

Curriculum Vitae

Byron J. Adams

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Education

Ph.D., School of Biological Sciences, University of Nebraska-Lincoln (1998).
Dissertation title: "Ecology and evolution of Heterorhabditid nematodes and their symbiotic bacteria: species concepts, ecological observations, coevolution and phylogeny."

B.Sc., Department of Zoology, Brigham Young University (1993). *Major:* Zoology
Minor: English

Positions Held

Professor, Department of Biology, Brigham Young University, Provo, UT, 2014-present
Associate Professor, Department of Biology, Brigham Young University, Provo, UT, 2008-2013
Assistant Professor, Microbiology and Molecular Biology Department, Brigham University, Provo, UT, 2003-2008.
Assistant Professor, Entomology and Nematology Department, University of Florida, Gainesville, FL, 2000-2003.
Postdoctoral Fellow, Department of Nematology, University of California, Davis, CA, 1999.
Graduate Research Assistant, Department of Plant Pathology, University of Nebraska, Lincoln, NE, 1993-1998.

External Research Grants Awarded

National Science Foundation, DEB: "LTER: Ecosystem response to amplified landscape connectivity in the McMurdo Dry Valleys, Antarctica" (Co PI, with Mike Gooseff, lead PI, Jeb Barrett, Tina Takacs-Vesbach, John Priscu, Rachael Morgan-Kiss, Peter Doran, and Adrian Howkins. 2017- 2023; (\$6,762,000; \$457,686 to BYU)

National Science Foundation, ANT: "The role of glacial history on the structure and functioning of ecological communities in the Shackleton Glacier region of the

Transantarctic Mountains" (PI, with Diana Wall, Berry Lyons, Ian Hogg and Noah Fierer). 2016-2019. PLR-1341736 (\$843,974; \$369,654 to BYU).

New Zealand Antarctic Research Institute (NZARI): "Testing predicted tolerances of Antarctic non-marine biota in a whole-ecosystem framework" (Co-PI with Phil Novis (lead), Ian Hawes, Adrian Monks, Fraser Morgan, and J. Hee Kim) Funding Amount: \$115,000 2016-2017 (Logistic support to BYU only)

New Zealand Antarctic Research Institute: "Springtails on the edge: Assessing the Mackay Glacier as an ecotone for tracking biological response to climate changes" (Co PI with Ian Hogg and Donald Cowan). 2014-2016 (logistic support only).

National Science Foundation, ANT: "A Planning Workshop for a McMurdo Dry Valleys Terrestrial Observation Network" (PI, with Jeb Barrett, Andrew Fountain and Diana Wall). 2012-2014. ANT 1241487 (\$38,217).

National Science Foundation, DEB and OPP: "Increased Connectivity in a Polar Desert Resulting from Climate Warming: McMurdo Dry Valley LTER Program" (Co-PI with Diane McKnight, Michael Gooseff, Peter Doran, Tina Vesbach, Diana Wall, John Barrett, Ross Virginia, Adrian Howkins, Berry Lyons, Andrew Fountain, John Priscu). 2011-2017. ANT 1115245. \$5,880,000 (\$233,490 to BYU).

Department of the Environment, Water, Heritage and the Arts - Australian Antarctic Division: "Molecular studies of the origins and dispersal patterns of invertebrates in the Antarctic and Subantarctic" (Co-PI with Mark Stevens, Peter Convey, Penny Greenslade, Ian Hogg). 2009-2011. AAS 2355 (logistic support only, dollar amount not specified).

National Science Foundation, Office of Polar Programs: "Limits and Drivers of Metazoan Distributions in the Transantarctic Mountains" PI, with Diana Wall, Berry Lyons, Ian Hogg. 2009-2010. ANT 0840979. \$50,571.

National Science Foundation, Division of Environmental Biology: "Tardigrades: Models for Mentored Research and High School Biology Curricula (RET Supplement)". 2009-2012. DEB-0640959, \$45,000.

National Science Foundation, DEB: "Tardigrades of the LTER sites: A Framework for the Distribution and Phylogeny of North American Tardigrada" (Co-PI with William Miller, Carl Johansson and Paul Morris). DEB 0640959, 2007-2012. \$600,000.

National Human Genome Research Institute (NHGRI), National Institutes of Health (NIH): "6X coverage and draft assembly of the genome of the entomopathogenic nematode *Heterorhabditis bacteriophora* strain TT01" (Co-PI with Todd Ciche, Parwinder Grewal and Paul Sternberg; and the Entomopathogenic Nematode Genome Consortium). 2005-2007. Cost unspecified.

NSF and the United States Department of Agriculture (USDA) 07-165-0709: "The genome sequence of *Heterorhabditis bacteriophora*: Exploiting the unique biology and biological control potential of an entomopathogenic nematode" (CO-PI with Parwinder Grewal, Todd Ciche, and Paul Sternberg 2005-2006. \$240,000.

NSF: "MRI: Acquisition of DNA-manipulation robotics for increased throughput and data integrity in biological research, teaching, and student research training" (with Leigh Johnson and 9 others) 2005-2006. \$337,502

USDA Cooperative State Research, Education, and Extension Service (CSREES) National Research Initiative (NRI) 2005-00903: "Molecular Phylogeny of Tylenchida: Establishing An Evolutionary Framework for the Study of Plant Parasitic Nematodes" 2005-2008. \$322,248

NSF Office of Polar Programs (OPP) 0406141: "Synthesis of Soil Biodiversity and Ecosystem Functioning in Victoria Land, Antarctica: A Workshop 2004 (Co-PI with Diana Wall and Ross Virginia) \$51,655

USDA CSREES: "Effectiveness of indigenous entomopathogenic nematodes for the control of *Diaprepes abbreviatus*" 2003-2004. \$29,348.00

USDA NRI 2002-01974: "Trait Deterioration in Entomopathogenic Nematodes: Characterization and Stabilization" 2002-2005. (Co PI with David Shapiro and Randy Gaugler) \$299,958.

NSF: "Biology of *Helicosporidia*, a unique & unknown group of invertebrate pathogens" 2002-2005. (Co PI with Drion Boucias and Jimmy Becnel) \$290,000

International Science & Technology Center grant G-508 "Nematodes Against Harmful Insects" 2002-2005 (with Manana Lortkipanidze, Irakli Eliava, Tsisia Chkubianishvili, and Parwinder Grewal) \$199,544

USDA Tropical-Subtropical Agriculture Research: "Leveraging taxonomic expertise in existing research programs utilizing *Steinernema scapterisci* for control of mole crickets (*Scapteriscus* spp.) in Puerto Rico and Florida" 2002-2004. \$51,000.

State of Florida Department of Agriculture and Consumer Services: Monitoring and establishment of *Steinernema scapterisci* for the biological control of mole crickets (genus *Scapteriscus*) in Florida. 2002. \$32,000.

USDA CSREES: "Nematodes that are natural enemies of the citrus root weevil, *Diaprepes abbreviatus*" 2001-2003. \$14,000

TetraTec: "Invertebrate surveys for soil bioremediation" 2001. \$5,000

California Center for Equine Health Grant 99-10: "Pathogenesis, molecular biology/epidemiology of *Halicephalobus gingivalis*, a fatal infectious parasitic nematode of horses and humans" (PI, with Hailu Kinde, James Baldwin, and Steven Nadler). 2000-2001. \$26,000

USDA CSREES NRI Grant 95-37312-1660: "Phylogeny and biogeography of Heterorhabditid nematodes" (with Tom Powers). 1995-1997. \$24,000

Academic Grants Awarded

University of Florida College of Agriculture and Life Sciences Minigrant Award for the Improvement of Instruction: "Storage and dissemination solutions for ENY 5810, Information Techniques in Research: DVD authoring hard- and software" 2002. \$3,000

Brigham Young University, Office of Research and Creative Activities: "Agricultural, Ecological and Evolutionary Nematology: An Integrative Research Program for Undergraduates in the Biological Sciences (2006-2009)

Awards & Honors

US Delegate, Scientific Council on Antarctic Research (SCAR): United States delegate to the Standing Scientific Group on Life Sciences (SSLG) (2016-2022)

Karl G. Maeser Excellence in Research and Creative Arts Award: Brigham Young University, 2014.

Visiting Scholar: College of Science and Engineering, University of Waikato, New Zealand. 2012.

Program Development, Writing & Steering Committee: AnT-ERA: Antarctic Thresholds – Ecosystem Resilience and Adaptation; Scientific Council on Antarctic Research. 2010-present

Outstanding Research Award: College of Life Sciences, Brigham Young University, 2009

Outstanding Service in Science Education: Utah Science Teachers Association. 2009

Ice Marathon, McMurdo Station Antarctica: First Place (over 40 division), Raytheon Polar Services, National Science Foundation. 2009

Elected Public Servant (two terms): Woodland Hills UT City Council. 2009-2015

Golden Beaker Award: Petroleum Helicopters Inc., McMurdo Helicopter Operations. 2008

Young Scholar Award: Brigham Young University. 2007

Executive Committee Member: Society of Nematologists. 2006-present.

Antarctic Service Medal: United States Department of Defense and the National Science Foundation. 2006, 2010

Panel Member: US-Israel Binational Agricultural Research and Development Fund. 2006-2007; 2007-2008; 2008-2009.

Panel Member: USDA National Research Initiative: Suborganismal Biology Panel, 2008; Tools, Resources & Genomics Panel, 2008.

Member: National Science Foundation: Development of an Antarctic Integrated System Science program; Workshop & Proposal Document. 2007.

Panel Member: National Science Foundation, Science and Technology Centers. 2005.

Panel Member: USDA National Research Initiative: Program of Organismal and Population Biology of Arthropods and Nematodes. 2003, 2005.

Committee/Council Member: Genetic Monitoring of Polar Regions; British Antarctic Survey, Scientific Committee on Antarctic Research, Census of Antarctic Marine Life, International Antarctic Science Committee. April 2011 - Present.

Exemplar Lecturer: University of Florida Center for Excellence in Teaching. 2000.

Goss Memorial Fellowship: Rewarding research excellence in Plant Pathology (University of Nebraska). 1996, 1997, 1998.

Milton E. Mohr Fellowship: rewarding research excellence in Biotechnology (University of Nebraska). 1998.

Milton E. Mohr Fellowship: rewarding excellence in teaching undergraduates (Institute of Agriculture and Natural Resources, University of Nebraska). 1996.

DowElanco Graduate Student Travel Award (Society of Nematologists). 1996.

