

# CATHERINE L. ALVES, PH.D.

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## EDUCATION

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### Ph.D. in Ecology

December 2020

University of North Carolina at Chapel Hill | Chapel Hill, NC | Advisor: Dr. John Bruno

Thesis: Assessment of reef and fisheries management in Belize using a social-ecological systems approach

### B.A. in Biological Sciences, Minor in Chemistry

May 2013

Connecticut College | New London, CT | Advisor: Dr. Stephen Loomis

Spring 2012: Tropical Marine Ecology and Conservation Semester in Bonaire, Dutch Caribbean

## PROFESSIONAL EXPERIENCE

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### Save The Bay | Providence, RI

January 2023 – Present

#### *South County Coastkeeper*

As a licensed program of the Waterkeeper Alliance, I develop and manage the Coastkeeper program, including a public-facing facility in Westerly, RI, budget, and annual plans. I lead Save The Bay's advocacy initiatives on climate change, water pollution, and public access in southern Rhode Island by collaborating with municipal, state, and federal agencies and local stakeholders.

#### Key Accomplishments

- Support Save The Bay's broader advocacy initiatives, including legal, legislative, regulatory, and public communications. This includes collaborating with STB's Program and Policy Committee, Board of Directors, Environmental Education Programs, and Communications Team.
- Maintain a visible presence, both on the water and in local watersheds to identify and investigate pollution sources, conduct and support monitoring efforts, and identify and address problems that affect water quality and the health of local aquatic ecosystems.
- Conduct long-term watershed monitoring with local academic institutions and non-profits. Use data to advocate for improvements in stormwater and wastewater management treatment facilities.
- Develop and implement habitat restoration plans to improve coastal resilience.

### ECS Tech, Inc. | Narragansett, RI

December 2020 – December 2022

#### *Social Scientist under contract to NOAA/NMFS Northeast Fisheries Science Center Social Science Branch*

I serve on a multidisciplinary team of social scientists, oceanographers, scallop biologists, and marine ecologists assessing the vulnerability to ocean acidification and warming of the Atlantic sea scallop fishery and social-ecological system. I use quantitative and qualitative methods to analyze socio-economic indicators of fishing community vulnerability and resiliency to changing fisheries management and environmental conditions. I regularly collaborate with social scientists and scientists at the NEFSC and at regional universities and fishing industry stakeholders.

#### Key Accomplishments

- Collaborate with a multidisciplinary team to develop social, economic, and cultural analyses that will inform policy decision-making about the adaptive capacity of the seafood industry.
- Conduct thorough literature review on the regulatory history of the Atlantic sea scallop fishery.
- Co-lead and conduct focus groups and interviews with fishing industry stakeholders. I have been an active participant in three industry workshops and have planned and led 27 one-on-one interviews with industry stakeholders. I use grounded theory to produce, code, and rigorously analyze qualitative data.
- Combine existing socio-economic data on fishing fleets and coastal communities to understand the relationship between harvesting zones at sea and landings locations and how that might change in response to increasing ocean acidification and warming. I use R, SQL, GitHub and ArcGIS to analyze and visually convey NEFSC fishery-dependent and independent datasets.
- Present and disseminate research results to conservation practitioners, scientists, non-science colleagues and stakeholders. I have led 3 conference presentations, 5 presentations to fishery managers and the public, and am currently drafting several first-author publications to be submitted to peer-review journals.

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### **Marine Stewardship Council (MSC) | Remote**

**October 2021 – February 2022**

#### *Independent Consultant*

I oversaw the data collection, analysis, and writing of a report synthesizing what is known about key factors that can explain the occurrence of MSC price premiums (i.e., a higher sale price compared to competitors) across the fishery supply chain. I collaborated with MSC researchers and a team of international social scientists, economists, and fishery experts to revise and develop a draft publication for peer-review.

