

## EDUCATION

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### **Master of Environmental Science and Management** (Expected June 2020)

Bren School of Environmental Science & Management, University of California – Santa Barbara, CA

Specialization: Coastal Marine Resources Management | Focus: Eco-Entrepreneurship (Eco-E)

Leadership: 2020 Eco-Entrepreneurship Project Selection Committee

Awards: Individualized Professional Skills Grant, Eco-E Skills Grant, Knolling Summer Internship Scholarship

### **Bachelor of Science in Pharmaceutical Sciences & Bachelor of Arts in Biology, *magna cum laude*** (August 2015)

University of Rhode Island – Kingston, RI

Awards/Honors: University Honors Program; Golden Key International Honour Society; Phi Eta Sigma National Honor Society; Centennial Scholarship; M Galanti Nursing Scholarship; Dean's List

Exchange Program: University of Hawaii at Hilo (1/15–5/15)

## MASTER'S GROUP PROJECTS

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### **Assessing Brazil's Marine Aquaculture Potential**, Master's Thesis Group Project (March 2019–Present)

Client: World Wildlife Fund (WWF)

- Identify suitable sites for offshore marine aquaculture in Brazil to help WWF understand where and if capture fisheries and imported products can be supplemented or substituted with fish farming
- Analyze and process geographic shapefiles of barriers to aquaculture development using R programming
- Create a comprehensive ShinyApp tool for client to that integrates user-specified growth model parameters to assess available space and determine the species-specific parcels most suitable for mariculture

### **Highly Cultured – Developing a Seaweed-Based Biochar**, Eco-Entrepreneurship Project (January 2019–Present)

- Develop business model for a biochar startup company that addresses eutrophication and water scarcity by creating an invasive seaweed-based soil amendment that increases water and nutrient retention in agriculture
- Conduct 50+ phone and in-person interviews with seaweed researchers, biochar producers, vintners, and cannabis growers to attain expert advice and learn customer desires to inform business model development
- Prepare and present quarterly business model and development pitches to a 6-person committee of successful entrepreneurs and investors to receive feedback on viability of business plan

## SCIENTIFIC EXPERIENCE

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### **Waterkeeper Intern – Nicoya Peninsula Waterkeeper**, Santa Teresa, Costa Rica (06/19–09/19)

- Designed, developed a budget for, and constructed a double-reservoir grease trap filtration system to filter over 145 m<sup>3</sup>/month of greywater from the local high school cafeteria
- Drafted future design blueprints, materials checklists, construction protocols, maintenance guidelines, and a project proposal in Spanish to extend the grease trap system into a biofiltration garden

### **Fish & Wildlife Scientific Aid – Department of Water Resources (DES)**, West Sacramento, CA (8/17–5/18)

- Conducted long-term ecological monitoring of species abundance and composition of fishes and invertebrates in the Sacramento-San Joaquin Delta using a fyke trap, rotary screw trap, beach seines, and drift nets
- Assisted with acoustic tag implementation in spawning adult salmon and monitored juvenile abundance and origin to investigate Chinook salmon escapement and outmigration in the Yolo Bypass

### **Salmon Monitoring Intern – UC/Sea Grant Cooperative Extension**, Santa Rosa, CA (6/17–8/17)

- Assessed Russian River tributaries for habitat availability, water quality and the presence and abundance of native and non-native fishes to maintain long-term ecological monitoring studies
- Conducted downstream migrant trapping, electrofishing, and wand surveys of PIT-tagged juvenile salmonids to evaluate the effectiveness of Coho salmon restoration project within the Russian River watershed

## SCIENTIFIC EXPERIENCE (CONTINUED)

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### **Fisheries Research Intern – The Maru Research Center, Kande, Nkhata Bay Region, Malawi (1/17–4/17)**

- Fostered positive relationships with artisanal fisherman to facilitate community involvement in fisheries monitoring and to better identify trends in fishing methods and catch, informing management solutions
- Performed long-term ecological monitoring of population biodiversity and reproductive behavior of Malawian cichlids through underwater SCUBA surveys to identify trends in populations or changes in community structure

### **Aquatic Ecosystem Specialist – Oak Ridge Associated Universities/ US EPA, Narragansett, RI (10/15–1/17)**

- Led water quality testing, water chemistry sampling and processing, sample inventory, algaculture, and husbandry for *in-vitro* and *in-vivo* sublethal toxicity evaluations of antihypertensive pharmaceuticals to marine bivalves
- Drafted and revised associated Good Laboratory Practice (GLP)-compliant laboratory operating procedures to guide future sublethal toxicity exposures to marine invertebrates
- Performed field sampling, extraction, and sample preparation of seawater and sediment for the detection of contaminants, including pharmaceuticals, artificial sweeteners, and heavy metals like cadmium and lead

### **Undergraduate Research Assistant – University of Rhode Island, Rowley Lab, Kingston, RI (1/14–12/14)**

- Explored bioactive compounds through the extraction, purification, and elucidation of unknown metabolites derived from marine bacteria and fungi, which contributed to the discovery of at least one novel antimicrobial
- Created and maintained bioactive bacterial and fungal cultures and tested the antimicrobial potential of isolated metabolites against multi-resistant *Staphylococcus aureus* (MRSA)

## ADDITIONAL ENVIRONMENTAL EXPERIENCE

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### **Ocean Friendly Restaurants (OFR) Fellow – Surfrider Foundation, Santa Barbara, CA (10/18–04/19)**

- Engaged in policy and educational outreach with local restaurants to advocate for the adoption of sustainable practices and helped onboard 11 new businesses into the Ocean Friendly Restaurants (OFR) program
- Established marketing connections with local sources including *Santa Barbara Magazine* and *The Restaurant Guy* to promote participating ocean-friendly businesses through multimedia web, social, and print advertisements

### **Global Research Fellow – Sustainable Ocean Alliance (SOA), San Francisco, CA (01/19–03/19)**

- Identified (via internet research) 1000+ existing startups that tackle ocean-related challenges to create database of companies that will map out the ocean technology startup ecosystem in 2019
- Compiled associated technology, industry, and impact information to help facilitate startup recruitment for Ocean Solutions Accelerator program and contribute to statistics for the 2019 *State of Our Ocean (SOA) Report*

## SKILLS

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**Computer:** R, GIS, Adobe Premiere, Microsoft Office Suite

**Laboratory:** Solid phase extraction; organismal dissection; high-pressure liquid chromatography; ICP plasma mass spectrometry; grain size analysis; acid digestion

**Field:** Water quality analysis and sampling; SCUBA surveys; snorkel surveys; other fisheries surveys; fish handling; boat operation and trailering; acoustic telemetry; 4WD vehicle operation

**Communication:** 5-minute environmental documentary (12/19); poster presentation (03/18); co-authored peer-reviewed publications (*Chemosphere* – 11/18; *Environmental Toxicology and Chemistry* – 02/18); co-authored posters/presentations (06/16, 11/16, 03/17, 11/17)

**Certifications:** Swiftwater River Rescue (5/18); Wilderness First Aid (3/18); PADI Advanced Open Water (3/17)

**Trainings:** Strength-Based Leadership (3/18); CDFW Fish Identification (10/17); Mystic Aquarium Marine Mammal First Response (11/16); US EPA Scientific Integrity (4/16); Save the Bay Coastal Cleanup Leadership (3/16)

**Workshops/Conferences:** Seaweed Farming: Growing, Harvesting, Drying, & Packaging Alaria (01/20); Biochar II: Production, Characterization, & Applications (09/20); Interagency Ecological Program Annual Workshop (03/18)