Courses Taught

-Undergraduate courses at Brigham Young University

Biology for Majors
Molecular Biology
Evolutionary Biology
Readings in Microbial Pathogenesis
Microbiology & Molecular Biology Seminar
Advanced Laboratory Methods (Entomopathogenic Nematodes & Bacteria Module)

-Graduate courses at Brigham Young University

Research Orientation
Coevolutionary Analysis
Molecular Pathogenesis
Microbiology & Molecular Biology Graduate Seminar
Evolutionary Processes

-Graduate courses at the University of Florida

Nematode Anatomy and Morphology
Nematode Taxonomy and Systematics
Information Techniques in Research
Invertebrate Field Biology

-Undergraduate courses at the University of Florida

Invertebrate Field Biology

Publications (*=undergraduate student; # = graduate student %=high school student)

Peer Reviewed Publications

Knox, M. A., W. S. Andriuzzi, H. N. Buelow, C. Takacs-Vesbach, B. J. Adams, and D. H. Wall. 2017. Decoupled responses of soil bacteria and their invertebrate consumer to warming, but not freeze-thaw cycles, in the Antarctic Dry Valleys. *Ecology Letters* DOI doi: 10.1111/ele.12819

Gooseff, M. N., J. E. Barrett, B. J. Adams, P. T. Doran, A. G. Fountain, W. B. Lyons, D. M. McKnight, J. C. Priscu, E. R. Sokol, C. Takacs-Vesbach, M. L. Vandegehuchte, R. A. Virginia, and D. H. Wall. 2017. Decadal ecosystem response to an anomalous melt season in a polar desert in Antarctica. *Nature Ecology & Evolution*. DOI: 10.1038/s41559-017-0253-0

Beet, C. R.#, I. D. Hogg, G. E. Collins#, D. A. Cowan, D. H. Wall, and B. J. Adams. 2016. Genetic diversity among populations of Antarctic springtails (Collembola) within the Mackay Glacier ecotone. *Genome* **59**:762-770.

Bennett, K. R.#, I. D. Hogg, B. J. Adams, and P. D. N. Hebert. 2016. High levels of intraspecific genetic divergences revealed for Antarctic springtails: evidence for small-scale isolation during Pleistocene glaciation. *Biological Journal of the Linnean Society* **119**:166-178.

Blackburn, D.#, B. Crawford*, D. I. Shapiro-Ilan, and B. J. Adams. 2016a. Environmental drivers of trait changes in *Photorhabdus luminescens*. *Biological Control* **92**:145-152.

Blackburn, D.#, D. I. Shapiro-Ilan, and B. J. Adams. 2016b. Biological control and nutrition: Food for thought. *Biological Control* **97**:131-138.

Blackburn, D.#, P. L. Wood#, T. J. Burk*, B. Crawford*, S. M. Wright*, and B. J. Adams. 2016c. Evolution of virulence in *Photorhabdus* spp., entomopathogenic nematode symbionts. *Systematic and Applied Microbiology* **39**:173-179.

Fountain, A. G., G. Saba, B. Adams, P. Doran, W. Fraser, M. Gooseff, M. Obryk, J. C. Priscu, S. Stammerjohn, and R. A. Virginia. 2016. The Impact of a Large-Scale Climate Event on Antarctic Ecosystem Processes. *Bioscience* **66**:848-863.

Gunnell, M. K.#, B. J. Adams, and R. A. Robison. 2016a. The Genetic Diversity and Evolution of *Francisella tularensis* with Comments on Detection by PCR. *Current Issues in Molecular Biology* **18**:79-91.

Gunnell, M. K.#, R. A. Robison, and B. J. Adams. 2016b. Natural Selection in Virulence Genes of *Francisella tularensis*. *Journal Of Molecular Evolution* **82**:264-278.

- Knox, M. A., D. H. Wall, R. A. Virginia, M. L. Vandegehuchte, I. S. Gil, and B. J. Adams. 2016. Impact of diurnal freeze-thaw cycles on the soil nematode *Scottinema lindsayae* in Taylor Valley, Antarctica. *Polar Biology* 39:583-592.
- Lyons, W. B., K. Deuerling, K. A. Welch, S. A. Welch, G. Michalski, W. W. Walters, U. Nielsen, D. H. Wall, I. Hogg, and B. J. Adams. 2016. The Soil Geochemistry in the Beardmore Glacier Region, Antarctica: Implications for Terrestrial Ecosystem History. *Scientific Reports* 6:26189.
- Morffe, J., N. García, B. Adams, and K. Hasegawa. 2016. First record of the land planarian *Bipalium kewense* Moseley, 1878 (Tricladida: Geoplanidae: Bipaliinae) from Cuba. *BioInvasions Records* 5:127-132.
- Pearce, D. A., I. A. Alekhina, A. Terauds, A. Wilmotte, A. Quesada, A. Edwards, A. Dommergue, B. Sattler, B. J. Adams, C. Magalhães, W.-L. Chu, M. C. Y. Lau, C. Cary, D. J. Smith, D. H. Wall, G. Eguren, G. Matcher, J. A. Bradley, J.-P. de Vera, J. Elster, K. A. Hughes, L. Cuthbertson, L. G. Benning, N. Gunde-Cimerman, P. Convey, S. G. Hong, S. B. Pointing, V. H. Pellizari, and W. F. Vincent. 2016. Aerobiology Over Antarctica – A New Initiative for Atmospheric Ecology. *Frontiers in Microbiology* 7:4159-4157.
- Velasco-Castrillon, A., S. J. McInnes, M. B. Schultz, M. A. Arr níz-Crespo, C. A. D'Haese, J. A. E. Gibson, B. J. Adams, T. J. Page, A. D. Austin, S. J. B. Cooper, and M. I. Stevens. 2015. Mitochondrial DNA analyses reveal widespread tardigrade diversity in Antarctica. *Invertebrate Systematics* 29:578–13.
- Dillman, A. R., M. Macchietto, C. F. Porter#, A. Rogers, B. Williams, I. Antoshechkin, M.-M. Lee, Z. Goodwin, X. Lu, E. E. Lewis, H. Goodrich-Blair, S. P. Stock, B. J. Adams, P. W. Sternberg, and A. Mortazavi. 2015. Comparative genomics of *Steinernema* reveals deeply conserved gene regulatory networks. *Genome Biology* 16:1-21.
- Gunnell#, M., K., B. J. Adams, and R. A. Robison. 2015. The genetic diversity and evolution of *Francisella tularensis* with comments on detection by PCR. *Current Issues in Molecular Biology* 18:79-92.
- Shapiro-Ilan, D. I., D. Blackburn#, L. Duncan, F. E. El-Borai, H. Koppenhöfer#, P. Tailliez, and B. J. Adams. 2014. Characterization of biocontrol traits in *Heterorhabditis floridensis*: A species with broad temperature tolerance. *Journal Of Nematology* 46:336-345.
- Adams, B. J., D. H. Wall, R. A. Virginia, E. Broos, M. A. Knox. 2014. Ecological biogeography of the terrestrial nematodes of Victoria Land, Antarctica. *ZooKeys* 419:29-71.

- Miller, W. R., C. Johansson, and B. Adams. 2014. Tardigrades of North America: Records for five marine species from the Pacific Coast. *Transactions of the Kansas Academy of Science* 117:281-286.
- Gutt, J; Adams, B; Bracegirdle, T; Cowan, D; Cummings, V; di Prisco, G; Gradinger, R; Isla, E; McIntyre, T; Murphy, E; Peck, L; Schloss, I; Smith, C; Suckling, C; Takahashi, A; Verde, C; Wall, DH; Xavier, J. 2012. Antarctic Thresholds - Ecosystem Resilience and Adaptation: a new SCAR-Biology Programme. *Polarforschung*, 82, 2, 147-150, [hdl:10013/epic.42531.d001](http://hdl.handle.net/10013/epic.42531.d001) (erschienen 2013)
- Levy, J., W. Berry Lyons, and B. Adams. 2013. Understanding Terrestrial Ecosystem Response to Antarctic Climate Change. *Eos, Transactions American Geophysical Union* 94:33-33. [not indexed; times cited = 0]
- Bai, X., B. J. Adams, T. A. Ciche, S. Clifton, R. Gaugler, K.-s. Kim, J. Spieth, P. W. Sternberg, R. K. Wilson, and P. S. Grewal. 2013. A Lover and a Fighter: The Genome Sequence of an Entomopathogenic Nematode *Heterorhabditis bacteriophora*. *PLoS ONE* 8:e69618. [IF 3.73; times cited=0]
- Johansson, C., W. R. Miller, E. T. Linder, B. J. Adams, and E. Boreliz-Alvarado*. 2013. Tardigrades of Alaska: distribution patterns, diversity and species richness. *Polar Research* 32:104. [IF 1.62; time cited = 0]
- de Tomasel, C. M., B. J. Adams, F. G. Tomasel, and D. H. Wall. 2013. The life cycle of the Antarctic nematode *Plectus murrayi* under laboratory conditions. *Journal of Nematology* 45:39-42. [IF 0.33; times cited = 0]
- Fierer, N., J. W. Leff, B. J. Adams, U. N. Nielsen, S. T. Bates, C. L. Lauber, S. Owens, J. A. Gilbert, D. H. Wall, and J. G. Caporaso. 2012. Cross-biome metagenomic analyses of soil microbial communities and their functional attributes. *Proceedings of the National Academy of Sciences* 109:21390-21395. [IF 9.74; times cited = 7]
- Czechowski, P. C. J., Sands, B. J. Adams, C. A. D'Haese, J. A. E. Gibson, S. J. McInnes and M. I. Stevens. 2012. Antarctic Tardigrada: a first step in understanding molecular operational taxonomic units (MOTUs) and biogeography of cryptic meiofauna. *Invertebrate Systematics* 26, 526–538. [IF 1.98; times cited = 0]
- Nielsen, U. N., Wall, D. H., Adams, B. J., Virginia, R. A., Ball, B. A., Gooseff, M. N., McKnight, D. M. 2012. The ecology of pulse events: insights from an extreme climatic event in a polar desert ecosystem. *Ecosphere* 3(2):17. <http://dx.doi.org/10.1890/ES11-00325.1> [not indexed yet; times cited = 4]
- Dillman, A.*, Chaston, J. M.*, Adams, B. J., Ciche, T. A., Goodrich-Blair, H., Patricia Stock, S., Sternberg, P. W. 2012. An entomopathogenic nematode by any other name. *Plos Pathogens* 8(3): 1-4. [IF 8.14; times cited = 10]

