



QUANTITATIVE AND SYSTEMS BIOLOGY COLLOQUIUM: Biodiversity dynamics across scales: What shapes diversity in lizards and snakes?

Laura Alencar
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About the Speaker:

Laura is an Associate Research Scientist in the Department of Ecology and Evolutionary Biology at Yale University. She earned her PhD in Ecology from the University of São Paulo, Brazil. Her research centers on understanding how biodiversity is generated, lost, and maintained. To achieve this, Laura identifies, quantifies, and documents large-scale biodiversity patterns, connecting different levels of biological organization to uncover the processes driving these patterns. Her work primarily focuses on squamate reptiles (lizards and snakes), integrating a range of biological data, including natural history, morphology, geography, physiology, and phylogenetics. She combines field-based natural history with collections-based studies and comparative phylogenetics to address these complex questions.



Date:

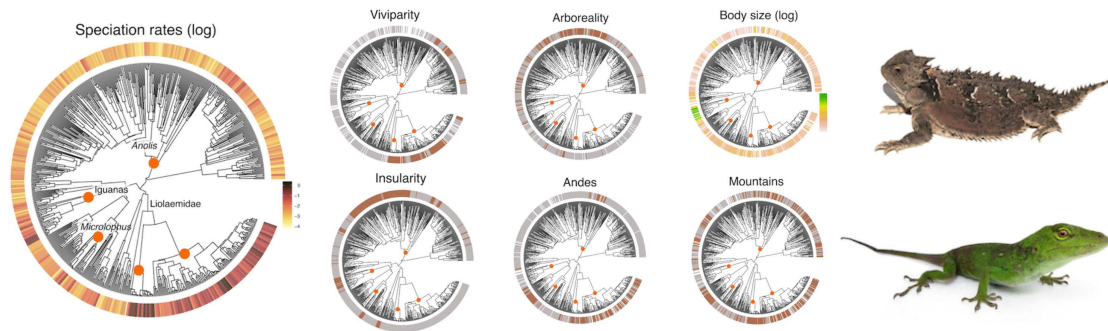
9/19/2024

Time:

10:30 AM - 11:45 AM

Location:

SSM 116



Abstract:

What drives biodiversity patterns? Why are arboreal snakes morphologically similar and terrestrial snakes morphologically diverse? Why do some viviparous lizards generate species more rapidly than others? In this talk, I will explore such questions by linking macroevolution and macroecology to uncover the mechanisms behind the unevenness across the reptile tree of life. I will demonstrate how lineages expand into new ecological niches, whether through biogeographic shifts, biotic interactions, or the emergence of key innovations, and how these processes can constrain or boost evolution. Finally, I will highlight how integrating different biological scales offers a promising approach to understanding large-scale biodiversity patterns.

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