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# ALEXANDRA STOTE

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I am a researcher interested in the intersection of people and the ocean and how social-ecological relationships in marine and coastal environments will change under the pressures of climate change. My research primarily uses quantitative methods to explore social-ecological relationships, but much of my interest lies in interpreting findings through a social, political, and/or equitable lens. My specific areas of interests include the interactions between climate change and food systems; global food security and sustainable seafood production; equitable climate policy; and data visualization in R.

## Education

- Master of Marine Affairs (MMA), University of Washington** June 2019
- Graduate Certificate in Climate Science, Program on Climate Change
  - Coursework: sustainable seafood, social justice in fisheries, shellfish aquaculture, valuation of ecosystem services, climate change adaptation and mitigation policy, ocean climate science and governance. GPA 3.85/4.0.
- Organismic and Evolutionary Biology (BA), Harvard University** May 2014
- Senior Honors Thesis completed with *Excellence*
  - Nominated for Thomas T. Hoopes prize for outstanding thesis research
  - Coursework: ichthyology, biomechanics, fishery science, ocean engineering, evolution, deep sea biology, physical sciences. GPA 3.4/4.0.
- Semester Abroad, University of Havana, Cuba** Aug 2012- Dec 2012
- Coursework: marine ecology, coral reef disease and ecology, animal physiology, Cuban history and culture. GPA 4.5/5.0.

## Awards and Scholarships

- Mortar-Tolo Board Scholar**, Mortar-Tolo Board Foundation. Sep 2018- June 2019
- National Science Foundation (NSF) Grant**, written on behalf of the Graduate Climate Conference committee; awarded \$35K conference funding. Mar 2018
- Dayton "Lee" Alverson Endowed Fellowship**, College of the Environment, UW. Sep 2017- Mar 2018
- Society of Integrative and Comparative Biology (SICB)**. Member. Jan 2013- Jan 2015
- Thomas T. Hoopes Prize nomination** for outstanding undergraduate thesis research, Harvard University. May 2014
- Myvanwy M. and George M. Dick Scholarship**, Harvard University. Dec 2013
- Harvard College Research Program Grant**, Harvard University. May 2013
- Grants in Aid of Undergraduate Research**, Harvard University. May 2013
- Bausch and Lomb Honorary Science Award**, University of Rochester. May 2010
- Board of Directors Award**, Massachusetts Foreign Language Association. May 2010
- National Honors Society**. Member. Nov 2008-May 2010

## Research Experience

- Nitrogen accumulation in the eastern oyster (*Crassostrea virginica*) varies significantly across the Delaware Inland Bays (Master's thesis)** Nov 2018- June 2019
- Advisors: Dr. S. Jardine (SMEA, UW) and Dr. T. Klinger (SMEA, UW)

- Performed ANOVA and difference-in-means to compare nitrogen uptake levels of >300 oysters to determine the influence of aquaculture on nutrient removal in the bays (R) in an effort to inform a nutrient trading program
- Spatial analysis term project: Visualizing oceanographic changes in an estuary** Apr 2019- June 2019
- Employed spatial analysis techniques in R (packages: sf, spData, raster, ggspatial, etc.) to visualize changes in temperature and chlorophyll concentration (netCDF files) on the US east coast over the course of a year
- Graduate Research Assistant, Washington Sea Grant** Sep 2018- June 2019
- Advisors: Dr. B. Vadopalas (SAFS, UW) and Dr. P. Dye (WA Sea Grant)
- Self-led extensive literature review examining the ecological interactions of key species in a coastal Washington estuary to inform a new approach to ecosystem-based management on the coast of WA
- Change the Climate: An interactive board game (PCC Capstone)** Mar 2018- June 2019
- Advisors: Dr. K. Lohwasser (UC Santa Barbara) and Dr. M. Bertram (PCC, UW)
- Created an interactive board game about the impacts of climate change on ecosystems and humans for middle school students
  - Facilitated game play in 3 middle school classrooms to assess the learning benefits of playing
- Ocean deoxygenation: Everyone's problem** Sep 2017- Present
- Advisor: Dr. E. Allison (SMEA, UW)
- Collaborated on researching and writing a peer-reviewed chapter introduction about the human impacts of ocean deoxygenation for the IUCN
- Science Writer and Watchstander, R/V Sikuliaq Cruise** Dec 2014- Jan 2015
- Advisors: Dr. M. Tominaga (WHOI) and M. Tivey (WHOI)
- Sailed from Hawaii to Guam over 42 days to measure the electromagnetic fields between shifting plate tectonics
  - Interpreted bathymetric and magnetic measures
  - Authored and compiled +100-page cruise report and several blog posts
- A morphological analysis of the suction disc performance and inter-specific host association in the remoras (Senior Honors Thesis)** Jan 2013- June 2014
- Advisors: Dr. G. Lauder (IB, Harvard) and Dr. C. Kenaley (IB, Boston College)
- Analyzed disc morphometrics (~500 parameters) using CT-scans and 3D-reconstruction software
  - Ran principal component analysis to compare features of disc structure to surface roughness of preferred hosts (R)

