

Brian M. Starzomski

Biodiversity Research Centre • Department of Zoology • University of British Columbia •
6270 University Blvd. Vancouver, British Columbia V6T 1Z4 •
starzom@zoology.ubc.ca • www.zoology.ubc.ca/~starzom •

Education:

University of British Columbia

Ph.D. Zoology 2006

Thesis Title: On the determination of local species richness and abundance

Supervisor: Dr. Diane Srivastava

Acadia University

M.Sc. Biology 2000

Thesis title: Movement dynamics of the forked fungus beetle, *Bolitotherus cornutus* (Panzer)

Supervisor: Dr. Soren Bondrup-Nielsen

Saint Francis Xavier University

B.Sc. Joint Advanced Major Geology/Biology 1996

Thesis title: Infrared video, microscopic measurements of metasiculae in the Silurian graptoloid, *Comograptus gorbiachinensis*

Supervisor: Dr. Michael Melchin

Awards and Grants:

2005 University Graduate Fellowship, the University of British Columbia

2005 Faculty of Science Achievement Award for Service, the University of British Columbia

2004 Santa Fe Institute Complex Systems Summer School Fellowship

2003 Natural Sciences and Engineering Research Council (NSERC) PGS B

2003 Northern Scientific Training Program Award

2003 D. E. Johnston Memorial Fund, Ohio State University

2002 Selected to lead Young Scholars' Dialogue, journal *Conservation Ecology*

2002 Entrance scholarship to the University of British Columbia

2000 Nominated for Governor General's Gold Medal for Best Graduate Thesis

1996 Nova Scotia Mining Society Scholarship Medal

1992 Bernard M. Henry Scholarship to St. Francis Xavier University

Peer-reviewed Publications:

Thompson, R., M. Hemberg, **B.M. Starzomski**, and J. Shurin. *In press*. Trophic levels and trophic tangles: the prevalence of omnivory in real food webs. *Ecology*.

Thompson, R.M. and **B.M. Starzomski**. 2006. What does biodiversity do? A review for policy-makers and managers. *Biodiversity and Conservation*

Starzomski, B.M., B.J. Cardinale, J.A. Dunne, M.J. Hillery, C.A. Holt, M.A. Krawchuk, M. Lage, S. McMahon, and M. C. Melnychuk. 2004. Contemporary visions of progress in ecology, and thoughts for the future. Young Scholars' Dialogue. *Ecology and Society* **9**(1):14 [online]
<http://www.ecologyandsociety.org/vol9/iss1/art14/index.html>

Starzomski, B.M. and Srivastava, D.S. 2004. What science tells us about ecosystems, for ecosystem-based management. Proceedings of the 5th *Science and Management of Protected Areas Conference- Making Ecosystem Based Management Work: Connecting Managers and*

Researchers, May 2003.

Starzomski, B.M. and Bondrup-Nielsen, S. 2002. Analysis of movement dynamics and consequences for metapopulation structure of the forked fungus beetle, *Bolitotherus cornutus* (Tenebrionidae). *Ecoscience* **9**(1):20-27.

Starzomski, B. and Bondrup-Nielsen, S. 2002. Self-organization in ecosystem structure and function: implications for environmental management. In: Eds. Bondrup-Nielsen, S., Munro, N.W.P., Nelson, G., Willison, N.W.P., Herman, T.B. and P. Eagles. *Managing Protected Areas in a Changing World. Proceedings of the Fourth International Conference on Science and the Management of Protected Areas.* Published by Science and the Management of Protected Areas Association. pp. 505-514.

Publications in review:

Starzomski, B.M. and D.S. Srivastava. *In review.* Landscape geometry determines community response to disturbance. *Oikos*

Starzomski, B.M., D. Suen, and D.S. Srivastava *In review.* A bromeliad-based processing chain facilitates species coexistence. *Oecologia*

Ngai, J.T., K. Kirby, B. Gilbert, **B.M. Starzomski,** A.J.D. Pelletier, and R. Connor. *In review.* The effects of land-use change on larval insect communities in Costa Rican bromeliads. *Biotropica*.

Publications in preparation:

Starzomski, B.M. and D.S. Srivastava. *In preparation.* Regional species richness determines local species richness: an experimental test of saturation theory.

Vellend, M., Lilley, P. and **B.M. Starzomski.** *In preparation.* Using subsets of taxa in biodiversity sampling.

