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**Title:** Cryptic is as cryptic does: intriguing patterns of speciation in Madagascar's mouse lemurs.

**Abstract:** Our understanding of the speciation process has been in constant flux since the time of Darwin, with species concepts offering philosophical mirrors of shifting theory. Whereas Darwin envisioned that speciation was initiated by natural selection within an interbreeding population — and by implication, with gene flow — the introduction of Mayr's Biological Species Concept shifted the conceptual focus to reproductive isolation resulting from geographic separation. These two views of speciation have long been considered to be fundamentally opposed, though the burgeoning field of speciation genomics has clarified the surprising extent to which species integrity can be maintained in the face of either episodic or ongoing gene flow. I will focus on Madagascar's mouse lemurs (genus *Microcebus*) as an emerging system for studying the process of "speciation with gene flow." These endemic primates occur across all habitats throughout Madagascar, and though genetic data reveal deep evolutionary divergence among the named species, they are morphologically cryptic. At present, the ecological and geographic forces driving this species radiation are unknown. My talk address current understanding of mouse lemur species diversity and also present data from new and ongoing studies of lineage diversification across an ecological and geographic spectrum in Madagascar. Using a combination of whole-genome sequencing and RADseq analysis we have found that patterns of speciation in mouse lemurs range from cases of complete reproductive isolation in sympatry, on one end of the speciation spectrum, to incipient population divergence within a single species on the other. We have also identified examples of intermediate levels of lineage diversification finding that effective population size, both past and present, can have enormous impacts on inferred patterns of gene flow and incomplete lineage sorting. In summary, there is no question that mouse lemurs are extraordinarily diverse, and with the benefit of genomic data and powerful statistical tools, we are entering a new phase of increased understanding of the patterns and processes that are shaping species diversity in these cryptic primates.