CURRICULUM VITAE

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Kate E. Allcock – Research Assistant, Marine Biological Laboratory

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EDUCATION:

2021 Master of Science in Marine Science, Department of Biology & Marine Biology, University of North Carolina Wilmington.

2018 Bachelor of Science in Environmental Science & Policy, concentration in Wildlife Ecology & Management, University of Maryland College Park.

PUBLICATIONS:

Allcock, K. E., Kamel, S. J., Willeboordse, P. L., Long, Z. T., & Jarvis, J. C. (2022). Spatiotemporal variation in patterns of genetic diversity, genetic structure, and life history across Zostera marina meadows in North Carolina, USA. *Marine Ecology Progress Series*, *683*, 53-66.

PROFESSIONAL EXPERIENCE:

Research Assistant *1/2022 – Present*

Josephine Bay Paul Center for Comparative Molecular Biology and Evolution Marine Biological Laboratory, Woods Hole, MA.

As part of Dr. Kristin Gribble's laboratory, I am working on an NSF-CAREER funded research program using a range of laboratory and statistical techniques to understand the ecology, evolution and mechanisms of maternal effects in rotifers.

- Designing and conducting experiments using rotifers as a study system focused on aging, maternal effects, and evolution of rotifers
- Culturing phytoplankton and zooplankton for use in maternal effects experiments
- Conducting data analysis using a range of statistical techniques such as ANOVA in R and Excel
- Performing qPCR, and DNA, RNA & protein extractions
- Utilizing light and confocal microscopy to examine rotifers and distinguish life histories
- Assisting with writing research results for publication
- Knowledgeable use of standard lab equipment: microscopy techniques, spectrophotometry, laminar flow hood, etc.

Conservation Science Intern *9/2021 – 12/2021*

Marine Conservation Institute (Remote)

- Researched, evaluated, and monitored nominated MPAs to determine candidacy for Blue Parks Award
- Conducted literature reviews and communicated with MPA managers, NGO's, indigenous communities & the public to compile information on nominated MPAs

- Drafted evaluation reports for nominated MPAs utilizing science-based approach
- Analyzed level of protection and establishment of MPAs globally to determine conservation outcome utilizing MPA Guide Assessment
- Wrote informational pieces on prevalent marine topics for MCI's blog, On the Tide

Graduate Teaching Assistant *8/2019 – 5/2021*
University of North Carolina Wilmington, Department of Biology & Marine Biology
- Successfully taught 150 students biology topics such as PCR, cell biology, microscopy, photosynthesis & cellular respiration
- Developed digital versions of all lab materials when schools switched to online learning during COVID-19 pandemic
- Trained new teaching assistants alongside the biology lab coordinator
- Cleaned lab rooms and assisted in maintaining & operating a variety of lab equipment (microscopes, spectrophotometers, thermocyclers, etc.)
- Managed inventories of chemicals, lab supplies, and equipment in teaching labs
- Made chemical reagents for lab experiments

Marine Conservation & Diving Intern *7/2017 – 8/2017*
Projects Abroad, Placencia, Belize
- Tagged, weighed, collected, and measured biological data for over 20 Loggerhead, Hawksbill and Green turtles
- Sampled Thalassia testudinum and Syringodium filiforme beds to assess meadow health metrics, produced reports on these metrics for Belize Department of Fisheries
- Led a group of international interns on invasive species removal dives
- Assisted with production of reference guides for future removal of invasive species, particularly lionfish
- Used GIS to create a sea turtle population distribution map for Belizean government utilizing GPS coordinates I collected
- Monitored sea turtle nesting populations and collected data on nesting locations, took egg measurements
- Led community outreach events, educating citizens on marine pollution and climate change
- Hosted weekly beach clean ups

VOLUNTEER EXPERIENCE:
Animal Rescue Team Volunteer *11/2018 – 8/2019*
Baltimore National Aquarium, Maryland
- Rehabilitated over 20 endangered sea turtles to prepare for their release back into the wild
- Performed behavioral and respiration observations after cold-stunning events
- Prepared diets for and feeding turtles, monitored body weight changes
- Tested and maintained pH, salinity and temperature of turtle holding tanks
- Assisted with physical assessments & administered oral medication to turtles
- Cleaned holding tanks & rehabilitation areas

CONFERENCES & PRESENTATIONS

4/2021 Spatiotemporal Genetic Variation in Two Zostera marina Meadows in North Carolina. Oral presentation at the 82nd Annual Meeting of the Southern Section of the American Society of Plant Biologists (SS-ASPB), April 17th, 2021 (hosted virtually).

4/2021 Spatiotemporal Genetic Variation in Two Zostera marina Meadows in North Carolina. Thesis Defense to the Department of Biology & Marine Biology, University of North Carolina Wilmington, April 27th, 2021.

4/2018 Tree Canopy Improvements in the City of Hyattsville, Council Meeting with the Hyattsville Environmental Committee for ENSP 400 Capstone Project, April 15th, 2018.

SKILLS

- Data Management, Visualization and Analysis (RStudio)
- Proficient use of ArcGIS
- Extensive knowledge of benthic ecology, particularly submerged aquatic vegetation (SAV)
- Field sampling, identification and analysis of SAV (*Zostera marina, Thalassia testudinum, Syringodium filiforme*)
- Design of experiments and field surveys
- Experience operating small boats
- Publication of scientific literature
- Scientific writing and speaking
- Collaborating with diverse research teams, including individuals in academia, government and non-profits
- Laboratory equipment maintenance
- Proficient in Spanish
- Review and synthesis of scientific literature
- Competent use of biostatistics in Excel and R
- PADI Advanced Open Water SCUBA
- Working knowledge of field research procedures
- Laboratory techniques (qPCR, DNA & RNA extractions, microscopy, spectrophotometry, etc.)
- Maintenance of marine zooplankton in a laboratory setting