

SOUTHWESTERN NATIVE AQUATIC RESOURCES AND RECOVERY CENTER

July 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
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
Microbiologist.....	Linda Vannest
Fish and Wildlife Biologist.....	Vacant



U.S. & DOI Flag, USFWS Photo

Partnerships and Accountability

Sandra Bohn worked with Aura Muniz, Student Conservation Association/Career Discovery Intern (SCA-CDIP), teaching her the basics of DNA isolation from tissue samples, Polymerase Chain Reaction (PCR), and scoring of genetic markers (microsatellite) using the software Genemapper. Aura helped with the construction of the Molecular Ecology Laboratory (MEL) eDNA water collection apparatus, and she helped reorganize the MEL reference library. Sandra Bohn, William Knight and Teresa Lewis completed Aura's SCA mid-term performance review.

William Knight participated in a facility evaluation of the Mora NFH to evaluate the potential for maintaining the second refuge population of bonytail. The multi-agency facilities evaluation team consists of representatives from several partnering agencies including Gregg Garnett from the Bureau of Reclamation, Mark Olson from Willow Beach NFH and Sarah Taylor from the AZ Game and Fish Department, Bubbling Ponds SFH. A final recommendation on which holding facility to utilize for this long term project is expected by September 30.

Teresa Lewis compiled individual Fish Health Center reports into a summary and brief "What Fish Health Centers Do" report for the July Fisheries ARD meeting. This information was compiled into a similar format for USFWS Fish Technology Centers by Judy Gordon from the Abernathy Fish Technology Center and

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included data from the Southwestern ARRC related to basic operations, staffing, research projects, and funding sources.

The annual facility safety review was conducted this month. Steve McEvoy, occupational safety specialist, from the regional office visited the Center and worked with Center staff to complete the review. Only three minor findings were identified for remedial action.

Aquatic Species Conservation Management

No fish were distributed this month.

Woundfin young of year were collected from the spawning ponds, inventoried and stocked into new ponds for grow-out over the summer. Pecos bluntnose shiner were harvested and brought indoor for inventory and age-0 Chihuahua chub were collected and stocked into a new pond to prevent overcrowding and increase growth.



Rueben Mendoza and William Knight, RGSM Sampling in Uvalde, TX, USFWS Photo

The collaborative Rio Grande silvery minnow (RGSM) culture pilot project initiated at the Uvalde NFH, TX in June continues to do well. William Knight and Manuel Ulibarri traveled to Uvalde to sample the fish, survey pond conditions and deliver fish feed. Fish growth over the 45 day period has been good. Fish sampled from all four ponds ranged from 32 to 35 mm in total length and weighed .38 to .49 grams each. No parasites of concern were detected and pond conditions remain stable and free of extreme algal blooms or rooted vegetation.

On July 14, the annual Aquatic Animal Health Inspection was conducted at Inks Dam NFH, TX. In addition, the fish health lab received two diagnostic cases for testing. Samples were received from Williams Creek NFH, AZ and Los Lunas Silvery Minnow Refugium, Los Lunas, NM.



L. Vannest, Inks Dam NFH Annual Aquatic Animal Health Inspection, USFWS Photo

Fish Health molecular diagnostic work will now be under the direction of the MEL staff. To prepare for this, Tracy Diver has been training with Linda Vannest. Tracy began by completing trial runs on Cutthroat Trout Virus and Bacterial Kidney Disease in order to familiarize herself with both RNA and DNA PCR protocols established in Fish Health's SOPs.

Leadership in Science and Technology

Mike Schwemm presented at an invited seminar at the Oklahoma Department of Wildlife Conservation's (ODWC) research office in Oklahoma City. His presentation covered research he completed on paddlefish (*Polyodon spathula*) genetics. Future collaborations and reintroduction between the Center, Tishomingo NFH and ODWC were also discussed.

Sandra Bohn and Tracy Diver genotyped 224 Colorado pikeminnow samples from the 2006 YC broodstock population. Of these, 23 individuals were originally from the Green River. This work will provide Center staff the information necessary to produce genetically diverse individuals for recovery efforts.

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A draft report describing genetic diversity of the White Sands pupfish (*Cyprinodon tularosa*) was submitted to New Mexico Ecological Services.



