



The Biodiversity Seminar Series is pleased to announce

**Katie McGee, PhD student**

from Department of Integrative Biology & Centre for Biodiversity Genomics,  
University of Guelph  
presenting the talk

## **“Tropical land-use change and microbial communities”**

### **Abstract:**

Managing secondary forests is of current importance as these mosaics of forest are prime candidates to serve as biological refuges for maintaining tropical biodiversity and Carbon-sequestration. Thus, the need to understand successional trajectories are a key priority in understanding how past land-use history has affected local soil biota in these forests. However, it is still not clear as to what these drivers are (i.e. environmental and temporal factors or a combination of both). In many cases, it is difficult to distinguish what drives these soil communities as many studies have not minimized potential confounding variables (e.g. soil type, soil pH, etc.). Indeed, temporal factors (i.e. time since disturbance) can often (and will often) drive changes in environmental factors that affect particular soil conditions such as the vegetation community, soil pH, moisture, C, N, P,  $\text{NO}_3^-$ ,  $\text{NH}_4^+$ , and C:N, and therefore, can affect certain soil processes and functions essential for nutrient cycling. Here, a meta-analysis was implemented to integrate soil nutrient responses (i.e. environmental factors) across independent field-based studies in tropical forests to identify possible patterns of soil microbial drivers in these regions.

### **Brief Bio:**

I am a PhD student in Mehrdad Hajibabaei's lab and received my BSc in Biology and MSc in Biotechnology from Kean University, NJ. I am finishing up my 4<sup>th</sup> year of my PhD and have been conducting research on soil microbial and arthropod communities along with C and N cycling dynamics across land-use change in Costa Rica since 2010.

**When:** Thursday March 30<sup>th</sup>, 2017 at 12:00 pm

**Where:** Visualization Theatre, Room 1009

Biodiversity Institute of Ontario

For scheduling and more information on the seminars, please visit:

<http://biodiversitygenomics.net/resources/seminar-series/>

