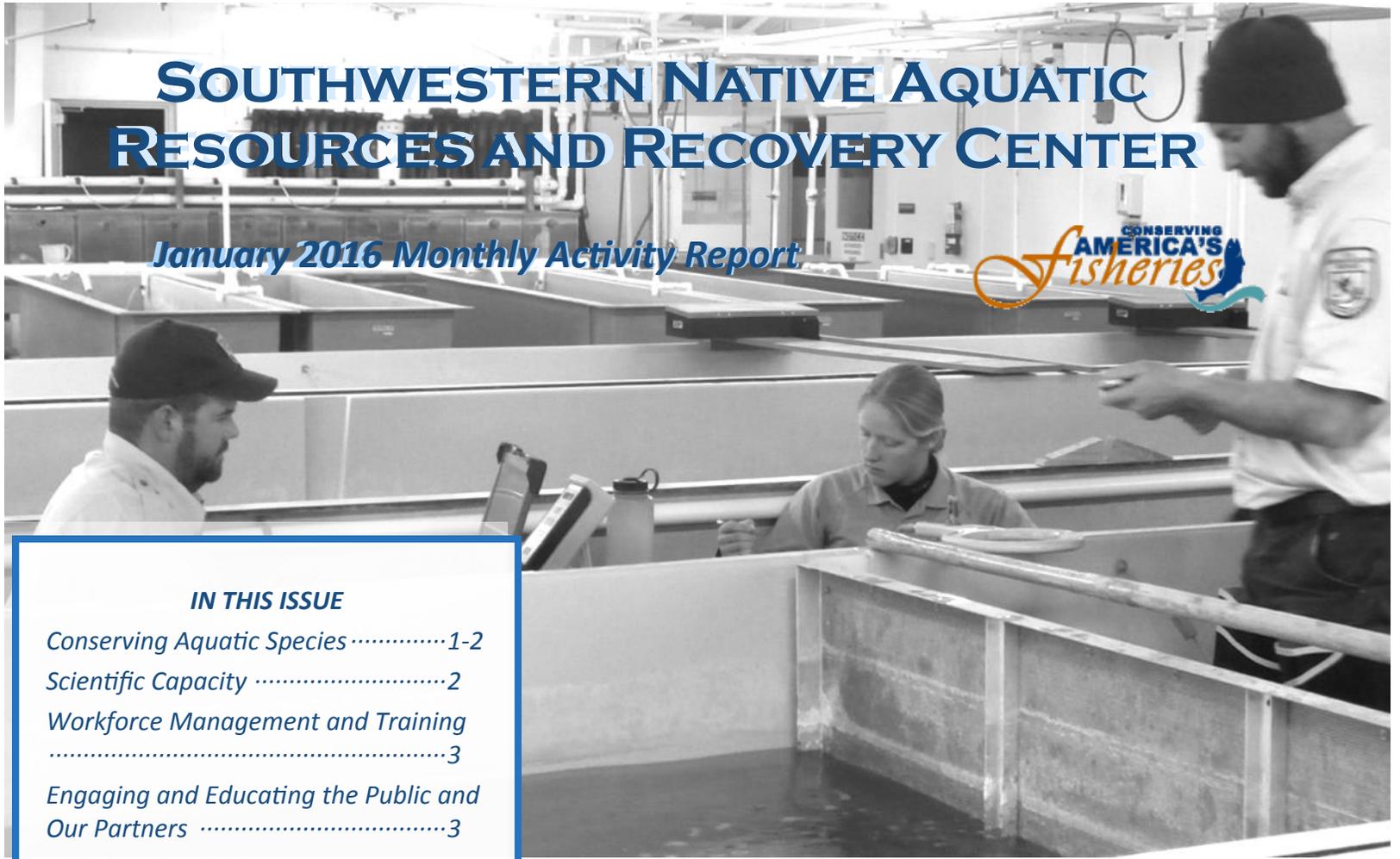


# SOUTHWESTERN NATIVE AQUATIC RESOURCES AND RECOVERY CENTER

January 2016 Monthly Activity Report



William Knight, Cecilia Lamb, and Ian Paige, scanning bonytail  
USFWS Photo

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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 Lamb  
Maintenance Mechanic.....Brian Hadlock  
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

