

SOUTHWESTERN NATIVE AQUATIC RESOURCES AND RECOVERY CENTER

April 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.....	Stephanie Callicutt
Fish Biologist.....	William Knight
Fish Biologist.....	Ian Paige
Fish Biologist.....	Garrad Poole
Fish Biologist.....	Tracy Diver
Bio Science Technician.....	Vacant
Maintenance Mechanic.....	David King
Maintenance Worker.....	Ty Terry
Maintenance Worker.....	Andrew Thatcher

RESEARCH

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

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 Peterson



Renee Martin and Maria Bullard at the POS-i-tive Change Fair at Dexter High School.

Clare Shea feeding fish.

USFWS Photos



Partnerships and Accountability

Maria Bullard, Renee Martin and David King represented the USFWS Southwestern ARRC at the seventh annual POS-i-tive Change Career Fair at the Dexter High School on April 29. This fair is open to 9th through 12th grade students. The goal of the fair was to promote higher education, teach students about career and college possibilities available to them after high school, and acquire information about opportunities to volunteer. Experts from around the community were available to answer questions. During the fair, Southwestern ARRC staff spoke with 187 students.

Tracy Diver and Renee Martin continued to mentor high school student Clare Shea from the Goddard High School in Roswell, NM. This month, Clare participated in activities conducted in the Fish Culture part of the Southwestern ARRC program. She received training on maintaining biosecurity, testing water quality, cleaning tanks, and feeding fish in ponds. She also received assistance with her mentor final project outline, poster, and PowerPoint presentation.

Matthew Peralta, the fish health program lead for New Mexico Department of Game and Fish, completed a week of fish health training at Southwestern ARRC on April 3. He worked with staff to observe operations and gain additional insight into parasitology and fluorescent microscopy protocols. He also spent time with Teresa Lewis planning a collaborative fish health workshop for agency hatchery staff, tentatively scheduled for the end of July.

Southwestern ARRC staff participated in two outreach efforts this month: “Celebrate Earth Day” at the Living Desert Zoo in Carlsbad, NM and the “POS-i-Tive Change Fair” at Dexter High School in Dexter, NM.



Southwestern ARRC staff and volunteer Faith Warren harvest Virgin River chub. USFWS Photo

Aquatic Species Conservation Management

Fish spawning and culture activities pick up tremendously this month. Razorback sucker, Chihuahua and humpback chub, bonytail, and Rio Grande silvery minnow were spawned to meet partner fish requests and Southwestern ARRC’s annual commitments. Larger fish were stocked into the NAPI ponds near Farmington, NM for growout and eventual release into the San Juan River, and Desert pupfish were provided to the Arizona Game and Fish Aquatic Research and Conservation Center in Cornville, AZ. A total of 425 bonytail (>300mm in total length) were stocked into Reach 3 of the Lower Colorado River (LCR) on behalf of the Bureau of Reclamation (BOR), and the LCR Multi-Species Conservation Program. Later in the month BOR staff provided assistance with hauling bonytail from Southwestern ARRC to Lake Mohave, AZ for use in year two of a

study to investigate the genetic diversity of the progeny produced in a backwater setting. Fish culture staff also Passive Integrated Transponder (PIT) tagged and fin clipped 300 humpback chub from the 2014 year class in preparation for translocation into Havasu Creek, Grand Canyon in May. In addition, several resident chub species were inventoried and moved to their summer holding ponds.

On April 7 and 21, the annual health inspections were conducted at Alchesay and Williams Creek National Fish Hatcheries (NFHs). On April 9, Fish Culture staff submitted bonytail for Asian tapeworm screening as part of an ongoing research project conducted with New Mexico State University. Fish Health also received several submissions of ovarian fluid from Mora NFH for testing. The results will be compiled and reported with Mora NFH's annual aquatic animal health inspection report.

