



The Department of Ecology and Evolutionary Biology Fall 2017 Seminar Series

Eco-evolutionary dynamics in spatially diffusing experimental microcosms

Most species in nature are distributed over space. Understanding the ramifications of this simple fact for ecological and evolutionary dynamics remains a major challenge. While a large and growing body of theoretical work has provided a rich set of predictions for the consequences of space on population and evolutionary dynamics, empirically testing much of this theory is impaired by the large spatial and temporal scales involved. In my talk, I will discuss recent work from my lab that overcomes some of these empirical constraints by combining theory with high-throughput experiments in spatially distributed microcosms of the rapidly dividing microbe, *Saccharomyces cerevisiae*. I will present work addressing three different but related questions: 1) How does the spatial distribution of a resource affect the total carrying capacity of a spatially diffusing consumer population? 2) What is the optimal spatial distribution of a toxin for limiting the size of a diffusing pest species? 3) How does spatial diffusion of growing microbial colonies promote stable co-existence of cooperation and conflict?

Join us in welcoming Dr. J. David Van Dyken
University of Miami

Friday, December 1, 2017

SERF 307 - 3:30 PM

Pre-talk Reception 3:00 PM in Dabney 575