#### Key Accomplishments

- I was specifically recruited by Dr. Katie Longo to fill a gap in MSC's expertise regarding qualitative analysis of key informant interviews and focus group content in the context of the peer-reviewed and gray literature on sustainable fisheries.
- Reviewed the peer-reviewed and gray literature to describe the scholarly work on MSC price premiums in fisheries across the globe.
- Developed and revised a thematic coding spreadsheet used to gather the following key themes from the MSC staff key informant interviews and focus groups: factors (company type, supply chain structure, sustainable market development, etc.) to explain occurrence and distribution of MSC price premiums, and current gaps in data availability and study focus.
- Analyzed content from recordings of interviews and focus groups with MSC staff key informants.
- Wrote high-level report for MSC staff summarizing preliminary data analysis and key findings, which will be used to produce a second-author peer-reviewed publication.

### **University of North Carolina at Chapel Hill | Chapel Hill, NC**

**August 2015 – December 2020**

#### *Ph.D. Candidate/Researcher*

I established myself as an interdisciplinary researcher capable of providing holistic, science-based advice for sustaining fishing livelihoods and preserving coral reef ecosystems in a changing world. Through multi-year collaborations with internal and external stakeholders, I determined that marine resource management in Belize is institutionally robust, which could lead to the overcoming of collective action problems. I described coral reef benthic community structure across the Belize Barrier Reef from 1997-2016 after several disturbances (bleaching, storms, and disease) and attributed them to ocean warming and local human impacts. I interviewed fishermen in southern Belize in 2019 and compared their knowledge, attitudes and perceptions to those in 2014.

#### Key Accomplishments

- Secured \$157,750 USD in grant, fellowship, and award funding to support research and travel costs.
- Built and strengthened relationships with natural resource managers, scientists, coastal community members, and fisheries stakeholders at 4 governmental agencies, 2 academic institutions, 10 non-profit organizations and 5 fishing associations in Belize. Worked effectively with colleagues to co-develop research questions, methodologies, data interpretation, and science communication strategies.
- Hired and trained 8 field assistants from 2 Belizean non-profit organizations to assist with a 3-month study interviewing Belizean fishermen about their perceptions and knowledge of fisheries management.
- Used advanced quantitative and statistical approaches to conduct spatial and time series multivariate analyses to detect temporal changes in benthic community structure, and understand complex relationships between coral reef community structure and environmental and human drivers.
- Led the production of 3 first-author peer-reviewed publications and gave 20 oral presentations based on this work to internal and external stakeholders, including academics, fishery managers, and the public.

### **Narrow River Kayaks | Narragansett, RI**

**June 2018 – September 2020, Seasonally**

#### *Assistant Waterfront Supervisor and Lead Eco Tour Guide/Naturalist*

I maintained a supportive and efficient working environment for my staff while ensuring safe and enjoyable experiences on the water for our customers. I coordinated and led environmental kayak tours of the Narrow River Estuary in Rhode Island to families, couples, and children's camps in the summer months. In 2019 and 2020, I held both positions concurrently, often switching roles from waterfront staff to leading tours on the water depending on customer needs and scheduling.

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### Key Accomplishments

- Promoted to Assistant Waterfront Supervisor in May 2020; previously was Waterfront Staff and Lead Eco Tour Guide/Naturalist.
- Coordinated daily tasks for staff which included booking customer appointments, setting up waterfront equipment, providing safety instruction to customers, maintaining an orderly and clean workspace, and delegating tasks when necessary.
- Held an average of 5 2.5-hour tours a week for 10 weeks over the summer. Tour topics included fish and wildlife conservation, salt marsh restoration projects, endangered species, climate change mitigation, and human-wildlife interactions.
- Educated diverse audiences about the local history, marine and terrestrial ecology, and conservation of the Narrow River Estuary while kayaking. Coordinated schedules, planned tours and maintained safety.

