Biology Newsletter

WCSU
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| APPLIED STEWARDSHIP |

Sara Gerkens on Sugar Kelp

Sara's stewardship project was in collaboration with Dr. Sean Grace at SCSU and Holly Turner-Moore at Bridgeport Regional Aquaculture Science and Technology Education Center (BRASTEC).

Through my project, I trialed Saccharina latissima, sugar kelp, cultivation on "green gravel" in BRASTEC's hatchery facilities with the long-term goal of aiding in kelp re-forestation in Long Island Sound. I learned the aquaculture process and formed connections with Holly and her high school students who worked with Dr. Grace and me. Our connections may prove important to the students as they further their marine science careers; they can use Dr. Grace and myself as future resources. This project also helped teach me a valuable lesson about research— experiments will fail (often!) but you can use this to revise methodology and make improvements.

Additionally, I now have a thesis opportunity with Dr. Grace to investigate current sugar kelp populations at our original sampling site in Fort Wetherill, Rhode Island. Learning about the aquaculture field through my stewardship project has already opened up new research and career opportunities for myself. I am grateful to have gained these unique experiences and believe other students will feel the same after they complete their stewardship projects.

DNA Sequencing & Parrot Fish

Athenea Acosta, working with Dr. Joshua Idjadi from Eastern Connecticut State University, completed training in metabarcoding sequencing of Parrot Fish gut microbes, with the goal of writing a protocol on best practices in DNA sequencing for undergrads students.

With the data collected from the research we aimed to gain further insight on the feeding behaviors of reef fish and how their habitat influences their diet and vice versa. As reefs have declined due to global (e.g., climate) and local (e.g., overfishing) factors, reef inhabitants are living in a different landscape, increasingly dominated by large algae species instead of reef-building coral. After successfully analyzing all samples and altering the protocol, our work is going towards other ongoing work with my stakeholder.

My stewardship project allowed me to lead my own project and to create long lasting outside connections with stakeholders in my chosen field. Although I ran into some difficulties like time management and had to change protocols as they were happening, my experience with the project has been fulfilling. By using the tools that were given to me during the Applied Stewardship Seminar as well as advice from my mentors, I was able to define my project and have something to focus on while I worked. I'm glad to have been lucky enough to fulfill my project within the semester but if given the chance, I would like to continue it throughout and after my time at Western.