

ERIKA CRISPO

Department of Biology
University of Toronto at Mississauga
South Building, Room 1077C
Mississauga, Ontario, L5L 1C6, Canada
Phone: 905-828-3890
Email: erika.crispo@utoronto.ca

EDUCATION & EXPERIENCE

- Postdoctoral University of Calgary, Department of Biological Sciences, 2011-present
Longnose dace in Alberta as a system for understanding evolutionary responses to aquatic contaminants
Supervisor: Sean Rogers
- Lectureship University of Toronto at Mississauga, Department of Biology, 2011
Biometrics II (third year undergraduate course in biological statistics)
- Ph.D. McGill University, Department of Biology, 2006-2010
Interplay among local adaptation, phenotypic plasticity, and gene flow in an African cichlid
Supervisor: Lauren Chapman
Co-supervisor: Andrew Hendry
- M.Sc. McGill University, Department of Biology, 2002-2004
Influences of natural selection and geography on gene flow in Trinidadian guppies
Supervisor: Andrew Hendry
- B.Sc. University of Guelph, Department of Zoology, 1998-2002
Wildlife Biology major, Honours program

AWARDS

- 2010-2012 Postdoctoral Fellowship, Natural Sciences and Engineering Research Council of Canada (\$40,000 per year for two years)
- 2010-2012 Postdoctoral Fellowship B3 (*declined*), Le Fonds Québécois de la Recherche sur la Nature et les Technologies (\$30,000 per year for two years)
- 2010 Delise Allison Graduate Student Development Award, Redpath Museum, McGill University (\$500)

- 2009-2010 Vineberg Family Fellowship, Freshwater Biology and Limnology, McGill University (\$8,000)
- 2009-2010 Principal's Graduate Fellowship, McGill University (\$2,500)
- 2009 Best oral presentation, Environment and Evolution session, Interdisciplinary Graduate Student Research Symposium, McGill University (\$200)
- 2008 Guy D. Jordon Endowment Fund, American Cichlid Association (\$1,120)
- 2007 Delise Allison Graduate Student Development Award, Redpath Museum, McGill University (\$500)
- 2006-2009 Canada Graduate Scholarship D3, Natural Sciences and Engineering Research Council of Canada (\$35,000 per year for three years)
- 2006-2009 Doctoral Research Scholarship B2 (*declined*), Le Fonds Québécois de la Recherche sur la Nature et les Technologies (\$20,000 per year for three years)
- 2006 Biology Department Top-Up Award, McGill University (\$5,000)
- 2003 Arts and Science Class of 1966 Award, Redpath Museum, McGill University (\$2,500)
- 2000 Ronald Ko Award, highest mark in Wildlife Parasitology undergraduate course, University of Guelph (\$500)

PUBLICATIONS

- Crispo, E.**, and Chapman, L.J. (In press) Hypoxia drives plastic divergence in cichlid body shape. *Evolutionary Ecology*.
- Crispo, E.**, and Chapman, L.J. (2010) Geographic variation in phenotypic plasticity in response to dissolved oxygen in an African cichlid fish. *Journal of Evolutionary Biology*, 23, 2091-2103.
- Crispo, E.**, DiBattista, J.D., Correa, C., Thibert-Plante, X., McKellar, A.E., Schwartz, A.K., Berner, D., De León, L.F., and Hendry, A.P. (2010) The evolution of phenotypic plasticity in response to anthropogenic disturbance. *Evolutionary Ecology Research*, 12, 47-66.
- Crispo, E.**, and Chapman, L.J. (2010) Temporal variation in the population genetic structure of a riverine African cichlid fish. *Journal of Heredity*, 101, 97-106.
- Crispo, E.** (2008) Modifying effects of phenotypic plasticity in interactions among natural selection, adaptation and gene flow. *Journal of Evolutionary Biology*, 21, 1460-1469.