## Conserving Aquatic Species

The second bonytail broodstock was inventoried and sorted this month in preparation for transfer to the Mora National Fish Hatchery (NFH) in early March. This activity culminates a 3 year effort in developing this refuge population. Approximately ~1,200 individual fish representing 50 unique family lots make up the refuge population. A similar subset of fish is being integrated into the adult population at Southwestern ARRC to aide in meeting long-term refuge and augmentation needs for the species basin wide. Fish health sampling and tissues for genetic analysis were collected prior to being distributed to Mora NFH.

Fish Health staff sampled Apache and rainbow trout at Alchesay and Williams Creek NFH. This sampling was conducted at the request of the facility and the Regional Fisheries program due to a recent pathogen finding. Sampled lots included those expected to be moved off station or stocked out prior to their annual aquatic animal inspection in April. Fish Health also received 60 bonytail samples from the Southwestern ARRC for aquatic animal health testing. National Wild Fish Health Survey and diagnostic reports for recently submitted fountain darters were completed and sent to the San Marcos Aquatic Resources Center.

## Conserving Aquatic Species Cont.



blacktail shiner, Photo Credit: Chad Thomas, TSU-San Marcos

Fish Culture staff harvested two ponds of bonytail and razorback sucker in preparation for fish tagging and spring stocking activities. Staff from the Texas Fish and Wildlife Conservation Office and Texas Parks and Wildlife collected and provided two additional Pecos River species to Southwestern ARRC. The blacktail shiner (*Cyprinella venusta*) and proserpine shiner (*Cyprinella proserpina*) will be spawned; cultured and developmental life series collected for each species over the next 6 months. The collections are used to develop an illustrated guide essential for field and lab identifica-

tion 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 U.S. Fish and Wildlife Service Texas and New Mexico Fish & Wildlife Conservation Offices.

No fish were distributed during the month of January.

### Scientific Capacity

Michael Schwemm worked with several partners this month. Discussions included internal revisions on a leopard darter genetic management plan with staff from the Ecological Services-Tulsa Office; options for stocking pahranagat roundtail chub (*Gila robusta jordani*) on the Pahranagat National Wildlife Refuge, NV with staff from the Southern Nevada Fish and Wildlife Conservation Office and coordination with University of New Mexico researchers on investigations and potential treatment protocols related to a cyanobacteria (*Microcystis* sp.) detection at the City of Albuquerque, BioPark RGSM Refugium. Michael also reviewed a manuscript on the optimal selection of Individual spawning-pairs to maintain diversity in captive populations of American paddlefish for the Archives of Polish Fisheries Journal.

Several staff members attended the Annual Researchers Meeting of the Upper Colorado River Endangered Fish Recovery Program and San Juan River Basin Recovery Implementation Program held in Durango, CO this month. Tracy Diver presented a talk detailing her work on microbiota associated with external lesions on fishes of the San Juan and Wade Wilson presented the Center's work on natural recruitment in bonytail ponds. Michael Schwemm coauthored a presentation examining hybridization among larval drift in Colorado suckers (*Catostomus* spp.) that was presented by Evan Carson from the University of New Mexico, at the Annual Researchers Meeting. Wade also presented the bonytail talk at the Annual Colorado River Aquatic Biologist's meeting in Laughlin, NV.

In preparation for the 2016 spawn, Tracy Diver completed genotyping the 2013 and 2014 Gila trout (*Oncorhynchus gilae gilae*) Main Diamond lineages held at Mora National Fish Hatchery. Sandra Bohn completed the 10% QAQC, in addition to genotyping; all samples have been labeled and archived.

Sandra Bohn prepared a presentation on White Sands pupfish (*Cyprinodon tularosa*) entitled "Refuge populations of White Sands pupfish diverge in the absence of high gene flow" for the upcoming Arizona/New Mexico chapter meeting of the American Fisheries Society in Flagstaff, AZ. She also continued writing a report on Devil's River minnows (*Dionda diaboli*) that were genotyped in 2005 and worked on quantitative PCR screening of Fish Health samples for the chytrid fungus (*Batrachochytrium dendrobatidis*).

