



UC MERCED ENVIRONMENTAL SYSTEMS SEMINAR

12:30 to 1:30 pm January 30th, 2019

Student Services Building Room 120

Vegetarian snacks, fresh coffee and tea will be provided. Please, bring your own mug to decrease waste.

Visit <http://es.ucmerced.edu/seminars>

Professors Emily Moran and Jason Sexton

Department of Life and Environmental Sciences

Dr. Emily Moran



How should we manage forests in an era of climate change?

Forests play a variety of important ecological, economic, and social roles that are threatened by climate change. In order to manage forests into the future, we need to better understand the biological responses of trees to changing environmental conditions. In particular, we need to know how well they can disperse into and establish in areas that are becoming climatically suitable, and how plasticity and genetic variation affect their ability to persist in areas that are becoming less suitable. In this talk, Dr. Moran will discuss several past and ongoing projects relating to these questions. Understanding the degree to which populations can adapt or shift their ranges on their own will help us to prioritize efforts to support forest health and function.

Emily Moran has been an assistant professor at the University of California Merced since 2014. She obtained her PhD from Duke University in 2010, and did postdoctoral research at the National Institute for Mathematical and Biological Synthesis (NIMBioS) and at ETH Zurich. Her research focuses on responses to environmental change in long-lived plants, particularly forest trees. She has investigated questions ranging from the dispersal capabilities of oaks, to local adaptation in an invasive perennial, to the role of local adaptation and evolutionary responses in conifer responses to climate change using tools ranging from field observations and experiments to genetic markers and computer modeling.

Dr. Jason Sexton



Do species ranges have rules?

Earth is changing rapidly. Referencing work in my lab (often monkeyflowers in the Sierra Nevada), I will discuss patterns of variation in, and gene flow among, wild populations across species ranges. Additionally, I will discuss potential general “rules” of species ranges and how any such rules can be used for our understanding of species distributions and to develop adaptive conservation strategies.

Jay Sexton applies an evolutionary perspective and a collaborative interdisciplinary approach to pressing questions in evolution and ecology. He uses field and greenhouse experiments, genetic analyses, environmental modeling, physiological analyses, and biogeographic datasets to address these questions. Although he focuses primarily on plant climate adaptation, he also actively contributes to research on sustainability science, from biological invasions, and maximizing species diversity under climate change, to the role of sociocultural adaptive capacity in biological conservation. Jay grew up in the California Mojave Desert and pursued his bachelor's at Humboldt State University, his master's at University of Montana, and his PhD at UC Davis. He held a postdoctoral position at University of Melbourne prior to starting at UC Merced as an assistant professor in 2014.

Did you know...? The ES Seminar is committed to decrease our environmental footprint. Our luncheons and seminar snacks are only vegetarian or vegan options. We brew our own coffee and tea, and encourage the participants to bring their own mugs to decrease waste.