- Smith, T. E.[†], Wall, D. H., Hogg, I. D., Adams, B. J., Nielsen, U. N., Virginia, R. A. 2012. Thawing permafrost alters nematode populations and soil habitat characteristics in an Antarctic polar desert ecosystem. *Pedobiologia* 55(2):75-81. [IF 1.70; times cited = 1]
- Nielsen UN, Wall DH, Adams BJ, Virginia RA. 2011. Antarctic nematode communities: observed and predicted responses to climate change. *Polar Biology* 34(11):1701-1711. [IF 2.01; times cited = 5]
- Maneesakorn P[†], An RS[†], Daneshvar H[†], Taylor K, Bai XD, Adams BJ, Grewal PS, Chandrapatya A. 2011. Phylogenetic and cophylogenetic relationships of entomopathogenic nematodes (*Heterorhabditis*: Rhabditida) and their symbiotic bacteria (*Photorhabdus*: Enterobacteriaceae). *Molecular Phylogenetics And Evolution* 59(2):271-280. [IF 4.07; times cited = 6]
- Nielsen UN, Wall DH, Li G, Toro M, Adams BJ, Virginia RA. 2011. Nematode communities of Byers Peninsula, Livingston Island, maritime Antarctica. *Antarctic Science* 23(4):349-357. [IF 1.63; times cited = 3]
- Chaston, J. M.*[†], A. R. Dillman*[†], D. I. Shapiro-Ilan, A. L. Bilgrami, R. Gaugler, K. R. Hopper and B. J. Adams. 2011. Outcrossing and crossbreeding recovers deteriorated traits in laboratory cultured *Steinernema carpocapsae* nematodes. *International Journal for Parasitology* 41:801-809. [IF 3.64; times cited = 4]
- Adhikari, B. N.[†], Tomasel, C. M., Li, G., Wall, D. H. and B. J. Adams. 2010. *Plectus murrayi*: A model organism to study multiple stress tolerance. *Cold Spring Harbor Protocols (Emerging Model Organism Series)* doi:10.1101/pdb.emo142. [not indexed; times cited = 0]
- Adhikari, B. N.[†], Tomasel, C. M., Li, G., Wall, D. H. and B. J. Adams. 2010. Culturing the Antarctic Nematode *Plectus murrayi*. *Cold Spring Harbor Protocols (Emerging Model Organism Series)* doi:10.1101/pdb.prot5522 [not indexed; times cited = 3]
- Demetras, N. J.[†], I. D. Hogg, J. C. Banks and B. J. Adams. 2010. Latitudinal distribution and mitochondrial DNA (COI) variability of *Stereotydeus* spp. (Acari: Prostigmata) in Victoria Land and the central Transantarctic Mountains. *Antarctic Science* 22(6), 749-756. [IF 1.63; times cited = 4]
- Peat, S. M.[†], ffrench-Constant, R., Waterfield, N., Marokhazi, J., Fodor, A., and Adams, B.J. 2010. A robust phylogenetic framework for the bacterial genus *Photorhabdus* and its use in studying the evolution and maintenance of bioluminescence: A case for 16S, gyrB, and glnA. *Molecular Phylogenetics and Evolution* 57:728-740. [IF 4.07; times cited = 5]

- Ayres E, Nkem JN, Wall DH, Adams BJ, Barrett JE, Simmons BL, Virginia RA, Fountain AG. 2010. Experimentally increased snow accumulation alters soil moisture and animal community structure in a polar desert. *Polar Biology* 33:897-907. [IF 2.01; times cited = 11]
- Adhikari, B. N., D. H. Wall and B. J. Adams. 2010. Effect of slow desiccation and freezing on gene transcription and stress survival of an Antarctic nematode. *Journal of Experimental Biology* 213:1803-1812. [IF 3.24; times cited = 9]
- Robeson II, M. S., E. K. Costello, K. R. Freeman, J. Whiting*, B. Adams, A. P. Martin and S. K. Schmidt. 2009. Environmental DNA sequencing primers for eutardigrades and bdelloid rotifers. *BMC Ecology* 9:25 doi:10.1186/1472-6785-9-. [not indexed; times cited = 9]
- Simmons, B. L., D. H. Wall, B. J. Adams, E. Ayres, J. E. Barrett, and R. A. Virginia. 2009. Long-term experimental warming reduces soil nematode populations in the McMurdo Dry Valleys, Antarctica. *Soil Biol. Biochem.* 41:2052-2060. [IF 3.65; times cited = 20]
- Adhikari, B. N., D. H. Wall, and B. J. Adams. 2009. Desiccation survival in an Antarctic nematode: Molecular analysis using expressed sequenced tags. *BMC Genomics* 10:69 doi:10.1186/1471-2164-10-69. [4.40; times cited = 26]
- Bai, X. D., B. J. Adams, T. A. Ciche, S. Clifton, R. Gaugler, S. A. Hogenhout, J. Spieth, P. W. Sternberg, R. K. Wilson, and P. S. Grewal. 2009. Transcriptomic analysis of the entomopathogenic nematode *Heterorhabditis bacteriophora* TTO1. *BMC Genomics* 10. [IF 4.40; times cited = 7]
- Johnson, J., M. Adair, B. Adams, D. Fairbanks, V. Itamura, D. Jeffery, D. Merrell, S. Ritter, and R. Tolman. 2009. Evolution Education in Utah: A State Office of Education–University Partnership Focuses on Why Evolution Matters. *Evolution: Education and Outreach* 2:349-358. [not indexed; times cited = 3]
- Johnson, J. B., S. M. Peat#, and B. J. Adams. 2009. Where's the ecology in molecular ecology? *Oikos* 118:1601-1609. [IF 3.32; times cited = 7]
- Shapiro-Ilan, D. I., G. N. Mbata, K. B. Nguyen, S. M. Peat, D. Blackburn*, and B. J. Adams. 2009. Characterization of biocontrol traits in the entomopathogenic nematode *Heterorhabditis georgiana* (Kesha strain), and phylogenetic analysis of the nematode's symbiotic bacteria. *Biol. Control* 51:377-387. [IF 1.92; times cited = 8]
- Simmons, B. L., D. H. Wall, B. J. Adams, E. Ayres, J. E. Barrett, and R. A. Virginia. 2009. Terrestrial mesofauna in above- and below-ground habitats: Taylor Valley, Antarctica. *Polar Biol.* 32:1549-1558. [IF 2.01; times cited = 3]

- Adhikari, B. N., C. Y. Lin, X. D. Bai, T. A. Ciche, P. S. Grewal, A. R. Dillman, J. M. Chaston, D. I. Shapiro-Ilan, A. L. Bilgrami, R. Gaugler, P. W. Sternberg, and B. J. Adams. 2009. Transcriptional profiling of trait deterioration in the insect pathogenic nematode *Heterorhabditis bacteriophora*. *BMC Genomics* 10. [IF 4.40; times cited = 4]
- Ayres, E., J. N. Nkem, D. H. Wall, B. J. Adams, J. E. Barrett, E. J. Broos, A. N. Parsons, L. E. Powers, B. L. Simmons and R. A. Virginia. 2008. Human trampling reduces soil faunal populations in a polar desert, McMurdo Dry Valleys, Antarctica. *Conservation Biology* 22(6):1544-1551. [IF 4.36; times cited = 11]
- Victoriano, P. F., J. C. Ortiz. E. Benavides[†], B. J. Adams and J. W. Sites. 2008. Comparative phylogeography of co-distributed species of Chilean *Liolaemus* (Squamata: Tropiduridae) from the central-southern Andean range. *Molecular Ecology* 17(10):2397-2416. [IF 6.28; times cited = 33]
- Barrett, J. E., R. A. Virginia, D. H. Wall, and B. J. Adams. 2008. Decline of a dominant invertebrate species contributes to altered carbon cycling in low diversity soil ecosystem. *Global Change Biology* 14:1-11. [IF 6.91; times cited = 24]
- Peat, S. M.[‡], and B. J. Adams. 2008. Natural selection on the *luxA* gene of bioluminescent bacteria. *Symbiosis* 46(2) 101-108. [IF 1.11; times cited = 1]
- Bliss, T.*, A. R. Dillman*, R. Russell, M. Anderson, M. Jett, D. Yourick, and B. J. Adams. 2007. The exterminators: An inquiry-based experimental module using insect parasitic nematodes. *The Science Teacher* 74(4):34-40. [not indexed; not cited]
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Book Chapters & Invited Reviews

- Adhikari, B. N.^s, and B. J. Adams. 2011. Molecular analysis of desiccation survival in Antarctic nematodes. Pp. 205-232 in R. N. Perry, and D. A. Wharton, eds. *Molecular and Physiological Basis of Nematode Survival*. CABI International, Wallingford. [not indexed; times cited = 2]
- Peat, S. M.^s, B. C. Hyman, and B. J. Adams. 2009. Phylogenetics and population genetics of entomopathogenic and insect-parasitic nematodes. Pp. 166-192 in S. P. Stock, N. Boemare, I. Glazer, and J. Vandenberg, eds. *Molecular*

- approaches and techniques for the study of insect pathogens. CABI International, Wallingford, Oxfordshire. [not indexed; times cited = 0]
- Adams, B. J., A. R. Dillman*, and C. Finlinson*. 2009. Molecular Taxonomy and Phylogeny. Pp. 119-138 *in* R. N. Perry, M. Moens, and J. Starr, eds. Root-knot Nematodes. CABI International, Wallingford, Oxfordshire. [not indexed; times cited = 36]
- Adams, B., A. Arthern, A. Atkinson, C. Barbante, R. Bargagli, D. Bergstrom, N. Bertler, R. Bindschadler, J. Bockheim, C. Boutron, D. Bromwich, S. Chown, J. Comiso, P. Convey, A. Cook, G. di Prisco, E. Fahrbach, J. Fastook, J. Forcarda (and 45 others). 2009. The Instrumental Period. Pp. 183-298 *in* J. Turner, R. Bindshadler, P. Convey, G. di Prisco, E. Fahrbach, J. Gutt, D. Hodgson, P. Mayewski, C. Summerhayes, eds. Antarctic Climate Change And The Environment. Scientific Committee on Antarctic Research, Cambridge, UK. [not indexed; times cited = 141]
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- Adams, B. J. and K. B. Nguyen. 2002. Taxonomy and Systematics. Pp. 1-34 *In* Entomopathogenic Nematology, R. Gaugler, (ed.). CAB publishing, CAB International. [not indexed; times cited = 160]
- Adams, B. J. 2002. Bioassays of entomopathogenic microbes and nematodes. Annals of the Entomological Society of America 95:139-140. [IF 1.204; times cited = 0]
- Adams, B. J. 2001. Species concepts and entomopathogenic nematodes: What species are, how we can find them, and an application to the genus *Heterorhabditis*. Pp 30 – 35 *In*: C. T. Griffin, A. M. Burnell, M. J. Downes and R. Mulder (Eds.). Developments in entomopathogenic nematode/bacterial research. European Commission Publications, Luxembourg. [not indexed; times cited = 0]
- D. Shapiro-Ilan, B. Wood, W. Gardner, T. Cottrell, J. Fuxa, M. Hall, K. Nguyen, and B. Adams. 2001. Research toward microbial control of the pecan weevil. pp.

