Kate A. Becker

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Recent graduate of the Master of Environmental Data Science program at the University of California, Santa Barbara's (UCSB) Bren School of Environmental Science & Management. Proficient in RStudio, Python, GIS, and SQL, with a robust skill set in product management, collaborative problem-solving, web application development, geospatial modeling, and statistical modeling. Possess over three years of dedicated experience in marine science, environmental science, and fisheries, driven by a deep passion for environmental sustainability, policy, and conservation.

SKILLS

- Data Analysis
- Database management
- Machine learning
- Microsoft Office
- Spreadsheets
- UX design
- Product management

FISHERIES MANAGEMENT EXPERIENCE

Product Manager
Bren School of Environmental Science & Management, UCSB, Santa Barbara, CA (1/24-6/24)
Project**:** Improving Access to Consumption Advisories and Maintaining Confidence in California's Seafood Products
Clients: Scripps Institute of Oceanography, California Cooperative Oceanic Fisheries Investigations (CalCOFI)
Deliverables: Interactive Web Application, Shiny Dashboard Github Repository, User Manual and Technical Guide
Links: Repository | SaferSeafood Web Application

- Directed the creation of the interactive, data–driven, and public-facing online application to visualize DDT concentrations dependant on species and location of capture
- Enhanced a spatiotemporal statistical model to predict DDT concentrations in sport fish across Southern California
- Invited to attend the Southern California Oceanic Observing Systems Conference (SCOOS) in San Diego
- Organized the deployment of the web application on CalCOFIs server

Undergraduate Researcher
Eliason Lab – UCSB, Santa Barbara**,** CA (3/22–6/23)

- Investigated thermal tolerance of fishes under fluctuating temperatures and varying diet quality using cardiovascular performance as a metric
- Performed fish husbandry for approximately 130 *Fundulus parvipinnis and 80 Girella nigricans* in a wet lab over six months
- Navigated complex procedure for analyzing Copper toxicity tolerance research in *Mytilus galloprovincialis using O2 uptake as a metric*

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Summer Intern
Eliason Lab - **UCSB**, Santa Barbara, CA (5/22–8/22)
- Designed the investigation of parasite load, *Euhaplorchis californiensis*, in the brain regions of California killifish, *Fundulus parvipinnis*, as it pertains to thermal tolerance
- Awarded UCSB Coastal Fund ($5,000)
- Executed numerous EKGs daily to analyze the relationship between arrhythmia occurrence and sea surface temperatures in Fundulus parvipinnis
- Directed fish dissection and brain removal procedure
- Organized numerous literature reviews to develop a dissection and analysis protocol for transparency and reproducibility

EDUCATION

Master of Environmental Data Science (June 2024)
Bren School of Environmental Science & Management – UCSB
> Highlighted Coursework: Environmental Policy Evaluation, Machine Learning, Data Visualization, Geospatial Analysis and Remote Sensing, Scientific Programming, Analytical Workflows, and Scientific Reproducibility, Statistical Modelling, Text Sent Analysis
> Relevant Workshops: Website Building in Quarto, Introduction to Shiny, Public Speaking, and Conflict Resolution in the Workplace

Bachelor of Science in Environmental Studies (June 2023)
University of California, Santa Barbara (UCSB)
> Concentrations: Environmental Policy, Sustainability, Climate Change, and Conservation

International Academic Field Studies Program (3/21–5/21)
Wildlands Studies, Big Island, Hawaii
- Selected for a competitive seven-week field training program focused on marine and terrestrial research, indigenous marine management, and food systems
- Collaborated with the Pacific Whale Foundation, a non-governmental organization that conducts whale research, to assess the impact of plastics on local marine populations, both plant and animal
- Conducted land surveys using transects and quadrats, supported by field measurements and inferential statistical analysis
- Received immersive training in the native sustainable fishing practice known as the 'Opelu Project in the fishing village of Miloli'i, the last land division on The Big Island in Hawaii.
- Reported and analyzed the economic and environmental impacts of the invasive Coqui Frog through a dedicated research project
- Spearheaded an interactive group discussion on the disappearance of Hawaiian culture and language due to colonization and increasing Western influence
- Executed native agricultural farming practices to achieve sustainable and high crop yields of Taro, 'Uala, and Breadfruit
- Presented a proposal for creating a Marine Protected Area, focusing on the recolonization of juvenile coral polyps and examining local weather patterns, water temperature, wind currents, and human influence

