

GEORGE MASON UNIVERSITY
COLLEGE OF SCIENCE
BIOLOGY DEPARTMENT SEMINAR
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“Climbing the slippery slope: predictive ecotoxicology in the age of the anthropocene”

The ultimate goal of ecotoxicology and ecological risk assessment is to predict the effects of chemical stressors on ecological systems so that appropriate management strategies can be implemented. Unfortunately, our predictions are infrequently tested and likely not to hold in complex, real-world systems. Predictive ecotoxicology is indeed a slippery slope. The issue is made more challenging because of a lack of a generalizable framework for generating, testing and validating hypotheses. One promising path forward may be to adopt a bio- or eco-energetic framework for understanding the effects of chemical stressors in simple to complex biological systems. Researchers are in the process of developing and testing energetic-based models to better understand the effects of environmental toxicants on ecological systems. To date, our laboratory has collected data or built mathematical models on a variety of species including freshwater snails, fish, birds and amphibians that we hope will contribute to an improved approach for predicting adverse ecological effects of anthropogenic activities.

TUESDAY March 1, 2016

3:00-4:15 PM

Fairfax Campus: Innovation Hall Room 334
Science & Technology Campus: OCC 221