

JAKE EISAGUIRRE

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EDUCATION

Master of Environmental Data Science (Expected June 2022)

Bren School of Environmental Science & Management – University of California, Santa Barbara (UCSB)

Highlighted Coursework: Spatial Analysis; Remote Sensing; Environmental Statistics; Meta Data Standards and Data Semantics; Machine Learning, Data Visualization and Communication; Modeling Environmental Systems; Analytical Workflows and Scientific Reproducibility, Team Science (completed by June 2022)

Teaching Experience: Coral Reefs; Department of Ecology, Evolution, and Marine Biology (9/21-12/21)
Principles of Evolution; Department of Ecology, Evolution, and Marine Biology (1/22-3/22)

Bachelor of Science in Environmental Studies (June 2019)

University of California, Santa Barbara (UCSB)

Emphasis: Ecology, Evolution, and Marine Biology

Highlighted Coursework: Industrial Ecology; Biometry; Ecology, Evolution, and Marine Biology; Aquatic Communities; Fish Biology; Applied Marine Ecology; Ecosystem Processes; Coral Reefs

Honors/Awards: UCSB Library Research Award (1st place, awarded \$750) (June 2019), UCSB Transfer Student Research Award (1st place, awarded \$40) (May 2018)

MASTER'S CAPSTONE PROJECT

Web-Based Application for Visualizing Anthropogenic Stressors on Coral Reefs in Moorea, French Polynesia

Client: Moorea Coral Reef Long Term Ecological Research (LTER), Marine Science Institute (1/22-5/22)

- Developing an interactive web-based application in RStudio with Shiny App and Leaflet packages for visualization of spatial and temporal patterns of anthropogenic stressors on Moorea coral reefs
- Facilitating bottom up policy making in Moorea by providing public access to a web based app for explicit temporal and spatial visualizations of the public's local marine resources
- Assisting researchers with rapid and precise data visualizations of historical Moorea LTER data sets

MARINE SCIENCE & ENVIRONMENTAL RESEARCH EXPERIENCE

Caselle Lab/PISCO – Marine Science Institute, UCSB, Santa Barbara

Research Technician (3/20-7/21) | **Research Diver** (6/17-12/19) | **Volunteer** (6/16-6/17)

- Analyzed the effects of sea star wasting disease on urchin populations to better understand how trophic redundancy can increase kelp forest resilience at the N. Channel.
- Led and conducted subtidal and intertidal temperate rocky reef surveys to better understand how our local marine populations change spatially and temporally between marine protected and fished areas.
- Deployed baited remote underwater video (BRUV) cameras to meso-photic reefs to gain population estimates between marine protected and fished reefs.
- Collected and identified rockfish and kelp bass recruits from Standard Monitoring Units for the Recruitment of Fishes (SMURF) to assist in determining larval recruitment processes of fished species.
- Captained UCSB Research Vessels (R/Vs) to Santa Barbara Channel Islands to collect long-term ecological data across 3 different sampling methods.

Pelagic Fisheries and Ecosystem Project, California Department of Fish and Wildlife, Santa Barbara, CA

Scientific Aid (12/19–5/20)

- Collected samples of commercially caught squid and bycatch species landed at Santa Barbara, Port Hueneme, and Ventura port complexes to gather squid and bycatch population estimates.
- Analyzed tissues samples, statoliths, reproductive capacity, and sex ratios of collected samples in order to gain better insight to our local squid populations resilience.
- Entered sample data and wrote daily reports on commercial squid and bycatch landings for statewide department analysis of squid population sustainability.

– Continued –

MARINE SCIENCE & ENVIRONMENTAL RESEARCH EXPERIENCE (Continued)

Kenneth Norris Rancho Marino Reserve, UC Natural Reserve System, Cambria, CA

UC Reserve Steward (12/19–5/20)

- Conducted central coast pine tree surveys to analyze rapidly spreading fungal infections to assist in understanding extent of fungal infection on the reserve.
- Maintained reserve research station and grounds to guarantee safe access to all parts of the reserve for researchers and wildlife.

Marine Science Institute, UCSB, Santa Barbara, CA

R.E.E.F. (Research Experience Education Facility) Guide (6/15–5/16)

- Learned all scientific names and ecological interactions of captive present organisms in order to better my understanding of our local marine ecosystems.
- Led tours and educated K-12 students about all captive organisms in the touch tanks with intent of illustrating the importance of biodiversity to our local ecosystems.

ADDITIONAL EXPERIENCE

Nature Track, Los Olivos, CA

Nature Track Guide (6/13–Present)

Educate K-12 students from LA to Santa Maria about ecosystem and community dynamics through outdoor field trips. Revealed the beauty of nature to underrepresented minority groups who had never hiked or visited a beach.

Aggressor Live Aboard Dive Fleet, Belize, Caymans, Palau, and Raja Ampat

Aggressor Dive Fleet Intern (1-2 weeks/year from 2012-2015)

Assisted with boat operations alongside company owner to gain better understanding of commercial dive boat operations. Received Dive Master Certification to assist in leading guests on dives. Designated photographer on each cruise to increase positive guest experience with underwater and topside photos.

PEER-REVIEWED PUBLICATION & CONFERENCE PRESENTATION

Eisaguirre, J.H., J.M. Eisaguirre, K. Davis, P.M. Carlson, S.D. Gaines, J.E. Caselle. 2019. Trophic redundancy and predator size class structure drive differences in kelp forest ecosystem dynamics.

Ecology.101(5):e02993. [10.1002/ecy.2993](https://doi.org/10.1002/ecy.2993)

Eisaguirre, J.H., J.M. Eisaguirre, K. Davis, P.M. Carlson, S.D. Gaines, J.E. Caselle. October 2019. 100th Western Society of Naturalists, Ensenada, Baja, Mexico. Trophic redundancy and predator size class structure drive differences in kelp forest ecosystem dynamics. (Talk)

SKILLS, CERTIFICATIONS, & TRAININGS

Programming Languages: R, Python, Bash, SQL

Computer Software: RStudio (RMarkdown), Jupiter Notebooks, GitHub, Tableau, Microsoft Office Suite

Diving & Boating Certifications: UCSB R/V Captain, SSI Dive Master (~1000 dives), AAUS Scientific Diver, Dry Suit Diver, SSI Rescue Diver, California Boating License, 16 Years Boating Experience

Trainings: CPR, First Aid, Oxygen Administration, Black Belt Puma Karate