



The Department of Ecology and Evolutionary Biology

Fall 2017 Seminar Series

Vertebrate Macroevolution and the importance of museums, fossils and data-science

Understanding how patterns of ecomorphological and lineage diversity are influenced by biotic and abiotic factors and the interaction between them is of fundamental importance. Only by understanding the regulators of biodiversity in the past can we begin to predict future responses to global change. The successful synthesis of phylogenetic and paleontological information has the potential to vastly improve our understanding of macroevolution as separate analyses of the fossil record and extant phylogenies frequently infer different factors as important drivers of diversification. To identify macroevolutionary patterns of biodiversity and their drivers requires an integrative approach, tapping the vast reserves of scientific data in museum collections and the published scientific literature data and thus combining traditional ecomorphology and phylogenetics with data-science techniques. I illustrate how this approach can identify repeating themes and general principles governing the evolution of vertebrate diversity using my recent work on dietary evolution and its impact on mammalian diversification and the ecological drivers of fish body shape diversity.



Join us in welcoming
Dr. Samantha Price
University of California, Davis

Friday, November 10th

Pre-talk Reception
3:00 PM in Dabney 575

Seminar
SERF 307 - 3:30 PM

