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CITIZENSHIP: Canadian

EDUCATION AND DEGREES

- Ph.D.** Department of Biological Sciences, University of Alberta. 1998 – 2003
Thesis: Maternal effects and the microevolution of juvenile growth rates in red squirrels (*Tamiasciurus hudsonicus*).
Advisor: Dr. S. Boutin
- M.Sc.** Department of Zoology. University of Western Ontario. 1995 – 1998
Thesis: Dietary protein limitation of growth and maturation in female *Peromyscus maniculatus borealis*.
Advisor: Dr. J. S. Millar
- B.Sc.** Department of Biology. McGill University, Quebec. 1991 – 1995
Thesis: Pause-travel of foraging grey squirrels (*Sciurus carolinensis*): an antipredatory mechanism to increase vigilance.
Advisor: Dr. D. L. Kramer

EMPLOYMENT HISTORY

- 2003 – present Natural Sciences and Engineering Research Council (NSERC) of Canada
Postdoctoral Fellow, University of California, Santa Cruz.
- 2000 – 2002 Killam Predoctoral Researcher, University of Alberta
- 2001 Graduate Teaching Assistant, University of Alberta
- 1998 – 2000 NSERC Postgraduate Researcher, University of Alberta
- 1995 – 1998 Graduate Teaching Assistant, University of Western Ontario
- 1996 – 1997 Research Assistant, University of Western Ontario
- 1995 Research Assistant, McGill University

PUBLICATIONS

Submitted Manuscripts

1. **McAdam, A.G.** and J.O. Murie. *in review*. Genetic and maternal effects on emergence mass in Columbian ground squirrels. Submitted to *Heredity*, June 16, 2003.
2. D. Berteaux, D., D. Réale, **A.G. McAdam** and S. Boutin. *in review*. Keeping pace with fast climate change: can arctic life count on evolution? Submitted to *Journal of Integrative and Comparative Biology*, March 14, 2003.

Refereed Publications

3. **McAdam, A.G.** and S. Boutin. 2003. Maternal effects and the response to selection in red squirrels. *Proceedings of the Royal Society of London, Series B*. DOI 10.1098/rspb.2003.2572
4. Réale, D., D. Berteaux, **A.G. McAdam** and S. Boutin. 2003. Lifetime selection on heritable life-history traits in a natural population of red squirrels. *Evolution*, 57(10): 2416-2423.
5. **McAdam, A.G.** and S. Boutin. 2003. Effects of food abundance on genetic and maternal variation in the growth rate of juvenile red squirrels. *Journal of Evolutionary Biology*, 16 (6): 1249-1256.
6. **McAdam, A.G.** and S. Boutin. 2003. Variation in viability selection among cohorts of juvenile red squirrels (*Tamiasciurus hudsonicus*). *Evolution*, 57(7): 1689-1697.
7. Réale, D., **A.G. McAdam**, S. Boutin, and D. Berteaux. 2003. Genetic and plastic responses of a northern mammal to climate change. *Proceedings of the Royal Society of London, Series B*. 270: 591-596.
8. **McAdam, A.G.**, S. Boutin, D. Réale, and D. Berteaux. 2002. Maternal effects and the potential for evolution in a natural population of animals. *Evolution*, 56(4): 846-851.
9. Millar, J.S., and **A.G. McAdam**. 2001. Life on the edge: the demography of short-season populations of deer mice. *Oikos*, 93(1): 69-76.
10. **McAdam, A.G.**, and J.S. Millar. 1999. The effects of dietary protein content on growth and maturation in deer mice. *Canadian Journal of Zoology*, 77: 1822-1828.
11. **McAdam, A.G.**, and J.S. Millar. 1999. Breeding by young-of-the-year female deer mice: why weight? *Écoscience*, 6(3): 400-405.
12. **McAdam, A.G.**, and J.S. Millar. 1999. Dietary protein constraint on age at maturity: an experimental test with wild deer mice. *Journal of Animal Ecology*, 68 (4): 733-740.
13. **McAdam, A.G.**, and D.L. Kramer. 1998. Vigilance as a benefit of intermittent locomotion in small mammals. *Animal Behaviour*, 55: 109-117.

