

ES SEMINAR SERIES

12:30-1:30 pm
11/17/2021

[Zoom](#)

Kristy Kroeker

*Ecological leverage points: scaling up
in ocean global change biology*



Abstract: Marine ecosystems are increasingly affected by global environmental changes, including warming temperatures, deoxygenation, and ocean acidification. Scientists recognize that these environmental changes are translated into community changes via organismal physiology. However, the multi-faceted nature of environmental change requires a common currency for scaling up the wide range of physiological effects. In this talk, I will discuss how understanding shifts in the outcome of species interactions requires a sharpened focus on the energetic demands and trophic mismatches generated by environmental changes, as well as how key species interactions that are sensitive to environmental change can operate as ecological leverage points through which small changes in abiotic conditions can be amplified into large changes in marine ecosystems. In addition, I will discuss how ecological leverage points can be used to inform our thinking about resilience.

Bio: [Kristy Kroeker](#) is an Associate Professor in Ecology and Evolutionary Biology at the University of California Santa Cruz and a core faculty member in the Coastal Science and Policy Graduate Program. Her research examines the ecological effects of environmental change on marine communities and ecosystems. Kroeker is a Packard Fellow in Science and Engineering, a Sloan Fellow in Ocean Sciences, and a UC Climate Action Champion. In addition, she sits on the Scientific Advisory Team of the California Ocean Protection Council as well as the advisory committee for the Ocean Acidification International Coordination Center, the leading intergovernmental body facilitating international collaboration and capacity building for ocean acidification research worldwide.

Papers:

[Kroeker, Kristy J., and Eric Sanford. "Ecological leverage points: species interactions amplify the physiological effects of global environmental change in the ocean." Annual Review of Marine Science 14 \(2021\).](#)

[Kroeker, Kristy J., Cassandra Powell, and Emily M. Donham. "Windows of vulnerability: Seasonal mismatches in exposure and resource identity determine ocean acidification's effect on a primary consumer at high latitude." Global Change Biology 27.5 \(2021\)](#)

