

KACIE RING, PHD CANDIDATE

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Education

University of California, Santa Barbara

Ecology, Evolution, and Marine Sciences PhD
Advisors: Cherie Briggs and Andrew MacDonald
Committee: Hillary Young and Andrea Swei

Fall 2020-Spring 2026*

*expected completion date

San Francisco State University

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

Fall 2018-Spring 2020

University of California, Santa Cruz

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

Fall 2013-Spring 2017

Publications

*denotes corresponding author

Peer Reviewed

1. MacDonald, A; TJ. Sipin, **K Ring** (2025). Spillover risk for yellow fever virus is amplified by forest–urban interface in the Amazon. *Biol Lett* ; 21 (12):20250555 <https://doi.org/10.1098/rsbl.2025.0555>
2. Broughton, H; A Crews, M Lilly, S Sambado, J Salomon, A Lawerence, **K Ring**, J Clark, G Shaw, S Summers, A Nakano, A Swei (2025). Climate differentially impacts ticks infected and uninfected with *Borrelia burgdorferi*. *Sci. Adv.*11,eads2181.[DOI:10.1126/sciadv.ads2181](#)
3. 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>
4. Detmer, R; S Miller, A Dubel, **K Ring**, J Christian, C Briggs, A Rassweiler, H Moeller (2025) 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>
5. Sambado, S, A Sparkman, A Swei, A Macdonald, H Young, J Salomon, A Crews, **K Ring**, S Copeland, C Briggs. (2025) Climate-driven variation in the phenology of juvenile *Ixodes pacificus* on lizard hosts. *Parasites Vectors* **18**, 141 . <https://doi.org/10.1186/s13071-025-06749-4>
6. 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>
7. Lee, B, S Sambado, D.N. Farrant, A Boser, **K Ring**, D Hyon, AE Larsen, and AJ MacDonald (2025) Bat activity reveals targeted foraging with agricultural and mosquito implications. *Ecol Evol*, 15:e70819. <https://doi.org/10.1002/ece3.70819>
8. MacDonald, A.J., D Hyon, S Sambado, **K Ring**, and A. Boser (2024). 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>
9. 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*, 31, 2698–2711. <https://doi.org/10.1111/mec.16413>

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 **Moorea Coral Reef Ecosystem Resilience Working Group**
Developed and worked on projects related to drives of ecosystem stability

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

Presentations

(only denotes presentations within PhD)

*Invited talk

2025 **Science by the Pint: Science talks for everyone at Draughtsman Aleworks**
Defining the relationship: Animal interactions in Madagascar's Rainforests

Science Pub: Santa Barbara Natural History Museum
Defining the relationship: Animal interactions in Madagascar's Rainforests

UCSB Ecology, Evolution, and Marine Biology's Graduate Research Symposium
Tick-Talker: evaluating the impact of education outreach on tick-related knowledge and confidence

2024 * **Materials Research Laboratory Science Teacher Workshop**
How to give a 3-minute research talk: Healthy Humans, Healthy Forests

* **Entomological Society of America**
Tick-Talker: discovering the joy of science communication through education on disease prevention

* **UCSB's Wine and Wisdom (donor event)**
Healthy Humans, Healthy Forests (adapted to UCSB's Allosphere)

* **UCSB's Parents and Family Weekend**
Healthy Humans, Healthy Forests

Ecological Society of America Conference
The impact of anthropogenic land-use on host-ectoparasite-pathogen interactions in Northeast Madagascar

Mosquito and Vector Control Association of California Conference,
Tick-Talk: Evaluating animation as an educational tool

* **Pacific Southwest Center of Excellence in Vector-borne Disease Annual Meeting**
Tick-Talk: Evaluating animation as an educational tool

UCSB Ecology, Evolution, and Marine Biology's Graduate Research Symposium
Host disassembly and ectoparasite interactions in Northeast Madagascar

2021 **Ecological Society of America Conference**
Host Blood meal identity modifies vector gene expression and competency

Invited talk: CDC mosquito and vector control seminar series
Determination of LC-50 of permethrin acaricide in the western blacklegged tick

Pacific Southwest Center of Excellence in Vector-borne Disease Annual Meeting
Determination of LC-50 of permethrin acaricide in the western blacklegged tick

Grants, Awards, & Fellowships

2025 Science Communication in the Parks (SCIP) Fellowship | ESA & NPS | \$3000
2025 UCSB Graduate Community Building award
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

2025 Teaching Assistant UCSB EEMBW22: Concepts and Controversies in Biological Sciences
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 **Worster Summer Research Mentorship Program**
Project: Investigating the Impact of Invasive Species on Amphibian-Parasite Networks in California Ponds
Mentee: Pratyush Rallapally

2025 **Student Representative EEMB Global Change Biology Faculty Search**

2025 **Organizer: UCSB Department of Ecology, Evolution, and Marine Biology Graduate Student Symposium**

2025 **UCSB EEMB Diversity, Equity, and Inclusion working group**
Officer of the 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 (chnunn@duke.edu), Dr. Pablo Tortosa - Project advisor (pablo.tortosa@univ-reunion.fr)