



AZFWCO staff using backpack electrofishing in Deep Creek to collect male Apache Trout to test milt extraction and gamete cryopreservation methods for potential future conservation efforts.

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



Conserving Aquatic Species

Jeremy Voeltz and Jennifer Johnson coordinated with the U.S. Forest Service's National Genomics Center for Wildlife and Fish Conservation to refine the protocols for an Environmental DNA project to be conducted this summer on the Fort Apache Indian Reservation. eDNA samples will be taken from several sites in a stream to complement the on-going Brown Trout removal efforts in that stream. Detection of Brown Trout genetic material in specific locations would help crews focus removal efforts in those areas.

Jeremy also prepared a briefing on the status of the Apache Trout recovery program to the Regional Office later this summer. He also submitted a pre-proposal to the National Fish and Wildlife Foundation to request funding for Apache Trout conservation actions scheduled for 2017 and 2018. NFWF has provided AZFWCO with significant funding since 2008 to implement activities identified by the multi-agency Apache Trout Keystone Initiative.

Jeremy 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. Jeremy also presented flooding and reproduction/recruitment data to the USFWS Roundtail Chub and Headwater Chub technical team for use in the revised model to be used in the final

listing decision for Headwater Chub and Distinct Population Segment of Roundtail Chub. The work built upon data published by USFWS employee Mark Brouder in "The Southwestern Naturalist" in 2001.

Chase Ehlo deployed six remote PIT scanners in Cibola High Levee Pond. The purpose of the PIT scanners is to track the survival of recently stocked Bonytail and Razorback Sucker in the pond. The efforts resulted in 908 contacts of 170 unique fish of which there were 154 Razorback Sucker, 13 Bonytail, and 3 unknowns. All 13 Bonytail were from a stocking in September 2015, and 31 Razorback Sucker were from the most recent stocking in December 2015.

Kirk Young and Randy VanHaverbeke coordinated a multi-agency meeting to discuss and plan a Humpback Chub sonic tag study to determine spatial use, spawning locations and movement in West Grand Canyon. Over the last three years, Humpback Chub have shown a dramatic range expansion into Western Grand Canyon. Our office will draft a study plan in June for implementation early next year.

Randy Van Haverbeke, Dennis Stone, Michael Pillow, Jim Walters, Rick Deshler, Chase Ehlo, and Brad Buechel participated in the May Little Colorado River Humpback Chub monitoring trip. This trip consisted of two separate projects: monitoring of the chub population in the lower 13.57 km of the



Dennis Stone measures a Humpback Chub captured above Chute Falls in the Little Colorado River.

LCR and monitoring of the population above 13.75 km, which includes the population of chubs translocated above Chute Falls between 2003-2015. Prior to the trip, Michael Pillow worked with Vic Scott to coordinate travel matters with volunteers and he provided a pre-trip safety briefing and orientation for crew members new to the project. He, Randy, and Dennis also worked to get gear packed and ready for the trip.

The translocation monitoring part of the LCR trip was successful and resulted in the capture of many translocated chubs still residing above Chute Falls as well as a substantial number of chubs between Lower Atomizer Falls and Chute Falls. The lower LCR monitoring was also a success. A spring population estimate for Humpback Chub captured in the lower reaches of the LCR will be generated once the May data has been entered, combined with April monitoring data, and analyzed. Updated abundance estimates will be available in the annual monitoring report. Randy, Dennis, and Michael also began entering and checking the data collected on the April 2016 LCR monitoring trip.



Humpback Chub captured in May during the annual spring population monitoring trip. This fish was captured above Lower Atomizer Falls as part of AZFWCO's project to monitor translocated Humpback Chubs

Conserving, Restoring, and Enhancing Aquatic Habitats

Stephanie Vail-Muse completed the 2016 Request For Proposals (RFP) announcement for the Desert Fish Habitat

Partnership (DFHP) and she posted the announcement on various Social Media accounts, the DFHP Website, and via

email for easy accessibility and dispersal to interested parties. Jess Newton reviewed and provided comment on RFP,

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



Habitat damage caused by trespassed cattle on Eagle Creek. The intent of this project is to fence the riparian area to protect it from cattle over-grazing.

which can be found here or on the DFHP website: <http://www.desertfhp.org/>. If you are interested in submitting your proposal for FY16 funding, follow the link, or you may contact Stephanie at: Stephanie_vail-muse@fws.gov. Stephanie also finalized the DFHP newsletter. It is available for download from the website or download it directly right here.

