

# FISH SOUP

Winter 2025 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: Quitobaquito (photo credit: Katie  
Hansford).



# President's Note

Welcome back to another edition of Fish Soup! The Arizona-New Mexico Chapter of the American Fisheries Society's (AZ-NM AFS) biannual newsletter. The field season has concluded, and we are now in the heart of winter and as I like to call it "meeting season!" As meeting season is in full swing your AZ-NM AFS executive committee has been busy preparing for the upcoming Joint Annual Meeting (JAM).

This year the JAM is being hosted by the New Mexico Chapter of the Wildlife Society (NMTWS) at the Clyde Hotel in Albuquerque, New Mexico on February 6th-8th. Early registration for the meeting ended on January 17th. The theme of this year's JAM is "Renewable Energy and Wildlife: Planning, Mitigation, and Impact." The Plenary Session will feature five wildlife professionals from tribal agencies, federal agencies, private consultants, and nonprofit organizations. There will be 70+ Fish and Wildlife talks and 30+ posters at this year's meeting. There are several continuing education workshops being offered at the meeting, including the annual Piscicide Application Workshop, a Wildlife Trapping and Handling Techniques Workshop, a Resume Building Workshop, and a Wildlife-Friendly Fencing Discussion. Our Arizona – New Mexico Chapter of AFS annual business meeting will be held at 4 pm on Thursday, February 6th. I hope to see many of you there!

Some of you likely noticed the extremely high cost of registration for students to attend the JAM this year. The executive committee has been working with NMTWS and the Arizona Chapter of TWS (AZTWS) to help fray the cost for students to attend JAM. First, all students who volunteer for 4-hour shifts at JAM will receive a **50%** reimbursement for their registration. To sign up for this, please reach out to **Travis Zaffarano** at **[TWSNewMexico@gmail.com](mailto:TWSNewMexico@gmail.com)**. Secondly, the Arizona – New Mexico Chapter of AFS is making \$500 donations to all four of its student subunits to help them support their members travel to the meeting.

Finally, the Arizona – New Mexico Chapter recently donated \$250 to support the upcoming Black Bass Symposium that will be held in conjunction with the Annual AFS Meeting August 9th-14th, 2025 in San Antonio, Texas. The meeting will be a forum to share information and ideas among fisheries professionals, as well as anglers, angler groups, and the fishing industry. On the last day of the symposium there will be a Summit for invited guests from as many stakeholder groups as possible to discuss key issues, propose solutions, and develop entrepreneurial proposals for projects to address the key issues. The winning

# President's Note, Continued

projects will be awarded seed money to support getting those proposed activities started. In addition, there will be several technical sessions, including two sessions focused on Future Proofing and on Building a Science/Management/Angler/Industry Nexus. The focus of the Symposium will be on building a sustainable future for bass fishing, and as such they will be looking for lots of student and early career professional participation. So, there will likely be travel award opportunities to look out for in the next couple months if you are interested in attending this symposium.

As always if you have any announcements, field stories, conservation successes, or anything else you would like to share please send them directly to our Newsletter Editor, **Katie Hansford** ([Kathryn.Hansford@tonation-nsn.gov](mailto:Kathryn.Hansford@tonation-nsn.gov)).

-ZB



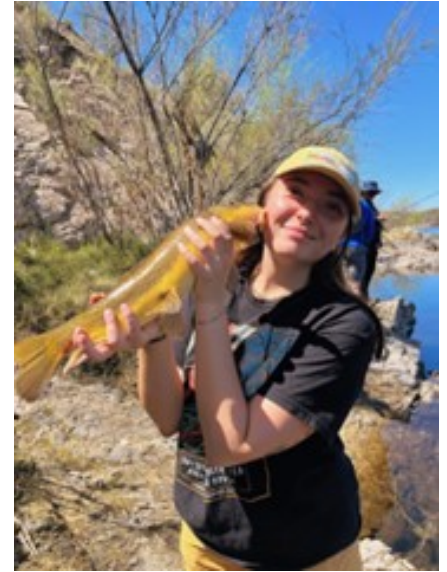
# Student Spotlight

## Stock Assessment of Sonora and Desert Suckers in the Lower Salt and Verde Rivers

By Regan Doss

*Master's Student*

University of Arizona



During my undergraduate studies, I worked on projects involving the analysis of consumption rates for Orangethroat Darters (*Etheostoma spectabile*) and investigating Virile Crayfish (*Faxonius virilis*) distribution and sex ratios throughout the Southwest. My passion for fisheries research inspired me to establish the student subunit of the American Fisheries Society at my university, the University of Texas at San Antonio (UTSA) and create a long-term sampling dataset on a stretch of the Guadalupe River managed by the subunit.