## Professional Experience

- Shellfish Aquaculture and Ecology Specialist, WA Sea Grant** June 2019- Present
- Leading an intensive effort to synthesize a comprehensive literature review to help inform advisory needs of the aquaculture sector in Washington, including environmental, economic and sociocultural considerations
  - Coordinating 200+ person workshop including budget and workshop design
- Carbon Emissions Analyst (pro-bono), UW Program on Climate Change** Mar 2019- Present
- Developing best practices for emissions accounting, including tracking emissions and carbon pricing, for upcoming climate conference focused on food and water security
  - Working with conference organizers to reduce emissions and to identify an appropriate offset program
- Graduate Intern, Maritime Environmental Dept., Port of Seattle** June 2018- Sep 2018
- Designed independent project to find ways to improve public access to the Duwamish River, Seattle, WA

- Combined quantitative and qualitative research methods to evaluate the accessibility, usability, and public safety of Port-owned public access sites and used results to inform a set of recommendations for improvement
- Collaborated on side projects including kelp restoration in Elliot Bay and Smith Cove Blue Carbon Pilot Project

**Program Coordinator and Leader, ThinkImpact**

Jan 2016- Feb 2016

- Coordinated immersive program for 12 high school students from China that involved several college tours in the US and entrepreneurial workshops in Panama

**Commercial Fisherman, F/V Meg J, Bristol Bay, AK**

June 2014- Aug 2015

- Worked as only female aboard commercial vessel during 10-week seasons
- Performed all deckhand duties and managed fish holds and galley

**Program Coordinator and Program Leader, Operation Groundswell**

June 2011- Aug 2012

- Organized, budgeted and guided 6-week backpacking trips in Guatemala for groups of young adults (18+)
- Partnered with local NGOs to facilitate social justice and environmental workshops for participants

## Skills

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| • Fluent in Spanish (reading, writing, speaking) | • R/GitHub (intermediate)              |
| • Policy analysis                                | • Climate modeling (novice)            |
| • Science communication                          | • InDesign (intermediate)              |
| • Fundraising, grant, and technical writing      | • GIS (novice)                         |
| • Research design                                | • Advanced Open Water Certified (PADI) |
| • Public speaking                                | • MS Suite/Google platforms (expert)   |
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## Publications

Kenaley, C.P, **A. Stote**, W. Ludt, and P. Chakrabarty. (2019). Comparative Functional and Phylogenomic Analyses of Host Association in the Remoras, a Family of Hitchhiking Fishes. *Integrative Organismal Biology: A Journal of the Society for Integrative and Comparative Biology*.

Bassett, H., **A. Stote**, and E. H. Allison. (In press). Ocean Deoxygenation: Everyone's Problem in *IUCN Global Report on Deoxygenation*. (Ch. 9).

**Stote, A** and Z. V. Duivenbode. (2019). Women in stem part IV: Celebrating the in(div)isible women of climate change. [Currents Student Blog]. Retrieved from <https://smea.uw.edu/about/student-blog/blog/women-in-stem-part-4-celebrating-the-indivisible-women-of-climate-change/>.

**Stote, A.** (2019). Generating hope: Washington state ferries plans to decarbonize their fleet by switching to electric power. [Currents Student Blog]. Retrieved from <https://smea.uw.edu/about/student-blog/blog/generating-hope-washington-state-ferries-plans-to-decarbonize-their-fleet-by-switching-to-electric-power/>.

**Stote, A.** and J. Rice. (2018). Ocean acidification may be twice as extreme in Puget Sound's seagrass habitats, threatening Dungeness crabs. [Encyclopedia of Puget Sound]. Retrieved from <https://www.eopugetsound.org/articles/ocean-acidification-may-be-twice-extreme-puget-sound%E2%80%99s-seagrass-habitats-threatening>.

**Stote, A.** (2018). Response to information, training, and knowledge in climate policy. [Public Administration Review, Speak Your Mind Forum]. Retrieved from <https://publicadministrationreview.org/speak-your-mind-climate-change-symposium/>.

Kenaley, C.P., **A. Stote** and B. E. Flammang. (2014). The morphological basis of labriform rowing in the deep-sea Bigscale *Scopelogadus beanii* (Percomorpha: Beryciformes). *JEMBE*.

## Leadership

<b>Graduate Student-Faculty Representative</b>	Sep 2018-Present
<b>Graduate Steering Committee Member</b> , Program on Climate Change	Sep 2018-Present
<b>Head of Public Engagement</b> sub-committee	
<b>Fundraising Chair</b> , 12th Annual Graduate Climate Conference	Feb 2018- Nov 2018
Harvard Boxing Club Captain	Aug 2013- May 2014
Harvard Women's Club Soccer Captain	Aug 2012- May 2014
Photography Editor-at-Large, <i>The Harvard Crimson</i>	Mar 2011- Mar 2012
Executive Arts Photographer, <i>The Harvard Crimson</i>	Oct 2010- Mar 2011

## Volunteer Experience

<b>Beach Naturalist</b> , Seattle Aquarium	Mar 2018- Aug 2018
<b>Salmon Surveyor</b> , Puget Soundkeeper	Oct 2017- Dec 2017
<b>Prospective Students Weekend Volunteer and Student Liaison</b> , SMEA, UW	Mar 2018- Present
<b>Worldwide Organization of Organic Farms (WWOOF)</b> (South America)	Feb 2015- June 2015
<b>Grant Fundraising Coordinator</b> , Operation Groundswell, Guatemala Division	Sep 2011- Sep 2013