

The Department of Environmental Studies at San José State University is pleased to present a public research presentation:

Wednesday, March 9, 2022

12:00 PM – 1:15 PM

<https://sjsu.zoom.us/j/5858275843> pw: ENVS@SJSU

## Dr. Tyler Neal McFadden

*Lecturer, Department of Biology Stanford University*

### *Can working lands work for conservation? Assessing biodiversity and ecosystem functioning in Chilean timber plantations*



Land use change is a leading driver of biodiversity loss and has far-reaching consequences for ecosystem functioning and human wellbeing. A central tenet of modern conservation is the establishment of protected areas, often with the goal of preventing land use change. However, there is mounting evidence that protected areas alone cannot reverse the current global biodiversity crisis. Expanding conservation efforts to working lands and other human-dominated landscapes is therefore essential to achieving global biodiversity conservation goals. In this talk, I will discuss my research on biodiversity in human-dominated landscapes in Chile and California. I will focus in-depth on the case of industrial timber plantations in Chile, where I use birds and plant-pollinator communities as indicators to inform forest management. Building on this empirical work, I will then introduce a novel holistic approach for forecasting the effects of global change on entire metacommunities. In closing, I will discuss some troubling bird population trends in the Bay Area and reflect on the key role that common urban species play in supporting human-nature interactions.

*Tyler McFadden is an ecologist, conservation scientist, and environmental educator. His research examines the causes and consequences of biodiversity loss, focusing on how ecological communities respond to human impacts. Tyler is currently a Lecturer in the Department of Biology at Stanford University. He also co-directs a non-profit outdoor education program for high school English Language Learners ([www.meroscience.org](http://www.meroscience.org)). Previously, Tyler completed a PhD in Ecology and Evolutionary Biology (2021) at Stanford University, and a BS in Fisheries and Wildlife Science (2014) at Oregon State University*