

Clara Rehmann

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github.com/clararehmann

Institute of Ecology and Evolution, University of Oregon, Eugene, OR

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

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

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 geography

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

Undergraduate Research Symposium

May 2019

University of Oregon, *Eugene, Oregon, USA*

Poster: Reduced success of urchin fertilization under low pH conditions

Publications

In revision

Rehmann CR, Ralph PL, Kern AD. Evaluating evidence for co-geography in the *Anopheles Plasmodium* host-parasite system. DOI: 10.1101/2023.07.17.549405

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

Seminar committee

Academic Year 2022 - 2023

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