

An Bui

Ecology, Evolution, and Marine Biology
University of California, Santa Barbara
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EDUCATION

- present PhD Candidate. University of California, Santa Barbara. Ecology, Evolution, and Marine Biology.
Committee: Dr. Adrian Stier (chair), Dr. Holly Moeller, Dr. Carla D’Antonio, Dr. Robert Miller
- 2020 MArts. UCSB. Ecology, Evolution, and Marine Biology.
Thesis: Soil fungal community richness and diversity are highest in arid environments along a climatic space-for-time substitution
Committee: Dr. Holly Moeller (chair), Dr. Hillary Young, Dr. Carla D’Antonio
- 2015 BSc. UCSB. Ecology & Evolution with emphasis in Evolution.
Thesis: Predator avoidance behavior in Pacific tree frogs (*Pseudacris hypochondriaca*)
Advisor: Dr. Cherie Briggs
- BArts. UCSB. English with specialization in Modern Literature and Critical Theory.
Thesis: William Faulkner and the Ecological Significance of Yoknapatawpha County
Advisor: Dr. Elizabeth Heckendorn Cook

TEACHING EXPERIENCE

Instructor of Record

- 2023 Statistics for Environmental Studies (ENVS 193DS, undergraduate, 1 quarter)

Head Teaching Assistant

- 2017-24 Vertebrate Ecology and Evolution (EEMB 113L, undergraduate, 8 quarters)
Designed curriculum, wrote course syllabus, supervised teaching assistant team

Teaching Assistant

- 2023 California Ecology and Conservation (undergraduate, 1 quarter)
2023 Data Visualization and Communication (EDS 240, graduate, 1 quarter)
2022 Ethology and Behavioral Ecology (EEMB 138, undergraduate, 1 summer term)
2020-22 Ecological Modelling (EEMB 179/279, undergraduate/graduate, 3 quarters)
2019 Research in STEM – Marine Ecology (high school, 1 summer term)
2019 Ecology of Managed Systems (ESM 201, graduate, 1 quarter)
2018-22 Introduction to Ecology (EEMB 120, undergraduate, 4 quarters)

Workshops

- 2023 Society for Open, Reliable, and Transparent Ecology and Evolutionary Biology (SORTEE). Integrating Javascript Libraries into R for Dynamic Visualizations.
UCSB EEMB R Seminar. “Figures in {ggplot2}.”
- 2021 R-Ladies Santa Barbara. “Putting the fun in FUNctions.”

- EEMB Community Analysis Statistics Workshop. Series of 8 workshops co-led by graduate students.
- 2020-21 UCSB Data Analysis and Coding Club. "Intro to R." Series of 4 workshops.
- 2020 Southern California Coastal Water Resource Project. "Introduction to community analysis in {vegan}."
- R-Ladies Santa Barbara. "Data Visualization Part 1." Co-taught with S Csik and J Verstaen.
- 2019 UCSC SCRUBs R Group. "Introduction to community analysis in {vegan}."
- EcoDataScience. "Introduction to community analysis in {vegan}."
- UCSB EEMB. "Community analysis in {vegan}."
- UCSB Science & Engineering Research Academy. "Introduction to R."
- R-Ladies Santa Barbara. "Intro to the Tidyverse." Co-taught with S Csik.
- UCSB EEMB. "Intro to the Tidyverse." Co-taught with S Csik.

Invited lectures

- 2022 Terrestrial Microbiology (EEMB 145). "Soil fungal community composition and functional similarity shift across distinct climatic conditions."
- Aquatic Communities (EEMB 142A). "Identifying shorebirds of UCSB Lagoon."

Invited facilitator

- 2022 Office of Black Student Development: We Outside

DISTINCTIONS

- 2020 UCSB Academic Senate Outstanding Teaching Assistant Award

RESEARCH AND FIELD EXPERIENCE

- 2017-present Coal Oil Point Reserve, California
- Surveyed small mammals using Sherman trapping techniques
 - Surveyed mesocarnivores and large mammals using camera traps
- 2019-present North Campus Open Space, Santa Barbara, California
- Surveyed small mammals using Sherman trapping techniques
- 2019-present Santa Barbara Coastal LTER, California
- Collected kelp blades on SCUBA for microbial analyses
 - Conducted benthic surveys for community diversity and kelp abundance
 - Collected macroalgae specimens for dissertation project
- 2021-present Sedgwick Reserve, California
- Surveyed cover board array comparing prescribed burn and control reptile communities
- 2022-present Coto Brus canton (Las Cruces Biological Station and other areas), Costa Rica
- Built seed predator exclosures
 - Monitored seed germination experiment
 - Censused trees in long-term restoration experiment
- 2018 Channel Islands National Marine Sanctuary, California
- Managed seabird survey transect operation
 - Assisted with baited remote underwater video deployment and retrieval

