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During my time at the Coastal Marine Institute Laboratory, I assisted graduate student Lily Jorrick. I had a wonderful experience working and being mentored by Lily. Her project investigates how two major climate change stressors, ocean warming and ocean acidification, may affect the predation behavior of fish living in eelgrass habitats. The two fish species we looked at were bay pipfish and juvenile giant kelpfish.



When I joined this project, the kelpfish behavioral trials were beginning. During the first part of the summer, I mostly helped acclimate the fish to their experimental conditions and completed the daily tasks necessary to keep the experiment running. There were four different treatments that the fish had to acclimate to: ambient, ocean warming, ocean acidification, and an interaction of both ocean warming and acidification. I enjoyed these tasks and learned a lot about all of the hard work and moving parts that go into keeping an experiment running. I also learned how to collect water quality data such as pH levels, dissolved oxygen levels, water temperature, and more. This part of the experiment showed me how much work happens behind the scenes before any experimental data is actually collected.



I also had the opportunity to participate in fieldwork to collect fish for the experiment. We went out into the find to collect fish that would later be brought back and acclimated to the experimental conditions. This was a super interesting and fun experience that introduced me to one of the many ways field work can be conducted in marine science.

Once the fish were acclimated, I helped prepare and set up the behavioral trials. The experiment used an artificial seagrass habitat containing amphipods as prey. Kelpfish were introduced into the experimental tank and allowed to forage while their behavior was recorded. The goal was to determine whether exposure to different climate conditions altered behaviors such as activity, hunting, attempted attacks, and successful prey captures.



For the latter part of my summer, I analyzed video recordings from the behavioral trials and collected data from what we observed. While watching the videos, we recorded different aspects of kelpfish behavior, including the amount of time the fish spent active, their attempted strikes at amphipods, and successful prey captures. Going through the videos taught me how important it is to clearly define behaviors and collect data consistently. Small differences in how observations are recorded can make a big difference when it comes time to compare treatments and interpret the results.

After collecting the behavioral data, I also gained experience organizing, cleaning, analyzing, and visualizing the data in RStudio. I worked with both behavioral data and temperature logger data and created graphs to compare the experimental treatments. Before this internship, I had limited experience working with data collected from an actual research project, so learning how to take observations and turn them into results that could help answer our research question was especially valuable.

We were also able to attend multiple workshops throughout the summer, which I learned a lot from. I found the careers in marine science workshops especially beneficial. I learned about the wide variety and different paths that one could take. I had no idea some of these careers were even an option, and as someone who is still trying to figure out their exact career path I found this very valuable.

I am very grateful to have had this opportunity and learned so much throughout the summer. I am especially thankful for Lily as my mentor and for all of the support, guidance, and openness she provided throughout my experience. She created an environment where I felt comfortable asking questions, learning new skills, and becoming more confident in research. I would highly encourage anyone interested in marine science to take part in this program.