

## Curriculum vitae

# Craig Franklin Purchase

*Updated June 23, 2010*

**Born:** December 1974; Newfoundland, Canada

**Citizenship:** Canadian

**Contact:**

Department of Biology

Memorial University

St. John's, Newfoundland

A1B 3X9, Canada

Phone: 709-737-4452

Email: craig dot purchase at mun dot ca

Website: <http://www.uccs.mun.ca/~cftpurchase>

---

## Current Appointments

---

Memorial University

Assistant Professor of Biology

Graduate Program in Cognitive & Behavioural Ecology

Graduate Program in Environmental Science

Committee on the Status of Endangered Wildlife in Canada (COSEWIC)

Marine Fishes Specialist Subcommittee

---

## Employment History

---

2008 – **Assistant Professor**, Memorial University  
2007 & 2006 **NSERC Visiting Fellow**,  
Fisheries & Oceans Canada – Northwest Atlantic Fisheries Centre  
2006 **Research Scientist** (temporary),  
Fisheries & Oceans Canada – Bedford Institute of Oceanography  
2005 **Part-time Lecturer**, Department of Biology, Saint Mary's University  
2005 **Assistant Professor** (temporary), Biology Department, Dalhousie University  
2005 & 2004 **NSERC Postdoctoral Research Fellow**, Dalhousie University  
2003 – 1999 **Ph.D. Candidate**, University of Toronto  
1999 – 1997 **M.Sc. Candidate**, Memorial University  
1998 **Research Assistant**, Ocean Sciences Centre, Memorial University  
1997 **Research Coordinator**, Protected Areas Association of Newfoundland & Labrador  
1996 **Research Assistant**, Ocean Sciences Centre, Memorial University  
1995 **Green Team Leader**, Conservation Corps of Newfoundland & Labrador  
1994 **Green Team Member**, Conservation Corps of Newfoundland & Labrador

---

## Education

---

- 2004 **Doctor of Philosophy**, University of Toronto (Zoology Department)  
 2000 **Master of Science**, Memorial University (Biology Department)  
 1999 **Graduate Teaching Program** (Certificate), Memorial University  
 1997 **Bachelor of Science (Honours)**, 1<sup>st</sup> Class, Memorial University (Biology Department)
- 

## Academic Honours & Achievements

---

### Academic Awards

- 2003 Ramsay Wright Award  
 Department of Zoology, University of Toronto  
 2003 Carl E. Atwood Graduate Award in Zoology, University of Toronto  
 2003 & 2002 Frederick P. Ide Graduate Award, University of Toronto  
 2000 Fellow of the School of Graduate Studies, Memorial University  
 1999 & 1998 Recognition of Excellence, School of Graduate Studies, Memorial University  
 1997 Honorable Mention for presentation at meeting of the Aquaculture Association of Canada  
 1997 Best Paper at the Atlantic Universities Aquaculture Conference

### Scholarships & Fellowships

#### *Major*

- 2006 Natural Sciences & Engineering Research Council of Canada  
 (NSERC) Visiting Fellow in a Canadian Government Laboratory (\$100,000)  
 2003 Natural Sciences & Engineering Research Council of Canada  
 (NSERC) Postdoctoral Fellowship (\$80,000)  
 2002 Ontario Graduate Scholarship (\$15,000)  
 2001 Ontario Graduate Scholarship "Separate Competition" (\$15,000)  
 1999 Natural Sciences & Engineering Research Council of Canada  
 (NSERC) Postgraduate Scholarship B (\$38,400)  
 1997 Natural Resource Development Scholarship,  
 Government of Newfoundland & Labrador (\$15,000)

#### *Minor*

- 2003 Doctoral Completion Grant, University of Toronto  
 2003 – 1999 Graduate Fellowships, Department of Zoology, University of Toronto  
 1998 Scholarship of the Natural History Society of Newfoundland & Labrador  
 1997 Graduate Fellowship, Memorial University

### Travel Awards

- 2003 P.A. Larkin Travel Award, American Fisheries Society  
 2003 & 2002 Clemens Rigler Travel Award  
 2001 & 2000 Canadian Society of Zoologists  
 1999 Fisheries Society of the British Isles  
 1997 Aquaculture Association of Canada  
 1997 Atlantic Provinces Council of the Sciences

