BRIEFS – The Official AIFRB Newsletter Volume 48, Number 4

President's Message

Dear Members,

I'm pleased to report that another productive board meeting was held at the joint conference of the American Fisheries Society (AFS) and The Wildlife Society (TWS) in Reno, NV. In addition to a successful symposium organized jointly by AFS, TWS and AIFRB titled, *Marking, Tagging and Tracking of Fish and Wildlife*, AIFRB hosted its annual networking social with the generous support of co-sponsors Lotek and Advanced Telemetry Systems (ATS). Both events drew much attention, were highly attended and offered AIFRB members and colleagues a week-long opportunity to share ideas and network. Be sure to read about the meeting in this issue of *Briefs*.

We welcome our newest AIFRB members to the Board of Directors. Emily Slesinger (Ph.D candidate, Rutgers) as our new Social Media Director. Emily is off to an energetic start in rejuvenating AIFRB's social media presence. Follow us and stay connected on our newly revived Twitter and Instagram accounts @aifrb_fishery_biologists. Sara Pace is a research scientist with the Gulf Coast Research Lab joining us as the Mississippi District Director. Sara is an invertebrate fishery biologist in a district that supports a productive shellfish fishery. We also welcome Jeff Vieser, recently elected District Director of the Capital District. Jeff will step in as Mark Chandler steps down. Thank you Mark—for your service to the Institute—and congratulations Jeff. We will continue to expand our board and are still seeking an AFS-AIFRB Liaison and District Directors. If you're interested in contributing to AIFRB at the board level, we welcome a conversation on how you can participate. Please contact me if you're interested and I'd be happy to answer any questions you have.

Recently, we held an email-based election for the position of President-Elect and I thank you all for voting. I'd like to confirm and congratulate Cate O'Keefe, our new President-Elect for the next year! Cate will transition to AIFRB President at our 2020 Board of Directors meeting in Columbus, Ohio.

As we close out the year, I'd like to thank the Board and our members for a great year, renewed enthusiasm and continued growth. Most importantly, be safe in your travels and celebrations this holiday season. I look forward to picking up in 2020!

Sincerely,

Kim Anthony
President
kim.anthony@aifrb.org

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Table of Contents

Current Member Spotlight

Abigail Golden has been an AIFRB Keystone District member since early 2019. She earned her B.A. from Columbia with a thesis that investigated the conservation attitudes of Fijian artisanal fishermen. Now, she is a fourth-year Ph.D. candidate in Ecology and Evolution at Rutgers University. Her research with Dr. Olaf Jensen of Rutgers University focuses on the emerging recreational fishery for taimen, *Hucho taimen,* in Mongolia. Taimen is the largest species of salmonid in the world, attaining lengths of up to two meters, and it is listed as Vulnerable on the IUCN Red List because of overfishing and habitat loss. Abigail uses a mix of social science and ecological methods to understand how human behavior, environmental conditions, and fish populations interact in ways that can affect the long-term sustainability of the taimen fishery. Her work ranges from qualitative interviews with international taimen fishers (recently published in Fisheries Research) to an observational study assessing how extreme water conditions affect Mongolian salmonids' vulnerability to fishing.

Alongside her dissertation research, Abigail has used this social-ecological approach to investigate the management preferences of recreational bottomfish fishers in New Jersey's black sea bass, summer flounder, scup, and tautog fishery. This ongoing project with AIFRB Keystone District Director Dr. Doug Zemeckis intends to help guide management of New Jersey's recreational bottomfish fishery by identifying regulatory options that can maximize anglers' satisfaction and economic revenues from the fishery while maintaining conservation goals. Abigail is also an active member of her Rutgers University graduate student association, where she is developing a "data club" for graduate students and early career professionals to share coding techniques and troubleshoot analyses. When she is not in the field or the office, she can be found contra dancing with the Princeton Country Dancers.

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Angler preferences and satisfaction in a high-threshold bucket-list recreational fishery

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[c] Bren School of Environmental Science and Management, University of California, Santa Barbara, Santa Barbara, CA, USA

Brendan Runde – North Carolina District

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

I am currently a PhD Candidate at NC State University. I am fortunate to work from our coastal research facility called the Center for Marine Sciences and Technology (CMAST) in Morehead City, NC. My dissertation investigates varying approaches to managing reef fishes, like snappers and groupers, off the US Atlantic coast.

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

I graduated from Virginia Tech in 2013 with BS degrees in Biology and Fisheries Science. I received my MS from NC State in 2017 before immediately matriculating to the PhD program in the same lab group. I credit influential mentors for their encouragement and invaluable advice along the way to my current position; in particular, I was told to carve out a niche in which I was able to work with species and issues of personal interest.

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

The majority of the species that are affected by my research are of current or historical economic importance. One example of the influence of my work is the recent passing of a requirement for descender devices on fishing vessels in the US south Atlantic. My research on the efficacy of these tools to promote survival of released groupers was critical to bringing this issue before the South Atlantic Fishery Management Council.

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 that we are in the adolescent stages of recreational fisheries management in this country. The popularity of recreational fishing has increased mightily in the last several decades, which has dramatically changed fisheries research needs. For example, for fisheries where the releases exceed harvests, quantifying release mortality is of burgeoning importance. Furthermore, estimating recreational fishing statistics has proved challenging, as the number, locations, and fishing success of recreational vessels is often impossible to determine. I

believe that angler education, outreach, and the development of new survey programs will be crucial to strengthening the collection of fisheries data that are vital to management.