My interest in population dynamics led me to pursue a Master of Science at the University of Arizona in the Bonar Lab. My research focuses on the population structure of Sonora Sucker (*Catostomus insignis*) and Desert Sucker (*Catostomus clarkii*) in the lower Salt and Verde Rivers near Phoenix, Arizona. Using raft electrofishing, we tag fish and employ submersible antenna systems alongside recapture events to estimate abundance, analyze growth, fecundity, survivorship, and recruitment, and track movements between the river confluence and isolated pools during low flow periods. My preliminary work examined age and growth patterns in populations in dammed versus undammed systems.

I was able to present my preliminary findings at the national American Fisheries Society conference in Honolulu, Hawaii, highlighting age and growth differences between dammed and undammed river systems. I plan to share updated insights on movement patterns and population dynamics at the upcoming JAM in February. My research will not only enhance the understanding of Sonora and Desert sucker populations but also inform conservation strategies for these species regarding recreational fishing pressure.

# Standard Methods

By Dr. Scott Bonar

*Professor / Unit Leader*

University of Arizona | US Geological Survey

AZ Co-Op Unity



Dr. William Davies was a pioneering fisheries professor at Auburn University in Alabama. He was also a protégé and successor of Dr. Homer Swingle, a scientist often considered “the father of pond management. When I was early in my career, as a fisheries biologist at the Washington Department of Fish and Wildlife, I took every class on warmwater fisheries management I could from Dr. Davies. This supplemented the fisheries skills I learned during my postgraduate work at the University of Washington.

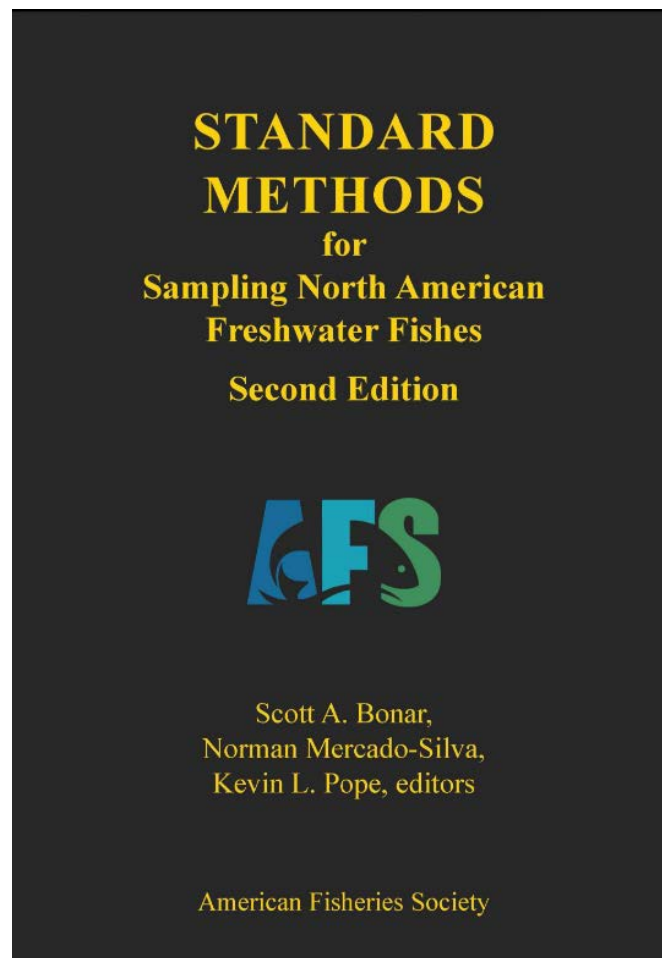
Dr. Davies stressed that using standard methods to sample fish communities and developing comparison data sets to evaluate whether fish populations are high, low or average for a particular measure was necessary for fisheries managers to diagnose limiting factors or understand surpluses in fish communities. Only with this information could the biologist apply the most effective management technique.

