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TITLE: How far can they go? Species responses to climate change through time

ABSTRACT: Modern rapid climate change poses significant challenges to biodiversity. My research asks how vertebrates respond to climate change, by moving, evolving, or going extinct. To address this, I use spatial and statistical models to generate hypotheses about the patterns and processes that result from environmental change. I then test those hypotheses using empirical data, such as modern or paleontological specimens gathered either from online databases or collected through targeted fieldwork. I will describe how I have used this approach to examine how vertebrate species have shifted their distributions in response to climate change in the past and whether they will be able to effectively do so in the future.

BACKGROUND: "We are interested in spatial questions about the ecological and evolutionary implications of climate change. We use modern data as well as the rich paleontological record of the last several million years to address those questions".