



Arizona Fish and Wildlife Conservation Office

Accomplishment Report

January 2016



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Chase Ehlo, Fish Biologist
Mitch Thorson, Fish Biologist
Brad Buechel, Fish Biologist
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AZFWCO Mission: Working with others to conserve, protect, and enhance fish and other aquatic organisms and their habitat in Arizona and the Southwest.

Conserving Aquatic Species

Jeremy Voeltz and Jess Newton attended a Roundtail Chub and Headwater Chub Species Status Assessment (SSA) workshop in Phoenix. The Service is revising the model used in the previous version of the SSA and will be incorporating public and peer reviewer comments received during the proposed listing rule for the chubs that was published in October 2015.

Jennifer Johnson worked on a draft report "Nonnative Trout Removal from Apache Trout Streams on the Fort Apache Indian Reservation 2015 Summary Report."

Jeremy and Jennifer participated in a conference call with Arizona Game and Fish Department and Trout Unlimited to discuss development of a new Apache Trout monitoring protocol. Trout Unlimited received a grant from the National Fish and Wildlife Foundation to assist with this effort.

Kirk Young and Randy Van Haverbeke assembled and presented results from recent Humpback Chub (HBC) work in Grand Canyon at the annual Adaptive Management Work Group reporting meeting in Phoenix. Kirk summarized HBC aggregation study results and use of new techniques including Passive Integrated Transmitter (PIT) submersible antennas, slow electrofishing, and mainstem seining. PIT antennas detected nearly 60% of HBC recaptured during the effort and seining indicated a growing and possibly reproducing population of HBC below Havasu Creek (RM158) and as far downstream as Diamond Creek (>RM 224). Randy reported results from the Little Colorado River (LCR) study and noteworthy points included a decline in estimated abundances of HBC in 2015. The decline may be the result of fish emigrating out or not immigrating into the LCR as surveys in the mainstem Colorado River indicated an increase in numbers of HBC in the reach near the LCR. Michael Pillow assisted both Kirk and Randy in compiling information for their presentations. Specifically, Michael summarized the detection data collected using remote submersible PIT tag antennas during the HBC aggregation study for Kirk's presentation and assisted Randy by building capture histories for all HBC translocated within the LCR between 2008 and 2015.



Brad Buechel (AZFWCO) displays a 90 cm non-native invasive Common Carp that was captured during a trammel net survey of Topock Marsh in Havasu National Wildlife Refuge near Needles, CA.

These capture histories are being used to help estimate annual survival for the population of translocated fish.

AZFWCO participated in a conference call with Fisheries and Refuge staff to begin identifying objectives and actions necessary to conserve Yaqui Catfish in the United States. A summary of recent activities and objectives are needed to identify actions, feasibility, and costs of moving forward. Depending on objectives, it may be necessary to bring additional wild fish in from Mexico.

Randy, Kirk, and Jess provided assistance to Arizona Ecological Services Field Office (AESO) regarding development of conservation measures associated with the Glen Canyon Dam Long Term Experimental Management Plan (LTEMP) EIS and Navajo Generating Facility. Kirk also met with USBR and NPS to discuss conservation opportunities and Randy reviewed the draft Conservation Measures for the Biological Assessment associated with the LTEMP EIS. Randy sent his comments to Shaula Hedwall. Kirk also prepared a briefing for our Regional Director on critical needs regarding LTEMP conservation actions. Conservation measures will target ESA-listed species above and below Glen

Canyon Dam (Humpback Chub, Razorback Sucker, and Colorado Pikeminnow).

Kirk and Randy met with USGS and AZGFD to modify and finalize the 2016 Grand Canyon survey schedule. This will be the second year that AZGFD assists us in our sampling of the LCR.

Randy and Kirk attended a Humpback Chub Recovery Team conference call discussing the current state of the Species Status Assessment being developed.

Randy ran population analyses in Program MARK for inclusion in the LCR annual report. This entailed running Cormack Jolly Seber (CJS) and robust design programs to estimate annual survival and abundance of HBC since 2001 in the LCR. He ran further CJS analyses in Program MARK to estimate annual survival of HBC that have been translocated to Chute Falls since 2008. Randy submitted a draft version of our office's annual report to Grand Canyon Monitoring and Research Center (GCMRC). The document will now be reviewed by GCMRC, returned, and resubmitted as a final version.

Michael also compiled and summarized

Conserving Aquatic Species *(continued)*

the data collected from the submersible PIT tag antenna set just downstream from Coyote camp in the LCR from April to September 2015. The antenna was in the water for 163 days and lost power a few times in the fall due to lack of sun on the solar panels, but it detected 364 unique tags while it was operational. Of those unique tags, most (87%) were Humpback Chub. We also detected 36 unique Flannelmouth Sucker, 4 unique Bluehead Sucker, and 3 unique Common Carp. Two-hundred of the unique PIT tags that the antenna detected were not captured in hoop nets in 2015 and there were two fish that have not been captured by anyone in over 11 years.

