

# Using genomics to resolve the mechanisms that underlie divergent patterns of speciation

Science and Mathematics

Colloquium Series

Wed., April 13, 2022  
3:35 - 4:35 p.m.

Agribusiness Center Building, Room 134  
ASU Polytechnic campus  
or via Zoom: <https://asu.zoom.us/j/5894040849>

Understanding the origins of diversity has driven the science of evolutionary biology since Darwin. Dr. Anthony Barley brings integrated, cutting-edge approaches to this beguiling question.

Barley's interests are in genetics, evolution, and science education. His research focuses on resolving the evolutionary mechanisms that generate and maintain genetic and phenotypic diversity across natural populations and through time. He integrates data from genomic, field and natural history collection-based studies, and statistical approaches from the fields of population genomics and phylogenomics to address fundamental questions about the origin and maintenance of biodiversity. His empirical work motivates computational research investigating the goodness-of-fit of evolutionary statistical models to genomics datasets.

Questions? Contact [csagers@asu.edu](mailto:csagers@asu.edu)

**ASU** College of Integrative  
Sciences and Arts  
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**Dr. Anthony Barley**

Post-Doctoral  
Fellow,  
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Dr. Barley completed a PhD in ecology and evolutionary biology at the University of Kansas in the Biodiversity Institute and a postdoctoral research position at the University of Hawai'i. Barley is interested in many aspects of evolutionary biology and conservation in reptiles and amphibians.

After joining curator Rafe Brown's lab at the University Kansas, Barley became interested in understanding how evolutionary processes generate different speciation patterns in evolutionary radiations, a question he began to address using a group of Southeast Asian lizards. His dissertation research has focused on species limits, biogeography, and landscape genetics in Philippine sun skinks. As a graduate student, Barley performed fieldwork in the Philippines, Mexico, and in the Mojave Desert in California.

*Dr. Barley is a candidate for a genetics position in CISA's Faculty of Science and Mathematics.*

*Faculty and practitioners discuss their current research and field projects in the Science and Mathematics Colloquium Series, held throughout the academic year at ASU's Polytechnic campus. All seminars are free and open to the public.*

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