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

As with any discipline, the future of fisheries science depends on the young generation. Our perspective is likely to be different from that of those who came before us. For instance, as the climate crisis intensifies, I believe young fishery professionals will lead the way in reshaping management to accommodate for changes. In addition, I believe that our field has problems with recruitment and retention of high-quality individuals. Young professionals in our field must be ambassadors to high school and college students and advocate for them to consider careers in fisheries.

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 encouraged to join AIFRB by several other young professional members. Prior to my decision to join, I read the mission statement of AIFRB's website. Upon reading that AIFRB was organized "to promote stewardship, sustainability and wise utilization of natural resources," I was sold: this adequately describes my personal mission statement as well. The resources that AIFRB offers to its members (networking, awards, etc.) are the #1 reason why other young professionals should consider joining.

Please contact Brendan (bjrunde@ncsu.edu) to continue the conversation!

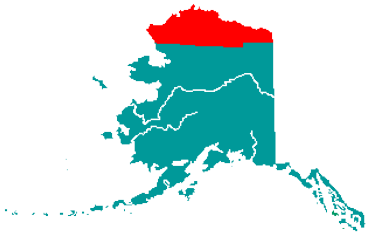
AIFRB Position Opening

AFS – AIFRB Liaison

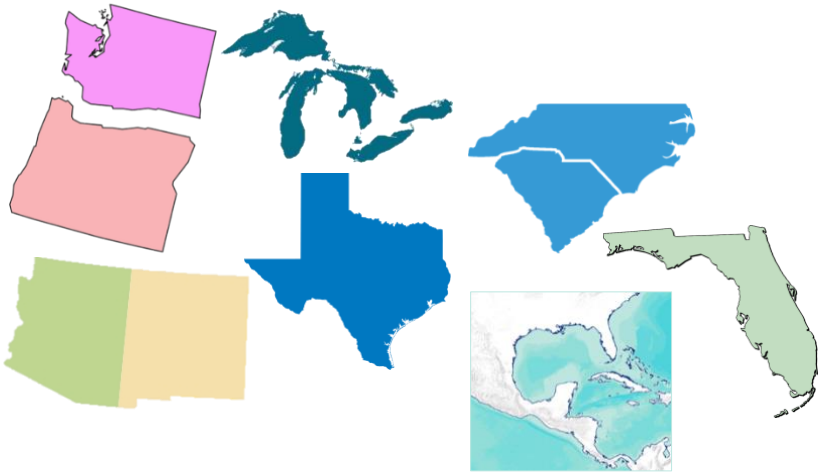
Are you looking to get more involved with AIFRB? Are you also active in AFS? We are looking for a new AIFRB-AFS liaison for the upcoming year. Duties include organizing an AIFRB sponsored symposium at the annual AFS meeting and updating both organizations on what the other is doing. This is an excellent position to network with scientists across multiple disciplines of fisheries science. If you are interested please feel free to reach out to our current AIFRB-AFS liaison, Sean Lucey, at Sean.Lucey@NOAA.gov.

AIFRB Position Opening

District Director Vacancies – Now Seeking Nominations!



The Institute has vacancies for District Directors in the following Districts: Northern Alaska, Southeast Alaska, Pacific Northwest Super District (Washington, NW Oregon – SW Washington), Oregon, the Great Lakes, the Carolinas, Arizona/New Mexico, the Gulf of Mexico, Texas, and Florida. These present excellent opportunities for members to get more involved with the Institute in a leadership role in order to help advance our mission, including the professional development of members and the advancement of the field of fisheries science. District Directors are elected by the membership of each District to serve two-year terms and they are responsible for promoting the Institute activities at the regional level, including the recruitment and advancement of members, as well as organization of regional meetings and activities. District Directors also serve on the AIFRB Board of Control to be involved with leadership of the Institute on a national level. Therefore, serving as a District Director presents individuals with many opportunities for professional and personal development while serving in these rewarding roles and making meaningful contributions to our field.



If you are interested in nominating someone (including self-nominations) for one of these vacancies, then please contact Kim Anthony by November 1, 2019.

AIFRB Position Filled

Social Media Director – Emily Slesinger

Emily Slesinger first found her fascination for fish while an undergraduate at the University of California, Santa Cruz studying Marine Biology and Environmental Science. This passion led her to move across the country where she is now a PhD candidate at Rutgers University studying fish physiology to help guide sustainable fishing under a changing climate. Her current research is focused on the northward shift in black sea bass, an important East Coast fisheries species. Specifically, she is studying the effects of ocean warming through a variety of physiological laboratory studies, field sampling, bioenergetic and fecundity analyses, otolith microchemistry, and more! One of her favorite aspects of her research is working with fishers and spending many wonderful hours on the water fishing. When she is not in the field or the lab, you can find Emily trail running or making various types of fish art.

AIFRB Position Filled

Mississippi District Director – Sara Pace

Currently, Sara Pace works at the Gulf Coast Research Laboratory, primarily focusing on a Dermo and mortality monitoring program for the eastern oyster in the Mississippi Sound. Additionally, Sara works on various surfclam and ocean quahog projects as a researcher and administrative assistant for the Science Center for Marine Fisheries, an NSF Industry-University Cooperative Research Center (IUCRC), whose mission is to utilize academic and fisheries resources to address urgent scientific problems limiting sustainable fisheries. This work has given Sara the opportunity to interact with fishers, industry members, fishery managers, and the public as we work together towards creating sustainable fisheries. Sara earned a B.S. in Marine Vertebrate Biology at Stony Brook University in 2014, after which she pursued a Master's degree in Coastal Sciences at USM's Gulf Coast Research Laboratory. Her graduate research focused on the development of population age frequencies and the evaluation of growth rates for four populations of ocean quahogs, the longest-lived, noncolonial animal on Earth, with a life span exceeding 500 years.

