

WILLIAM MARK ROBERTS
11 – 2162 Sherbrooke Street West
Montreal QC, H3H 1G7, Canada

+1 (514) 939-3302

wroberts@alumni.princeton.edu

<http://wmarkroberts.com>

EDUCATION

Princeton University	Ph.D. in Ecology and Evolutionary Biology	2000
Princeton University	M.A. in Ecology and Evolutionary Biology	1995
University of British Columbia	M.Sc. in Zoology	1992
University of British Columbia	B.Sc. (Honours) in Zoology	1987

EMPLOYMENT HISTORY

CONSULTING

The H. John Heinz III Center for Science, Economics and the Environment **2001**

- Developed indices of bird population trends as indicators of grassland ecosystem health for the Heinz Center's *Report on the Status of the Nation's Ecosystems*.
- Conducted statistical comparisons between indices for native and invasive bird species, using North American Breeding Bird Survey data.

New Jersey Department of Environmental Protection **2000 - 2001**

- Integrated published and Internet-based information to evaluate the risks of habitat loss and habitat fragmentation to biodiversity and ecosystem health in the State of New Jersey. This work is a component of the New Jersey Comparative Risk Project, which compares the impacts of different environmental stressors, examines how well various strategies deal with these issues, and identifies gaps in existing knowledge that need to be filled.

Environmental Defense (formerly, Environmental Defense Fund) **1999 - 2000**

- Used GIS and statistical software to conduct a population viability analysis of Utah prairie dogs, federally listed in the United States as a Threatened species.
- Reappraised existing management plans for Utah prairie dogs.

British Columbia Ministry of Agriculture, Fisheries and Foods **1992**
B.C. Blueberry Industry Development Council
Corporation of the District of Pitt Meadows

- Designed and implemented research into critical aspects of the problem of bird damage to blueberry crops, in consultation with provincial and municipal government, industry leaders, growers and public.
- Studied pest-bird activity patterns, and evaluated the effectiveness of deterrents.
- Achieved conciliation by investigating residents' complaints about noise-scare devices and monitoring growers' compliance with device use guidelines.
- Devised recommendations to manage resident-grower conflicts, and to improve crop protection, that have been adopted province-wide and remain the current standard.

- British Broadcasting Corporation's Natural History Film Unit** **1990**
- Provided technical advice and assistance for special effects to communicate information about animal migration in David Attenborough's broadcast documentary series *The Trials of Life*.

- University of California, Irvine, Department of Ecology and Evolutionary Biology** **1987**
- Created software programs and strategies to analyze complex data sets of animal behaviour.

UNIVERSITY TEACHING

- Lecturer** **McGill University** **2001**
Biostatistical Analysis; Methods in Biology of Organisms
- Lecturer** **Yale University** **2000**
Population Ecology
- Lecturer** **Princeton University** **1999 - 2000**
Conservation and Biodiversity; Comparative Animal Physiology
- Assistant Instructor** **Princeton University** **1993, 1996 - 1998**
Evolution of Biological Diversity; Comparative Animal Physiology
- Sessional Lecturer** **University of British Columbia** **1993**
Comparative Vertebrate Zoology
- Graduate Teaching Assistant** **University of British Columbia** **1988 - 1992**
Comparative Vertebrate Zoology; Comparative Invertebrate Zoology; Advanced Biology of Invertebrates; Introduction to Animal Behaviour

MANAGEMENT

- Programme Manager** **1993**
Canadian Centre for Creative Technology, Shad Valley UBC Summer Programme
- Managed summer residency course providing intensive exploration of science, technology and business for gifted high school students from across Canada.
 - Accurately carried out all accounting for programme, managing a budget of CDN\$110,000.
 - Negotiated contracts for accommodation, catering, and transportation, conducted staff hiring interviews, set up office, located and organized guest speakers, suppliers and service providers, and planned daily schedules for all programme participants.

PUBLIC RELATIONS

- Interpreter (Visitor Services Naturalist)** **1988 - 1989**
Vancouver Public Aquarium
- Developed interactive programmes at Vancouver's top tourist attraction to convey key concepts about marine and conservation biology to visitors from around the world.
 - Collaborated with World Wildlife Fund (Canada) to distribute fundraising materials for rainforest conservation.
 - Scripted and narrated marine mammal shows, and conducted tour groups.

PUBLICATIONS

PAPERS

- Dobson, A. P., J. P. Rodríguez, and W. M. Roberts. 2001. Synoptic tinkering: integrating strategies for large-scale conservation. *Ecological Applications* 11: 1019-1026.
- Dobson, A. P., J. P. Rodríguez, W. M. Roberts and D. S. Wilcove. 1997. Geographical distribution of endangered species in the United States. *Science* 275: 550-553.
- Roberts, W. M. 1996. Hummingbirds' concentration preferences at low volume: the importance of time scale. *Animal Behaviour* 52: 361-370.
- Roberts, W. M. 1995. Hummingbird licking behaviour and the energetics of nectar feeding. *The Auk* 112: 456-463.
- Temeles, E. J. and W. M. Roberts. 1993. Effect of sexual dimorphism in bill length on foraging behavior: an empirical analysis of hummingbirds. *Oecologia* 94: 87-94.
- Gass, C. L. and W. M. Roberts. 1992. The problem of temporal scale in optimization: three contrasting views of hummingbird visits to flowers. *The American Naturalist* 140: 829-853.