SCHOLARSHIPS AND AWARDS	AWARDING AGENCY	DATE
NSERC Doctoral Prize - excellence in student research in the natural sciences.	University of Alberta nominee - decision pending	
NSERC Postdoctoral Fellowship	NSERC	2003 – 2005
Fellowship in Mammalogy	American Society of Mammalogists	2002 – 2003
Dissertation Fellowship	University of Alberta	2002 – 2003
Andrew Stewart Memorial Graduate Prize - excellence in doctoral research	University of Alberta	2002
Izaak Walton Killam Memorial Scholarship	The Killam Trusts	2000 – 2002

Walter H. Johns Graduate Fellowship	University of Alberta	1998 – 2000
NSERC Postgraduate Scholarship	NSERC	1998 – 2000
Faculty of Science Graduate Scholarship	University of Alberta	1998
Detwiler Award - best thesis and defence in Zoology	University of Western Ontario	1998
Ontario Graduate Scholarship	declined	1998
Michael Locke Travel Scholarship	University of Western Ontario	1997
Special University Scholarship	University of Western Ontario	1995 – 1997
Scarlet Key Award - excellence in leadership and service	McGill University	1995

RESEARCH GRANTS

2002	Circumpolar/Boreal Alberta Research Grant, <i>Paternity and male reproductive success in red squirrels.</i>	\$1000
2000	Northern Scientific Training Program grant, <i>Genetic and maternal effects on juvenile growth rates in North American red squirrels.</i>	\$3990
2000	Arctic Institute of North America grant-in-aid, <i>Maternal and genetic effects on nestling growth rates in red squirrels – temperature sensitive transmitters.</i>	\$750
1999	Northern Scientific Training Program grant, <i>Selection and body size in male and female red squirrels.</i>	\$4700
1999	American Society of Mammalogists grant-in-aid, <i>Causes and consequences of variation in the preweaning growth rates of red squirrels.</i>	US\$1000
1999	Arctic Institute of North America grant-in-aid, <i>Genetic and maternal influences on growth in North American red squirrels – portable electronic balances and two-way radios.</i>	\$750

TEACHING EXPERIENCE

Guest Lectures

Evolution, University of California Santa Cruz. August 2003.

Ethology, The King's University College, Alberta. March 2002.

Ecological Modelling, University of Alberta. March 2001.

Graduate Teaching

Field Course in Animal Ecology, Kananaskis Field Station, University of Alberta.

Community Ecology, University of Western Ontario.

Scientific Methods – Ecology, University of Western Ontario.

Introductory Biology Laboratory (nominated for Teaching Assistant Excellence Award),
University of Western Ontario.

SUPERVISORY AND MENTORING EXPERIENCE

Undergraduate Thesis Projects

Amy J. Patrick, University of Western Ontario. Fluorescent powder transfer from contaminated nesting material to white-footed mice (*Peromyscus leucopus*).

Erin Burrell, University of Alberta. Evidence for a positive relationship between territory area and food supply in a northern population of red squirrels (*Tamiasciurus hudsonicus*).

INVITED PRESENTATIONS

Invited Conference Presentations

Maternal effects and the response to selection in red squirrels. *83rd Annual Meeting of the American Society of Mammalogists*. Lubbock, Texas. June 2003.

Maternal effects and the potential for evolution in a natural population of animals. *Gordon Research Conference in Quantitative Genetics and Genomics*. Ventura, California. February 2001.

Invited Seminars

The Nature of Nurture: Evolution by maternal effects in a natural population of red squirrels. University of Alberta, Biological Sciences Departmental Seminar, Ecology Series, April 2002.

