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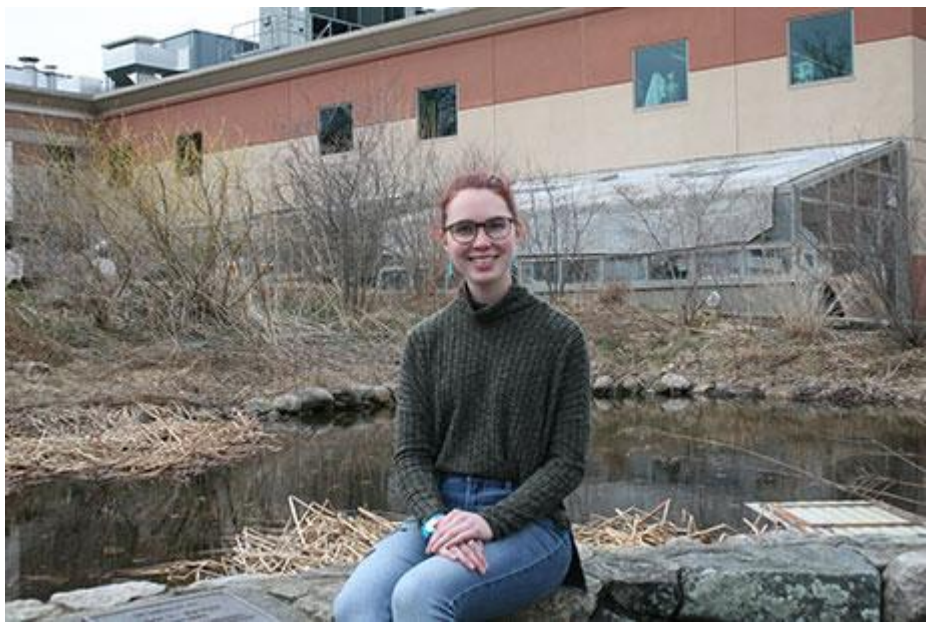
RWU Marine Biology major selected as one of eight students in nation for Ocean Global Change Biology Research Experience for Undergraduates program



Gabrielle Baillargeon will study the impact of environmental change on marine ecosystems and organisms at the highly competitive Ocean Global Change Biology Research Experience for Undergraduates (REU) program at the University of California, Santa Barbara.

April 10, 2018 | Courtney Dell’Agnese ’19

BRISTOL, R.I. – Gabrielle Baillargeon’s passion for marine science courses has brought her wading into knee-deep waters to collect aquatic specimens, performing hands-on dissections in the biology lab, and working in the WetLab at RWU, where she learned about the positive impact of fish aquaculture on preserving the ecological balance of natural coral reef habitats. This summer it's taking the sophomore marine biology major across the country to the University of California, Santa Barbara to participate in the highly competitive Ocean Global Change Biology Research Experience for Undergraduates (REU) program.

Out of hundreds of applicants from across the country, Baillargeon is one of eight students who landed a spot in UCSB’s program, which is funded by the National Science Foundation to provide undergraduate students research opportunities to study the impact of environmental change on marine ecosystems and organisms.

“I want to go to grad school and I’d like to know what I’d want to research there,” Baillargeon said. “By attending this REU program, it will give me a larger scope of opportunities to pursue different types of research and see which one I like best.”

At the Ocean Global Change REU program, Baillargeon will conduct her own scientific work at UCSB’s world-class research facility and will receive training in professional development, science communication and leadership skills.

"These REU's are so prestigious and really help to accelerate your career," said Associate Professor of Marine Biology Andrew Rhyne, who is serving as her research adviser. "They are an enhancement of what we do very naturally at Roger Williams University, but at a very highly competitive national level."

An Ethical Guide for Tropical Aquarium Fish

This incredible opportunity is thank in part to a unique project she's undertaken combining her passion for ecological sustainability and marine research interests.

In writing an article series on marine conservation for an online sustainable coral reef seller, Baillargeon learned there weren't many resources available guiding hobbyists on making sustainable purchases in the aquarium trade. With this in mind, she met with Rhyne – a pioneer in marine ornamental fish aquaculture who has been raising awareness about sustainable and unsustainable methods of supplying the aquarium hobbyist trade – to create an independent project at RWU.

Using Monterey Bay Aquarium's Seafood Watch as a guide, Baillargeon has been developing a mathematical model to determine if certain aquarium fish are sustainable for consumers to purchase, which according to Rhyne doesn't yet exist. With the knowledge and skills she's gained as a marine biology major and math minor, Baillargeon is building this model as a tool to help consumers make more ecologically responsible fish purchases for their home tanks.

But the Monterey Bay Aquarium's guide is only one source informing her work. Baillargeon also collects data from peer-reviewed scientific journals and other sources, which she inputs into her model and refines as necessary. Baillargeon says it's a slow process and one that will most likely continue well into her senior year.

"I stepped into this project not having a big background in marine ornamental fish species." Baillargeon said. "So it's all about pushing yourself to learn and for me it's been a learning process on how research is done and how you interact with other people when you need their help."

When she returns from the eight-week summer research program, Baillargeon will have deeper skills and more research experience to bring to her project, combining her love of science and math to investigate the intersection between animal population dynamics and their ecosystems.

"My large career goal would be to do field studies on population dynamics on sharks and bring that [knowledge] to a management policy side of things so they're managed properly," she said. "And working with communities to support sustainable fishing."

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