ROBERT N. JARRETT II

Darling Marine Center
School of Marine Sciences, University of Maine
193 Clarks Cove Road, Walpole, ME 04573

Phone: (260) 446-9426
Email: robert.jarrett@maine.edu
Website: https://r-jarrett.github.io/

EDUCATION

Ph.D.   Marine Biology, School of Marine Sciences, University of Maine, Orono, ME (2026)
              Graduate advisors: Bob Steneck & Damian Brady
M.S.   Marine Policy, School of Marine Sciences, University of Maine, Orono, ME (2022)
B.S.   Marine Sciences, Dept of Marine & Coastal Sci, Rutgers University, New Brunswick, NJ (2018)
A.S.   Mathematics/Science Program, Brookdale Community College, Lincroft, NJ (2015)

RESEARCH EXPERIENCE

Graduate Assistant, University of Maine

2019-Present, American Lobster Demography Studies
- Sampling lobster abundance and habitat use along coastal Maine via scuba and ROV
- Comparing trends and demography in lobsters monitoring surveys (scuba, trap, trawl)
- Classifying benthic substrate habitats using random forests and multibeam echosounder data
- Modeling lobster distribution using spatially-explicit individual based models

2023-Present, Acoustic Imaging using Remotely Operated Vehicles (ROV) Calibration Study
- Maintaining and upgrading Blue Robotics BlueROV2 and BlueBoat equipment
- Developing methodology for use of Cerulean Omniscan 450 Imaging Sonar and Surveyor 240-16 Multibeam Echosounder for ROV surveys of marine habitats, aquaculture farms, sunken vessels
- Developing a micro credential course for ROV piloting and surveys

2022-2023, Scallop Aquaculture Rigid Tray Experiment
- Constructed and deployed Dark Sea™ trays, Max Flow™ trays, and lantern nets
- Tracked growth and survival of hatchery-reared scallop seed and labor metrics at both experimental and commercial scallop farms

2020-2022, American Lobster Behavior Study
- Examined effect of low oxygen and algae species on adult lobster shelter selection
- Determined effects of chronic low oxygen on adult behavior and vitality reflexes
- Conducted experiment of benthic habitat effects on postlarval lobster sounding behavior

Field Researcher, University of Maine, Steneck Lab

2023, Bonaire Coral Reef Survey
- Conducted fish surveys via scuba transects at 11 sites on the western coast of Bonaire
- Assisted undergrad students in the coral reefs course in analyzing data and writing reports

Intern, Maine Department of Marine Resources

2021, Gillnet Fishery and North Atlantic Right Whale Project
- Created gear materials and configuration survey
- Conducted survey by email and phone with New England fishers

Research Assistant, Haskin Shellfish Research Laboratory

2019, Bivalve Larvae Swimming Study
- ◦ Recorded video of oyster and scallop larvae swimming in a 3-dimensional environment
- ◦ Assisted in general maintenance of laboratory and other research projects

Student Research, Rutgers University Department of Marine & Coastal Sciences

2018, Marine Protected Area GIS Study
- ◦ Georeferenced MPA maps and regulatory zones in ArcGIS
- ◦ Determined the regulatory zones of data collected

2017, Mongolian Taimen Tagging Study
- ◦ Plotted paths of tagged taimen in R of multiyear dataset
- ◦ Determined home range size and seasonal migration of taimen

Maryland Sea Grant REU Fellow, University of Maryland Chesapeake Biological Lab

2017, Chesapeake Bay Anoxic Volume Forecasting
- ◦ Developed statistical model to predict anoxic volume of Chesapeake Bay
- ◦ Applied a residual bootstrap to improve forecasting performance
- ◦ Generated prediction of anoxic volume for 2017 NOAA press release

Research Assistant, Rutgers University Asphalt Pavement Lab

2016, Albedo and Solar Radiation Flux of Asphalt Pavement Study
- ◦ Set up data collection system of radiometers and thermocouples for asphalt and concrete slabs
- ◦ Determined heat flux and radiative solar flux for different pavement types

PUBLICATIONS

Jarrett R, Reardon K, Steneck R, & Brady D. (In prep). Evidence for the evolution of behavioral trap avoidance in American lobster: Diverging trends of harvestable-sized lobster in fisheries dependent and independent surveys**.**

Jarrett R, Reardon K, Steneck R, & Brady D. (In review). Multiple independent indicators of American lobster in Maine: Patterns in space and time.