Dennis Stone assisted Morgan Brizendine with her MS thesis on the use of ultrasonic imaging to evaluate egg maturation of HBC in the Colorado River. Dennis supplied background information, publications, other references, etc.

Chase Ehlo participated in two Lower Colorado Multi-species Conservation Plan projects throughout the month. He assisted with quarterly monitoring

efforts at Imperial Ponds Conservation Area to assess the renovation of the ponds prior to stocking with Razorback Sucker (RBS) and/or Bonytail. He also participated in a large multi-agency effort to locate large spawning aggregates of RBS in riverine portions of Reach 3 below Davis Dam.

Chase participated in an Imperial Ponds workgroup meeting to discuss the future directions for the conservation area including native fish stockings, research, and monitoring. He also participated in the annual Colorado River Area Biologists meeting in Laughlin, NV where he gave a talk on the backwater monitoring efforts at the Bill Williams and Cibola National Wildlife Refuges.

Brad Buechel (along with volunteers and AZFWCO personnel) assisted in the Topock Endangered Species population survey, which took place on Topock Marsh. AZFWCO staff conducted the survey in anticipation of reencountering previously marked and released Razorback Suckers (RBS). Eleven trammel nets were deployed, over the course of two days, in areas likely to

contain RBS. The crew was able to obtain a CPUE of 3.5 RBS per net. Overall, 38 RBS were entrained with an average length of 544mm (min and max lengths of 488mm and 590mm, respectively), and 33 of the 38 were previously PIT tagged. Other species present were Black Crappie (1), Channel Catfish (40), Common Carp (103), Gizzard Shad (105), Goldfish (3), Largemouth Bass (6) and a Mirror Carp (1).

Brad deployed PIT tag antennas in Topock Marsh in hopes of developing a population estimate for RBS. Over the initial five-day period, twenty-eight unique RBS were encountered.

Brad also assisted the Bureau of Reclamation (BOR) in their Lower Colorado River Reach-3 electrofishing surveys. These surveys occurred from Davis Dam (Laughlin, NV) to Jack Smith Park (Needles, CA) and they focused on encountering endangered Razorback Sucker on spawning grounds and marking, via GPS, locations of presence so PIT tag antennas may be deployed later to study spawning aggregate populations.

Conserving, Restoring, and Enhancing Aquatic Habitats

AZFWCO senior biologist met to develop a 5 to 10-year work plan for implementing National Fish Passage Program projects in Arizona. Fish passage projects will focus on the upper Salt River watershed including the West Fork Black River.

Jess Newton participated in the “Arizona Annual Coordination Meeting” of State and Federal land-management and wildlife agencies. This is a unique and groundbreaking forum where the directors of agencies and departments gather to tackle the “big” issues influencing our collaborative, efficient, and affective management of public lands and wildlife/fish resources.

Tim Grosch met with Arizona Game and Fish Department Landowner Relations Program along with a landowner near Snowflake to discuss potential habitat enhancement projects on his property.



A burnt slash pile on a grassland restoration project site near the New Mexico/Arizona state line.

The landowner has been working on installing solar wells to distribute water but is also seeking technical assistance for other areas of his property.

Tim and Kyle Dutro from AGFD Landowner Relations Program (LRP) visited a grassland restoration project near the New Mexico border. This project is

Conserving, Restoring, and Enhancing Aquatic Habitats (*continued*)

ongoing to enhance local grassland communities. The area had been cleared by juniper pushing and burning of slash piles. The landowner is also interested in changing out his existing well system ran by generator and replacing it with a solar powered system.

Tim and AGFD LRP personnel conducted a site visit at a public golf

course near Show Low, Arizona. One of the owners wants to turn property adjacent to the course into a natural area in which the public can enjoy. The area is teeming with waterfowl and other trust species. A native fish refugia is proposed, however baseline surveys need to be completed before the project can move forward.

Brad Buechel continued off-channel habitat water quality surveys on Topock Marsh, Three Fingers Lake, Office Cove, Parker Dam pond, and Emerald Canyon Golf Course.

Managing Aquatic Invasive Species

Dennis Stone completed analyses on the effects of suspended sediment and

hydrological regimes on nonnative fishes survivorships in the Little Colorado

River, Arizona, and began incorporating this information into a manuscript.

Fulfilling Tribal Trust Responsibilities

Jess Newton and Jeremy Voeltz work with San Carlos Apache Tribe's director of Recreation and Wildlife Department to arrange our annual coordination meeting. The agenda will include new projects in 2016 for expanding recreational fishing opportunities, increasing native fish status assessment surveys (focusing on two chub species), and completing a new Memorandum of

Understanding between FWS and the Tribe.

Jeremy Voeltz continued coordination with the Navajo Nation Department of Fish and Wildlife and the Hopi Tribe Department of Natural Resources to plan for nonnative species eradication on two lakes on the Navajo Nation and Hopi Tribe. Through a Cooperative Agreement,

AZFWCO has contributed funds to the Hopi Tribe for a portion of this project.