REPORTS

- Roberts, W. M. 2001. Grassland birds.xls. Workbook prepared for The H. John Heinz III Center for Science, Economics and the Environment. Pp. 58.
- Roberts, W. M. 2001. Materials and Methods: Grassland Birds - Native/Non-Native Indicator. Report prepared for The H. John Heinz III Center for Science, Economics and the Environment. Pp. 6.
- Roberts, W. M. 2001. Draft Technical Note: Grassland Birds - Native/Non-Native Indicator. Report prepared for The H. John Heinz III Center for Science, Economics and the Environment. Pp. 2.
- Roberts, W. M. 2001. New Jersey Comparative Risk Project, Ecological Technical Work Group, Stressor-Specific Risk Assessment: Habitat Loss. Report prepared for New Jersey Department of Environmental Protection. Pp. 32.
- Roberts, W. M. 2001. New Jersey Comparative Risk Project, Ecological Technical Work Group, Stressor-Specific Risk Assessment: Habitat Fragmentation. Report prepared for New Jersey Department of Environmental Protection. Pp. 32.
- Roberts, W. M., J. P. Rodríguez, and A. P. Dobson. 2000. Review of the Habitat Conservation Plan for Utah Prairie Dogs in Iron County, Utah. Report prepared for Environmental Defense (formerly Environmental Defense Fund). Pp. 30.
- Roberts, W. M., J. P. Rodríguez, T. C. Good and A. P. Dobson. 2000. Population Viability Analysis of the Utah Prairie Dog. Report prepared for Environmental Defense. Pp. 51.
- Roberts, W. M., J. P. Rodríguez, and A. P. Dobson. 1999. Review of Utah Prairie Dog Recovery Plan (U.S. Fish and Wildlife Service 1991). Report prepared for Environmental Defense Fund. Pp. 9.
- Rodríguez, J. P., W. M. Roberts and A. Dobson. 1997. Where are endangered species found in the United States? *Endangered Species Update* 14:1-4.

Roberts, W. M. 1992. Controlling bird damage to blueberry crops in Pitt Meadows: a study of bird behaviour and crop protection devices. Report prepared for British Columbia Provincial Ministry of Agriculture, Fisheries and Food, B.C. Blueberry Industry Development Council and Corporation of the District of Pitt Meadows. Pp. 37.

CONFERENCE ABSTRACTS

Dobson, A., W. M. Roberts, J. P. Rodríguez and D. Wilcove. 1999. Conservation strategies at a demi-continental scale: reconciling problems of scale, perspective and geographical distribution. Presented at Ecological Society of America Annual Meeting, Spokane, WA, 8 - 12 August 1999.

Dobson, A. P., J. P. Rodríguez, W. M. Roberts and D. S. Wilcove. 1996. The geographical distribution of endangered species in the United States. *Supplement to the Bulletin of the Ecological Society of America* 77:115. Presented at ESA 1996 Annual Combined Meeting, Providence, RI, 10 - 14 August 1996.

Roberts, W. M. 1994. Hummingbirds' concentration preferences and the energetics of nectar feeding: time scale and optimality. *Journal für Ornithologie* 135:151. Presented at XXI International Ornithological Congress, Vienna, Austria, 20 - 25 August 1994.

Roberts, W. M. 1993. Controlling bird damage to blueberry crops: bird behaviour and crop protection. *Proceedings of the 35th Annual Lower Mainland Horticultural Improvement Association Grower's Short Course (Abbotsford, British Columbia, Canada)*: 101-103.

PUBLISHED CORRESPONDENCE

Dobson, A. P., J. P. Rodríguez, W. M. Roberts and D. S. Wilcove. 1997. Response to Czech, B. and P. R. Krausman (1997. Distribution and causation of species endangerment in the United States. *Science* 277:1116-1117). *Science* 277:1117.

Dobson, A. P., J. P. Rodríguez, W. M. Roberts and D. S. Wilcove. 1997. Response to Dunn, C. P. *et al.* (1997. Endangered species "hot spots". *Science* 276:513-515) and Ehrenfeld, D. *et al.* (*ibid*:515-516). *Science* 276:516-517.

THESES

Roberts, W. M. 2000. Dimorphism for silvering in Mormon fritillary butterflies (*Speyeria mormonia*) Boisduval (Lepidoptera: Nymphalidae: Argynnini). Ph.D. Thesis. Princeton University, Princeton. Pp. ix + 104.

Roberts, W. M. 1992. Hummingbirds' concentration preferences and the energetics of nectar feeding: predictions, tests, and implications for optimal foraging theory and pollination biology. M.Sc. Thesis. University of British Columbia, Vancouver. Pp. viii + 96.

Roberts, W. M. 1987. Temporal patterns of feeding regulation in the rufous hummingbird. B.Sc. Honours Thesis. University of British Columbia, Vancouver. Pp. vi + 50.

REFERENCES AVAILABLE UPON REQUEST
