

# Alexandria Marquardt

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## EDUCATION

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| <b>Ph.D. Marine Biology</b> , Virginia Institute of Marine Science, Gloucester Point, VA               | 2020-Pres |
| <b>M.S. Biological Sciences</b> , California Polytechnic State University, San Luis Obispo, CA         | 2017-2020 |
| With Distinction, GPA 3.90   |           |
| <b>B.S. Fisheries &amp; Wildlife Science <i>Cum laude</i></b> , Oregon State University, Corvallis, OR | 2010-2013 |
| Undergraduate Research Fellow, GPA 3.65  |           |

## RELEVANT WORK EXPERIENCE

**Graduate Researcher** 09/17 – 05/20

**California Polytechnic State University**, San Luis Obispo, CA

Responsibilities: Project lead for Pismo clam (*Tivela stultorum*) research in California to understand statewide abundance & local annual cycles of reproduction on Pismo Beach, CA.

- Field logistics: set sample priorities, organize 130+ community & student volunteers, secure site access
- Histological preparation of specimens: use of microtome, H&E staining procedures
- Chlorophyll-*a* sample collection, filtration, extraction, & analysis with fluorometer
- Mentor 17 undergraduate students in field, lab methods, & professional development
- Data cleaning & analysis in R

**Marine Phytoplankton Specialist (NRS-1)** 04/17 – 08/17

**Oregon Department of Fish & Wildlife**, Astoria, OR

Responsibilities: Primary researcher on a harmful algal bloom (HAB) monitoring project investigating the capability of models to forecast spatial & temporal occurrences of HABs.

- Cell counts of phytoplankton, emphasis on HAB species
- Organized & collected shore-side net tow & whole water samples from the surf zone
- Determine particulate domoic acid & toxin levels in shellfish: enzyme-linked immunosorbent assays (ELISA)

**Marine Biotoxin Specialist (NRS-1)** 06/16 – 03/17

**Oregon Department of Fish & Wildlife**, Astoria, OR

Responsibilities: Co-investigator on exploratory marine biotoxin monitoring program for the Oregon Coast.

- Lead in sample collection, processing, & analysis of marine species & water samples using ELISA
- Co-lead in development of sampling plan & protocols for marine biotoxin monitoring
- Crew lead for sample collections: site selection, setting sampling goals, & multi-tide series scheduling
- Phytoplankton identification & cell counts; emphasis on marine HAB species

**Shellfish Sampling & Data Technician** 09/13 – 09/14

**Oregon Department of Fish & Wildlife**, Astoria, OR

Responsibilities: Primary technician conducting a comprehensive program to determine recreational & commercial shellfish harvest in Oregon. Participated in estuary research & shellfish population assessments.

- Performed recreational creel surveys, effort counts, & commercial biological sampling of Dungeness crab & Razor clam fisheries; Razor clam stock assessment, toxin samples & biomass indices
- Coded, entered, & error checked multi-year Access & Excel databases including commercial shellfish harvest logs
- Assisted Marine Mammal Project: trapping, resighting animals, flipper tags, GI tracts, & branding
- Assisted the Groundfish Program: otolith removal & cleaning, sex, length measurements, & species composition

## OTHER FIELD EXPERIENCE

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| <b>Juniper Obligate Technician</b> ; Wyoming Game & Fish Department                       | 05/16 – 06/16 |
| <b>Bat Technician</b> ; Wyoming Game & Fish Department                                    | 05/15 – 09/15 |
| <b>Deer Capture Technician</b> ; Pennsylvania Game Commission                             | 01/15 – 04/15 |
| <b>Experimental Biology Aide (OASIS Project)</b> ; Oregon Department of Fish & Wildlife   | 09/14 – 12/14 |
| <b>Biological Technician (prairie dog/plague research)</b> ; United States Forest Service | 06/13 – 09/13 |

## TEACHING EXPERIENCE

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### Laboratory Instructor

California Polytechnic State University, San Luis Obispo, CA

Introduction to Organismal Form & Function, Undergraduate lab course, 7 sections; 2017-2020