Research staff reviewed and addressed the final comments on the Bonytail Recruitment Study. Field trials for the project were conducted at Southwestern ARRC in 2013 and 2014. The project was funded by the Bureau of Reclamation, Boulder City, NV, Field Office on behalf of the Lower Colorado River Multi-Species Conservation program.

Martha Keller visited the San Marcos Aquatic Resources Center. She met with staff members to discuss the a recent pathogen finding in fountain darters collected from the Comal River, TX and worked with staff to improve quarantine facilities, overall biosecurity and standard operating procedures for quarantine of all incoming animals and plants.

## Workforce Management and Training

The Administrative staff submitted the 2016 Needs Assessments to the Regional Office; they also participated in a number of calls in reference to the 2016 Budget and the upcoming Administrative Conference.

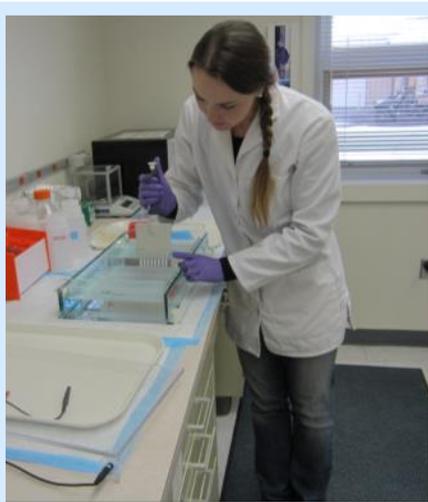
During the week of January 25, Martha Keller and Marlene Rodarte attended the annual Rocky Plains Fish Pathologist Meeting in Geyserville, CA. Martha also attended a Supervisory Skills Workshop in Albuquerque, NM during the week of January 11.

Cecilia King attended the “Introduction to Fish Health” training in Lacrosse, WI. William Knight attended a pesticide applicators renewal course that was provided by New Mexico State University in Hobbs, NM. Sandra Bohn and Tracy Diver participated on an online Landscape Genetics course and Jason Woodland completed the DOI online training for “Scientific Integrity”.

Center staff participated in the Region 2 Fisheries & Aquatic Conservation monthly conference call; the Fish Technology Centers conference call; Security Update call; Yaqui Catfish workgroup call; National Wild Fish Health Survey & Database committee conference call, and humpback chub conference call; USFWS – Inter State Stream Commission coordination meeting.

## Engaging and Educating the Public and Our Partners

Southwestern ARRC received three visitors for the month of January.



Meredith Campbell, processing samples, USFWS Photo

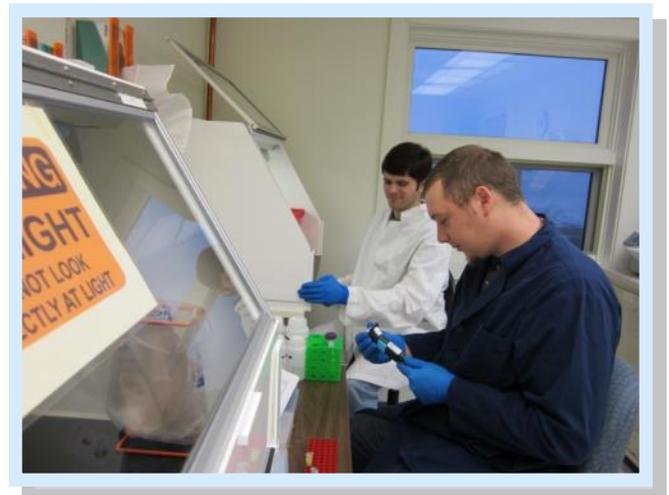
NM State University Graduate student Meredith Campbell continued to work in the Research Labs collecting data for her Master’s thesis. Tracy Diver and Sandra Bohn assisted Meredith with sequencing positive Asian Tapeworm (*Bothriocephalus acheilognathi*) samples.

