

Christopher Jochen Greyson-Gaito

<https://christopher.greyson-gaito.com/>

Professional Positions

McMaster University

HAMILTON, CANADA

Postdoctoral Researcher

November 2023 – Present

Supervisors: Dr. Matheus Grasselli & Dr. Gail Wolkowicz

Education

University of Guelph

GUELPH, CANADA

Doctor of Philosophy in Ecology

September 2018 – September 2023

Thesis: "Resilience across complex systems in a variable world"

Supervisor: Dr. Kevin McCann

University of Guelph

GUELPH, CANADA

Master of Science in Ecology

January 2016 – August 2018

Thesis: "Flexibility of the spruce budworm - parasitoid food web"

Supervisors: Dr. Kevin McCann & Dr. Eldon Eveleigh

GPA: 89.6%

University of British Columbia

VANCOUVER, CANADA

Bachelor of Science (Honours) in Ecology

September 2010 – May 2014

Thesis: "Access to food drives movement in the Arctic woolly bear caterpillar,

Gynaephora groenlandica (Wocke) (Lepidoptera: Lymantriidae)"

Supervisors: Dr. Greg Crutsinger & Dr. Greg Henry

GPA: 87.2% September 2010 – April 2014

Warwickshire College

LEAMINGTON SPA, U.K.

International Baccalaureate Diploma

September 2008 – May 2010

Grades: 37/45 overall

Additional Education

McMaster University

HAMILTON, CANADA

McCall MacBain Postdoc Teaching & Leadership Program *September 2025 – April 2026*

Program to advance knowledge about best practices in teaching & learning, and leadership development. Includes Instructional Skills Workshop, Opinion Editorial workshop, and Postdoctoral Leadership Certificate.

Young Scholars Initiative

UNAM, MEXICO CITY, MEXICO

Escuela de Verano de Economía Aplicada para América Latina

June 2025

Workshop on Agent-Based Models and Stock-Flow Consistent macroeconomic modeling

Coursera

COLUMBIA UNIVERSITY, NEW YORK, U.S.A.

Economics of Money and Banking

May 2025

Perry Merhling's Money View MOOC

Santa Fe Institute

UNIVERSIDAD DE LOS ANDES, BOGOTÁ, COLOMBIA

Complexity Global School for Emerging Political Economies

July 2024

Project: Tragedy of the commons in microbiome and economic systems across scales

Publications

Christopher J. Greyson-Gaito, Aaron Delaporte, Alfons Weersink, Kevin S. McCann. 2026. Amplification of reddening environmental variability in crop farms. In prep for submission to Ecological-Economics.

Christopher J. Greyson-Gaito, Sabrina Streipert, Gail Wolkowicz. 2026. Adding a fecundity-survival trade-off to a discrete population model with maturation delay. Submitted to Mathematical Biosciences (MBS-D-25-00729R1).

Christopher J. Greyson-Gaito, Gabriel Gellner, Kevin S. McCann. 2023. Life history speed, population disappearances, and noise-induced ratchet effects. Proceedings of the Royal Society B: Biological Sciences 290:20222149.

Christopher J. Greyson-Gaito, Sarah J. Dolson, Glen Forbes, Rosanna Lamb, Wayne E. Mackinnon, Kevin S. McCann, M. Alex Smith, Eldon S. Eveleigh. 2022. Phylogenetic community structure and stable isotope analysis of the parasitoid community associated with Eastern spruce budworm, *Choristoneura fumiferana* (Lepidoptera: Tortricidae). Agricultural and Forest Entomology. **24**(4):476-486.

Marie K. Gutgesell, Kevin S. McCann, Gabriel Gellner, Kevin Cazelles, **Christopher J. Greyson-Gaito**, Carling Bieg, Matthew M. Guzzo, Connor P. K. Warne, Charlotte Ward, Reilly F. O'Connor, Alexa M. Scott, Brandon C. Graham, Emily J. Champagne, Bailey C. McMeans. 2022. On the dynamic nature of omnivory in a changing world. BioScience **72**:416430.

