BRIEFS – The Official AIFRB Newsletter Volume 50, Number 1

# 50th Anniversary Volume

## President's Message

Hello AIFRB Members!

Happy New Year – 2020 is finally behind us! As 2021 gets underway, we face difficult challenges in our lives and in our field of fisheries science. The pandemic continues to impact so many aspects of fisheries including maintaining a steady supply of seafood, teaching and learning in isolated settings, and trying to conduct research with fewer resources and support systems. Despite these challenges, optimism and innovation will keep us moving forward to meet our mission and keep our Institute's membership engaged, productive, and safe.

This edition of AIFRB's newsletter marks the 50th anniversary of *Briefs*! To highlight the momentous achievement of 50 years in publication, we will be revisiting articles, pictures, and snippets from past newsletters throughout 2021 and will be launching a new *Briefs* Archives page on our website. Volume 1, Number 1, published in February 1972 proposed the name *Briefs* as *"indicative of what the character of the newsletter should be – a concise compendium of brief and topical items."* *Briefs* keeps us up to date on events and achievements of our members, and also serves as the historical record of AIFRB's range of contributions to the field of fisheries science. Beth Bowers, our Newsletter Editor, was awarded the 2020 Distinguished Service Award for her amazing work over the past couple of years to give *Briefs* a fresh look with engaging content. I encourage all members to check out the Archives and please help us fill any gaps of missing volumes. As Past President Dick Shaeffer used to say, "don't throw out your old *Briefs*!"

As you'll see throughout this newsletter, AIFRB continues to recognize professional excellence through awards, spotlight our Young Professional and Emeritus members, and highlight research contributions to the field. We are embracing change in fisheries science by encouraging Diversity, Equity & Inclusion in the field, emphasizing the impacts of climate change, and communicating research in a broadly understandable manner.

I'm proud of our Institute and grateful for our members' contributions and dedication to fisheries science. Let's showcase our individual and collective achievements throughout 2021 in our 50th year of *Briefs*!

Stay safe and well,

Cate O'Keefe
president@aifrb.org
**Please note new email

*BRIEFS*, the newsletter of the American Institute of Fishery Research Biologists, is intended to communicate the professional activities and accomplishments of the Institute and its Members.
Comments and written contributions should be sent to Beth Bowers at mebowers5@gmail.com
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## Renew Your Membership for 2021!

Student Renewal – $25

Member/Fellow Renewal – $45

Lifetime Membership – $600

**New Members**

Same rates + one-time fee – $10

**Online payments available at [www.aifrb.org](http://www.aifrb.org)**

**Checks payable to "AIFRB" can be sent to:**
AIFRB c/o Sean Lucey
P.O. Box 827
East Falmouth, MA 02536

# Announcements

*Social Media:*
We would like to showcase our members on social media! If you'd like to participate, please send Emily Slesinger (slesinger@marine.rutgers.edu) or your District Director a photo along with your name, your district, where you work and position, how your work relates to fisheries, and a goal for 2021 (can be serious or fun!).

*Membership Committee:*
We are soliciting interested Members/Fellows/Emeritus for an opening on our Membership Committee. The committee reviews applications for new membership and promotion of current members and provides a recommendation for rank in the Institute. If interested, please contact Cate O'Keefe (president@aifrb.org).

*District Director Vacancies and Opportunities:*
We have open District Director positions in Alaska, Washington, Oregon, Texas, and the Carolinas. We also welcome proposals to start new Districts in areas of interest. Leading an AIFRB District is a rewarding experience with opportunities to join the Board, network with members in your region, and plan engaging events with support from the Treasury.

*Award Solicitations*
We are currently soliciting applications and nominations for AIFRB's awards for 2021 and 2022. We want to ensure recipients for all of our awards this year, and we're asking the membership to consider applying or nominating a deserving colleague. Nomination and application procedures are fully outlined on our website (www.aifrb.org/awards).

# 2020 W.F. Thompson Award

*Lisa Chong, Florida District*

The winner of the 2020 W.F. Thompson Award for Best Student Paper published in 2019 is Lisa Chong, a PhD student at the University of Florida (Fisheries and Aquatic Sciences) under the supervision of Dr. Edward V. Camp. Lisa's paper titled, *"Performance evaluation of data-limited, length-based stock assessment methods"* was also selected as the ICES Editor's Choice in November 2019.

One of the challenges in the stock assessment field is to assess the status of fisheries that are data-poor or limited. Numerous data-limited length-based methodologies have been developed and applied to report on regional status of fisheries across many stocks, including Thompson and Bell, length-based spawning potential ratio (LBSPR), length-based integrated mixed effects (LIME), and length-based risk analysis. While all four methods use length-data as a primary input, estimates of the stock status might vary due to differing model assumptions. Thus, the performance of these methods needs to be tested to determine which are the most accurate in different circumstances. The authors tested these models by simulation populations, running the length-based models, and then comparing the model estimates against the actual stock status in the simulations. The results revealed the biases and imprecision of each method under various life history, exploitation, and recruitment scenarios. This study highlights the importance of testing stock assessment methods against alternative model assumptions in order to better quantify their performance and to identify their strengths and weaknesses under various situations.

*Photo credit Tobias K. Mildenberger*

The full citation of Lisa's paper is:

Chong, L., Mildenberger, T.K., Rudd, M.B., Taylor, M.H., Cope, J.M., Branch, T.A., Wolff, M., and Stäbler, M. 2020. Performance evaluation of data-limited, length-based stock assessment methods. ICES Journal of Marine Science 77: 97-108. https://doi.org/10.1093/icesjms/fsz212

The 2020 W.F. Thompson Award for Best Student Paper published in 2019 included one of the largest groups of nominated papers in the history of the award. This year, 16 papers published in 10 different journals authored by students from 14 universities were nominated. We are grateful to all of the nominators for the excellent submissions and extend a huge thank you to the eleven reviewers that volunteered time to read these outstanding contributions to field of fisheries!

