

SOUTHWESTERN NATIVE AQUATIC RESOURCES AND RECOVERY CENTER

October 2014 Monthly Activity Report



Woundfin Minnow, PHOTO CREDIT: Joel Saltore

RIO GRANDE SILVERY MINNOW CAPTIVE PROPAGATION PROGRAM

On October 9, Southwestern ARRC staff assisted the New Mexico Fish and Wildlife Conservation Office with a facilities and operations evaluation of Rio Grande Silvery Minnow (RGSM) captive propagation program at the City of Albuquerque BioPark, Aquatic Conservation Facility. The Service will use the information generated from this site visit to provide recommendations to BioPark staff to ensure compatibility and consistency of standard operating procedures with actions of the multi-agency RGSM Genetics Management and Captive Propagation Workgroup and T & E Permit requirements. A similar review was completed at the New Mexico Interstate Stream Commission's, Los Lunas Silvery Minnow Refugium in 2012 and the Southwestern ARRC is scheduled for a review in 2015.

PARTNERSHIPS AND ACCOUNTABILITY

On October 20, Southwestern ARRC staff was contacted by the facilities manager for the Town of Dexter to investigate a fish mortality event at Lake Van, which neighbors the Center. Fish Health staff collected water samples along with moribund fish from around the lake for diagnostic testing. In total, 65 grass carp and 14 channel catfish were collected and sampled for bacterial and viral pathogens. PCR of water samples confirmed the presence of golden algae *Prymnesium parvum*; supporting the microscopic identification of the algal bloom at the Lake made by the Fisheries Manager for Southeast Area Operations, New Mexico Department of Game and Fish. This is the second instance of mortality in the lake due to golden algae, the initial detection and fish kill was in 2011. *continued on next page*

Staff

Center Director	Manuel Ulibarri
Deputy Center Director	Vacant
Administrative Officer	Maria Bullard
Administrative Technician	Michelle Bell
Office Assistant	Stephanie Callicutt
Fish Biologist	Tracy Diver
Fish Biologist	William Knight
Fish Biologist	Garrad Poole
Fish Biologist	Ian Paige
Bio Science Technician	Vacant
Maintenance Mechanic	Vacant
Maintenance Worker	Vacant
Maintenance Worker	Vacant

Research

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

Fish Health

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

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Partnership and Accountability continued

Dr. Allison Pease, PhD, Assistant Professor, Dept. Natural Resources Management at Texas Tech University and 16 undergraduate students in her Fisheries Conservation and Management class visited the Center on October 17. In addition to the lectures provided and touring the various Units of the facility the students were given the opportunity to PIT tag a Colorado pikeminnow and participate in a careers in natural resources conservation round table discussion.



TTU students experienced tagging fish, USFWS PHOTO



Teresa Lewis, Wade Wilson, William Knight, Dr. Pease, and TTU students gave their "guns up" salute, USFWS PHOTO



TTU students tour the Genetic's lab, USFWS PHOTO

AQUATIC SPECIES CONSERVATION MANAGEMENT

Fish culture staff was extremely busy this month harvesting 20 ponds and sorting, tagging and distributing fish to Utah and New Mexico.

A total of 12,000 Visible Implanted Elastomer (VIE) tagged woundfin were stocked into the Virgin River, Utah this month. The one and two year old fish were maintained indefinitely at Dexter by request from the Virgin River Recovery Program due to the lack of water in the Virgin River in 2012. Adequate water levels resumed this fall enabling the fish to be stocked.

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Fish culture staff stock RGSM in the Middle Rio Grande Albuquerque Reach, USFWS PHOTO

FISH DISTRIBUTION for October 2014

<i>Species</i>	<i>Number</i>	<i>Size</i>	<i>Agency</i>	<i>Site</i>
Woundfin	12,000	74mm	STG	Virgin River, St. George, Utah
Rio Grande Silvery Minnow	80,650	55mm	USFWS	Middle Rio Grande Albuquerque Reach, Sandia and Santa Ana Pueblos

Aquatic Species Conservation Management continued

The second of three tagging efforts of RGSM occurred this month. A total of 120,153 fish from the 2014 year class were VIE tagged. The multi-agency marking crew included staff from the New Mexico Fish and Wildlife Conservation Office (NMFWCO), Tishomingo NFH, Bitter Lake National Wildlife Refuge, NM Interstate Stream Commission (Los Lunas RGSM Refugium), City of Albuquerque BioPark, Bureau of Reclamation (Albuquerque Office), USFWS FAC Regional Office and Southwestern ARRC. The fish will be stocked into the Middle Rio Grande, Isleta and San Acacia reaches in November. The RGSM from the tagging effort in September were stocked into the Albuquerque Reach of the Middle Rio Grande at Sandia and Santa Ana Pueblos.



