

The Siscowette

Profiling women in science in the Great Lakes

FEATURED RESEARCH

Limburg, K.E., and 4 others. 2010. *The good, the bad, and the algae: perceiving ecosystem services and disservices generated by zebra and quagga mussels.* *J Great Lakes Res.* 36:86-92.

Karin Limburg and colleagues explore the social complexities surrounding the common perception of zebra and quagga mussels as pests in the Great Lakes region. In fact, these non-native invasives are responsible

for phenomena considered both good and bad: the production of clear water versus an increase in nuisance filamentous algae (e.g., *Cladophora glomerata* can become superabundant, and when it dies it sloughs off onto beaches and becomes a nuisance). People form very strong preferences for clear water, and very strong dislikes of the algae. These preferences have economic consequences: homeowners experienced a \$3500 increase in property values that they attributed

to increased water clarity, and a \$750 decline in property values due to nuisance algae.

This study highlights the importance of considering the social dimension in the assessment of invasive species, as it may identify “positives” in addition to “negatives”.

Karin is an Associate Professor of Fisheries and Ecosystem Science at the College of Environmental Science and Forestry of



Karin Limburg

the State University of New York in Syracuse.

FEATURED PROFESSIONAL



Pat Chow-Fraser at Pointe au Baril wetland, holding a juvenile muskellunge

Pat Chow-Fraser is Professor and Chair of Biology at McMaster University, Hamilton, Ontario. Her research and passion is to conserve the pristine wetlands of eastern and northern Georgian Bay, and to prevent them from suffering the same fate as degraded urban marshes of Lakes Erie and Ontario.

Pat and her lab group work hard and publish many papers on the use of models to predict the effects of water level, invasive

species, and human disturbance on marsh vegetation and fish habitat in Great Lakes coastal wetlands. In addition, she inspires the next generation of ecologists by teaching undergraduate and graduate courses in Ecology and Biodiversity.

Pat’s career in freshwater ecology started in 1978 following her B.Sc. (Hons Biology) at University of Waterloo, where she remained to pursue a M.Sc. (Biology), focusing on the im-

portant part of low-level fertilization on the phytoplankton community of a bay in Lac Matamec, Quebec. This was followed by a Ph.D (Zoology) at University of Toronto, where she studied zooplankton grazing in small Ontario lakes. Other interesting postdoctoral research, ranging from copepod mating to trophic indicators of aquatic health, followed before Pat landed her appointment as Assistant Professor at McMaster in 1991.

FEATURED STUDENT OR POSTDOC

Michelle Farwell is a Ph.D. student at the University of Windsor investigating the effects of aquatic contaminants on reproductive traits. In one study, Michelle is testing whether contamination in the Detroit River elicits adaptive responses in wild populations of brown bullhead. She is also testing whether synthetic estrogen present in birth control pills (and consequently also in municipal waste water effluents) affects gamete quality and reproductive success in fat-

head minnows, and similar to the bullheads, whether wild populations adapt to chronic exposure.

Michelle started her academic career as an undergraduate working with Michael Fox at Trent University studying hypoxia tolerance in sunfishes. She then completed her M.Sc. with Robert McLaughlin at the University of Guelph where a keen interest in animal behaviour began. Her M.Sc. thesis focus-

ed on how personality traits in young-of-the-year brook charr relate to large-scale differences in the migratory tactics of adults.

Michelle was excited to join the field of ecotoxicology with Dr. Pitcher as her Ph.D. supervisor to broaden her research scope and apply research to local conservation efforts. Michelle was recently awarded a prestigious NSERC scholarship to support her studies!



Michelle Farwell with a brown trout