**Robert Buchkowski**

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| **Personal Information:**  Yale University School of Forestry & Environmental Studies  370 Prospect Street New Haven, CT 06511 USA | Tel: (203) 602-4483  Email: [robert.buchkowski@yale.edu](mailto:robert.buchkowski@yale.edu)  Twitter: @BuchkowskiR  Website: [robertwbuchkowski.github.io](https://robertwbuchkowski.github.io/) |

**Education:**

* Doctor of Philosophy, School of Forestry & Environmental Studies, Yale University, Expected December 2019
  + Thesis: Feedbacks between plant-based and detritus-based food chains and their impacts on carbon and nitrogen cycling
  + Candidacy (with distinction): December 2015
  + Advisor: Dr. O.J. Schmitz
  + Committee: Dr. M. A. Bradford and Dr. S. J. Leroux
* Masters of Environmental Science, School of Forestry & Environmental Studies, Yale University, May 2014
  + Thesis: Detritivores ameliorate the enhancing effect of plant-based trophic cascades on nitrogen cycling in an old-field system
  + Advisor: Dr. O.J. Schmitz
* Honors Bachelor of Science, Biology, Lakehead University, June 2012
  + Thesis: Precipitation limits shrub growth in the Central Canadian Arctic
  + Advisor: Dr. D. Morris

**Publications:**

1. **Buchkowski, R.W.**,S.J. Leroux, O.J. Schmitz. *early view*. Microbial and animal nutrient limitation change the distribution of nitrogen within coupled green and brown food chains. *Ecology*. <https://doi.org/10.1002/ecy.2674>
2. **Buchkowski, R.W.**,Schmitz, O.J., Bradford, M.A. 2019. Herbivore and detritivore effects on nitrogen recycling: implications for plant nitrogen uptake and growth. *Journal of Ecology*, 107, 963-976. <https://doi.org/10.1111/1365-2745.13079>
3. Schmitz, O.J., **Buchkowski, R.W.**, Smith, J.R., Telthorst, M. & Rosenblatt, A.E. 2017. Predator community composition is linked to soil carbon retention across a human land use gradient. *Ecology*, 98, 1256-1265. <https://doi.org/10.1002/ecy.1794>
4. **Buchkowski, R.W.**, Bradford, M.A., Grandy, A.S., Schmitz, O.J. & Wieder, W.R. 2017. Applying population and community ecology theory to advance understanding of belowground biogeochemistry. *Ecology Letters*, 20, 231-245. <https://doi.org/10.1111/ele.12712>
5. **Buchkowski, R.W.** 2016. Top-down consumptive and trait-mediated control do affect soil food webs: It’s time for a new model. *Soil Biology and Biochemistry*, 102: 29-32. <https://doi.org/10.1016/j.soilbio.2016.06.033>
6. Mendelsohn, R., Prentice, I.C., Schmitz, O., Stocker, B., **Buchkowski, R.** & Dawson, B. 2016. The Ecosystem Impacts of Severe Warming. *The American Economic Review*, 106: 612-614. DOI[: https://doi.org/10.1257/aer.p20161104](https://doi.org/10.1257/aer.p20161104)
7. **Buchkowski, R. W.**, Williams, C. J., Kelly, J., Veinot, J. G., and Xenopoulos, M. A. 2016. Nanosilver and Nano Zero-Valent Iron Exposure Affects Nutrient Exchange Across the Sediment–Water Interface. *Bulletin of environmental contamination and toxicology*, 96: 83-89. <https://doi.org/10.1007/s00128-015-1697-z>
8. **Buchkowski, R. W.**, and Schmitz, O. J. 2015. Detritivores ameliorate the enhancing effect of plant-based trophic cascades on nitrogen cycling in an old-field system. *Biology Letters*, 11: 20141048. <https://doi.org/10.1098/rsbl.2014.1048>
9. **Buchkowski, R. W.**, Schmitz, O. J., and Bradford, M. A. 2015. Microbial stoichiometry overrides biomass as a regulator of soil carbon and nitrogen cycling. *Ecology*, 96:1139-1149. <https://doi.org/10.1890/14-1327.1>
10. Schmitz, O. J., **Buchkowski, R. W.**, Burghardt, K. T., and Donihue, C. M. 2015. Functional traits and trait-mediated interactions: connecting community-level interactions with ecosystem functioning. *Advances in Ecological Research*, 53: 319-343. <https://doi.org/10.1016/bs.aecr.2015.01.003>
11. Dashtban, M., **Buchkowski, R.**, and Qin, W. 2011. Effect of different carbon sources on cellulase production by *Hypocrea jecorina* (T*richoderma reesei*) strains. *International Journal of Biochemistry and Molecular Biology* 2:274-286. <https://www.ncbi.nlm.nih.gov/pmc/PMC3193291/>