Jeremy Voeltz and Jennifer Johnson participated in the monthly Fishery Coordination meeting among AZFWCO, A-WC NFH (Alcheyay-Williams Creek National Fish Hatchery), & WMAT-WORD (White Mountain Apache Tribe-Wildlife & Outdoor Recreation Division).

Enhancing Recreation Fishing and Public Use of Aquatic Resources

Jennifer Johnson continued to assist Williams Creek NFH with Apache Trout spawning. Spawning started in mid-November and ended in January. Nearly one million Apache Trout eggs were

collected and fertilized for the production of recreational fishing on the Fort Apache Indian Reservation.

Jennifer participated in the national

Fisheries and Aquatic Conservation (FAC) Conservation Education conference call. They discussed plans for the upcoming World Fish Migration Day in May.

Workforce Management, Training, and Scientific Capacity

Jess Newton prepared the budget analysis to fill our vacant GS-482-12 Project Coordinator position for our Grand Canyon work. Stay tuned for a future vacancy announcement. Also, Jeremy Voeltz submitted the pre-recruitment hiring packages for the 2016 Apache Trout seasonal crew. AZFWCO will be hiring several GS-5 seasonal biological technicians and up to five GS-2/3/4 Biological Student Trainees (summer interns).

Chase Ehlo obtained a combination acoustic and radio transmitter (ART) to experiment with prior to initiating a telemetry field study in Topock Marsh on the Havasu National Wildlife Refuge. He also obtained several

'dummy' ART tags to implant in Razorback Suckers in a controlled experiment to test the efficacy of the surgical techniques.

Chase Ehlo also began work on drafting a work plan for specific projects within the Parker Field Office of the Arizona Fish and Wildlife Conservation Office. He also provided comments for the draft annual work plans for the Arizona Fish and Wildlife Conservation Office.

Tim Grosch participated in a Region 2 PFW conference call. During the call, the group discussed a way to standardize monitoring efforts across the region, monarch initiatives, strategic planning and

several other topics pertaining to the program.

Michael Pillow worked with Mitch Thorson to compile AZFWCO's scientific collectors permit report to Arizona Game and Fish Department. He submitted this report along with 2016 collectors permit renewal documents. Michael also submitted scientific collectors permit renewal documents to the Navajo Nation Department of Fish and Wildlife.

Michael participated in the January field station safety meeting with other members of the safety committee at the Flagstaff Rocky Mountain Research Station (USFS). The primary topics for

Workforce Management, Training, and Scientific Capacity (*continued*)

this meeting included concerns and protocols related to the new electronic key-pad door locking mechanisms being installed at the station and the interest in implementing active shooter training for all field station personnel (both USFWS and USFS).

Michael also began putting together materials for the annual call for volunteers for the USFWS Humpback Chub monitoring project in the Little Colorado River. The announcement was

sent out in early February. AZFWCO will be looking for several volunteers to assist with our spring and fall mark-recapture trips in the canyon.

Brad Buechel took part in the Colorado River Aquatic Biologist (CRAB) meeting, which took place in Laughlin, NV.

Jeremy and Jess worked with the Desert Fish Habitat Partnership State and Federal Co-Chairs (Megan Bean (Texas Parks and Wildlife Department) and Cynthia Tait

(U.S. Forest Service)) to complete and submit the funding allocation reports for the Desert Fish Habitat Partnership to Headquarters.

Jeremy attended “An Overview of Structured Decision Making” NCTC training course, held in Tucson, AZ.

Randy Van Haverbeke met with Charles Yackulic at GCRC to discuss ways to answer the questions about survival of chub translocated to Chute Falls.

Public Education and Engagement

Did you know AZFWCO has a facebook page? We post information on our staff, upcoming projects, educational events, and volunteer opportunities across the state. We currently have 727 “likes” from 20 countries. Check us out at

www.facebook.com/AZFWCO.

Jeremy Voeltz’s interview with Bass Pro Shop’s Outdoor Radio discussing the Apache Trout Recovery Program aired on Sirius XM radio in early January. The

interview can be heard here:

<http://www.fws.gov/news/blog/index.cfm/2016/1/14/Tune-in-to-Native-Trout-Conservation>

Upcoming Events

- ◆ **February 8-12:** Lake Havasu Razorback Roundup
- ◆ **February 22-26:** Colorado River, Reach 3 Electrofishing (Laughlin-Lake Havasu)
- ◆ **March 14-18:** Lake Mohave Razorback Roundup
- ◆ **April 19-29:** Little Colorado River Humpback Chub Monitoring Trip I
- ◆ **May 17-27:** Little Colorado River Humpback Chub Monitoring Trip II
- ◆ **September 20-30:** Little Colorado River Humpback Chub Monitoring Trip III
- ◆ **October 18-28:** Little Colorado River Humpback Chub Monitoring Trip IV
- ◆ **August 27-September 13:** Mainstem Grand Canyon Humpback Chub Monitoring, hoop nets
- ◆ **September 23-October 7:** Mainstem Grand Canyon Juvenile Humpback Chub monitoring, seine

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