

Marine Science Graduate Student Funding Opportunity

Are you interested in studying how the ocean drives key biological processes? Do you want to spend time at sea applying the latest tools to these questions with an interdisciplinary team of researchers?

Apply now for a Master's in Marine Sciences at Savannah State University (SSU) in the Department of Marine and Environmental Sciences (<https://www.savannahstate.edu/cost/mar-env-science/>). The position is located in Savannah, GA in the zooplankton ecology lab of Dr. Laura Treible and will start in Fall 2024.

The student will work at the interface of oceanography and plankton ecology using cutting edge technologies and approaches in a collaborative environment to answer different facets of an overarching question: *Do fine-scale water column structure and particle aggregations favor gelatinous-dominated food webs in subtropical continental shelf environments?*

Although physical mechanisms of layer formation, and plankton groups associated with them, have been described in several shelf environments, less is known about layer influence on zooplankton community composition and trophic transfer. For fast-reproducing pelagic tunicates (salps, pyrosomes, doliolids, and appendicularians), these layers or aggregations may serve as rich food resources that prime pelagic tunicates to form dense blooms, which then ultimately serve as food for gelatinous predators. This sequence of events, from layer formation to pelagic tunicate reproduction and predation on the bloom, may generate high abundances of gelatinous organisms throughout the marine food web. This hypothesis will be tested by measuring the fine-scale abundances of gelatinous zooplankton with in-situ imaging, their corresponding diets using molecular gut content analysis, and broader food web properties using compound-specific stable isotopic techniques, in contrasting vertically mixed and stratified conditions. The graduate student will work primarily with plankton images and stable isotopes to untangle the “jelly web” of higher- trophic level gelatinous zooplankton in response to physical water column layering.

This research is funded by the National Science Foundation and will compare processes in the South Atlantic Bight and northern Gulf of Mexico shelf ecosystems, which both provide favorable conditions for blooms of gelatinous zooplankton, yet have differing oceanographic drivers of vertical stratification. For more information about the project, please visit the project webpage at <https://www.skiio.uga.edu/dol-layer/> or view the public abstract at www.nsf.gov/awardsearch/showAward?AWD_ID=2244690.

The selected student will receive reduced graduate tuition and a competitive stipend for two years. Research will occur in collaboration with Drs. Adam Greer, Marc Frischer, and Jay Brandes at the University of Georgia Skidaway Institute of Oceanography (<https://www.skiio.uga.edu/about/>). The graduate student will participate in oceanographic research cruises aboard the RV Savannah (<https://www.skiio.uga.edu/marine-ops-2/rv-savannah-2/>), in addition to opportunities for teaching and mentoring undergraduate researchers and participating in an innovative hands-on outreach program working with local high schools.

Preferred Candidate Qualifications:

- Strong organizational and interpersonal skills and ability to work independently and as part of a team in a collaborative setting
- Educational or research background in marine science, biology, ecology, oceanography, or a combination
- Experience with sea-going research and oceanographic data analysis is preferred but not required

Interested candidates should contact Dr. Laura Treible (treible@savannahstate.edu), and include a CV, including higher education grades/ GPA, a 1-page cover letter outlining the motivation for the position and relevant skills, and contact details for at least two references. Dr. Treible will then schedule virtual meetings to further discuss the research opportunity. Candidates must also apply for admission to the graduate program (<https://www.savannahstate.edu/graduate/master-degrees/degrees-grad-ms.shtml>) to be considered.

Deadlines: Applicants will be reviewed on a rolling basis until the position is filled. Applications for Fall 2024 admission to the SSU Marine Science graduate program must be submitted by March 20.