116-128 *In* Proceedings of the Southeastern Pecan Growers Association, 94th Annual Convention, Orange Beach Alabama. [not indexed, times cited = 0]

Adams, B. J., A. M. Burnell, and T. O. Powers. 1998. Phylogenetic inference and taxonomic resolution among Heterorhabditid species: Limitations and delimitations. *In*: Abad, P., Burnell, A.M., Laumond, C. Boemare, N. and Coudert F. (Eds.). Genetics and Molecular Biology of Entomopathogenic Nematodes. European Commission Publications, Luxembourg. [not indexed; times cited = 0]

Powers, T. O. and B. Adams. 1994. Nucleotide sequences in nematode systematics. *In* Lamberti, F. (ed.). Advances in Molecular Plant Nematology. Plenum Press, New York. [not indexed; times cited = 4]

Textbooks

Adams, B. J. and J. L. Crawley. 2013. Van de Graaff's Photographic Atlas for the Zoology laboratory. Morton Pub., Englewood, CO.

Adams, B. J. and J. L. Crawley. 2013. Van de Graaff's Photographic Atlas for the Biology laboratory. Morton Pub., Englewood, CO.

Invited Symposia

"Antarctic Ecology and Evolution: Skepticism, Denialism and Science Education". Utah Science Teachers association, Annual Meeting, Provo, UT. February 2016.

"Adaptation and Exaptation: Nematodes Probably Don't Live on Mars (but they could if they wanted to)". Society of Nematologists, Annual Meeting, Montreal Canada, July 2016.

"Evolution and Environmental Change in the Transantarctic Mountains". Scientific Council on Antarctic Research, Open Science Meeting, Kuala Lumpur, Malaysia. August 2016.

"Adaptation and Exaptation: Coupled evolutionary and physiological responses to freezing and desiccation in *Plectus murrayi*". Scientific Council on Antarctic Research, Open Science Meeting, Kuala Lumpur, Malaysia. August 2016.

"If animals live(d) on Mars, this is how they could do it: The evolutionary ecology of Antarctic soil animals. Standard 4: Students will understand that offspring inherit traits that make them more or less suitable to survive in the environment. Objective 2: Relate the adaptability of organisms in an environment to their inherited traits and structures." Utah Science Teachers Association, Provo UT, February, 2015.

“Biota of the McMurdo Dry Valleys and The Tree of Life.” Long Term Ecological Research All Scientists Meeting, National Science Foundation, Estes Park, CO; September 2015

“Evolution and Environmental Change in the Transantarctic Mountains.” National Science Foundation, Interdisciplinary Antarctic Earth Science Meeting, Loveland CO, September 2015.

“The McMurdo Dry Valleys Terrestrial Observation Network: Directives and Outcomes.” Antarctic Near-Shore and Terrestrial Observation System (ANTOS). University of Waikato, Hamilton NZ., August 2015.

“Terrestrial Ecosystems”, Environmental drivers of Antarctic biodiversity at different spatial scales, Ant-ECO; Scientific Committee on Antarctic Research, Auckland, NZ, August 2014.

“The McMurdo Terrestrial Observation Network”, ANTOS - Antarctic Near Shore and Terrestrial Observation System, Scientific Committee on Antarctic Research, Ant-ECO, Auckland NZ, August 2014.

“Increased Explanatory Power through International Science Coordination: *The McMurdo Dry Valleys Terrestrial Observation Network*” XI SCAR Biology Symposium, Life in Antarctica: Boundaries and Gradients in Changing Environments, Barcelona, Spain July 2013.

“Increased Explanatory Power through International Science Coordination: *The McMurdo Dry Valleys Terrestrial Observation Network*” NSF LTER Science Council Meeting, Jornada Experimental Range and New Mexico State University, Las Cruces, NM May 2013.

“The McMurdo Dry Valleys Terrestrial Observation Network: An International Effort to Coordinate Scientific Measurements, Data Management, and Environmental Stewardship” NSF Forum: The Globalization of Long Term Ecological Research, National Science Foundation, Arlington, VA March 2013. NSF press release: <http://tinyurl.com/lyo6mzs> archived webcast at: <http://tinyurl.com/k6gchnq>

“Ecological Responses to Environmental Change in the McMurdo Dry Valleys, Antarctica: The Long Term Ecological Approach” The New Zealand Antarctic Research Institute, Auckland, New Zealand March 2013.

“The Endemic Fauna of Terrestrial Victoria Land and the Transantarctic Mountains: Sentinels of Global Change and Environmental Policy?” XXXVII Scientific Council on Antarctic Research, Portland OR July 2012.

"Evolutionary and ecological stoichiometry of Antarctic nematodes," Ecological Genomics Symposium, Kansas State University & the National Science Foundation, Kansas City, MO November 2011.

"Where's the ecology in molecular ecology?" Molecular Ecology Symposium, annual meeting of the Society of Nematologists, Boise, ID August 2010.

"Trophic phylogeography: A research program for identifying drivers of soil food web composition and concerted patterns of change over space and time" The Society of Nematologists and Soil Ecology Society Joint Conference: Symposium on "The two faces of soil community ecology - interactions within and among trophic groups." Burlington, VT, July 2009.

"Evolutionary ecology of MCM LTER animals" The MCM PAL Joint Session, National Science Foundation Long Term Research Network All Scientists Meeting, Estes Park, CO August 2009.

"Turning Trees into Taxonomies *or* How one goes from a Phylogeny to revising a Classification" Fifth International Nematology Congress, Brisbane Australia, July 2008.

"Evolution and the Taxonomy of Plant Parasitic Nematodes" International Congress of Plant Pathology, Torino Italy, August 2008.

"EPN Phylogeny and Evolution" Annual Meeting, Society for Invertebrate Pathology, Quebec City, Quebec, Canada, August 2007.

"Trophic Phylogeography: A Research Program for Examining Ecosystem Assembly and Functioning within a historical Coevolutionary Framework" The Ecological Complexities of Biological Control: Trophic Cascades, Spatial Heterogeneity, and Behavioral Ecology. Joint Meetings, Society of Nematologists, and the American Phytopathological Society, San Diego CA, July-Aug 2007.

"Nematodes: Phylogeny, Diversity & Evolution" Invertebrate Phylogenetics Symposium, Annual Meetings of the Willi Hennig Society. New Orleans, LA, June 2007.

"Diversity and Distribution of Organisms in Victoria Land" Synthesis of Soil Biodiversity and Ecosystem Functioning in Victoria Land, Antarctica: An NSF Sponsored Workshop. Jekyll Island, GA; April 2005.

"Update on the Tylenchida" The NSF Tree of Life Project Symposium, Annual Meetings of the Society of Nematologists. YMCA of the Rockies, Estes Park, Colorado, July 2004.

"Contributions of Nematology to 21st Century Biology: Franchise Player, Role Player, Waterboy or Spectator?" Plenary Session, "Linkages of Nematology to Emerging

Disciplines" Annual Meetings of the Society of Nematologists. YMCA of the Rockies, Estes Park Colorado, July 2004.

"Intraspecific Designations: A Molecular Perspective" Intraspecific Designation of Plant-Parasitic Nematodes. Annual Meetings of the Society of Nematologists. YMCA of the Rockies, Estes Park Colorado, July 2004.

"Molecular and Analytical Approaches to Nematode Biodiversity" NSF sponsored International Symposium on Impacts of Soil Biodiversity on Biogeochemical Processes in Ecosystems/ International Workshop on Molecular Methods in Soil Biological and Biochemical Diversity in Terrestrial Ecosystems. Taipei, Taiwan, April 2004.

"Evolution and Biogeography" Third International Symposium on Entomopathogenic Nematology. Eilat, Israel, November 2003.

"Biodiversity" Third international Symposium on Entomopathogenic Nematodes and Symbiotic Bacteria. Wooster Ohio, September 2003.

"Taxonomy and Systematics of *Steinernema*" European Union COST 850 Biocontrol Symbiosis, WG3 Biotechnology, workshop and meeting. Budapest and Debrecen, Hungary April 2002.

"Evolution of plant parasitism in nematodes" Annual meeting of the Society of Nematologists. Nematode Evolution. Salt Lake City, Utah, August 2001.

"Nematode speciation and biodiversity" Annual meeting of the Society for Invertebrate Pathology. Nematode/bacterium: the present and future. Guanajuato, Mexico, August 2000.

"Species concepts and entomopathogenic nematodes" COST 819: European cooperation in the field of scientific and technical research: Genetics of entomopathogenic nematode-bacterium complexes. Maynooth, Ireland, 2000.

"The Species Delimitation Uncertainty Principle: On the dichotomy between non-operational and operational species definitions" Joint meetings of the American Society of Parasitologists and the Society of Nematologists: Nematode Evolution. Monterey, CA, July 1999.

"Dysfunctional species concepts can screw up your research" Annual meeting of the Society of Nematologists: Do species concepts matter in nematology? Plenary session, St. Louis, MO, July 1998.

"Gene trees, species trees, and the species problem: Is there a rational basis for using molecular markers to delimit species of entomopathogenic nematodes?" Annual meeting of the Society of Nematologists: Workshop on entomopathogenic nematode taxonomy. St. Louis, MO, July 1998.

“Molecular phylogenetics and species delimitation in the genus *Heterorhabditis*” COST 819: European cooperation in the field of scientific and technical research: Genetics of entomopathogenic nematode-bacterium complexes. INRA, Antibes, France, 1997.

“Taxonomic and biogeographic diversity within *Heterorhabditis*: A molecular phylogenetic perspective.” Third International Nematology Congress: Origin of *Meloidogyne sp.* and resistance genes. Guadeloupe, FWI, 1996.

“Molecular diagnostics and taxonomy in the genus *Heterorhabditis*” Second International Symposium on Entomopathogenic Nematodes and their Symbiotic Hosts. Honolulu, HI, 1995.

Invited Seminar Presentations

“Metazoan Cryptobiosis and Medical Bioengineering”. Stanford University, Palo Alto, CA. March 2016.

“Evolutionary and Ecological Stoichiometry of Antarctic Nematodes”, University of California-Riverside, March 2014.

“Evo-Eco Genomics: Phosphorus can drive ecological and evolutionary phenomena across multiple spatial and temporal scales”, University of Colorado, Boulder, CO, June 2014.

