



Arizona Fish and Wildlife Conservation Office staff photo taken at Lake Mohave in March 2016. All three offices came together to conduct a trammel net survey of Razorback Suckers at the lake.

AZFWCO Staff

Flagstaff

Jess Newton, Project Leader
Kirk Young, Assistant Project Leader
Vacant, Project Coordinator
Randy Van Haverbeke, Senior Fish Biologist
Dennis Stone, Fish Biologist
Michael Pillow, Fish Biologist
Jim Walters, Biological Technician
Rick Deshler, Biological Technician
Vic Scott, Administrative Officer

Pinetop

Jeremy Voeltz, Project Coordinator
Jennifer Johnson, Fish Biologist
Tim Grosch, Partners for Fish and Wildlife Biologist
Stephanie Vail-Muse, Fish and Wildlife Biologist
Vacant, Office Assistant

Parker

Chase Ehlo, Fish Biologist
Mitch Thorson, Fish Biologist
Brad Buechel, Fish Biologist
John Naugle, Biological Technician



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

Personnel from all three of the AZFWCO offices (Flagstaff, Parker, and Pinetop) teamed up to complete the 4-day annual Lake Mohave Razorback Roundup in March. Staff spent the week on the lake running trammel nets night and day to monitor Razorback Sucker population trends. Over the four-day survey, netting effort resulting in 32 net-nights captured 88 fish from seven species. Smallmouth Bass (n=27) and Razorback Sucker (n=20) were the two most encountered species. Of the 20 Razorback Sucker captured, there were 12 females, 7 males, and one fish of unknown sex. Mean total length was 601 mm and ranged from 525 – 680 mm. Additionally, AZFWCO personnel collected 750 Razorback Sucker larvae from Yuma Cove, which will be reared at Willow Beach National Fish Hatchery, in support of the Lake Mohave repatriate program.

Chase, Jess, Brad, Randy, and Michael participated in the Native Fishes Work Group meeting held concurrently with the Lake Mohave Roundup. The work group is collaboration between state and

Razorback Sucker and Bonytail in Lake Mohave.

Jess Newton and Kirk Young along with other Federal and State partners met with USGS Fisheries Scientist, Scott Bonar, to finalize study designs for two new research projects led by Dr. Bonar and his graduate students at University of Arizona. The two research projects are titled: 1) “Relationship of Riparian and Instream Habitat with Presence of Native and Nonnative Fishes in Intermediate-Sized Arizona Rivers” and 2) “Relationship between Native and Nonnative Fish Presence and the Five Components of the Hydrograph in Streams of the Mogollon Rim Emphasis Area, Arizona.”

Chase Ehlo, Mitch Thorson, and Brad Buechel assisted the Bureau of Reclamation (BOR) in their Lower Colorado River Reach-3 (Davis Dam to Parker Dam) electrofishing surveys. The four days of surveying began at the AVI Resort and Casino (Nevada) proceeded through the Lake Havasu Topock Gorge



Michael Pillow holds a Razorback Sucker captured during a four-day trammel net survey of Lake Mohave.

antennas might be deployed later to study spawning aggregate populations.

Kirk, Chase, and Jess met with the Fisheries and Habitat Leads of the Lower Colorado River Multi Species Conservation Program (MSCP) at Planet Ranch. Planet Ranch is a property recently purchased by MSCP to provide riparian habitat and develop Razorback Sucker and Bonytail grow-out and refuge habitats. The trip was an initial site visit and will provide context for future site planning and development of functional habitats for these native fish.

Chase worked with biologists with Arizona Game and Fish Department (AGFD) to survey habitats for Mohave fringe-toed lizard on Havasu National Wildlife Refuge.

Michael Pillow continued to update and improve upon a database designed and built to identify species, last known total length, and date and location last captured for PIT tags detected using submersible PIT antennas. This database is compiled from the Grand Canyon Monitoring and Research Center’s (GCMRC) master database along with some provisional data from the past few years that has yet to be appended to the master database. It



Chase Ehlo (right) and Jeremy Voeltz check a trammel net set during a Razorback Sucker survey on Lake Mohave in March.

government agencies and private entities dedicated to the conservation of native fishes in Lake Mohave. The meeting provided updates and discussions on research and monitoring efforts of

and ended in Lake Havasu. Surveys’ were focused on encountering endangered Razorback Sucker on spawning grounds and marking, via GPS, locations of presence so PIT tag

Conserving Aquatic Species (*continued*)

has proven to be useful in quickly summarizing the PIT tag data that we collect from fish that we detect with the antennas at a particular site. In 2015, we deployed several antennas at each sampling location along the Colorado River during our annual sampling of Humpback Chub aggregations in the Grand Canyon, and plan to continue in 2016. We also have an antenna at a fixed location in the Little Colorado River.