Aura Muniz, Meredith Campbell, Joanna Rogers
USFWS Photo

Under the guidance of Center Staff and Dr. Colleen Caldwell, from the New Mexico Cooperative Fish and Wildlife Research Unit Department of Wildlife and Conservation Ecology, New Mexico State University, graduate student Meredith Campbell and technician Joanna Rodgers, initiated a 5-week study assessing the sensitivity of anogenital swabs and utilization of two primers “CES” and “Proteo” (Bean et al. 2007) for a potential non-lethal screening technique for Asian tapeworm *Bothriocephalus acheilognathi* in juvenile humpback chub. Asian tapeworm is a parasitic cestode in many freshwater fish that was introduced into the U.S. through the introduction of Asian grass carp (*Ctenophayngodon idella*). Each week of July, approximately 96 age-0 humpback chub were terminally sampled, swabbed and necropsied to determine presence or

absence of tapeworms. Each anogenital swab was extracted and run through PCR protocol using primers specific for Asian tapeworm to screen for the parasite. Molecular results were back-referenced with necropsy results to calculate sensitivity and specificity of the method. In August, Meredith will be presenting her research findings to-date at the annual conference of the Western Division of the American Fisheries Society in Portland, OR.

Workforce Management



Teresa Lewis, USFWS Photo

Teresa Lewis, Fish Health Unit Leader, accepted the Project Leader position for the newly completed Midwest Fisheries Center in Onalaska, WI. The Center houses the La Crosse Fish and Wildlife Conservation Office, La Crosse Fish Health Center, and Whitney Genetics Laboratory (WGL). On July 21, the staff acknowledged her time at the Center with a plaque and artistic rendering of a catfish tapeworm that is sure to have a place of honor in her new office. We wish Teresa the best of luck in her new position!

Aura Muniz traveled to Bitter Lake National Wildlife Refuge (NWR) to assist in their survey of the Roswell Spring snail (*Pyrgulopsis roswellensis*) and Koster Spring snail (*Juturnia kosteri*). In addition, Aura had the unique experience of traveling to Carlsbad National Park with Bitter Lake NWR staff to band cave swallows (*Petrochelidon fulva*), after which the crew stayed and watched Brazilian free-tailed bats (*Tadarida brasiliensis*) exit the cave.

Sandra Bohn traveled to the Whitney Genetics Lab in Onalaska, WI, to learn more about the techniques used for detecting environmental DNA (eDNA) from Asian carp. While there she observed the entire process of sample management to decontamination procedures and analyzing the final results. She also visited the USGS facility in La Crosse where she was able to tour the fish culture facility and learn to draw blood from a tilapia.

Tracy Diver completed laboratory safety training for Aura Muniz and Joanna Rodgers.

William Knight and Manuel Ulibarri conducted interviews for a TERM Fish Biologist position in the Fish Culture Unit.

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Maria Bullard and Michelle Bell are participating in a real time vehicle and equipment utilization testing pilot program and listened in on the first meeting to discuss this new platform on July 22. In addition, they attended the mandatory training Basic Financial Assistance FAPO in Lakewood Colorado.

The staff participated in a number of meetings and conference calls this month, including the monthly Fisheries and Aquatic Conservation conference call; the R2 and R3 Student/Intern Teleconference call; GRCA Fisheries and humpback chub translocation conference call, and monthly RGSM captive propagation facilities conference call. Wade Wilson attended the Gila trout (*Oncorhynchus gilae gilae*) recovery team meeting in Albuquerque, NM and participated in the Rio Grande Sucker/Rio Grande Chub Conservation Team Meeting call.

Cecilia King joined the Fish Culture program as the new Animal Caretaker on July 27. Cecilia has a Bachelor's degree in Environmental Studies from the University of

Nebraska at Omaha and worked seasonally for the Nebraska Game and Parks Commission as a Conservation Tech II. In her spare time, she rides horses, bird watches, and keeps tropical fish. She is fascinated by fish biology, especially minnows and other indicator species, and took this job to help with conservation.



Cecilia King, USFWS Photo

Additional Activities

Maintenance activities at Southwestern ARRC consisted of routine maintenance of buildings and grounds, including mowing and weed eating all fields, road sides and around ponds. All of the UTV's were serviced and the electrical room door hinge repaired at the Isolation/Quarantine building. Sprinklers near the entrance area were repaired, a dripping faucet in the break room was repaired, and approximately 50 yards of barbwire fence on the NE boundary repaired. Powell Tire of Roswell, NM repaired a tire on the John Deere tractor. The #2 blower on the fish culture building and motion sensor light switch in the feed room were replaced.

The new 10.75 KW Photovoltaic system at the Isolation building carport was activated this month. Xcel Energy tested the system and installed the bi-directional meter making it operational on July 28.

Above average ambient temperatures returned this month along with 1.95" of rain. The Center had 5 visitors in July.

UPCOMING EVENTS

August 11 Mora NFH Aquatic Animal Health Inspection