“Want to get your research funded and be rich and famous? You can do that!”, Featured Speaker, Utah Conference on Undergraduate Research, Brigham Young University, February 2014.

“The McMurdo LTER and the environmental Domains for the Ross Sea Region”, Landcare Research New Zealand, Hamilton, New Zealand, March 2012.

“Key Innovations in Nematode Evolution”, University of Nebraska, School of Biological Sciences, Lincoln, NE April 2009.

“Identifying and Testing Key Evolutionary Innovations” Nematology Department, University of California-Davis, February 2009.

“Open Source Publishing: A Biologist’s Perspective” University Libraries, Brigham Young University, Provo, UT, October 2009.

“How Darwin’s Big Idea Has Improved the Human Condition: Evolution in Forensics, Food & Conservation”. The Darwin Year at BYU – 2009
Duane E. Jeffery Lecture Series in Evolution Education & Religion, Brigham Young University, February 2009

“Evolution Matters: In our Schools and in our Courts (Forensics)”. Utah Valley University Darwin Symposium, March 2009.

“Key Innovations in Nematode Evolution”. Department of Nematology, University of California – Riverside, October 2008.

“Antarctic Biodiversity and Ecosystem Functioning: Historical and Contemporary Responses to Climate Change” College of Science & Health, Utah Valley University, March 2008.

“Are the Effects of Climate, Litter Quality and Time on Decomposition Dependent on Fauna?” EcoLunch, Biology Department, Brigham Young University, 2008.

“The Dry Valleys: Getting Evolution, Ecology, and Biodiversity to Rat out Climate Change” Sunday Night Science Lecture Series, McMurdo Station, Antarctica. 2007.

“Phylogeography, molecular evolution, and the historical response of soil food webs to environmental change” Nematology Department, University of California-Davis, 2006. (note – invited & accepted, but not delivered due to host date issues)

“Antarctic Soil Ecosystems: Linking Ecosystem Structure and Function to Climate Change (*Hot Research in a Cold Climate*)” EcoLunch, College of Biology & Agriculture, Brigham Young University 2005.

“Tylenchid Nematode Phylogeny: Taxon and Character Sampling Effects and Tests of Systematic Hypotheses” Nematology Department, University of California, Riverside, 2003.

“Molecular Pathogenesis of Insects, Nematodes, Algae & Bacteria: A Research Program for Understanding the Evolution of Pathogenicity, Parasitism and Symbiosis” Microbiology & Molecular Biology Department, Brigham Young University, 2002.

“Entomopathogenic Nematodes and their Bacterial Associates: Historical Ecology and Molecular Evidence of Coevolution” Biology Department, University of South Florida, 2001.

“Heterorhabditid nematodes and their bacterial symbionts: Ecology, Phylogeny, Coevolution, and Species Concepts” Department of Ecology and Evolutionary Biology, University of California, Irvine, 1998.

“Symbiosis, Matricidal Birth, Parasitic Infections and Cadavers that Glow in the Dark: Model Evolutionary Organism or X-files Poster Child?” National Library of Medicine, National Center for Biotechnology Information, Bethesda Maryland, 1998.

Paper Presentations

Blackburn D#, Crawford B*, Adams B. Environmental drivers of trait changes in *Photorhabdus*. 2015 8th International IPM Symposium. Salt Lake City, UT, March 2015.

Michael N. Gooseff, John E. Barrett, Byron J. Adams, Peter T. Doran, Andrew Fountain, W. Berry Lyons, Diane M. McKnight, John Priscu, Eric R. Sokol, Cristina Takacs-Vesbach, Martijn Vandegehuchte, Ross A. Virginia, Diana H Wall.
"Antarctic terrestrial ecosystems abide: Changes in soils, lakes and streams of the McMurdo Dry Valleys as the cooling trend ends." Ecological Society of America, Baltimore MD, August 2015

Blackburn, D.#, Crawford, B.* ,Shapiro-Ilan, D. I. I, Adams, B.J. Environmental drivers of trait changes in *Photorhabdus luminescens*. Annual Meeting of the Society of Nematologists. Michigan State University, East Lansing, MI, July 2015.

W Berry Lyons, K. Deuerling, B. Adams, K.A. Welch, S.A. Welch, G. Michalski, B. Theiling, U. Nielsen, D.H. Wall, I. Hogg. "The Hunt for Invertebrate Refugia During the Pleistocene: A Soil Geochemistry – Soil Ecological Nexus." Interdisciplinary Antarctic Earth Science Meeting, Loveland CO, September 2015

Gooseff, M., Fountain, A., Priscu, J., Takacs-Vesbach, C., Howkins, A., Virginia, R., Doran, P., Barrett, J., Wall, D, Lyons, B. McKnight, D. and Adams B. "The Past as a Window to the Future - What Does Long Term Research in the McMurdo Dry Valleys, Antarctica Tell Us About the Trajectory of Polar Ecosystems?" American Geophysical Union, San Francisco, CA; December 2015.

E. A Shaw, D. H. Wall and B. J. Adams. "Climate variation impacts antarctic McMurdo dry valley soil food web structure and complexity" First Soil Biodiversity Conference, Dijon, France (December 2014).

D. H. Wall and Adams, B. J. "Biotic responses to climate change in the Antarctic Dry Valleys" Climate Change, the Cryospheres and Cryopreservation; 2014 World Forum on Biology, Savannah, GA (June 2014).

Lyons, W. B., K. Deuerling#, K. A. Welch, S. A. Welch, G. Michalski, B. Theiling, W. W. Walters, S. Aleshire, U. Nielsen, D. H. Wall, I. Hogg and B. J. Adams. "The Geochemistry of Soils in the Beardmore Glacier Region: Implications for Terrestrial Ecosystem History and Development" Open Science Conference of the Scientific Council on Antarctic Research, Scientific Council on Antarctic Research, Auckland, NZ (August 2014).

Aanderud, Z. T., C. D. Takacs-Vesbach, J. E. Barrett, D. H. Wall, R. A. Virginia and B. J. Adams. "Soil nutrients structure patterns of bacterial community assembly in an Antarctic polar desert" Open Science Conference of the Scientific Council on Antarctic Research, Scientific Council on Antarctic Research, Auckland, NZ (August 2014).

Adams, B. J. "Environmental drivers of Antarctic biodiversity at different spatial scales", Ant-ECO; Scientific Committee on Antarctic Research, Auckland, New Zealand (September 2014).

Thompson, A. R., C. Cary and B. J. Adams. "Habitat suitability of Polyextremophilic Protozoa in Antarctic Dry Valley Soils". Extremophiles 2014, 10th International Congress on Extremophiles, St. Petersburg, Russia (September 2014).

Aanderud, Z. T., C. D. Takacs-Vesbach, J. E. Barrett, D. H. Wall, R. A. Virginia, and B. J. Adams. "Multiple resources determine soil bacterial diversity and activity in an Antarctic polar desert". INTECOL 2013, London, UK (August 2013).

A. Mortazavi, M. Macchietto, A. Dillman, A. Rogers, B. Williams, I. Antoshechkin, C. Finlinson, Z. Goodwin, X. Lu, S. P. Stock, E. E. Lewis, H. Goodrich-Blair, B. J. Adams, and P. W. Sternberg. "Genomic analysis of *Steinernema*: Insights into insect parasitism, intragenus and intergenus evolution". Biology of Genomes, Cold Spring Harbor (May 2013).

Blackburn, D.[†], D. Shapiro-Ilan, and B.J. Adams. Annual Meeting of the Society of Nematologists, "The role of nutrition in the deterioration of biocontrol traits in *Photorhabdus luminescens*". Society of Nematologists, Savannah, GA (July 2012)

Blackburn, D.[†] and B. J. Adams. Evolution of *Caenorhabditis* and Other Nematodes Meeting, Cold Spring Harbor, "A Phylogenetic Analysis of the Genus *Photorhabdus*: 'til death do us part", Cold Spring Harbor Laboratories (New York, USA) (April 3-6 2012).

Saurey, S.[‡], Adams, B. J., Takacs-Vesbach, C. D., Barrett, J. E., Wall, D. H., Virginia, R. A., Aanderud, Z. T. "Exploring C substrate and soil moisture effects on bacterial diversity through 13C- and 18O-DNA stable isotope probing in polar deserts" National Science Foundation Long Term Ecological Research All-Scientists Meeting, Estes Park, CO (September 2012).

Nielson, U. N., Adams, B. J., Wall, D. H., and Lyons, W. B. "Evidence for a spatio-temporal island archipelago model of glacial recession, habitat suitability, and community structure of continental East Antarctic soil fauna", XXXVII Scientific Council on Antarctic Research, Portland OR, (July 2012).

Blackburn, D.[†], D. Shapiro-Ilan, and B.J. Adams. NemaSym, Origins and Evolution of Nematode-Bacteria Associations, "The role of nutrition in the deterioration of biocontrol traits in *Photorhabdus luminescens*". 4th NEMASYM RCN Meeting, Cold Spring Harbor Laboratories, (April 3, 2012).

Levy, J., Fountain, A., Gooseff, M., Barrett, J., Wall, D. H., Nielsen, U. N., Adams, B. J., and Lyons, W. B. "Permafrost and Active Layer Processes in the McMurdo Dry Valleys, Antarctica: Decadal Ecosystem Trends and New Insights Into Cold Desert

Connectivity" Tenth International Conference On Permafrost (TECOP), Salekhard, Russia, (June 2012).

Adams, B. J. & Vesbach, C., McMurdo LTER All Scientists Meeting, "Distribution and Diversity of MCM Biota: From Conundrum to Research Program," University of Colorado & NSF, University of Colorado, Boulder CO. (October 2011).

Adams, B. J., Wall, D., Adams, B. J., Nielsen, U. N., Virginia, R. A., Annual Meeting, Ecological Society of America, "Can climate change in extreme ecosystems inform future scenarios of soil biodiversity.," Ecological Society of America, Austin, TX. (August 2011).

Ball, B., Virginia, R. A., Adams, B. J., Barrett, J. E., Wall, D. H., Annual Meeting, Ecological Society of America, "Extreme stoichiometry: Nutrient limitation and fertilization in polar desert soils," Ecological Society of America, Austin, TX. (August 2011).

Barrett, J., Adams, B. J., Ball, B. A., Nielsen, U. N., Virginia, R. A., Wall, D. H., Annual Meeting, Ecological Society of America, "Influence of climate variation on soil ecosystems of the McMurdo Dry Valleys, Antarctica," Ecological Society of America, Austin, TX. (August 2011).

