

# SOUTHWESTERN NATIVE AQUATIC RESOURCES AND RECOVERY CENTER

## October 2015 Monthly Activity Report



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### STAFF

Center Director.....	Manuel Ulibarri
Deputy Center Director.....	Vacant
Administrative Officer.....	Maria Bullard
Administrative Technician.....	Michelle Bell
Office Assistant.....	Casey Booth
Fish Biologist.....	William Knight
Fish Biologist.....	Ian Paige
Fish Biologist.....	Colby Crouse
Fish Biologist.....	Ashlie Peterson
Animal Caretaker .....	Cecilia King
Maintenance Mechanic.....	Vacant
Maintenance Worker.....	Ty Terry
Maintenance Worker.....	Vacant

### RESEARCH

Research Unit Leader.....	Wade Wilson
Research Fish Biologist...	Michael Schwemm
Fish and Wildlife Biologist.....	Tracy Diver
Fish Biologist (Genetics).....	Sandra Bohn
Fish Biologist (Genetics).....	Vacant

### FISH HEALTH

Fish Health Leader.....	Vacant
Fish Health Biologist.....	Marlene Rodarte
Fish Health Biologist.....	Jason Woodland
Fish Health Biologist.....	David Hampton
Micro Biologist .....	Vacant
Fish and Wildlife Biologist .....	Vacant

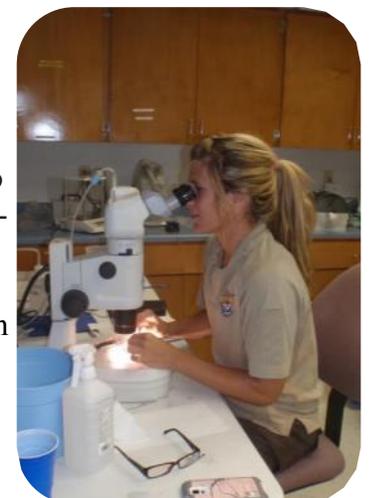


Rio Grande silvery minnow (RGSM) Stocking Shaffer's Crossing, Dryden, TX, USFWS Photo

### Partnerships and Accountability

Center staff completed the Rio Grande silvery minnow (RGSM) culture pilot project at Uvalde National Fish Hatchery (NFH) this month. The project yielded positive results with 132,500-55mm fish produced. Fish survival over the 115 day period equaled 94.6% and fish condition was calculated at .87. On September 28 and 29, Manuel Ulibarri and William Knight harvested the fish from the rearing ponds. Ashlie Peterson and Ian Paige provided daily care for the fish until October 15, when they were stocked in the Rio Grande at Shaffer's Crossing near Dryden, TX.

The project was initiated and managed by Southwestern ARRC to evaluate the capacity of Uvalde NFH to contribute to ongoing conservation efforts for the species by developing rearing and culture techniques in support of 10(j) population stockings. While working on the pilot project, Ashlie Peterson completed a health assessment on this lot of fish prior to stocking. Tissue samples were also collected for genetic monitoring of the species.



Ashlie Peterson Completing RGSM Health Assessments, USFWS Photo

The Center received 19 visitors this month.

## Aquatic Species Conservation Management

Fish Distribution for October 2015

Species	Number	Size	Agency	Site
Rio Grande silvery minnow	96,517	52mm	NPS	Rio Grande at Shaffer's Crossing near Dryden, TX
Rio Grande silvery minnow	59,357	52mm	USFWS	Middle Rio Grande River NM Reach, Sandia and Santa Ana Pueblos
Virgin River chub	428	Adults	STG	Wahweap SFH, Big Water, UT
woundfin	4,000	50mm	STG	Wahweap SFH, Big Water, UT

Fall fish harvest and pond preparations continued this month. The 2015 Colorado pikeminnow were harvested from the culture ponds in preparation for stocking into the San Juan River near Farmington, NM during the first week of November. Two ponds of razorback suckers were harvested and rearing ponds cleaned. Bonytail, woundfin, and Pecos bluntnose shiner were stocked into separate ponds for the winter.



**RGSM Visible Implanted Elastomer(VIE) Tagging Session, USFWS Photo**

The first of two tagging efforts of RGSM occurred this month. Fish destined for the Middle Rio Grande, NM were Visible Implanted Elastomer (VIE) tagged with orange material October 4- 6. The tagging crew included staff from New Mexico Fish and Wildlife Conservation Office and Dexter. The tagged fish were released into the Middle Rio Grande Albuquerque Reach in October. Additional silvery minnow were harvested and stocked into the Texas Reach of the Rio Grande at Shaffer's Crossing near Dryden, TX. Prior to release, Center staff fin clipped 200

individuals for continued genetic monitoring of the species by researchers at the University of New Mexico.