*2020 W.F. Thompson Award Submissions*

| Student Nominee | Paper Title | Journal Citation |
|---|---|---|
| Echelle Burns | The residency, movement patterns and habitat association of several demersal fish species to the Orange County Sanitation District wastewater outfall | Marine Pollution Bulletin 149: 110638 |
| Lisa Chong | Performance evaluation of data-limited, length-based stock assessment methods | ICES Journal of Marine Science 77: 97–108 |
| Nima Farchadi | Modeling the dynamic habitats of mobile pelagic predators (*Makaira nigricans* and *Istiompax indica*) in the eastern Pacific Ocean | Marine Ecology Progress Series 622: 157-176 |
| Chris Free | Impacts of historical warming on marine fisheries production | Science 363: 979-983 |
| Cameron Freshwater | Individual variation, population-specific behaviours and stochastic processes shape marine migration phenologies | Journal of Animal Ecology 88: 67-76 |
| Keilin Gamboa-Salazar | Effects of age and size on spawning and egg production in gag and scamp grouper off the southeastern United States | ICES Journal of Marine Science 77: 290–299 |
| Abigail Golden | Angler preferences and satisfaction in a high-threshold “bucket list” recreational fishery | Fisheries Research 220: 105364 |
| Madison Kosma | Pectoral herding: an innovative tactic for humpback whale foraging | Royal Society Open Science 6: 191104 |
| Ryan Logan | Home range size and inferred spawning activity of three exploited rocky reef fishes on a large artificial reef | Fisheries Management and Ecology 26: 558–569 |
| Tony Marshak | Competitive interactions among juvenile and adult life stages of northern Gulf of Mexico red snapper (*Lutjanus campechanus*) and a tropical range-expanding congener | Marine Ecology Progress Series 622: 139-155 |
| Mackenzie Mazur | Contributions of a conservation measure that protects the spawning stock to drastic increases in the Gulf of Maine American lobster fishery | Marine Ecology Progress Series 631: 127-139 |
| Vaskar Nepal | High salinity tolerance of invasive blue catfish suggests potential for further range expansion in the Chesapeake Bay region | PLOS ONE 14(11): e0224770 |
| Brendan Runde | Low discard survival of gray triggerfish in the southeastern US hook-and-line fishery | Fisheries Research 219: 105313 |
| Emily Slesinger | Effects of ocean warming on black sea bass (*Centropristis striata*) aerobic scope and hypoxia tolerance | PLoS ONE 14(6): e0218390 |
| Molly Stevens | Life history demographic parameter synthesis for Florida and Caribbean reef fishes | Fish and Fisheries 20: 1196-1217 |
| Douglas Zemeckis | Identifying the distribution of Atlantic cod spawning using multiple fixed and glider-mounted acoustic technologies | ICES Journal of Marine Science 76: 1610–1625 |

# Distinguished Service Award

*Beth Bowers, Florida District*

The Distinguished Service Award was established in 1994 to recognize members who performed outstanding and sustained service to the Institute. Candidates are evaluated by three past presidents of the Institute and selected on the basis of their contributions to the Institute.

AIFRB is pleased to present Beth Bowers with the 2020 Distinguished Service Award for her dedication as AIFRB's Newsletter Editor, bringing a fresh look and creative ideas to the broad content of *Briefs*. Now, accompanied with social media outreach, AIFRB's messaging is not only refreshed, but accessible and globally reaching. Beth's participation and representation as a Florida District member are a testament to the excellence of AIFRB's members and their contributions to the day-to-day operation of the Institute and to fishery science.

Beth is a doctoral candidate at Florida Atlantic University, studying under the guidance of Dr. Stephen Kajiura. Her dissertation focuses on the environmental drivers of movements, migratory patterns, and sexual segregation of the blacktip shark. In addition to her contribution to the AIFRB newsletter, she also serves as the Vice Chair of the FACT Network Steering Committee and on the Nominating Committee for the American Elasmobranch Society. In the past, she served as Vice President and Secretary/Treasurer of the Florida Chapter of the American Fisheries Society Student Subunit.

# Climate Change Statement

Last September, AIFRB joined 110 aquatic scientific societies, representing more than 80,000 scientists across the world, to sign onto the *"Statement of World Aquatic Scientific Societies on the Need to Take Urgent Action against Human-Caused Climate Change, Based on Scientific Evidence"* (https://climate.fisheries.org/world-climate-statement/). The statement has been widely shared over the last few months, and was recently covered in the journal *Nature, Nature Briefing* (https://www.nature.com/articles/d41586-021-00107-x).

The American Fisheries Society spearheaded this initiative, with AFS Past President, Scott Bonar, playing a critical role in engaging so many organizations and professional societies. According to Scott's correspondence with *Nature*, *"the joint statement from the world's top aquatic scientists – who are usually reticent about speaking out en masse – is one of the largest from scientific societies to date."* Several AIFRB member scientific contributions are referenced in the Climate Change Statement, showcasing the impact and reach of our Institute's members.

The Climate Change Statement has been translated and published in Spanish and Portuguese, with additional translations in the works. Additional media coverage:
https://www.azcentral.com/story/news/local/arizona-environment/2020/10/31/fish-scientists-climate-change-arizona/6058931002/
https://insideclimatenews.org/news/23012021/warming-trends-monarchs-science-moms-greta-thunberg-trump-farewell/

# New Member Spotlight

*Robert Hunter – Great Lakes District*

I am a new Student Associate AIFRB member in the Great Lakes District. I have always been a Michigander and my interest in fisheries began here with a rod and reel. That growing interest led to my bachelor's degree at Michigan State University in the Department of Fisheries and Wildlife. While wrapping up my bachelor's degree I had the opportunity to work with the U.S. Geological Survey, Great Lakes Science Center with a primary focus on early life history from southern Lake Huron to western Lake Erie.