ADDITIONAL EXPERIENCE

Fine Dining Waitress, The Kitchen American Bistro, Boulder, CO (7/24–Present)
- Strengthened the restaurant's mission, established by Kimbal Musk, by providing an exceptional and personalized dining experience
- Expertly served elevated international dishes and craft cocktails with in-depth knowledge of menu items, flavor profiles, pairing options, and allergens
- Showcased attentive service across brunch, lunch, and dinner shifts while taking on additional responsibilities such as food running, restocking, bussing, hostessing, and ensuring sanitation standards

Fine Dining Waitress, The Ritz-Carlton Bacara, Santa Barbara, CA (6/21–1/22)
- Served food and beverages to a variety of high-profile guests for an average of 40 hours a week
- Conducted food and beverage service to a variety of luxury and high-profile guests for an average of 40 hours a week while in school
- Memorized hotel guest profiles, daily specials, seasonal cocktail list, regular menu, and possible allergens
- Facilitated extra work as needed such as food running, barista, restocking, cleaning, and private event staff

Boutique Sales Associate Stella E Luna Boutique, Point Pleasant, NJ (5/19–10/19)
- Strengthened upscale boutique by managing and processing sales, social media marketing, and customer satisfaction

Food Service Shore Fresh Seafood Restaurant & Market, Point Pleasant, NJ (6/18–10/18)
- Provided food and beverage service while coordinating seafood market

SKILLS, CERTIFICATION, & ADDITIONAL EDUCATION

Technical: Spatial Mapping in ArcGIS, Statistical Analysis and Data Visualization in R Studio, Python, Google Workspace, Scientific Writing, R, Python, SQL, Git, (Basic) Command Line, Quarto, Shiny, Github Issues, Microsoft Office (Word, Excel, PowerPoint), Java, HTML, and CSS

Research Qualifications: IACUC Training (Fish), CITI Wildlife Research, CITI Working with Fish in Research Settings

Certification: PADI Open Water Diver

Writing, Research, and Presentation: Report writing, literature review, policy memos, public presentations

Additional Education: University of Queensland, Australia UCEAP Study Abroad Program (Winter 2021 and Spring 2021); Accepted twice into competitive academic program but canceled due to COVID-19; Marine Biology and Terrestrial Ecology courses while working in conjunction with the Heron Island Research Station

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PROJECTS

Remote Sensing Land Cover
Master's Geospatial Analysis and Remote Sensing Course Project
Converting landsat values to reflectance values
Use Terra package to wrangle spatial data
True Color Imagery
Creating and applying a decision tree classifier
Link to repository: https://github.com/kateebeckerr/RemoteSensing_Landcover.git

Redlining Injustices
Master's Geospatial Analysis and Remote Sensing Course Project
Employing EJ Screen Data
Spatial Mapping
Wrangling geometries
Link to repository: https://github.com/kateebeckerr/Redlining_Injustices.git

Santa Barbara Thomas Fire
Master's Geospatial Working with Environmental Datasets Course Project
Employing EPA data and Landsat 8 satellite data
Raster data processing
Use Numpy package in python
True and False Color Image construction
`   **Link to repository: https://github.com/kateebeckerr/ThomasFire_Analysis**

Fisheries in Alaska
Master's Data Visualization Course Project
Employing Alaska Department of Fish and Game Data and GIS Shapefiles
DEI lens application
Spatial Mapping
Wrangling Geometries
Time Series Analysis
Link to repository: https://github.com/kateebeckerr/Becker-eds240-Final