

ALLISON N. CRAMER

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POSITIONS

National Science Foundation Postdoctoral Fellow **December 2021 – Current**

University of Washington Friday Harbor Labs, in collaboration with
California State University Monterey Bay & USGS Pacific Coastal and Marine Science Center

Postdoctoral Researcher **July 2020 – April 2022**

University of California Santa Cruz, NOAA Southwest Fisheries Science Center Fisheries Ecology Division

EDUCATION

Washington State University – Pullman, WA

Ph.D. in Environmental and Natural Resource Science **January 2015 – May 2020**

Dissertation: *"Problems in Data Synthesis: Towards a Dynamic Understanding of Marine Habitat Use"*

California State University Monterey Bay – Seaside, CA

M.S. in Applied Marine and Watershed Science **August 2011 – December 2015**

Thesis: *"Marine Fish Site Fidelity: Broad Scale Patterns across Species and Geographies"*

University of Oregon – Eugene, OR

B.A. Honors in Biology, Minor in French **September 2005 – June 2010**

Emphasis in Ecology & Evolution, Marine Biology

Honors Thesis: *"The Role of Beaver (Castor canadensis) in Salmon Management: A Literature Review and Test of Method."*

Université catholique de l'Ouest – Angers, France

French Coursework towards Minor **May – July 2007**

PUBLICATIONS

Research articles

Cramer, Alli N., Curt D. Storlazzi, Olivis Bible, Canon Cline, Grace Leuchtenberger, Casey Smith, Corey Garza, Emily Carrington. In USGS internal review. *"The use of an analog sclerometer to estimate the friability of hard substrates supporting coastal marine communities."* Intended for Estuarine, Coastal and Shelf Science.

Cramer, Alli N., Peter N. Dudley, Ethan A. Mora. In NOAA internal review. *"Timing and response of spawning Green Sturgeon to environmental conditions"*. Intended for Canadian Journal of Fisheries & Aquatic Sciences.

Cramer, Alli N. & Hoey, Jennifer A., Dolan, Tara E., Gatins, Remy, Toy, Jason A., Chancellor, Jordan L., Palkovacs, Eric P., Garza, John Carlos, Beltran, Roxanne S. 2023. *"A unifying framework for understanding ecological & evolutionary population connectivity."* Frontiers in Ecology and Evolution.

Cramer, Alli N. & Urmy, Sam S., Rogers, Tanya L., Sullivan-Stack, Jenna, Schmidt, Marian, Stewart, Simon D., Symons, Celia C. 2022. *"When are bacteria really gazelles? Comparing patchy ecologies with dimensionless numbers."* Ecology Letters. (co-first author, citation: Urmy et al 2022)

Cramer, Alli N., Steve Katz, Clark Kogan, James Lindholm. 2021. *"Distinguishing residency behavior from random movements using passive acoustic telemetry."* Marine Ecology Progress Series.

Quintana, Anastasia C., Alfredo Giron-Nava, Samuel Urmy, **Alli N. Cramer**, Santiago Dominguez-Sánchez, Salvador Rodriguez-Van Dyck, Octavio Aburto-Oropeza, Xavier Basurto, Amy H. Weaver. 2021. *"Positive social-ecological feedbacks in community-based conservation."* Frontiers in Marine Science.

Meyer, Michael F., Matthew R. Brousil, **Alli N. Cramer**, Brian P. Lanouette, Julie C. Padowski, Stephanie E. Hampton. 2020. *"The global lake area, climate, and population (GLCP) dataset: a new tool for addressing critical limnological questions."* Limnology and Oceanography Bulletin.

Cramer, Alli N., Stephen L. Katz. 2020. *"Primary Production and Habitat Stability Organize Marine Communities."* Global Ecology and Biogeography.

Labou, Stephanie G., Michael F. Meyer, Matthew Brousil, **Alli N. Cramer**, Brad T. Luff. 2020. *"Global Lake Area, Climate, and Population (GLCP) Dataset."* Data product. Environmental Data Initiative.

