

Robin LeCraw, Ph.D

924 Philip Street, Peterborough, Ontario (416) 970-0871
robinlecraw@gmail.com, www.robinlecraw.com

PROFILE

Key Assets

- Over 14 years' experience in ecosystem assessment, research, monitoring and policy review
- Participation in and development of aquatic monitoring programs for Kawartha Region Conservation Authority, MNRF, and private developments
- Experience assessing development, infrastructure and natural heritage projects in relation to federal and provincial resource planning requirements, and environmental legislation
- Extensive oral presentations, written publications, and workshop coordination experience
- Certified Ontario Benthic Biomonitoring Network member, and 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

Ecosystem Research, Monitoring and Management

I have extensive experience conducting research and implementing monitoring programs 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, MNRF, graduate projects, and as a consultant including data management and interpretation. My specific ecological research and management experience includes:

WSP (formerly MMM Group) 2013 to present – *Project Ecologist, Fisheries Biologist*

- Bridging current science in aquatic ecosystems with policy review, technical assessments, and project recommendations. I develop and carry out monitoring programs including aquatic invertebrate analysis for development and natural heritage projects. 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.

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

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

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

- Gathered valuable monitoring data on watershed health through stream habitat, fish community and benthic invertebrate assessments with the Ontario Stream Assessment Protocol (OSAP) and Ontario Benthic Biomonitoring Network (OBBN) protocols.

Applied Ecological Assessment and Conservation Reporting

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

WSP (formerly MMM Group) 2013 to present – Project Ecologist - Fisheries

- Ensure project compliance with legislation by identifying resource management status under *the Fish and Wildlife Conservation Act, and Ontario Fisheries Regulations*, and planning and permit 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

ACADEMIC CONTRIBUTIONS

Refereed Publications

- LeCraw, R.M., Romero, G.Q., and Srivastava, D.S. 2017. Geographic shifts in how habitat size affects trophic structure and decomposition. *Ecography* 40:1445-1454.
- 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 QUALIFICATIONS

- Ecological Society of America, **Certified Ecologist**, member 2013 to present
- Ministry of Transportation RAQS qualified Fisheries Assessment Specialist, 2017
- Electrofishing Class II crew leader certification, 2016
- 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 Word, MS Excel, MS Access, and statistical package R
- 'G' Class Ontario Driver's Licence and Pleasure Craft Operators Card