On October 20, the adult population of VRC was transferred to Wahweap State Fish Hatchery in Big Water, Utah. Zane Olsen from Wahweap picked up the fish from Southwestern ARRC. The transfer was facilitated at the request

of the Virgin River Recovery and Management Program (VRRMP) received on July 23. A total of 428 adult fish averaging 352 mm total length and 410 grams each were transferred. The fish were PIT tagged and length/weight data collected and provided to Zane Olsen and Steve Meisner from the VRRMP prior to the fish transfer. Fin clips were also collected from 50 randomly selected fish for archiving. The population was transferred to create additional space at Southwestern ARRC to culture woundfin for the program. Southwestern ARRC successfully maintained the refuge population since March of 1989. The donor population consisted of fish primarily from the upper reach of the Virgin River. Several hundred wild fish were added to the refuge



**Adult Virgin River chub, USFWS Photo**

population in 2002 and 2005. The primary purpose was to maintain a refuge population to safeguard for the species in case of a catastrophic loss in the wild. Over the past 25 years, Center staff developed successful culture and spawning techniques for the species and genetically typed all individuals in the refuge population. Virgin River chub (VRC) was listed as endangered in 1990. The species has not been collected from the southern range in Arizona and Nevada since late 1970. Factors contributing to decline are modifications and loss of habitat and introduction of non-native fish.



Jason Woodland, Achii Hanyo Annual Fish Health Inspection, USFWS Photo

### Aquatic Species Conservation Management cont.

The annual Fish Health Inspections for Southwestern ARRC, the Albuquerque Biological Park, and a lot inspection from Uvalde NFH were completed this month. Center staff also traveled to Parker, Arizona to conduct the annual inspection for the Achii Hanyo Native Fish Rearing Facility on October 20. In addition, the lab received live fish from the ISC, Los Lunas Silvery Minnow Refugium (LLSMR) for their annual inspection.

Ashlie Peterson completed the annual RGSM health assessments at the Albuquerque BioPark and the LLSMR.

## Leadership in Science and Technology

Tracy Diver completed the first draft of the Guzman beautiful shiner (*Cyprinella formosa*) report for internal review. This report examined the genetic diversity of the *C. formosa* refuge population maintained at the Southwestern ARRC and was funded by the New Mexico Ecological Services Field Office. Tracy also started sequencing a mitochondrial region from the isolated bacterial colonies cultured as part of a study focusing on the health of native fish in the San Juan River, NM and UT.

Sandra Bohn completed a draft report for the Arizona Game and Fish Department on 19 trout (*Oncorhynchus* spp.) collected in Pine Creek, AZ. These fish were suspected of having hybrid ancestry because of their unusual spotting patterns. Samples were sequenced at a mitochondrial gene (*ND4*) and genotyped using 13 microsatellites; results were compared to known Rainbow trout (*Oncorhynchus mykiss*), Gila trout (*Oncorhynchus gilae*), and Apache trout (*Oncorhynchus apache*) genotypes.

Michael Schwemm coordinated with partners on several projects this month:

- The status of the wild and refuge populations of Pahrangat roundtail chub (*Gila robusta jordani*) with James Harter at Southern Nevada Ecological Services Field Office.
- Leopard darter (*Percina pantherina*) genetics with Dr. Brook Fluker at Arkansas State University and shared mitochondrial sequence for Dr. Fluker's graduate student to design primers.
- Discussion on the Neosho smallmouth bass (*Micropterus dolomieu velox*) project with Dr. James Long of the USGS Oklahoma Cooperative Fish and Wildlife Research Unit (Oklahoma State University) and his graduate student.
- Researching cyanobacteria biology with an emphasis on *Microcystis*, a pathogen that can be toxic to fish, cause fish mortality when present at specific densities. Plans were made to conduct experimental trials on Rio Grande silvery minnow to determine treatment potential and efficacy. Project partners include the University of NM and City of Albuquerque Bio Park.

## Workforce Management

Colby Crouse started working in Fish Culture on October 5, as a TERM Fish Biologist. Colby was raised in Garland, Texas and received a bachelor's degree in Wildlife and Fisheries Science from Texas A&M University in 2009. After graduating, he began his career with the federal government starting with the National Park Service and then moved over to the Fish and Wildlife Service. He has worked at Rocky Mountain National Park, Kirwin NWR, Lake Mead NRA, Red Bluff FWO, and Leadville NFH. In-between federal jobs, he worked as a Fisheries Observer on commercial fishing boats in Alaska. He enjoys snowboarding, hiking, and fishing. Welcome to the Center Colby!



