Panelist Profiles: Ecology During Rapid Environmental Change

Delta Independent Science Board Meeting

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Carrie Kappel, Ph.D.

Dr. Carrie Kappel is a Research Scientist and Senior Fellow at UC Santa Barbara's National Center for Ecological Analysis and Synthesis. Dr. Kappel is a marine conservation biologist and professional team science facilitator with deep experience in interdisciplinary and intersectoral collaboration and science communication. In her research, Dr. Kappel uses collaborative synthesis science to develop conservation solutions that protect marine ecosystems and enhance human wellbeing. Dr. Kappel recently led the Ocean Tipping Points project, a large, multi-institution interdisciplinary collaboration which sought to integrate our growing scientific understanding of tipping points in marine ecosystems into ocean management through practical tools and approaches. As a member of the Science for Nature and People Partnership Science Advisory Council and advisor and facilitator of numerous SNAPP working groups and other team science endeavors, Dr. Kappel works to accelerate the science-to-action pathway and advance integrated approaches to pressing social and environmental challenges.

Jeffrey Mount, Ph.D.

Dr. Jeffrey Mount is a senior fellow at the Public Policy Institute of California, Water Policy Center. He is an emeritus professor of earth and planetary sciences and founding director of the Center for Watershed Sciences at the University of California, Davis. A geomorphologist who specializes in the study of rivers, streams, and wetlands, his research focuses on integrated water resource management, flood management, and improving aquatic ecosystem health. He has served on many state and federal boards and commissions that address water resource management issues in the West. He has published more than a hundred articles, books, and other publications, including the seminal book California Rivers and Streams (UC Press). He holds a Ph.D. and M.S. in earth sciences from the University of California, Santa Cruz.

Margaret Palmer, Ph.D.

Dr. Margaret Palmer is a Distinguished University Professor at the University of Maryland, College Park, and director of the National Socio-Environmental Synthesis Center. Her research has focused on coastal and freshwater ecosystems with an emphasis on restoration of rivers, streams, and wetlands.

She is an international leader in restoration ecology, has more than 150 peer-reviewed articles and co-edited Foundations of Restoration Ecology, a widely used text that is in its second edition. Dr. Palmer is also known for her work at the interface of science and policy, having served as a technical advisor and as an innovator that helps build solution-focused teams to solve problems that have social, legal, policy, and scientific aspects. She co-designed and now directs a unique national synthesis center (SESYNC) that has championed new approaches to fostering research collaborations between social and natural scientists on problems at the interface of people and the environment.

Melanie Harsch, Ph.D.

Dr. Melanie Harsch received her Ph.D. in quantitative ecology in 2010 from Lincoln University in New Zealand. While in New Zealand, she used experiments, long-term observations, and treeline studies from across the world to demonstrate that species response to climate change is complex and not determined by temperature alone. She then worked with Janneke Hille Ris Lambers and Mark Kot at the University of Washington to develop synergistic statistical and mathematical models of species response to climate change. These models demonstrate the complexity of water-temperature interactions and provide tools to how life history, biotic interactions, and stochasticity affect persistence with increasing rates of shifting habitable ranges. In 2015, she left academic research with the goal of conducting translational ecology. Melanie has been contracted at NOAA fisheries developing communication and management tools that aim to integrate human dimension with ecological information to aid in developing management plans.

Sam Luoma, Ph.D.

Dr. Samuel N Luoma’s specific research interests are in the bioavailability and ecological effects of contaminants in aquatic environments, the subject of most of his more than 200 peer reviewed publications and one textbook. He retired from the US Geological Survey after 34 years as a project chief with the agency including 15 years as a Senior Research Hydrologist. At present he holds the position of Research Ecologist at the John Muir Institute of the Environment at the University of California, Davis.

He is the Editor-in-Chief of San Francisco Estuary & Watershed Science and was a Scientific Associate with The Natural History Museum in London, UK until 2017. He served as the first Lead Scientist for the CALFED Bay-Delta program from 1999-2003 (now the Delta Science Program), and has continued working with California water issues since then. He is presently co-chair of the Collaborative Adaptive Management Team, a court-mandated, multi-stakeholder group that facilitates communication and cooperative studies on contentious California water issues. He received his Ph.D. from University of Hawaii in Marine Biology.

Tessa Hill, Ph.D.

Dr. Tessa Hill is a Professor and Chancellor's Fellow at University of California, Davis, in the Department of Earth & Planetary Sciences. She is resident at UC Davis Bodega Marine Laboratory, a research station on the Northern California Coast. Tessa graduated with a B.S. in Marine Science from Eckerd College (1999) and a Ph.D. in Marine Science from UC Santa Barbara (2004). She was then a UC President's Postdoctoral Fellow at UC Davis, prior to starting a faculty position. Research interests include climate change, both past and present, and understanding the response of marine species to environmental perturbation. She is part of the Bodega Ocean Acidification Research (BOAR) group at Bodega Marine Laboratory, which aims to understand the impact of ocean acidification on marine species. Tessa leads an NSF-supported program with future (pre-service) K-12 science teachers to infuse their classrooms with climate change science, and an industry-academic partnership to understand the consequences of ocean acidification on shellfish farmers. Tessa has served as an Associate Director of the UC Davis Coastal & Marine Sciences Institute since 2013.