In 2016, I began my master's work back at Michigan State University where we used genetic pedigree reconstruction to estimate numbers of spawning adult Lak Sturgeon and describe patterns in adult spawning location. Pedigree reconstruction using only sampled offspring allowed important population demographic estimates and observations in reconstructed habitat use for a threatened species in a large river system where direct estimates are difficult. Results provided evidence that large numbers of adults contributed genotyped offspring and adults spawned at multiple locations in a single spawning season. These behavioral and demographic estimates provide valuable metrics to assess constructed spawning habitat performance and inform future habitat remediation in large river systems.

After publishing my master's work, I have transitioned to the University of Toledo, OH where I am pursuing my PhD working with funding from the Great Lakes Fishery Commission and the Ohio Department of Natural Resources on the Grass Carp (*Ctenopharyngodon idella*) ecology and control project in western Lake Erie. Here, invasive herbivorous Grass Carp pose a serious threat to critical wetland and submerged aquatic vegetation habitat in western Lake Erie. Large-scale, multi-agency removal efforts are underway to address threats from increased herbivory due to population growth and expansion. However, removals are difficult due to the size and complexity of habitat, sampling limitations in shallow, turbid water, and the challenge of finding rare individuals. I am interested in improving Grass Carp capture numbers and describing distributions across life stages by using habitat mapped at fine scales and across multiple seasons to focus adult removal efforts, address uncertainties in habitat carrying capacity estimates, and identify suitable nursery habitat. This work will inform invasive Grass Carp management efforts and responses to future invaders. I hope to continue calling the Great Lakes my home and that my current work will help me find my place among the many excellent Great Lakes fisheries professionals.

While describing my professional journey in brief, I would be remiss not to mention the outstanding mentoring that has provided me with opportunities, inspiration, and direction at every step. Those mentors continue to give me chances to succeed. Importantly, I have been built up as a professional, an individual, and a friend. The fisheries research community is often a small world and as a new member I look forward to meeting and learning from the diverse membership of the AIFRB as I continue to grow professionally. Contact Rob at robert.hunter3@utoledo.edu.

# New Member Spotlight

*Erin Spencer – Florida District*

Erin Spencer is a marine ecologist, science writer, and recent AIFRB member. She's a PhD candidate in the Predator Ecology and Conservation Lab at Florida International University where she studies movement and physiology of great hammerhead sharks and their prey under Dr. Yannis Papastamatiou.

Erin's research has covered a range of topics, unified by a love of fisheries. She received two National Geographic Young Explorers grants to study invasive species, the first of which was in the Florida Keys looking at locals' responses to lionfish. It was a crash course in how to conduct her own research (e.g., she used all of her grant money allocated for food on diving, so had to eat lionfish every day for two weeks).

After graduating from the College of William and Mary, she worked for Ocean Conservancy in Washington, D.C., where she expanded her knowledge of fisheries policy and science writing. After working on projects around federal red snapper management, she decided to pursue the topic in her Master's degree.

Erin's Master's thesis at the University of North Carolina-Chapel Hill, under Dr. John Bruno, focused on assessing two pressing issues in the red snapper fishery in the southeast US; mislabeling of snapper fillets and data deficiency in the recreational fishery. She used DNA barcoding to test "red snapper" samples collected from restaurants, seafood markets, and grocery stores, and found a 72.6% mislabeling rate. Her second focus was in collaboration with the South Atlantic Fisheries Management Council (SAFMC) assessing what motivates recreational fishers to use cell phone applications to report catches to fisheries managers. Now, as a PhD student, she has delved into a different area of research, using biologgers to track movement and behavior of elasmobranchs. Her dissertation work involves assessing speed, turning velocity, and muscle capacity of great hammerhead sharks and their associated prey. She hopes to pursue a job in the federal government or with a nonprofit organization.

Throughout her studies, Erin has continued to pursue her love of science writing and outreach. She's given talks about marine conservation at National Geographic, the Department of Energy, TEDx, and the World Bank, and has published over 100 articles on ocean topics for Ocean Conservancy. She has also published a children's book on coral reefs that will be released in fall of 2021. Erin is passionate about connecting with others who get excited about fish and is very excited to be a part of AIFRB!

# Diversity, Equity and Inclusion

The new *Briefs* Diversity, Equity and Inclusion (DE&I) section includes interviews with individuals who have succeeded in increasing DE&I in the sciences. This section is open to students, professionals, and members who have made efforts to increase DE&I in science. The objective of this segment is to increase awareness of successful strategies and actions to create opportunity for DE&I applications.

## *Jasmin Graham – President, CEO, and Co-Founder of Minorities in Shark Sciences*

Jasmin is an elasmobranch ecologist and taxonomist. Her past research studies included hammerhead shark phylogeny and the movement ecology of smalltooth sawfish. She is a member of the American Elasmobranch Society, where she has served on the Student Affairs Committee for two years. Jasmin has interned with the Florida Fish and Wildlife Conservation Commission (FWC) Division of Marine Fisheries Management, and the Smithsonian Environmental Research Center. She worked as an instructor for the Florida State University Office of STEM Teaching Activities "Saturday at the Sea" program. She is currently employed by MOTE Marine Laboratory as the Grant Project Coordinator for the MarSci-LACE project, which open doors for underrepresented, minority students to enter and excel in the field of marine science. Jasmin is passionate about science education and making science more accessible to everyone. In addition, she is the Co-Founder of Minorities in Shark Sciences, a group that supports and promotes the career growth of women of color and helps them to overcome the financial barriers that have historically kept women of color out of shark science. She was also an organizer for the 2020 "Black in Marine Science Week," is a member of Black Women in Ecology, Evolution and Marine Science (BWEEMS) and a Safina Center Launchpad Fellow.

***What is your current position and what is the focus of your research/work?***

I wear many hats and do many things. I am the Project Coordinator for the Marine Science Laboratory Alliance Center of Excellence (MarSci-LACE) at Mote Marine Laboratory. MarSci-LACE is a program focused on understanding best practices to recruit, support and retain minority students in marine science. I am also the President/CEO of Minorities in Shark Sciences (MISS), an organization dedicated to supporting women of color interested in shark science. In addition to this, I study elasmobranch movement ecology. My current research focuses on understanding the movements of the critically endangered smalltooth sawfish.