The development of standard collection methods and comparison data for fishery diagnoses continues today through the work of over 500 freshwater fisheries professionals from almost 200 different agencies, universities and non-governmental organizations in AFS’s second edition of **Standard Methods for Sampling North American Freshwater Fishes**. The book was published Fall 2024, and in it you will find contributions from many Southwestern biologists. Standard gear and techniques are described for sampling fishes of warmwater and cold-water ponds, streams, rivers, lakes, two-story systems, and new for this edition, wetlands, cenotes, and the Great Lakes. Additionally, updated supplemental information on statistics, databases, converting non-standard to standard data for comparison purposes, preventing transfers of nonnative species, electrofishing output standardization, and eDNA sampling as they relate to standard fish data collection are included. Furthermore, construction specifications and drawings for gear are included in a handy appendix in the back to aid in gear construction and ordering.

# Standard Methods, Continued

The largest chapter in the book provides almost 350 pages of tables that summarize standard data collected from almost 15,000 surveys on 52 fish species in 54 U.S. states and Canadian provinces. These summaries provide the standard comparison data needed to diagnose issues with fish communities. In the book, data summaries are subdivided by species, method, waterbody type and index, both range-wide and by ecoregion. However, we also provide an on-line webtool that allows comparisons of your data with the same database summaries, which is accessible simply by uploading a data spreadsheet from your particular waterbody and hitting a button. Furthermore, in addition to range-wide and ecoregion comparisons, the webtool also provides within-state data comparisons. Why are data summaries provided in the book in addition to those on-line? Electronic data over the years can be lost, compromised with new electronic storage methods, and computer programs break down. Printed data extends its life. For example, Carlander's data books from the later 20th century still prove useful today.

Please look over the book and accompanying data summaries. We hope this information will help you with your fisheries management and research activities. 500 of your colleagues can vouch for the care and expertise used to develop this book for you. It is available from the American Fisheries Society.



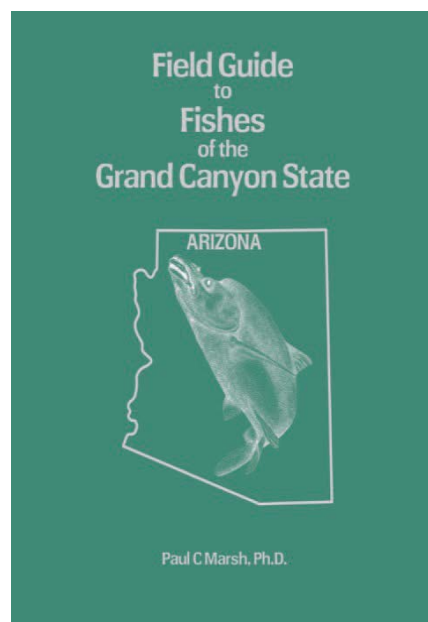
# Field Guide to Fishes of the Grand Canyon State

Paul C. Marsh, with a PhD in Fisheries, has dedicated more than four decades to education, management, and research on native fishes of the American Southwest. As the Principal Investigator on numerous projects involving endangered native fishes, he has authored hundreds of technical reports and peer-reviewed publications on these aquatic inhabitants. Marsh is widely recognized as an expert and authority on the biology and management of southwestern native fishes.

W.L. Minckley's classic *Fishes of Arizona* was published more than 50 years ago in 1973 and has been out of print for many decades. That book was followed posthumously in 2009 by *Inland Fishes of the American Southwest: Chronicle of a Vanishing Biota*, co-authored with Paul C. Marsh, also now out of print. The new **Field Guide to Fishes of the Grand Canyon State** provides a wealth of information and updates on both of these iconic works in a field-compatible format not previously available anywhere.

