

SOUTHWESTERN NATIVE AQUATIC RESOURCES AND RECOVERY CENTER

November 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.....	Vacant
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.....	Martha Keller
Fish Health Biologist.....	Marlene Rodarte
Fish Health Biologist.....	Jason Woodland
Fish Health Biologist.....	David Hampton
Fish Biologist.....	Ashlie Peterson
Fish and Wildlife Biologist	Vacant



Sunrise at Southwestern ARRC
USFWS Photo

Partnerships and Accountability

Michael Schwemm presented a poster and was co-author on one other paper at the 2015 Desert Fishes Council meeting held at Furnace Creek, Death Valley National Park, CA. Wade Wilson was co-author on one poster and several papers being presented. Programs can be found at <http://www.desertfishes.org/?p=1905> .

- Genetic contribution of native and introduced catostomids to larval drift in experimental and control streams of the Gunnison River basin in Colorado **Schwemm, Michael R.**^{*1}, Turner, Thomas F.², Thompson, Kevin³, Carson, Evan W². (1- Southwestern Aquatic Resources and Recovery Center, 2- Biology and Museum of Southwestern Biology, University of New Mexico, 3- Colorado Department of Natural Resources).
- Molecular assessment of nonnative status for Largespring Gambusia (Poeciliidae: *Gambusia geiseri*) in West Texas: Conservation value of nonnative populations. Echelle, Anthony A.^{*1}, **Schwemm, Michael R.**², Echelle, Alice F.¹, Turner, Thomas F.³, **Wilson, Wade**². (1- Department of Integrative Biology, Oklahoma State University, 2-Southwestern Native Aquatic Resources and Recovery Center, 3-Department of Biology and Museum of Southwestern Biology).

Partnership and Accountability Cont.

- Drought and wildfire compromise genetic diversity and recovery in Gila Trout. Turner, Thomas F.^{*1}, Osborne, Megan J.¹, Pilger, Tyler J.¹, Propst, David L.¹, Brooks, James E.¹, **Wilson, Wade D.**² (1-University of New Mexico, Museum of Southwestern Biology, 2-USFWS - Southwestern Native Aquatic Resources and Recovery Center).

The Center received six visitors and .86” of rain for the month of November.

Bernie Freeman, Regional Engineer, completed the Centers Environmental Compliance audit on November 4.

Aquatic Species Conservation Management

Fish Distribution for November 2015

Species	Number	Size	Agency	Site
Colorado pikeminnow	402,087	50-70mm	BOR	San Juan and Animas River near Farmington, NM
Chihuahua chub	4,000	92mm	STG	Mimbres River, NM
Rio Grande silvery minnow	83,618	62mm	USFWS	Rio Grande @ Shaffer’s Crossing near Dryden, Texas.
Rio Grande silvery minnow	38,216	62mm	USFWS	Middle Rio Grande, NM Reach

On November 3, a total of 402,087 Colorado pikeminnow from the 2015 year class were stocked into the San Juan and Animas Rivers near Farmington, New Mexico at three different sites; PNM weir and River Park on the San Juan and the Berg Park on the Animas. The fish were released on behalf of the San Juan River Recovery and Implementation Program to help meet annual augmentation goals for the species.

The second and final tagging effort of Rio Grande silvery minnow (RGSM) occurred on November 15-17. A total of 97,573 age-0 fish were Visible Implanted Elastomer (VIE) tagged this year by Southwestern ARRC and NMFWCO staff. Subsequently the fish were stocked into 5 locations in the middle Rio Grande, New Mexico. An additional 83,618 age-0 fish were stocked into the Texas Reach of the Rio Grande in November. Total RGSM stocked for the year (Texas and Middle Rio Grande reaches) equaled 277,708 fish with an average total length of 58mm and average weight of 128 grams each. An additional 31,806 larval and 5,400 age-0 fish were provided to the ISC, Los Lunas RGSM Refugium and 140,000 larval fish to the Uvalde NFH, TX for growout and eventual stocking into the Rio Grande. Over 350 fin clips (tissue samples) were collected from the 2015 production stock and transferred to researchers at the University of New Mexico for genetic monitoring of the stock and the captive propagation program. Ashlie Peterson completed all of the RGSM Health Assessments (HAI) on November 16. Data from all four facilities was entered into a database and compiled into reports.



Colorado pikeminnow stocking, San Juan and Animas River , USFWS Photo



**Chihuahua chub stocking into the Nature Conservancy
McAnally Tract, USFWS Photo**

Chihuahua chub from the 2015 year class were harvested from the ponds, sorted, PIT tagged, length and weight data collected and a total of 4,000 released into the Mimbres River on November 30. Staff from the NM Department of Game and Fish assisted with the stockings on The Nature Conservancy, McAnally Tract.

Approximately 500 individuals from each of the refuge populations of Guzman beautiful shiner, Desert pupfish, Comanche Springs pupfish, and Big Bend gambusia were collected and brought indoors to be held over the winter months. This management action insures survival of the species during the cold winter months.

