

Mariah C. Livernois

Texas A&M University at Galveston, Dept. of Marine Biology
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EDUCATION

Texas A&M University at Galveston, Galveston, TX

- Ph.D. in Marine Biology, anticipated 2022
- Shark Biology and Fisheries Science Lab (Advisor: Dr. R.J. David Wells)

University of South Alabama, Mobile, AL

- M.S. in Marine Science, 2018
- Fisheries Ecology Lab, Dauphin Island Sea Lab (Advisor: Dr. Sean P. Powers)
- *GPA*: 4.0
- *Thesis*: Ecological interactions and resource partitioning of two estuarine predators, Red Drum (*Sciaenops ocellatus*) and Spotted Seatrout (*Cynoscion nebulosus*)

Northeastern University, Boston, MA

- B.S. in Environmental Science, summa cum laude, 2015
- *Concentration*: Marine Science
- *GPA*: 3.97
- *Honors*: William J. Alcott Jr. Cooperative Education Award 2015, Sears B. Condit Academic Achievement Award 2015, Honors in Marine and Environmental Science 2015
- *Honors Thesis*: Habitat fragmentation alters *Zostera marina* seed abundance and distribution

RESEARCH EXPERIENCE

UNC-Chapel Hill, Institute of Marine Sciences, Morehead City, NC

January-July 2016

Research Technician: Fodrie Lab, Fisheries Ecology and Oceanography

- Explored data from written and verbal surveys of North Carolina waterfront homeowners, fishermen, and general state-wide residents
- Analyzed data pertaining to questions on state fisheries status, environmental issues, and shoreline hardening infrastructure
- Aided in assorted field surveys investigating the function of estuarine habitats, oyster reef restoration, fish habitat use, and the ecological impacts of aquaculture

Dauphin Island Sea Lab, Dauphin Island, AL

May-December 2015

Internship: Powers Lab, Fisheries Ecology

- Participated in field sampling of marine teleosts, elasmobranchs, and invertebrates
 - Gear types used: vertical and bottom longline, trawl, gillnet, seine, hook and line
- Collected otoliths, gonads, and muscle samples from teleost fishes
- Identified and examined marine fishes and invertebrates from estuarine, coastal, and offshore ecosystems
- Analyzed video footage from remotely operated vehicle surveys of offshore artificial reefs and associated fishes
- Assisted in sidescan sonar surveys to locate natural and artificial offshore reefs

UNC-Chapel Hill, Institute of Marine Sciences, Morehead City, NC February-July 2014
Research Assistant: Fodrie Lab, Fisheries Ecology and Oceanography

- Assisted in field sampling, data collection, and lab processing for projects related to oyster reef, fish, seagrass, and marsh ecology
- Planned and executed the building of an oyster reef and saltmarsh “living shoreline”
- Designed and executed a field experiment in seagrass ecology

Research Assistant: Rodriguez Lab, Coastal Geology

- Collected sediment cores in marsh, oyster reef and beach shoreline systems
- Processed sediment cores for temporal data by sieving and performing grain size analysis

Woods Hole Oceanographic Institution, Woods Hole, MA January-June 2012
Research Assistant: Anderson Lab, Biology Department

- Performed molecular laboratory work including DNA extraction and purification, PCR amplification, gel electrophoresis, and bacterial cloning while researching the genetic variations of toxic algae populations
- Participated in water sampling and whole-cell specimen collection efforts
- Assumed responsibility of caring for hundreds of live specimen cultures

TEACHING EXPERIENCE

Dauphin Island Sea Lab, Dauphin Island, AL July-August 2017
Teaching Assistant

- Assisted teaching a short course for undergraduate students: Marine Vertebrate Zoology
- Prepared course materials for lectures and exams, both written and practical, and delivered one guest lecture
- Organized field sampling trips to collect and observe various estuarine fishes in AL and FL
- Provided support to students during labs, primarily focusing on fish identification skills