Stephanie also worked on and submitted the Weber River Project as the DFHP/WNTI Legacy Waters to Watch Nomination. Stephanie Vail-Muse submitted the DFHP 2015 annual report summary to NFHP. She also continued to work on the DFHP database that focuses on funded projects the DFHP has worked on over the last 10 years and continued improving the DFHP website.

Tim Grosch and Region 2 Arizona Game and Fish Department Habitat and Landowner Relations Personnel (LRP) visited an ongoing grassland restoration project located east of Flagstaff. The group met with the rancher to discuss future juniper removal on his land. Mechanical removal of the invasive tree has been traditionally used in the area, however the group discussed the possibility of spot treatment through herbicide use. We visited a site where the

herbicide was used which showed success however we believe differences in application rates resulted in some trees not being fully affected by the product. This treatment will be evaluated further to determine whether



Water restriction removal of Moovalya Lake inlet as part of a fish passage project. The photo shows reconnection of flow to the lake.

the techniques will be beneficial in certain situations.

Tim also conducted a site visit at a forest restoration project near Vernon, AZ. The area had previous tree thinning done to open the forest canopy in the meadow habitat areas. The landowner had contacted Tim to inform him of an unidentified frog species that had recently come back to the property. During the visit no frogs were found most likely due to cooler temperatures. Further investigation will be required to identify the frogs and will be re-visited as temperatures begin to warm.

Tim evaluated a potential riparian restoration project in Coconino County, AZ. The proposed project consisted of fencing off an ephemeral lake which would protect riparian habitat from overgrazing. Although the intent of the project could prove beneficial the cost of maintenance could potentially outweigh the benefits at this time.

Tim met with county fire personnel to discuss implementing a fire regime to aid in forest and grassland management. We discussed the process and permitting avenues that would need to occur in order to accomplish this enhancement

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

technique. Initially we determined that cost may be too great so we are currently investigating alternate methods to implement prescribed burns to supplement future management.

Tim and AGFD LRP personnel conducted site visit at a riparian restoration project along Eagle Creek. The area receives a high amount of trespass cattle which degrade the river system and surrounding landscape. Our intent is to fence the riparian area thereby restoring it from over grazing and other damage these trespass cattle may cause. The western perimeter has already been re-fenced leaving the remaining area to partner with AGFD and the owner.

Tim re-visited a past native fish refugia pond that was completed by the Partners program several years ago. The pond itself looks healthy by means of the amount of aquatic vegetation and hundreds of native fish were observed. This project appears to be very successful.

Kirk Young, Mark Olson and Manuel Ulibarri attended a meeting and site visit to Planet Ranch, a recent acquisition and

lease-back by U.S. Bureau of Reclamation. Objectives were refined for the property and include significant Razorback Sucker and Bonytail production in addition to a refuge and conservation habitat for the two species. Our office intends to be involved in the design and management of the conservation habitat.

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

Stephanie joined the Rio Grande Assessment conference call discussing collaboration between DFHP, WNTI, and the Southern Rockies LCC to complete an assessment in the Rio Grande Basin in New Mexico and Colorado. The assessment models species distributions with landscape factors and anthropogenic stressors by subwatershed to create a conservation prioritization framework. DFHP, WNTI, and partners have completed these assessments for the Upper and

Lower Colorado regions. The Great Plains LCC and a State Wildlife Grant recently completed Rio Grande and Pecos in Texas. DFHP and WNTI are looking for partners to help fund the rest of the Rio Grande/Pecos basin that occurs in New Mexico and Colorado.

Stephanie worked to disperse DFHP funding for three habitat restoration projects selected from the 2015 Request For Proposals. Those are:

#1 Project: Goose Creek Allotment Pipeline Project, Idaho

This project will replace livestock water infrastructure to ensure consistent water sources are available to reduce livestock reliance on streams for watering and use of riparian areas. By managing the riparian health of Goose Creek and its tributaries, the few remaining populations of Northern Leatherside Chub and Bluehead Suckers will be maintained.

#2 Project: Upper Sycan River Aquatic Habitat Restoration, Oregon

This project will restore riparian and floodplain functions as well as improve aquatic habitat conditions for Miller Lake Lamprey, Pit-Klamath Brook Lamprey, and Klamath Speckled Dace as well as Redband Trout and critical habitat for Bull Trout. The project involves large wood additions, stream bank stabilization, and the creation of floodplain terraces, and riparian restoration and fencing.

