

SOUTHWESTERN NATIVE AQUATIC RESOURCES AND RECOVERY CENTER

June 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.....Ashlie Peterson
 Fish Biologist.....Vacant
 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...Michael Schwemm
 Fish and Wildlife Biologist.....Tracy Diver
 Fish Biologist (Genetics).....Sandra Bohn
 Fish Biologist (Genetics).....Vacant

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.....Vacant

Partnerships and Accountability

The Center participated in the 31st Annual Milkman Triathlon hosted in Dexter on June 6. There were 170 athletes that competed in the event that included a swim through Lake Van, biking to and from Bottomless Lakes State Park, and the run portion through the Center on a marked route. Michelle Bell volunteered at the event assisting with registration activities and handing out packets to participants. The Center also provided ice and water for the event.



Mescalero Intern, Dissecting a Fish, USFWS Photo

On June 17, the Center opened its doors to a group of summer interns from the Mescalero Tribal Fish Hatchery. An overview of current programs and a facility tour was provided followed by hands on activities conducted in each section of the program. Research staff provided an interactive laboratory experiment where the students learned about basic genetics and cell structure and were able to extract their own DNA using simple household supplies; Fish Health staff conducted a fish dissection and anatomy exercise, and Fish Culture provided a fish tagging -marking exercise. The day closed out with a Careers question and answer session.

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NM Tech Students Touring the Molecular Ecology Lab with Tracy Diver, USFWS Photo.

A group of primary and secondary teachers taking a professional development science course at New Mexico Institute of Mining and Technology (Socorro, New Mexico) visited the Center on June 23. The students had a wide range of backgrounds from Science to English literature. Center staff provided a tour of the facility and information on the importance and applications of conservation genetics, an overview of current research projects, fish health diagnostics, and fish propagation.

Matthew Patterson from the National Conservation Training Center (NCTC), WV visited the facility and participated in day to day activities. Matthew was on station for a week to gain experience and gather information on aquatic species conservation facilities and activities in the Southwest. The main objective is to develop a warm water fish culture and aquatic species conservation course to be offered at NCTC in the future.

Aquatic Species Conservation Management

Species	Number	Size	Agency	Site
Colorado pikeminnow	45,327	fry	BOR	Hogback Diversion Weir , San Juan River, Farmington, NM
Leon Springs pupfish	500	30-50mm	UNV	Diamond Y Draw (Monsanto Pool), FT. Stockton, TX

The years spawning effort was wrapped up this month. A total of 13 ponds were cleaned and prepped to receive fish. Colorado pikeminnow were spawned to meet this year production commitments and research activities for the species. Approximately 50,000 newly hatched larvae were oxytetracycline marked by American Southwest Ichthyological Researchers (ASIR) staff to determine the utility of the newly built Hogback Diversion weir on the San Juan River and the remaining 550,000 larvae were stocked into ponds at Southwestern ARRC for grow-out and stocking into the San Juan River this winter.

Leon Springs pupfish were provided for stocking into Diamond Y Draw, Monsanto Pool near FT. Stockton, TX. The Texas Fish & Wildlife Conservation Office coordinated this effort with staff from the Department of Biological Sciences, Lehigh University, PA. These fish were used to supplement the limited existing population and monitoring of life history activities for the species.



Aura Muniz and Ashlie Peterson, Spawning Colorado pikeminnow, USFWS Photo.

Young of year Rio Grande silvery minnow averaging 15mm in total length were transferred to the ISC, Los Lunas Rio Grande Silvery Minnow Refugium, in Los Lunas, NM. The fish were provided as part of their 2015 annual operating plan and permit approved by the USFWS. At the same time, staff transported 5,000 wild caught larvae back to Dexter from Albuquerque Biopark to be incorporated into the captive refuge stock.

Annual fish health inspections were conducted at Tishomingo NFH, Durant State Fish Hatchery in Oklahoma, and San Marcos Aquatic Resources Center (SMARC) San Marcos, TX. The inspection at SMARC was the first in the station's history and included sample collection on non-traditional hatchery species including Barton Springs Salamander and San Marcos Springs Salamander. Additional testing included swabbing of salamanders for screening of Chytrid Fungus. The Lab also received wild caught fish for health testing from the Arizona Game & Fish Department that included speckled dace from Eagle Creek, AZ and a mix of Desert and Sonora suckers provided by Mora NFH. Southwestern ARRC provided Humpback chub samples collected from the Little Colorado River, Grand Canyon, AZ. Tracy Diver assisted Linda Vannest in Fish Health with sequencing of intestinal tapeworms found in

Leadership in Science and Technology

A total of 140 Devils River minnow (*Dionda diabolica*) tissue samples were received from SMARC for genetic analysis. These samples represent the 2014 year class refuge population and the wild Pinto Creek collected in 2012 and 2014. This ongoing project is assessing genetic diversity in both captive stocks and wild populations to insure that the captive stocks maintaining genetic diversity.

Research staff fin clipped 224 Colorado pikeminnow (*Ptychocheilus lucius*) that represent the future broodstock of the species at the Center. Tracy Diver is currently genotyping the collected samples to measure genetic diversity. The Center maintains the sole broodstock of this species for the entire Colorado River basin.



