



Climate Change, Range Shifts, Persistence and Traits - The Long View

Date: 18 June 2024 (Tue)

Time: 10:00

Venue: 3N-01

About the speaker:

Steven R. Beissinger is a Professor of Ecology and Conservation Biology in the Department of Environmental Science and the co-Director of the Berkeley Institute for Parks, People and Biodiversity. His current research focuses on centers on wildlife responses to global change and species' extinctions.

Abstract:

Traits – characteristics of individuals or species typically related to morphology, life history, behavior or phenology – have long been used in ecology to understand community assembly, nutrient cycling, ecosystem response to disturbance, ecosystem functions and services, and invasion ecology and range dynamics. An emerging area of inquiry is to use traits to evaluate susceptibility of species to climate change. One approach examines how traits influence demographic variation among individuals in relation to climatic variation and how this influences population dynamics. A second approach examines how traits describe variation among species in their responses to climatic variation. This seminar takes a “long view”, examining: (1) data from 308 long-term studies of vertebrate species that tracked known individuals to understand body size and phenological changes driven by climate and their impact on population dynamics; and (2) the role of traits in explaining range shifts in relation to climate change over the past century through work of my lab in the Grinnell Resurvey Project, a 15-year effort to resample locations throughout California that Joseph Grinnell and colleagues originally surveyed for birds and mammals from 1900-1939.