Adams, B. J., Adhikari, B. N., Simmons, B. L., Ball, B. A., Wall, D. H., Virginia, R. A., Ecological Society of America, "Evolutionary and ecological stoichiometry link nutrient availability to nematode life history and genome evolution," Ecological Society of America, Austin, TX. (August 2011).

Porter, C., Dillman, A. R., Mortazavi, A., Sternberg, P. W., Adams, B. J., Annual Meeting of the Society of Nematologists, "A phylogenomic approach to *Steinernema* evolution," Society of Nematologists, Corvallis, OR. (July 2011).

de Tomasel, C. M., Adhikari, B. N., Adams, B. J., Wall, D. H., Annual Meeting of the Society of Nematologists, "Life cycle of the Antarctic Nematode *Plectus murrayi* under laboratory conditions," Society of Nematologists, Corvallis, OR. (July 2011).

Adams, B. J., Annual Meeting of the Society of Nematologists, "Nematology education: legacy of lineages," Society of Nematologists, Corvallis, OR. (July 2011).

Blackburn, D., Shapiro-Ilan, D., Adams, B. J., Society of Nematologists Annual Meeting, "The role of nutrition in the deterioration of biocontrol traits in *Photorhabdus luminescens*," Society of Nematologists, Corvallis, OR. (July 2011).

Adams, B. J., Peat, S. M., Annual Meeting of the Society of Nematologists, "Comparative Transcriptomics: A research program for nematode ecology and evolution," Society of Nematologists, Boise, ID. (2010).

Adams, B. J., Clayton, A. L.*, Andràssy, I., Wall, D. H., Holovachov, O., Peat, S.#, Annual Meeting of the Society of Nematologists, "Molecular and morphological analysis of *Plectus* biodiversity in the McMurdo Dry Valleys," Society of Nematologists, Boise, ID. (2010).

Adams, B. J., Adhikari, B. N.†, Annual Meeting of the Society of Nematologists, "Molecular genomic approaches to nematode-environment interaction studies," Society of Nematologists, Boise, ID. (2010).

Adams, B. J., Martin, M. T.*, Wall, D. H., Peat, S.#, Adhikari, B. N.#, Annual Meeting of the Society of Nematologists, "Response of *Scottinema lindsayae* to Antarctic glacial cycles," Society of Nematologists, Boise, ID. (2010).

Adams, B. J., Smith, T. E.‡, Wall, D. H., Hogg, I. D., Nielsen, U. N., Virginia, R. A., Annual Science Meeting of the MCM LTER, "Variation in soil nematode community dynamics and soil properties with permafrost seep in a polar desert ecosystem, Antarctica," Fort Collins, CO. (2010).

Adams, B. J., Martin, M. T., Wall, D. H., Peat, S. M., Adhikari, B. N., Annual Science Meeting of the McMurdo LTER, "Phylogeography and population structure of *Scottinema lindsayae*," Fort Collins, CO. (2010).

Adams, B. J., Whiting, J.*, Nielsen, U. N., Wall, D. H., Annual Science Meeting of the McMurdo LTER, "Population genetics and phylogenetics of the MCM tardigrades," Fort Collins, CO. (2010).

Adams, B. J., Adhikari, B. N.†, XXXI Scientific Council on Antarctic Research Open Science Conference, "Evolutionary and ecological stoichiometry of the Antarctic nematode *Scottinema lindsayae*: Links between genes and environment," Buenos Aires, Argentina. (2010).

Adams, B. J., Adhikari, B. N.†, XXXI Scientific Council on Antarctic Research Open Science Conference, "Molecular genetic analysis of stress survival in an Antarctic nematode: A synthesis of nematode biology, ecology and genomics," Buenos Aires, Argentina. (2010).

Martin, M. T.*, D. H. Wall, S. M. Peat, B. N. Adhikari† and B. J. Adams. Response of *Scottinema lindsayae* to Antarctic glacial cycles. Annual Meeting of the Society of Nematologists, July 11-14, 2010, Boise ID.

Clayton, A. L.*, Andràssy, I., Wall, D. H., Holovachov, O., Peat, S.‡, and B. J. Adams. Molecular and morphological analysis of *Plectus* biodiversity in the McMurdo Dry Valleys. Annual Meeting of the Society of Nematologists. Boise, Idaho, July 11-14, 2010.

Adhikari, B. N.† and B. J. Adams. Evolutionary and ecological stoichiometry of the Antarctic nematode *Scottinema lindsayae*: Links between genes and environment.

XXXI Scientific Council on Antarctic Research Open Science Conference, Buenos Aires, Argentina August 2010.

Adhikari, B. N.* and B. J. Adams. Molecular genomic approaches to nematode-environment interaction studies. "Molecular Ecology in Nematological Research" Annual Meeting of the Society of Nematologists, Boise ID, July, 2010.

Peat, S. M.* and B. J. Adams. Comparative Transcriptomics: A research program for nematode ecology and evolution. "Molecular Ecology in Nematological Research" Annual Meeting of the Society of Nematologists, Boise ID, July, 2010.

Bishwo N Adhikari*, Chin-Yo Lin, Parwinder S. Grewal, David I. Shapiro-Ilan, and Byron J Adams, "Transcriptional profiling of trait deterioration in the insect pathogenic nematode *Heterorhabditis bacteriophora*" Society for Invertebrate Pathology, Park City UT, August 2009.

Peat, S. M.* and B. J. Adams, "A model system for the identification of 'insect parasitism genes' and the investigation of 'parasitism gene' evolution" Society for Invertebrate Pathology, Park City UT, August 2009.

Porter, C. F.*, Peat, S. M.* and B. J. Adams, "*Meloidogyne* phylogeny: A supertree approach" The Society of Nematologists and Soil Ecology Society Joint Conference, Burlington, VT, July 2009.

Jenkins, S.*, Pittendrigh, B., Onstadt, D. and B. J. Adams, "Evaluating the cost of RNAi resistance in *C. elegans*" Society for Invertebrate Pathology, Park City UT, August 2009.

Simmons, B. L., Adams, B. J., McKnight, D. M. and D. H. Wall, "Relationships between invertebrate habitat preference, stream flow and temperature fluctuation in an Antarctic meltwater stream" Ecological Society of America, Annual Meeting, Albuquerque, NM, August 2009.

Smith, T. E., Wall, D. H., Hogg, I. D., and B. J. Adams, "Increased soil moisture availability resulting from subsurface ice melt has an impact on nematode abundances and community structure in a polar desert ecosystem" Ecological Society of America, Annual Meeting, Albuquerque, NM, August 2009.

Keplinger, N.* and B. J. Adams, "Isolation and characterization of a North American species of *Phasmarhabditis*" Society for Invertebrate Pathology, Park City UT, August 2009.

Simmons, B. L., Wall, D. H., Adams, B. J., Ayres, E., Barrett, J. E. and Virginia, R. A. "Experimental warming reduces nematode populations in Taylor Valley, Antarctica. Annual Meeting of the Ecological Society of America, Milwaukee, WI, August 2008.

Simmons, B. L., Wall, D. H., Adams, B. J., Ayres, E., Barrett, J. E., and Virginia, R. A. "Aboveground and belowground diversity and soil properties in the McMurdo Dry Valleys, Antarctica" Annual Meeting of the Ecological Society of America, Jan Jose, CA, August 2007.

Ayres, E., J. Nkem, D. H. Wall, B. L. Simmons, B. J. Adams, J. E. Barrett and R. A. Virginia. "Human trampling reduces soil faunal populations in the McMurdo Dry Valleys, Antarctica" Annual Meeting of the Ecological Society of America, Jan Jose, CA, August 2007.

Bailey, G. C.* and B. J. Adams. "Effect of *Galleria mellonella* hosts on phase variation in *Photorhabdus luminescens*" Published abstract: Journal of Nematology 39:103. Annual Meeting of the Society of Nematologists, San Diego, CA, July-August 2007.

Blackburn, D.*, G. C. Bailey*, J. M. Chaston*, T. Bliss*, A. R. Dillman*, S. M. Peat and B. J. Adams. "Shedding light on bioluminescence in *Photorhabdus luminescens*" Annual Meeting of the Society of Nematologists, San Diego, CA, July-August 2007.

Barrett, J. E., R. A. Virginia, D. H. Wall, and B. J. Adams. "Persistent effects of climate driven hydrological pulses on soil communities in a polar desert ecosystem" Annual Meeting, Soil Ecology Society, Moab, Utah, April-May 2007.

Shapiro-Ilan, D., R. Gaugler, B. Adams, and K. Hopper. "Trait modification in entomopathogenic nematodes" Annual Meeting, Society for Invertebrate Pathology, Quebec City, Quebec, Canada, August 2007.

Simmons, B. L., D. H. Wall, B. J. Adams, E. Ayres, J. E. Barrett, and R. A. Virginia. "Aboveground and belowground diversity and soil properties in the McMurdo Dry Valleys, Antarctica" Annual Meeting, Soil Ecology Society, Moab, Utah, April-May 2007.

Peat, S. M., R. French-Constant, N. Waterfield and B. J. Adams. "Selection on the *luxA* gene of bioluminescent bacteria" Nematode-Bacteria Symbioses Workshop, Tucson, AZ, April 21-23.

Bailey, G. C.*, T. Bliss*, K. C. Krasomil-Osterfeld, and B. J. Adams. "Osmotic promoted phase switch in *Photorhabdus luminescens*" Annual Meeting, Soil Ecology Society, Moab, Utah, April-May 2007.

Dillman, A. R.*, S. M. Peat, T. S. Davie*, W. R. Miller, C. M. Johannson, E. Ayres, B. Simmons, D. H. Wall, and B. J. Adams. "A comparison of morphologic taxonomy and molecular phylogeny for the Phylum Tardigrada" Annual meeting, Willi Hennig Society, New Orleans, LA June 2007.

Dillman, A. R.*, J. M. Chaston* and B. J. Adams. 2006. "Inbreeding and trait deterioration in entomopathogenic nematodes" American Society for Microbiology Intermountain Branch Annual Meeting, Provo, UT March 2006.

Bliss, T.* , D. Yourick, M. Jett, M. Anderson, and B. J. Adams. 2006. "The exterminators: A laboratory module for comparing the entomopathogenic efficacies of insect parasitic nematodes to common chemical insecticides" American Society for Microbiology Intermountain Branch Annual Meeting, Provo, UT March 2006.

Bliss, T.* , M. K. Anderson, M. Jett, D. Yourick and B. J. Adams. 2006. "Using entomopathogenic nematodes as model organisms in high school education modules and the benefits of field-testing" Published abstract, Journal of Nematology 38(2):264. Annual Meeting, Society of Nematologists, Kauai, HI, July 2006.