### **Williams-Mystic Maritime Studies Program | Mystic, CT**

**January 2014 – June 2015**

#### *Marine Science Laboratory Manager and Teaching Assistant*

I managed the Marine Sciences Center (8,000 sq-ft lab) by maintaining an extensive aquaria system, a small fleet of research vessels, and all laboratory equipment. I also mentored 2-3 undergraduate lab assistants and 8-10 research projects in marine ecology and oceanography per semester, regularly collaborating with Marine Ecology and Oceanography faculty to meet teaching objectives. Each semester, I was an active staff participant during interdisciplinary field seminars including a 10-day sailing expedition on a tall ship and visits to the Pacific and Gulf Coasts of the United States.

### Key Accomplishments

- Designed and maintained a detailed salt water aquarium system maintenance protocol, including regular water quality testing and record-keeping, monitoring of overall health of aquarium flora and fauna, and routine maintenance and cleaning.
- Established and developed a laboratory-wide chemical waste catalog, storage, and disposal system, which was never done in the program's 30+ year history. I collaborated and built working relationships with Seaport boatyard staff, the Williams College Chemistry department, and external partners. I coordinated the purchase and setup of 2 secure cabinets, within which flammable laboratory chemicals were kept. I also maintained a detailed material safety data sheet binder for the facility.
- Single-handedly cleaned out, organized, and maintained the building's garage storage system, including a small fleet of research vessels, large field equipment, and foul weather gear for student rental.
- Led the digital archiving of over 30 years of student research project reports.

### **Reef Environmental Education Foundation (REEF) | Key Largo, FL**

**May – December 2013**

#### *Intern Project Coordinator*

I collaborated with office staff and other interns to support the organization's marine conservation and education projects in south Florida and globally. Specifically, I led monthly field-based lionfish research trips to sites along the Florida Keys reef tract. I coordinated with local SCUBA dive operators to rent boats, recruit and train local volunteer divers, and ensure timely and safe diving operations while conducting accurate and efficient research on the water. This required making decisions under pressure, maintaining flexibility to changing conditions (like weather), and ensuring staff and volunteer safety.

### Key Accomplishments

- Promoted to leadership position after four months as Marine Conservation Intern. My responsibilities included coordinating field-based lionfish research, local volunteer opportunities, outreach events, presentations on Caribbean fish identification and daily office management for myself and the interns.
- Invited to represent REEF during an international dive symposium, the Diving Equipment and Marketing Association (DEMA), which included promoting REEF programs to SCUBA diving professionals at a table in the great hall, and delivering a presentation about lionfish to 300 local middle school students.

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### PUBLICATIONS (\* Undergraduate mentee)

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#### PEER-REVIEWED

- 2022 **Alves, C.**, O. D. Garcia, and R. Kramer. Fisher perceptions of Belize's Managed Access program reveal overall support but criticism of enforcement. *Marine Policy*. 143. DOI: 10.1016/j.marpol.2022.105192.
- 2022 Donovan, M., **C. Alves**, J. Burns, C. Drury, O. Meier, R. Ritson-Williams, R. Cunning, R. Dunn, G. Goodbody-Gringley, L. Henderson, I. Knapp, J. Levy, C. Logan, L. Mudge, C. Sullivan, R. Gates, and G. Asner. From polyps to pixels: Understanding coral reef resilience to local and global change across scales. *Landscape Ecology*. DOI: 10.1007/s10980-022-01463-3.
- 2022 **Alves, C.**, A. Valdivia, R. Aronson, N. Bood, K. Castillo, C. Cox, C. Fieseler, Z. Locklear\*, M. McField, L. Mudge, J. Umbanhowar, and J. F. Bruno. Twenty years of benthic community changes across the Belize Mesoamerican Barrier Reef. *PLOS ONE*. 17(1). DOI: 10.1101/2021.03.15.435443.
- 2021 **Alves, C.** Marine resource management and fisheries governance in Belize exhibit a polycentric, decentralized, and nested institutional structure. *Ocean and Coastal Management*. 211:105742.
- 2019 Mudge, L., **C. Alves**, B. Figueroa-Zavala, and J. Bruno. Assessment of elkhorn coral populations and associated herbivores in Akumal, Mexico. *Frontiers in Marine Science*. 6:683. DOI: 10.3389/fmars.2019.00683.

