

KACIE RING, PHD CANDIDATE

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Education

University of California, Santa Barbara

Fall 2020-Present

Ecology, Evolution, and Marine Sciences PhD

Advisors: Cherie Briggs and Andrew MacDonald

Committee: Hillary Young and Andrea Swei

San Francisco State University

Fall 2018-Spring 2020

Microbiology M.S. GPA 4.0

Master's Thesis: "*Host blood meal identity modifies vector gene expression and competency*"

Advisor: Andrea Swei

Committee: Seemay Chou and Ravinder Sehgal

University of California, Santa Cruz

Fall 2013-Spring 2017

Ecology and Evolutionary Biology B.S. GPA 3.55

Dean's List, Undergraduate Researcher

Senior Thesis: "*The Effect of Marine Subsidies on Insectivorous Lizard Abundance in Baja California*"

Advisor: Donald Croll

Relevant Professional Experience

2025 Santa Fe Institute - Micro-Working Group

Loss of Stabilization in Declining North American Birds

2025 UCSB – PI Dr. Cherie Briggs | UC Climate Action funded project

Graduate student researcher | Enhancing richness and resilience of CA amphibian communities

2024 Santa Fe Institute - Complexity-GAINS International School | NSF funded program

Ecological persistence and resilience | Sete, France

2024 UCSB – Instructor of Record

Biometry (~90 students) | lecturer for the analysis of biological data

2023 UMR PIMIT – PI Dr. Pablo Tortosa | NIH funded project

Visiting student researcher | Identifying and diagnosing ticks and tick-borne pathogens in Madagascar

2023 UCSB – PI Dr. Cherie Briggs | DoD funded project

Graduate student researcher | integral projection model on amphibian fungal pathogen growth dynamics

2019 SFSU, PI Dr. Andrea Swei | NSF CAREER funded project

Graduate student researcher | Field and molecular ecology of CA tick-borne pathogens

2018 Stanford University, PI Dr. Jose Dinneny

Research Technician | Molecular mechanisms of water and nutrient sensing in roots

Publications

**denotes corresponding author*

In Review

1. Ring, K; A Nakano, T Roth, T Shelton, A Crews, A Nicolico, A Lund, A Kjemtrup, S Sambado, C Briggs, R Curtis-Robles. Education improves tick related knowledge and confidence. *Submitted to Plos One* (9/29/2025)
2. MacDonald, AJ; T Sipin, K Ring. Spillover risk for Yellow Fever is amplified by forest-urban interface in the Amazon. *Submitted to Biology Letters* (8/22/2025)

Peer Reviewed

1. Broughton, H; A Crews, M Lilly, S Sambado, J Salomon, A Lawrence, K Ring, J Clark, G Shaw, S Summers, A Nakano, A Swei. Climate differentially impacts ticks infected and uninfected with *Borrelia burgdorferi*. *Sci. Adv.* 11, eads2181(2025). DOI: [10.1126/sciadv.ads2181](https://doi.org/10.1126/sciadv.ads2181)

2. Lilly, M; A Crews, A Lawrence, J Salomon, S Sambado, L Cerna, **K Ring**, et al. 2025. " Functional Vertebrate Group Diversity Differentially Impacts Vector-Borne Pathogen Transmission and Genetic Diversity." *Ecosphere* 16(6): e70292. <https://doi.org/10.1002/ecs2.70292>
3. Detmer, R; S Miller, A Dubel, **K Ring**, J Christian, C Briggs, A Rassweiler, H Moeller. A Busse balloon in the lagoon: herbivore behavior generates spatial patterns in coral reef ecosystems. *Ecology Letters*, 28: e70098. <https://doi.org/10.1111/ele.70098>
4. Sambado, S, A Sparkman, A Swei, A Macdonald, H Young, J Salomon, A Crews, **K Ring**, S Copeland, C Briggs. Climate-driven variation in the phenology of juvenile *Ixodes pacificus* on lizard hosts. *Parasites Vectors* **18**, 141 (2025). <https://doi.org/10.1186/s13071-025-06749-4>
5. Fenosoa, Z.S.E., Brook, C.E., Dunham, A.E., Rakotomanana, H.F., Razafindraibe, H. and ***Ring, K.A.** (2025), Gut Passage in Lemurs Enhances the Germination of Mistletoe Seeds *Bakerella gonoclada*, in a Madagascar Rainforest. *Afr J Ecol*, 63: e70012. <https://doi.org/10.1111/aje.70012>
6. Lee, B, S Sambado, D.N. Farrant , A Boser, **K Ring**, D Hyon, AE Larsen, and AJ MacDonald. Bat activity reveals targeted foraging with agricultural and mosquito implications. *Ecol Evol*, 15:e70819. <https://doi.org/10.1002/ece3.70819>
7. MacDonald, AJ, D Hyon, S Sambado, **K Ring** & A Boser Remote sensing of temperature-dependent mosquito and viral traits predicts field surveillance-based disease risk. *Ecology* 105(11):e4420. <https://doi.org/10.1002/ecy.4420>
8. **Ring, K.**, Couper, L. I., Sapiro, A. L., Yarza, F., Yang, X. F., Clay, K., Mateusiak, C., Chou, S., & Swei, A. (2022). Host blood meal identity modifies vector gene expression and competency. *Molecular Ecology*, 00, 1– 14. <https://doi.org/10.1111/mec.16413>