***What inspired you to enter the field of fishery science?***

I grew up doing a lot of fishing with my dad and grew to love the ocean. I want to make sure that we have healthy fish populations so that future generations can experience the joys of fishing and exploring healthy marine ecosystems.

***What is your professional outlook for diversity, equity, and inclusion in fishery science?***

I think fishery science has the potential to become increasingly inclusive and more representative of the global population. People are finally starting to acknowledge the effects of colonialism and

oppression in various aspects of society, science included. Acknowledging there is a problem is the first step to solving it.

***What is the importance of diversity, equity, and inclusion today and for the future of fishery science?***

It is my hope that everyone will have a seat at the table when it comes to fishery discussions, because it is impossible to effectively manage without stakeholder buy in. Until everyone feels their voice is heard and is invested in sustainable fisheries, our policies will continue to fall short of providing the necessary protections.

***In what way(s) have you influenced diversity, equity, and inclusion in the field of fishery science?***

The creation of MISS has shown people throughout the science community that people of color are in fact interested in fishery science. It has been a bold proclamation that dispels the myth that people of color don't have interest in this field and forces organizations to acknowledge that the lack of diversity within their organizations is the result of exclusionary practices and not a lack of interest. MISS has also given a collective voice to the frequently ignored. Representation matters and having a group like this has already done a lot to inspire the next generation of scientists. Similarly, MarSci-LACE is making great strides to understand how to build inclusive programming that not only provides interns with hands-on research experience, but also provides them with professional development, networking opportunities and creates a supportive and race-positive environment.

***What needs to be done to increase diversity, equity, and inclusion in fishery science (e.g., through research, education, grant funding)?***

First and foremost, we must address the systemic barriers underrepresented minorities face. Wealth disparities, poorly-funded schools, conscious and unconscious biases, pay gaps and discrimination are just a few of these systemic barriers that make it more challenging for marginalized groups to succeed in STEM. Some ways that we can combat this in fishery science are 1) providing paid research experiences for people who wouldn't otherwise get these experiences, 2) doing outreach with schools in under-served communities, 3) acknowledging our own privileges and biases, 4) using bias interrupters in evaluation and hiring metrics, and 5) creating race-positive environments where we acknowledge and actively celebrate cultural differences instead of ignoring them or creating situations where people feel the need to assimilate or conform.

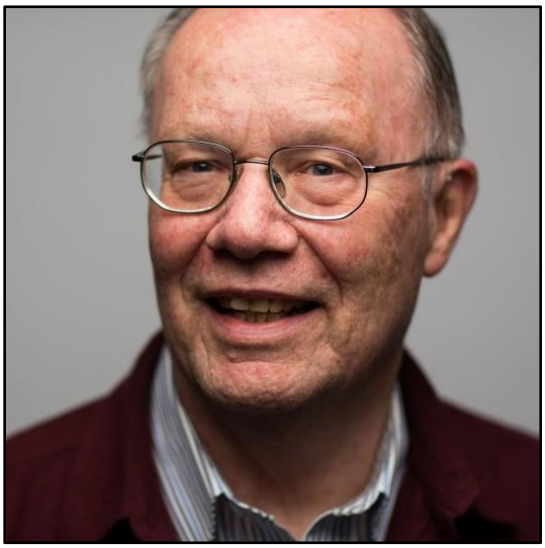
***What can AIFRB do to increase diversity, equity, and inclusion in this field?***

AIFRB can educate their members, sponsor diversity, equity and inclusion projects as well as amplify scientists of color and organizations working to change the status quo in fishery science.

# A Celebration of Life

*Bruce Stuart Miller – Past Washington District Director*

April 30, 1936–October 31, 2020



On 31 October 2020, Bruce Stuart Miller, Professor Emeritus at the University of Washington School of Aquatic and Fishery Sciences, passed away at the age of 84. Born in Worcester, Massachusetts, Bruce was raised in Iowa City, Iowa with his three brothers. He studied chemistry and biology at Grinnell College and did his graduate research at the University of Washington (MS 1965, PhD 1969), where he studied the life history of flathead sole off Orcas Island, Washington.

Bruce served the UW School of Fisheries and Aquatic Science as a Professor at for 27 years, retiring in 2002, and continued to serve the University actively as Professor Emeritus for 18 years. Bruce was widely known and highly regarded for his expertise on the biology, ecology, and life history of marine fishes. His 2009 textbook, *Early Life History of Marine Fishes* (Arthur Kendall, Jr., co-author), continues to influence and guide marine scientists.

Bruce worked extensively at UW's Friday Harbor Marine Labs on San Juan Island, conducting research, teaching marine fish biology and ecology courses, and mentoring undergraduates in their research apprenticeship program. Donations in Bruce's name can be made to the Friday Harbor Labs Discretionary Fund: https://fhl.uw.edu/about/community/scholarship-fellowship-funds/

# Young Professional Spotlight

*Max Murray – Southern California District*

***What is your current position and what is the focus of your research/work?***

I am currently an Associate Biologist at ECORP Consulting Inc. My work for ECORP is generally involved with biological and environmental studies that focus on sensitive environmental resources in southern California. This allows me the opportunities to work with a wide range resources in varying habitats throughout southern California.

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

I graduated from California State University, Long Beach in 2012 with a BS in Marine Biology. I received my MS in Biology from the University of California, Los Angeles in 2019. My research as well

as my mentors along the way have been a huge influence for me as a professional biologist. In particular, I was advised to follow my passion and be adaptable which has been crucial in my career.

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

Many of the species that I study, both academically and professionally, are of particular interest to governing agencies due to their conservation status and function as essential fish habitat. For example, during my graduate career I studied an introduced population of suckers (*Catostomus santaanae* and *C. fumeiventris*) and arroyo chub (*Gila orcutti*) in the Santa Clara River in Ventura County, California. While all three of these fishes are not protected in the Santa Clara River, they are of special concern in their native drainages due to habitat loss, competition from introduced species, and infectious disease.

