

# Megan Nicole Moran

mm32@exchange.tamu.edu

www.linkedin.com/in/megan-n-moran

804-490-2472

---

---

## EDUCATION

### **Duke University, Nicholas School of the Environment**

*Master of Environmental Management*, Coastal Environmental Management  
Concentration in GIS

**Durham, NC**

**May 2020**

### **Christopher Newport University**

*Bachelor of Science*, Environmental Biology, magna cum laude  
Honors Program

**Newport News, VA**

**May 2018**

## EXPERIENCE

### **Duke University Marine Lab**

#### ***Examining the Influence of Genetics on Migration and Habitat Preference in *Callinectes Sapidus****

*Master's Project*, Primary Researcher

**Beaufort, NC**

**August 2019 – May 2020**

- Collected 100+ blue crabs from the Beaufort Inlet, NC and processed DNA using the Wizard Genomic DNA Purification Kit to compare to previously collected DNA from Lake Mattamuskeet, NC
- Performed PCR amplification for the mitochondrial gene (CO1) and aligned with Codon Code Aligner
- Created a haplotype map with PopArt and analyzed data with Arlequin 3.5, DnaSP, and MEGA.

#### ***Analysis of Hermit Crab Density and Algal Coverage on Corals within the Great Barrier Reef, Heron Island***

*Researcher*

**January 2020**

- Collected hermit crabs from different zones and measured their length, width, and claw size
- Calculated algal feeding rates of the hermit crabs and estimated algal coverage per coral head
- Found that hermit crab shell type varied per study site and hermit crab grazing rate was significantly different depending upon type of algae
- Presented findings at Heron Island Research Station, Australia

#### ***Comparing the Toxicity of Chemical Sunscreen versus Mineral Sunscreen on Barnacle Larvae***

*Researcher*

**October – December 2019**

- Researched how chemical sunscreen exposure may be posing a hazard and risk for human and environmental health
- Conducted toxicity bioassays on nauplii to predict the TC<sub>50</sub> and settlement assays on cyprids to predict the EC<sub>50</sub> for eight different types of sunscreen
- Used R-coding, including the Ecotoxicology package, to assist with the prediction of the TC<sub>50</sub> and EC<sub>50</sub>, and to create graphs and other visualizations

### **Southern Environmental Law Center**

#### ***Stanback Science and Policy Intern***

**Charleston, SC**

**May – August 2019**

- Wrote policy briefs and memos compiling and summarizing the latest published scientific studies and information relating to climate change and resilience of the Southeast coast to help strengthen legal arguments
- Used GIS to calculate the total acreage of wetland for each coastal state, as well as estimate the change in wetland acreage using a land use/land cover approach
- Helped further the Coastal Resilience Initiative by communicating research and findings with managers and other Southern Environmental Law Center Offices

### **Duke University - Department of Molecular Genetics and Microbiology**

#### ***Lab Assistant at Rawls Lab***

**Durham, NC**

**September 2018 – May 2019**

- Assisted with experiments by preparing chemical stock and DNA Master Mix solutions, sorted

genetically engineered fish embryos based off fluorescent receptors in cells, and genotyped with PCR to check for CRISPR gene editing success

- Fed the zebrafish, maintained healthy tank conditions, and helped retain the organization of the fish room

**Christopher Newport University**

**Newport News, VA**

***A Comparison of Constructed Living Shoreline and Natural Marsh Plant Communities in Back Bay, VA***

**June 2017 – April 2018**

*Research Assistant, Department of Organismal and Environmental Biology*

- Collected plant samples, analyzed plant biodiversity and abundance, calculated erosion rates, and measured standard site conditions, such as water quality, to compare erosion rates between selected constructed living shorelines and related natural marsh plant communities to analyze the ecological risk posed by climate change and provide site restoration updates
- Analyzed data to present a poster summarizing research at Sigma Xi Research Conference (November 2017, CNU)
- Further analyzed data and presented a poster summarizing research at Paideia Research Conference (April 2018, CNU)

***Diet Selectivity of Mummichogs (*Fundulus heteroclitus*) Along a Tidal Creek Gradient***

**June 2017 – May 2018**

*Research Assistant, Department of Organismal and Environmental Biology*

- Collected mummichogs, insects, and benthic invertebrates, cut sediment core samples, and measured standard site conditions to observe the diet selectivity of mummichog fish
- Sorted benthic samples and identified species to further the completion of this project

***Craney Island Oyster Reef Monitoring***

**January – April 2017**

*Research Assistant, Department of Organismal and Environmental Biology*

- Analyzed oyster reef samples, identified and measured live organisms on the reefs, and took dry mass to monitor the ecological risk posed by land change as a result of the construction of the Craney Island Marine Terminal
- Analyzed data to present a poster summarizing research at Paideia Research Conference (April 2017, CNU)

***Craney Island Eastern Expansion Oyster Mitigation Elizabeth River Shellstring Survey***

**August – November 2016**

*Research Assistant, Department of Organismal and Environmental Biology*

- Deployed and retrieved oyster shellstrings in the Elizabeth River to count oyster spat and barnacles on the shells, and measured environmental conditions such as water quality
- Monitored oyster spat settlement over time to determine the best location for oyster restoration reefs based off current environmental health conditions
- Analyzed data to present a poster summarizing research at Sigma Xi Research Conference (November 2016, CNU)

**LEADERSHIP**

**Duke University**

**Durham, NC and Beaufort, NC**

***The Coastal Society, Beaufort Representative***

**January 2019 – January 2020**

Facilitated relations between Durham and Beaufort. Helped organize the largest beach cleanup to date. Also organized networking events, career workshops, and social events to help generate coastal awareness.

**Christopher Newport University**

**Newport News, VA**

***Campus Leadership, Group Initiative***

**October 2017 – March 2018**

Led a group of students to petition for the implementation of a Green Fee on top of tuition for sustainable initiatives on campus. Helped write a proposal of the Green Fee. Initiative convinced Student Assembly to allocate funds from their annual budget to go towards a Green Fund supervised by a newly established Green Committee.

***HERO Campaign, Vice President***

**September 2016- May 2017**

Helped start up the HERO Campaign on campus, an organization that discouraged drinking and driving.

Came up with fundraising plans and helped organize events for the school year.

***Tropical Smoothie Cafe***

*Shift Leader*

**Newport News, VA**

**May 2017 – July 2018**

- Supervised the work of other employees, opened and closed the store, and counted the money

**PROFESSIONAL / ACADEMIC SOCIETIES**

- **The Coastal Society**, International Society for Coastal Resource Managers
- **Ocean Policy Working Group**, Interdisciplinary Group to Facilitate Cross Disciplinary Discussions and Collaborations
- **Duke Fish**, Duke Chapter of the American Fisheries Society
- **Alpha Chi**, National College Honor Society
- **Beta Beta Beta**, Biological Honor Society
- **Alpha Chi Sigma**, Professional Chemistry Honors Fraternity