



Dexter National Fish Hatchery & Technology Center Monthly Activity Report



November 2007

12/5/2007

Dexter NFH&TC Staff

Center Director
Assistant Center Director
Administrative Officer
Administrative Tech.
Office Assistant
Fish Biologist
Fish Biologist
Fish Biologist
Fish Biologist
Maintenance Mechanic
Maintenance Worker
Biological Tech.
Student Intern

Molecular Ecology Lab

Research Leader
Fish Biologist (Genetics)
Fish Biologist (Genetics)
Student Intern
Student Intern
NMSU Postdoc Research

Dexter Fish Health Unit

Unit Leader
Fish Health Biologist
Fish Health Biologist
Fish Health Biologist
Fish Health Biologist

Manuel Ulibarri
Roger Hamman
Janell Desmond
Maria Bullard
Guadalupe Burger
David Hampton
William Knight
Jason Nachtmann
Catherine Sykes
Bill Williams
James Lay
Curtis Knoll
Derek Klein

Dr. Connie Keeler-Foster
Dr. Carole Conway
Sherri Baker
Renee Martin
Teri Dane
Gerry Zegers

John Thoesen
Phil Hines
Marlene Rodarte
Jason Woodland
Karin Eldridge



Figure 1: Rio Grande Silvery minnow Tagging, USFWS Photo

Partnership and Accountability

Fish Health Unit staff provided technical assistance and treatment recommendations to the Yuma Quartermaster State Park, Arizona for sick razorback sucker and desert pupfish that they are holding in aquariums for educational display. Based on the information provided to the lab the fish have an external bacterial infection. (CSF 7.4.1)

Portions of text out of the National Wild Fish Health Survey Procedures manual were provided to Joel Lusk, Ecological Services in Albuquerque New Mexico ES Office. (CSF 7.4.1)

Cooperation with Native Americans

The Arizona National Fish & Wildlife Conservation Office – Flagstaff Office collected and shipped 30 razorback sucker to the Fish Health Lab for pathogen testing. These fish are being cultured in ponds on the Hualapai Reservation, Arizona. Following the disease inspection the fish will be stocked into the Lower Colorado River. This is the first official fish health inspection for fish cultured in these tribal grow-out ponds. (CFS 28.3.1.1)

Aquatic Species Conservation Management

Dexter staff along with staff from Uvalde National Fish Hatchery, New Mexico FWCO, USGS and the Albuquerque BioPark, VIE tagged 30,000 Rio Grande Silvery minnow. The fish will be stocked into the middle Rio Grande, New Mexico as part of Dexter's augmentation commitment for the species and to evaluate the effectiveness of stocking cultured fish to maintain population numbers. (CSF 13.1A.3.1 and CSF 7.3.3.1)

394,000 Age-0 Colorado pikeminnow were stocked into the San Juan River, Farmington, NM this month. A request from the National Aquarium, Washington, DC, was filled, sending Woundfin, Gila topminnow, and Desert pupfish for display. Fossil Creek near Strawberry, AZ was the recipient of 2000 Gila topminnow.

Fish health lab staff began diagnostic examinations of bonytail chub, fathead minnow, koi, and gambusia for large mouth bass virus (LMBV) on samples provide by Uvalde NFH. Sample testing is ongoing but to date results are negative for the virus. (CSF 7.3.1.1)

Fish Stocking for November 2007

<i>Species</i>	<i>Number</i>	<i>Size</i>	<i>Agency</i>	<i>Site</i>
CPM	48058	2.0"	BOR	San Juan River, Farmington, NM
CPM	151659	2.0"	BOR	San Juan River, Farmington, NM
CPM	139525	2.0"	BOR	San Juan River, Farmington, NM
CPM	54744	2.0"	BOR	San Juan River, Farmington, NM
WDF	10	1.5"	NOAA	National Aquarium, Washington, DC
GTM	10	1.5"	NOAA	National Aquarium, Washington, DC
DEP	10	1.5"	NOAA	National Aquarium, Washington, DC
GTM	2000	1.5"	STG	Fossil Creek, Strawberry AZ

Leadership in Science and Technology

Dexter staff wrapped up the second-year of a three-year growth study on the Bonytail chub (BTC). This involved the assistance of Justin Perkins, Uvalde NFH and Guadalupe Burger, Dexter NFHTC, 450 BTC were taken from separate ponds then weighed and measured comparing the growth from ponds with adults present to the ponds without adults. The goal of the study is to investigate fish growth by maximizing space saving stocking techniques. (CSF 7.4.3 and 13.1A.3.2)

Connie Keeler-Foster and Renee Martin, Molecular Ecology Lab; Phil Hines and Karin Eldridge, Dexter Fish Health Unit; attended the "Amphibian declines and chytridiomycosis: translating science into urgent action" meeting in Tempe, Arizona. Chytridiomycosis is recognized as the primary cause of amphibian extirpations in recent years, and the meeting hosted speakers involved in the conservation of endangered amphibians from many nations. The focus was on the emerging science regarding the pathogen, and the management and conservation implications based on the current understanding of the disease. Renee Martin presented a poster on the assay she conducted at Dexter on samples from captive alligator snapping turtles raised by Tishomingo NFH.