Martha Keller visited both the Mora NFH and the Albuquerque Biopark RGSM Refugium. She toured both facilities and spoke with project leaders at both sites to get an understanding of their setup and unique challenges.

Fish Culture delivered a Colorado pikeminnow and a razorback sucker to the Roswell Bureau of Land Management office. The fish will be used in a new display aquarium for the public to see and learn about the native fish species of New Mexico.

Fish health staff responded to requests from the Arizona Game and Fish Department and the New Mexico Department of Game and Fish for a five year annual fish health history /reports for Williams Creek and Mora NFHs.

Michael Schwemm worked with Andrew Taylor and Colt Holley, two students from Oklahoma State University, College of Natural Resources. This included all necessary components typical of genetic research in fisheries management and included theory and hands-on activities (DNA isolation, PCR, genotyping and basic statistical analyses). Tracy Diver provided the visiting students laboratory safety training.



Andrew Taylor and Colt Holley, OSU Students, USFWS Photo

## Additional Activities



Maintenance Staff replacing carpet, USFWS Photo

Following storm “Goliath”, maintenance staff continued snow and ice removal from driveways and building entrance areas. New carpet was installed in three offices in the Administration building, air filters for the HVAC system replaced and a new instant hot water heater and faucet installed. In addition, a leaking toilet was repaired in the Maintenance shop, light ballast replaced in the Paint and Oil storage room and a new autoclave installed in the Virology lab in the Fish Health building.

Preventative maintenance was completed on all riding lawn mowers in preparation for spring time mowing. Routine maintenance activities completed this month include the replacement of a battery and cables at Well #5; installation of a new alternator on the champion road grader; digging up two broken pond water valves; repairing 17 damaged aluminum D-series ponds draining screens; and replacement of the rotted floor of the 14’ utility trailer. The new Dodge 3500 distribution truck was equipped with a gooseneck hitch, running board steps, headache rack and oxygen holders to meet safety requirements of personnel while transporting fish to stocking locations. Metal pipe, t-posts and barbed wire were purchased in preparation for repairs to the facilities property boundary fencing.

Fish Culture repaired bird netting and cables damaged by winter storm “Goliath”. A grid of twine was installed over a B-series pond to protect small razorback sucker from fish eating birds migrating through the area during the winter months. The PVC

drain line vents on the D-series ponds were repaired after the old ones had broken during the last pond harvesting. In preparation for the warmer weather and the necessary repairs that are needed on the pond liner, staff started cutting and prepping new sections of liner to make the repairs. A small distribution tank was set up for use with air lines, agitators, and valves. New air lines and air diffusers were installed in the two compartment fish distribution tank.

Precision Electric from Dexter worked on the electrical panel on Well #5. The reset button was inoperable and would not allow the Well to turn on. Precision Air of Roswell completed repairs to Fish Culture building boiler.



New John Deere 5085 Tractor, USFWS Photo

Several new vehicles and equipment were received this month. The items include a new John Deere 5085 tractor, 2016 Ford Explorer, 2016 Chevrolet Suburban, and autoclave for virology and necropsy laboratories.

A surplus Kubota riding lawn mower and John Deere 1250 farm tractor were auctioned off and picked up by the successful bidders this month.

The Center recycled 220 lbs. of cardboard and 1lb. of empty printer toner cartridges this month.

## **Upcoming Activities**

- February 2-4: Fisheries Administrative Conference, Albuquerque, NM.
- February 4-6: 49<sup>th</sup> Joint Annual Meeting of the Arizona and New Mexico Chapters of The Wildlife Society and the Arizona/New Mexico Chapter of The American Fisheries Society, Flagstaff, AZ.
- February 16-19: National Wild Fish Health Survey sampling for Lake Texoma, OK/TX (This is a coordinated effort with Oklahoma Department of Wildlife Conservation and the Texas Parks & Wildlife Department)
- February 22: Annual Aquatic Animal Health Inspection of Mescalero TFH