

California State University, Fresno
Department of Biology presents

Ecological Processes in a Changing Environment: perspectives from the Quaternary



Dr. Jessica Blois
UC-Merced

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Understanding the patterns of and mechanisms underlying compositional change is important given the many factors that may influence future biodiversity. To provide a long-term context for recent and future biodiversity changes, my research explores the influence of two potential primary drivers of biodiversity change: climate and interactions between species. In this talk, I focus on several projects that use the Quaternary fossil record to disentangle these two potential drivers, and in the process, explore the robustness of models commonly used to project future biodiversity changes. Overall, Quaternary fossil assemblages show strong signals of environmental structuring which implies that, at least at broad scales, climate-based models are relatively good for predicting changes in species and communities. However, interactions between species are likely influencing assemblages as well and incorporating associations between taxa into models could lead to relatively greater predictive ability, particularly across periods of substantial climate change. Despite this, all models perform poorly with increasing amounts of climate change, so care needs to be taken when projecting biodiversity changes into potential no-analog climates of the future.

For further information: www.csufresno.edu/biology or phone 278-2001

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