Christopher J. Greyson-Gaito, Kevin S. McCann, Jochen Fründ, Christopher J. Lucarotti, M. Alex Smith, Eldon S. Eveleigh. 2021. Parasitoid community responds indiscriminately to fluctuating spruce budworm and other caterpillars on balsam fir. The Canadian Entomologist **153**(4):482-496.

Christopher J. Greyson-Gaito, Timothy J. Bartley, Karl Cottenie, Will M.C. Jarvis, Amy E.M. Newman, Mason Stothart. 2020. Into the wild: microbiome transplant studies need broader ecological reality. Proceedings of the Royal Society B: Biological Sciences **287**(1921):20192834.

Matthew A Barbour, **Christopher J. Greyson-Gaito**, Arezoo Sootodeh, Brendan Locke, Jordi Bascompte. 2020. Loss of consumers constrains phenotypic evolution in the resulting food web. Evolution Letters **4**(3):266-277.

Mariano A. Rodriguez-Cabal, Noelia Barrios-Garcia, **Christopher J. Greyson-Gaito**, Heather L. Slinn and Gregory M. Crutsinger. 2019. Non-native ungulates triggered indirect impacts on foliar arthropods, but not on soil function. Biological Invasions **21**(10):1-8.

Christopher J. Greyson-Gaito, Matthew A. Barbour, Mariano A. Rodriguez-Cabal, Gregory M. Crutsinger, Gregory H. R. Henry. 2016. Freedom to move: Arctic caterpillar (Lepidoptera) growth rate increases with access to new willows (Salicaceae). The Canadian Entomologist **148**(6):673-682.

Book Chapters

Gabriel Gellner, Kevin S. McCann, **Christopher J. Greyson-Gaito**. 2020. The Synergistic Effects of Interaction Strength and Lags on Ecological Stability (Chapter). *Theoretical Ecology: Concepts and Applications*. Edited by Kevin S. McCann and Gabriel Gellner. Oxford University Press. Oxford, United Kingdom.

Policy Reports

Christopher J. Greyson-Gaito. 2025. Removing Parking Minimums: A Key Step Towards an Affordable, Healthy, and Sustainable Guelph. Policy report for Guelph Community for Active Transportation and Transit Action Alliance of Guelph

Scholarships and Awards

Canadian Society for Ecology and Evolution Excellence in Doctoral Research (Runner up)	Jnue 2023
University of Guelph Ontario Graduate Scholarship (\$15,000)	September 2021-August 2022
Natural Sciences and Engineering Research Council of Canada Alexander Graham Bell Canada Graduate Scholarship-Doctoral (CGS-D) (\$105,000)	September 2018-August 2021
University of Guelph André Auger Citizenship Award	March 2018
University of Nevada - Reno Graduate Dean's Merit Scholarship - Declined (\$10000 USD)	September 2018
Royal Canadian Geographical Society Graduate Research Scholarship (\$2500)	September 2017
University of Guelph Queen Elizabeth II Graduate Scholarship in Science and Technology (\$15,000)	September 2017-August 2018
Elgin Card Scholarship in Terrestrial Animal Ecology (\$4000)	October 2016
Arthur D. Latornell Travel Scholarship (\$400)	May 2016
University of Guelph Graduate Tuition Scholarship (\$16000)	January 2016 - December 2017
Natural Sciences and Engineering Research Council of Canada Undergraduate Student Research Award (\$7200)	May - August 2014
Mary and Joseph Bryant Scholarship (\$825)	September 2013
UBC Biodiversity Research: Integrative Training & Education Undergraduate Student Research Award (\$6263)	May - August 2013
Natural Sciences and Engineering Research Council of Canada Undergraduate Student Research Award (\$7200)	May - August 2012
Go Global International Learning Programs Award (\$1500)	May - August 2011
President's Entrance Scholarship (\$2500)	September 2010

Conference Presentations (selected from 16 total)

Christopher J. Greyson-Gaito*, Sabrina Streipert, Gail Wolkowicz. Maturation delay with a fecundity-survival trade-off in a discrete population model. Mathematical Congress of the Americas, 21-25 July 2025, Miami, Florida.

