

NATHANIEL JEAN-RENE BUROLA

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EDUCATION

Master of Environmental Science and Management (Expected 6/20)

Coastal Marine Resource Management (CMRM) Specialization | Environmental Data Science Focus

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

Selected Coursework: Advanced Data Analysis for Environmental Science and Management (ESM), Coastal Marine Policy & Management, Data Analysis for ESM, Coastal Marine Ecosystem Processes, Computing for ESM, Environmental Data Visualization, and Advanced Geographic Information Systems (GIS).

Bachelor of Science in Environmental Science with a Minor in Political Science (12/17)

California Lutheran University (CLU) – Thousand Oaks, CA

Honors: Dean's List (4 semesters); Departmental Honors in Environmental Science

Academic Recognition: Received recurrent academic merit awards (Provost scholarship; Tiplady Burgess and Bergfield Science Scholarships) and a STEM Research Fellowship

TECHNICAL SKILLS

Data Analysis: Microsoft Office Excel, RStudio, ImageJ, and GitHub

Mapping and Data Visualization: ArcGIS, Tableau, QGIS, and Python

Communication: Microsoft Office Word and PowerPoint

MARINE MANAGEMENT AND RESEARCH EXPERIENCE

Master's Group Project Thesis

Title: Evaluating Adaptive Management Strategies for Climate Resilient Fisheries (4/19 – Present)

Client: Environmental Defense Fund (EDF) | **Role:** Outreach Manager

- Supervised a team of 3 Bren students to create a Shiny app to communicate findings to EDF; designed 4 tabs of the Shiny app with an introduction page and 3 reactive outputs such as maps and graphs.
- Evaluated 68 scientific literature papers on technical modeling and general fisheries background; assembled a reading matrix to narrow down broad research to climate change impacts on fisheries.
- Built the project website on the platform Squarespace as a deliverable; tracked meetings with the client, advisor, and PhD mentor through writing administrative notes to be used for future reference.

Marine Graduate Researcher – University of California, Santa Barbara, Santa Barbara, CA (6/19 – 9/19)

- Coordinated a team of 3 researchers surveying Olympia oyster (*Ostrea lurida*) recruitment at 4 study sites at the Carpinteria Salt Marsh to determine ecological restoration impacts of the Thomas Fire debris flow.
- Composed a scientific literature matrix with 2 primary literature and 5 grey literature sources discussing how key abiotic factors (temperature, salinity, etc.) can affect the growth rates and frequency of oysters.
- Forecasted the estimated settling dates of 283 surveyed adult oysters by using ImageJ to determine their original settling dates and calculate how many pre Thomas Fire debris flow oysters existed at one point.

Research Assistant – University of California, Santa Barbara (UCSB), Santa Barbara, CA (7/19 – 8/19)

- Strengthened the environmental cobenefits section of a seaweed working group using the F1000 database to upload scientific literature related to commercial cultivation of kelp species in temperate waters.
- Analyzed 33 primary and grey literature sources to document information on nitrogen, phosphorus, and carbon content for specific kelp species to be used for seaweed mariculture with carbon sequestration.
- Summarized the key points of all uploaded sources in the F1000 database by noting down the biofilter potential of kelp species for the potential assimilation and removal of nutrients including carbon in water.

Marine Undergraduate Researcher – California Lutheran University, Thousand Oaks, CA (6/16–12/17)

- Oversaw a team of 3 researchers evaluating the development of marine fouling communities in Channel Islands Harbor to understand how environmental conditions could affect marine succession.
- Assessed the growth rates of the keystone species the California mussel (*Mytilus californianus*) and other sessile invertebrates such as bryozoans to determine the dominant invertebrate in marine communities.
- Presented to 20+ academic scientists at the Western Society of Naturalists (WSN); finding greater species richness at the location furthest away from the mouth of the Channel Islands Harbor.

MARINE MANAGEMENT AND RESEARCH EXPERIENCE (Continued)

Freshwater Undergraduate Researcher – University College Dublin (UCD), Dublin, Ireland (6/17–7/17)

- Modelled the effects of small hydropower schemes on fish and macroinvertebrates through PrimerE and Excel to identify the impacts of barriers on freshwater hydromorphology and connectivity in Irish rivers.
- Classified 9 types of freshwater macroinvertebrates from river samples by surveying the physical dimensions of barriers to define their biological impacts either upstream or downstream of the river.
- Conducted research presentation for 30+ academic scientists at the Western Society of Naturalists (WSN); finding that upstream artificial barriers of a river have an effect on mayfly communities.

ENVIRONMENTAL EXPERIENCE

Teaching Assistant – University of California, Santa Barbara (UCSB), Santa Barbara, CA (9/19 – 12/19)

- Delivered grades for 42 midterms, finals, and 98 short papers for “Global Ideologies and World Order” class; provided student guidance on papers, clarification on material, and grade reevaluations.
- Lectured on California coastal zone management; covered coastal policy focused on protecting rural coastal zones; addressed future issues such as demand for public access and extreme weather events.
- Cultivated weekly learning for 42 students by implemented interactive activities (jeopardy and reading concept game) to stimulate learning of lecture material and facilitate independent discussion.

Environmental Intern – Alta Environmental, Long Beach, CA (1/18–8/18)

- Complied hazardous waste inventories into the California Environmental Reporting System (CERS) for the environmental health and safety team to keep track of hazardous waste and materials for industrial clients.
- Proposed different methods of improving green purchasing at the company by using more green brands such as Seventh Generation to operate in a manner that does not permanently deplete resources.
- Conducted air quality readings and took soil samples on job sites for the site assessment, remediation, and closure (SARS) team to help construction clients remain in compliance with CEQA and NEPA regulations.

CONFERENCE PRESENTATIONS

- 2017 **Western Society of Naturalists (WSN) Conference**, Pasadena, CA
2017 **Student Research Symposium, California Lutheran University (CLU)**, Thousand Oaks, CA
2017 **Festival of Scholars, California Lutheran University (CLU)**, Thousand Oaks, CA
2017 **42nd Annual West Coast Biological Sciences Undergraduate Research Conference (WCBSURC), Santa Clara University**, Santa Clara, CA
2016 **Western Society of Naturalists (WSN) Conference**, Monterey Bay, CA
2016 **Student Research Symposium, California Lutheran University (CLU)**, Thousand Oaks, CA

RESEARCH GRANTS

- Coastal Fund Summer Research Fellowship** – University of California, Santa Barbara, \$1,000 (6/19–8/19)
Bren Summer Internship Fellowship – University of California, Santa Barbara, \$1,200 (6/19–8/19)
STEM Research Fellowship – California Lutheran University and Arcadia University, \$5,300 (6/17–7/17)
Swenson Science Summer Research Fellowship – California Lutheran University, \$4,000 (6/16–7/16)

ADDITIONAL SKILLS, CERTIFICATIONS, AND ACTIVITIES

Languages: French (basic reading, writing, and speaking)

Certifications: OSHA 40-Hour Hazardous Waste Site Worker Certification Training (4/18)
PADI Open Water Diver Certification (7/19)

Memberships: Officer & Chair, Association of Environmental Professionals (AEP) (8/18–12/19)

Publication: Nguyen, Trang, and Burola, Nathaniel. *The Youth of Vietnam: A New Hope for Wildlife*. WildAct, 2015. *DataCite*, doi:10.13140/rg.2.1.1363.0482.