***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)?***

I am hopeful that fisheries management in the United States will take a more integrative approach in the future. Other than species that are important for aquaculture or recreational stocking programs, little is known about infectious disease in wild fish populations across North America. This is especially true for freshwater fishes which face a myriad of other threats in their native habitats.

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

I believe that, as a biologist, perspective is important especially in the highly dynamic field of fisheries management. Young fishery professionals bring new and differing perspectives to the ever-changing challenges in conservation, commercial regulations, and sportfishing that professional fisheries biologists deal with on a regular basis. The quality of the young fisheries professionals in my cohort and the next cohort is inspiring and makes me hopeful for the future of fisheries management.

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

AIFRB has been a society known for its established fisheries researches in southern California and throughout the United States. As a young fisheries biologist, AIFRB gave me an interface with the leading fisheries managers, biologists and consultants in my region. AIFRB was influential in my graduate research by providing travel funds via the Clark Hubbs Research Award. AIFRB provides a community for young professionals to meet, share ideas and network with fisheries managers not just in their region but through North America

**Please contact Max (maxdmurray@gmail.com) to continue the conversation!**

# Young Professional Spotlight

*Matthew Woodstock – Florida District*

***What is your current position and what is the focus of your research/work?***

I am currently a PhD student at Florida International University in the Fisheries and Ecosystem Assessment Lab, which is located in North Miami, FL. My dissertation involves developing multi-species models for the oceanic (seaward of 1000 m isobath) Gulf of Mexico, with an emphasis on the trophic connectivity between mesopelagic fishes with tunas and billfishes. This project is part of the Deep Pelagic Nekton Dynamics of the Gulf of Mexico Consortium (DEEPEND) www.deependconsortium.org

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

I graduated from Beloit College in 2015 with a BS degree in Ecology, Evolution, and Behavioral Biology. In the spring of 2018, I received an MS in Marine Biology from Nova Southeastern University and started my PhD that fall. I have had great mentors that have been encouraging and provided phenomenal advice. In particular, I was taught the importance of developing a diverse quantitative skillset, which has helped form collaborations with other researchers.

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

The offshore Gulf of Mexico is the temporary home for highly migratory commercial species (tunas and billfishes), which are monitored by NOAA and/or ICCAT. Multi-species models encompass these fishes, as well as other species within the ecosystem. My research will allow fisheries managers to practice ecosystem-based management when adjusting regulations.

***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)?***

I believe we are in the beginning stages of implementing ecosystem-based fisheries management in this country (as well as much of the world). We do a great job of monitoring from a single-species approach, but indirect ecosystem effects (e.g., declines in prey abundance over time) are often not included in this method. The influx of data regarding the life histories and population levels of non-commercial species is filling the gaps necessary to develop robust ecosystem models. We have a long way to go in terms of data collection and model development, but I believe an ensemble modeling approach (including multi- and single-

species assessment methods) will become more commonplace in management.

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

Young fishery professionals are going to drive the way management proceeds in the future. As human-caused stressors continue to disturb ecosystems, I believe young fishery professionals will develop innovative methods that advance our ability to manage marine fisheries. Personally, I believe young fishery professionals must be relentless in our efforts to manage the stocks of highly migratory species, both within national economic boundaries and in the high seas.

***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 was introduced to AIFRB through other young professional members. I had been looking for opportunities to get involved with professional societies and the AIFRB mission aligned with my interests. I wanted to be a part of a community of researchers that did similar work. Other young professionals should consider joining AIFRB because of the resources provided (networking events, workshop announcements, and awards).

**Please contact Matthew (fishesofthedeep@gmail.com) to continue the conversation!**

## Current Research

*John Tiedemann – Keystone District*

**Director - Monmouth University Marine and Environmental Biology and Policy Program**

***Stripers for the Future*** is a research and education campaign initiated in 2011 as a collaborative effort with the recreational angling community. The goal of ***Stripers for the Future*** is to develop and disseminate scientific information on local striped bass populations that allows anglers to contribute to the conservation and long-term sustainability of the striped bass fishery. Research projects underway as part of the ***Stripers for the Future Campaign*** include:

*Assessing Impacts of Catch-and-Release Practices on Striped Bass*
The objective of this project is to use rapid assessment techniques to identify stress imparted to surf angled striped bass resulting from various angling and handling techniques in order to develop and disseminate scientifically based recommendations on best practices for catch-and-release.

*Sources of Striped Bass in the Mixed-Stock Recreational Fishery in Northern New Jersey*
The objective of this project is to use DNA analysis to identify the stock-specific origin of striped bass in the fall mixed-stock fishery in northern Ocean County, New Jersey and estimate the contribution of individual spawning stocks to the fishery.

*Movement Patterns of Striped Bass in the Coastal Waters of Northern New Jersey*
The objective of this project is to use acoustic telemetry to understand what season's striped bass use select coastal waters of Monmouth and Ocean Counties in New Jersey, if distribution changes with seasons, and if individual fish have different movement patterns within these waters.


Educational highlights of the *Stripers for the Future* campaign to date include:
Production and distribution of a *Striped Bass Catch-and-Release Best Practices Roundtable* video where a group of scientists, anglers, and authors 'talked story' about what anglers can do to ensure survival of released stripers. Watch YouTube Video Here!

Feature articles in popular recreational angling magazines:
**On the Water Magazine**, January 2013
*Stripers for the Future: Employing Best Practices to Increase the Survival of Released Striped Bass*
**The Fisherman Magazine**
*Ensuring Stripers for the Future*, October 2015
*The Forage Factor: The Eclectic Striped Bass Diet*, July 2017
*The BOFFF Principle: Do Bigger Stripers Make Better Spawners*, November 2018
*Unraveling Striper Migrations, Movements and Population Dynamics*, October 2020

Distribution of 2,000 posters, 2,000 brochures and 5,000 laminated weight-at-length cards highlighting catch-and-release do's and don'ts via bait and tackle shops, marinas, saltwater fishing club meetings, fishing expos, and other recreational angling events throughout New Jersey.