Presentations (only denotes presentations within PhD)

- 2025** Science by the Pint
Science Pub: Santa Barbara Natural History Museum
Graduate Research Symposium
- 2024** Invited talk: Materials Research Laboratory Science Teacher Workshop
Invited talk: Entomological Society of America
Invited talk: UCSB's Wine and Wisdom (donor event)
Invited talk: UCSB's Parents and Family Weekend
Ecological Society of America Conference
Mosquito and Vector Control Association of California Conference,
Invited talk: Pacific Southwest Center of Excellence in Vector-borne Disease Annual Meeting
- 2021** Ecological Society of America Conference
Invited talk: CDC mosquito and vector control seminar series
Pacific Southwest Center of Excellence in Vector-borne Disease Annual Meeting

Grants, Awards, & Fellowships

- 2025** Science Communication in the Parks (SCIP) Fellowship | ESA & NPS | \$3000
- 2025** Charles A. Storke Graduate Research Fellowship | \$2500
- 2025** Worster Summer Research Fellowship Mentoring Program | \$5000
- 2025** Dixon-Levy Service Award | \$250
- 2024** UC-wide Grad Slam, Second place and people's choice award ([link to talk](#)) | \$5000
- 2024** UCSB Grad Slam Winner | \$2000
- 2024** UCSB Block Grant | \$8000
- 2023** CDC CoE PacVec Training grant | \$25,000
- 2023** UCSB Block Grant | \$4000
- 2022** Lewis and Clark Field Scholar | \$8000
- 2022** UCSB Coastal Fund Grant | \$15000
- 2021** Best Poster Award Ecological Society of America, Disease section | \$100
- 2020** Honorable mention NSF GRFP
- 2019** CDC CoE PacVec Training grant | \$24,794

Teaching, Mentoring & Service

Courses taught

- 2024** Teaching Assistant UCSB EEMB 146: Biometry (Analysis of Biological Data), Spring
- 2024** Instructor of Record UCSB EEMB 146: Biometry (Analysis of Biological Data) , Winter
- 2022** Teaching Assistant UCSB EEMB 146: Biometry (Analysis of Biological Data), Winter
- 2022** Teaching Assistant UCSB EEMB 120: Introduction to Ecology, Fall
- 2021** Teaching Assistant UCSB EEMB 146: Biometry (Analysis of Biological Data), Spring & Winter
- 2021** Teaching Assistant UCSB EEMB 40: Ecology of Infectious Diseases, Fall
- 2020** Teaching Assistant UCSB EEMB 110: Parasitology, Winter

Mentoring and Community Service

- 2025** **Student Representative EEMB Global Change Biology Faculty Search**
- 2025** **UCSB EEMB Diversity, Equity, and Inclusion working group**
Officer of inaugural committee (2024-2025)
Working group one (2023) – Recruitment, retention, and professional development
- 2024** **Isla Vista YMCA Girls in Leadership mentorship program (grades 6-12)**
- 2023** **Coding 4 conservation**
Year-long mentoring program in data analysis techniques and communication for Malagasy students
- 2022** **UCSB EEMB Graduate Student Advisory Committee**
Social chair, planned community events for the ecology, evolution, and marine biology department.
- 2022** **UCSB Coastal Fund**
Trained two undergraduates (Kathryn Koo & Arnav Kumar) on field and molecular methods for disease ecology research.
- 2017** **UCSC Doris Duke Conservation Scholars Program**
Coordinator and teaching assistant for ecological field course that promotes diversity and inclusion in Ecology

References Dr. Cheryl Briggs -PhD Principal Investigator(briggs@ucsb.edu), Dr. Andy MacDonald- PhD Principal Investigator (macdonald@bren.ucsb.edu), Dr. Hillary Young- PhD committee member(hillary.young@lifesci.ucsb.edu), Dr. Andrea Swei- PhD committee member & MS Thesis Advisor (aswei@sfsu.edu)Dr. Charles Nunn – Project advisor(cnunn@duke.edu), Dr. Pablo Tortosa - Project advisor (pablo.tortosa@univ-reunion.fr)