As Mississippi's new District Director, she hopes to foster AIFRB membership in the region, organize events to bring members together to share their research, and to bring attention to our critically important invertebrate fisheries amongst a finfish-centric fishery industry.

AIFRB Position Filled

Capital District Director – Jeffrey Vieser

Jeff first ventured into the Capitol District in 2014 as a Knauss Fellow in NOAA Fisheries Office of Science and Technology in Silver Spring, MD after completing his M.S. degrees in Marine Biology and Marine Policy at the University of Maine. Today you can still find him in the office, just a few cubes over, working as the Project Lead for national stock assessment tracking and reporting. In his professional life, Jeff's interests center on the interface between science and policy. Most of his time is spent thinking about how to design policies and guidance that are straightforward, evidence-based, and adaptable to various circumstances. He also works on the development of communications materials and tool designed to increase transparency, serve as a resource for stakeholders, and enable more informed discussions about fisheries management. Outside of the office, Jeff does whatever he can to escape the confines of the beltway. Once there, most of his time is spent rock climbing, fishing, or hiking. Feel free to shoot him an email at Jeffrey.vieser@noaa.gov!

Membership Update

The trade show booth was well attended during the 2019 Reno AFS/TWS Conference. We added a total of 23 new members to AIFRB. In addition to new memberships, a total of 13 existing members were able to extend their memberships for an additional year. A social event was held to celebrate our membership at the Renaissance Reno Hotel where a total of 44 associates, members, fellows, and emeriti enjoyed light hors d'oeuvres and drinks. AIFRB once again hosted a well-attended symposium at this conference entitled "Marking, Tagging, and Tracking of Fish and Wildlife". Each of our new members received a 2019 AIFRB t-shirt and were entered into a drawing to win a signed copy of a publication edited by our esteemed Past President, Dick Beamish. Congratulations to Brett Hanshew of Sequoia Ecological Consulting (The Ocean Ecology of Pacific Salmon and Trout), and Devon Oliver of the Arizona Game and Fish Department (The future of Fisheries Science in North America) for winning the signed book copies.

Follow the AIFRB Members

AIFRB is back on social media! Follow us on Facebook, Instagram, Twitter, and LinkedIn for updates on events, news, member highlights, and more. If you have content from past or advertisements for upcoming AIFRB events, research highlights (e.g. recently published paper, invited talk, presentation at a conference), or other exciting fisheries news, we would like to share it on our social media platforms to spread the word. Please contact our Social Media Director, Emily Slesinger, at slesinger@marine.rutgers.edu with a photo, description, and the names of the AIFRB local district and/or AIFRB members present.

Award Recipients

Clark Hubbs Award

So-Jung Youn – Michigan State University

So-Jung Youn is currently a PhD student with Dr. William Taylor at Michigan State University. Her research focuses on the dietary, economic, and cultural values that the lake whitefish commercial fishery provides to coastal communities in Michigan. She is studying ways to assess and value inland fisheries and is interested in the valuation of the services that inland fisheries provide to human communities and the surrounding environments.

Riley Gallagher – North Carolina State University

Riley Gallagher received his undergraduate degree from the University of Montana, where he became an avid fly fisherman. He is now in the 3rd year of his master's project: *Estimating stock structure of cobia (Rachycentron canadum) using acoustic telemetry in the Southeast U.S*. Riley recently traveled to the joint AFS/TWS conference in Reno, NV on a Clark Hubbs Research Assistance Award to present his research in the AIFRB sponsored symposium, *Marking, Tagging, and Tracking of Fish and Wildlife.* Contact Riley Gallagher to continue the conversation at rgallag2@ncsu.edu.

Kasahara Award

Abby Lynch – United States Geologic Survey

Abigail (Abby) Lynch is a Research Fish Biologist with the U.S. Geological Survey's National Climate Adaptation Science Center. Working primarily in inland systems, Abby's research examines the impacts of global change on fish at local, national, and global scales. She is the coordinator for the international 'InFish' research network and an adjunct/affiliate faculty member at Michigan State University, New Mexico State University, and North Carolina State University. She also recently served as a fellow and author for the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services Global Assessment. Abby received her Ph.D. in Fisheries and Wildlife from Michigan State University on climate impacts to Great Lakes Lake Whitefish, M.S. in marine science on Atlantic Menhaden population genetics at the Virginia Institute of Marine Science, College of William & Mary, and B.S. in biology and B.A. in English literature from the University of Virginia. She also served as a Knauss Marine Policy Fellow with the U.S. Fish & Wildlife Service's Fisheries Program.