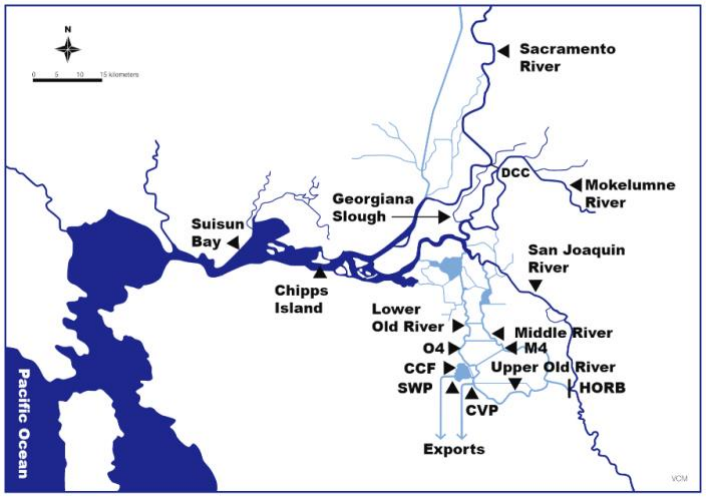
Presentations on striped bass life history, conservation, and management at saltwater fishing club meetings, fishing expos, and other recreational angling events throughout New Jersey.

## Published Research

*Andy Jahn – Emeritus Member*
*Bill Kier – Northern California District*

Check out a recent article authored by Andy Jahn and Bill Kier of the Northern California District:

Jahn, A. and Kier, W. 2020. Reconsidering the Estimation of Salmon Mortality Caused by the State and Federal Water Export Facilities in the Sacramento-San Joaquin Delta, San Francisco Estuary. San Francisco Estuary and Watershed Science 18(3).




Read the full article here: **https://escholarship.org/uc/item/5gr7h7nm**

*Figure from Jahn and Kier, 2020*

# Briefs Throwback – Volume 1, Number 3

In October 1972 (*Briefs* Volume 1, Number 3), Dr. Walter J. Hogman from the Virginia Institute of Marine Science (VIMS) contributed an article to *Briefs*, titled "Hurricane Agnes Effects on Fisheries." Agnes was a Category 1 hurricane that made landfall on the Florida panhandle. The storm dumped an estimated 10 to 14 inches of rain on Maryland, Virginia and Pennsylvania and killed 122 people along the East Coast.

## *HURRICANE AGNES EFFECTS ON FISHERIES – Dr. Walter J. Hogman, VIMS*

In addition to widespread human life and property loss, a hurricane has great potential effects on coastal fisheries. The primary mode of destruction is the change in salinity throughout the estuaries.

*Photo credit: www.lancasteronline.com*

When Hurricane Agnes struck, June 19-21 (1972), it dumped massive amounts of freshwater in Chesapeake Bay's 64,000 square-mile drainage. This water began running to sea, normal tidal excursion was interrupted, and freshwater covered valuable oyster and clam beds throughout the tidewater area.

In lower Chesapeake Bay, the Virginia Institute of Marine Science mounted a major investigation program under Dr. William J. Hargis, Jr., Director, and Dr. Jackson Davis, Assistant Director. A multidisciplinary group began studying hydrographic effects of Agnes, erosion and sedimentation, nutrient and pesticide loading, bacterial contamination, current patterns and tidal recovery, plankton distributions, fish larvae transport, change in adult fish distribution, mortalities of oysters and clams, and effects on the crab populations.

*Photo credit: www.washingtonian.com*

The precise and long-term effects of Agnes on the fisheries resources may never be known, but the results from this summer's work allow some tentative conclusions. Oysters in the James River experienced approximately 20% mortality over a two-month period due to prolonged exposure to low salinity water, according to Dr. Jay Andrews. The mortalities were greatest in the upper reaches of the normally saline zones and the shallow water beds were affected more than the deeper. The Potomac River and the Rappahannock River also lost large quantities of oysters. The stocks along the Atlantic Ocean were not seriously affected.

Blue crabs were displaced downstream by Agnes and catches declined in most areas for several weeks. Because of their mobility, the blue crabs apparently did not suffer extensive mortality. The 1972 larvae were probably most affected, but the results are not yet clear.

Transport of larval fishes out of the James and Rappahannock was considerable over the first 10 days after Agnes. Preliminary calculations by Dr. W. J. Hogman based on catches made during maximum flow, indicate 40-80 million larval fish may have been lost per day in the Rappahannock. Other

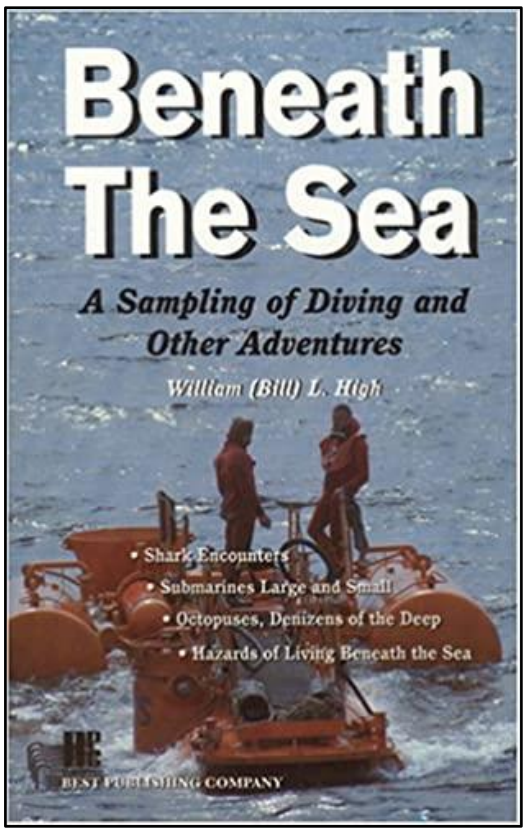
planktonic forms were also flushed out and this fish food loss could conceivably further reduce year-class strength of the species collected.