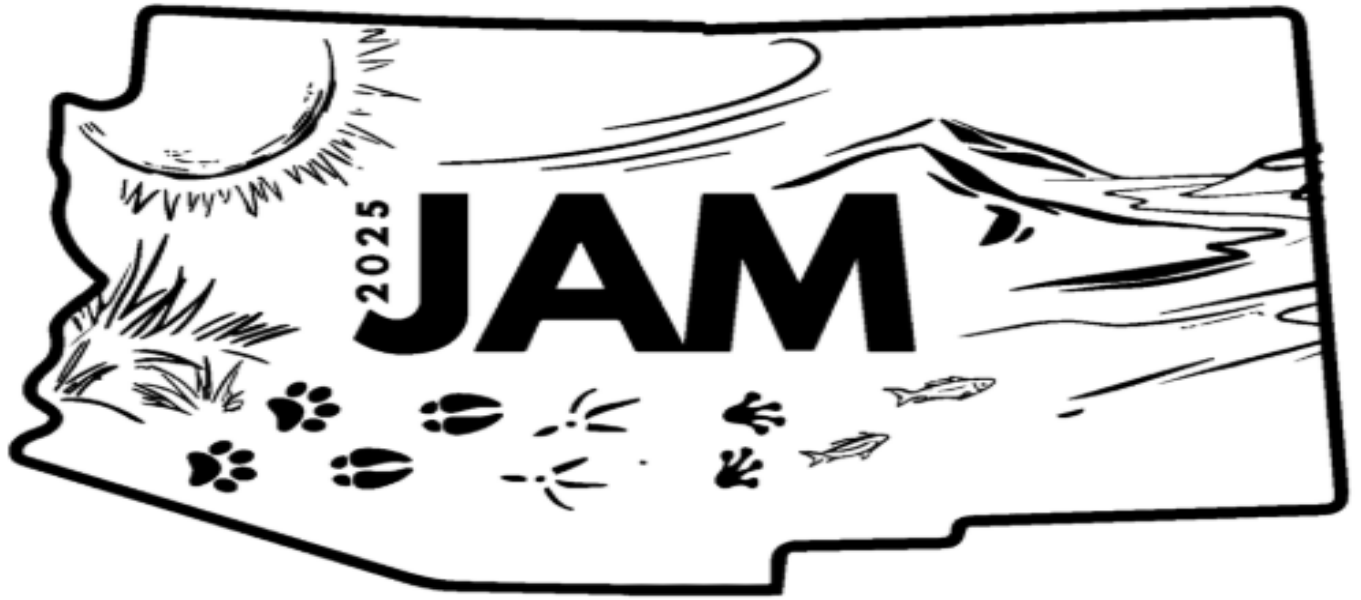
Features include maps to navigate the waters and pinpoint where specific fish can be found, identifying keys at both the family and species levels, photographs, and detailed descriptions of unique characteristics of 37 native and 48 non-native fish in Arizona.

The book is available from local publisher American Traveler Press (<https://americantravelerpress.com/books.php?Item=3188>) or Amazon.com. The project has a high probability of success given the budget, other resources at hand, people/person involved and timeframe for project completion.





# Upcoming Events

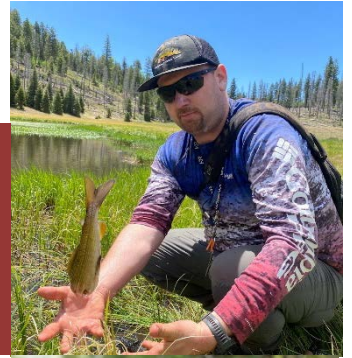


The NM Chapter TWS will be hosting the 2025 Joint Annual Meeting (JAM) on February 6-8th, 2025. The JAM will be hosted at The Clyde Hotel in downtown Albuquerque, NM. For more information, please visit: <https://wildlife.org/nm-chapter/annual-meeting/>

# Executive Board

## President:

Zach Beard  
Arizona Game & Fish Department  
zbeard@azgfd.gov



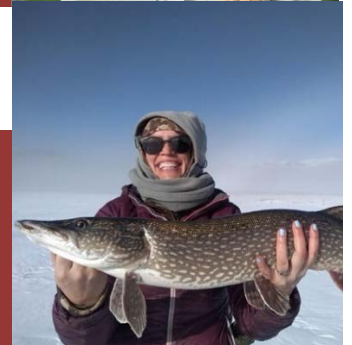
## President-Elect:

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## Past President:

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## Secretary:

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## Treasurer:

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# Committee Members

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## **Newsletter**

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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 from you for the next newsletter! Please send in articles, photos, and announcements to [Kathryn.Hansford@tonation-nsn.gov](mailto:Kathryn.Hansford@tonation-nsn.gov). Feel free to contact me with suggestions and comments about the newsletter.

Best,  
**Katie Hansford**

