

Gabriel C. Runte

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Education

- PhD Candidate** | University of California, Santa Barbara - Ecology, Evolution, and Marine Biology. Expected graduation date: September 2024 **Present**
Committee: Holly Moeller (chair), Leander Anderegg, Laura Bogar (UC Davis), Carla D'Antonio, Ryoko Oono **2021**
- M.A.** | University of California, Santa Barbara - Ecology, Evolution, and Marine Biology.
Thesis: Spheres of Influence: Host Tree Proximity and Soil Chemistry Shape rRNA, but Not DNA, Communities of Symbiotic and Free-Living Soil Fungi in a Mixed Hardwood-Conifer Forest
Committee: Holly Moeller (co-chair), Ryoko Oono (co-chair), Carla D'Antonio
- B.S.** | University of California, Santa Barbara - Environmental Studies. **2018**
Minor in Professional Writing for Science Communication
Writing Advisor: Amy Propen

Publications

- GC Runte**, A Chuen, B McKernan, HV Moeller (2024). A reflection of their roots: How soil conditioning and neighbor effects shift seedling outcomes and drought response. *In prep, manuscript available upon request.*
- GC Runte**, HV Moeller (2024). Is the friend of my friend my enemy? The maintenance of multiple hosts and symbionts in a mutualism network. *In prep, manuscript available upon request.*
- GC Runte**, R Oono, NA Molinari, SR Proulx, CM D'Antonio (2022). Restoring bigcone Douglas-fir post-fire in drought-stricken Southern California: Assessing the effects of site choice and outplanting strategies. *Frontiers in Forests and Global Change*. <https://doi.org/10.3389/ffgc.2022.995487>
- J Weverka, **GC Runte**, EL Porzig, CJ Carey (2022). Exploring plant and soil microbial communities as indicators of soil organic carbon in a California rangeland. *Soil Biology and Biochemistry*. <https://doi.org/10.1016/j.soilbio.2023.108952>
- GC Runte** AH Smith, HV Moeller, LM Bogar (2021). Spheres of influence: Host tree proximity and soil chemistry shape rRNA, but not DNA, communities of symbiotic and free-living soil fungi in a mixed hardwood-conifer forest. *Frontiers in Ecology and the Environment*. <https://doi.org/10.3389/fevo.2021.641732>

Grants, Fellowships, and Awards

- Joseph H. Connell Field Ecology Research Fellowship (\$3,000) **2024**
- Worster Award Fellowship (\$5,000) **2022**
- Sonoma County Mycological Society Scholarship (\$1,000) **2022**
- Schmidt Family Foundation Mentorship Award (\$8,000) **2021**
- Associated Students Coastal Fund at UC Santa Barbara (\$9,000) **2021**
- Honorable Mention, NSF Graduate Research Fellowships Program **2021**

Garden Club of America Fellowship in Ecological Restoration (\$4,000)	2020
Honorable Mention, NSF Graduate Research Fellowships Program	2020
Sonoma County Mycological Society Scholarship (\$1,000)	2020
NSF Research Experiences for Undergraduates	2018
UC Global Food Initiative Fellowship (\$4,000)	2018
Diana Raab Writing Fellowship (\$750)	2018

Presentations

Ecological Society of America Annual Meeting	2023
Terrestrial Microbiology (EEMB 145) Guest Lecture on Fungi in the Environment	2023
8th Annual California Oak Symposium	2022
Ecological Society of America Annual Meeting	2022
Yosemite Symbiosis Workshop	2022
Conservation Seminar Series, UC Santa Barbara	2021
Terrestrial Microbiology (EEMB 145) Guest Lecture on Fungi in the Environment	2021
UCSB EEMB Graduate Research Symposium	2020
National Fish and Wildlife Fire Restoration Grantee Forum	2019

Training

CyVerse Foundational Open Science Skills (FOSS) Course	2023
ESIIL Forest Resiliency Working Group	2023

Mentorship

Undergraduate Researchers

Independent projects:

Aubrey Chuen 2022-2023

Developed a non-destructive plant health survey method for greenhouse applications. This method uses remote sensing techniques and a multispectral camera for image analysis in R. *Worster Award Recipient*

Bailey McKernan 2021-2023

Conducted an experiment on how drought-conditioning might improve outplant success in the backcountry. *Schmidt Family Foundation Mentorship Award Recipient, URCA Recipient. Masters Student at SDSU beginning fall 2024.*

Nicholas Haghani 2019-2020

After the campus closure due to COVID, Nicholas pivoted from a lab-based project to bioinformatic and statistical analyses on microbe communities in a highly stratified marine system. *Currently a PhD student at UC Davis.*

Additional mentoring (discipline, Graduate/Undergrad):

Ryan Fass (programming, G), Stephanie Hurtado-Gonzalez (molecular techniques, U), Ronja Keeley (data analysis, U), Piper Lovegreen (general advising, G), Emily Lu (molecular techniques, U), Keith Oshima (molecular techniques, U), Alex Smith (molecular techniques, U), Kiana Soeung (molecular techniques, U), Joanna Tang (data analysis, G)

Outreach and Teaching

Outreach

EEMB Undergraduate Research Open House

2022-2024

Developed and ran an open house event aimed at broadening access to underrepresented groups in undergraduate research. Led fundraising and co-led organizing each year.

High school research demos

2023-2024

Introduced high school students to university programs and facilities. Led students through a brief experimental project harvesting mycorrhizal seedlings.

Teaching Assistant

Ecological Modeling

2022

Led a computer-based laboratory section introducing students to coding in R and working with calculus-based mathematical modeling using numerical simulations.

Introduction to Ecology

2021, 2024

Broad introductory course to many of ecology's foundational theories. Led discussion sections centered on literature interpretation. (2021 was via Zoom)