White Sands pupfish, Photo Credit:
Tory Davis

Fish Culture provided 95 Rio Grande silvery minnow (*Hybognathus amarus*) tissue samples from wild caught larvae collected by the Albuquerque Biopark in the spring of 2015 (2015 year class). Approximately 5,000 individuals were received by the Center and added to the captive refuge population. The tissues collected will be archived for future genetic analyses.

Sandra Bohn completed a draft report that examines genetic diversity among the native and refuge populations of White Sands pupfish (*Cyprinodon tularosa*) found on White Sands Missile Range, White Sands National Monument, and Holloman Air Force Base in New Mexico.

On June 16, Teresa Lewis provided an update on the amoebic pathogen surveys being conducted in Rio Grande silvery minnow to Science Work Group of the Middle Rio Grande Endangered Species Act Collaborative Program, held at the State Engineer's Office in Albuquerque, NM.

Fish health received samples of kidney tissue from the Lamar FHC for ring testing. Samples will be tested for BKD by RPCR and results will be compared with other USFWS Fish Health Centers.

Workforce Management

The staff participated in a number of meetings or conference calls this month, including the monthly Fisheries and Aquatic Conservation, Fish Technology and Health Centers conference calls, the USFWS National Wild Fish Health Survey and USFWS National Aquatic Animal Health Policy calls, monthly User Acceptance Team conference call, the Virgin River Program Technical committee conference call, GRCA Fisheries and humpback chub translocation conference call and monthly RGSM captive propagation facilities conference call.

Manuel Ulibarri and Maria Bullard completed the Firearms Accountability course on DOI-learn and David King attended "Supervision for New Supervisors" training in Albuquerque, NM.

Workforce Management



Michael Schwemm,
USFWS photo

In our continued effort to bring the Research Unit back to full staffing, Dr. Michael Schwemm joined the Unit as a geneticist on June 15th. Mike's research has focused on the conservation and management of freshwater fishes and he has worked to interpret patterns of genetic variation in natural and reintroduced populations. Disciplines he enjoys include historical biogeography, life-history ecology, conservation genetics, and fisheries management. One of his most recent projects has been the conservation genetics of paddelfish (*Polyodon spathula*) in Oklahoma. Welcome to the Center Mike!



Casey Booth,
USFWS Photo

Casey Booth joined the administrative group as the new Office Assistant (OA) on June 28. Casey graduated from ENMU-Roswell with an Associate's Degree in Business Administration, and Eastern New Mexico University with a Bachelor's Degree in Business Administration. Casey worked at Pioneer Bank in Roswell for nine years where he was able to advance into multiple positions that included: accounting, finance, overseeing the bank's lines of credit, portfolio management, and ending as an Operations Manager over Internal Auditing. Casey has left banking in order to pursue new and interesting opportunities. Casey enjoys going waterfowl hunting all season long with friends and family, as well as elk hunting when possible. Welcome Casey!

Sandra Bohn began mentoring Aura Muniz, a Student Conservation Association/ Career Discovery Intern (SCA-CDIP) from the University of Puerto Rico. Aura is Interested in zoology and herpetology and has been shadowing and participating in work activities in all sections of the Center program. They both participated in a conference call with other Region 2 Fish and Aquatic Conservation (FAC) youth employees. The call gave the FAC youth employees a chance to learn about the other program participants and safety, professionalism, and employment opportunities within the Service.

Tracy Diver joined the Research Unit full-time on June 28th. Tracy has a varied background in conservation genetics and fisheries biology focusing on species in the Southwest. Prior to this, she was in a Fish Culture position at the Center.

Additional Activities

J & G Electric from Roswell, NM completed the electrical connection of a new 10.75KW photo voltaic (solar powered) system at the Isolation / Quarantine building. Michael Zamora, Construction Inspector, USFWS Regional Engineering was on site this month conducting the final inspection on the Project. The system passed inspection and will be activated next month when Xcel Energy installs the electrical meter.

The Centers bi-annual water well testing was initiated this month. Water samples were collected from well #4 and #5 and sent to Hall Environmental Labs in Albuquerque, NM for analysis.



PV-Electrical Connection,
USFWS Photo



Well #3 Maintenance, Coats Pump and Supply, USFWS Photo.

Pro Tech Services from Albuquerque, NM performed performance evaluations for the laminar flow hoods in the fish health laboratories on June 10th. All hoods were found to be operating within normal parameters.

Coats Pump from Dexter, NM refurbished well #3.

The area continues to receive above average rainfall. General maintenance of grounds and facilities included mowing and weed eating around ponds and buildings, servicing generators and cleaning buildings. Weed control was conducted on C-series earthen ponds and the banks were mowed. Drywall and paint repairs were completed to the skylight water damaged area in the Administrative Building lobby. Fish culture staff replaced broken water valves on ponds 8A and 13C and the door lock on the F-750 distribution truck.

Southwestern ARRC received 2.6" of rain and had 41 visitors for the month of June.

(Front Page Photo: Students from Mescalero Tribal Fish Hatchery and staff moving fish from ponds to the Fish Culture Building for tagging demonstration, USFWS Photo.)

UPCOMING EVENTS

July 8	Facility Safety Review
July 13-15	Inks Dam NFH Annual Fish Health Inspection.
July 22	Facility evaluation at Mora NFH. Access potential for maintaining second bonytail refuge population.