Macy Ricketts, Ph.D.

Microbiome Scientist | Science Communication
Colorado State University | Fort Collins, CO | macy.ricketts@colostate.edu | www.macyricketts.com

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 – Colorado State University & 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