Using Acoustic Telemetry to Investigate Cobia Stock Structure in the Southeast US

R.M. Gallagher[1,2], J.R. Krause[1], J. A. Buckel[1]

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[2]AIFRB Member

Cobia are a moderately-sized pelagic fish that is highly sought after by recreational anglers for their aggressive fight and excellent table fare. Researchers have identified two genetically distinct stocks in the US: the Atlantic and Gulf of Mexico. The current stock assessment model for the Atlantic assumes homogeneity in demographic rates (e.g. growth, survivorship) and recruitment occurs within the closed stock. Much of the data used to delineate these stocks were from fish tagged in the southern portion of the range; additionally, a genetic study found differences between inshore- and offshore-captured cobia in the northern portion of the Atlantic stock (NC and VA). A telemetry-tagging study in the northern portion of the Atlantic stock range was recommended to determine if the current stock boundary is valid and to test for substructure. My graduate research aims to 1) describe the spatio-temporal movement patterns of acoustic tagged cobia and 2) test if cobia exhibit philopatry (i.e. if cobia habitually return to inshore or offshore areas during spawning months). Results will determine if the current stock boundaries are appropriate and potentially explain genetic differences between inshore and offshore cobia.

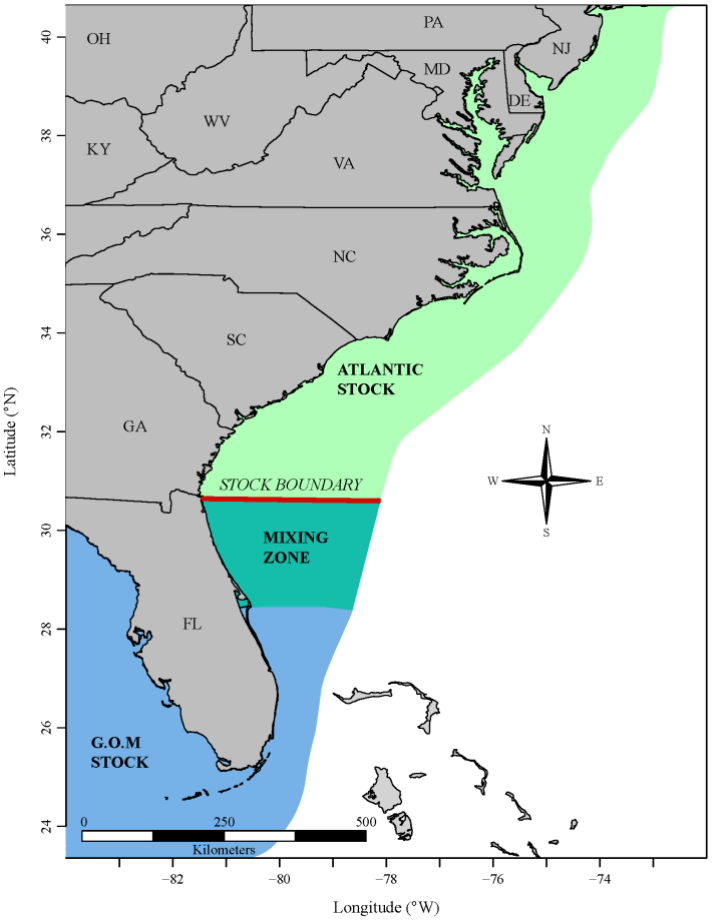


Figure 1. The delineation of the two US cobia stocks. Atlantic (light green) and Gulf of Mexico (blue) mix between Cape Canaveral, FL and the GA/FL border (SEDAR58).

In order to detect telemetry-tagged cobia, we first established an acoustic receiver array in North Carolina (n = 38 receivers), positioned between Cape Lookout and Cape Hatteras, extending east to the continental shelf break. The NC State array detects tagged cobia migrating within detection range of acoustic receivers. Over the last two years, researchers from NC State University surgically implanted Vemco V16 transmitters in cobia captured in NC and VA (2018: NC = 34, VA = 20, 2019: NC = 34, VA = 10).

During late spring to early fall, we detected 45 of the 2018 tagged cobia. The bulk of these fish were inshore in Chesapeake Bay (n = 34, 76%) with a smaller number detected in offshore ocean waters between NC and DE (n = 11, 24%; Fig. 2, top). All cobia remained within the stock boundary during the spring to early fall period.

As water temperatures dropped below ~20°C, cobia began migrations to overwinter locations; during winter, we detected 9% of cobia at outer continental shelf receiver sites off NC and 28% of cobia south of the current stock boundary in the known mixing zone between Cape Canaveral, FL and the GA-FL boundary (Fig. 1). To date, there have been no reports of our northern-tagged cobia being harvested during winter months south of the stock boundary. However, managers should monitor cobia harvest in the mixing zone given the potential for a large percentage of Atlantic cobia to be in this region.