FISH DISTRIBUTION FOR APRIL 2015

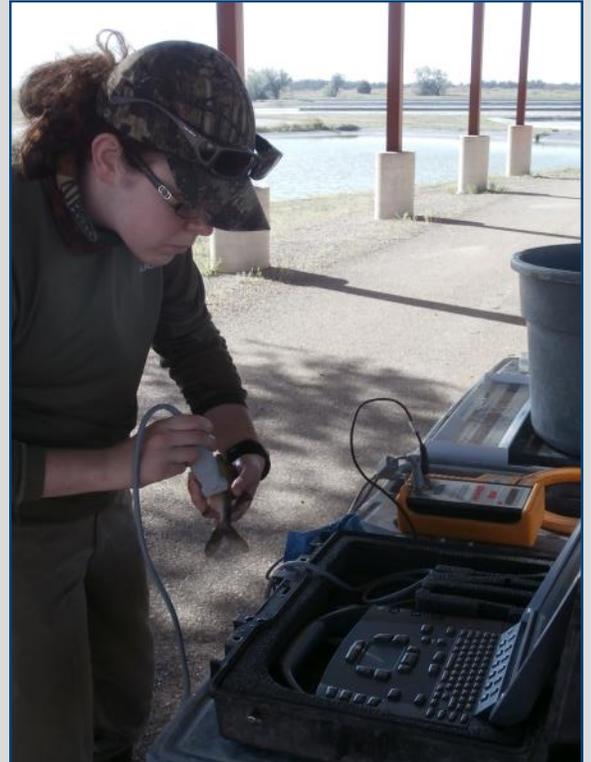
<i>SPECIES</i>	<i>NUMBER</i>	<i>SIZE</i>	<i>AGENCY</i>	<i>SITE</i>
Bonytail	425	>300mm	BOR	Lower Colorado River- R3 (Park Moabi) Multi-Species Conservation Program, AZ
Bonytail	600	>250mm	BOR	Lower Colorado River- R2 (Backwater Study) Multi-Species Conservation Program, Lake Mohave, AZ
Desert pupfish	500	Various	STG	Aquatic Research & Conservation Center, Cornville, AZ, Arizona Game and Fish Dept.
Razorback sucker	7,000	190mm-225mm	BOR	Navajo Agricultural Products Industry (NAPI), East Avocet and Hidden Pond on the Navajo Nation, Farmington, NM
Razorback sucker	5,000	Fry	STG	Aquatic Research & Conservation Center, Cornville, AZ, Arizona Game and Fish Dept.
Razorback sucker	60,000	Fry	STG	Bubbling Ponds SFH Bubbling Ponds SFH, Cornville, AZ, Arizona Game and Fish Dept.

Leadership in Science and Technology

Fish Culture and Research staff collected fin clips from 201 humpback chub (*Gila cypha*). The samples represent chub collected from the Little Colorado River in 2014 as larvae for a year of grow-out at the Center, and eventual translocation to Havasu Creek in May 2015. DNA was isolated and the samples were genotyped utilizing 14 microsatellite markers. The 10% QAQC and secondary scoring for these samples was also completed this month.

Renee Martin submitted a White Sands pupfish (*Cyprinodon tularosa*) Microsatellite Record for publication in the journal *Conservation Genetics Resources*. Tracy Diver and Renee Martin provided laboratory safety training to new employee Sandra Bohn, and Tracy completed inputting water quality data into pivot tables making the database more accessible for future analyses.

Morgan (MO) Brizendine, a student from the University of Arizona working on her Master's degree, made multiple visits to Southwestern ARRC to scan humpback chub with an ultrasound machine. Her work will aid in determining egg development in females immediately prior to spawning and provide a reference point for humpback in the Grand Canyon. She also assisted with numerous fish culture activities during her time at the Center. Thank you, MO, for the help.



MO Brizendine scans gravid humpback chub.
USFWS Photo

Workforce Management

Teresa Lewis completed a two-week detail at the Chincoteague National Wildlife Refuge on the Eastern Shore of Virginia. She was tasked with updating and revising all sections of the refuge's draft Comprehensive Conservation Plan (CCP) related to climate change and sea level rise as well as addressing specific partner concerns submitted during the public review process. While the detail was devised as a cross-programmatic training opportunity, she contributed significantly to the revision process as it relates to the USFWS efforts on climate change planning outlined in the CCP. She also took a morning away from the office to judge science-related Science Fair entries at Chincoteague Elementary School.

Wade Wilson completed the One DOI Supervisory course in Albuquerque. Maria Bullard completed RBST Training, "Exchange Server 2010 SP1: High Availability and Social Networking for Users," and Ian Paige attended "Introduction to Health and Safety for General Industry" in Albuquerque, NM for training as Southwestern ARRC's collateral duty safety officer (CDSO).

In response to a program-wide request for assistance, Ashlie Peterson of the Southwestern Fish Health Unit completed a month-long detail at the Idaho Fish Health Center on April 18. While on detail she had the opportunity to help spawn steelhead trout as well as collect samples for health inspections. Ashlie assisted with assignments in all aspects of the Fish Health program, including virology, parasitology, ELISA screening for pre-releases, and bacteriology. She also traveled to multiple tribal hatcheries to assist with monthly and pre-release sampling. She contributed to a wild fish health survey at Lake Pend Oreille, attended the State and Tribal Salmon Fisheries Management Pre-Season Planning Meeting, and assisted Idaho Fishery Resource Office staff with the retrieval of coded wire tags.

Tracy Diver continued her cross-training by providing assistance to Fish Health during the Paddlefish Health Survey in Miami, OK at the Oklahoma DWC USDA certified processing center. In addition to collecting Paddlefish health

samples, they also collected tissue from White Bass (*Morone chrysops*), Gizzard Shad (*Dorosoma cepedianum*), and Bluegill Sunfish (*Lepomis macrochirus*) for virology, bacteriology, and parasites screening.



Sandra Bohn USFWS Photo

Our new geneticist Sandra Bohn joined the lab on April 20. Sandra has a background in conservation genetics and has been a Research Associate for Auburn University contracted to the Conservation Genetics lab at the Warm Springs Fish Technology Center under the direction of Dr. Greg Moyer. There she completed genetics work on flatwoods salamanders *Ambystomabishopi* and *A. cingulatum*), black bass (*Micropterus* spp.), sicklefin redhorse (*Moxostoma* sp.), Chucky madtom (*Noturuscrypticus*), and the Piedmont blue burrower (*Cambarus harti*). Sandra was born and raised in Ohio, and attended New College of Florida and the University of Southern Mississippi, where she completed her master's thesis on the conservation genetics of alligator gar (*Atractosteus spatula*). Welcome, Sandra!