Meyer, Michael F., Stephanie G. Labou, **Alli N. Cramer**, Mathew Brousil, Brad T. Luff. 2020. *"Global Lake Area, Climate, and Population (GLCP) Dataset"*. Scientific Data.

Auster, Peter, James Lindholm, Jose Pereira, Sara Fangman, Heather Bolton, **Allison Cramer**, Lise Jensen, Jessica Moye. *"Preliminary results assessing movement patterns of select demersal piscivores at the sub-tropical reefs of Gray's Reef National Marine Sanctuary (Norwest Atlantic, Carolinian Province), 2008-2013."* In: Review of Scientific Research in and around the Designated Research Area of Gray's Reef National Marine Sanctuary (NW Atlantic). ONMS-20-08. P 98-115.

Lindholm, James, Mary Gleason, Donna Kline, Larissa Clary, Steve Rienecke, **Alli Cramer**, Marc Los Huertos. 2015. *"Ecological effects of bottom trawling on the structural attributes of fish habitat in unconsolidated sediments along the central California outer continental shelf."* Fishery Bulletin 113:82-96.

Lindholm, James, Ashley Knight, Flower Moye, **Alli N. Cramer**, Joshua Smith, Heather Bolton, Michael Esgro, Sarah Finstad, Rhiannon McCollough, Molly Fredle, Dirk Rosen, Andy Lauermann. 2015. *"South Coast Marine Protected Areas baseline characterization and monitoring of mid-depth rocky and soft-bottom ecosystems."* Final Report to CA Sea Grant #R/MPA-261.

Lindholm, James, **Alli N. Cramer**, Aimee M. Braddock. 2013. *"Distribution and abundance of selected corals and sponges in the Channel Islands National Marine Sanctuary as determined from ROV video imagery."* Final Report #NCND6022-12-02931

Commentary

Cramer, Alli N. 2022. *"Open data and the 21st-century naturalist."* Frontiers in Ecology and the Environment.

Michael F Meyer, Robert Ladwig, Jorrit Mesman, Isabella Oleksy, Carolina C Barbosa, Kaelin M Cawley, **Alli N Cramer**, Johannes Feldbauer, Patricia Q Tran, Jacob Aaron Zwart, Gregario A Lopez Moreira, Muhammed Shikhani, Deviyani Gurung, Robert T Hensley, Elena Matta, Ryan P McClure, Thomas Petzoldt, Nuria Sanchez Lopez, Karline Soetaert, Mridul K Thomas, Simon Nemer Topp, Xiao Yang. 2021. *"The AEMON-J 'Hacking Limnology' workshop series & virtual summit: Incorporating data science and open science in aquatic research."* Limnology and Oceanography Bulletin.

Michael F Meyer, Matthew R Brousil, **Alli N Cramer**, Brian P Lanouette, Julie C Padowski, Stephanie E Hampton. 2020. *"The Global Lake Area, Climate, and Population Dataset: A New Tool for Addressing Critical Limnological Questions"* Limnology and Oceanography Bulletin.

Cramer, Alli N. 2020. *"Scientists and the Art of Critique: Why We Should Train Scientists like Artists."* Limnology & Oceanography Bulletin.

Farrell, Kaitlin J., **Alli N. Cramer**, Kelly L. Hondula, Seth K. Thompson, Jacob A. Zwart. 2019. *"Support of Early-Career Researchers Supports the Future of ASLO."* Limnology & Oceanography Bulletin.

CONFERENCE PRESENTATIONS

"A unifying framework for understanding ecological & evolutionary population connectivity"

Cramer, Alli N.

Poster Presentation. Eco Soc. America Meeting. **2023**

"Does disturbance to underlying substrate structure rocky intertidal communities?"

Cramer, Alli N.