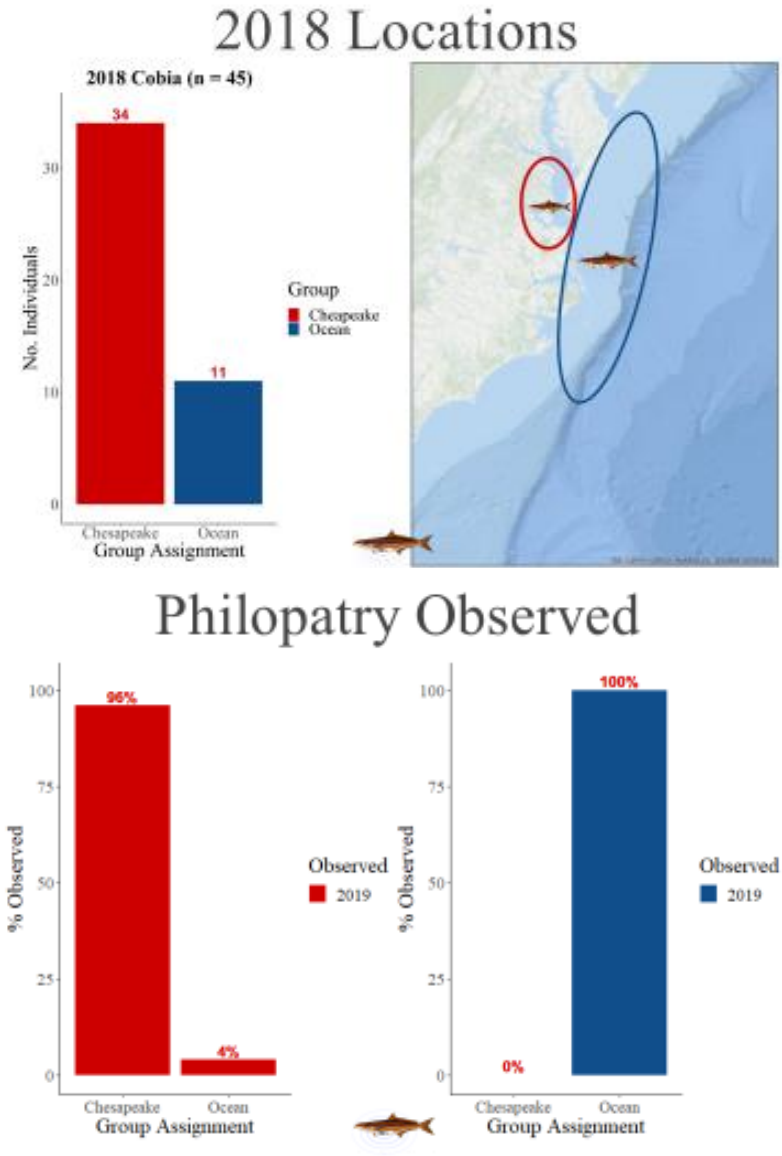


Figure 2. (Top) Cobia were assigned to a habitat group in 2018 based on their locations during spawning period (Bottom). In 2019, cobia returned to their 2018 summer locations suggesting philopatry during the spawning season.

In spring 2019, as water temperatures warmed above ~20°C, cobia began moving northward and/or westward. We detected n=26 of the 2018 Chesapeake Bay group in summer 2019 and 96% returned to Chesapeake Bay (Fig. 2, bottom). Of the 11 offshore cobia from summer 2018, we detected n=6 in summer 2019 and 100% were detected offshore (Fig.2, bottom).

Given published results on genetic structuring between inshore- and offshore-captured groups, we hypothesized that cobia would show habitual use of these habitats. Our data provide strong evidence for philopatry, as cobia adhered to their 2018-assigned inshore (Chesapeake Bay) and offshore (Ocean) groups in 2019. A future area of research will be to determine if there are differences in vital rates and demographics between inshore and offshore cobia that warrant different management strategies. To learn more, contact Riley Gallagher.

The changing nature of the Great Lakes Lake Whitefish (*Coregonus clupeaformis*) supply chain and implications for their value

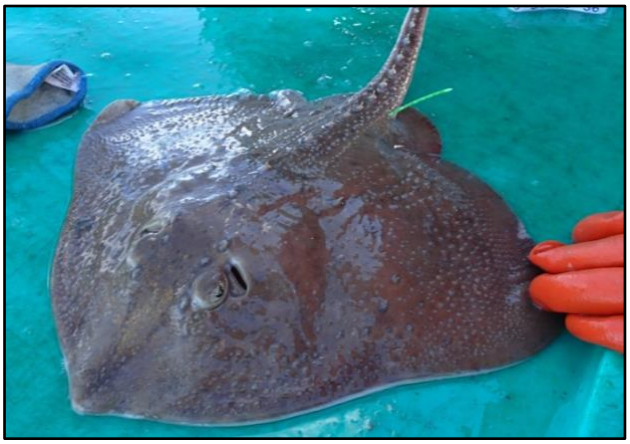
So-Jung Youn[1,2], William W. Taylor[1,2], David Ortega[1], Heather Triezenberg[1, 3], Ron Kinnunen[3]

[1] Michigan State University, [2] AIFRB Members, [3] Michigan Sea Grant Extension

Lake whitefish (*Coregonus clupeaformis*) are an important part of the cultural, economic, and ecological communities of the Laurentian Great Lakes region. Historically, and continuing to the present day, commercial harvests of Lake Whitefish provided food and livelihoods for Great Lakes communities. Today, tourists and residents alike seek out local fish houses and restaurants in order to consume Lake Whitefish fillets, smoked whitefish dip, and other Lake Whitefish products. Ecologically, Lake Whitefish abundance in the upper Great Lakes (Lakes Michigan, Huron, and Superior) has fluctuated over the past 50 years, reaching high population abundances during the 1990s, then declining through the present time. Negative interactions with invasive species (e.g. Sea Lamp rey *Petromyzon marinus*, Zebra mussels *Dreissena polymorpha*, and Quagga mussels *D. rostriformis*), coupled with climate changes in the Great Lakes (e.g. decrease in fall/winter ice cover, increase in storms) and overfishing, likely contributed to the decreases in Lake Whitefish abundance in the upper Great Lakes.

