



Master's Opportunity at Cal Poly San Luis Obispo, CA: Aquaculture and recovery of Pismo clams and Olympia Oysters

The Ruttenberg, Johnson, and Bockmon Labs at Cal Poly San Luis Obispo:

(<http://www.marine.calpoly.edu/faculty/benjamin-ruttenberg>

<https://caseagrants.ucsd.edu/profiles/kevin-marquez-johnson>

<https://bockmon.wixsite.com/oceancarbonlab>

<https://www.marineconservationlab.org/pismoclams.html>)

have funding for a master's student to work on a project exploring the applications of integrated multi-trophic aquaculture (IMTA) approaches to increase hatchery yields of Pismo clams and Olympia oysters, to begin Fall 2023. The student would be based in San Luis Obispo, CA, with some travel required to local field sites, as well as potentially sites throughout California. More information about the Cal Poly Biology Graduate Program is available here: <http://bio.calpoly.edu/content/grad-degrees>.

Pismo clams (*Tivela stultorum*) and Olympia oysters (*Ostrea lurida*) were once abundant in California and in San Luis Obispo County. There is significant local and regional interest in developing these as local, native aquaculture species and potentially restoring depleted populations. Work for this project will include: 1) leading development of IMTA approaches using algal cultures along with spawning/rearing of these bivalves to increase growth and survivorship of larvae and newly settled individuals; 2) assisting with ongoing field monitoring programs for both species. There will also be ample opportunities to explore additional questions of the student's interest related to these issues. Funding for the project includes in-state tuition, stipend, and costs related to field work and travel; additional funding for student stipend may be available and opportunities will also be available to obtain support as a teaching assistant/lab instructor in the Biological Sciences Department at Cal Poly. Note: there may be additional private donor support available for California residents of financial need.

This is a specific project, and therefore the ideal student would have many of the following qualifications:

1. Experience rearing/care of adult and/or larval molluscs (or other invertebrates or fish)
2. Experience culturing microalgae or seaweed
3. Experience measuring carbonate chemistry parameters
4. Experience conducting shore-based/intertidal fieldwork, including organizing field logistics
5. Experience managing teams of students/assistants
6. Experience/skills with statistics and data analysis; experience with software packages such as R strongly preferred but not required
7. CA residency advantageous (but not required) since tuition funds only cover in-state tuition (but out-of-state tuition waivers are available for strong candidates)
8. Minimum 3.0 undergraduate GPA (higher **strongly** preferred)

Interested candidates should email Dr. Benjamin Ruttenberg (bruttenb 'at' calpoly 'dot' edu) with a **brief** description of qualifications, interest in the Cal Poly MS program, and the project, and a short CV (2 pages max), all as a **single** PDF file (with the title 'LastName_Firstname.pdf'). Please include GPA, experience with lab/aquarium/aquaculture work, fieldwork and organizing logistics, data analysis experience, etc, and names and contact information of at least 3 references.

Application deadline for Cal Poly is Feb 1.