#3 Project: Bitter Creek Drop Structure, Wyoming

This project will replace an existing drop structure which presently contains an active head cut, with an engineered structure. The new structure will help improve water quality by reducing erosion and sedimentation associated with the active head-cut; stabilize banks and riparian habitats; and serve as a fish barrier to prevent the upstream movement of White Suckers and possible hybridization with the native Flannelmouth Sucker population.



San Carlos Apache Tribe Recreation and Wildlife Department Staff display Largemouth Bass from Seneca Lake.

Managing Aquatic Invasive Species

Nonnative fish are a primary threat to native fish in Arizona through direct predation and resource competition. Yet, in a few streams in Arizona, natives and

nonnatives appear to coexist in stable numbers. To study and learn from this phenomenon, Jess Newton wrote both a cooperative agreement and a grant proposal for collaborative research with

USGS fisheries scientist, Scott Bonar, and University of Arizona. This research will focus on the correlation between instream flow and the hydrograph with coexistence metrics.

Fulfilling Tribal Trust Responsibilities

Jennifer Johnson with assistance from staff from the San Carlos Apache Tribe's Recreation and Wildlife Department completed fish surveys on San Carlos Lake, Talkalai Lake, Seneca Lake, Boni Tank and Bobcat Tank. Largemouth Bass averaged 15 inches and three pounds in Seneca and 19 inches and four pounds in Talkalai. Flathead Catfish averaged 23 inches and 9 pounds in Talkalai.

Jennifer, Jeremy Voeltz, Stephanie Vail-Muse, and staff from the Williams Creek National Fish Hatchery and White Mountain Apache Tribe attempted to collect Apache Trout milt from several streams, including Deep and Ord Creeks, to test gamete cryopreservation methods in cooperation with the Service's Warm Springs Fish Technology Center in Georgia. Unfortunately, we appeared to have missed the spawn this year.

Chase Ehlo and Kirk Young visited the Hualapai Native Fish Rearing Facility near Peach Springs, AZ. The purpose of the visit was to evaluate the site as a potential grow out and production facility of native desert fishes, more specifically Razorback Sucker, Bonytail, and Humpback Chub. The facility consists of twelve 1/10th acre earthen ponds and



Hualapai Hatchery Facility catch kettle. AZFWCO staff visited the site to evaluate its potential as a grow out and production facility of native desert fishes, specifically Razorback Sucker, Bonytail, and Humpback Chub.

three outside raceways constructed in the late 1990s with funding from the U.S. Bureau of Reclamation. It was previously used as grow out for Razorback Sucker, but has not been operational since 2012. The Hualapai tribe is interested in again using the facility for native fish production and AZFWCO is coordinating with the

Lower Colorado River Multi-Species Conservation Program to this end.

Sean O'Kray, Mitch Thorson and Brad Buechel worked on removing water restrictions in the inlet of Moovalya Lake, near Parker, AZ. Once removed, water swiftly surged into the lake increasing lake levels improving water quality and restoring access to fish including Razorback.

Enhancing Recreation Fishing and Public Use of Aquatic Resources

Kirk and Jess worked to finalize the Biological Assessment for stocking Rainbow Trout into the Lower Colorado River. These trout will be produced at Willow Beach National Fish Hatchery. We submitted the draft Biological Assessment to Arizona Ecological

Services Office in early May and a second draft (response-to-comments) will be submitted in June. The BA will be the basis for the Section 7 Biological Opinion for the program.

Kirk and Jess also participated in a conference call with staff from

Ecological Services and the Arizona Game and Fish Department to discuss Rainbow Trout stockings below Davis Dam on the Colorado River. The state expressed concerns over the need for minimizing/mitigating impacts to Razorback Sucker.

Workforce Management, Training, and Scientific Capacity

Jake Washburn and Louis Eastwood started seasonal work for the 2016 Apache Trout Crew. Jake is a STEP Biological Student Trainee and Louis is hired as a 1040-seasonal. Welcome, Jake and Louis!

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

Tim Grosch attended an Installation of Erosion Control Structures for Restoration Seminar hosted at the BLM National Training Center in Phoenix, AZ. Several presentations were given by subject matter experts from numerous agencies that helped to identify proper techniques when installing control structures intended to slow down the flow of water during high flow events. The seminar was very informative and will aid with future erosion control projects within the Partners program.

Several AZFWCO supervisors attended a 1-day training on promoting Equal Employment Opportunity and Diversity in the Service.