---

## Research

---

### Publications

#### Peer reviewed scientific manuscripts

- 18) Rennie, M.D., C.F. Purchase, B.J. Shuter, N.C. Collins, P.A. Abrams, & G.E. Morgan. Predation influences prey life histories and bioenergetics: patterns differ between vulnerable and invulnerable size classes of prey. *Journal of Fish Biology*, In Press.
- 17) Gavaris, S., K.J. Clark, A.R. Hanke, C.F. Purchase, & J. Gale, 2010. Overview of discards from Canadian commercial fisheries in NAFO Divisions 4V, 4W, 4X, 5Y, and 5Z for 2002-2006. Canadian Technical Report of Fisheries & Aquatic Sciences 2873: vi + 112 p.
- 16) Purchase, C.F., I.A.E. Butts, A. Alonso-Fernández, & E.A. Trippel, 2010. Thermal reaction norms in sperm performance of Atlantic cod (*Gadus morhua*). *Canadian Journal of Fisheries & Aquatic Sciences*, 67: 498-510.
- 15) Wheeler, J.P., C.F. Purchase, P.D.M. Macdonald, R. Fill, L. Jacks, H. Wang, & C.L. Ye, 2009. Temporal changes in growth, maturation, and condition of spring-spawning Atlantic herring (*Clupea harengus*) and the potential implications for fisheries management in Newfoundland waters. *ICES Journal of Marine Science*, 66: 1800-1807.
- 14) Rennie, M.D., C.F. Purchase, N.P. Lester, N.C. Collins, B.J. Shuter, & P.A. Abrams, 2008. Lazy males? Bioenergetic differences in energy acquisition and metabolism help to explain sexual size dimorphism in percids. *Journal of Animal Ecology*, 77: 916-926.
- 13) Purchase, C.F., & J.A. Hutchings, 2008. A temporally stable spatial pattern in the spawner density of a freshwater fish: evidence for an ideal despotic distribution. *Canadian Journal of Fisheries & Aquatic Sciences*, 65: 382-388.
- 12) Purchase, C.F., D.J. Hasselman, & L.K. Weir, 2007. Relationship between fertilization success and the number of milt donors in rainbow smelt (*Osmerus mordax* Mitchell): implications for population growth rates. *Journal of Fish Biology*, 70: 934-946.
- 11) Purchase, C.F., J.A. Hutchings, & G.E. Morgan, 2006. The biological and statistical significance of life history invariants in walleye (*Sander vitreus*). *Evolutionary Ecology Research*, 8: 295-308.
- 10) Rennie, M.D., N.C. Collins, C.F. Purchase, & A. Tremblay, 2005. Predictive models of benthic invertebrate methylmercury in Ontario and Quebec lakes. *Canadian Journal of Fisheries & Aquatic Sciences*, 62: 2770-2783.
- 9) Purchase, C.F., N.C. Collins, G.E. Morgan, & B.J. Shuter, 2005. Predicting life history traits of yellow perch *Perca flavescens* from environmental characteristics of lakes. *Transactions of the American Fisheries Society*, 134: 1369-1381.

- 8) Purchase, C.F., N.C. Collins, G.E. Morgan, & B.J. Shuter, 2005. Sex-specific covariation among life history traits of yellow perch (*Perca flavescens*). *Evolutionary Ecology Research*, 7: 549-566.
- 7) Purchase, C.F., N.C. Collins, & B.J. Shuter, 2005. Sensitivity of maximum sustainable harvest rates to intra-specific life history variability of lake trout (*Salvelinus namaycush*) and walleye (*Sander vitreus*). *Fisheries Research*, 72: 141-148.
- 6) Shuter, B.J., N.P. Lester, J. La Rose, C.F. Purchase, K. Vascotto, G. Morgan, N.C. Collins, & P.A. Abrams, 2005. Optimal life histories and food web position: linkages between somatic growth, reproductive investment and mortality. *Canadian Journal of Fisheries & Aquatic Sciences*, 62: 738-746.
- 5) Purchase, C.F., D.L. Boyce, & J.A. Brown, 2002. Occurrence of hypomelanisation in cultured yellowtail flounder. *Aquaculture Research*, 33: 1191-1193.
- 4) Purchase, C.F., & J.A. Brown, 2001. Stock-specific changes in growth rates, food conversion efficiencies, and energy allocation in response to temperature change in juvenile Atlantic cod. *Journal of Fish Biology*, 58: 36-52.
- 3) Purchase, C.F., S.V. Goddard, & J.A. Brown, 2001. Antifreeze glycoprotein production in cultured and wild juvenile Atlantic cod (*Gadus morhua* L.) under common laboratory environments. *Canadian Journal of Zoology*, 79: 610-615.
- 2) Purchase, C.F., D.L. Boyce, & J.A. Brown, 2000. Growth and survival of juvenile yellowtail flounder (*Pleuronectes ferrugineus*) under different photoperiods. *Aquaculture Research*, 31: 547-552.
- 1) Purchase, C.F., & J.A. Brown, 2000. Inter-population differences in growth rates and food conversion efficiencies of young Grand Banks and Gulf of Maine Atlantic cod (*Gadus morhua* L.). *Canadian Journal of Fisheries & Aquatic Sciences*, 57: 2223-2229.

