Clara Rehmann

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Education

Ph.D. Ecology and Evolutionary Biology   September 2021 - present
    University of Oregon *University of Oregon*

Bachelor of Science Biology   June 2020
    University of Oregon *Eugene, Oregon*   September 2018 - June 2020
    University of California, Los Angeles *Los Angeles, California*   September 2017 - June 2018

Research experience

Spatial dynamics of selective sweeps   September 2022 - present
Advisor: Dr. Andrew Kern, *University of Oregon*
    Simulation-based research for PhD dissertation investigating the effects of spatial population
    structure on selective sweeps.

Machine learning inference of location from genetic data   June 2020 - present
Advisor: Dr. Andrew Kern, *University of Oregon*
    Simulation-based research investigating the impact of spatially-biased training data on machine
    learning inference of location from genetic data.

Cross-species analysis of transcription expression   March 2022 - June 2022
Advisor: Dr. William Cresko, *University of Oregon*
    Rotation project assessing the effects of cross-species scRNA-seq integration methods on analysis
    outcomes.

Modeling high-order epistasis in populations   September 2021 - December 2021
Advisor: Dr. Michael Harms, *University of Oregon*
    Rotation project simulating population-level evolutionary trajectories across fitness landscapes.

Bacterial-host evolutionary conflict   April 2020 - June 2021
Advisor: Dr. Matthew Barber, *University of Oregon*
    Computational and experimental work investigating coevolutionary dynamics between the
    primate immune system and bacteria.

Fitness effects of inaccurate translation   September 2017 - June 2018
Advisor: Dr. Beth Lazazzera, *University of California, Los Angeles*
    Experimental work investigating impacts of the loss of aminoacyl-tRNA synthetase editing on
    E. coli fitness

Teaching Experience

Evolutionary Biology   Fall 2023
Guest Lecturer *Department of Biology, University of Oregon*
   Lectured on integrating evolutionary forces.

Computational Genetics   Spring 2023
Guest Lecturer *Department of Biology, University of Oregon*
   Lectured on principal component analysis and data visualization.

Evolutionary Biology   Fall 2022
Guest Lecturer *Department of Biology, University of Oregon*
   Lectured on genotypic and phenotypic variation.

General Biology IV: Mechanisms   Spring 2022
Graduate Employee *Department of Biology, University of Oregon*
   Lead and instructed students during wet and dry lab activities, graded assignments and assisted
   in curriculum development.

Immunology and Infectious Disease   Winter 2022
Graduate Employee *Department of Biology, University of Oregon*
   Developed discussion material, lead and instructed students during discussions, and graded
   assignments.

Evolutionary Biology   Fall 2021
Graduate Employee *Department of Biology, University of Oregon*
   Lead student discussions of publications in evolutionary biology, and graded assignments.

Marine Biology   Winter 2020
Biology Undergraduate Lab Assistant *Department of Biology, University of Oregon*
   Assisted in instruction of students during wet lab activities.

General Biology IV: Mechanisms   Summer 2019
Biology Tutor for Undergraduates *Department of Biology, University of Oregon*
   Assisted in instruction of students during lectures and wet and dry lab activities

Conferences and Meetings

The Allied Genomics Conference   March 2024
Genetics Society of America, *National Harbor, Maryland, USA*
   Poster: In space no one can hear you sweep: Dynamics and outcomes of selective sweeps in
   continuous geographic space

SMBE   July 2023
Society for Molecular Biology and Evolution, *Ferrara, Italy*
   Poster: Location, location, location: Evaluating evidence for co-geography in the Anopheles
   Plasmodium host-parasite system

EVO-WIBO   April 2023
American Society of Naturalists, *Port Townsend, Washington, USA*
   Poster: Location, location, location: Dissecting errors in machine learning prediction of geogra-
   phy

Population, Evolutionary, and Quantitative Genetics June 2022

Genetics Society of America, *Asilomar, California, USA*

    Poster: Location, location, location: Dissecting errors in machine learning prediction of geography

Probabilistic Modeling in Genomics April 2021

Cold Spring Harbor Laboratories, *virtual*

    Poster: Location, location, location: Dissecting errors in machine learning prediction of geography

Publications

Rehmann CR, Ralph PL, Kern AD. Evaluating evidence for co-geography in the Anopheles Plasmodium host-parasite system. G3 Genes—Genomes—Genetics, Volume 14, Issue 3, March 2024, jkae008, DOI: 10.1093/g3journal/jkae008

In prep: Chevy E, Miseon J, Caudill V, Champer S, Haller B, **Rehmann CR**, Smith CS, Tittes S, Messer P, Kern AD, Ramachandran S, Ralph PL. Population genetics meets ecology: a guide to simulations in continuous geography.

Outreach and Community Involvement

Women in Graduate Sciences Fall 2021 - present

Public Relations Chair Academic Year 2023 - 2024

    Communicating with WGS members about upcoming events, opportunities, and gatherings; advertising WGS events to the on- and off-campus community.

Social Co-chair Academic Year 2022 - 2023

    Planning and organizing social events for WGS members and the local community.

Mad Duck Outreach Winter 2023 - present

    Helping to facilitate on-campus science activities for middle school students on furlough days.

Graduate Evolutionary Biology and Ecology Students Fall 2021 - present

SPECIE2S chair Academic year 2023 - 2024

    Organizing and facilitating weekly writing groups and peer feedback sessions for graduate students.

Seminar committee Academic Year 2022 - 2023; 2023 - 2024

    Helping plan and organize an annual free public seminar on current topics in biology.

Genetics Society of America Member Winter 2022 - present

American Society of Naturalists Winter 2023 - present

Society for Molecular Biology and Evolution Spring 2023 - present