

DEPARTMENT OF ECOLOGY & EVOLUTIONARY BIOLOGY
Fall 2016 Seminar Series



Ben Bolker - Professor of Mathematics
& Statistics and of Biology
McMaster University

“Eco-evolutionary dynamics of virulence:
the devil is still in the details”

The ideas that (1) pathogen virulence (the harm done by the pathogen to its host) is an evolved trait that can be explained by evolutionary theory, and (2) virulence can evolve significantly over the course of a single epidemic ("transient" or "eco-evolutionary" dynamics), have gained both theoretical and empirical support in the last several decades. Biologists thus hope that these ideas can be applied in practical contexts to forecast and, hopefully, manage the evolution of virulence. I will present the basic theory of eco-evolutionary dynamics of virulence; review some of the empirical success stories; and finish with a recent analysis of HIV virulence evolution that adds some cautionary twists to the story.

Friday, September 16; Room 307, SERF; 3:30 - 4:30PM. Pre-talk reception: 3:00 PM in Dabney 568