- Crispo, E.**, and Chapman, L.J. (2008) Population genetic structure across dissolved oxygen regimes in an African cichlid fish. *Molecular Ecology*, 17, 2134-2148.
- Crispo, E.** (2007) The Baldwin effect and genetic assimilation: revisiting two mechanisms of evolutionary change mediated by phenotypic plasticity. *Evolution*, 61, 2469-2479.
- Crispo, E.**, Hagen, C., Glenn, T., Geneau, G., and Chapman, L.J. (2007) Isolation and characterization of tetranucleotide microsatellite markers in a mouth-brooding haplochromine cichlid fish (*Pseudocrenilabrus multicolor victoriae*) from Uganda. *Molecular Ecology Notes*, 7, 1293-1295.
- Davy, C.M., **Crispo, E.**, and Woo, P.T.K. (2007) The use of a live vaccine to modulate *Cryptobia salmositica* infections in *Salmo salar*. *Diseases of Aquatic Organisms*, 76, 45-48.
- Crispo, E.**, Bentzen, P., Reznick, D.N., Kinnison, M.T., and Hendry, A.P. (2006) The relative influence of natural selection and geography on gene flow in guppies. *Molecular Ecology*, 15, 49-62.
- Crispo, E.**, and Hendry, A.P. (2005) Does time since colonization influence isolation by distance? A meta-analysis. *Conservation Genetics*, 66, 665-682.
- Paterson, I.G., **Crispo, E.**, Kinnison, M.T., Hendry, A.P., and Bentzen, P. (2005) Characterization of tetranucleotide microsatellite markers in guppy (*Poecilia reticulata*). *Molecular Ecology Notes*, 5, 269-271.

PRESENTATIONS

SEMINARS

- Crispo, E.** (December 2010) Factors influencing phenotypic variation: natural selection, phenotypic plasticity, and gene flow. Laurentian University, Sudbury, Ontario.
- Crispo, E.** (February 2010) Interactions among local adaptation, phenotypic plasticity, and gene flow. Queen's University, Kingston, Ontario.
- Crispo, E.** (April 2009) Adaptation to hypoxia in an African cichlid fish: roles of phenotypic plasticity and gene flow. University of Toronto at St. George, Toronto, Ontario.
- Crispo, E.** (November 2006) Phenotypic plasticity and adaptive evolutionary diversification in an African cichlid. Behaviour and Ecology Seminar Series; Concordia University, Montréal, Québec.
- Crispo, E.**, Hendry, A.P., Bentzen, P., Kinnison, M.T., and Reznick, D.N. (February 2005) Natural selection and gene flow in guppies. Simon Fraser University, Burnaby, British Columbia.
- Crispo, E.** (May 2003) Relative roles of natural selection and gene flow in the divergence of guppy populations. Aquatic Seminar Series; McGill University, Montréal, Québec.

CONFERENCES

- Crispo, E.** (May 2010) INVITED: Interplay among local adaptation, phenotypic plasticity, and gene flow. SYMPOSIUM TITLE: Phenotypic plasticity and its role in evolution. Comparative Morphology and Development Section, Canadian Society of Zoologists; Vancouver, British Columbia.
- Crispo, E.,** and Chapman, L.J. (May 2009) Interplay among divergent selection, phenotypic plasticity, and gene flow in an African cichlid fish. Canadian Society for Ecology and Evolution; Halifax, Nova Scotia.
- Crispo, E.,** and Chapman, L.J. (July 2008) No evidence for ecological isolation in an African cichlid: a role of phenotypic plasticity? Joint Meeting of Ichthyologists and Herpetologists; Montréal, Québec.
- Crispo, E.,** and Chapman, L.J. (August 2007) POSTER: Parapatric versus allopatric population divergence, and adaptation to alternate oxygen regimes in an African cichlid. European Society for Evolutionary Biology; Uppsala, Sweden.
- Crispo, E.,** and Chapman, L.J. (May 2007) Population divergence and adaptation to hypoxic and normoxic environments in an African cichlid. Canadian Society of Zoologists; Montréal, Québec.
- Crispo, E.,** Moore, J.-S., and Hendry, A.P. (August 2005) POSTER: A comparison of classification methods: morphology versus microsatellites. Ecological Society of America; Montréal, Québec.
- Crispo, E.,** Moore, J.-S., and Hendry, A.P. (June 2005) Use of morphology and neutral markers to infer relative roles of selection, history, and gene flow in evolutionary diversification. Evolution; Fairbanks, Alaska.
- Crispo, E.,** and Hendry, A.P. (September 2004) Relative influence of natural selection and barriers to dispersal on gene flow. South Eastern Evolution, Population Genetics, and Ecology; Swannanoa, North Carolina.
- Crispo, E.,** Hendry, A.P., Bentzen, P., Kinnison, M.T., and Reznick, D.N. (June 2004). Factors influencing gene flow in Trinidadian guppies. Evolution; Fort Collins, Colorado.