Rael, R. and **B.M. Starzomski.** *In preparation.* Integrating food web structure and dynamics: effects of targeted extinction.

Venter, K. and **B.M. Starzomski.** *In preparation.* Saturation of species and individuals: an empirical test.

Technical Reports and others:

Dell, T., Friesen M., Hemberg, M., Marshall, J. and **B. Starzomski.** 2004. Food webs: pattern and process, theory and data. *Proceedings of the Complex Systems Summer School, Santa Fe Institute, June 2004.*

Rael, R. and **B. Starzomski.** 2004. Integrating food web structure and dynamics: effects of targeted extinction. *Proceedings of the Complex Systems Summer School, Santa Fe Institute, June 2004.*

Starzomski, B. M and J. S. Boates. 2001. *Framework for Conservation and Use of Biodiversity in Nova Scotia.* 75 pp. Wildlife Division Internal Report, Nova Scotia Department of Natural Resources, Kentville, Nova Scotia.

Starzomski, B.M. and J.S. Boates. 2001. *Habitat characteristics and community spatial structure for Species-at-risk elements of Nova Scotia's Coastal Plain Plants.* 85 pp. Federal Habitat Stewardship Program, Department of Natural Resources Internal Report, Kentville, Nova Scotia.

Starzomski, B.M. and A.P. Duke 2001. Wildlife Division Forest Inventory Permanent Sample Plots: Some Statistical Analyses and Discussion for the Future. 35pp. Wildlife Division Internal Report, Nova Scotia Department of Natural Resources, Kentville, Nova Scotia.

Starzomski, B.M. 2000. Forest Inventory Permanent Sample Plot Data and its use in Wildlife Habitat Assessment for Nova Scotia. 44 pp. Wildlife Division Internal Report, Nova Scotia Department of Natural Resources, Kentville, Nova Scotia.

Starzomski, B.M. 2000. The Paleoclimatic/Paleogeographic History of Southwestern Nova Scotia and its Implications for Endangered Coastal Plain Plant Habitat. 12 pp. Wildlife Division Internal Report, Nova Scotia Department of Natural Resources, Kentville, Nova Scotia.

Starzomski, B.M., A. P. Duke, L. Benjamin. 2000. Deer Pellet Group Inventory: Plantation and Natural Regeneration Use by White-tailed Deer (*Odocoileus virginianus*) Following Harvesting. 11 pp. Wildlife Division Internal Report, Nova Scotia Department of Natural Resources, Kentville, Nova Scotia.

Starzomski, B.M. 2000. Movement dynamics of the forked fungus beetle, *Bolitotherus cornutus* (Panzer). 71 pp. Unpublished M.Sc. Thesis, Acadia University.

Starzomski, B.M. 1996. Infrared video, microscopic measurements of metasiculae in the Silurian graptoloid, *Comograptus gorbiachinensis*. 85 pp. Unpublished B.Sc. Thesis, Saint Francis Xavier University.

Book Reviews:

Starzomski, B. M. 2004. Berkes, F., J. Colding, and C. Folke. 2003. Navigating Social-ecological Systems: Building Resilience for Complexity and Change. Cambridge University Press, Cambridge, UK. Ecology and Society **9**(1): 1. [online] URL: <http://www.ecologyandsociety.org/vol9/iss1/art1>

Starzomski, B. M. 2002. *Natural Areas Journal* **22**(4). *Conservation Biology: Research Priorities for the Next Decade*. Michael E. Soulé and Gordon H. Orians (eds.). Island Press, Washington. 307 pp., paper. 2001.

Starzomski, B. M. 2001. *Natural Areas Journal* **21**(2). *The Geometry of Ecological Interactions: Simplifying Spatial Complexity*. Ulf Dieckmann, Richard Law, Johan A. J. Metz (eds.). Cambridge University Press, New York. 564 pp., cloth. 2000.

Starzomski, B. M. 2001. *Nova Scotia Birds* **43**(4). *Restoring North America's Birds : Lessons from Landscape Ecology*. Robert A. Askins. Yale University Press. 288pp., cloth. 2000.

