

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 **Dr. Ryan Knotek, New England District and Assistant Scientist at New England Aquarium's Anderson Cabot Center for Ocean Life in Boston, MA.**

Dr. Ryan Knotek – New England District



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

I am currently an assistant scientist for the Anderson Cabot Center for Ocean Life at the New England Aquarium. Here I am part of the Fisheries Science and Emerging Technology program that uses cutting-edge technology and techniques to address fisheries-based questions both here in New England and throughout the U.S. My research in particular focuses on the impacts of capture-and-handling on the health and survival of overfished species of sharks, skates, and rays that are incidentally captured and discarded in commercial and/or recreational fisheries.

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

I received my education from the University of New England (B.S. and M.S.) and the University of Massachusetts Boston (M.S. and Ph.D.). Throughout my education, it was just as much the knowledge and experience I received, as the connections and

network that I built, that helped paved the way to my current position. Notably, Dr. Mandelman, Kneebone, and Sulikowski have played major roles in my career and have given me the opportunities and tutelage to become a successful young fishery professional.

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

My research provides discard mortality rates (either at-vessel or post-release) for overfished species that lack this information, and whose populations are particularly susceptible to this source of mortality. These rates inform the calculation of fishing mortality in stock assessments, and aid with the establishment of management frameworks (e.g. total allowable catch) that are designed to prevent fishing industries from overfishing the resource and in some cases, promote the rebuilding of a stock. In addition, my research often aims to provide complimentary best fishing practices and/or bycatch avoidance strategies to help mitigate fishing mortality.



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)?

In 10-20 years I envision fisheries management will be better equipped with the tools to be more proactive than reactive with regulatory decisions (e.g. better understanding of discard mortality for species and fisheries) and continue to transition towards a more ecosystem-based approach that takes into account more than just the managed species. But as it relates to my field of work, I imagine management will continue to develop new and innovative strategies to more effectively mitigate fishing mortality for bycatch species. In particular, I believe advancements to near real-time identification of bycatch hotspots will have great potential and utility moving forward.



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

Simply put, incredibly important. Young fishery professionals today come into this career facing problems both old and new. On one hand, there are still many overfished species yet to recover that young professionals will be tasked with addressing coming into their career. But young professionals are faced with challenges on the other hand as well, including an unprecedented climate crisis and growing demand for seafood that will further complicate the establishment of effective fisheries management frameworks to promote the recovery of species. Luckily, from what I've seen from fellow AIFRB young professionals, I'm encouraged that our next generation is more than capable of tackling these difficult tasks ahead!

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

I had originally learned about AIFRB at an American Fisheries Society annual meeting years back, and shortly afterward I became a member! Beyond aligning with my motivation of promoting the conservation of fish species and sustainable fisheries, AIFRB has provided me and other young professionals with a powerful network of folks who share many of the same goals, but with different and uniquely valuable skillsets. And if there's one thing I've learned, a network goes a long way when tackling complicated modern-day issues that are best addressed by an interdisciplinary team of experts.

Please contact Ryan (rknotek@neaq.org) to continue the conversation!