
SAHANA SIMONETTI

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Experience

Fisheries and Climate Change Research Contractor

Environmental Defense Fund: La Paz, Mexico — January 2020 - Present

The Environmental Defense Fund (EDF) is a US-based environmental advocacy group focusing on climate change, ecosystem restoration, energy systems, public health and the oceans. As a research contractor for the EDF's Oceans Program, I was responsible for overseeing a research project that coupled methods in the social sciences with biophysical and ecological data to assess how Mexican small-scale fishers perceive the impacts of climate change. Responsibilities included: (1) a **literature review** to quantify the impacts of climate change on Mexican fisheries; (2) submission of necessary documentation to comply with Northeastern University's **Institutional Review Board** (3) the design and execution of a series of **in-depth interviews** amongst a diverse group of small-scale Mexican fishers, scientists, and resource managers; (4) the creation and distribution of an **online survey tool** to assess the same themes within a larger, more diverse sample; (5) **data wrangling, statistical analysis and figure generation** - in Microsoft Excel, R Studio and ArcGIS; (6) **writing, editing and submission of a scientific manuscript**

Research Assistant

Helmuth Lab; Marine Science Center Northeastern University — September 2017 - September 2019

The Helmuth Lab uses biophysical applications to forecast where and when trouble-spots and refugia (areas that remain relatively buffered in the face of environmental change) are likely to occur in coastal marine environments as a result of climate change. As a research assistant in the lab, I wore many different hats. Responsibilities included: (1) using **ESRI Storymaps and ArcGIS** to create an interactive map to allow students in China, Indonesia and the Caribbean to explore the impacts of overfishing; (2) **conducting biodiversity surveys** along the coast of Maine; (3) **image analysis, statistical analysis, and figure generation** – in R Studio and Image J; (4) assisting the Boston Museum of Science's Wicked Hot Boston Campaign to investigate the urban heat island effect in Boston

REU Intern

Price Lab; Bigelow Laboratory for Ocean Sciences — Summer 2018

The Price lab studies how global change phenomena like ocean warming and acidification impact species interactions, community structure and ecosystem dynamics in benthic marine environments. As an REU intern in the Price Lab, I studied the combined impacts of ocean warming and acidification on the dynamics and etiology of a tropical fungal disease (CFD) that targets crustose coralline algae (CCA), a keystone species on coral reefs worldwide. Responsibilities included: (1) tracking changes in benthic cover via **image analysis** in Adobe Photoshop; (2) measuring the growth of CCA using **fluorescent microscopy and imaging techniques**; (3) developing novel protocols for culturing CFD

and measuring the fecundity of the coralline algal host. I presented this research at the 2019 Association for the Science of Limnology and Oceanography conference in San Juan, Puerto Rico.

Research Assistant

Rosengaus Lab; Northeastern University — September 2016 - May 2017

The Rosengaus lab studies disease resistant adaptations in termites and the costs and benefits of group living. This was my first research position, and took place during my freshman year of college. Responsibilities included: (1) Growing and plating different strains of bacteria; (2) caring for termite colonies; (3) sexing termites; (4) staging and photographing the growth of termite offspring

Education

Northeastern University — Marine Biology, 2020

- Deans List all semesters, GPA: 3.8/4.00
- Awards: 2019 Carl F. Muckenhoupt Scholarship and the 2019 Northeastern College of Science Dean's Scholarship, Presidential Global Scholarship
- Relevant Coursework: Biostatistics, Ecology, Evolution, Organic Chemistry, Genetics and Molecular Biology, Geographic Information Systems, Marine Invertebrate Zoology and Botany, Marine Ecological Experimental Design, Oceanography, Physiological and Molecular Marine Ecology
- Alumna of Northeastern University Three Seas Program

Volunteer Work and Community Engagement

Huskies Organizing with Labor, Northeastern University

I worked with a coalition of student organisations supporting Northeastern food service workers in their campaign for contracts with liveable incomes, affordable healthcare and better protections for immigrant workers.

Coral Restoration Foundation, Curaçao

I volunteered in the non-profit's coral nursery cleaning and caring for fragments of elkhorn and staghorn corals being used for asexual reproduction and out planting on the island's reefs

SECORE International, Curaçao

I worked as a volunteer collecting gametes of coral species to be grown in the lab and cared for an educational display in the local aquarium

Computer Skills, Certifications and Interests

- Computer Skills: Microsoft Excel, Adobe Photoshop, ImageJ, R-Studio, ArcGIS, NVivo, ESRI StoryMaps, Agisoft Metashape
 - Certifications: SCUBA (PADI Advanced Open Water diver, PADI Coral Restoration diver, and American Academy for Underwater Sciences Scientific diver), CPR certified
 - Interests: Political organising, writing, music (guitar, bass, and vocals), and hiking
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