Andrew Thatcher USFWS Photo

Andrew Thatcher entered on duty at Southwestern ARRC on April 13. Andrew is the latest addition to the maintenance crew at the Center. He joined the USFWS (Service) in May of 2014, after graduating from Unity College with a degree in Parks Recreation and Eco-tourism. Andrew has been working in maintenance positions since his high school graduation, and began working for Cheshire, Connecticut's park and recreation department, his hometown parks department, on summers off from college, and has continued this line of work. Since starting with the Service, he has had the opportunity to work and learn at two different refuges, Medicine Lake NWR in Montana, and Bosque Del Apache NWR in New Mexico. Welcome, Andrew!

A quarterly safety/ staff meeting was held this on April 29 covering "heat related illnesses" and routine house-keeping and administrative items.

Administrative Technician Michelle Bell was presented with a STAR award to acknowledge the extraordinary assistance and support she provided in the planning and execution of the Fish Health Biologists' meeting.

Employee mid-year Performance Progress Reviews were completed for all staff.



Garrad Poole holding a razorback sucker broodstock. USFWS Photo

Several staff members transitioned to the next phase of their careers this month. Morgan Robinson's completed her TERM appointment in the Research part of the program on April 2, and Garrad Poole and family relocated to Phoenix, AZ on April 24. Garrad provided invaluable assistance to the Fish Culture part of the program for over two years. Faith Warren, a student intern from Texas Tech University concluded her work at the facility this month. She assisted fish culture with checking water quality, feeding and spawning fish, and maintenance of the facility. We wish everyone the best in the next phase of their careers.

The staff participated in a number of meetings or conference calls this month, including monthly Fisheries and Aquatic Conservation and Fish Health project leader calls, the USFWS National Wild Fish Health Survey and USFWS National Aquatic Animal Health Policy calls. They also participated in a coordination call with Mark Mckinstry (BOR) and Howard Brandenburg, American Southwest Ichthyological Researchers (ASIR) biologist to discuss razorback sucker and Colorado pikeminnow larval fish availability for a study to be conducted at the

Hogback diversion fish weir on the San Juan River to test the effectiveness of the newly built weir. Research staff participated in the Advanced Topics in Conservation Genetics Webinar series on April 23.

Additional Activities

Tracy Diver and Renee Martin continued with routine database, freezer, chemical, software, and equipment inventory and maintenance for the Research Unit. Research autoclaves and centrifuges were cleaned; filters in the ultra-cold freezers were dusted and ArcGIS and statistics software were installed on office computers.

Fish culture and maintenance staff continued upkeep of Southwestern ARRC grounds and facilities. Work included mowing, weed and dead tree removal, earthen pond prep, lined pond cleaning, pond liner repairs, skylight repair, stenciling new numbers on pond kettles, replacing water inlet valves on B and 18C ponds, and pouring concrete cap over an abandoned water control structure.

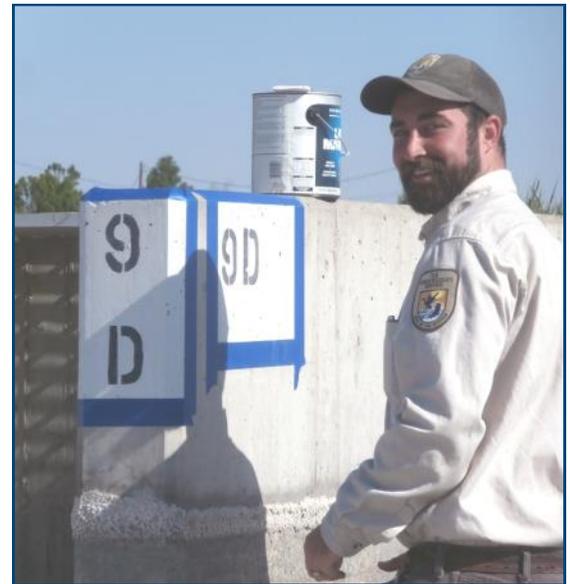
Southwestern ARRC received 2.0" of rain and had 12 visitors for the month of April.



Andrew Thatcher and David King pouring concrete. USFWS Photo

UPCOMING EVENTS

May 5	<i>Uvalde NFH fish health inspection</i>
May 5	<i>Earth Day Celebration at the Carlsbad Living Desert Zoo</i>
May 7	<i>Dexter Middle School 6th grade Comparative Fish Anatomy Module</i>
May 12	<i>Sierra Middle School 6th grade Comparative Fish Anatomy Module</i>
May 19	<i>RGSM Health Update seminar for the New Mexico ISC Science Workgroup</i>
May 20	<i>Wild Fish Health Survey in partnership with AZGFD Gila River Basin Conservation Program</i>
May 27	<i>Holdenville SFH (OK) fish health inspection</i>



Ty Terry painting pond numbers. USFWS Photo