

Young Professional Spotlight

Young Professional members of AIFRB represent the next generation of leaders in fisheries science and management. Through *Briefs* and our social media platforms we will be highlighting our Young Professionals as a way to introduce them to the full membership and create opportunities for collaborations. AIFRB's Young Professional Representative, Connor Capizzano (connor.capizzano001@umb.edu), will be showcasing new Young Professionals throughout the year using a series of biographical interviews. This month's Young Professional Spotlight features **Kathleen Hemeon, Mississippi District** and **Ph. D. candidate** at the **University of Southern Mississippi's Gulf Coast Research Laboratory** in Ocean Springs, MS.

Kathleen Hemeon – Mississippi District



What is your current position, with what company/organization, and what is the focus of your research/work?

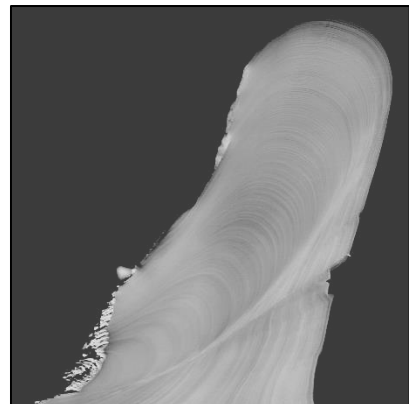
I am a Ph.D. candidate with the Gulf Coast Research Laboratory at the University of Southern Mississippi (Ocean Springs, MS). As a Coastal Sciences graduate assistant, I support molluscan fisheries modeling, including analyses of disease progression in multiple abalone species and recruitment dynamics of the eastern oyster (*Crassostrea virginica*) in Delaware Bay. My dissertation studies population dynamics of the commercially harvested ocean quahog (*Arctica islandica*), a clam that also happens to be the longest-living bivalve on Earth (greater than 200 years in US waters and greater than 500 years at northern latitudes!).

Where did you receive your education, and what helped pave your way to your current position?

I received a B.S. in Biology with a marine emphasis from Western Washington University (Bellingham, WA), and a M.S. in Sustainable Environmental Resource Management from a joint graduate program with James Madison University (Harrisonburg, VA) and L-Università ta' Malta (Msida, Malta). After several years employed with the U.S. Forest Service and the University of California-Santa Cruz as a fisheries technician, I wanted to complete a doctorate program so I could continue my career in the public sector and ensure the conservation of aquatic species and habitat.

How does your work apply to, or influence, fishery management (e.g., stock assessments, sportfishing, commercial regulations, habitat protection, etc.)?

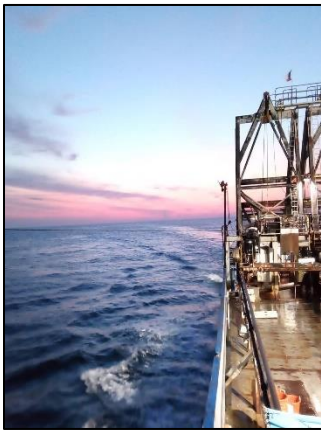
Population dynamics are used to estimate stock parameters such as spawning stock biomass, abundance, mortality, and recruitment. Data can then be used to predict future scenarios with some level of confidence. My dissertation will provide an extremely large age composition dataset, and estimated error associated with the age dataset, to describe the age structure, mortality, settlement periods, and recruitment frequency for two ocean quahog populations. This species is notoriously tough to age and is therefore managed without age data,



an unusual predicament for fisheries management that traditionally use age-based models to set harvest limits. These data will help describe the US ocean quahog stock and provide fisheries managers more accurate data for stock assessment models.

What is your professional outlook for fisheries management? In other words, what will the future of fisheries management look like 10-20 years from now. What are we doing correctly, what needs to be improved (e.g., in research, policy, education)?

Over the next decade or two, fisheries management will have the pressing task of incorporating climate change and resulting range shifts into stock prediction models. Although this is not a new projection, holistic and ecosystem-based models that look beyond rigid management boundaries and incorporate oceanographic data will become increasingly important. Managers and researchers are moving forward with these ecosystem-based models; however, policy will need to keep pace with the science to put these models and research into action at the federal management level.



What is the importance of young fishery professionals today and for the future of fishery management?

Now more than ever, fishery professionals are critical for providing cornerstone data from both sampled and model datasets. As our understanding of these fisheries and their interactions with the changing world grows, so will our need to study aquatic populations and recommend innovative management solutions. Collaboration between fisheries managers, academia, industry, recreational anglers, and the general public is critical for balancing such diverse interests.

What drew you to AIFRB, and what does AIFRB do for you and what can it do for other young professionals in this field?

My advisor and a coworker both recommended AIFRB as a great support organization for students. I joined early on in my Ph.D. program to connect with other fisheries scientists interested in the conservation and sustainable use of our aquatic resources. As a young professional, it can be difficult to gain traction and find support opportunities; AIFRB offers networking and monetary awards that can really jump start a career in fisheries science.

Please contact Kathleen (Kathleen.Hemeon@usm.edu) to continue the conversation!