AZFWCO personnel participated in the monthly staff conference call on May 12.

Upon Morgan Brizendine's request, Dennis Stone reviewed her draft M.S. Thesis for the University of Arizona concerning ultrasonic imaging to evaluate egg maturation of Humpback Chub.

Randy Van Haverbeke ensured that USFWS volunteers and staff have current Aviation Safety certificates.

Public Education and Engagement

Jess Newton met with Diana Biya, Constituent Advocate for Senator John McCain. Ms. Biya's area of expertise and interest includes fishery issues of Lake Powell, Grand Canyon, and the Colorado River. Jess briefed Ms. Biya on AZFWCO activities associated with (1) the Environmental Impact Statement for operations of Glen Canyon Dam, (2) native fish concerns associated with Lake Powell's low water surface elevations and resulting warmer water releases into Grand Canyon, (3) Lees Ferry Rainbow Trout recreational fishery, (4) conservation measures for Humpback Chub and Razorback Sucker in Grand Canyon, and (5) the Willow Beach National Fish Hatchery recreational Rainbow Trout stocking program.

AZFWCO's "Trout in the Classroom" project came to an end in May. The students said goodbye to their Apache trout for this school year. Three classrooms participated reaching over 150 students this school year.

Kirk Young attended an orientation and served as a mentor for the Career Discovery Internship Program (CDIP) at the Southeast Louisiana NWR Complex

in Lacombe, La. The CDIP is a partnership effort between the Service and the Student Conservation Association to create a more diverse workforce by introducing diverse college students to conservation and career opportunities in the Service. After the intensive five-day orientation, students will serve in 12-week internships at Service facilities. Kirk's mentee will be an intern at Uvalde NFH for the summer.

Stephanie Vail-Muse went to Kerrville, TX and collaborated with TX Parks and Wildlife Ecologist/DFHP Executive Committee Co-Chair Megan Bean on DFHP's 2016 RFP, the DFHP Database, and the 2015 DFHP Annual Report. Stephanie also collaborated with TX FWCO Project Leader Mike Montagne in San Carlos, TX on the DFHP RFP and during her visit she was able to learn about some of the ground work the TX FWCO is doing.

Jennifer participated in the national Fisheries and Aquatic Conservation (FAC) Conservation Education conference call. Plans were discussed for World Fish Migration Day.

Stephanie participated in the Bluehead Sucker and Bonneville Cutthroat Trout conference call with WNTI and the DFHP Education/Outreach Committee. The Bluehead and Bonneville Campaign is being filmed this month in UT to create a 4-5 minute video that will showcase the different partnership collaborations that have been working toward the preservation of these two native fish species in the Weber River. This inspiring video will have a permanent presence on the internet that will be used by DFHP and WNTI as an anchor for other education/outreach materials that we want to share about these species and our partnerships in order to attract other partners and donations/funding. This project is funded by the 2015 Multi State Grant that DFHP/WNTI were awarded.

Stephanie led the DFHP bi-monthly conference call. The DFHP conference call focused on the DFHP funded projects, the RFP and the nomination of the Weber River as the "2016 Legacy Waters to Watch" project as well as the creation of the Amazon Smile account. The purpose of the Amazon Smile account is to increase funding for the 19 Fish Habitat Partnerships under the new NFHP 501c3. The Amazon Smile account essentially donates .5% to your qualifying Amazon Smile charity when you make certain purchases. Interested parties must use www.smile.amazon.com and select the National Fish Habitat Fund from the charity.

Stephanie also attended the bi-monthly NFHP conference call. During this call Ryan Roberts updates the FHP's on the current state of the Multi state grant, the new Beyond the Pond website and the NFHP's ideas on how they would like to celebrate the NFHP 10-year anniversary. Additional topics discussed were the FHP's thoughts and ideas on a document of Interdependence which will hopefully help clarify the overall goals of the 19 FHP's into one document.

Stephanie asked NM FWCO Project Leader Tom Sinclair if the NM FWCO would be willing to host the DFHP part of the annual meeting in November 2016 at the NM FWCO. Tom Sinclair approved the DFHP meeting.



Kirk Young served as a mentor for the Career Discovery Internship Program (CDIP) at the Southeast Louisiana NWR Complex in Lacombe, Louisiana. Pictured are the 38 students and mentors participating in the program.