Christopher J. Greyson-Gaito*, Andrew Jackson, Mattia Pettena, Hector Pollitt, Matheus Grasselli. A comparison of net-zero macroeconomic models. Macroeconomic Modelling Society. 17-20 July 2025, Lyon, France.

Christopher J. Greyson-Gaito*, Gabriel Gellner, Kevin S. McCann. Life history speed, population disappearances, and noise-induced ratchet effects (Invited Talk). Society for Industrial and Applied Mathematics Conference on the Life Sciences, 10-13 June 2024, Portland, Oregon.

Christopher J. Greyson-Gaito*, Aaron Delaporte, Alfons Weersink, Kevin S. McCann. Resilience of farms to multi-dimensional noise. Canadian Society for Ecological-Economics Annual Conference, 11-13 October 2023, Toronto, Ontario.

Christopher J. Greyson-Gaito*, Jacob Wilde, Emma Allen-Vercoe, Cortland Griswold, Kevin McCann. Lysogenic bacteriophage as a gene reservoir in gut ecosystems (Poster). Ecological Society of America and Canadian Society for Ecology & Evolution Joint Conference, 14-19 August 2022, Montréal, Québec.

Christopher J. Greyson-Gaito*, Jacob Wilde, Emma Allen-Vercoe, Cortland Griswold, Kevin McCann. Lysogenic bacteriophage as a gene reservoir in gut ecosystems (Poster). Canadian Society of Microbiologists Annual Conference, 26-29 June 2022, Guelph, Ontario

Christopher J. Greyson-Gaito*. Resilience of farms to multi-dimensional noise. Ecological-Economics Academy, Canadian Society for Ecological-Economics, 27-28 May 2022, Victoria, British Columbia.

Christopher J. Greyson-Gaito*, Gabriel Gellner, Kevin S. McCann. Sudden population disappearances in a reddened world. Canadian Society for Ecology and Evolution Meeting, 15-20 August 2021, Vancouver, British Columbia.

Christopher J. Greyson-Gaito*, Timothy J. Bartley, Karl Cottenie, Will M.C. Jarvis, Amy E.M. Newman, Mason Stothart. Into the wild: microbiome transplant studies need broader ecological reality. Second International Conference on Holobionts, 8-10 May 2019, Montréal, Québec.

Christopher J. Greyson-Gaito*, Eldon S. Eveleigh, Kevin S. McCann. Flexibility of the spruce budworm -parasitoid food web in response to spruce budworm density fluctuations. Canadian Society for Ecology and Evolution Meeting, 19-21 July 2018, University of Guelph, Guelph, Ontario.

Christopher J. Greyson-Gaito*, Kevin S. McCann. Interaction of an explicit and an implicit time delay in a one predator-two prey system (Poster). Living on the Precipice, Waterloo Institute for Complexity and Innovation spring conference, 16-17 May 2017, University of Waterloo, Waterloo, Ontario.

Matthew Barbour*, **Christopher Greyson-Gaito**, Brendan Lock, Arezoo Sotoodeh, Erik Jules, Gregory Crutsinger. Food-web complexity reduces variation in herbivore fitness among host-plant genotypes (Poster). Ecological Society of America Annual Meeting, 9-14 August 2015, Baltimore, Maryland.

Research Experience

- Banff International Research Station 5-day workshop BANFF, CANADA
Lead Organizer *July 2024-September 2026*
Lead organizer on a 5-day workshop at BIRS, titled Stochastic modeling for the resilience of healthy ecosystems. The co-organizers are Priscilla Greenwood and Mary Lou Zeeman.
- Schuur Lab, Northern Arizona University FLAGSTAFF, UNITED STATES OF AMERICA
Research Assistant *May 2015 – November 2015*
Changes in carbon cycling in subarctic tundra ecosystems as a result of warming temperatures and permafrost thaw.
- Rodriguez-Cabal Lab, Universidad del Comahue BARILOCHE, ARGENTINA
Volunteer Research Assistant *January 2015 – March 2015*
Consequences of the loss of native species and the addition of invasive species to the populations, communities and ecosystem functioning of temperate forests in Patagonia.
- Crutsinger Lab, University of British Columbia VANCOUVER, CANADA
Volunteer Research Assistant *January 2014 – December 2014*
Food-web complexity reduces variation in herbivore fitness among host-plant genotypes
- Tundra Ecology Lab, University of British Columbia VANCOUVER, CANADA
Research Assistant *May 2012 – August 2014*
The ecological and evolutionary consequences of climate change in a High Arctic tundra ecosystem.
-