Peat, S. M.* , R. French-Constant, N. Waterfield and B. J. Adams. "The effect of rooting and outgroup choice in recovering significant cospeciation between *Heterorhabditis* and *Photorhabdus*" Published abstract, Journal of Nematology 38(2):286. Annual Meeting, Society of Nematologists, Kauai, HI, July 2006.

Davie, T. S.* , A. R. Dillman* and B. J. Adams. 2006. "DNA taxonomy and ecology of Antarctic Tardigrada" American Society for Microbiology Intermountain Branch Annual Meeting, Provo, UT March 2006.

Blackburn, D.* , J. M. Chaston* , T. Bliss* , A. R. Dillman* and B. J. Adams. "Conservation of luminescence genes in *Photorhabdus luminescens*" Annual Meeting, Rocky Mount Branch of the American Society for Microbiology, Pingree Park, CO, October 2006.

Smith, S. A.* , and B. J. Adams. "The role of *Photorhabdus luminescens* phase variants and nematode-bacteria signaling in the adult stage entomopathogenic nematode *Heterorhabditis bacteriophora*" Annual Meeting, Rocky Mount Branch of the American Society for Microbiology, Pingree Park, CO, October 2006.

Bailey, G. C.* , T. Bliss* , K. C. Krasmil-Osterfeld and B. J. Adams. "The stability of primary phase in *Photorhabdus luminescens*" Annual Meeting, Rocky Mount Branch of the American Society for Microbiology, Pingree Park, CO, October 2006.

Dillman, A. R.* , J. M. Chaston* , D. I. Shapiro-Ilan, A. Bilgrami, R. Gaugler and B. J. Adams. 2006. "Inbreeding and trait deterioration in entomopathogenic nematodes" Published abstract, Journal of Nematology 38(2):270. Annual Meeting, Society of Nematologists, Kauai, HI, July 2006.

Blackburn, D.* , J. M. Chaston* and B. J. Adams. 2006. "Conservation of luminescence genes in *Photorhabdus luminescens*" Published abstract, Journal of Nematology 38(2):263. Annual Meeting, Society of Nematologists, Kauai, HI, July 2006.

Chaston, J. M.* , A. R. Dillman* , R. Gaugler, A. Bilgrami, D. I. Shapiro-Ilan and B. J. Adams. "The effects of inbreeding on the fecundity and heat tolerance of

Heterorhabditis bacteriophora and *Steinernema carpocapsae*” Annual Meetings of the Society for the Study of Evolution, Fairbanks Alaska, June 2005 (presented in both oral and poster sessions).

Adolphson, D.*, K. B. Nguyen, H. L. Smith & B. J. Adams. “Virulence of entomopathogenic nematodes to the Citrus Root Weevil: A comparison between indigenous and commercially available nematodes” Annual Meeting, Society of Nematologists, Estes Park, CO, August 2004.

Chaston, J. M.* and B. J. Adams. “Characterization of symbiosis genes in *Photorhabdus luminescens* TTO1 via transposon mutagenesis” Annual Meeting, Society of Nematologists, Estes Park, CO, August 2004.

Bliss, T.*, U. Gozel and B. J. Adams. “Rates of molecular evolution in Antarctic and temperate nematodes” Annual Meeting, Society of Nematologists, Estes Park, CO, August 2004.

Davidson, W. L.*, K. B. Nguyen, R. McSorley, and B. J. Adams. “Effects of simulated acid rain on nematode communities: A greenhouse experiment” Annual Meeting, Society of Nematologists, Estes Park, CO, August 2004.

Dillman, A. R.*, and B. J. Adams. “Evolutionary analysis of horizontal gene transfer in *Meloidogyne*” Annual Meeting, Society of Nematologists, Estes Park, CO, August 2004.

Hilton, L.*, and B. J. Adams. “Analysis of entomopathogenic nematode distributions in Florida via GIS mapping” Annual Meeting, Society of Nematologists, Estes Park, CO, August 2004.

Winkler, K. A.* and B. J. Adams. “Identification of trophic relationships for free-living nematodes via DNA extraction, amplification, and sequencing of nematode gut contents” Annual Meeting, Society of Nematologists, Estes Park, CO, August 2004.

Garcia-Varela, M., P. G. Mullin, T. S. Harris, A. L. Szalanski, T. O. Powers, and B. J. Adams. “A phylogenetic analysis of the Order Tylenchida (Nematoda) based on 18S RNA ribosomal DNA sequences: characters, support, and tests of systematic hypotheses.” Annual meeting of the Society of Nematologists, Ithaca, New York, 2003.

Gozel, U., K. B. Nguyen, L. W. Duncan, J. Hamil, and B. J. Adams. “Morphological and molecular variability among *Belonolaimus* (Nemata: Belonolaimidae) populations in Florida.” Annual meeting of the Society of Nematologists, Ithaca, New York, 2003.

Rodrigues, J. C. V., C. C Childers, M. Gallo-Meagher, R. Ochoa, and B. J. Adams. “Mitochondrial DNA and RAPD polymorphisms in the haploid mite *Brevipalpus*

phoenicis" Annual meeting of the Entomological Society of America, Cincinnati, Ohio. 2003.

Smith, H.L., J.B. Jones, F.J. Louws and B.J. Adams. "Genomic Diversity of the Bacterial Symbionts of Entomopathogenic Nematodes." Annual meeting of the Society of Nematologists, Ithaca, New York, 2003.

Davidson, W. L., K. B. Nguyen, R. McSorley, and B. J. Adams. "Nematode community structure of a declining northern hardwood forest." Annual meeting of the Society of Nematologists, Ithaca, New York, 2003.

H. L. Smith, "Symbiotic Bacteria: Biodiversity and Biogeography," Third International Symposium on Entomopathogenic Nematology. Eilat, Israel, November 2003.

Adams, B. J. and K. B. Nguyen. "Molecular evolution and phylogeographic discordance among inferred metapopulations of *Steinernema carpocapsae*" Fourth International Nematology Congress. Tenerife, Spain, 2002.

Tartar, A., Boucias, D.G. & Becnel, J.J. and Adams, B. J., "Biology and phylogeny of the protist *Helicosporidium* sp." Annual Meeting of the International Society for Evolutionary Protistology, Vancouver, British Columbia, 2002.

Adams, B. J. "The utility and futility of using ITS rDNA in the systematics and taxonomy of *Steinernema*" Entomopathogenic Nematodes and Bacteria 2001 Meeting, Madison Wisconsin 2001.

Adams, B. J. "A preliminary molecular phylogeny of the nematode order Tylenchida with comments on proposed classification schemes" Soil and Crop Science Society of Florida, 2001.

Adams, B. J. Society of Nematologists, "Testing factors that promote nematode speciation" Quebec City, 2000.

Adams, B. J. "A ribosomal gene phylogeny of insect parasitic nematodes in the genus *Heterorhabditis*" Southwestern Association of Parasitologists, University of Oklahoma, 1996.

Adams, B. J. "Feeding selectivity and morphology in balanomorph barnacles (Class Cirripedia): Testing two hypotheses of speciation" Graduate student research symposium, University of Nebraska, 1995.

Poster Presentations

Xue, X.#, Adihikari, B. N., Perkes, A. *, Martin, M. *, Wall, D. H. and Adams, B. J. "Life History Evolution of an Antarctic Nematode: Elemental Stoichiometry and the

Growth Rate Hypothesis". Society of Nematologists, Annual Meeting, Montreal Canada, July 2016.

Diaz, M. A.#, Welch, S. A., Welch, K. A., Khan, A. L.#, Adams, B. J., Cary, C., McKnight, D. M., and Lyons, W. B. "Preliminary characterization of wind-blown dust from the McMurdo Dry Valleys of Antarctica". Geological Society of America, Annual Meeting, Denver CO, July 2016.

Hendricks, K.*, Johansson, C.*, and B. J. Adams. "Impact of Diurnal Freeze-Thaw Cycling on Antarctic Tardigrade Mortality". Scientific Council on Antarctic Research, Open Science Meeting, Kuala Lumpur, Malaysia. August 2016. (Student unable to attend).

Kasper, S.*, Wright, S.*, Hogg, I. D., and B. J. Adams. "Glacial Refugia as a Means of Nematode Survival during the Last Glacial Maximum". Scientific Council on Antarctic Research, Open Science Meeting, Kuala Lumpur, Malaysia. August 2016. (Student unable to attend).

George, S. F.#, J. S. Levy, N. Fierer and B. J. Adams. Phylogenetic Analysis and Implications of Microbial Communities in Deliquescent Wet Tracks within Taylor Valley, Antarctica. Scientific Council on Antarctic Research, Open Science Meeting, Kuala Lumpur, Malaysia. August 2016.

Thompson, A. R.#, D. Robinson#, Z. Aanderud, and B. J. Adams. "Stable Isotope Probing sheds light on the McMurdo Dry Valley soil food web". Scientific Council on Antarctic Research, Open Science Meeting, Kuala Lumpur, Malaysia. August 2016.

Xue, X.#, Adhikari, B. N., Perkes*, A., Martin, M.*, Wall, D. H. and B. J. Adams. "Life History Evolution in Antarctica: Elemental Stoichiometry and the Growth Rate Hypothesis". Scientific Council on Antarctic Research, Open Science Meeting, Kuala Lumpur, Malaysia. August 2016.

Andriuzzi, W. S., Knox, M. A., Adams, B. J., and D. H. Wall. "Consequences of altered freeze-thaw cycle frequency on the dominant soil invertebrate in the McMurdo Dry Valleys". Scientific Council on Antarctic Research, Open Science Meeting, Kuala Lumpur, Malaysia. August 2016.

Knox, M. A., Andriuzzi, W. S., Adams, B. J., and Wall, D. H. "Mortality, demography and body size distribution of a cold-specialist soil invertebrate under freeze-thaw cycles and warming." Ecological Society of America, Ft. Lauderdale FL, August 2016.

Shaw E., A.#, B. J. Adams, R. A. Virginia and D. H. Wall. "Identifying the carbon sources of soil foodwebs in the McMurdo Dry Valleys, Antarctica". Ecological Society of America, Ft. Lauderdale FL, August 2016.

W. Archibald*, E. Forsyth*, T. Smart* and B. Adams. Factors Determining Entomophilic Nematode Diversity and Distribution in Utah's Mojave Region. Utah Conference on Undergraduate Research. Dixie State College, St. George, UT. February, 2015.

Michael Cowley*, Andrew Thompson# and Byron Adams. Techniques and Conditions That Can Be Used to Form Pure Cultures for Maximum Growth of Antarctic Soil Protists. Long Term Ecological Research All Scientists Meeting, National Science Foundation, Estes Park, CO; September 2015. Contributed paper, poster presentation.