#### Non-peer reviewed publications

- 3) Purchase, C.F., H.P. Benoît, D.L. Boyce, G.E. Brown, V. Gotceitas, B.J. Laurel, V. Puvanendran, & R.J. Thompson, 2006. TRIBUTE: Joseph A. Brown, Ph.D. *Canadian Journal of Fisheries & Aquatic Sciences*, 63: iii-iv.
- 2) Boyce, D.L., C.F. Purchase, V. Puvanendran, & J.A. Brown, 1998. Designing rearing environments for on-growing of juvenile yellowtail flounder (*Pleuronectes ferrugineus*). *Bulletin of the Aquaculture Association of Canada, Proceedings from Aquaculture Canada 1998*, 98(2): 23-24.
- 1) Purchase, C.F., & J.A. Brown, 1997. Growth of juvenile yellowtail flounder (*Pleuronectes ferrugineus*) under different photoperiods. *Bulletin of the Aquaculture Association of Canada, Proceedings from Aquaculture Canada 1997*, 97(2): 51-52.

#### Theses

- Purchase, C.F. 2004. Influence of sexually dimorphic growth and environmental heterogeneity on intra-

specific life history traits. Ph.D. Thesis, Zoology Department, University of Toronto. Toronto, Ontario, Canada.

Purchase, C.F. 2000. Inter-population differences in growth and energy allocation of young northwest Atlantic cod (*Gadus morhua* L.) revealed under common environment experiments. M.Sc. Thesis, Biology Department, Memorial University. St. John's, Newfoundland, Canada.

Purchase, C.F. 1997. Growth and survival of normally pigmented and hypomelanized juvenile yellowtail flounder (*Pleuronectes ferrugineus*) under different photoperiods. B.Sc.(Hons) Thesis, Biology Department, Memorial University. St. John's, Newfoundland, Canada.

### Supervised student theses

Blades, L. 2008. Factors affecting egg quality in capelin, *Mallotus villosus*. B.Sc.(Hons) Thesis, Biology Department, Memorial University. St. John's, Newfoundland, Canada.

Hurley, M.T. 2010. Divergence in trophic morphology in brown trout (*Salmo trutta*) populations of eastern Newfoundland. B.Sc.(Hons) Thesis, Biology Department, Memorial University. St. John's, Newfoundland, Canada.

Murphy, A.J. 2010. Fecundity of capelin, *Mallotus villosus*, in five regions surrounding Newfoundland in 2007. B.Sc.(Hons) Thesis, Biology Department, Memorial University. St. John's, Newfoundland, Canada.

### **Presentations**

#### Invited

9) Purchase, C.F., 2010. Patterns and processes of intra-specific life history variation in fishes. Biology Department Seminar Series, Concordia University. Montreal, PQ.

8) Purchase, C.F., 2010. A myriad of scales: patterns, causes, and importance of phenotypic variability in fishes. Biology Department Seminar Series, University of Toronto at Mississauga. Mississauga, ON.

7) Purchase, C.F., 2008. What's a fish to do? Hierarchical responses to variable environments. Science Seminar Series, St. Andrews Biological Station. St. Andrews, NB.

