

# FISH SOUP

Summer 2021 Newsletter





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The O 'Fish' al Newsletter of the AZ-NM Chapter of the American Fisheries Society

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Cover:

Sunset on Lake Pleasant, AZ, this summer.

# News and Announcements



## AFS Job Board Gets an Upgrade

The American Fisheries Society has revamped its job board site: <https://jobs.fisheries.org/>. The new job board includes new features that makes it easier to search for and apply to jobs. Posting jobs on the new job board is also free for all AFS members and organizations that are part of the AFS Strategic Partners Program.



## Fall 2021 Conference Schedule: AFS and DFC Annual Meetings

The American Fisheries Society's 151<sup>st</sup> Annual Meeting will be held November 6-10, 2021, in Baltimore, Maryland. The event will be held both in-person and online, with a different registration rate for each attendance format. I recommend reading the meeting's registration and attendance policies which, along with the meeting's program and list of events, at: <https://afsannualmeeting.fisheries.org/>.

The Desert Fishes Council (DFC) 2021 annual meeting will be held November 17-21 in St. George, Utah. The deadline for abstract submission is September 15 and early registration ends on September 30. For more info on the meeting, visit: <https://www.easychair.org/cfp/DFC2021>.





## 2021 Small Grant Winners:

### Utilizing urban reclaimed timber for construction of sportfish habitat in Saguaro Lake

Bryant Dickens, Arizona Game and Fish Department

The focus of this project will be on building Pennsylvania Porcupine Cribs and installing them at a predetermined site on Saguaro Lake in need of vertical structural habitat. These wooden structures will be built using urban reclaimed timbers that would normally be turned into mulch or firewood. The timbers will be donated from local tree service companies and cut into 2x2x48 inch pieces. The pieces will then be stacked like a pyramid on a pallet and weighed down with cinder blocks. These structures are used all over the country and have proven to be successful in providing cover for forage fish, but also allowing sportfish to congregate around them, allowing for better angler success.

The current cost of lumber makes these types of structures infeasible when directly purchasing material from large businesses that have to import the products. By utilizing the urban tree resource we are able to keep costs significantly down by milling them ourselves.

Figure 1 shows an example of what the cribs look like. We really want to start



*Figure 1: Example of Pennsylvania Porcupine Cribs constructed.*

moving in this direction of structural habitat rather than installing PVC or plastic man-made structure. This would be a pilot program to prove this is a feasible option. Thousands of trees are cut down and wasted in the Phoenix-area every day. This is a sustainable resource that could be used for many years to come on providing fish habitat throughout Arizona's reservoirs.

This pilot study will consist of 20 wooden Pennsylvania Porcupine Crib structures in a roughly two-acre cove. We will install the structures in 15-20 feet of water from our large pontoon barge. We plan on monitoring the structures using side scan sonar and dive surveys to see how well the structures are being used compared to plastic manmade structures. Figure 2 shows the proposed cove the structures will be installed at.



*Figure 2: Map of Blackwell Bay, Saguaro Lake*

We are very excited for this opportunity to turn the underutilized resource of urban timber into useable fish habitat structures allowing anglers success for many years to come. Thank you!





## 2021 Small Grant Winners (Continued):

### **Native Fish Studies Within the Verde River, Arizona**

Chris Jenney, University of Arizona

The Verde River one of the largest remaining perennial rivers in Arizona, supporting both the people of Arizona and a diversity of fish and wildlife. But, what makes the Verde River unique – its steep canyon walls, its inaccessibility, its flow variability – complicates research. As part of my master's research we rented canoes to sample 21-miles of the Verde River including the 17-mile “Wild” segment of the Wild and Scenic River.



*Graduate student, Kaitlyn Gahl, floating down a seldom seen location on the Verde River. As part of this float, we recorded temperature, conductivity, and flow data while collecting GPS points of the start and end of every macrohabitat unit to be plotted*



While the trip was a success, the canoes were a burden. Canoes are fantastic when you need to haul generators, electrofishers, and camping equipment for multiple days; however, they are difficult to transport and require trailering, the cost of renting canoes is high, and maneuvering large canoes on a river is difficult, especially for field technicians with little boating experience. After two broken leaf springs on the trailer, a few capsized boats, and two “Stinky Boot” awards in a 3-year period, using canoes was no longer tenable for regular floats down the Verde River.

My current research brings me back to the Verde River, where we will investigate the survival, movements patterns, and habitat use of a native fish in the Verde River-Horseshoe Reservoir complex, from Sheep’s Bridge to Horseshoe Dam. We will monitor fish using a combination of stationary remote telemetry towers and submersible passive integrated transponder (PIT) antennas, both of which will be strategically placed throughout the study-site. Additionally, we will conduct mobile telemetry surveys - where we float downstream in search of “tagged” fish – at regular intervals throughout the year.



*The two red kayaks were purchased with funds provided by the Arizona/New Mexico American Fisheries Society Small Grant Award. These boats allow for researchers to access otherwise inaccessible areas to collect data on native fish survival, movement patterns, and habitat use.*

The maintenance of remote radio- and PIT telemetry stations, the offloading of data from those sites, and the ability to conduct mobile telemetry surveys is reliant upon an ability to regularly float this section of river in a way that is safe, efficient, and reliable. However, this study area is remote, is inaccessible to trailers, and is not ideal for navigation by canoe.

