Oral Defense Announcement
University of Missouri – St. Louis Graduate School

An oral examination in defense of the dissertation for the degree
Doctor of Philosophy in Biology with an emphasis in Ecology, Evolution, and Systematics

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M.N.S. Biology, May, 2008, Southeast Missouri State University
B.S. in Biology, December, 2005, Southeast Missouri State University

Phylogeographic Relationships of *Coereba Flaveola* and Their Malaria Parasites

Date: May 15, 2019
Time: 5:00 p.m. to 7:00 p.m.
Place: 303 Benton Hall

Abstract
This research is broadly focused on elucidating how the geographic structure and demographic changes in host and parasite populations relate to one another, and how such interactions contribute to the generation and maintenance of biological diversity. I begin by relating within-island changes in population size of *Coereba flaveola* on Puerto Rico to phases of geographic expansion and contraction of the species within the West Indies. I use these findings to test the independence of demographic change among species. In the second chapter, I characterize genetic variation in avian malaria parasites that is related specifically to invasion of host cells. This variation is used to identify the demographic structure and history of the parasite populations and to identify differences in the infective agents of different host species. Finally, I assess the population genetic variation of avian globin genes and test whether associations exist between globin variants and parasitism by particular lineages of avian malaria parasites.

Defense of Dissertation Committee
Robert Ricklefs, Ph.D.
Patricia Parker, Ph.D.
Nathan Muchhala, Ph.D.
Carlos Botero, Ph.D.