2026 CMIL MURP Summer Internship

Tori Stoddard

This summer, I had the opportunity to intern with Valentina Montes as a research assistant in the Long Lab at the SDSU Coastal and Marine Institute Laboratory (CMIL). Throughout my internship, I participated in laboratory and field work, from weighing and measuring Abalone and seaweed to snorkeling and diving in Mission Bay. This experience allowed me to see many different sides of the scientific process while exploring what I want to pursue in my future career. I gained a firsthand understanding of how much planning, organization, and teamwork goes into designing and carrying out a marine science experiment.

At the SDSU Coastal and Marine Institute Laboratory (CMIL), we investigated whether Black and Red Abalone prefer native kelp, *Macrocystis pyrifera*, or the invasive seaweed, *Sargassum horneri*. By studying their feeding preferences, we hoped to better understand how these species may respond to changing ocean conditions and inform future conservation efforts.



A picture of an adult Red Abalone I took when freediving in Catalina Island this summer. This is the same island the juvenile Red Abalone that were used in the experiment were collected from.

As California's coastal ecosystems evolve and the global climate warms, Abalone diets are rapidly changing. These shifts in available food sources have the potential to reshape entire coastal ecosystems. As keystone species in intertidal habitats, the health of Abalone influences the many plants and animals that share their environment.

During this experiment, Abalone were randomly assigned to one of three tanks. They were also randomly assigned a diet of *Macrocystis pyrifera*, *Sargassum horneri*, or a combination of both. The leftover seaweed was then weighed to determine how much substance was eaten. The animals themselves were also weighed to determine tissue gain. The Abalone were kept in individual containers alongside each other and daily care checks were performed in order to ensure Abalone health. During this time, our team was able to make observations about activity level, lip color, and feeding behavior.

One of my favorite parts of working in the lab was how closely the experience connected to my personal interests. I have a passion for scientific writing, and I was given the opportunity to write an article about our abalone research. I also participated in several fieldwork excursions in Mission Bay, where I was able to combine my interests in marine science and the ocean with skills I have developed as a swimmer and freediver. Using my own freediving experience and gear to collect meaningful scientific samples was especially rewarding. This was one of my favorite parts of the internship because I had the opportunity to explore more of San Diego while seeing firsthand how invasive *Sargassum* is changing our local marine environment.

Coming into the lab each week gave me the opportunity to connect with other students and researchers throughout the facility. One of the best parts of the summer was hearing about their individual career journeys and learning from their different experiences and paths in science. This helped me narrow down my interests, and I appreciate all the advice I was given.

Overall, this internship gave me the opportunity to experience marine science from many different perspectives. I gained hands-on research experience, strengthened my scientific communication skills, and learned more about the fieldwork and teamwork that go into marine research. Most importantly, I left the internship with a better understanding of the areas of science that excite me and a clearer idea of the work I hope to pursue in the future.

And, of course, I have gained a new love for Abalone!





