab received, archived, and began genotyping 300 bonytail recruitment samples from Wahweap State Fish Hatchery. The genetic assessment will assist management with determining how these fish will be used in recovery.

LEADERSHIP IN SCIENCE AND TECHNOLOGY *continued*

A newly funded genetics project was initiated this month. The Center received and archived 195 White Sands pupfish (*Cyprinodon tularosa*) fin clip samples from the University Of New Mexico Museum Of Southwestern Biology. The purpose of this work is to evaluate the success of the genetic maintenance program for the species. The White Sands Pupfish Conservation Team has identified the need to genetically examine fish from lower and upper section of Lost River on Holloman Air Force Base and fish from Salt Creek on White Sands Missile Range. The Monitoring Plan calls for genetic samples taken in 2013, and 2017 to be compared to the original samples in 2008. This portion of the study will compare 2008 with 2013.

On September 7, the Research Unit's primer note "Isolation and characterization of twenty-five novel microsatellite loci in Colorado pikeminnow, *Ptychocheilus lucius*, with cross-species amplification for eight other cyprinids" (10.1007/s12686-014-0306-5) was published in *Conservation Genetics Resources*.



Colorado pikeminnow, PHOTO CREDIT: Tom Kennedy

Early life stage developmental series were completed for two additional Pecos River Cyprinids; the Tamaulipas shiner, *Notropis braytoni* and Chihuahua shiner, *Notropis Chihuahua*. This work is part of a project to develop an illustrated guide for the cypriniform (minnows and suckers) fish larvae of the Pecos River, NM and TX. Nine species were identified and prioritized for culture, spawning and collection from 2012-2015. In 2012-2013 Southwestern ARRC staff completed series collections for roundnose minnow (*Dionda episcopa*), speckled chub (*Macrhybopsis aestivalis*), Arkansas River shiner (*Notropis girardi*), Rio Grande shiner (*Notropis jemezianus*), and Pecos bluntnose shiner (*Notropis simus pecosensis*). The remaining two species Manantail roundnose minnow (*Dionda argentosa*), Texas shiner (*Notropis amabilis*), will be collected in the spring of 2015. The series consist of approximately 36 collections of 8 to 10 larval fish at designated timeframes over a four to five month period. The samples are used to develop an illustrated guide essential for field and lab identification of larval fishes. This project is a collaborative effort with the Bureau of Reclamation, Museum of Southwestern Biology - University of New Mexico, American Southwest Ichthyological Researchers and USFWS Texas and New Mexico Fish & Wildlife Conservation Office's.

WORKFORCE MANAGEMENT

Interviews were conducted and job offers made for three Maintenance, one Administrative and one Fish Biologist position this month. Successful applicants will be starting work at Southwestern ARRC in October.

Ashlie Rademacher assisted the Mora National Fish Hatchery from September 2 – 9 with VIE tagging, pit tagging, and general day to day operations.

Rebecca Cook, Fish Biologist from the New Mexico Fish and Wildlife Conservation Office, initiated a week-long detail to the Fish Health Unit on September 29 to learn more about the operations and procedures within the Unit.

September 3, an administrative meeting was held to discuss upcoming outreach events.

Manuel Ulibarri, William Knight, Wade Wilson and Linda Vannest attended a Region 2 Fish and Aquatic Conservation (FAC) Project Leader's meeting in Albuquerque, NM September 11 – 12. During this three-day meeting staff representing all of the Region 2 Fisheries facilities discussed how to better communicate both within FAC and across programs, how to efficiently set short and long term strategic goals, budgets, and a variety of other topics related to management of FAC facilities and staff.

WORKFORCE MANAGEMENT *continued*

September 16, Research staff participated in the Advanced Topics in Conservation Genetics Webinar series.

September 30, staff participated in an Administrative Workshop for WebEx instructions.

It was a busy month for end of year training. Garrad Poole, Teresa Lewis and Dave Hampton attended classes at the National Conservation Training Center in Shepherdstown, WV the week of September 8. Garrad attended the USFWS Foundations course, Teresa attended “Interagency Consultation on Endangered Species” and Dave attended “Freshwater Mussel Restoration for Restoration”. Jason Woodland attended the Western Regional Panel on Aquatic Nuisance Species (ANS) in Houston, TX September 17 – 19 as an observer to learn more about regional issues related to ANS.

Staff participated in a number of conference calls this month, including Fish Health project leader, National Wild Fish Health Survey User’s Acceptance Team, and Desert LCC Science Working Group calls.

ADDITIONAL ACTIVITIES

A Research ABI-9700 thermal cycler was repaired this month. Lab centrifuges were cleaned and greased; ultrapure water purifier filters replaced, air vent covers dusted and freezer and air conditioner filters cleaned. Autoclave temperatures were tested, and cleaned with Chamber Bright autoclave cleaner.

Staff mowed and trimmed weeds around the buildings, entrance, and operational areas. The distribution trucks and passenger vehicles were taken in for oil changes.

The Center received 15 visitors and 5.4” of rain for the month of September.