6) Purchase, C.F., 2007. Hypothesized environmental and evolutionary influences on maturation of Newfoundland herring. Fisheries Oceanography Committee Workshop, Bedford Institute of Oceanography. Dartmouth, NS.

5) Purchase, C.F., 2006. Invariance and environmental correlates: two predictive approaches for investigating percid life history variability. Harvest Fisheries Seminar Series, Bedford Institute of Oceanography. Dartmouth, NS.

4) Purchase, C.F., 2005. On intra-specific life history variation: population and gender differences in the lives of yellow perch. Department of Biology Seminar Series, Saint Mary's University. Halifax, NS.

3) Purchase, C.F., 2002. On the demise of Atlantic cod: how intra-specific adaptation and phenotypic plasticity may limit the recovery of the fish that changed the world. Department of Zoology Ecolunch Series, University of Toronto. Toronto, ON.

2) Purchase, C.F., 2002. Oh my cod! Nature versus nurture and recovery expectations of the northern cod stock. Ecology & Evolution Seminar Series, McMaster University. Hamilton, ON.

1) Purchase, C.F., 2002. Genetic variation and phenotypic plasticity in Atlantic cod: implications for stock identification and recovery. Department of Biology Seminar Series, University of Toronto at Mississauga. Mississauga, ON.

### Contributed

22) Purchase, C.F., I.A.E. Butts, A. Alonso-Fernández & E.A. Trippel, 2010. Phenotypic plasticity in the swimming performance of cod sperm as a function of temperature. Canadian Society for Ecology & Evolution, Quebec City, PQ.

21) Purchase, C.F., I.A.E. Butts, A. Alonso-Fernández & E.A. Trippel, 2010. Reaction norms of cod sperm performance as a function of temperature. Canadian Conference for Fisheries Research, Winnipeg, MB.

20) Purchase, C.F. & J.A. Hutchings, 2009. Spatial/temporal patterns in the spawning densities of brook trout. Canadian Conference for Fisheries Research, Ottawa, ON.

19) Purchase, C.F. & J.A. Hutchings, 2008. No free choice in brook trout: spawning densities in a pristine river follow a despotic distribution. The George Barlow Commemorative Symposium on Fish Reproduction Behavior, Mating, and Parental Care Strategies. Ecological & Evolutionary Ethology of Fishes Colloquium. Boston, USA.

18) Purchase, C.F. & F. Mowbray, 2008. Continued use of ancient submerged capelin spawning beaches 350 km from shore. Canadian Conference for Fisheries Research. Halifax, NS.

18) Purchase, C.F. 2007. Life history and habitat variability. Inaugural Joe Brown Marine Sciences Symposium. St. John's, NL.

17) Purchase, C.F., D.J. Hasselman, & L.K. Weir, 2007. Fertilization success and the number of milt donors in rainbow smelt. Canadian Conference for Fisheries Research. Montreal, PQ.

16) Purchase, C.F., J.A. Hutchings, & G.E. Morgan, 2004. Statistical versus biological deviation in walleye life history invariants. Ecological & Evolutionary Ethology of Fishes Colloquium. Skagafjörður, Iceland.

15) Purchase, C.F., N.C. Collins, B.J. Shuter, & G.E. Morgan, 2003. Predicting life history traits of yellow perch from relationships with environmental variables. Canadian Conference for Fisheries Research. St. John's, NL.

