

**Robin LeCraw, Ph.D**

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**PROFILE**

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**Key Assets**

- Over 13 years of experience in aquatic ecosystem research, assessment, and policy review
- M.Sc and Ph.D degrees in aquatic ecosystem research
- Experience assessing projects in aquatic ecosystems in relation to federal and provincial fisheries and environmental legislation
- Extensive written publications, oral presentations, and workshop coordination experience
- Certified Ecologist with the Ecological Society of America

**Education**

Ph.D. Zoology, 2014, **University of British Columbia**

Thesis: The influence of spatial processes at multiple scales on local community structure and function

M.Sc. Biology, 2009, **Lakehead University**, Ontario Ministry of Natural Resources

Thesis: Sources of small-scale variation in headwater stream habitat and macroinvertebrate communities

B.Sc. Honours Wildlife Biology, 2004, **University of Guelph**

**AREAS OF PROFESSIONAL EXPERIENCE**

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***Ecosystem Research and Management***

I have extensive experience conducting research and environmental assessments on freshwater aquatic communities in the context of landscape connectivity, resource management, and policy compliance. I have implemented research and monitoring programs for conservation organizations, graduate projects, and as a consultant including data management and interpretation. My specific ecological research and management experience includes:

**MMM Group Limited, 2013 to present – *Project Ecologist, Fisheries Biologist***

- Conducting aquatic assessments of fish habitat, fish communities and water quality through aquatic invertebrate monitoring
- Bridging current science in aquatic ecosystems with policy review, technical assessments, and project recommendations. I consult with technical staff to impart summaries of science literature reviews, survey methods, and new analysis techniques.

**University of British Columbia, 2009-2013 – Ph.D Candidate**

- Answered novel research questions on the nature of ecological interactions in freshwater ecosystems and their terrestrial matrix by developing and implementing studies of aquatic invertebrates resulting in peer reviewed publications.

**Center for Northern Forest Ecosystem Research, OMNR, 2007-2009 – M.Sc Candidate**

- Studied the effects of forest management on aquatic ecosystems through projects on the interface between terrestrial areas and headwater stream communities resulting in peer reviewed publications and recommendations for stream buffer design.

**Kawartha Region Conservation Authority 2004, 2007 – Fisheries Technician**

- Helped gather valuable monitoring data on watershed health by conducting stream habitat, fish community and benthic invertebrate assessments with the Ontario Stream Assessment Protocol and Ontario Benthos Biomonitoring Network protocol.

**Applied Ecological Assessment and Conservation Reporting**

I have experience applying aquatic ecosystem science to provincial and federal legislation with government agencies and NGO's working to improve the effectiveness of conservation policies, and with the private sector assessing projects for ecological impact, permitting requirements, and compliance with regulations. My specific applied experience includes:

**MMM Group Limited 2013 to present – Project Ecologist - Fisheries**

- Ensured project compliance with legislation by identifying fisheries management status under *the Fish and Wildlife Conservation Act, and Ontario Fisheries Regulations*, and requirements under *the Fisheries Act, Endangered Species Act, Species at Risk Act, Conservation Authorities Act, and Environmental Assessment Act*
- Completed thorough data and literature reviews to develop innovative solutions to maintain ecosystem function and best practices to protect species at risk in province-wide BMPs

**The David Suzuki Foundation 2011 – Conservation Intern**

- Researched and wrote a public report developing an 'Ecosystem based approach to species-at-risk conservation in British Columbia'
- Organized and hosted a workshop of scientific, policy, and legal experts to discuss and define the 'ecosystem approach'

**British Columbia Ministry of the Environment 2009-2010 – Species at Risk Intern**

- Created a database to catalogue and prioritize all identified research needs for Species at Risk in British Columbia to efficiently allocate research funding within the Ministry

**Ontario Ministry of Natural Resources 2009 – Project Biologist, CNFER Thunder Bay**

- Collaborated with MNRF and DFO scientists to develop a plan for monitoring the impact of hydroelectric facilities on stream ecosystems in Ontario. Included jurisdictional scan, identification of appropriate indicators and recommendations for monitoring protocols.

## ACADEMIC CONTRIBUTIONS

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### **Refereed Publications**

LeCraw, R.M., Romero, G.Q., Srivastava, D.S. 2017. Geographic shifts in the effects of habitat size on trophic structure and decomposition. DOI: 10.1111/ecog.02796

LeCraw, R.M., Kratina, P., and Srivastava, D.S. 2014. Food web complexity and stability across habitat connectivity gradients. *Oecologia*. 176:903-915

LeCraw, R.M., Srivastava, D.S., and Romero, G.Q. 2014. Metacommunity size influences aquatic community composition in a natural mesocosm landscape. *Oikos*. 123: 903-911 \*Editor's Choice\*

Kratina, P., R. M. LeCraw, T. Ingram, and B. R. Anholt. 2012. Stability and persistence of food webs with omnivory: Is there a general pattern? *Ecosphere* 3(6):50.

LeCraw, R., and Mackereth, R. 2010. Sources of small-scale variation in headwater stream invertebrate communities. *Freshwater Biology*. 55: 1219-1233

### **Selected presentations at scientific meetings**

[Invited talk] Metacommunity size and functional diversity in a natural mesocosm landscape. **Ecological Society of America** annual meeting, Minneapolis, MN. August 2013

Regional variation in drivers of ecosystem function in natural bromeliad mesocosms. **Canadian Society for Ecology and Evolution**, Kelowna, BC, May 2013

Sources of small-scale variability in benthic macroinvertebrate communities in small streams.  
Poster presentation. **American Fisheries Society** annual meeting, Ottawa, August 2008  
Oral presentation. **Canadian Conference for Fisheries Research**, Ottawa, January 2009

### **Peer Reviewer for International Journals**

Ecology, Freshwater Biology, Trends in Ecology and Evolution, PLoS One

## PROFESSIONAL AFFILIATIONS AND TRAINING

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- Ecological Society of America, **Certified Ecologist**, member 2013 to present
- Canadian Society for Ecology and Evolution, member 2012 to present
- Ministry of Transportation Fisheries Assessment Specialist Training, 2015
- Electrofishing Class II crew leader certification, 2014
- ROM Minnow Identification Workshop, University of Guelph, 2014
- Ontario Benthic Biomonitoring Network certification, 2008
- Excellent written and oral communication skills
- Data management skills in MS Excel, MS Access, and statistical package R
- 'G' Class Ontario Driver's Licence and Pleasure Craft Operators Card