Genetic and maternal effects on juvenile growth in red squirrels. McGill University, Department of Natural Resource Sciences Seminar Series, November 1999.

Dietary protein constraint on the maturation of female deer mice. University of Alberta, Biological Sciences Departmental Seminar, Ecology Series, October 1999.

CONFERENCE PRESENTATIONS

McAdam, A.G. and S. Boutin. Maternal effects and the response to selection in red squirrels. *Ninth Congress of the European Society for Evolutionary Biology*. Leeds, UK. August 2003. (Poster).

Berteaux, D., D. Réale, **A.G. McAdam** and S. Boutin. Genetic and plastic responses of a northern mammal to climate change. Symposium on the Biology of the Canadian Arctic - *Annual meeting of the Society for Integrative and Comparative Biology*. Toronto, Ontario. January 2003.

McAdam, A.G. and S. Boutin. Maternal effects and the dynamics of juvenile growth rates in red squirrels. *American Society of Naturalists*. Banff, Alberta. July 2002.

Réale, D., **A.G. McAdam**, D. Berteaux and S. Boutin. Selection studies and behavioural ecology: measuring selection on reproductive traits in North American red squirrel. *Ninth Biennial Congress of the International Society for Behavioral Ecology*. Montreal, Quebec. July 2002.

McAdam, A.G. and S. Boutin. Masting and the maintenance of genetic variation in red squirrels. *Society for the Study of Evolution / American Society of Naturalists*. Knoxville, Tennessee. June 2001.

McAdam, A.G. and S. Boutin. Maternal effects and heritability of nestling growth rates in the red squirrel. *Pacific Ecology Conference*. Parksville, British Columbia, February 1999.

Millar, J.S., **A.G. McAdam**, and V.E. Collins. Life on the edge: deer mice in the Kananaskis Valley 1979-1997. *Canadian Society of Zoologists*. Kelowna, British Columbia, May 1998.

McAdam, A.G. and J. S. Millar. The effects of dietary protein supplementation on the growth and maturation of female young-of-the-year *Peromyscus maniculatus*. *Seventh International Theriological Congress*. Acapulco, Mexico. September 1997. (Poster).

McAdam, A.G. and D.L. Kramer. Stop, look, and listen: vigilance and intermittent locomotion in small mammals. *76th Annual Meeting of the American Society of Mammalogists*. Grand Forks, North Dakota. June 1996. (Poster).

REVIEWED MANUSCRIPTS

- Evolution (6)
- Journal of Mammalogy (5)
- American Midland Naturalist (2)
- Behavioral Ecology (1)
- Écoscience (1)
- Journal of Zoology (1)

PROFESSIONAL AFFILIATIONS

- Society for the Study of Evolution
- American Society of Mammalogists
- European Society for Evolutionary Biology
- British Ecological Society
- Sigma Xi - UCSC Chapter
- Arctic Institute of North America

UNIVERSITY SERVICE

Graduate Students' Association Councillor, Department of Biological Sciences, University of Alberta, 1998 – 2000.

Graduate Student Representative, Biological Sciences Council, University of Alberta, 1998 – 2002.

PRESS COVERAGE

Maternal effects on evolution. Our research was featured in articles by the *Edmonton Journal*, *Science Daily*, *EurekAlert!* and *Innovations Report*.

Plastic and genetic responses of red squirrels to climate change. I was interviewed for articles or radio broadcasts by *NewScientist*, *The Scientist*, *LA Times*, CBC radio (Yukon), KVMR radio, *YES Mag*, *Frontiers in Ecology and the Environment*, and *Alaska Science Forum*. This work was also reported by CBC television (Edmonton), *The Guardian*, *Daily Telegraph*, *Globe and Mail*, *National Post* and *Edmonton Journal*, and will be featured in *Discover Magazine's* "Top 100 Science Stories of 2003".

Antipredatory benefits of intermittent locomotion. This research was reported by Science News (*Science*, 288:83-5).