Volunteers that participated in RGSM Tagging along with staff, William Knight, Tracy Diver, Garrad Poole, and Ian Paige, USFWS PHOTO



RGSM tagging, USFWS PHOTOS



Fish Health staff conducted Health Assessment Index necropsies for RGSM lots from Southwestern ARRC, and the Albuquerque BioPark. The ongoing health monitoring for this species provides a measures of quality control/ assurance on behalf of the RGSM captive propagation facilities and the Middle Rio Grande Endangered Species Act Collaborative Program. Fish were also preserved for histology and screening of an amoebic pathogen that has been identified as an emerging disease of concern for this species.



Meredith Campbell, Linda Vannest and Marlene Rodarte at the Achii Hanyo Native Fish Rearing Facility, USFWS PHOTO



The Achii Hanyo Native Fish Rearing Facility inspection was conducted October 21. Staff biologists from Achii Hanyo and Willow Beach NFH assisted with the inspection. One lot of razorback sucker and one lot of bonytail was sampled. In collaboration with Meredith Campbell, a Masters student from NMSU, swab samples were collected from the bonytail to investigate the sensitivity of two methods for screening Asian tapeworm, *Bothriocephalus acheilognathii*. The research method of fecal swab testing by PCR is being compared to the AFS-FHS Blue Book method of microscopic examination of the gastro-intestinal tract for this parasite.



In addition, wild fish health surveys were conducted at Blue River and Chevelon Creek sites in Arizona in collaboration with Arizona Game and Fish Department biologists. The surveys were requested to support native fish conservation efforts at Blue River and to provide a pathogen baseline for roundtail chub in Chevelon Creek. A total of 110 speckled dace, 60 fathead minnows, and 9 roundtail chub were collected for testing.

Fish culture staff PIT tagged, scanned, measured and created a data base for 248 age-1 and 205 age-0 Colorado pikeminnow, and 212 age-1 razorback sucker. The fish will be stocked into the San Juan River near the Hogback canal and fish weir in November. The fish will be provided to the San Juan River Basin Recovery Implementation Program to test the effectiveness of the weir by monitoring fish movements through the newly built structure and recording any entrainment of fish. The weir concept is new and innovative and may have application to other locations.

LEADERSHIP IN SCIENCE AND TECHNOLOGY



Bonytail fin clipping, USFWS PHOTO

In October, Molecular Ecology Laboratory (MEL) staff, continued to genotype bonytail (*Gila elegans*) as part of a research study which examines the use of a piscivore to control natural recruitment in rearing ponds and the genetic diversity of the surviving offspring. Bonytail from the study were harvested from the control ponds, sorted and fin clips collected from 1,200 offspring. The samples were genotyped using microsatellite markers multiplexed in six primer sets. In addition, 300 bonytail samples from Wahweap State Fish Hatchery were genotyped. These fish were provided to the Nevada Division of Wildlife, Lake Mead SFH for growout and eventual stocking into the lower Colorado River on behalf of the Lower Colorado River Multi-Species Conservation Program. The genetic assessment will assist management with determining how these fish will be used in the recovery program.

Genetic monitoring of captively produced RGSM continued this year. Fin Clips were collected from 50 Rio Grande silvery minnow (*Hybognathus amarus*) representing fish that were stocked into the Albuquerque reach of the Rio Grande on the Sandia and Santa Ana pueblo. The fin clips were transferred to the Museum of Southwestern Biology Division of Fishes at the University of New Mexico for archival and future genetic analysis. The lab also received tissue samples from 52 wild humpback chub (*Gila cypha*) collected from Desolation Canyon on the Green River in Utah and 9 roundtail chub (*Gila robusta*) samples collected during a fish health survey in Arizona. Analysis of the Upper Colorado River Basin Humpback chub samples will be completed in 2015. Mora NFH also provided 1,502 Main Diamond and South Diamond Gila trout (*Oncorhynchus gilae gilae*) fin clip samples from the 2012 and 2013 year classes. Prior to archiving, a portion of the 2012 year class were examined using a Y-linked marker to determine the gender of each fish. The Y-linked marker was also redesigned and tested on Rio Grande cutthroat trout (*Oncorhynchus clarki virginalis*).

MEL staff submitted the results for a Wildlife Genetics Proficiency Test organized by the National Fish and Wildlife Forensic Laboratory. The three samples were independently characterized using Southwestern ARRC's standard laboratory procedures.