**Non-refereed publications:**

1. Helton, A., Lewis, R., Hoffnagle, G., Prewo, K.M., Kane, K., Smith, W.J., Keiser D.A., Stahl, J., Klug, J.L. Tobias, C., Raymond, P.A., **Buchkowski, R.**, Coplin, K., Weber, L., Strauss, R.H., Clark, T., Bertini, A.G. (2014) Methods to measure phosphorus and make future projections. The Connecticut Academy of Science and Engineering. Reported Dec. 17/2014: 1-66.

**Academic Presentations:**

\*Invited seminars

* **Buchkowski, R.W.** November 2018. The effects of herbivores and decomposers on plant communities and nutrient cycles. Yale Institute for Biospheric Studies; New Haven, CT, USA
* **Buchkowski, R.W.** October 2018. Insect herbivory impacts leaf-litter nitrogen with cascading effects on detritivory but not on plant growth. University of Maryland; College Park, MD, USA\*
* **Buchkowski, R.W.** July 2018. Empirical insights on the feedbacks between terrestrial green and brown food chains. Canadian Society for Ecology and Evolution; Guelph, ON, CAN
  + Co-organized the symposium “Merging theory and empirical research on ecosystem functioning of connected ecosystems” with S.J. Leroux
* **Buchkowski, R.W.** April 2018. *Upgoer 5*: Animals change where matter is in fields, but only when we consider the starting place and the ground. Research Colloquium at Yale University;New Haven, CT, USA
* **Buchkowski, R.W.** August 2017. Plant growth responds to the detritivores processing of leaf litter only when that litter has a history of herbivory. Ecological Society of America; Portland, OR, USA
* **Buchkowski, R.W.** September 2016. Unanticipated interactions explain the combined effects of plant-based and detritus-based food chains on nitrogen cycling. Memorial University, St. John’s, NL, CAN\*
* **Buchkowski, R.W.** September 2015. Is it what you eat or where you live that matters? Yale University Doctoral Conference; New Haven, CT, USA
* **Buchkowski, R. W.**, Schmitz, O. J., and Bradford, M. A. August 2015. An empirical assessment of a stoichiometrically and microbially explicit nutrient cycling model. Ecological Society of America; Baltimore, MD, USA
* **Buchkowski, R. W.** and Schmitz, O. J. June 2015. Detritivores ameliorate the enhancing effect of plant-based trophic cascades on nitrogen cycling. Rhizosphere 4; Maastricht, Limburg, Netherlands
* **Buchkowski, R. W.** and Schmitz, O. J. April 2014. How do aboveground and belowground consumers impact nitrogen mineralization? Research Colloquium at Yale University;New Haven, CT, USA
  + Awarded best oral presentation
* **Buchkowski, R. W.** March 2014. Putting animals back into the nitrogen cycle. Trent University; Peterborough, ON, CAN
* **Buchkowski, R. W.**, Schmitz, O. J., and Bradford, M. A. 2015. Microbial stoichiometry overrides biomass as a regulator of soil carbon and nitrogen cycling. Eco-Lunch at Yale University; New Haven, CT, USA

**Poster Presentations:**

* **Buchkowski, R. W.** and Schmitz, O. J. August 2014. How do aboveground and belowground consumers impact nitrogen mineralization? Ecological Society of America; Sacramento, CA, USA

**Public Presentations:**

* **Buchkowski, R. W.** 2015. Isopods and how they fit into the old-field nitrogen cycle. Yale-Myers Forest Seminar Series; Eastford, CT, USA
* **Buchkowski, R.W.** 2014. GMOs: Let’s talk. The Green Café; New Haven, CT, USA
* Grome, M., Lauridsen, H., **Buchkowski, R.W.** 2014. OMG GMOs! Food for thought. Yale Science Diplomats: Science in the News; New Haven, CT, USA

**Relevant work experience:**

* Research Assistant, September 2012- September 2013, Yale University
* Ecology and Evolution Intern, Summer 2011 and 2012, Lakehead University
* Limnology Intern, Summer 2009 and 2010, Trent University

