

Funded M.S. Position in Host-Microbiome Evolution with Tropical Fieldwork (ENMU, Spring 2027)

Description: The Microbial Ecology and Macroevolution Group (<https://kvasir7.github.io/>) in the Department of Biology at Eastern New Mexico University (ENMU) is offering a funded M.S. position beginning Spring 2027. The selected student will study how microbes shape the evolution of their metazoan hosts, combining fieldwork in Panama and potentially the Ecuadorian Amazon with DNA sequencing and computational analysis. The position includes a graduate assistantship, in-state tuition, a summer stipend, and field work support.

The group studies how microbes and their metazoan hosts shape biodiversity across levels of biological organization, with a focus on the microbial role in evolutionary novelties, innovations, and constraints on adaptation. Study systems include turtles (including the microbial role in the origin of the turtle shell) and amphibians. Thesis questions are developed with the PI within this research program and are otherwise flexible to fit the student's interests. Possible questions include how host-associated microbiomes vary along environmental gradients, how they are transmitted and how they mediate developmental trajectories, and how patterns differ across levels of selection. The work combines field, laboratory, and computational components, including shotgun and long-read metagenomics, multi-omics approaches, and bioinformatic analysis on high-performance computing resources.

The student will be based at ENMU, taking coursework during the academic year and conducting fieldwork in the summers. Fieldwork will take place in Panama with the Smithsonian Tropical Research Institute (STRI), where the group's PI is a Research Associate, and potentially at the Tiputini Biodiversity Station in the Ecuadorian Amazon with local collaborators. Regional fieldwork in the Chihuahuan Desert is also possible. Two full summer field seasons are expected, so applicants should be available to begin in January 2027, and the degree is expected to take about two years. Some field sites are remote, with limited access to medical care, so the PI will plan field safety and emergency logistics with the student. The student will be the first graduate student in the group, which means close, individual mentorship and the chance to help shape the lab's direction. The PI has mentored undergraduate students, graduate students, and postdoctoral researchers in previous positions, and the student will join a Department of Biology with other graduate students.

The selected student will be offered a graduate assistantship (GA), providing a stipend of approximately \$11,000 per 9-month academic year and tuition at the in-state rate. The PI can also provide a summer stipend of up to \$5,000 for each summer field season, in addition to supporting field work costs. Together, this can total approximately \$16,000 per year plus field costs. Students are also encouraged to apply for external funding if desired.

ENMU is a federally designated Hispanic-Serving Institution in Portales, New Mexico, a small, friendly town with an affordable cost of living. The group's [mentoring guidelines](#) and [commitment to diversity and inclusion](#) are available on our website.

Qualifications: A B.S. in Biology, Microbiology, Ecology, Evolution, or a related field, with strong academic credentials, is required. Experience with bioinformatics and statistics is

desirable, as is interest in the conceptual foundations of evolutionary biology. Significant fieldwork will take place outside the United States, primarily in Panama and potentially in Ecuador, so working knowledge of Spanish is preferred. Applicants should be able to work independently and comfortably in remote, physically demanding field conditions for extended periods. Strong applicants will show evidence of taking ownership of a project, such as an undergraduate thesis, independent research, or extended field or lab experience, and will communicate clearly in writing and in person. Competitive applicants will have tropical field research experience, preferably from their undergraduate program. Students must hold a valid driver's license and passport and be able to obtain any required visas for international travel. The selected applicant must apply to and be accepted by the ENMU Graduate School and Department of Biology; the Graduate School application is free.

How to Apply: Email a statement describing your interest in the lab, this project, and your career goals, along with your CV, unofficial transcripts, and contact information for two references, to joseph.madison@enmu.edu (subject line: "ENMU MS Position"). Applications are reviewed as received, with full consideration given to those received by 2 November 2026. Graduate assistantships are applied for separately through ENMU's employment site. Questions are welcome at the same email address.