Michael also continued updating and improving the database that links Carlin and floy tagged fish in the Little Colorado and Colorado Rivers from the 1980's to their 400kHz PIT tag numbers in the 1990's and then to their 134.2kHz PIT tag numbers in the 2000's. This database shows the full capture history of many of the tagged Humpback Chub that might show up as multiple fish in the master Grand Canyon fish database.

Dennis Stone provided Marsh and Associates, LLC with historic 1988-1999 data collected on Razorback Suckers in Lake Mohave by the USFWS, so it can be archived and used in the master lower Colorado River native fish database.

Jennifer Johnson compiled Apache Trout data for analysis by Trout Unlimited. Trout Unlimited is developing a standardized monitoring plan for Apache Trout. Jennifer also finalized the "Nonnative Trout Removal from Apache Trout Streams on the Fort Apache Indian Reservation 2015 Summary Report".

Chase completed an effort summary for the 2016 Lake Mohave Roundup and distributed it to the Native Fishes Work Group. He also began work on drafting a study plan that will be delivered to the LCR MSCP. The purpose of the study



Jennifer Johnson works to retrieve a Razorback Sucker from a trammel net during the survey of Lake Mohave in March.

plan was to propose research activities on Razorback Sucker and Bonytail in Cibola High Levee Pond on Cibola National Wildlife Refuge. Kirk reviewed the draft Lake Mohave trip report and the draft study plan for proposed research at Cibola High Levee Pond.

Randy and Kirk reviewed and provided comments on the Long Term Experimental Management Plan (LTEMP) draft Biological Assessment (BA) and proposed Conservation Measures for Humpback Chub and Razorback Sucker in the Grand Canyon.

Randy distributed the final .pdf version of the annual Little Colorado River

monitoring report to cooperators. The report summarizes monitoring efforts on the Humpback Chub in the Little Colorado River from 2000-2015.

Randy reviewed portions of a draft Species Status Assessment for Humpback Chub and sent comments to the Humpback Chub recovery writing team.

Kirk attended a meeting with Western Association Power Authority (WAPA), U.S. Bureau of Reclamation, and National Park Service to discuss concerns about possible impacts to Humpback Chub from low summer flows proposed in the LTEMP.

Conserving, Restoring, and Enhancing Aquatic Habitats

Tim Grosch prepared a State Historic Preservation Office (SHPO) concurrence letter for cultural clearance on the Battle Tank Grassland restoration project. Although the letter and report was submitted to the Partners for Fish and Wildlife Program (PFW) State Coordinator and forwarded on to SHPO for 30-day review, the document has been returned for further revision. Currently we are waiting on edits from the

consulting firm hired to produce the report.

Tim and AGFD Landowner Relations Program personnel visited a completed grassland restoration project near Vernon, Arizona. The area was revisited to decide whether retreatment was needed based on reports from the landowner that juniper re-sprouts were occurring. Upon further investigation,

the property does indeed warrant another treatment not because of re-sprouting but due to the degree of juniper infestation that has occurred on the property. A second phase to the project will be evaluated and discussed with the landowner.

Tim also conducted a site visit at an ongoing refugia pond construction project. Tim met with the landowner at a

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

once working fish farm that has since been abandoned and reconstruction is in the process to make this property a viable location for native fishes. The project is about 60-70% complete and is expected to be up and running in the next couple of months. We are still in discussion as to what fish species will be stocked on location.

Brad Buechel continued off-channel habitat water quality surveys on Topock Marsh, Three Fingers, Office Cove, Parker Dam, Emerald Canyon Golf Course ponds, and Three Mile Lake. Brad also accompanied Mitch Thorson in performing water quality at Alamo Lake.

Stephanie Vail-Muse, coordinator for the Desert Fish Habitat Partnership, participated in the National Fish Habitat Partnership Board Meeting via teleconference. Stephanie coordinated with DFHP partners to discuss goals, projects, and funding for 2016.