**Teaching Experience:**

* Yale University
  + - Applied Math for Environmental Studies (Fall 2013, 2015)
      * Duties: Lectures, office hours, grading
  + Dynamics of Ecological Systems (Spring 2015)
    - Duties: Lectures, office hours, grading
  + Ecosystems and Landscapes (Fall 2014)
    - Duties: Lead a field and laboratory section
* Lakehead University
  + Animal Biology (Fall 2011)
    - Duties: Lead a laboratory section
  + Comparative Animal Physiology (Spring 2011)
    - Duties: Lead a laboratory section

**Mentoring Experience:**

* High school science fair mentor (1-3 projects with 1-2 students per year)
  + Academic years: 2013-4, 2015-6, 2016-7, 2017-8, 2018-9

**Awards/ Honors:**

* Flag Bearer (top academic performance), Yale School of Forestry & Environmental Studies, 2014
* Best master’s thesis presentation, Yale School of Forestry & Environmental Studies, 2014
* Robert Poulin Memorial Award for Outstanding Citizenship, Lakehead University 2012
* Lakehead University President’s Award for Community Leadership, 2012
* Dean of Science and Environmental Studies Metal, Lakehead University 2012
* Biology Prize, Lakehead University 2012
* Gold Metal in Earth and Environmental Sciences, Canada Wide Science Fair, 2008

**Scholarships/ Fellowships:**

* Postdoctoral Fellowships Program, Natural Science and Engineering Research Council of Canada 2019, $90,000
* Postgraduate Scholarship for Doctoral Students, Natural Science and Engineering Research Council of Canada 2014, $63,000
* Yale University Doctoral Fellowship, 2014, $66,000 year-1
* Mackenzie King Scholarship, 2013, $8,300
* Faculty of Forestry and Environmental Studies Entrance Scholarship, Yale University 2012-2013, $40,000
* Postgraduate Scholarship for Masters Students, Natural Science and Engineering Research Council of Canada 2012, $17,300
* Undergraduate Student Research Award, Natural Science and Engineering Research Council of Canada 2011, $4,500
* Undergraduate Student Research Award, Natural Science and Engineering Research Council of Canada 2010, $4,500
* Undergraduate Student Research Award, Canada Wide Science Fair 2009, $4,500
* President’s Scholarship, Lakehead University 2008
* Local Excellence Award, Canada Millennium Scholarship Program 2008, $4,000
* Queen Elizabeth II: Aim For The Top Tuition Scholarship, Ontario Student Assistance Program 2008, $500

**Grants/ Fellowships:**

* Kohlberg Fellowship, 2018, $1000
* Yale Institute for Biospheric Studies Fellowship, 2017, $1,500
* Kohlberg Fellowship, 2017, $1000
* Schiff Fund, Yale University, 2016, $8,500
* Yale Institute for Biospheric Studies Fellowship, 2015, $4,000
* Yale Institute for Biospheric Studies Matching Funds, 2015, $750
* Yale Institute for Biospheric Studies Fellowship, 2014, $4,500
* Edna Bailey Sussman Fund, 2013, $6,300
* Schiff Fund, Yale University, 2013, $3,500

**Memberships in Professional Societies:**

* Canadian Society for Ecology and Evolution 2017-present
* Ecological Society of America 2012-present

**Professional Service:**

* Reviewer: *Applied Soil Ecology, Basic and Applied Ecology*, *Biology and Fertility of Soils, Ecology, Ecosphere, Environmental Microbiology, Environmental Toxicology Reports, Evolution, Functional Ecology,* and *Soil Biology and Biochemistry*
* Doctoral Student Member, Yale-Myers Forest Research Committee 2015-present
* PhD Representative, Student Academic Affairs Committee 2014-2015
* Research Team Member, Connecticut Academy of Sciences and Engineering (Working Group 2 from CT Public Act 12-155), 2013-2015
* Student Senator, Lakehead University Senate 2009-2012
* Undergraduate Representative, Lakehead University Library Committee 2009-2012

**Synergistic Activities:**

* Group leader: Stoichiometry in emerging models of terrestrial organic matter dynamics, WoodStoich 4, 2019
* Co-leader, Data Analysis Student Interest Group, 2018
* Co-organized high school student program at Yale Research Day, 2016-7 & 2017-8
* Co-organized a Science Communication Workshop, Yale University, 2017
* Student Presenter, Yale University Science In The News, 2013
* Volunteer, New Haven Science Fair, 2013
* Events Coordinator, Lakehead Association of Biology Students 2010-2011
* Host Committee, Canada Wide Science Fair 2010
* Chaperone, Canadian Biology Olympiad 2009-2010
* Student Ambassador, Orientation and Commuter Services Office of Lakehead University 2008-2011