Teaching Experience

- Math 1ZC3 Engineering Mathematics II-B, McMaster University HAMILTON, CANADA
Lecturer *September 2025 – December 2025*
- Math 3DC3 Discrete Dynamical Systems & Chaos, McMaster University HAMILTON, CANADA
Substitute Lecturer *January 2025*
- Writing Services, McLaughlin Library, University of Guelph GUELPH, CANADA
Writing Support Teaching Assistant *November 2021 – August 2023*
- Writing in the Sciences: Storytelling in Science Writing. McLaughlin Library GUELPH, CANADA
Online module designer *May 2021 – August 2021*
- Biol 3060 - Populations, Communities, Ecosystems. University of Guelph GUELPH, CANADA
-

Teaching Assistant *January 2021 – April 2021*
Writing in the Sciences: A Song of Ice and Fire. McLaughlin Library GUELPH, CANADA
Volunteer workshop designer and presenter *September 2018 – September 2019*
Writing Services, McLaughlin Library, University of Guelph GUELPH, CANADA
Writing Support Teaching Assistant *September 2017 – April 2018*
Biology 1070 - Discovering Biodiversity, University of Guelph GUELPH, CANADA
Teaching Assistant *January 2017 – April 2017*
Biology 2060 - Ecology, University of Guelph GUELPH, CANADA
Teaching Assistant *September 2016 – December 2016*

Community Service

MathBio Seminar HAMILTON, CANADA
Co-organiser *September 2024 - Present*
Co-organiser of the weekly MathBio seminar at McMaster's Department of Mathematics and Statistics

Guelph Community for Active Transportation GUELPH, CANADA
Volunteer *November 2023 - Present*
Lead author of policy document on removing parking minimums. Member of Advocacy committee.

Alliance for Just Money U.S.A. U.S.A
Volunteer *January 2021 - December 2024*
Co-chair of the Diversity, Equity, and Inclusion committee.

University of Guelph - Integrative Biology Holiday Party Auction GUELPH, CANADA
Organiser *December 2016, 2017, 2018*
Initial creation of and continued organising of annual Integrative Biology Holiday Party Auction. Raising funds for a variety of charities.

University of Guelph - Integrative Biology Graduate Student Seminar GUELPH, CANADA
Organiser *September 2018 – March 2020*
Organising of weekly graduate seminars in the department.

University of Guelph - Integrative Biology Evelyn Pielou Discussion Group GUELPH, CANADA
Co-organiser *September 2016 – December 2020*
Organising of weekly discussion topics and maintenance of Pielou listserv and webpage.

University of Guelph - Integrative Biology Graduate Curriculum Committee GUELPH, CANADA
Graduate Student Representative *September 2016 – April 2017*
Providing graduate student perspectives in the improvement of the IB Graduate Curriculum.

McMaster Children and Youth University - Guelph Chapter	GUELPH, CANADA
Volunteer	<i>September 2016 – April 2017</i>
Designing and dissemination of a workshop entitled "Backyard Biodiversity".	
University of Guelph Let's Talk Science	GUELPH, CANADA
Volunteer	<i>January 2016 – December 2016</i>
Science, Technology, Engineering, and Mathematics outreach in local schools.	
UBC International Service Learning Placement	MONTEZUMA, COSTA RICA
Internship	<i>May 2011 – August 2011</i>
Outreach for and improving the local recycling centre.	

Skills

Technical specialties: *Julia proficient, MATLAB intermediate, R proficient, L^AT_EX intermediate, Typst beginner, HTML & CSS beginner*