#### PUBLICATIONS FOR PUBLIC AUDIENCES

- 2020 **Alves, C.** Ctenophora (*Mnemiopsis leidyi*). Published April 1, 2020. Article for the Narrow River Preservation Association website and newsletter.
- 2019 **Alves, C.** Belize's coral reefs: Fostering sustainable practices through co-management. National Geographic Open Explorer Expedition Posts. Supported by the Science Exploration Education (SEE) Initiative.
- 2018 Baumann, J., L. Mudge, and **C. Alves**. North Carolina can lead the fight against climate change if we make it our priority. Op-Ed. Published December 11, 2018 in the *Durham Herald Sun* and *Raleigh News and Observer*.
- 2015 **Alves, C.** The Offshore Adventures Continue. Blog post. Williams-Mystic Maritime Studies Program Blog. Published February 11, 2015.

### RESEARCH FUNDING

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I was lead PI and primary writer on all of these projects.

- Sustainable Ocean Alliance Leadership for Climate-Resilient Fisheries Micro Grant (\$4000) 2022
- Rufford Foundation Small Grant (\$6,400) 2019
- National Geographic Society ("Explorer") Early Career Grant (\$5,000) 2018
- Women Divers Hall of Fame Marine Conservation Research Grant (\$2,000) 2018
- UNC-CH Institute for the Study of the Americas Field Research Grant (\$2,000) 2017
- Connecticut College President's Sustainability Grant (\$4,000) 2013

### FELLOWSHIPS

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- Fellow, New Leaders Council Rhode Island 2021
- Graduate Research Fellowship, National Science Foundation (\$138,000 for 3 years) 2017

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- Mingma Norbu Sherpa Fellowship, UNC-CH Carolina Center for Public Service (\$1,250) 2018

### AWARDS & HONORS

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- Graduate Student Transportation Grant Recipient, UNC-CH Graduate School (\$1,000) 2019
- Outstanding Student Achievement Award, Gulf and Caribbean Fisheries Institute (GCFI; \$1,500) 2019
- Travel Award, UNC-CH Graduate and Professional Student Federation (\$600, declined) 2019
- Biology Teaching Assistant of the Year, UNC-CH Tri-Beta Biology Honor Society 2016
- Honorable mention, Graduate Research Fellowship, National Science Foundation (NSF) 2016
- E. Frances Botsford Prize for excellence in biology and service to department, Connecticut College 2013
- Collaboration Award, Connecticut College Office of Student Engagement and Leadership 2013
- Travel Grant for Student Researchers, Connecticut College (\$500) 2012
- Leadership Award, Rhode Island Lieutenant Governor Elizabeth Roberts 2009
- Rhode Island Scholar, RI Governor Donald Carcieri & the RI Higher Education Assistance Authority 2009
- Outstanding Academic Excellence Award, President Barack Obama's Education Awards Program 2009
- Environmental Awareness Award, Narrow River Preservation Association (NRPA) 2007

### ORAL PRESENTATIONS

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#### INVITED SPEAKING ENGAGEMENTS