- 14) Purchase, C.F., N.C. Collins, B.J. Shuter, B.A. Henderson, & G.E. Morgan, 2003. Sex-specific life history variation among populations of yellow perch. American Fisheries Society, Annual Meeting. Quebec City, PQ.
- 13) Purchase, C.F., 2003. Can sex-specific life history traits be predicted in un-sampled populations of yellow perch? Ontario Ecology & Ethology Colloquium. Hamilton, ON.
- 12) Purchase, C.F., N.C. Collins, B.J. Shuter, B.A. Henderson, & G.E. Morgan, 2003. Temperature effects on population dynamics of yellow perch (*Perca flavescens*). Canadian Conference for Fisheries Research. Ottawa, ON.
- 11) Purchase, C.F., 2002. Sex ratio, sexual dimorphism and their relation to life history variation in yellow perch (*Perca flavescens*). Ecological & Evolutionary Ethology of Fishes Colloquium. Quebec City, PQ.
- 10) Purchase, C.F., N.C. Collins, B.A. Henderson, & G.E. Morgan, 2002. Annual repeatability in determining life history traits: implications for predicting population parameters from lake characteristics. Canadian Conference for Fisheries Research. Vancouver, BC.
- 9) Purchase, C.F., N.C. Collins, & B.A. Henderson, 2001. Phenotypic variation in age and size of maturity in yellow perch (*Perca flavescens*). Canadian Society of Zoologists, Annual Meeting. Sudbury, ON.
- 8) Purchase, C.F., N.C. Collins, & B.A. Henderson, 2001. Life history variation in Ontario yellow perch (*Perca flavescens*). Canadian Conference for Fisheries Research. Toronto, ON.
- 7) Purchase, C.F., S.V. Goddard, & J.A. Brown, 2000. A comparison of blood plasma antifreeze glycoprotein production in populations of cultured and wild juvenile Atlantic cod (*Gadus morhua* L.) under common laboratory environments. Canadian Society of Zoologists, Annual Meeting. St. Andrews, NB.
- 6) Purchase, C.F., & J.A. Brown, 1999. Growth rate of two populations of Northwest Atlantic cod (*Gadus morhua* L.) under common environments. Fisheries Society of the British Isles, Symposium on Environment, Development, & Growth of Fishes. St. Andrews, Scotland.
- 5) Purchase, C.F., & J.A. Brown, 1999. The effect of source population on growth rate of northwest Atlantic cod (*Gadus morhua* L.) larvae: indication of countergradient variation. Aldrich Interdisciplinary Conference, Memorial University. St. John's, NL.
- 4) Boyce, D.L., C.F. Purchase, V. Puvanendran, & J.A. Brown, 1998. Designing rearing environments for on-growing of juvenile yellowtail flounder (*Pleuronectes ferrugineus*). Aquaculture Canada. St. John's, NL. (Presented by Purchase)
- 3) Purchase, C.F., & J.A. Brown, 1998. Comparative growth of three populations of Atlantic cod (*Gadus morhua* L.) under common environments. Aquaculture Canada. St. John's, NL.

2) Purchase, C.F., & J.A. Brown, 1997. Growth of juvenile yellowtail flounder (*Pleuronectes ferrugineus*) under three photoperiods. Aquaculture Canada. Quebec City, PQ.

1) Purchase, C.F., & J.A. Brown, 1997. Growth of juvenile yellowtail flounder (*Pleuronectes ferrugineus*) under three photoperiods. Atlantic Provinces Council of the Sciences, Atlantic Universities Aquaculture Conference. Truro, NS.

Conference presentations by my students

5) Vilimek, M., C.F. Purchase, & F. Mowbray, 2010. Another piece of the puzzle: Evaluating long-term life history trends of a non-commercial species to better address fishery impacts on Northwest Atlantic stocks. Canadian Society for Ecology & Evolution, Quebec City, PQ.

4) Warner, L.A., C.F. Purchase, & G. Veinott, 2010. Use of a small Newfoundland estuary by invasive brown trout. Canadian Society for Ecology & Evolution, Quebec City, PQ.

3) Vilimek, M., C.F. Purchase, & F. Mowbray, 2009. Long-term life history trends in Newfoundland northern sand lance. Canadian Conference for Fisheries Research, Ottawa, ON.

2) Warner, L.A., C.F. Purchase, & G. Veinott, 2009. Anadromy and residency life histories in sympatric salmonids. Canadian Conference for Fisheries Research, Ottawa, ON.

1) Blades, L.E., C.F. Purchase, & B.S. Nakashima, 2008. Factors affecting egg quality in capelin. Atlantic Provinces Council of the Sciences Undergraduate Biology Conference. St. John's, NL.

Presentations by other coauthors

3) Rennie, M.D., N.C. Collins, C.F. Purchase, & A. Tremblay, 2004. Predictive models of benthic invertebrate methylmercury. American Society of Limnology & Oceanography, Annual Meeting. Savannah, Georgia.

2) Brown, J.A., & C.F. Purchase, 2000. Inter-population differences in phenotypic response among Atlantic cod populations (common-garden experiments). ICES Cod Growth Workshop. Dartmouth, NS.

1) Brown, J.A., V. Puvanendran, & C.F. Purchase, 1999. Inter-population differences in cod performance: a Canadian perspective. High Technology Centre, University of Bergen. Bergen, Norway.

