

Elizabeth Miller

University of Oregon

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Education

Michigan State University

PhD Plant Biology, May 2016

Kellogg Biological Station

Program in Ecology, Evolutionary Biology, and Behavior

Carleton College

BA Mathematics 2005

Concentration in Spanish

Dissertation

“Community Composition and Coexistence: The Effects of Temporal Variation and Environmental Forcing on Community Trait Distributions and Diversity”

Graduate Committee

Christopher A Klausmeier (Chair), Elena Litchman

Orlando Sarnelle, Gary Mittlebach

Research and

Leadership

META Center for Systems Biology, University of Oregon 2016-Present

Postdoctoral Research Associate in the lab of Brendan Bohannan

Project: Metacommunity ecology of host-associated microbiomes

Theoretical and empirical studies

International Fish Microbiome Meeting, September 2019

Co-chair of organizing committee

Solicited and selected participants from 5 continents

Constructed budget

Organized lodging, venue, catering and activities

Ensured a smooth experience for all participants

Delegated tasks to other committee members

Gordon Research Seminar Discussion Leader, July 2018

Facilitated panel discussion after speaker session

ESA Organized Oral Session, August 2017

Organized the session program

Invited and selected speakers from all over the world

Facilitated discussion and networking

CIEE Working Group on Plankton Dynamics, December 2010

Analyzed zooplankton community dynamics

Worked with multiple high resolution datasets

Produced peer reviewed publication

Peer Reviewer

Nature Ecology and Evolution, American Naturalist, Ecology Letters, Journal of Theoretical Biology, Oikos, Microbial Ecology

Publications

Miller ET and BJM Bohannan

“Feedback Processes in a Metacommunity: Niche construction and Coexistence” In Prep

Erdoğan, S, M Beklioğlu, E Litchman, **ET Miller**, EE Levi, T Bucak, ÜN Tavşanoğlu “Small-sized zooplankton can control phytoplankton size structure in warm-nutrient rich lakes” In Revision, Journal of Phytoplankton Research

2019 Miller ET and BJM Bohannan

“Life between patches: incorporating microbiome biology alters the predictions of metacommunity models" Frontiers in Ecology and Evolution

2018 Miller, ET, R Svanbäck, and BJM Bohannan

“Microbiomes as Metacommunities: Understanding Host-Associated Microbes through Metacommunity Ecology" Trends in Ecology and Evolution

2018 Edwards, KF, CT Kremer, **ET Miller**, MM Osmond, E Litchman, CA Klausmeier

“Evolutionarily stable communities: a framework for understanding the role of trait evolution in the maintenance of diversity” Ecology Letters

2017 Burns, AR, **ET Miller**, M Agarwal, AS Rolig, K Milligan-Myhre, S Seredick, K Guillemin, BJM Bohannan

“Inter-host dispersal overwhelms host factors in the assembly of host-associated microbial communities” PNAS

2016 Miller, ET and CA Klausmeier

“Evolutionary stability of coexisting species in a two season model” Theoretical Ecology

Miller, ET, CT Kremer, and CA Klausmeier

“Synergistic or independent? The nature of environmental variation determines how relative nonlinearity and the storage effect interact” In Prep

2014 Vasseur, DA, JW Fox, A Gonzalez, R Adrian, BE Beisner, MR

Helmus, C Johnson, C Johnson, P Kratina, C Kremer, C de Mazancourt,

E Miller, WA Nelson, M Paterson, JA Rusak, JB Shurin, and CF Steiner
“Synchronous dynamics of zooplankton competitors prevail in temperate lake ecosystems” Proceedings of the Royal Society B

2009 Crone, EE, **E Miller**, A Sala
“How do plants know when other plants are flowering? Resource depletion, pollen limitation, and mast seeding in a perennial wildflower” Ecology Letters
Editor’s Choice Science and Faculty of 1000 Biology

Talks and Presentations **2020** Invited Talk, American Society of Microbiology: Microbe Ecological and Evolutionary Theory of Host Microbiomes
Postponed until 2021 in Anaheim, CA

2019 Invited Talk, The Michigan Microbiome Project
“Life between patches: the roll of the environment in shaping the host’s microbiome”, University of Michigan, Ann Arbor, MI

2019 Poster Presentation, Second International Fish Microbiome Meeting
“Dispersal in the microbiome: The matrix is not lava” Eugene, OR

2019 Contributed Talk, Ecological Society of America Annual Meeting
“Life between patches: Theoretical and empirical studies of the role of the matrix in the microbiome metacommunity” Louisville, KY

2018 Poster Presentation, Gordon Research Conference: Ecology Across Scales “Updating metacommunity ecology for the microbiome” Biddeford, ME

2017 Organized Talk, Ecological Society of America Annual Meeting
“Biological patches: The importance of the host's population for understanding the metacommunity ecology of host-microbiome system” Portland, OR

2015 Invited Talk, Fukami Lab
“Temporal variation and coexistence: Ecological and evolutionary coexistence in a 2 season world” Stanford University, Palo Alto, CA

2014 Invited Talk, Ecological Society of America Annual Meeting
“Temporal variation and coexistence: Ecological and evolutionary coexistence in a 2 season world” Sacramento, CA

2013 Poster, Center for Marine Life: Trait Based Approaches to Marine Life Symposium “Trait-wise investigation of phytoplankton communities reveals predictable responses to environmental variation” Copenhagen, Denmark

Work and
Teaching
Experience

Instructor, Population and Community Ecology Theory Lab

Fall 2011 Sabbatical Replacement

Weekly, 3 hour graduate course

Taught programming of ecological systems

Mathematica programming language

Graduate Teaching Assistant Statistical Methods in Ecology and Evolution

Spring 2013

Graduate-level statistics course

R programming language

Program Coordinator, Enhancing Linkages Between Math and Ecology

Fall 2011-Summer 2012

3 week, intensive, summer statistical course

Recruited students and instructors from around the world

Arranged housing and travel and funding for all participants

Served as the teaching assistant

Handled day-to-day issues and put out fires

Guest Lectures

Algal Biology, Matrix Population Modeling, Predator Prey Dynamics,
Population Dynamics