McHenry J, Byrnes J, DiBacco C, Djikstra J, Feehan C, Ferrario F, Filbee-Dexter K, Gagnon P, **Jarrett R,** Johnson L, Lotze H, MacGregor K, Metaxas A, Noisette F, Rasher D, Savard-Drouin A, Savoie A, Stasko Z, Steneck R, Velasquez M, Wilkes L, Wong M, Baum J, Krumhansl K. (In review). Projecting microclimate refugia for kelp forests in a global hotspot for rapid ocean warming.

Jarrett R, Wahle R, Brady D, & Steneck R. (2024). Shifts in habitat use and demography of American lobsters in coastal Maine over the past quarter century.

Stoll J, Albano H, Clements A, Coleman S, Flye M, Isherwood J, **Jarrett R**, Leeman C, Liberman K, Ober C, Orminski N, & Risley S. (2020). 2020 Canada-US Lobster Town Meeting: Lobsters without boarders: Forging our futures together. (pp. 1–17) [Proceedings Report]. Lobster Institute.

PRESENTATIONS   (mentees indicated with *)

St. Gelais A, **Jarrett R**. (2025). Monitoring technology for Kelp Aquaculture [Webinar]. *Aquaculture Information Exchange.* Virtual.

Jarrett R, Brady D, & Steneck R. (2025). Shifts in habitat and demography of American lobster in coastal Maine over the past quarter century [Oral Presentation]. *Gulf of Maine Monitoring and Research Symposium*, Haverhill, MA.

Jarrett R, Reardon K, Steneck R, & Brady D. (2025). Multiple independent indicators of American lobster in Maine: Patterns in space and time [Oral Presentation]. *Benthic Ecology Meeting*, Mobile, AL.

Jarrett R, Brady D, & Steneck R. (2024). Habitat-specific monitoring documents dramatic changes in habitat use and ecology of a data-rich fisheries species, American lobster [Oral Presentation]. *Benthic Ecology Meeting*, Charleston, SC.

Jarrett R, Brady D, & Steneck R. (2024). Shifts in habitat, habitat use and demography of American lobster in coastal Maine over the past quarter century [Oral Presentation]. *ASMFC American Lobster Data Workshop*, Virtual.

Jarrett R, & Steneck R. (2023). Mapping and modeling habitat to determine drivers of dramatic shifts in American lobster demography in the Gulf of Maine. [Oral Presentation]. *Benthic Ecology Meeting*, Miami, Florida.

Jarrett R, & Steneck R. (2022). Difficulty Breathing: Assessing changes in behavior and measures of vitality of American lobster at reduced oxygen levels [Oral Presentation]. *46th Annual Meeting of the Atlantic International Chapter of the American Fisheries Society*, Sunday River, Maine.

Hamel O*, **Jarrett R**, & Steneck R. (2022). Do lobsters move randomly to escape low oxygen environments? [Poster]. *2022 SEA Fellows Summer Science Symposium*, Walpole, ME.

Leonard E*, **Jarrett R**, & Steneck R. (2022). Scaling up shifts in lobster habitat use in midcoast Maine [Poster]. *2022 SEA Fellows Summer Science Symposium*, Walpole, ME.

Jarrett R, & Steneck R. (2022). No Easy Answers: Dramatic shifts in American lobster habitat and demography in the Gulf of Maine. [Oral Presentation]. *Benthic Ecology Meeting*, Portsmouth, NH.

Burnham K*, **Jarrett R**, & Steneck R. (2021). Does the invasive alga Dasysiphonia japonica impact American lobster shelter selection and postlarval settlement: Experimental methods [Poster]. *2021 SEA Fellows Summer Science Symposium*, Walpole, ME.

Gould K*, **Jarrett R**, & Steneck R. (2021). Are marine ecosystem changes affecting lobster sheltering behavior in coastal Maine? [Poster]. *2021 SEA Fellows Summer Science Symposium*, Walpole, ME.

Harris L*, **Jarrett R**, & Steneck R. (2021). Counting lobsters with an underwater robot [Poster]. *2021 SEA Fellows Summer Science Symposium*, Walpole, ME.