Research Experience:

July-August 2006 *Field biologist, climate change experiments, Ellesmere Island*

September, 2002 – Present *PhD Student, Biodiversity Research Centre, Dept of Zoology, University of British Columbia*

Summer, 2004 *Visiting scholar, Santa Fe Institute*

September-December, 2004 *Field Biologist, Estacion Biologica Pitilla, Guanacaste, Costa Rica*

July/August, 2003 *Field Biologist – Southampton & Baffin Island, Arctic Food Webs; Canadian Wildlife Service and Department of Zoology, UBC*

April, 2002-August, 2002 *Field biologist/Crew Leader, Centre for Applied Conservation Research, University of British Columbia, Vancouver*

Brian M. Starzomski, Biodiversity Research Centre, the University of British Columbia

- April, 2001-August, 2001** *Biodiversity Biologist, Centre for Wildlife and Conservation Biology and Nova Scotia Department of Natural Resources*
- July, 2000-March, 2001** *Biologist, Wildlife Division, Nova Scotia Department of Natural Resources*
- May 1998- July 2000** *Graduate Research Assistant, Population Ecology, Dr. Soren Bondrup-Nielsen, Acadia University*
- July 1995- May 1996** *Undergraduate Research Assistant, Paleontology, Dr. Michael Melchin, St. Francis Xavier University*

Teaching Experience:

- September- December 2005** *Teaching Assistant, Population Biology 303, University of British Columbia*
- January-April, 2004** *Teaching Assistant, Ecological Methods 404, University of British Columbia*
- January-April, 2003** *Teaching Assistant, Ecological Methods 404, University of British Columbia*
- September- December 2002** *Teaching Assistant, Population Biology 303, University of British Columbia*
- September-December, 1999** *Teaching Assistant, Introductory Biology 100, Acadia University*
- January-April, 1999** *Teaching Assistant, Conservation Biology 416, Acadia University*
- September-April, 1999** *Teaching Assistant, Introductory Biology 100, Acadia University*
- September-April, 1998** *Teaching Assistant, Introductory Biology 100, Acadia University*
- September-December, 1995** *Lab Instructor, Mineralogy 303, St. Francis Xavier University*

Related Experience:

- February-April, 1998** *Volunteer, Rocky Mountain Ecosystem Coalition, Calgary, Alberta*
- May-October, 1997** *Geologist, Noranda Mining and Exploration, Bathurst, New Brunswick*
- May-September, 1996** *Geologist, Noranda Mining and Exploration, Bathurst*
- December, 1995** *Geological Field Assistant, H. V. Geological Services, Guysborough County, Nova Scotia*
- May-July, 1995** *Underground Geologist, Brunswick Mines, Bathurst, New Brunswick*

June-September, 1993

Student Biologist, Nova Scotia Department of Natural Resources

Papers and Posters Presented:

2006 Ecology, evolution and biodiversity seminar series: 'The effects of metacommunity size and indirect interactions on local species diversity'

2005 Ecological Society of America/INTECOL conference, Montreal, Canada- 'Landscape geometry determines community response to disturbance'

2005 Department of Zoology, The University of British Columbia- 'Landscape geometry determines community response to disturbance'

2004 Dell, T., Friesen M., Hemberg, M., Marshall, J. and **B. Starzomski**. Food webs: pattern and process, theory and data. Complex Systems Summer School, Santa Fe Institute, June 2004.

2003 University of British Columbia Research Forum, Victoria, British Columbia- 'Habitat loss and biodiversity'

2003 Department of Zoology, The University of British Columbia- 'Experimental, observational, and theoretical analyses of community structure and functioning'

2003 Department of Zoology, The University of British Columbia- 'What is a stable ecological system?'

2003 Science and Management of Protected Areas Association (SAMPAA) Conference, University of Victoria, British Columbia- 'What science tells us about ecosystems, for ecosystem-based management'

2003 Zoology Graduate Student Symposium, the University of British Columbia- 'The role of biodiversity in ecosystem function'

2003 Department of Zoology, The University of British Columbia- 'How big are populations? Evidence from insect movements'

2003 Department of Zoology, The University of British Columbia- 'Biodiversity and ecosystem function in practice, theory, and field'

2002 UBC/UVIC/SFU Departments of Zoology Conference and Retreat, Brackendale, British Columbia- 'Biodiversity and ecosystem function in a small, wet, mossy, experimental landscape'

2001 Wildlife Division, Nova Scotia Department of Natural Resources- 'Framework for Conservation and Use of Biodiversity in Nova Scotia'