Introduction to Ecology & Evolution, Undergraduate lab course, 2 sections; Fall 2018

Diversity & History of Life, Undergraduate lab course, 2 sections; Fall 2017

## MENTORSHIP & INVOLVEMENT

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- National Shellfisheries Association: Co-Chair
- Graduate Student Representative: Cal Poly Distinguished Scholarship Award Committee
- Pismo Beach Clam Festival: Led outreach table on current research and bivalve biology
- Frost Research Mentor: Supervised 3 undergraduate research projects & final presentations
- Guest Instructor: Santa Barbara City College: Led field sampling trip on sandy intertidal invertebrates
- DIG Event Leader: Led outreach events for local high school students focused on bivalves of California

## SELECTED AWARDS & GRANTS

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| 2021    | Chesapeake Oyster Education, Technology and Monitoring Award; Chesapeake Bay Trust   |
| 2020-22 | Provost Distinguished Graduate Fellowship; Virginia Institute of Marine Science      |
| 2020-22 | VIMS Foundation Fellowship; Virginia Institute of Marine Science                     |
| 2019    | COAST Graduate Student Research Award; Cal State University System                   |
| 2019    | Thurlow C. Nelson Outstanding Oral Presentation; National Shellfisheries Association |
| 2017-19 | Rich & Arnie Leggett Scholarship; Cal Poly   |
| 2017-19 | Graduate Assistantship Award; Cal Poly   |
| 2018    | Myers Oceanographic & Marine Biology Trust   |
| 2017    | Sponsored; Taxonomic Identification of Harmful Algae in U.S. Waters Course           |

## MEDIA

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KVEC: Pismo Beach Today Show. Radio Show. 06/09/19

KSBY News: A new study aims to learn more about Pismo Beach clams. TV & Web. 06/09/18

The Tribune: Pismo's legendary clams are back - but don't plan a bake just yet. Newspaper. 05/05/18

## SELECTED PRESENTATIONS \*denotes presenter ^denotes undergraduate mentee

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- \*Marquardt, A, ^S Park, ^N Clark, ^E Maietta, ^E De Luca, ^D Almaguer, G Waltz, & B Ruttenberg. (2019, September). Population trends & reproductive cycles of Pismo clams (*Tivela stultorum*) in California. Pacific Coast Shellfish Growers Association, Portland, OR. Oral.
- \*Marquardt, A & B Ruttenberg. (2019, May). Pismo clams (*Tivela stultorum*) in California. Morro Bay Science Explorations: Native Shellfish & Aquaculture. San Luis Obispo, CA. Oral.
- \*Marquardt, A, ^S Park, ^D Almaguer, G Waltz, L Needles, & B Ruttenberg. (2019, March). Population trends & abundance of Pismo clams (*Tivela stultorum*) in CA. National Shellfisheries Association, New Orleans, LA. Oral.
- \*Marquardt, A, ^S Park, ^D Almaguer, G Waltz, L Needles, & B Ruttenberg. (2018, November). Population trends & abundance of Pismo clams (*Tivela stultorum*) in California. Western Society of Naturalists, Tacoma, WA. Oral.
- \*Marquardt, A, B Ruttenberg, L Needles, G Waltz, & D Wendt. (2018, June). Rise & Fall (and Rise?) of the Pismo clam. Pismo Beach City Council Meeting, Pismo Beach, CA. Oral.
- \*Marquardt, A, M Hunter, S Rumrill, K Corbett, & C Schmitt. (2018, March). Marine Biotoxins: Domoic Acid Monitoring on the Oregon Coast. National Shellfisheries Association. Poster.

## PROFESSIONAL DEVELOPMENT & CERTIFICATIONS

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PADI Advanced Open Water Diver (2019); EPA Region 10 Harmful Algae Identification Training Webinar (2016);

Survival Equipment, Procedures & Onboard Drills (ALMSEA-490) (2016)

## PROFESSIONAL MEMBERSHIPS

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National Shellfisheries Association (2017-Pres); Western Society of Naturalists (2017-Pres); American Fisheries Society (2017-Pres); Graduate Women in Science (2018-2019)