Other conferences & workshops attended (no presentation given)

2009 International Council for the Exploration of the Sea (ICES) Annual Science Meeting. Berlin, Germany.

2009 Canadian Society for Ecology and Evolution, Annual Meeting. Halifax, NS.

2009 Fisheries & Oceans Canada, Regional Advisory Process on NL salmonids

2009 Fisheries & Oceans Canada, Regional Advisory Process on NL herring

2008 The Harris Centre Workshop on Community Research Partnerships: Resource Management in Marine & Freshwater Environments. Eastport, NL.

2008 APICS Atlantic Universities Undergraduate Biology Conference. St. John's, NL.

2008 Fisheries & Oceans Canada, Regional Advisory Process on NL salmonids

- 2008 Fisheries & Oceans Canada, Regional Advisory Process on NL herring
- 2008 Fisheries & Oceans Canada, Regional Advisory Process on NL capelin
- 2007 Fisheries & Oceans Canada, Regional Advisory Process on NL salmonids
- 2007 Fisheries & Oceans Canada, Zonal Advisory Process on winter skate
- 2006 Fisheries & Oceans Canada, Regional Advisory Process on NL salmonids
- 2006 Fisheries & Oceans Canada, Regional Advisory Process on NL herring
- 2006 Fisheries & Oceans Canada, Regional Advisory Process on Scotian Shelf snow crab
- 2007 31<sup>st</sup> Annual Larval Fish Conference, American Fisheries Society. St. John's, NL.
- 1999 Summit of the Sea. St. John's, NL.

### **Research Grants & Contracts**

- 2009 Fish ecology research laboratory. Research Development Corporation IRIF Leverage R&D Fund. C.F. Purchase; \$90,716.
- 2009 Fish Ecology Research Program Startup Funding. Government of Newfoundland & Labrador IRIF Ignite R&D Fund. C.F. Purchase; \$67,500.
- 2009 Anadromy and migratory history of the brown trout population in the Renew's River ecosystem. Fisheries & Oceans Canada Contract. C.F. Purchase; \$9990.
- 2009 Shared field vehicle. NSERC Research Tools and Instruments Grant. Y. Wiersma, S. Zeigler, & C.F. Purchase; \$29,400.
- 2009 Data assessment for study on long-term trends in life histories of sand lance. Fisheries & Oceans Canada Contract. C.F. Purchase; \$4000.
- 2008 Assessing and mitigating risk from a diversifying aquaculture industry: the potential for interaction between escapee and wild Atlantic cod. NSERC Strategic Project Grant. I.A. Fleming, C.F. Purchase, E.A. Trippel, & J. Bratley; \$443,800.
- 2008 Fish ecology research laboratory. Canadian Foundation for Innovation, Leaders Opportunity Fund. C.F. Purchase; \$81,456.
- 2008 Intraspecific fish life history variability at multiple scales. NSERC Discovery Grant. C.F. Purchase; \$85,000.
- 2008 Brown trout habitat utilization in Renew's River. Fisheries & Oceans Canada Contract. C.F. Purchase; \$9975.
- 2006 Browns Bank North scallop census. Seafood Producers Association of Nova Scotia Contract for Chief Scientist. C.F. Purchase; \$8320.
- 2002 Predicting life history parameters of Ontario yellow perch. Ontario Federation of Anglers & Hunters, Sport Fisheries Research Grant. C.F. Purchase; \$2000.

### **Research Supervision**

#### *Independent Graduate Research*

- 2010 - Emily Zimmerman, M.Sc. Cognitive & Behavioural Ecology, Memorial University (co-supervised)
- 2010 - Corey Clarke, M.Sc. Environmental Science, Memorial University (co-supervised)
- 2009 - Brendan Wringe, Ph.D. Biology, Memorial University (co-supervised)
- 2009 - Olivia Puckrin, M.Sc. Biology, Memorial University (co-supervised)
- 2008 - Michael Vilimek, M.Sc. Biology, Memorial University
- 2008 - Lucas Warner, M.Sc. Biology, Memorial University