While the ecological drivers and impacts of fluctuating Lake Whitefish abundances have been studied intensely over the past decades, there is much less information available on the sociocultural impacts of changes in Lake Whitefish population abundance. This study was designed to evaluate whether or not the recent declines in Lake Whitefish abundance affected people's values for Lake Whitefish. While it is possible that decreasing Lake Whitefish abundance increases people's value for Lake Whitefish (as whitefish become less available, people are willing to pay more to consume Lake Whitefish products), it is also possible that decreasing Lake Whitefish abundance decreases people's value for Lake Whitefish (people choose to substitute Lake Whitefish with other fish species or food products). In order to study how changes in Lake Whitefish abundance affect people's value for Lake Whitefish, the first step was to identify baseline values for Lake Whitefish. To answer this question, we conducted economic experiments at 2 farmers' markets on Michigan's west coast. These experiments elicited participants' maximum willingness-to-pay (WTP) for a variety of Lake Whitefish products. By comparing participants' WTP for different products, we are able to see whether or not participants are willing to pay a premium for specific attributes of Lake Whitefish products (e.g. fresh vs. frozen, harvested in Michigan, type of harvest gear used). Our preliminary analyses indicate that most consumers are willing to pay a premium for Lake Whitefish that are locally harvested in US waters of the Great Lakes. Additionally, whenever possible, most consumers prefer fresh fillets to frozen fillets and will often choose to pay a premium in order to obtain a fresh fillet. We anticipate that this information will assist fishers in pricing their products and also identifying which attributes of their products matter most to their customers.

LENFEST OCEAN PROGRAM



Genomics for Fisheries Management: An Application to the Thorny Skate in the North Atlantic

A webinar by Drs. Gavin Naylor, Shannon Corrigan, and AIFRB member, John Denton, was hosted on September 19th, 2019. Interested? Unable to time travel? No problem! Visit the YouTube link here and watch the entire webinar.

Fall Crab Feast – Capital District

On October 19th, 2019 the AIFRB Capital District and the Potomac Chapter of the American Fisheries Society (AFS) jointly convened a classic Maryland crab feast as a great way to mix and mingle with fisheries professionals. The event took place at the AFS headquarters in North Bethesda, MD.

Northern California District Meeting

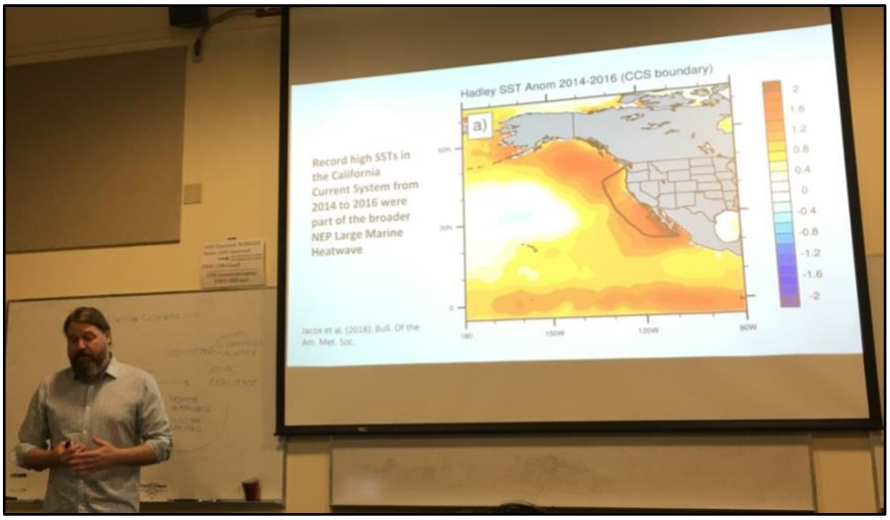
The AIFRB Northern California District held an illustrious meeting in Santa Cruz, California Wednesday, October 16, 2019 at the Center for Ocean Health, Long Marine Laboratory, University of California, Santa Cruz. The purpose of the event was to:

- Present the Institute's Outstanding Achievement Award to Dr. Marc Mangel, for the scientific merit and broad-reaching impacts of his research in the use of mathematical methods to solve biological and ecological problems in ecosystem-based fishery management

- Hear a presentation of recent research by Dr. Jarrod Santora, entitled "***Marine heatwave causes habitat compression impacting forage species, crab fishery timing and record whale entanglements***"

- Recruit new members to the Institute

One of Dr. Mangel's past graduate students and current Professor in the Department of Ecology and Evolutionary Biology, UCSC, Dr. Suzanne Alonzo provided an eloquent introduction of Dr. Mangel's educational and professional career. The event was well attended by about 30 AIFRB members, UCSC students and faculty, and NOAA NMFS researchers, who dined on pizza, salad and liquid refreshment (all of which was provided by AIFRB) prior to the presentations.



Past Events

AIFRB Social – AFS/TWS Joint Conference

The AIFRB Northern California District organized and held an AIFRB social event during the recent AFS/TWS annual meeting in Reno, Nevada. The event occurred the evening of Tuesday, October 1, 2019 at the Renaissance Reno Downtown Hotel in the River Rock Room overlooking the Truckee River. The event was open to all and free of charge, giving AIFRB members and potential new members a chance to meet up with fellow AIFRB members from around the country. Drink tickets were available to AIFRB members and a variety of excellent appetizers were provided. Judging by the attendance and the lack of unused drink tickets, the evening was a great success. Approximately 45 AIFRB members and prospective members were in attendance. AIFRB thanks our event sponsors, Lotek and ATS Tracking, who helped make the event a great success.