The Small Grant awarded by the Arizona / New Mexico Chapter of the American Fisheries Society provided funding that was used towards the purchase of two inflatable kayaks. These boats allow us to 1) safely access our study site without the use of a trailer, 2) conduct mobile radiotelemetry surveys in the mainstem Verde River 3) navigate a variable and rarely floated segment of river, 4) safely teach undergraduate field technicians how to navigate a river in a boat.

The inflatable kayaks have already played an integral role in our preliminary habitat assessment and pictures of the boats in action are attached. Thank you to the AZ/NM Chapter of the American Fisheries Society. If anyone has any questions or would like more information about my current research, please reach out at: [chrisjenney@email.arizona.edu](mailto:chrisjenney@email.arizona.edu).



# Student Spotlight: Kelsie Field

Kelsie is a M.S. Student at New Mexico State University working under Dr. Colleen Caldwell of the New Mexico Cooperative Fish and Wildlife Research Unit. Prior to moving to New Mexico, Kelsie was a student at the University of



Montana Western in Dillon, Montana. Here, she received her B.S. in Biology and B.S. in Environmental Science and worked for the U.S. Forest Service as a Hydrology Technician. Her position as a Hydrology Technician really sparked her interest in aquatic systems. The position allowed her exposure to many fish habitat projects and collaborative data collection efforts with various agencies. On one such work trip, while collecting spawning habitat data for arctic grayling, she decided to pursue graduate school and a career in fisheries.

Her current M.S. work focuses on habitat suitability for an endangered desert fish, Gila Chub (*Gila intermedia*). The purpose of this research is to provide managers with a recommendation for Gila Chub repatriation locations in the San Francisco River drainage, New Mexico. When she isn't in the field or analyzing data, Kelsie can be found shed hunting, hiking, or working in her garden.

# Student Sub-Unit Updates

## **New Mexico State University Student Chapter of the American Fisheries Society**

Due to uncertainties surrounding COVID-19 last semester we were unable to have any in-person events. We were, however, able to finish designing and producing our hats and we are now selling them to members. For the Fall 2021 semester we have several volunteer events lined up. These events have been coordinated by two graduate students at NMSU and will include fishery-based field work projects throughout eastern Arizona and Northern New Mexico. We are currently in the process of planning fundraising events and other fisheries related events for the fall and spring semesters.

## **Wildlife and Restoration Student Association, Arizona State University**

As far as fisheries go we have still not been very active given everyone having to remotely tend events and the lack of ability to host activities while maintaining covid guidelines for school. However, we have been continuously passing information to our members via newsletters and our new discord server. Currently several of our members have been working in the field as interns for AZGFD. There have also been some non-fisheries related activities like the relocation of displaced burrowing owls to our ASU polytechnic campus!



## **University of Arizona Fish and Wildlife Society**

We have a brand new, all-star cast of officers for the 2021-2022 school year. With more people vaccinated and pandemic protocols lifted, we are planning on holding regular meetings and coordinating volunteer opportunities for the upcoming year. Our foremost volunteer opportunity is provided by the UAFWS's newly established, Research Committee. The committee is currently studying the effect of the added effluent on the herpetofauna of the Santa Cruz River. We are looking for volunteers throughout the year to hike the Santa Cruz, look for reptiles and amphibians, and compare the richness and abundance between three different sites along the river. In order to continue offering volunteer opportunities, we rely on support from agencies and non-profit organizations.

# Executive Board

## President:

Brian Hickerson

Arizona Game & Fish Department

bhickerson@azgfd.gov



## President Elect:

Daniel Trujillo

New Mexico Department of Game & Fish

Daniel.Trujillo@state.nm.us

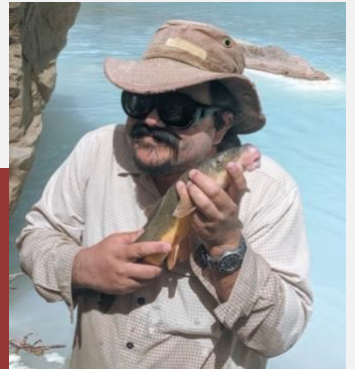


## Past President:

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## Secretary:

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Arizona Game & Fish Department

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## Treasurer:

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# Committee Members

## **Continuing Education**

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AZ Game & Fish Department

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NM Department of Game & Fish

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## **Environmental Affairs**

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## **Membership**

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## **Newsletter**

Steven Ingram

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## **Student Affairs & Miles McInnis Scholarship**

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U.S. Fish & Wildlife Service

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## **Nominations/Awards**

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AZ Game & Fish Department

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## **Small Grants**

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New Mexico Cooperative Fish and

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## **Website**

Christopher Jenney

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## Note from the editor....

Hi Everybody,

Thank you to everyone who contributed to this issue of Fish Soup. I want to hear more input from you for the next newsletter! Please send in articles, photos, and announcements to [singram@email.arizona.edu](mailto:singram@email.arizona.edu). Also feel free to contact me with suggestions and comments about the newsletter.

Thank you,

Steven Ingram

