

# Macy Ricketts, Ph.D.

Microbiome Scientist | Science Communication

Colorado State University | Fort Collins, CO | [macy.ricketts@colostate.edu](mailto:macy.ricketts@colostate.edu) | [www.macyricketts.com](http://www.macyricketts.com)

Ph.D.-trained microbiome scientist specializing in microbial ecology, experimental design, and biological data analysis. Experienced in multi-omics research, bioinformatics, and translating complex science through education, collaboration, and public communication.

## EXPERIENCE

---

### COLORADO STATE UNIVERSITY

Research Scientist – Microbial Ecology & Gut Microbiome

Fort Collins, CO | 2022–Present

- Design and lead microbiome research investigating host–microbe interactions and environmental influences on microbial communities
- Conduct bioinformatic analysis of large sequencing datasets using R, Python, and HPC systems
- Lead manuscript preparation, peer review coordination, and interdisciplinary research collaborations
- Mentor students and contribute to experimental design, data interpretation, and publication strategy

### FLATHEAD LAKE BIOLOGICAL STATION – UNIVERSITY OF MONTANA

Adjunct Instructor – Alpine Ecology Field Course

Glacier National Park, Montana | 2022–Present

- Lead immersive field course in Glacier National Park teaching alpine ecology, conservation science, and field research methods
- Train undergraduate students in ecological data collection and environmental analysis

### MODEL BEHAVIOR PODCAST

Remote | Creator, Host & Producer, 2025–Present

Science and culture podcast recognized as a Spotify Instant Hit Show (2025).

- *Produce and host episodes translating scientific research on health, human behavior, and relationships for broad audiences*
- *Develop cross-platform short-form media content to expand public engagement*

### UNIVERSITY OF WYOMING

Graduate Researcher, Ph.D. Candidate – Microbial Ecology

2017–2022

- Investigated microbial community dynamics in archaeological and environmental soils using sequencing-based approaches
- Designed field and laboratory experiments integrating microbiology, ecology, and geochemical data
- Published and presented research at national conferences

## **ADDITIONAL EXPERIENCE**

---

- Lagree Fitness Instructor – Nourish Lagree & Wellness (2025–Present)
- Fitness and Lifestyle Model – Wilhelmina Models (2022-Present)
- Editor-in-Chief – The Technocrat, Montana Tech Student Newspaper
- Freelance Science Writer – Distinctly Montana Magazine
- Undergraduate Research Assistant – Montana Technological University
- Undergraduate Research Assistant – University of Kentucky (Cold Genomes Project)
- Reporter – The Livingston Enterprise
- Collegiate Athlete – Women’s Basketball, Montana Tech

## **EDUCATION**

---

### UNIVERSITY OF WYOMING

Laramie, Wyoming

Ph.D. Ecology, November 2022

*Microbial Ecology and Data Science*

### MONTANA TECHNOLOGICAL UNIVERSITY

Butte, Montana

B.S. Cellular and Molecular Biology, minor in Technical Communication

*Highest honors*

## **SELECTED PUBLICATIONS**

---

**Ricketts, M.,** Renner, S., Nehrig, M., VandeWoude, S., and Ward, N., 2026. Sex-Associated Variation in the Feline Gut Microbiome May Influence Host Health. *In prep.*

**Ricketts, M.,** Mackie, M., Kornfeld, M., Stettner, S., Surovell, T., Kelly, R., and Ward, N., 2026. Beyond the Gradient: Bacterial Sensitivity and Fungal Stability Across Deep Soil Physicochemical Profiles. *In prep for mSystems.*

**Ricketts, M.,** 2025. Echoes of Tourism: Exploring the Ecological Effects of Habituation in Alpine Wildlife. Food, Energy, and Water (FEW) FMN, QUBES Educational Resources. doi:10.25334/ZWEC-WS97

Apple, M. E., **Ricketts, M. K.,** Martin, A. C., & Moritz, D. J. (2022). Distance from Retreating Snowfields Influences Alpine Plant Functional Traits at Glacier National Park, Montana. In *Mountain Landscapes in Transition* (pp. 331-348). Springer, Cham.

Apple, M.E., **Ricketts, M.,** and Martin, A., 2019. Plant and microbial functional types at the snowfields and periglacial patterned ground of Glacier National Park. *Journal of Geographical Sciences*, 29(7): 1127-1141.

Apple, M.E., **Ricketts, M.,** and Carlson, L., 2015. Rhizomes and Roots of Rare Arctic-Alpine Snowfield Plants on the Edges of Retreating Snowfields at Glacier National Park, Montana. *Microscopy and Microanalysis* 21(S3): 709-710.

## **TEACHING EXPERIENCE**

---

Instructor – Alpine Ecology Field Course, Flathead Lake Biological Station (2022–Present)  
Instructor – Microbial Sequencing, Colorado State University (2023)  
Teaching Assistant – Microbial Diversity and Ecology, University of Wyoming  
Teaching Assistant – Introduction to Research and Analysis, University of Wyoming

## **COMMUNITY OUTREACH**

---

- Staff Advisor – CSU Coding Club
- Science Communicator – Wyoming Biodiversity Institute COPSE Program
- Science Fair Judge – Wyoming State Science Fair
- Panelist – Wyoming Press Association Science Journalism Panel

## **AWARDS AND FELLOWSHIPS**

---

Barry M. Goldwater Scholarship Honorable Mention (National)  
Ecological Society of America FEW-FMN Fellowship (2024)  
Aven Nelson Fellowship for Outstanding Research (2020, 2021)  
University of Wyoming Excellence in Teaching Award (2020)  
Roy J. Shlemon Center for Quaternary Studies Research Award (2019, 2021)  
Colorado State University Discipline-Based Education Research Award (2024)

## **TECHNICAL SKILLS**

---

Bioinformatics & Data Science: R, Python, HPC systems  
Laboratory: microbial sequencing, microscopy (SEM, TEM, phase contrast)  
Design & Media: Adobe Photoshop, InDesign  
Field Research: alpine ecology, backcountry fieldwork

## **REFERENCES**

---

*Available upon request*