

# “Visual signals, adaptive diversification & the speciation continuum”



What drives speciation is a fundamental question in evolutionary biology that is not that easy to address considering the speciation process represents a continuum and not all divergence will ultimately lead to complete reproductive isolation – considered the end point of the process. Researchers now realize that to study speciation, we must integrate our understanding of how natural and sexual selection interact to push species through the speciation continuum. Visual signals are a means for diverging populations to rapidly accumulate reproductive isolation, primarily through pre-copulatory mechanisms that prevent divergent populations from mating. They are also transmitted through the environment and perceived by different viewers – which allows natural selection to shape their evolution – in addition to sexual selection. Therefore, visual signals are a means to speciation that reflects both the effects of natural and sexual selection. To better understand the speciation process, the Edwards lab studies the evolution of visual signals in lizards from multiple, integrative perspectives including using comparative studies, modeling and theory and by considering how signals operate in their respective environments and how they are viewed by lizards and their predators.

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**Friday, October 20, 2017, 3:00 – 3:50 PM**

Science 2, room 109

For further information: [www.csufresno.edu/biology](http://www.csufresno.edu/biology)

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**Bio:** Dr. Edwards has a B.S. in Environmental Science from The University of Newcastle (in Australia) and subsequently a Ph.D. from The University of Western Australia working with Professor Emeritus Dale Roberts. She then worked as a research associate at Museum Victoria followed by postdoctoral positions at The Australian National University; University of Michigan; and Yale University before starting at the University of California Merced in 2015. Dr. Edwards has a background in phylogeography, biogeography, taxonomy, phylogenetics and systematics that are applied to conservation problems. Her more recent research focuses on what drives speciation, in the forms of both natural and sexual selection, using integrative approaches to combine phenotypic, ecological and behavioral evolution between populations, species and across large phylogenies.

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