Teresa Lewis and Wade Wilson travelled to New Mexico State University on October 14 to meet with Meredith Campbell, a Masters student and Colleen Caldwell, USGS Coop – Unit lead to discuss current and future research projects. Meredith is working on a collaborative research project to validate non-lethal sampling methods for Asian tapeworm monitoring in wild and captive propagated chub species. They discussed the draft research proposal outlining her proposed thesis experiments and also a sample collection trip to Achii Hanyo that was scheduled October 21 in conjunction with the facility's annual health inspection.

ADDITIONAL ACTIVITIES

A technician from Ricoh completed routine maintenance on the copy machine in the Administrative building.

The Center recycled 80 lbs. of plastic, 320 lbs. of cardboard and 26 lbs. of aluminum cans this month. The materials were hauled to several recycling centers in Roswell, NM.

Staff mowed and trimmed weeds around ponds and pond structures. Lined ponds 18D, 19D, and 25D were cleaned; bird netting set up, filled, and stocked with fish for the winter months. Weeds on the earthen C-series ponds were trimmed, and cleaned up in preparation for winter use. Coats Pump from Dexter, New Mexico replaced seals and rebuilt a deteriorated water circulation pump for the Administration building HVAC system.

The Center received .60" of rain and 28 visitors for the month of October.

WORKFORCE MANAGEMENT

Stephanie Callicutt was hired as the Office Assistant on October 5, 2014. Stephanie is a native of Borger, Texas, and holds a BS degree in Vocal Performance as well as a BA degree in Mass Communications from Southern Nazarene University. She brings a broad range of experience including teaching, publishing, book keeping, and more to the Service. She recently held the position of Construction / Consumer Loan Auditor at Pioneer Bank in Roswell, NM. Welcome to Dexter, Stephanie.



**Stephanie Callicutt,
Prescott Photography**



Tracy Diver, USFWS PHOTO

Tracy Diver began working in fish culture this month as a Fish Biologist.

Tracy grew up in Albuquerque and holds a BS degree in Biology and MS degree in Conservation Genetics from the University of NM in Albuquerque. She began her career with the Service as a field technician/biologist with the NMFWCO and most recently was employed by American Southwest Ichthyological Researchers L.L.C. While at Southwestern ARRC she plans to enhance her conservation ichthyologist skills and enjoy her hobbies which include backpacking, biking, skiing, sewing and hanging out with her dog Chico. Welcome to Dexter, Tracy.

Rebecca Cook, Fish Biologist from the New Mexico Fish and Wildlife Conservation Office, completed a one week job shadow assignment with Fish Health staff in October.

All Fiscal Year (FY) 2014 Employee Performance Appraisal Plans were completed and submitted to the Regional Office. The FY2015 Performance Appraisal Plans and Individual Development Plans were also established for staff.

On October 9, Center staff attended a webinar on the Thrift Savings Plan presented by FEDweek and on October 15, Research staff participated in the Advanced Topics in Conservation Genetics Webinar series.

William Knight completed the Fiscal Year 2014 Distribution Reports into FIS.

Maria Bullard and Michelle Bell submitted the FY2015 Salary and Benefits and Needs Request Budgets to Karen Welsh in the Regional Office. Maria also completed new computer set-ups for Stephanie Callicutt and Tracy Diver.

Staff participated in a number of conference calls this month, including the RO Admin Conference Call and Planning Committee for the upcoming R2 Administrative Conference, Region 2 Fisheries & Aquatic Conservation monthly call, the FTC Directors conference call, the Fish Health and National Wild Fish Health Survey User's Acceptance Team, Desert LCC Science Work Group, Southwestern ARRC Route ID with Central Federal Land Program

and DOT, and GRCA Fisheries Conference calls.

Onsite flu immunizations were available to staff on October 27, courtesy of the Roswell Health Office. Michelle Bell coordinated with the flu shot clinic, and the Town of Dexter offices were also invited to participate.

UPCOMING EVENTS	
November 06	CPM stocking into the San Juan River, NM
November 10 & 24	RGSM stocking into Middle Rio Grande, NM Reach
November 19	Facility tour and discussions with Arizona Game and Fish Dept., Bubbling Ponds SFH staff
December 01-05	Fish Health staff will be conducting a Wild Fish Health Survey at Eufaula Lake, Oklahoma
December 03	RGSM stocking into Big Bend, Rio Grande, TX Reach
December 08-12	Southwestern ARRC will be hosting the Fish Health Biologist Meeting