Adult fishes were not affected appreciably by Hurricane Agnes. Trawling operations just after the storm, and repeated in late August, indicated the freshwater runoff merely displaced the adults downstream 15-40 miles. By late summer when salinities had returned to near normal, the adults were distributed as before the storm.

The above can only represent a sketch of flood effects on fisheries, or more precisely, freshwater pollution of saline zone fishery resources. The complete story will take years of follow-up investigation. The Maryland and Virginia oyster stocks have certainly been reduced. In Virginia waters alone, John Pleasants of VIMS estimates there has been a $7.9 million loss due to oyster mortalities up to the end of July 1972. Dollar losses of fish and crab stocks can only be evaluated in later years.

## Fish Tales, The Golden Years

### *Bill High – Founder of Professional Scuba Inspectors*



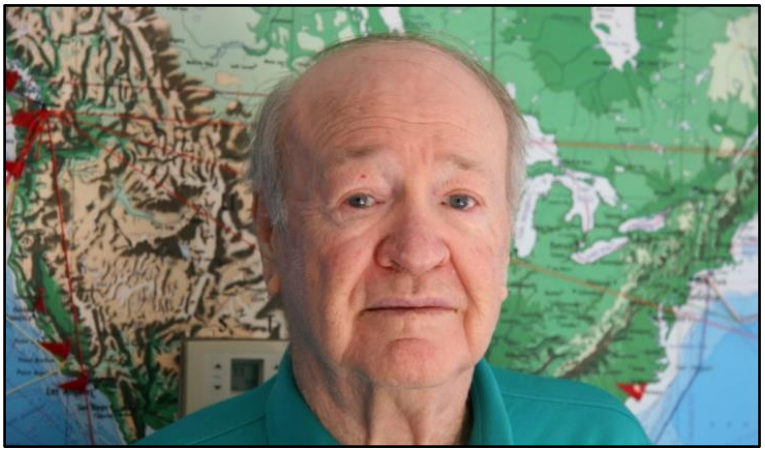

In early August 2020, Wally Pereyra sent to several fisheries colleagues a couple of stories about his fisheries experiences in the good old days when so many of us were young, adventurous, and working throughout the North Pacific fisheries world. It occurred to me that my Book, *Beneath the Sea*, a collection of true short stories, was well received in the diving community and beyond. I reasoned that there must be many good stores to be told by those who served in the field of fisheries so long ago. Bill Hershberger was kind enough to send to his extensive list of "old timers" my request for those adventurous tales. I simply gathered the great reports into this compendium. I hope you enjoy the many fascinating experiences.

*Background*

I am sure you also recall an experience or adventure that occurred while pursuing some field or lab project that your colleagues might enjoy. Because there must be many such stories (often more humorous now than when it happened) worth sharing with those of us still alive and hopefully kicking, I am prepared to gather your short stories about some experience you had during your career.

The tale should be generally about 600 words or less. If typed to a computer file, it should be emailed to me (psicylinders@msn.com) as a pdf file. Please include a story in 600 words or less. Include names of those who were there and a photo if it clarifies or enhances the story. It's your story so no editing would be done. When the stories are assembled, you will receive a computer file with all the assembled stores included.

## *Lee Alverson 1970* from the "Golden Years of Fisheries" *by Bill High*



*Dr. Lee Alverson (1924-2013); photo credit: www.fisheriesconservation.org*

Shortly after I moved into my office in the old Montlake Lab next to the elevator, Center Director Lee Alverson came in one morning on his way up to his office. He sat down and asked how my project was progressing. I began what was to be an extensive overview. After about one minute, Lee said thanks and went on his way. Nearly every day thereafter Lee would make that same stop. Fortunately, I quickly learned my lesson. Lee wanted and thereafter got a one-minute summary.

By 1970, Lee was NMFS Director in Washington DC. Al Beardsley and I went to DC in preparation for our mission in the Tektite undersea habitat. Our meeting was not associated with Lee's office, but he knew we were in town so sent a message that we should stop by his office.

We two non-script looking young men (no suit and tie) walked down the long corridor toward Lee's secretary's station. As we passed open office doors the occupant glanced up then seemed to stare at these strangers. Along one wall were several occupied chairs. We identified ourselves to the secretary and said that **Lee** (not Director nor Dr. Alverson) had asked for us. She said the director was with someone, but she would tell him we were there.

Promptly the visitor came out and we were ushered into the big, elaborate office. The very nice secretary quietly told us that Dr. Alverson could only give us 10 minutes as others were waiting. It was those properly suited people sitting in the chairs that had appointments with "the Boss" and they were blatantly surprised that two folks they had never seen before could just walk up, refer to the Director by his first name and be promptly ushered into Lee's presence.

Lee greeted us warmly and told us to pull up chairs near a coffee table. "Prop your feet up and tell me about your undersea mission and how are things at Montlake" he said. We reported while the minutes ticked by. All too soon, I noted the 10 minutes were up, but Lee continued to inquire. After about 20 minutes the secretary came in and Lee apologized for having to end the chat.

Now, the visitors in the chairs were clearly annoyed and I know they were thinking "who the hell are these strangers that were granted a too long meeting with the Director". As we slowly walked down the hall some of those who were seen staring at us earlier were now at their office door trying to be casual, but they too clearly wanted to know who the two strangers were. I hope no one told them so they will always wonder who those strangers were. Some months later Lee named me to an UN FAO committee that required me to twice go to Rome.