Northeastern University Marine Science Center, Nahant, MA January-June 2013
Outreach Program Assistant

- Taught students grades pre-K through 12 topics in marine ecology, oceanography and research methods
- Developed and prepared curriculum for programs and classes, both on-site and at schools
- Oversaw students performing scientific surveys of the rocky intertidal zone while teaching data collection and handling of marine animals
- Maintained live aquaria, including crustaceans, mollusks, and echinoderms

PUBLICATIONS

- Livernois, M.C., Grabowski, J.H., Poray, A.K., Gouhier, T.C., Hughes, A.R., O’Brien, K.F., Yeager, L.A., and Fodrie, F.J. 2017. Effects of habitat fragmentation on *Zostera marina* seed distribution. *Aquatic Botany* 142:1-9.

ACCOMPLISHMENTS

- Honorable Mention, National Science Foundation Graduate Research Fellowship Program,

April 2016

- Texas A&M University at Galveston Marine Biology Interdisciplinary Program
Competitive Award – Graduate Research Assistantship, September 2018

PRESENTATIONS

- Livernois, M.C., Powers, S.P., Fodrie, F.J., and Heck Jr., K.L. 2018. Habitat complexity and species assemblage shape predator-prey interactions in a model estuarine ecosystem. **Benthic Ecology Meeting**, Corpus Christi, TX.
- Livernois, M.C., Powers, S.P., Fodrie, F.J., and Heck Jr., K.L. 2018. Habitat complexity and species assemblage shape predator-prey interactions in a model estuarine ecosystem. **Gulf of Mexico Graduate Student Symposium**, Dauphin Island, AL.
- Livernois, M.C. and Powers, S.P. 2018. Co-occurrence and habitat associations of two estuarine sportfish, Red Drum and Spotted Seatrout, in coastal Alabama. **Alabama Chapter of the American Fisheries Society Annual Meeting**, Fort Payne, AL.
- Livernois, M.C., Powers, S.P., Fodrie, F.J., and Heck, K.L., 2017. Ecological Interactions and Resource Partitioning of Two Estuarine Predators, Red Drum (*Sciaenops ocellatus*) and Spotted Seatrout (*Cynoscion nebulosus*). Poster Presentation, **American Fisheries Society Annual Meeting**, Tampa, FL.
- Livernois, M.C., Bosarge, G.S., and Powers, S.P. 2016. Utilization of a coastal estuary by a demersal finfish family (Sciaenidae): Implications for habitat associations and ecological interactions. **MS-AL Sea Grant Bays and Bayous Symposium**, Biloxi, MS.
- Livernois, M.C., Poray, A.K., Fodrie, F.J., Hughes, A.R., Grabowski, J.H. 2015. Effects of fragmentation on reproductive effort and short-distance seed dispersal in *Zostera marina* beds. **Benthic Ecology Meeting**, Quebec City, QC, Canada.
- Livernois, M.C., Poray, A.K., Fodrie, F.J., Hughes, A.R., Grabowski, J.H. 2015. Effects of habitat fragmentation on reproductive effort and seed distribution in *Zostera marina* beds. **Honors Senior Thesis Defense**, Northeastern University Marine Science Center, Nahant, MA.

PROFESSIONAL SOCIETIES & SERVICE

- Manuscript referee: *Aquatic Botany* – 2018
- American Fisheries Society (AFS) member – 2017-18
- Alabama Chapter of the AFS (AL AFS) member – 2018

VOLUNTEERING AND OUTREACH

- Northeastern University Alumni Mentor (Informational Interviews) – 2017, 2018
- Girls Exploring Math and Science – November 2017
- Alabama Coastal Cleanup – September 2016, 2017
- Dauphin Island Sea Lab Discovery Day – April 2017, 2018
- National Ocean Sciences Bowl Judge – April 2016
- Northeastern University College of Science Student Ambassador – 2013, 2014, 2015
- Northeastern University Marine Science Center Open House – October 2013, 2014