OTHER SYMPOSIA

- Crispo, E.,** and Chapman, L.J. (March 2009) Adaptation to alternate oxygen environments in an African cichlid fish. Interdisciplinary Graduate Student Research Symposium; McGill University, Montréal, Québec.
- Crispo, E.** (June 2008) Adaptation of fish populations to hypoxic environments. Kibale Conservation Area Researchers Symposium; Kibale National Park, Uganda.
- Crispo, E.** (December 2006) Phenotypic plasticity, gene flow, and evolution in an African cichlid. Graduate Student Symposium; Gault Nature Reserve, Mont St. Hilaire, Québec.
- Crispo, E.** (April 2004) Does natural selection influence gene flow in guppies? Conservation, Ecology, Evolution, and Behaviour Research Symposium; McGill University, Montréal, Québec.

OTHER TEACHING & SUPERVISION

GUEST LECTURES

- 2006,2008 Advanced Seminar in Evolution (graduate course), McGill University
2002 Biometry (third year undergraduate course), McGill University

TEACHING ASSISTANTSHIPS

- 2010 Animal Diversity (third year undergraduate course), McGill University

2009 Ecological Genetics (third year undergraduate course), McGill University

2007 Introduction to Ecology and Evolution (second year undergraduate course), McGill University

2005 Basic Genetics (second year undergraduate course), McGill University

2002,2003 Biometry (third year undergraduate course), McGill University

UNDERGRADUATE RESEARCH SUPERVISION

- 2010 Kirsten Wiens (NSERC Undergraduate Student Research Award recipient), McGill University
 Developmental plasticity in an isolated population of African cichlid fish

2008,2009 Lora Tzaneva (NSERC Undergraduate Student Research Award recipient), McGill University
 Fine-scale effects of hypoxia on fish gills and brains

2008 Jennifer Sunahara (independent studies student), McGill University
 Seasonal variation in gill size in a fluctuating environment

2007 Ruoqi Wang (independent studies student), McGill University
 Effects of hypoxia on activity and aggression

WORKSHOP PARTICIPATION

- 2011 Assignment Design, University of Toronto

2008,2009 Learning to Teach: A Professional Development Workshop for Graduate Students, McGill University

2007 Graduate Teaching Workshop, Tomlinson Project in University-Level Science Education, McGill University

ACADEMIC SERVICE & OUTREACH

- 2009-2011 Outreach Committee Member, Canadian Society for Ecology and Evolution
Assisted with the organization of public outreach events at the annual meeting;
solicited and edited research vignettes.
- 2005,2009 Judge, Bell Montréal Regional Science and Technology Fair
- 2005-2006 Volunteer, Let's Talk Science, McGill University
Mentored high-school students on science fair projects; judged science fair
competitions; conceived and organized a symposium on evolution for high-school
students.
- 2004-2007 Committee Member, Biology Graduate Students' Association, McGill University
Co-organized events for graduate students; maintained website and mailing list.
- 2002 Volunteer, Sea Turtle Protection Society of Greece
Educated tourists and locals on issues pertaining to sea turtle conservation and
biology.

MANUSCRIPT REVIEW

Molecular Ecology (8 manuscripts)
Evolution (5 manuscripts)
African Journal of Environmental Science and Technology
Artificial Life
Biological Journal of the Linnean Society
Biology Letters
Evolutionary Applications
Functional Ecology
Journal of Applied Ecology
Journal of Fish Biology
Terrestrial Arthropod Reviews

OTHER EMPLOYMENT

- 2004-2005 Laboratory Manager, Department of Biology, McGill University, Montréal, Québec
Hired, trained, and supervised undergraduate student employees; ordered supplies
and equipment; reared experimental fish in the laboratory.
- 2001 Research Assistant, Department of Biology, Laurentian University, Sudbury, Ontario
Analyzed the diet and morphology of mustelids.
- 2000-2001 Research Assistant, Department of Zoology, University of Guelph, Guelph, Ontario
Reared Arctic charr and obtained morphological measurements.