- Eldorado National Forest, California
 - Conducted vegetation transects, small mammal surveys
- 2017-19 Tejon Ranch Conservancy, California
 - Collected soil and vegetation samples for thesis project
 - Conducted floral and pollinator surveys, small mammal surveys, vegetation transects, camera trapping, built mammal exclosures
- 2017-18 Channel Islands National Park, California
 - Collected tissue samples from Western gulls
 - Deployed and retrieved GPS tags
- 2017 Palmyra Atoll, USA
 - Conducted vegetation surveys, collected and identified invertebrates
 - Drove lagoon boats
- 2014 Hendrick Reserve Natural Area, California
 - Collected frogs for behavioral experiments

MENTORSHIP

Undergraduate mentees

- 2023 Hayden Vega
- 2022 Leta Dawson
- 2019 Ileana Fenwick (co-advised with Sevan Esaian)
- 2017-2018 Huda Faiz
- 2017 Carina Isabella Motta
- Bella Mayorga

AWARDS AND FELLOWSHIPS

- 2019-2022 Santa Barbara Coastal LTER Graduate Fellowship (awarded 4 times)
- 2018 UCSB EEMB Graduate Fellowship (\$3000, awarded twice)
- 2014 Kirby-Jones Scholarship (\$5000)
- Chris and Anita Anderson Scholarship (\$2800)
- 2013 William and Marie Thornbury Endowed Scholarship (\$2700)

GRANTS IN SUPPORT OF RESEARCH

- 2017 Bloom-Hays Ecological Research Grant (\$1700)
- 2016 Nisbet Research Grant (\$1100)
- 2015 Undergraduate Research and Creative Activities Grant (\$700)

PUBLICATIONS

9. Guerra, AS, **A Bui**, M Klope, DA Orr, SA Shaffer, HS Young. "Leaving more than footprints: anthropogenic nutrient subsidies to a protected area." *Ecosphere*. 2022.
8. Miller-ter Kuile, A, A Apigo, **A Bui**, K Butner, JN Childress, S Copeland, BP DiFiore, ES Forbes, M Klope, CI Motta, D Orr, KA Plummer, DL Preston, HS Young. "Changes in invertebrate food web structure between high- and low-productivity environments are driven by intermediate but not top predator diet shifts." *Biology Letters*. 2022.

7. Ingeman, KE, C Wolf, DR Williams, LZ Zhao, AL Ritger, WJ Ripple, KL Kopecky, EM Dillon, BP DiFiore, SR Csik, **A Bui**, AC Stier. “Glimmers of Hope in Global Apex Predator Recovery.” *Scientific Reports*. 2022.
6. Orr, D, **A Bui**, MM Klope, IM McCullough, M Lee, CI Motta, I Mayorga, K Konicek, K, HS Young. “Context-dependent effects of shifting large herbivore assemblages on plant structure and diversity.” *Journal of Ecology*. 2022.
5. Miller-ter Kuile, A, A Apigo, **A Bui**, B DiFiore, ES Forbes, M Lee, D Orr, DL Preston, R Behm, T Bogar, J Childress, R Dirzo, M Klope, KD Lafferty, J McLaughlin, M Morse, C Motta, K Park, K Plummer, D Weber, R Young, H Young. “Predator-prey interactions of terrestrial invertebrates are determined by predator body size and species identity.” *Ecology*. 2022.
4. **Bui, A**, D Orr, M Lepori-Bui, K Konicek, HS Young, HV Moeller. “Soil fungal community composition and functional similarity shift across distinct climatic conditions.” *FEMS Microbiology Ecology*. 2020.
3. Miller-ter Kuile, A, D Orr, **A Bui**, R Dirzo, M Klope, DJ McCauley, C Motta, HS Young. “Impacts of rodent eradication on seed predation and plant community biomass.” *Biotropica*. 2020.
2. Lafferty, KD, JP McLaughlin, DS Gruner, TA Bogar, **A Bui**, JN Childress, M Espinosa, ES Forbes, CA Johnston, M Klope, A Miller-ter Kuile, M Lee, KA Plummer, DA Weber, RT Young, HS Young. “Secondary extinction of Asian tiger mosquitoes (*Aedes albopictus*) following rat eradication on Palmyra Atoll.” *Biology Letters*. 2018.
1. Hardesty-Moore, M, S Deinet, R Freeman, GC Titcomb, EM Dillon, K Stears, M Klope, **A Bui**, D Orr, HS Young, A Miller-ter Kuile, LF Hughey, and DJ McCauley. “Migration in the Anthropocene: how collective navigation, environmental system, and taxonomy shape the vulnerability of migratory species.” *Phil. Trans. R. Soc. B*. 2017.