The assay showed that the pathogen was not present on the turtles, indicating that the stocking program at Tishomingo is not facilitating the passive transfer of the pathogen. (CSF 7.4.1)

Carole Conway and Gerry Zegers attended the 39th Annual Meeting of the Desert Fishes Council from November 14-18 in Ventura, California. Carole presented a paper entitled: Characterization of genetic structure and levels of variation in wild and captive populations of Devils River minnow. Gerry gave a presentation entitled: Population assignment, hybridization, and genetic drift in refuge populations of the Devil's Hole pupfish *Cyprinodon diabolis*. Both talks were well received and stimulated interest in additional research. The conference was attended by governmental and academic scientists throughout the southwest region and was very valuable for communicating the latest findings on many threatened and endangered species. (CSF 7.4.1 and 13.1A.3.2)



Figure 2: Seminar Given by Dr. Walker, USFWS Photo

On November 29th, Dexter hosted a seminar given by Dr. David Walker from the University of Arizona's Environmental Research Laboratory. Dr. Walker spoke on two topics: endocrine disruptors and the impact on aquatic systems; and the ecology of the golden algae, *Prymnesium parvum*. In addition to Dexter Staff, the seminar was attended by personnel from the New Mexico Department of Game and Fish, and the Bureau of Land Management. (CSF 7.4.1, 20.5.1)

Jason Woodland contacted Dr. Rod Getchell from Cornell University to discuss a new real time PCR tool developed at Cornell for detecting largemouth bass virus. Some of the information gathered will be used in the development of a proposal to ground test new fish health diagnostic capabilities here at the Dexter Fish Health Unit. (CSF 7.4.1)

Reneé Martin and Carole Conway completed the project to distinguish between trout species using a custom single nucleotide polymorphism (SNP) assay. A total of 1,279 samples were analyzed this month. Teri Dane assisted with these analyses. The grand total for the Mora FTC/ Gila Trout project, which began last January, was 5,647 samples. This study demonstrated the efficiency, cost-effectiveness and relative simplicity of the SNP technique for use in conservation genetic analyses. (CSF 7.4.1 and 13.1A.3.2)

This month, Gerry Zegers continued optimizing the amplification of Class I major histocompatibility complex (MHC) loci in Devils Hole pupfish. He also genotyped historic samples from Devils Hole with the assistance of Sherri Baker. Gerry began reviewing sequence data from an enriched microsatellite library developed for razorback sucker at Dexter. His objective is to design additional primers to survey samples of razorback sucker from Lake Mohave for a baseline study. Teri Dane began organizing the collection of razorback sucker samples. (CSF 7.4.1 and 13.1A.3.2)

Sherri Baker started a new project this month on Yaqui catfish. Sherri is very excited about the new project as her master's project was on genetic structure in headwater catfish. The objective of this project is to assess whether hybridization has taken place between Yaqui and other species of catfish at the San Bernadino National Wildlife Refuge in Arizona. Sherri obtained samples of headwater and channel catfish to be used as reference samples from Tony Echelle's laboratory at Oklahoma State University. (CSF 7.4.1 and 13.1A.5.1)

Workforce Management

Jason Nachtmann, Fish Biologist joined the Dexter staff on November 26th. He is from Pennsylvania and earned a B.S. Degree in Fisheries and Wildlife Biology from Colorado State University at Fort Collins, CO. Jason brings 4 years of fishery experience from the Medicine Bow-Routt National Forest and Thunder Basin National Grassland in Wyoming. He also has experience in aquaculture and fishery management, working with the Saratoga National Fish Hatchery and Amphibian Husbandry Program in Saratoga, Wyoming. Welcome to Dexter Jason



Figure 3: Jason Nachtmann, USFWS Photo



Figure 4: Terri Dane, USFWS Photo

This month, Teri Dane joined the Molecular Ecology Laboratory under the Student Conservation Association (SCA) program. Teri earned a B.S. Degree in Marine Biology from the University of Maine at Machias. Her undergraduate education gave her experience in the use of molecular genetic techniques for conservation applications. She also brings to the laboratory other valuable skills including experience with aquaculture techniques, field sampling, and GIS analysis.

On November 29, 2007, Trinity Pump from Hobbs, NM, replaced Water Tower Pump #2.

Dexter staff replaced deteriorated water valves on ponds 10C, 18C, 19C and 13B.

Volunteer trailers were winterized during the month of November.

Dexter received 4" of snow and .20" of rain in the month of November.

Dexter NFH&TC received 17 visitors for the month of November. (CSF 21.3A.1)

Dexter Staff completed Quicktime training.