2000 Science and Management of Protected Areas Association Conference, University of Waterloo, Waterloo, Ontario- 'Self-organization of ecosystem structure and function: implications for environmental management'

2000 Northeast Wildlife Conference, Acadia University- 'Fine-scale movements of the forked fungus beetle, *Bolitotherus cornutus*'

2000 Acadia University Biology Department Seminar Series- 'In forest and field- Insect movements in the Annapolis Valley, Nova Scotia'

1999 Northeast Wildlife Graduate Conference, University of Maine, Orono- 'Dispersal and Movement Dynamics of the Forked Fungus Beetle, *Bolitotherus cornutus* (Panzer)'

1999 Exploring Equity/Sustainable Development Conference, Trent University, Peterborough, Ontario- 'Self-organization and environmental management'

1996 St. Francis Xavier University Geology Seminar- 'Computer-aided Infra-red video microscopic measurements of siculae in the graptoloid, *Comograptus gorbiachinensis*'

Workshops:

2004 Complex Systems Summer School, Santa Fe Institute.

2003 Introductory Acarology Program, Ohio State University

2001 Wilderness First-Aid- Nova Scotia Search and Rescue, Halifax

2001 Distance Sampling Workshop, Acadia University

1998 Animal Movement Workshop. University of New Brunswick

Conferences Attended:

2005 Ecological Society of America/INTECOL conference, Montreal, Canada

2003 UBC/Simon Fraser University/University of Victoria/University of Washington Conference and Retreat

2003 Science and Management of Protected Areas Association (SAMPAA) Conference, University of Victoria, British Columbia

2003 South/North Conference- Peter Wall Institute for Advanced Studies, UBC

2002 UBC/UVIC/SFU Conference and Retreat, Brackendale, British Columbia

2002 BioMERGE, University of Washington, Seattle.

2000 Science and Management of Protected Areas Association (SAMPAA) Conference, University of Waterloo, Ontario.

2000 Northeast Wildlife Graduate Conference, Wolfville, Nova Scotia (Chair and Presenter)

1999 Northeast Wildlife Graduate Conference. University of Maine, Orono, Maine

1999 Exploring Equity: Graduate Student Roles in Research and Sustainable Development. Trent University, Peterborough, Ontario

1996 Geological Association of Canada/Mineralogical Association of Canada Conference. St. Francis Xavier University, Antigonish, Nova Scotia

1995 Atlantic Universities Undergraduate Geology Conference. St. Francis Xavier University, Antigonish, Nova Scotia

1993 International Union of Game Biologists Conference. Halifax, Nova Scotia

Service:

Organizer, 2005 Dennis H. Chitty Lecture, Department of Zoology, UBC

Organizer, 2003 UBC/Simon Fraser University/University of Victoria/University of Washington Conference and Retreat

Co-organizer, 2003 Conservation Seminar Series, Department of Zoology and Centre for Applied Conservation Research, UBC

David Suzuki Foundation, Vancouver, British Columbia

Reviewer, Proceedings of Fourth Science and Management of Protected Areas Conference (Waterloo, Ontario)

Chair of Organizing Committee for the international Northeast Wildlife Graduate Conference, 2000.

Organizer, Acadia University's Biology Seminar Series 1999-2000

Co-organizer, Acadia University's Biology Seminar Series 1998-1999

Genuine Progress Index Atlantic, Ecological Footprint Committee for King's County, Nova Scotia, Board member 1999-2000

Nova Scotia Herpetofaunal Atlas Volunteer

North American Migration Count participant 1990-2001

Graduate student representative on Acadia University Senate (Elected), 1999-2000

Senate Library Committee, Acadia University 1999-2000

Senate Library Sub-committee on Space and Resource Allocation 1999-2000

Canadian Parks and Wilderness Society, Calgary Chapter 1998

Rocky Mountain Ecosystem Coalition, Calgary, Alberta 1998

Co-organizer, 1995 Atlantic Universities Undergraduate Geology Conference

Organizer, Antigonish, Nova Scotia, Christmas Bird Count 1989-1991

Peer reviewer:

Canadian Journal of Forest Research, Ecology, Ecology and Society, Functional Ecology, Oikos, Proceedings of the Fourth International Conference on Science and the Management of Protected Areas

Memberships:

Ecological Society of America, Society for Conservation Biology, Canadian Society for Ecology and Evolution