Clayton H. Riddell Faculty of Environment, Earth, and Resources | University of Manitoba

Riddell Faculty Seminar Series Presents:

The importance of extra-enteric ecology for fecal bacteria used in water quality assessments.

Dr. Andrew Juhl,

Lamont-Doherty Earth Observatory and
Department of Earth and Environmental Science,
Columbia University

Date: Friday, February 24th, 2017
Time: 1:30 p.m. - 3:00 p.m.
Location: Klaus Hochheim Theatre
(5th floor, Wallace Building)

Abstract: Enteric bacteria are commonly used as indicators for assessing water quality with respect to fecal inputs and pathogen risk. Natural waterways represent a fairly hostile environment for these bacteria. In theory, they should therefore suffer rapid mortality, meaning that their abundance in a natural waterway should follow recent input events, exactly what you want for an indicator. In reality, the mortality of these commonly-used indicator bacteria can be highly variable, and they can sometimes persist for weeks to months. Fortunately, this variability in persistence can be explained through the physiological ecology of the organisms once they enter a waterway. Understanding key processes in the extra-enteric ecology of fecal bacteria can improve prediction and guide water quality management.

Biography: Andrew Juhl is an oceanographer and aquatic ecologist who uses a combination of lab and field based experiments to study how aquatic microorganisms interact with each other and their physical/chemical environment. His work finds application in understanding geochemical fluxes, harmful algal blooms, water quality, and sea ice ecology.

12:30 p.m. Free Pizza lunch for graduate students with Andrew Juhl, Dean's office Boardroom - 440 Wallace Building.