Pond construction site for a potential future native fish refugia on private land. The site is on an abandoned fish farm and the project is currently about 60-70% complete.

Managing Aquatic Invasive Species

Jess Newton worked with the director of the White Mountain Apache Tribe Game and Fish Department to finalize plans to move forward on a new study. The study focuses on the collection of eDNA (environmental DNA) samples from an Apache Trout recovery stream in which we *may have* successfully eradicated nonnative Brown Trout through multi-year mechanical removal efforts. Collecting eDNA water samples and testing them for Brown Trout eDNA may help confirm eradication or guide future

removal efforts. Both agencies agreed to support the study, which will commence this summer.

Kirk Young and Chase coordinated with stakeholders on the reported occurrence of two new AIS species in the lower Colorado River. Water Hyacinth (*Eichhornia crassipes*) has been reported from Ferguson Lake, a lake within the lower river near Yuma, Arizona. While searching for Water Hyacinth, biologists from AZGFD collected an additional

AIS tentatively identified as Water Lettuce (*Pistia stratiotes*). AZFWCO is working with AGFD, Refuges, USFWS AIS staff and others to assist in organizing and assisting with an inventory and rapid response.

Dennis Stone continued working on a manuscript concerning the effects of suspended sediment concentrations, flood discharges, and dissolved carbon dioxide levels on nonnative fishes in the Little Colorado River, AZ.

Fulfilling Tribal Trust Responsibilities

AZFWCO staff continued coordination with staff from the Alchesay-Williams Creek National Fish Hatchery, White Mountain Apache Tribe, San Carlos

Apache Tribe, Hopi Tribe, Navajo Nation, Kaibab Band of Paiute Indians, AGFD, and Fish Health Unit at the Southwestern Native Aquatic Resources

and Recovery Center to address issues surrounding the recent detection of Bacterial Kidney Disease at Alchesay and Williams Creek NFH's.

Enhancing Recreation Fishing and Public Use of Aquatic Resources

Jennifer participated in the national Fisheries and Aquatic Conservation (FAC) Conservation Education

conference call. Plans were discussed for the upcoming World Fish Migration Day in May.

Jeremy Voeltz coordinated with the Arizona Game and Fish Department for their 2016-2020 trout egg requests from Federal broodstock hatcheries.

Workforce Management, Training, and Scientific Capacity

AZFWCO welcomes Stephanie Vail-Muse as the newest addition to our staff as Fish and Wildlife Biologist and Desert Fish Habitat Partnership coordinator stationed at the Pinetop, AZ office. Stephanie came to AZFWCO from the Kansas Department of Wildlife, Parks, and Tourism where she worked at the Milford Fish Hatchery as a Fisheries

Specialist. During her time there she assisted in the Walleye Larviculture Pilot Study and the various sport fish breeding programs. She practiced her fish wrangling skills while learning about one of Arizona's endangered fish species, the Razorback Sucker, at the roundup on Lake Mohave in March. Welcome, Stephanie!

Senior staff worked with Jess Newton to compile and complete the draft AZFWCO Annual Report for FY 2015. The annual report contains all the highlights of AZFWCO's monitoring, management, and research projects for the past year.

Along with the native fish monitoring at Lake Mohave, AZFWCO staff also



Stephanie Vail-Muse displays a Razorback Sucker captured at Lake Mohave. Stephanie joined the AZFWCO team as a fish and wildlife biologist and Desert Fish Habitat Partnership coordinator in March. She is stationed in Pinetop, Arizona. Welcome, Stephanie!

participated in the annual all-employee meeting to discuss FY2016 goals and operations. A dessert-making competition during the week at Lake Mohave resulted in victory for Randy Van Haverbeke out of the Flagstaff AZFWCO office with his delicious hummingbird cake.

AZFWCO staff 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).

Jennifer also worked with the USFWS Denver Radio Team and the White Mountain Apache Tribe to complete an MOU between the agencies for radio frequency use. Radios were sent in for reprogramming. This will increase safety of our crews when working on the Fort

Apache Indian Reservation.

Jeremy Voeltz completed interviews for the Apache Trout seasonal crew. AZFWCO will be hiring two seasonal GS-5 positions, and four GS-2/3/4 Pathways intern positions. Selections will be made in April, and employees will start in late May or early June.

