

Alexandra Gabrielle Tissot

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Education

Portland State University (PSU), 2019-Present

Portland, OR, USA

PhD Student: Earth, Environment and Society – Advised under Dr. Elise Granek

Lead Laboratory Safety Officer – ACE (Applied Coastal Ecology) Lab

Working thesis title: “Pesticides as multiples stressors on aquatic invertebrates”

Western Washington University (WWU), 2010-2015

Bellingham, WA, USA

Bachelor of Science, Environmental Sciences with Marine Ecology Emphasis

Minor in Environmental Education

Research Experience

Portland State University, 2020-Present

Portland, OR, USA

Research Lead, 2020-2021

- Researching and designing a chronic exposure study with varying pesticide types
- Pesticide application, dosing calculations and proper laboratory safety regulations
- Maintenance of fabricated seawater tanks and care of the soft-shell clam (*Mya arenaria*)

Research Assistant to Kimberly Brown in Dr. Catherine de Rivera’s Lab 2020-2021

- Assistance in estuary fieldwork conducting enclosure experiment to observe the effects of the green crab (*Carcinus maenas*) on native eelgrass species (*Zostera marina*)
- Collection of green crabs, identification and quantification of benthic invertebrate diversity in core samples

Estación Costera de Investigaciones Marinas (ECIM), 2018-2019

Las Cruces, V Región, CL

Pontificia Universidad Católica de Chile

Laboratory Technician in laboratory of Dr. Sergio Navarrete

- Cultivating barnacle larva to be used in experiments testing various types of antifouling paint
- Completing work on various marine invertebrate field identification guides
- Testing the efficiency of antifouling paints against the formation of biofilms
- Assistance in monthly fieldwork, changing and revising larval collectors
- Teaching assistance in intertidal fieldwork; community surveys and escape response experiments
- Student mentor; biannually leading 3-5 students in intensive laboratory internships

Humboldt State University, 2018

Arcata, CA, USA

Research Assistant

- Analyzing photographic data from photo quadrats comparing the effects of fishing impacts on resilience in areas under different levels of protection
- Identifying corals and other invertebrates to species level

Estación Costera de Investigaciones Marinas (ECIM), 2016-2018

Las Cruces, V Región, CL

Pontificia Universidad Católica de Chile

Research Assistant in laboratory of Dr. Sergio Navarrete

- Lead community surveys in the rocky intertidal to view indirect effects of predator-prey interactions with a keystone predator
- Analysis of larval collectors (tuffys), separating organisms by phylum at a larval/juvenile level

- Lead multiple larval cultivations of two species of a predominant Chilean kelp crab, maintaining live specimens from release until megalopa stage, identifying larval stages and documenting by photomicroscopy
- Secondary investigator in project concerning the effects of hypoxia on maternal investment in Chilean kelp crab
- Assistance in bi-monthly field and lab work, installing and analyzing larval collectors to establish a connectivity matrix along the central coast of Chile
- Teaching assistance in doctoral course on direct vs. indirect predation effects, involving laboratory experiments with escape responses between predator and prey
- Teaching assistance in intertidal fieldwork, completing community surveys and escape response experiments

Humboldt State University, 2015-2016

Arcata, CA, USA

Research Assistant

- NOAA and NSF funded project on the effects of ocean acidification on species of juvenile rockfish and cabezon, experiments run on endurance and sensory reception
- Assistance with OA/DO mesocosm experiment set-up and maintenance, data capture

Washington State University, 2015-2016

Vancouver, WA, USA

Dive Assistant to PhD candidate Corinne Kane in West Hawai'i

- Summer 2015: Assisted with mesophotic reef research
 - Operated photo quadrats at various depths, identified, followed, and filmed fish for 5-minute periods to observe behavior, aided in algal transplants from 30m to 6m
- Summer 2016: Analyzed benthic photographic data from previous summer using CoralNet software, identifying various species of corals, alga, and invertebrates

Teaching and Service Experience

Portland State University

Portland, OR, USA

University Studies Program, 2019-Present

Graduate Peer Mentor

- Courses Mentored:
 - UNST 201/286: Natural Science Inquiry (Fall 2019-Present)
 - UNST 224: Environmental Sustainability (Winter 2021)
 - UNST 231: Gender & Sexualities (Spring 2021)

Western Washington University, 2014

Bellingham, WA, USA

Teaching Assistant: Ecogastronomy: The Art and Science of Food

- Responsible for independently leading a two hour weekly discussion course, creating original teaching material that correlated with the main course

Bellingham Marine Life Center, 2012- 2015

Bellingham, WA, USA

Volunteer Exhibit Interpreter/Aquarist/Intern

- Taught visitors about the physiology of intertidal invertebrates and maintained the Pacific Giant Octopus and Rocky Intertidal tanks
- Lead demonstrations for children describing life cycles and physiology of intertidal animals