Oral Presentation. Western Soc. of Naturalists. **2022**

"Pairing tagging data to biophysical models"

Cramer, Alli N.

Oral Presentation. DSOS Aquatic Research. **2021**

"Modelling Green Sturgeon (Acipenser medirostris) spawning via environmental conditions"

Cramer, Alli N.

Poster Presentation. Bay-Delta Sci. Conference. **2021**

"What is the site fidelity of a dead fish? And how would you prove it?"

Cramer, Alli N., Steve Katz.

Poster Presentation. Ocean Sciences. **2020**

"Quantifying changes in global lake surface area of 20 years (1995-2015) in relation to climate and human population"

Cramer, Alli N. Michael F. Meyer, Stephanie G. Labou.

Oral Presentation. AGU Fall Meeting. **2018**

SELECTED SEMINAR PRESENTATIONS

"Are there universal drivers across marine biomes? Classifying and centering ecosystem processes to understand marine communities"

Science Seminar Series

2022

Pacific Coastal and Marine Science Center

"Distinguishing residency behavior from random movements using passive acoustic telemetry"

Data/theory seminar

2020

Southwest Fisheries Science Center, NOAA

"Running R and Python on an HPC"

Presentation and workshop facilitator

2018

CEREO and CIRC, Washington State University

"Deep Data: Modeling Shark Movements"

Presentation. CIRC Seminar Series.

2018

Washington State University

FUNDING

Awarded

NSF Ocean Sciences Postdoctoral Research Fellowship, # 2126729 <i>Understanding substrate mobility as a disturbance in hard rock marine communities</i>	2021-Current \$319,295
RCN Working Group <i>Do spatial and genomic estimates of connectivity agree?</i> (co-lead)	2021-Current \$10,000

AWARDS & AFFILIATIONS

American Geophysical Union LANDInG Fellow <i>AGU Leadership Academy & Network for Diversity and Inclusion in the Geosciences 2023 cohort</i>	2021-2023
Research Coordinated Network for Evolution in Changing Seas	2019-Current
Incorporating Data Science and Open Science in Aquatic Research, Organizer	2021 - Current
Francis Rush Bradley Excellence Fund	2019
Ecological Dissertations in the Aquatic Sciences XIII (EcoDAS)	2018
Robert Lane Fellowship in Environmental Sciences	2017

RESEARCH EXPERIENCE

University of Washington Friday Harbor Laboratories and California State University Monterey Bay

National Science Foundation Ocean Sciences Postdoctoral Fellow **2021-present**
Postdoctoral Fellowship (#2126729) investigating the role of substrate mobility in structuring marine hard rock communities. Collaboration between University of Washington, California State University Monterey Bay, and USGS Pacific Coastal and Marine Science Center.

Fisheries Ecology Division, NOAA Southwest Fisheries Science Center, University of California – Santa Cruz

Postdoctoral Scholar – University of California Santa Cruz **2020-2022**
Joint appointment to UCSC and NOAA SWFSC through the Institute of Marine Science. Investigating the occurrence of breeding Green Sturgeon (*Acipenser medirostris*) within the Sacramento River in relation to environmental variables and year to year change.

Katz Lab, Washington State University, Pullman WA

Graduate Research Assistant – Washington State University **2015 – 2020**
Investigated limitations and application of technology in marine ecology, focused on ecological implications and evolutionary constraints of fish movements using data mining and informatics.

Center for Sustaining Agriculture and Natural Resources, Washington State University, Pullman WA

Graduate Research Assistant – Washington State University **2017 – 2018**
Refined, streamlined, and supplemented interactive climate change and agriculture web application. Reformatted data structure and algorithms in R Statistical.

Institute for Applied Marine Ecology, CSU Monterey Bay, Seaside, CA

Research Assistant – MPA Monitoring Enterprise: South Coast **2012 – 2014**
Sampled video imagery to collect community assemblage data on rockfish and key invertebrates. Assisted with ROV deployment and equipment maintenance in the field. Contributed to final report.