- 2021 *Ensuring Underrepresented Community Participation.* Invited to lead breakout session with 12 attendees during NOAA's Ocean Acidification Program (OAP)'s Regional Vulnerability Assessment (RVA) workshop. Virtual.
- 2021 *Gaps in the Ocean Acidification/Regional Vulnerability Assessment Space.* Invited subject-matter expert panelist during NOAA's Ocean Acidification Program (OAP)'s Regional Vulnerability Assessment (RVA) workshop. Virtual.
- 2021 **Alves, C.,** L. L. Colburn, S. L. Meseck, S. A. Siedkecki. *A vulnerability assessment of the Atlantic sea scallop social-ecological system to ocean acidification and warming.* Invited Oral Presentation. Joint Symposium held by NOAA/NMFS Northeast Fisheries Science Center (NEFSC) and Greater Atlantic Regional Fisheries Office (GARFO). Virtual.
- 2021 *The Importance of using a social-ecological lens to conduct oral histories in fishing communities.* Invited subject matter expert speaker. South County Museum's Oral History Hub Lab Training Workshop. Virtual.
- 2021 *Climate Impacts on Marine Ecosystems (CLIME) session and discussion.* Invited panelist during the Leadership Initiative for Networking and Collaboration (LINC) Conference, NOAA's Northeast Fisheries Science Center (NEFSC) and Living Marine Resources Cooperative Science Center (LMRCSC). Virtual.
- 2020 *Preparing to Apply to Graduate School.* University of Rhode Island's Society for Women in Marine Science (SWMS) Symposium (invited panelist). Virtual.
- 2019 *Life as a Marine Conservation Ecologist.* Higher Edge, Inc's Summer Institute for high school seniors in College Access Program (invited panelist). Stonington, CT.
- 2019 *Searching for the win-win: Can community-based fisheries management restore ecological function and improve the livelihoods of Belizean fishers?* University of Massachusetts at Dartmouth School for Marine Science and Technology (invited speaker). New Bedford, MA.
- 2014 *Citizen Science and the Reef Environmental Education Foundation (REEF).* Invited Speaker. Connecticut College's Spring Log Jam Fundraiser. New London, CT.

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### ACADEMIC CONFERENCES

- 2021**      **Alves, C.**, L. L. Colburn, S. L. Meseck, S. A. Siedkecki. *Predicting the adaptive capacity of the Atlantic sea scallop fishery to ocean acidification and warming*. Oral Presentation. American Fisheries Society (AFS) Annual Meeting. Virtual.
- 2020**      **Alves, C.** *Marine resource management in Belize: Historical analysis and ways forward*. Poster Presentation. Gulf and Caribbean Fisheries Institute (GCFI). Virtual.
- 2020**      **Alves, C.**, R. Kramer, J. Bruno. *Assessing fisher perceptions of the Territorial User Rights for Fishing (TURF) Program: A case study in southern Belize*. Oral Presentation. International Marine Conservation Congress (IMCC). Virtual.
- 2020\***      **Alves, C.**, J. Bruno. *Assessing fisher perceptions of the Territorial User Rights for Fishing (TURF) Program: A Belizean case study*. Poster Presentation. International Coral Reef Symposium (ICRS). Bremen, Germany.
- 2020\***      **Alves, C.** Belize's coral reefs: fostering sustainable practices with community-based management. Rufford Small Grant Conference. Roatán, Honduras.
- 2019**      **Alves, C.**, J. Bruno. *Assessing fisher perceptions of the Territorial User Rights for Fishing (TURF) Program: A Belizean case study*. Poster Presentation. Gulf and Caribbean Fisheries Conference (GCFI). Punta Cana, Dominican Republic.
- 2017**      **Alves, C.**, Z. Locklear, M. McField, J. Bruno. *MPAs did not mitigate coral reef phase shifts in Belize caused by disease and warming*. Oral Presentation. Benthic Ecology Meeting (BEM). Myrtle Beach, SC.
- 2014**      Weiner, M., L. Gilbert, **C. Alves**, P. Poole, S. Schleicher. *A salt marsh erosion model: Interplay between biotic and physical factors at the seaward edge*. Poster Presentation. American Geophysical Union (AGU) Conference. San Francisco, CA.
- 2013**      Perry, E., **C. Alves**, C. Craig, V. Miller-Sims, W. Kimmerer, and C.S. Cohen. *Genetic variability of mitochondrial COI ranges from low to dramatically high in invasive species of copepods in San Francisco Estuary*. Poster Presentation. Society for Integrative and Comparative Biology (SICB) Conference. San Francisco, CA.
- 2012**      **C. Alves**, and E. Perry. *Determining genetic diversity at cytochrome c oxidase (COI) of copepod species in the San Francisco Estuary*. Oral Presentation. San Francisco State University (SFSU)'s Summer Undergraduate Research Symposium. San Francisco, CA.