Jarrett R, Lyubchich V, & Testa J. (2017). Predicting anoxic volumes of Chesapeake Bay: Utilizing bootstrapping to improve forecasts. [Poster]. *Coastal and Estuarine Research Federation Biennial Conference*, Providence, RI.

TEACHING EXPERIENCE

Teaching Assistant, University of Maine School of Marine Science

2021, Marine Ecology, Semester-by-the-Sea
- ◦ Led students into field for sampling in the intertidal zone and aboard research vessel
- ◦ Maintained herbivory experiment over several weeks to collect data for students to analyze
- ◦ Assisted students processing field samples and analyzing data

2020, Marine Ecology, Online Semester-by-the-Sea
- ◦ Recorded videos in the field demonstrating sampling techniques or data collection
- ◦ Maintained classroom materials using Brightspace

Head Sailing Instructor, Monmouth Boat Club, Red Bank, NJ

2018, Summer Junior Sailing Program
- ◦ Developed new curriculum for the Optimist and 420 sailing courses
- ◦ Oversaw a team of six sailing instructors across beginner, intermediate, and advanced classes
- ◦ Assisted with beginner sailing course daily and coached intermediate sailors at regattas

MENTORSHIP

Owen Hamel, *Intern*	2022	Katherine Gould, *Undergrad Intern*	2021
Emily Leonard, *Undergrad Intern*	2022	Lydia Harris, *Undergrad Intern*	2021
Ondine Morgan-Knapp, *HS Vol*	2022	Beth Davis, *Undergrad Intern*	2019
Katherine Miller- Burnham, *Intern*	2021	Grace McDermott, *Undergrad Intern*	2019

GRANTS, AWARDS, & HONORS

2026   Brady, D., Rzeszowski, E., **Jarrett, R.** Maine BlueTech Innovation: Offshore Wind Monitoring and Testing ($67,216 USD Pending)

2025   Brady, D., **Jarrett, R**. Mapping benthic habitats of the American lobster using cost effective multibeam echosounder surveys and remotely operated vehicles ($100,000 USD)

2024   Brady, D.C., **Jarrett, R**. Calibration of an acoustic method to calculate biomass of kelp in aquaculture operations, Lukis Family Foundation ($100,000 USD)

2024   Dan Sandweiss Graduate Student Advocacy Award

2024   UMaine Graduate Student Government Research Grants ($6,732 USD)

2022   Atlantic International Chapter of the AFS Student Travel Award ($150 USD)

2021   Lobster Institute Graduate Fellowship ($15,627 USD)

2017   Maryland Sea Grant Research Experience for Undergraduates Fellowship

RELATED EXPERIENCE

2022-2024	UMaine School of Marine Sciences Graduate Student Board Member
2023	American Lobster Research Roadmapping Workshop Participant
2022-2023	UMaine Graduate Student Government President
2022-2023	UMaine Graduate Board Member
2022-2023	UMaine University Research Council Member
2022-2023	AFS Hutton Junior Fisheries Program Reviewer
2022-2023	UMaine School of Marine Sciences Professional Development Club Co-chair
2021-2023	AFS Northeastern Division Newsletter Co-editor
2021-2022	UMaine Graduate Student Government Grants Officer
2019-2020	Maine Dept. of Marine Resources Lobster Research Collaborative Researcher
2020	ICES Stock Assessment Advice Drafting Group Member

RELEVANT COURSES

Fisheries Policy and Mgmt.	Principles of GIS	Biological Oceanography
Fisheries Pop. Dynamics	Spatial Analysis	Physical Oceanography
Marine Resource Mgmt.	Agent Based Modeling	Animal Phys. Ecology
Coral Reefs	Occupancy Modeling	Biophysical Interactions

MEDIA AND OUTREACH

Penelope Overton. (2024, October 18). Lobsters in the shallows are emerging from their caves. *Portland Press Herald*. https://www.pressherald.com/2024/10/18/lobsters-in-the-shallows-are-emerging-from-their-caves/

SKILLS

- AAUS Scientific Diver, PADI Rescue Diver, DAN CPR/First Aid
- Strong seamanship, NJ Boating Safety Certificate, U.S. Sailing Level 1 Small Boat Instructor
- Proficiency in R Statistical Programming, NetLogo, QGIS, Microsoft Office, Adobe Illustrator
- Experience with Individual Based Models, Occupancy Models, Kriging, Machine Learning
- Experience in fish sampling methods using rod and reel, seining, and trawling