Awards and Scholarships

Friday Harbor Laboratories, University of Washington, Spring 2022

- *Charles Lambert Memorial Endowment, Research Fellowship (\$3,500)*

Women in Science, Portland, Fall 2021

- *Professional Development Scholarship, Women in STEM (\$600)*

Portland State University, Spring 2021

- *Ed and Olive Bushby Scholarship (\$2,000)*

Publications

- Athey, S., Almroth, B.C., Granek, E.F., Hurst, P., **Tissot, A.G.**, Weis, J.S. Unraveling Physical and Chemical Effects of Textile Microfibers (under review).
- Granek, E. F., Traylor, S. D., **Tissot, A. G.**, Hurst, P. T., Wood, R. S., & Brander, S. M. (2022). Clothes Encounters of the Microfibre Kind: The effects of natural and synthetic textiles on organisms. In *Polluting Textiles* (pp. 63-99). Routledge.
- **Tissot, A. G.**, Granek, E. F., Thompson, A. W., Hladik, M. L., Moran, P. W., & Scully-Engelmeyer, K. (2022). The silence of the clams: Forestry registered pesticides as multiple stressors on soft-shell clams. *Science of the Total Environment*, 819, 152053.
- Baldanzi, S., Storch, D., Fusi, M., Weidberg, N., **Tissot, A.**, Navarrete, S. A., & Fernández, M. (2020). Combined effects of temperature and hypoxia shape female brooding behaviors and the early ontogeny of the Chilean kelp crab *Taliepus dentatus*. *Marine Ecology Progress Series*, 646, 93-107.
- Working title: "Taxonomic Description of *Taliepus* spp.," Weidberg et al. (in preparation)

Conferences and Trainings

State of the Coast, Oregon's Coastal Conference, 2019-Present

- 2021 – Session panelist, "*What's that in the water? Contaminants in Oregon's coastal waters and animals*"
 - Presented "*Exploring biophysical linkages between forestry practices and estuarine shellfish*," Scully-Engelmeyer, K. and **Tissot, A.G.**

Empowering Academic Researchers to Strengthen Safety Culture, June 5, 2021

- Laboratory risk assessment education, learning and executing RAMP principles, guide to establish Lab Safety Teams in university settings

Pacific Estuarine Research Society (PERS), 2021-Present

- 2021 – Presented "*The Silence of the Clams: The Sub-lethal Effects of Environmentally Relevant Concentrations of Forestry Use Pesticides on Adult Soft Shell Clams*"
 - **Award:** Heinle Award for Best Overall Graduate Student Presentation

Society of Environmental Toxicology and Chemistry (SETAC), 2020- Present

- North America and Pacific Northwest Chapters, Microplastics Interest Group
- November 2021, SETAC North America – Presented "*The Silence of the Clams: Forestry Registered Pesticides as Multiple Stressors on Soft-Shell Clams*"
- April 2021, SETAC PNW – Presented "*The Silence of the Clams: The Sub-lethal Effects of Environmentally Relevant Concentrations of Forestry Use Pesticides on Adult Soft Shell Clams*"
 - **Award:** 1st Place Presentation Award, Thunder PhD Category

Western Society of Naturalists (WSN), 2015-Present

- 2020 Presented "*Clamity: The Silent Victims of Forestry Use Pesticides*"
- 2015 Co-authored and presented poster: *Assessing the competitive relationship between yellow tangs and brown surgeonfish with changes in depth*

Extra-Curricular Activities

White Supremacy and Me Anti-Racism Workshops, 2021-Present

Attendee and Leader

- Completing work from “Me and White Supremacy: Combat Racism, Change the World, and Become a Good Ancestor” by Layla Saad, leading groups in workshops to promote anti-racism practices in an educational setting

Portland State University Lab Safety Team, 2021-Present

Lead Safety Officer for the ACE (Applied Coastal Ecology Lab)

- Contributing to the creation and launch of a lab safety team at PSU, working to improve safety culture across laboratories and improve general safety measures

Academia Exploradores Marinos (Marine Explorers Academy), 2021

Guest Invertebrate Expert

- Academia Exploradores Marinos is an educational group formed to promote marine education in young children (ages 5-10). Workshops are held weekly and experts are invited to speak and answer questions about specific organismal groups (ie. *Crabs, nudibranchs*)

Proyecto Huiros (Project Huiros), 2020

Collaborator, Educator, English Translator

- Proyecto Huiros is an educational Instagram account led by a group of Chilean marine scientists with the interest of spreading awareness of subtidal ecosystems with a focus in conservation

Informed DREAMer Ally, 2019-Present

- Attends trainings to provide support and hold safe space for undocumented students at PSU

Certifications and Skills

- **Open Water SCUBA** through PADI, Received in 2010
 - Dive experience: 4 dives in Tacoma, WA; 55 dives in West Hawai'i; 5 in Central Chile
- **Oregon Public Pesticide Applicator License**, *Demonstration and Research*, Received 2020
- **Fluent in Spanish language** (non-native speaker), specialty in Chilean dialect
- Comfortable working in harsh field environments, experience in intertidal and subtidal research
- Marine animal husbandry, in laboratory settings has successfully cared for crustaceans, bivalves, and coastal rockfish
- Maintaining mainland sea water laboratories, is experienced in the creation and maintenance of healthy aquarium conditions with fabricated sea water
- Proficient in written and verbal communication as well as social media
- Energetic and passionate, strong leader as well as collaborator
- Talented in photography and photomicroscopy
- Trained in potassium hydroxide (KOH) tissue digestion
- Proficient in programs: ImageJ, CoralNet, Blender (3D Content Creation Program), Sigmaplot, Sigmastat, Microsoft Office Suite, R, Adobe Premiere Pro, Lightroom