\* = Canceled due to COVID-19.

### ACADEMIC GUEST LECTURES

- 2021**      *Interdisciplinary marine conservation in the US and abroad*. University of Indiana first-year English course Whales and the Heart of the Sea (Dr. Karen Newman). Virtual.
- 2021**      *Assessment of reef and fisheries management in Belize using a social-ecological systems approach*. Texas A&M University at Corpus Christi course in Biology and Ecology of Coral Reefs (Dr. Keisha Bahr). Virtual.
- 2019**      *My PhD Journey*. University of North Carolina at Chapel Hill ENEC 567: Ecological Analysis and Applications (Dr. Colin West). Chapel Hill, NC.

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**2014** *Coral Reef Ecology*. Invited Guest Lecture. Williams-Mystic Maritime Studies Program Marine Ecology Class (Dr. Jim Carlton). Mystic, CT.

### PRESENTATIONS FOR MARINE MANAGERS AND STAKEHOLDERS

**2019** *Searching for the win-win: Can community-based fisheries management restore ecological function and improve the livelihoods of Belizean fishers?* Oral Presentation to fisheries managers and stakeholders at the Belize Fisheries Department, Belize City, Belize.

**2019** *Searching for the win-win: Can community-based fisheries management restore ecological function and improve the livelihoods of Belizean fishers?* Oral Presentation to fisheries managers and stakeholders at the Southern Environmental Association (SEA), Placencia, Belize.

**2019** *Searching for the win-win: Can community-based fisheries management restore ecological function and improve the livelihoods of Belizean fishers?* Oral Presentation to fisheries managers and stakeholders at the Toledo Institute for Development and Environment (TIDE), Punta Gorda, Belize.

**2017** *Can community and ecosystem based fisheries management restore ecological function and improve the livelihoods of small-scale fishers in Belize?* Oral Presentation to fisheries managers and stakeholders at the Belize Fisheries Department, Belize City, Belize.

### PRESENTATIONS FOR PUBLIC AUDIENCES

**2019** *Assessing fisher perceptions of the Territorial User Rights for Fishing (TURF) Program: A Belizean case study*. Oral Presentation. Environment, Ecology, and Energy Program Student Seminar Series. Chapel Hill, NC.

**2019** *Explorer Classroom: My path to becoming a marine conservation ecologist*. National Geographic's Explorer Classroom. Recording on YouTube. Virtual.

**2018** *A day in the life of a marine biologist*. Oral Presentation. Temple Beth Or Synagogue Senior Luncheon. Raleigh, NC.

**2017** *Life as a marine biologist: Using SCUBA to study coral reef communities*. Oral Presentation. Culbreth Science Day. Culbreth Middle School, Chapel Hill, NC.

**2013** *Invasive Lionfish Ecology*. Oral Presentation. Diving Equipment and Marketing Association (DEMA) Conference. Orlando, FL.

**2012** *Examining the effect of different grazers on algal biomass*. Oral Presentation. CIEE Research Station Bonaire's Public Lecture Series. Kralendijk, Bonaire.

### TEACHING & MENTORING

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**University of North Carolina at Chapel Hill | Chapel Hill, NC** **2016 – 2017**

- Mentored senior Biology honors thesis student, Zachary Locklear on research titled: *Belizean coral functional group shifts from 1997 to 2016*

**Academic Support Program for Student Athletes, UNC-CH | Chapel Hill, NC** **2016 – 2017**

- Tutor for student athletes in Biology, Mathematics, Marine Science

**University of North Carolina at Chapel Hill | Chapel Hill, NC** **2015 – 2017**

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- Teaching Assistant for BIOL 201: Ecology and Evolution (Dr. Mara Evans)
  - Awarded Biology Teaching Assistant of the Year by the UNC-CH Tri-Beta Biology Honor Society my first semester teaching this course (Fall 2016)
- Teaching Assistant for BIOL 252 Lab: Human Anatomy and Physiology (Dr. Peter DeSaix)
- Teaching Assistant for ENEC 201: Environment and Society (Dr. Greg Gangi)

