

Birds Stack the Deck in the Sweepstakes of Madagascar Biogeography

Thursday, May 6th: 4:30pm ET

Prof. Sushma Reddy



Islands are natural laboratories to study how species evolve in novel environments. In Madagascar, a biodiversity hotspot with an exceptional diversity of endemics, several lineages of birds have undergone this experiment with varying results. Of the 50+ lineages that have colonized the island, only half have subsequently diversified within the island. We use Madagascar as a model system to study comparable endemic birds on a single landmass and investigate the influence of timing, space, and phylogeny on diversification patterns. Our studies indicate a complex dynamic of dispersal into Madagascar from nearby Africa as well as more distant landmasses. Some groups, like the vangas and tetrakas, demonstrate adaptive radiations with dramatically different phenotypic diversification than their non-Malagasy relatives. Additionally, detailed phylogeographic analyses within Madagascar have uncovered hidden diversity and evidence for fine-scale patterns of micro-endemism for birds. Our studies continue to grow knowledge of diversification patterns in this under-studied region with modern genomic and phenomic tools.

Prof. Sushma Reddy received her B.A. in Environmental Sciences from Barnard College and her Ph.D. from Columbia University. Her doctoral research, the evolution and biogeography of birds in southern Asia, was conducted mainly at the American Museum of Natural History in New York. She spent five years as a postdoctoral fellow at the Field Museum of Natural History in Chicago, working on the tree of life of modern birds. Prof. Reddy was faculty at Loyola University Chicago from 2009-2018. Currently, she is the Breckenridge Chair of Ornithology at the Bell Museum of Natural History and faculty in Fisheries, Wildlife, Conservation Biology at the University of Minnesota.

Hosted by the [Soft Math Lab](#).

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