The Fish Health Lab received Fountain darters (*Etheostoma fonticola*) that were collected by at the San Marcos ARC staff from several locations on the San Marcos and Comal Rivers in Texas. Samples are being tested as part of the

National Wild Fish Health Survey and for continued quarterly parasite research purposes. In addition the Annual Aquatic Animal Health Inspection Reports were issued for the Los Lunas Silvery Minnow Refugium and Achii Hanyo Native Fish Rearing Facility. No diagnostic cases were conducted during November.

William Knight provided a 2015 facilities update to Steve Meismer from the Virgin River Recovery Program in Utah. The update included activities completed for woundfin and Virgin River chub maintained at the Center.

Leadership in Science and Technology

Wade Wilson and Tracy Diver addressed edits and comments from the Lower Colorado River Multi-Species Conservation Program (LCR-MSCP) for the Bonytail (*Gila elegans*) Recruitment Report.

Michael Schwemm continued discussions with James Harter and Lee Simons from the Southern Nevada Fish and Wildlife Office on Pahrangat roundtail chub (*Gila robusta jordani*) (PRC) genetics. He also met with Kevin Guadalupe (Nevada Department of Wildlife) to organize field sampling at Key Pittman WMA where additional PRC will be collected.

Sandra Bohn and Tracy Diver assisted New Mexico State University graduate student Meredith Campbell and her assistant Rachael Ryan with designing new species-specific Asian tapeworm (*Bothriocephalus acheilognathi*) primers.

Workforce Management



**Martha Keller,
Photo Credit: M.Keller**

Martha Keller DVM joined the Southwestern Fish Health Unit as the new Fish Health Unit Leader on November 1. Martha received her DVM from Oklahoma State University in 2000 and a master's degree from the University of Florida in 2005. Prior to her selection she served as the lead veterinarian for the Cayman Turtle Farm, Grand Cayman Islands.

Ashlie Peterson accepted a permanent position with the Fish Health Unit on November 1. Her initial work assignment is in the Virology lab. Congratulations Ashlie!

Workforce Management Cont.

This month the Research Unit hosted Eastern NM University Roswell student, Wil Romero. While in the Unit, Tracy Diver provided him with a basic introduction to genetics along with hands on laboratory training. He learned the basics of heredity, traits, and DNA along with reviewing the metric system and how to run PCR. Wil ran samples of Asian Tapeworm. His next lesson will be to run the product on a gel and see how he did.

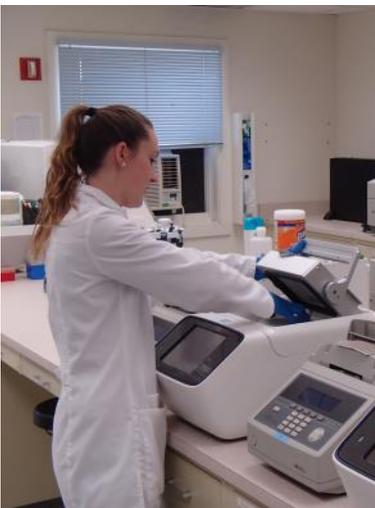
On November 10, Jason Woodland, Ashlie Peterson, and Martha Keller attended a webinar titled “Introduction to Real-Time PCR: Basic Principles and Chemistries” that was presented by Leta Speffan, PhD of Promega Corporation.

Cecilia King and Casey Booth attended the “USFWS Foundations: Discover Your Service!” course at NCTC. The course provided an introduction to the service. It included an overview of budgeting, human resources, diversity, history, as well as other speakers who focused on the biology and forestry side.

Tracy Diver attended the ‘Introduction to GIS’ training at NCTC, the course used spatial geographic data and ArcGIS.

All 2016 Employee Performance Plans and Supervisory Performance Plans were completed in the month of November.

Additional Activities



Meredith Campbell working in the MEL on the new Thermal Cycler, USFWS Photo

The Molecular Ecology Laboratory (MEL) upgraded the real-time PCR machine and two of their thermal cyclers. Sandra Bohn and Tracy Diver setup the equipment and ran a test plate on the PCR machine. A representative from ThermoFisher visited the MEL and provided Sandra with training on the new real-time PCR instrument and the new software used to operate it and analyze results.

In preparation for the winter, anchors, eyebolts, cables and bird netting were placed on several C and D -series ponds to protect the fish from fish-eating birds that migrate through. Property boundary signs were inventoried, refastened and replaced where necessary. The signs are used to inform the public of the hatchery boundaries and the use limitations on the open access areas. Trash was picked up along the exterior boundary fences and 20 lined ponds cleaned for use in 2016.

The RO water filtration systems in the research and fish health labs were serviced this month by Fulkerson Plumbing of Roswell, NM. Precision Air of Roswell, NM replaced the heating coil on one of the boilers in the fish culture building.

The Center recycled 330 lbs. of cardboard and 1 lb. of empty printer toner cartridges.

Upcoming Activities

- ◆ December 1-2 Project Leaders Meeting, Albuquerque, NM
- ◆ December 7-10 FTC/FHC Meeting, Onalaska, WI