# Award Nominations

## *2021 Outstanding Achievement Awards – Dick Beamish, Chair*

The Outstanding Achievement Awards recognize sustained contributions of significant publications, exceptional service to the fishery profession, outstanding teaching or training programs, important discoveries or inventions and significant contributions to the advancement of fishery science. The awards are AIFRB's highest recognition for achievement for individuals and groups. One nominee will be selected for both individual and group awards each year; all nominees remain in consideration for three years.

*Nomination Instructions:*
Nominations may be submitted for the individual or group award. The nomination should include a letter fully describing how the nominee meets the criteria for the award and may include additional supporting materials, such as letters of support, notable publications, press coverage, etc. Nomination letters should include the name and contact information of the nominee, as well as the nominator. Submissions in MSWord or as pdf documents are required.

**Submit nominations to:**
**Chair, Dick Beamish**
**Richard.Beamish@dfo-mpo.gc.ca**
**Subject: AIFRB Outstanding Achievement Award Nomination**

## *2021 W.F. Thompson Award – Steve Cadrin, Interim Chair*

The W. F. Thompson Best Student Paper Award is given annually to recognize excellence in research, as well as to encourage student professionalism in fisheries and aquatic sciences and publication of research results. All scientists are eligible as long as the senior author conducted the research while a student in the field of fisheries/aquatic sciences. The award includes a check for up to $1,000 and a one-year membership to AIFRB.

*Nomination Instructions:*
Nominations for the award may be submitted by the author or a 3rd-party, including academic advisors, supervisors, colleagues, etc. The submission package should include: 1) a letter of nomination; 2) the student's resume or CV, including details of education and employment and; 3) a copy of the publication. Submissions in MSWord or as pdf documents are required.

**Submit nominations to:**
**Interim Chair, Steve Cadrin**
**scadrin@umassd.edu**
**Subject: AIFRB W.F. Thompson Award Nomination**

## *2021 Clark Hubbs Research Award – Jerry Ault, Chair*

The Clark Hubbs Research Award was established in 1986 to support travel expenses associated with professional development. The award is granted to cover travel expenses associated with presenting results of an original research paper or project at scientific meetings or to conduct research at distant study sites. It is offered annually to graduate students and Professional Associate members in good standing with a monetary award up to $500.

*Application Instructions:*
Applications for the award should be submitted by the graduate student or Professional Associate including: 1) contact information; 2) research abstract, including the title of the research presentation or study; 3) name of the meeting where research will be presented or location where research will be conducted; 4) a letter of support from an academic advisor or supervisor; and 5) a resume or CV. Submissions in MSWord or as pdf documents are required.

**Submit nominations to:**
**Chair, Jerry Ault**
**jault@rsmas.miami.edu**
**Subject: AIFRB Clark Hubbs Award Application**

## *2022 Kasahara Early Career Award - Steve Cadrin, Chair*

The American Institute of Research Fishery Biologists established the Kasahara Early Career Award in 2006 to honor the memory of Dr. Hiroshi Kasahara and the lasting contributions made by Dr. Hiroshi and Mrs. Toshiko Kasahara to fisheries science and the work of the Institute. The Kasahara Award is intended to recognize the Institute's most promising young associates and members early in their research careers. A committee comprised of five individuals was appointed by the President to determine guidelines and procedures for the award. The award was presented to Jamal Moss in 2007, John Field in 2010, and Abigail Lunch in 2019. AIFRB is now soliciting nominations for a 2022 award.

*Nomination Instructions:*
Nominations for the award may be submitted as a self-nomination or from a 3rd-party AIFRB member in good standing, including academic advisors, supervisors, colleagues, etc. The nomination should minimally include the nominee's name and contact information, and may include additional supporting materials, such as a letter of support detailing the qualifications of the nominee.

All nominees will be contacted by the Kasahara Award Committee Chair and requested to submit a current resume or CV, including a list of publications, and a one-page summary of how the award would be used to promote the nominee's research. Submissions in MSWord or as pdf documents are required.

**Submit nominations to:**
**Chair, Steve Cadrin**
**scadrin@umassd.edu**
**Subject: AIFRB Kasahara Award Nomination**

# Fellowship Opportunities

*Knauss Fellowship (https://seagrant.noaa.gov/insideseagrant/Knauss-Fellowship)*

Sea Grant's John A. Knauss fellowship program provides a unique educational and professional experience to graduate students who have an interest in ocean, coastal, and Great Lakes resources and in the national policy decisions affecting those resources. The fellowship is named after one of Sea Grant's founders, former NOAA Administrator John A. Knauss. It matches nationally selected finalists with host offices of the Federal government located in the Washington, D.C. area for a one year nonrenewable, paid fellowship. Fellowships are subject to the availability of federal resources and occur on a February 1 to January 31 cycle.

The class of fellows is split into two cohorts—legislative and executive. Each year, legislative fellows are selected to work in the U.S. House of Representative and U.S. Senate. Fellows can be placed in both personal and committee offices. Executive fellows are placed in Federal agencies with marine policy relevant missions. Executive fellows have served on the Committee on the Marine Transportation System, Department of Energy, Department of Interior, Department of Transportation, Environmental protection Agency, Marine Mammal Commission, National Oceanic and Atmospheric Administration, National Science Foundation, Oceanographer of the Navy, State Department, Smithsonian Institute, US Army Corps of Engineers, US Coast Guard, and the White House.

Information for hosts, prospective and existing fellows is available through this site. General information about the fellowship, including application process and alumni information, can be found at seagrant.noaa.gov/knauss.

https://seagrant.noaa.gov/insideseagrant/Knauss-Fellowship/Prospective-Fellows

# Job Openings

*Natural Resources Area Supervisor – Lanesboro Area Fisheries Supervisor*

The Minnesota Department of Natural Resources is currently soliciting for a position to supervise and administer the planning, implementation and evaluation of a comprehensive fisheries management program in the Lanesboro Fisheries Management Area to protect, sustain and enhance fisheries and other aquatic resources.


Apply here!

If you have questions about the position, contact Brian Nerbonne at brian.nerbonne@state.mn.us

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