Past Events

AIFRB/AFS/TWS Joint Symposium

In September the American Fisheries Society (AFS) teamed up with The Wildlife Society (TWS) to bring together one of the largest gatherings of fish and wildlife scientists in Reno, Nevada. At the meeting, AIFRB teamed up with multiple AFS sections (Fish Culture, Fisheries Information and Technology, Marine Fisheries, and Fisheries Management) as well as TWS working groups (Spatial Ecology and Telemetry, Hunting, trapping, and conservation) to convene a session entitled “Marking, tagging, and tracking of fish and wildlife”. The symposium spanned two and a half days of the meeting and was well attended throughout its entirety. The first day focused more on the wildlife side with introductory presentations by Arthur Rodgers of the Ontario Ministry of Natural Resources and Roland Kays from NC State and the NC Museum of Natural History. Those presentations were followed by a keynote presentation by Nevada Department of Wildlife’s Corey Schroeder. The subsequent days of the symposium focused more on the fish side of the house. The fish-centric methods were introduced by a

presentation by Lee Blankenship of Northwest Marine Technology. This was followed by a keynote presentation by Zeb Hogan of the University of Nevada, Reno who is also the host of National Geographic’s “Monster Fish”. Zeb also gave one of the plenary keynote presentations for the conference. Next year’s AFS meeting will mark the 150th year and is being held in Columbus, Ohio. If you are interested in organizing a session on behalf of AIFRB, please reach out to your district director. We are still looking for a new liaison between AFS and AIFRB as well.

Past Events

Round Table Discussion – New England District

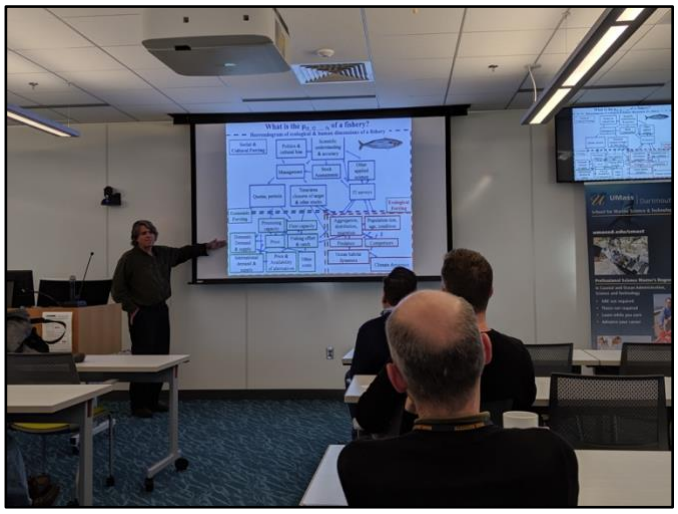
On November 6th the New England district hosted a roundtable discussion and social event at the University of Massachusetts (SMAST) campus in New Bedford, MA. The event was kicked off with a seminar by Dr. John Manderson from Open Ocean Research, who described the challenges and opportunities associated with incorporating Fishermen's Ecological Knowledge into fisheries management and stock assessment. John's seminar provided an excellent catalyst for the roundtable discussion, which centered around the value of collaborative research. During the group discussion, AIFRB members shared their perspectives on working with the fishing industry, including the benefits that can be derived by collaborating with fishermen, and the unique challenges that cooperative research can create. Some of the major themes that emerged from the discussion included

(1) As a best practice, graduate students should take the initiative to engage knowledgeable fishermen that target the species they are studying. Establishing a relationship with industry will provide students with valuable context for their research and offer unique perspectives that may assist in the development of hypotheses and interpretation of results.

(2) The greatest benefits of collaborative research are derived when the industry is consistently engaged in the science, from the design of the study through the interpretation of the results. Email can be an effective tool to sustain engagement with industry partners.

(3) There is often a stigma surrounding collaborative research, which researchers can overcome by being transparent and publishing their results.

(4) Even if the results of cooperative research are not used directly for stock assessment, it can help to investigate validity of the major model assumptions.



Upcoming Events

Spatial Stock Assessment Methods

Workshop October 2020

WORLD FISHERIES CONGRESS
ADELAIDE • AUSTRALIA

Workshop – Early Notification and Call For Interest

A three-day spatial stock assessment methods workshop will take place following the 2020 Adelaide World Fisheries Congress. The workshop will evaluate methods for incorporating spatial complexity into stock assessments and will focus on, but not be limited to, the application of different assessment modeling platforms to simulated spatial data for two important international stocks (Antarctic toothfish and Indian Ocean yellowfin tuna).

We are currently looking for analysts to implement spatial population dynamic models using the modeling framework of their choice (generalized software packages or specific applications), examine the assumptions in their approach, and provide feedback on performance and potential improvements at the workshop. Simulated data and biological parameters will be provided well before the October 2020 workshop, along with a general study design.

Contact Aaron Berger (aaron.berger@noaa.gov) or Dan Goethel (daniel.goethel@noaa.gov) for more information.

A full workshop announcement and a general call for presentations will be forthcoming.