Research Lead – Channel Islands NMS Corals Survey **2013**
Developed sampling protocol to survey large corals and sponges from ROV video imagery. Managed and mentored undergraduate researcher in project execution. Authored final report for the sanctuary.

Science Diving, CSU Monterey Bay, Seaside, CA

Diving Assistant – Native Crab predation on Invasive Tunicate **2013**
Safety diver and data collection assistant for season long monitoring project of invasive tunicate.

Diving Assistant – Science Diving Course **2012 – 2014**
Instructed students on sampling techniques and field methods. Monitored students in diving skills.

SERVICE

Diversity, Equity, & Inclusion Committee, Friday Harbor Laboratories

Committee Chair **2023-Current**
Coordinate and prioritize DEI initiatives at Friday Harbor Laboratories (FHL). Initiatives include efforts to 1) maintain and advance working relationship between FHL and the Coast Salish peoples, 2) improve mental health access at the marine laboratory, 3) spearhead undergraduate and professional scientist mentor program on campus, and 4) improve accessibility of the marine lab.

Kenneth S. Norris Center for Natural History

Scientist in Residence **2022** The goal
Scientist in Residence for collaborative Art-Science program at the University of California Santa Cruz's Norris Center. The Art-Science Residency program aims to fund and support creative communication opportunities for science research, and student artist professional development. I coordinated with two artists, a visual artist and an acoustic artist, to communicate about the endangered southern population of Green Sturgeon in California. <https://chaparr.al/GreenSturgeon/>

R Working Group, Washington State University

Founder and Lead Educator **2016 – 2018**
Founded, facilitated, and presented in multi-institution, cross departmental working group focused on applying R statistical. Connected research community of R users spanning graduate students, postdocs, and faculty. Selected speakers and topics relevant to user interests. cereo.wsu.edu/r-working-group/. The working group continues to support the local R community after transferring to new leadership.

Sustainability & the Environment Committee, Washington State University

Graduate Student Representative **2015 – 2016**
Coordinated with multi-departmental and facilities representatives to dispense funds for student lead projects related to sustainability and environmental initiatives.

SELECTED TEACHING EXPERIENCE

School of the Environment, Washington State University, Pullman, WA

Teaching Assistant – to Prof. Steve Katz & Prof. Jeff Vervoort in “Oceanography 230” **2015 – 2019**
Designed curricula, lectured, designed projects and exams. Graded quizzes, exams, and papers.

California State University Monterey Bay, Seaside, CA

Teaching Assistant – to Prof. James Lindholm in “Advanced Marine Science & Policy” **2013, 2014**
Assisted in teaching, graded quizzes, exams, and papers.

Teaching Assistant – to Prof. James Lindholm in “Science Diving” **2013, 2014**
Assisted in teaching, graded quizzes, exams, and papers.

Teaching Assistant – to Prof. James Lindholm in “Marine Fish Ecology”

2013, 2014

Assisted in teaching, graded quizzes, exams, and papers.

Teaching Assistant – to Prof. Gerick Bergsma in “Ecology 320”

2011

Assisted in teaching, graded quizzes, exams, and papers. Developed assignments, final exam, and final project. Administered grades.

SKILLS AND CERTIFICATIONS

Certifications

AAUS Science Diver

First Aid/CPR

ESRI Geographic Information Systems

Analytical and Programming Experience

R statistical, Python, Stella

Google Earth Engine

High Performance Computing

LANGUAGES

English – Native Language

French – Speak fluently, read and write

MEMBERSHIPS

Association for the Sciences of Limnology
and Oceanography

Ecological Society of America

American Geophysical Union

Society for the Advancement of

Chicanos/Hispanics and Native Americans
in Science

National Society of Collegiate Scholars

Oregon Marine Student Association

University of Oregon Presidential Scholars

Girl Scouts of America