### Williams-Mystic Maritime Studies Program | Mystic, CT

2014 – 2015

- Mentored 2-3 undergraduate lab assistants and 8-10 independent undergraduate research projects in marine ecology and oceanography per semester

### PROFESSIONAL DEVELOPMENT

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- 2022**      **Fellow, New Leaders Council of Rhode Island**, selected among 15 other cross-sector, inclusive and progressive leaders to take part in 6-month intensive place-based leadership training program centered on diversity, equity, justice, collective impact, and sustainable change. Virtual and in Providence, R.I.
- 2021**      **Workshop on Ecosystem and Socioeconomic Profiles**, active participant in two-half day workshops to gather expert knowledge about developing ecosystem and socioeconomic profiles for the Northeast Continental Shelf. NOAA/NMFS/NEFSC. Virtual.
- 2021**      **Capturing the Spoken Word: A Virtual Oral History Workshop**, participant in one-day oral history workshop. Lawrence de Graaf Center for Oral and Public History, California State University Fullerton. Virtual.
- 2019**      **National Science Policy Network Symposium**, funded participant in event for early-career scientists interested in science policy, advocacy and diplomacy. National Science Policy Network. University of Wisconsin-Madison, Madison, WI.
- 2019**      **Inclusive SciComm Symposium**, participant in three-day symposium designed to engage trainers, scholars, and practitioners in engaging audiences in conversations and activities related to STEM topics. Metcalf Institute. University of Rhode Island, Kingston, RI
- 2019**      **Data Carpentry Geospatial Workshop in R**, participant in two-day training in geospatial analysis in R. University of Massachusetts Boston, Boston, MA
- 2018**      **National Geographic Science Telling Boot Camp**, Video Production Course designed to teach participants how to use video to communicate science, Online
- 2018**      **Policy Engagement Workshop Training**, led by Scholars Strategy Network, UNC-Chapel Hill
- 2018**      **Data Science for Coral Reefs: Data Integration and Team Science**, Coral Reef Science and Cyberinfrastructure Network (CRESCYNT) and National Center for Ecological Analysis and Synthesis (NCEAS), applied for and received participant funding for weeklong-training in open data science. Santa Barbara, CA.
- Participation resulted in a second-author paper published in *Landscape Ecology*.
- 2017**      **Inspiring Meaningful Programs and Communication through Science (IMPACTS)**, Science Communication Ambassador training, Morehead Planetarium and Science Center, UNC-CH
- 2016**      **Teaching in Challenging Times Workshop**, designed to prepare faculty and teaching



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assistants to discuss gender, race, sexuality and politics in the classroom, led by The Center for Faculty Excellence, UNC-Chapel Hill

2016 **Software Carpentry Workshop**, participant in two-day training in R Studio, GitHub, and Unix Shell, UNC-Chapel Hill

### EXTRACURRICULAR SERVICE

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- 2022 – Present **The Northeast Climate Resilient Fisheries Network, Remote**  
Co-Founder; Collaborate with 2 other early-career researchers to develop and lead interdisciplinary research network to foster collaboration among scientists working in the climate-resilient fisheries realm; hold quarterly virtual meetings of the Network
- 2017 – 2018 **The Scientific Research and Education Network (SciREN), Chapel Hill, NC**  
Co-Organizer; Collaborated with 7 NC Triangle-based graduate students to plan, coordinate, and hold workshops and networking opportunities for researchers in STEM fields to connect with local K-12 teachers
- 2016 – 2018 **Graduate and Professional Student Federation (GPSF), UNC-CH, Chapel Hill, NC**  
Senator; Represented Ecology graduate students in university student government
- 2016 – 2018 **Biology Graduate Student Association (BGSA), UNC-CH, Chapel Hill, NC**  
Liaison, Curriculum for the Environment and Ecology
- 2016 – 2017 **Curriculum for the Environment and Ecology (CEE), UNC-CH, Chapel Hill, NC**  
Seminar Committee Member, coordinated weekly seminar series
- 2012 - 2013 **Forest Justice Student Organization, Connecticut College, New London, CT**  
Co-President