Stephanie has created DFHP E-News Shout Outs! Sign up to be on our Newsletter subscription list and get monthly Shout Outs where we share with you what the DFHP is up to that month. Join now at <http://www.desertfhp.org/>

Follow the DFHP on their Social Media Accounts as they promote their mission and goals to conserve native desert fish by protecting, restoring, and enhancing their habitats in cooperation with state and tribal fish and wildlife agencies, federal resource agencies, research and private organizations, and engaged individuals.

Upcoming Events

- ◆ **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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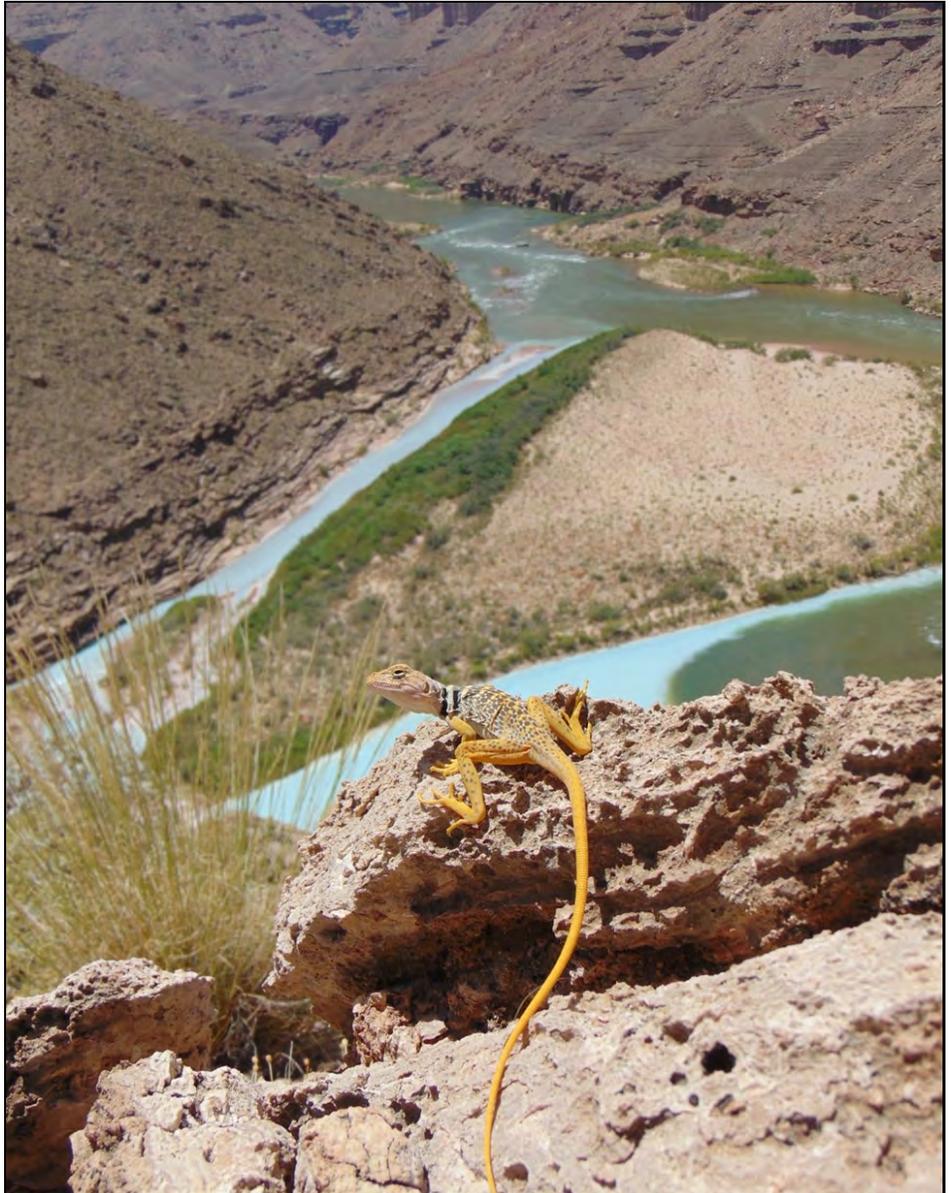
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Check out #DesertFishFriday on the DFHP Facebook page:

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

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 987 “likes” from over 20 countries.

Check us out at www.facebook.com/AZFWCO.



A Collared Lizard basks in the sun overlooking the confluence of the Little Colorado River and mainstem Colorado River in the Grand Canyon. Photo: Brad Buechel, AZFWCO