Chase Ehlo received six remote PIT scanning antennas from the AZFWCO Flagstaff office to be deployed in several areas on the lower Colorado River.

Michael Pillow met with Randy Van Haverbeke, Dennis Stone, and Kirk Young to settle on the final list of volunteers for our 2016 field season in the Little Colorado River. Following the meeting, Michael notified all volunteers of their selection and began mailing forms and information to the selected spring volunteers. We had a lot of highly

qualified applicants this year, making it difficult, as usual, to settle on a crew list. We are going to have another great field season this year. Randy ensured that USFWS volunteers and USFWS staff have current Aviation Safety certificates.

Randy incorporated comments on the 2016 Project Aviation Safety and Evacuation Plan (PASP) risk assessment table, and sent to Regional Aviation Managers for their final approval signatures. The 2016 PASP is now completed.

Randy worked in Program MARK to estimate survival of humpback chub that have been translocated to above Chute Falls, and worked on rewriting a draft Chute Falls manuscript for publication.

Jeremy, Chase, Kirk, and Jess participated in the AZFWCO monthly Senior Staff call.

Stephanie completed several new-employee/annual required training courses, including: FISSA, defensive driving, Concur, Quicktime, cardholder-travel card, scientific integrity, bloodborne pathogens, fire extinguisher safety, and four hours of EEO/diversity training.

Jennifer completed electrofishing safety, defensive driving, bloodborne pathogens, chainsaw, and fire extinguisher safety trainings.

Dennis completed Basic Aviation Safety recertification courses as well as four hours of EEO/diversity training.

Chase completed several hours of training including basic aviation safety training, FISSA, and his MOCC refresher training.

Brad Buechel also completed basic aviation safety and the online FISSA and Privacy and Records Management training.

Randy completed Wilderness First Responder refresher certification on 20 March 2016.

Public Education and Engagement

Tim Grosch attended an informational meeting for a relatively new group that plans to focus on landscape scale habitat restoration in Navajo and Apache counties. Several organizations are

represented including Bureau of Land Management, Arizona Game and Fish Department, Arizona State Forestry, Natural Resources Conservation Service, Natural Resource Conservation Districts,

private landowners and New Mexico agency representatives. Partners for Fish and Wildlife Program will keep involved and offer assistance where possible.

Tim also attended the Navajo County

Public Education and Engagement (*continued*)

Natural Resource Conservation District meeting in Holbrook, AZ. The meeting covers financials, ongoing projects, future projects and general information for conservation measures occurring within the county.

Jeremy Voeltz participated in several conference calls with the USFWS Roundtail Chub and Headwater Chub technical team working on the final listing decision for Headwater Chub and Distinct Population Segment of Roundtail Chub.

Kirk Young provided information summarizing USFWS Grand Canyon Humpback Chub conservation activities in the annual report to Congress on operations of Glen Canyon Dam.

Stephanie Vail-Muse facilitated the Desert Fish Habitat Partnership March teleconference. Topics discussed were the NFHP Assessment, Multi-State Grant Updates, and the potential partnership with WNTI and WAFWA for a DFHP 501(c)(3) Chapter. Stephanie provided notes to the DFHP members.

Stephanie also updated the DFHP member contact information and began improving the Steering Committee member's webpage to more closely model the Executive Committees webpage on the DFHP website. She began adding clickable links to the DFHP website. This change acts to increase ease of usability for all site visitors so that they can link to the various organizations that partner with the DFHP.

Stephanie joined the DLCC Aquatics and Riparian team to further maintain communication and support between the DLCC and DFHP. She joined the DFHP Education/Outreach committee and began coordinating with Megan Bean; the state co-chair and Rio Grande Regional Representative, and Therese Thompson from Western Native Trout on effective ways to maximize awareness about the mission and goals of the DFHP to the public.

Stephanie continued to highlight native desert fish for #DesertFishFriday on DFHP's Facebook page.

Check it out at:

<http://www.facebook.com/pages/Desert-Fish-Habitat-Partnership/193053497376208?ref=hl>

Or click here:



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 772 "likes" from over 20 countries.

Upcoming Events

- ◆ **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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Photo: Larval fish, presumably Razorback Sucker, captured by AZFWCO during the annual Razorback Roundup on Lake Mohave in March. These fish will be grown out at Willow Beach National Fish Hatchery before being re-stocked into Lake Mohave.