### COMMUNITY ENGAGEMENT & OUTREACH

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- 2018 – Present **Narrow River Preservation Association, Narragansett, RI**  
Volunteer, teaching the public about marine science at various events
- 2018 – 2020 **Skype a Scientist**  
Scientist, sharing research with students in classrooms around world
- 2018 – 2019 **National Geographic Society Open Explorer Expedition, Science Exploration Education (SEE) Initiative**  
*Belize's coral reefs: Fostering sustainable practices through co-management*  
Recipient of Sofar Trident underwater drone, write blog posts
- 2017 – 2018 **Inspiring Meaningful Programs and Communication through Science (IMPACTS), NC**  
Science Communication Ambassador
- 2016 – 2017 **The Scientific Research and Education Network (SciREN), Chapel Hill, NC**  
Researcher, developed lesson plan in marine food webs for grades 8-12
- 2013 **Biscayne National Park, Homestead, FL**  
National Parks Service Blue-Card Diver, contributing to management projects
- 2013 **John Pennekamp Coral Reef State Park, Key Largo, FL**  
Volunteer Diver, assisted with lionfish research and seagrass restoration

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### PROFESSIONAL AFFILIATIONS & MEMBERSHIPS

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2022	Northeast Climate Resilient Fisheries Network (co-founder)
2022	Northeast Regional Social Science for Fisheries Management Network
2021	American Fisheries Society (AFS)
2021	Ocean Acidification Information Exchange (OAIE)
2019	Gulf and Caribbean Fisheries Institute (GCFI)
2019	International Coral Reef Symposium (ICRS)
2018	National Science Policy Network
2017	Inter-university Consortium for Political and Social Research (ICPSR)
2017	Society for Conservation Biology (SCB)
2013	Reef Environmental Education Foundation (REEF)
2011	Diver's Alert Network (DAN)

### REVIEWER

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- *PLOS ONE* • *Marine Ecology Progress Series* • *Ecosphere*

### SKILLS & EXPERTISE

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#### Field & Research Skills

- Accomplished SCUBA Diver (PADI Divemaster with >250 logged dives, mostly scientific)
- Caribbean and Northwest Atlantic coastal & marine species identification
- Small boat handling and sailing skills
- Marine science research methods (underwater transects, water quality testing, species identification)
- Quantitative and qualitative social science research methods (focus groups, interviews, grounded theory, content analysis, and obtaining institutional review board (IRB) approval)
- Analysis of socio-economic and environmental fisheries data
- Collaboration with natural resource managers and marine stakeholders (including government agencies, academic institutions, NGOs and media) to build capacity and increase community engagement

#### Computer Proficiency

- Advanced coding skills and proficiency with R, GitHub, and SPSS
- Geospatial mapping in ESRI ArcGIS
- Qualitative text analysis using MAXQDA
- Experience using relational databases including SQL and Oracle
- Benthic community composition analysis using Coral Point Count (CPCe) and CoralNet
- Multimedia communication via Adobe Illustrator, Photoshop, and Premiere Pro
- Strong organizational and time management skills using Slack, Asana, Zoom, and Skype
- Web design via Weebly and Wordpress

### CERTIFICATIONS

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2017	Divemaster (# 406704), Professional Association of Diving Instructors (PADI)
2016	Scientific Diver, American Academy of Underwater Sciences (AAUS)
2013	Emergency First Responder, Emergency First Response (EFR)
2013	Enriched Air Nitrox Diver & Equipment Specialty (PADI)
2012	Rescue and Advanced Open Water Diver (PADI)
2011	Open Water Diver, SCUBA Diving International (SDI)

### LANGUAGES

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French	Intermediate written and oral proficiency
Spanish	Beginner written and oral proficiency
Italian	Beginner written and oral proficiency