Steering Committee

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Dan Goethel (NOAA)
Simon Hoyle (NIWA)
Jeremy McKenzie (NIWA)
Pamela Mace (FNZ)
Mark Maunder (IATTC)
Rick Methot (NOAA)
Patrick Lynch (NOAA)
Rich Little (CSIRO)
Paul DeBruyn (IOTC)
Rosemary Hurst (NIWA)
Andrea Chan (NOAA)

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Upcoming Events

11th International Flatfish Symposium - Interdisciplinary Fisheries Science & Solutions

AIFRB is sponsoring the 11th International Flatfish Symposium, which will take place on November 15-20, 2020 at Wentworth by the Sea in New Castle, New Hampshire. Since 1989, the International Flatfish Symposium has offered a platform for the exchange of high quality, scientific ideas and results, and for strengthening international cooperation and collaborations (www.flatfishsymposium.com). The 11th International Flatfish Symposium will be focused on interdisciplinary research to solve persistent challenges of flatfish ecology, conservation and sustainable utilization, including climate change, essential habitat, bycatch and population structure. The program is being developed as a single session with keynote speakers for each theme. If you are interested in getting involved, please contact AIFRB members Elizabeth Fairchild (University of New Hampshire, elizabeth.fairchild@unh.edu) or Steve Cadrin (University of Massachusetts, School for Marine Science & Technology, scadrin@umassd.edu) for more information.

Upcoming Events

Upcoming Events

71st Tuna Conference

The 71st Tuna Conference will take place on Monday, May 18th – Thursday, May 21st, 2019 in Los Angeles, California at the Lake Arrowhead Conference Center with the theme *Using new technologies to update and validate life history studies: The times they are a changin'*. Student scholarships are available and are due by February 4, 2020. Abstracts and registration must be received by February 26, 2020. General conference and registration information and application and applicability for student scholarships can be found here.

Job Posting

Experienced Marine Biologists

Positions: General Series (GS) 12 level

Salary: $74,896 - $97,370 per year*

The Navy team offers innovative, exciting and meaningful work linking military and civilian talents to achieve our mission and protect our freedoms. Our work is exciting and dynamic in support of various types of projects. The Department of the Navy provides competitive salaries, comprehensive benefits, and professional development and training. These positions are located in Silverdale, Washington, one hour west of Seattle, and are part of Naval Facilities Engineering Command Northwest (NAVFAC Northwest). NAVFAC Northwest is a complex, multi-mission team where Civil Engineer Corps officers, civilians and contractors work together as engineers, architects, contract specialists, environmental planners, scientists, biologists and professionals to plan, construct, sustain, and repair the Navy's infrastructure at shore facilities and provide support to the fleet for Navy operations. Our geographic area of responsibility covers eleven states; Washington, Oregon, Montana, Idaho, Wyoming, Alaska, North Dakota, South Dakota, Nebraska, Iowa and Minnesota.

NAVFAC Northwest has openings for experienced Marine Fisheries Biologists to work on the Natural Resources team. These positions require preparation of supporting documentation under various federal laws, such as, Section 7 of the Endangered Species Act and Essential Fish Habitat, as well as reviewing and providing input on NEPA documents. Biologists prepare biological assessments, Incidental Harassment Authorization applications, Integrated Natural Resource Management Plans and other federally required documents to support the Navy's environmental stewardship mission. These positions also lead, conduct, or participate in natural resources surveys and studies in the Navy Region Northwest area. There is a wide variety of project work available and many professional opportunities to explore. Need someone with habitat management experience and strategic decision analysis skills.

To apply for these positions or for more information, please contact Ms. Mary Anderson at mary.c.anderson@navy.mil. Please include "Marine Biologist" in the subject line of your email.

*Recruitment or relocation incentives may be offered depending on funding availability

Position Title: A generalized age-structured projection model to evaluate management implications of climate impacts on recruitment and life history of marine fish populations

Location: Seattle, WA

Start date: Immediately

Supervisor: André Punt (University of Washington)

Primary collaborators: Martin Dorn, Paul Spencer, Carey McGilliard, Cody Szuwalski, Kirstin Holsman

Term length: One year

Salary: Annual salary will depend on skill and experience.

Topic: New modeling tools are needed to understand the possible impacts of climate variation on fish productivity, population dynamics, and fisheries in the North Pacific. The selected post-doctoral candidate will work closely with researchers at University of Washington and the Alaska Fisheries Science Center to develop a flexible projection modeling tool that enables evaluation of environmental forcing on stock population dynamics under future climate change. The projection model will address the research goal of developing climate-forced single species models (CC-SSM) in the EBS RAP and GOA RAP, and the call for environmentally-linked stock assessments in the Next Generation SAIP and the EBFM roadmap. The model will minimally include the following specifications:

- Incorporate current assessment error and uncertainty;
- Account for future assessment error and uncertainty;
- Allow for alternative hypotheses for the stock-recruit relationship;
- Measurement error and process error of environmental forcing will be modeled;
- A set of harvest control rules will be implemented;
- Growth, maturity, natural mortality, recruitment deviations, and stock productivity will be functions of optionally-specified relationships with environmental covariates; and
- A bioenergetic module will be developed to model the effect of temperature on consumption and growth.

Application of the model will follow the framework described by Hollowed et al. (2009) for a unified approach to forecasting the implications of climate change on production of marine fish. Environmental relationships will be derived from retrospective studies and process studies. ROMS model projections from a Gulf of Alaska ROMS modeling project will be used to project future environment conditions. Deliverables include coding package (such as an R package) that simulates a generalized age-structured population with environmental forcing on life history characteristics and recruitment, and a manuscript describing the approach and analyses of the projected impact of climate change on select North Pacific species.

Essential qualifications: Earned PhD in Quantitative Ecology, Applied Statistics or a related field; Experience with population and life history modeling, R-programming, simulation modeling, statistical analyses; ability to work in a collaborative setting.

To Express an Interest: Please contact André Punt (aepunt@uw.edu) or Martin Dorn (Martin.Dorn@noaa.gov) with a CV and copy of at least one peer-reviewed publication.

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