#### *Independent Undergraduate Research*

- 2010 & 2009 Michael Hurley, B.Sc.(Hons) thesis, Memorial University

- 2010 & 2009 Andrew Murphy, B.Sc.(Hons) thesis, Memorial University  
 2008 & 2007 Lindsay Blades, B.Sc.(Hons) thesis, Memorial University (co-supervised)  
 2003 Daniel Lai, Independent Undergraduate Research Program, University of Toronto at Mississauga (co-supervised)

*Technical assistance*

- 2010 Meagan Careen, MUCEP student, Memorial University  
 2010 & 2009 Marcel Field, Intern, Conservation Corps Newfoundland & Labrador  
 2010 & 2009 Patricia Howse, MUCEP student, Memorial University  
 2009 Andrew Murphy, SWASP student, Memorial University  
 2010 & 2009 Michael Hurley, NSERC USRA, Memorial University  
 2009 Grant Samson, Summer Research Assistant, Memorial University  
 2007 & 2006 Brianna Browning, Summer Student, Fisheries & Oceans Canada (co-supervised)  
 2007 Ainsley Decker, Research Assistant, Fisheries & Oceans Canada (co-supervised)  
 2000 Michael Lau, Field Assistant, Cooperative Freshwater Ecology Unit

---

## Teaching

---

### Training

- 1999 Graduate Program in Teaching (*a certificate program*)  
 School of Graduate Studies, Memorial University

### Undergraduate Teaching Responsibilities

*Assistant Professor*: Memorial University

- 2009W&F Ichthyology (Biology 4600)  
 2009W Vertebrate Biology (Biology 2210)  
 2008W Conservation Biology (Biology/Geography 4650)

*Assistant Professor (temporary)*: Dalhousie University

- 2005S Applied Field Methods in Fish Ecology

*Lecturer*: Saint Mary's University

- 2005F Ecology

### Teaching assistantships

*Teaching assistant (full laboratory responsibility)*: University of Toronto at Mississauga

- 2003 Biometrics I  
 2003 Biometrics II  
 2002 Ecology  
 2002 & 2001 Diversity of Organisms

*Demonstrator (shared laboratory responsibility)*: Memorial University

- 1999 & 1998 Animal Physiology  
 1999 & 1997 Ichthyology  
 1998 & 1997 Principles of Biology  
 1998, 96, 95 Principles of Ecology

- 1997            Introductory Botany  
1997 & 1996   Science for Primary & Elementary Education Students Level II  
1995            Science for Primary & Elementary Education Students Level I

**Other Lectures in other Undergraduate Courses (Course, Institution)**

- 2010            Conservation Biology, Memorial University  
2005            Ecology, Saint Mary's University  
2004            Ecology & Evolution of Fishes, Dalhousie University  
2003            Advanced Population Ecology, University of Toronto at Scarborough  
2003            Conservation Biology, McMaster University  
2003            Population Ecology, University of Toronto  
1998            Animal Physiology, Memorial University  
1998            Ichthyology, Memorial University  
1998            Function Biology of Fishes, Memorial University

---

**Professional Service, Interaction & Outreach**

---

**Scientific Reviewer**

Manuscripts

- Aquaculture Research  
Archiv Für Hydrobiologie  
Canadian Journal of Fisheries & Aquatic Sciences  
Ecology of Freshwater Fish  
Evolutionary Applications  
Fisheries & Oceans Canada  
Functional Ecology  
Journal of Fish Biology  
Journal of Applied Ecology  
North American Journal of Fisheries Management  
Transactions of the American Fisheries Society

Grant proposals

- Great Lakes Fishery Commission  
National Science Foundation (U.S.A.)

**Academic Research Service**

*Thesis & Comprehensive Examinations*

- 2010    Craig Knickle (Cognitive & Behavioural Ecology, Memorial University). Ph.D. Comprehensive - examiner  
2009    Guangxu Liu (Biology, Memorial University). Ph.D. Thesis - examiner  
2009    Patrick Abgrall (Cognitive & Behavioural Ecology, Memorial University). Ph.D. Thesis - examiner