In review/revision:

- Joyce, FH, JA Rosales, KD Holl, RA Zahawi, **A Bui**, JL Reid. “Active restoration facilitates recovery of tropical forest bird communities over two decades.”
- Miller-ter Kuile, A, **A Bui**, A Apigo, S Lamm, M Swan, JS Sanderlin, K Ogle. “Accounting for imperfect detection to reveal the importance of current and past environmental conditions for long-term community stability.”
- Copeland, S, S Sambado, **A Bui**, D Orr, A Swei, HS Young. “Context-dependent effects of wildlife declines and livestock additions across a climatic gradient on tick abundance in southern California.”
- Orr, D, Z Zilz, E Duge, S Copeland, **A Bui**, CI Motta, A Swei, HS Young. “Context-dependent effects of wildlife and cattle on tick survivorship.”

PRESENTATIONS

Contributed Talks

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| 2019 | Southern California All Hands useR and R-Ladies Meetup. “Exploring communities with {vegan} - an introduction to community analysis.”
A Bui
Yosemite Symbiosis Workshop. “Tree-fungal associations in the Anthropocene: Symbiotroph community composition in a changing climate.”
A Bui , HV Moeller, DA Orr, M Lepori-Bui, HS Young |
| 2018 | UCSB OUTreach Seminars. “Changing relationships in a changing world: how anthropogenic stressors reshape community composition and function.” |

A Bui**Posters**

- 2015 UCSB Undergraduate Research Colloquium. "Predator avoidance behavior in Pacific tree frogs (*Pseudacris hypochondriaca*)."
A Bui, CJ Briggs, TL Dudley, E Wilson

ACADEMIC HONORS

- 2019 Honorable Mention – NSF Graduate Research Fellowship Proposal
2015 Outstanding Achievement in the English Major
Distinction in the Major, Ecology & Evolution
Distinction in the Major, English
2014 Phi Beta Kappa

PROFESSIONAL SERVICE

Department and Campus

- Present Student representative, EEMB Working Group on Anti-racism and Climate
Graduate student mentor, UCSB Data Analysis and Coding Club
Diversity, Equity, Inclusion, and Wellness Liaison, Graduate Student Advisory Committee
Organizer, R-Ladies Santa Barbara
2022 Student representative, Graduate Affairs Committee
2021-2022 EEMB graduate student representative, Marine Science Director search committee
2021 Committee member, UCSB Environmental Health & Safety: Field Safety
2020-2021 Student representative, Faculty Diversity, Equity, and Inclusion Committee, UCSB EEMB
Committee member, UCSB Diversity, Equity, Inclusion, and Wellness Committee
2018-19 Graduate student mentor, Women in Science and Engineering
Judge, Santa Barbara County Science Fair
Specimen preparator, Cheadle Center for Biodiversity and Restoration
2017 Poster session manager, Ecology and Evolution of Infectious Disease Conference

Outreach

- 2019-2021 Scientist correspondent, Letters to a Pre-Scientist
Scientist, Skype a Scientist
Science Project Advisor, Goleta Valley Junior High School
2018-19 Speaker, Partners in Education Career Day
2018 Science project advisor, Partners in Education Science Fair
2016-17 Bird interpreter, Santa Barbara Natural History Museum

MANUSCRIPTS REVIEWED

Proceedings of the Royal Society: Biological Sciences; Global Ecology and Biogeography

CERTIFICATIONS

Field First Aid, SSI Open Water, AAUS Diver, NAUI Rescue SCUBA Diver, NAUI Nitrox Diver, CPR/O2

RELEVANT COURSEWORK

Advanced Data Analysis, Data Analysis for Environmental Science and Management, Software Carpentry (R, Github, Python)

REFERENCES

Adrian Stier
Associate Professor
EEMB, UC Santa Barbara

Holly Moeller
Assistant Professor
EEMB, UC Santa Barbara

Hillary Young
Professor
EEMB, UC Santa Barbara

Deron Burkepile
Professor
EEMB, UC Santa Barbara

Bob Miller
Principal Investigator
Marine Science Institute, UC Santa Barbara