Colby Crouse,  
USFWS Photo

New Mexico State University graduate student Meredith Campbell has a new technician, Rachel Ryan, assisting her with data collection for her Master's thesis (Development and validation of a non-lethal screening method for Asian tapeworm *Bothriocephalus acheilognathi* in juvenile humpback chub).

Tracy Diver provided Rachel laboratory safety training and a tour of the Research Unit. Rachel Ryan is a Ph.D. student at NMSU working on conservation genetics of butterflies under the direction

of Brook Milligan. Welcome to the Center Rachel! Sandra Bohn and Tracy Diver continued to provide Meredith assistance with her project including expertise in sequencing.

On October 28, two sessions of The American Heart Association – Heart Saver First Aid and CPR training were held at the Center; Mr. Tony Souza from the Roswell Fire Department conducted the trainings. All staff attended the training and the certification is good for 2 years.

Marlene Rodarte participated in an online livestream class entitled “Retirement Planning for Federal Employees” and Casey Booth completed a DOI online Access Course.

William Knight completed the Fisheries Information System (FIS) annual distribution report.

Annual Employee Performance Plans and Supervisory Performance Plans for BFY 2015 were completed.



Rachel Ryan,  
USFWS Photo

## Additional Activities

Several new pieces of equipment were received this month including a 3500 Dodge truck; two Kubota UTVs; a 20' gooseneck utility trailer and an autoclave.

The genetic analyzer required maintenance and troubleshooting this month. Research staff worked with technical representatives from Life Technology to fix problems with the polymer pump that were causing errors in the system. They also performed several maintenance updates within the laboratory including filter replacement for the Milli-Q water filtration system, filter cleaning for the -80 freezers, and updating of the MSDS sheets for the new chemicals received for eNDA and other projects.

Maintenance staff mowed and weed-eated the entrance area of the property and around all facility buildings, and ponds. Ty Terry serviced all air handlers in administrative building and replaced burned out ballasts and bulbs in the genetics labs and conference room. He also serviced the shop truck, UTV's and lawn mowers. Earthen ponds were prepped for use and eyebolt anchors installed around C-series ponds to receive bird netting. An electrical outlet and oxygen bottle holders were installed on the Chevy 2500 fish distribution truck.



#### **Additional Activities cont.**

Two 2015 deferred maintenance projects were awarded this month and notice to proceed issued to the successful contractors. The first project is replacement of the skylight in the administrative building lobby. The second includes renovations to the Vehicle storage building; placing concrete in one bay and stair replacement and reinforcement of the existing loft on the west end of the building. In preparation for the loft renovations, Maintenance and Fish Culture staff removed all tools, wood, screens and shelving from under the structure. Southwestern CM, LLC from Albuquerque arrived at the Center on October 22 to start prepping the area to receive concrete. Significant progress was during the following week and concrete was placed and finished by October 30.

The Center recycled 70 lbs. of batteries, 100 lbs. of plastic, 420 lbs. of cardboard and 1 lb. of printer toner cartridges this month. The materials were hauled to several recycling Centers in Roswell, NM.

Precision Air from Roswell, NM diagnosed and repaired the cooling portion of the HVAC unit in the administrative building.

Three pieces of surplus heavy equipment were auctioned off this month; a 1955 Allis Chalmers HD16M Bulldozer Crawler; 1969 Galion Iron Works 503A Road Grader, and 2011 Kubota riding lawn mower. The successful bidders picked up the equipment at the end of the month.

The area received an unseasonable 7.85” of rain for the month of October.



Preparing gravel bay to receive concrete, tying steel, placing concrete and final concrete pad, USFWS Photo

#### **Upcoming Activities**

- ◆ November 3: CPM stocking into the San Juan River near Farmington, NM
- ◆ November 15 - 17: VIE tagging RGSM
- ◆ November 18-22: 47<sup>th</sup> Annual meeting of the Desert Fishes Council (DFC), Furnace Creek Visitor Center, Death Valley National Park.
- ◆ November 19: RGSM stocking trip in the Texas Reach of the Rio Grande
- ◆ November 23: RGSM stocking trip in the Middle Rio Grande, NM
- ◆ November 30: CCH stocking into the Mimbres River, NM
- ◆ November 30-December 4: Project Leaders Meeting, Albuquerque, NM.