- 2009 Alejandro Burden (Cognitive & Behavioural Ecology, Memorial University). Ph.D. Comprehensive - examiner
- 2009 Alex Bond (Biology, Memorial University). Ph.D. Comprehensive - examiner
- 2009 Aisha Elmelwi (Biology, Memorial University). M.Sc. Thesis - examiner
- 2009 Julia Pantin (Biology, Memorial University). B.Sc(Hons) - examiner
- 2009 Jens Currie (Biology, Memorial University). B.Sc(Hons) - chair
- 2008 Nathan Wilke (Biology, Memorial University). Ph.D. Comprehensive - examiner
- 2008 Jennifer Monk (Aquaculture, Memorial University). M.Sc. Thesis - examiner

#### *Graduate Student Supervisory Committees*

- 2010 Shad Madlum (Biology, Memorial University). M.Sc.
- 2010 Livia Goodbrand (Biology, Memorial University). M.Sc.
- 2009 Nyssa Van Vierssen Trip (Biology, Memorial University). M.Sc.
- 2008 Tara Stevens (Cognitive & Behavioural Ecology, Memorial University). Ph.D.
- 2008 Michelle Caputo (Biology, Memorial University). M.Sc.
- 2008 Brettney Pilgrim (Biology, Memorial University). M.Sc.

#### **General Committee & Board Service**

- 2009 – 2012 *Member*; Marine Fishes Specialist Subcommittee, Committee on the Status of Endangered Wildlife in Canada (COSEWIC)
- 2010 – 2009 *Member*; Head's Advisory Committee, Memorial University Biology Department
- 2009 – *Member*; Search Committee, Memorial University Biology Department
- 2009 *Member*; Search Committee, Chair of the Cognitive & Behavioural Ecology Program, Memorial University
- 2009 – 2008 *Member*; Nominations Committee, Faculty of Science, Memorial University
- 2009 – 2008 *Member*; Promotion & Tenure Committee, Memorial University Biology Department
- 2008 *Chairman of the Board of Directors*; Protected Areas Association of Newfoundland & Labrador
- 2008 *Member*; Organizing Committee, APICS Undergraduate Biology Conference
- 2007 & 2006 *Member*; Board of Directors, Protected Areas Association of Newfoundland & Labrador
- 2006 *Member*; Board of Directors, Canadian Parks & Wilderness Society (Newfoundland & Labrador Chapter)
- 2005 – *Member*; Centre for Marine Biodiversity
- 2004 *Member*; Organizing Committee, Canadian Conference for Fisheries Research
- 2003 *Member*; Search Committee for Lecturer Position, University of Toronto at Mississauga
- 2003 & 2002 *Member*; Academic Board of Governing Council, University of Toronto
- 2002 & 2001 *Elected Member*; Graduate Affairs Committee, University of Toronto
- 2003 – 2000 *Member*; Curriculum Committee, University of Toronto at Mississauga
- 1997 & 1996 *Elected Member*; Memorial University Biology Society

#### **Current or Past Memberships in Professional – Academic Societies**

American Fisheries Society  
 Canadian Society for Ecology & Evolution  
 Canadian Society of Zoologists  
 Centre for Marine Biodiversity  
 Fishermen & Scientists Research Society  
 Fisheries Society of the British Isles

Society for Conservation Biology

## Conference Service

### *Organization*

- 2008 APICS Atlantic Universities Undergraduate Biology Conference (St. John's, N.L.)
- 2004 Canadian Conference for Fisheries Research (St. John's, N.L.)

### *Session chair*

- 2010 Canadian Conference for Fisheries Research (Winnipeg)
- 2009 Canadian Conference for Fisheries Research (Ottawa)
- 2008 Ecological and Evolutionary Ethology of Fishes Colloquia (Boston)
- 2008 Canadian Conference for Fisheries Research (Halifax)

### *Judging*

- 2009 Canadian Society for Ecology & Evolution Annual Meeting
- 2009 Memorial University Biology Graduate Student Symposium
- 2008 Memorial University Biology Graduate Student Symposium
- 2006 Centre for Marine Biodiversity's Grade 12 Essay Contest
- 2002 Peel Regional Science Fair
- 2002 Toronto Final Science Fair
- 2001 Western Toronto Science Fair

---

## Practical Training & Certificates

---

- Licensed Guide (Hunting, Fishing, Canoeing & Camping)
- Pleasure Craft Boating
- Marine Emergency Duties A1
- Former Member, Halifax Regional Search & Rescue Team
- WHMIS
- Canadian Council on Animal Care
- Workplace Standard First Aid & CPR