Sarah Wright, Burke Crawford, Byron Adams. Phylogeny and Phylogeography of *Eudorylaimus* in Victoria Land, Antarctica. Long Term Ecological Research All Scientists Meeting, National Science Foundation, Estes Park, CO; September 2015. Contributed paper, poster presentation.

Andrew R. Thompson#, Byron J. Adams. Soil ciliates of the McMurdo Dry Valleys: who, where, and what? Long Term Ecological Research All Scientists Meeting, National Science Foundation, Estes Park, CO; September 2015. Contributed paper, poster presentation.

Michael N. Gooseff, John E. Barrett, Byron J. Adams, Peter T. Doran, Andrew Fountain, W. Berry Lyons, Diane M. McKnight, John Priscu, Eric R. Sokol, Cristina Takacs-Vesbach, Martijn Vandegehuchte, Ross A. Virginia, Diana H Wall. Antarctic terrestrial ecosystems abide: Changes in soils, lakes and streams of the McMurdo Dry Valleys as the cooling trend ends. Ecological Society of America, Baltimore MD, August 2015. Contributed paper, Oral presentation

Andrew R. Thompson#, Caj Johanssen*, Josh Morell*, Jeremy Whiting*, Byron Adams. Taxonomic and Ecological Diversity of McMurdo Dry Valley Tardigrades. Long Term Ecological Research All Scientists Meeting, National Science Foundation, Estes Park, CO; September 2015. Contributed paper, poster presentation.

Xue, Xia (Summer)#, Adhikari, Bishwo N., Perkes, Ammon*, Martin, Mac* Wall, Diana H. and Adams, Byron J. Elemental Stoichiometry as a Driver of Life History Evolution: An Experimental Test of the Growth Rate Hypothesis. Long Term Ecological Research All Scientists Meeting, National Science Foundation, Estes Park, CO; September 2015. Contributed paper, poster presentation.

Zachary T. Aanderud, Sabrina Saurey, Andrew Thompson#, Christina D. Takacs-Vesbach, John E. Barrett, Diana H. Wall, Ross A. Virginia, and Byron J. Adams. Multiple resources determine soil bacterial diversity and activity in an Antarctic polar desert. Long Term Ecological Research All Scientists Meeting, National Science Foundation, Estes Park, CO; September 2015. Contributed paper, poster presentation.

Johansson, C. A.* , C. A. Pullan*, R. Marx*, J. Ornelas*, D. H. Wall, C. M. de Tomasel and B. J. Adams. "Response of the terrestrial tardigrade *Acutuncus antarcticus* to predicted, climate-driven habitat change" Open Science Conference of the Scientific Council on Antarctic Research, Scientific Council on Antarctic Research, Auckland, NZ (August 2014).

Knox, M. A., Adams, B. J., D. J. Cox*, C. M de Tomasel, R. A. Virginia and D. H. Wall., "Nematode species distributions, demographics and survival in response to freeze-thaw cycles in soils of the McMurdo Dry Valleys, Antarctica." Open Science Conference of the Scientific Council on Antarctic Research, Scientific Council on Antarctic Research, Auckland, NZ (August 2014).

Thompson, A. R.#*, C. Cary, and B. J. Adams. "Exploring Protists in the McMurdo Dry Valley soils", Open Science Conference of the Scientific Council on Antarctic Research, Scientific Council on Antarctic Research, Auckland, NZ (August 2014).

Shaw, E. A.#, B. J. Adams, R. A. Virginia, and D. H. Wall. "Dry valley soil food web structure and complexity is related to decadal trends in climate variation", Open Science Conference of the Scientific Council on Antarctic Research, Scientific Council on Antarctic Research, Auckland, NZ (August 2014).

Thompson, A. R.* , Bates, S. T., Fierer, N. and Adams, B. J. "Metagenetic Snapshot of Microeukaryotic Diversity and Distribution in Antarctic Soils". 5th International Conference on Polar & Alpine Microbiology, Big Sky, MT (September 2013).

Adhikari, B. N.[†] and B. J. Adams. Molecular genetic analysis of stress survival in an Antarctic nematode: A synthesis of nematode biology, ecology and genomics. XXXI Scientific Council on Antarctic Research Open Science Conference, Buenos Aires, Argentina, August 2010.

Whiting, J.* , Nielsen, U.N., Wall, D.H., and Adams, B.J. 2010. Population genetics and phylogenetics of the MCM tardigrades. Annual Science Meeting of the McMurdo LTER, Fort Collins, CO August 27-28, 2010.

Martin, M. T.* , D. H. Wall, S. M. Peat[‡], B. N. Adhikari[†] and B. J. Adams. Phylogeography and population structure of *Scottinema lindsayae*. Annual Science Meeting of the McMurdo LTER, Fort Collins, CO August 27-28, 2010.

Smith, T. E.[‡], D. H. Wall, B. J. Adams, I. D. Hogg, U. N. Nielsen and R. A. Virginia. Variation in soil nematode community dynamics and soil properties with permafrost seep in a polar desert ecosystem, Antarctica. Annual Science Meeting of the MCM LTER, Fort Collins CO August 27-28, 2010.

Nielsen, U. N., Wall, D. H., and B. J. Adams, "The discovery of the tardigrade, *Milnesium* sp., in the McMurdo Dry Valleys, Antarctica, and the potential implication for biotic interactions" National Science Foundation Long Term Research Network All Scientists Meeting, Estes Park, CO, September 2009.

Whiting, J. W.* , Miller, W. R., Johansson, C. M. and B. J. Adams, "Evaluation of PCR amplification and DNA sequencing for tardigrades" National Science Foundation Long Term Research Network All Scientists Meeting, Estes Park, CO, September 2009.

Martin, Q. D. and B. J. Adams, "Molecular identification of nematode gut contents" National Science Foundation Long Term Research Network All Scientists Meeting, Estes Park, CO, September 2009.

Whiting, J. W., Miller, W. R., Johansson, C. M. and B. J. Adams, "Evaluation of PCR amplification and DNA sequencing for tardigrades" 7th Annual Ecological Genomics Symposium, Kansas City, MO, November 2009.

Colton, R.M.*, Brady, T.S*, Calloway, S.* , Takemoto, C*, Miller, W.R., Johansson, C.M., Heward, J.D., and Adams, B.J., "The tardigrades of the Andrews LTER" National Science Foundation Long Term Research Network All Scientists Meeting, Estes Park, CO, September 2009.

Douglass, S. P.* , Peña, C. A.* , Clayton, A. L.* , Peat, S. M.†, Adhikari, B. N.†, Chaston, J. M.* , Wall, D. H., Andrassy, I., and B. J. Adams. "Molecular and morphological analysis of *Eudorylaimus* biodiversity in the McMurdo Dry Valleys" National Science Foundation Long Term Research Network All Scientists Meeting, Estes Park, CO, September 2009.

Clayton, A. L.* , Andrassy, I. and B. J. Adams, "Molecular and morphological analysis of *Plectus* biodiversity in the McMurdo Dry Valleys" National Science Foundation Long Term Research Network All Scientists Meeting, Estes Park, CO, September 2009.

Adhikari, B. N.†, Wall, D. H. and B. J. Adams, "Molecular genetic analysis of stress survival in an Antarctic nematode: A synthesis of nematode biology, ecology and genomics" National Science Foundation Long Term Research Network All Scientists Meeting, Estes Park, CO, September 2009.

Adhikari, B. N.†, M. A. Ansari, F. Ali, B. J. Adams and M. Moens. Biological control of *Hoplia philanthus* (Coleoptera: Scarabaeidae) using entomopathogenic nematodes Annual Meeting, Society for Invertebrate Pathology, Quebec City, Quebec, Canada, August 2007.

Dillman, A. R.* , T. S. Davie*, J. M. Chaston*, S. M. Peat†, E. Ayres, B. L. Simmons, J. E. Barrett, D. H. Wall, and B. J. Adams. Biodiversity and ecosystem functioning in Victoria Land nematodes: a molecular approach. Published abstract: Journal of Nematology 39:103. Annual Meeting of the Society of Nematologists, San Diego, CA, July-August 2007.

Adhikari, B. N.[†], E. Ayres, B. L. Simmons, D. H. Wall, and B. J. Adams. A study of the molecular mechanisms of desiccation tolerance in Antarctic nematodes using Expressed Sequenced Tags (EST). Published abstract, *Journal of Nematology* 39:102. Annual Meeting of the Society of Nematologists, San Diego, CA, July-August 2007.

Dillman, A. R.*[†], S. M. Peat[†], T. S. Davie*, W. R. Miller, C. M. Johansson, E. Ayres, B. L. Simmons, D. H. Wall and B. J. Adams. Tardigrade Barcoding: A comparison of morphologic taxonomy and a three gene molecular phylogeny for the phylum Tardigrada. Annual Meeting of the Soil Ecology Society, Moab, Utah, April-May, 2007.

Bailey, G. C.*[†], T. Bliss*, K. C. Krasmil-Osterfeld and B. J. Adams. Osmotic promoted phase switch in *Photorhabdus luminescens*. Annual Meeting of the Soil Ecology Society, Moab, Utah, April-May, 2007.

Akhikari, B. N.[†], E. Ayres, B. L. Simmons, D. H. Wall, and B. J. Adams. A study of the molecular mechanisms of desiccation tolerance in Antarctic nematodes using expressed sequenced tags (ESTs). Annual Meeting of the Soil Ecology Society, Moab, Utah, April-May, 2007.

Dillman, A. R.*[†], Peat, S. M.[†], Davie, T. S., Miller, W. R., Johansson, C. M., Ayres, E., Simmons, B., Wall, D. H. and B. J. Adams. Tardigrade barcoding: A comparison of morphologic taxonomy and a three gene molecular phylogeny for the phylum Tardigrada. Annual Meeting of the Soil Ecology Society, Moab, Utah, April-May, 2007.

Miller, W. R., C. M. Johansson, T. Davie*, A. R. Dillman* and B. J. Adams. 2006. Tardigrade biology and ecology: Biodiversity, distribution and ecosystem functioning. (third and fourth authors are undergraduates). Fourth Annual Ecological Genomics Symposium, Overland Park, Kansas. October, 2006.

Bliss, T*. 2006. The exterminators: An inquiry-based experimental module using insect parasitic nematodes. (presenter is an undergraduate). National Association of Biology Teachers Annual Conference, Albuquerque, New Mexico. October 2006.

Adams, B. J., A. R. Dillman*, D. H. Wall, B. L. Simmons, E. Ayres, R. A. Virginia, J. E. Barrett, S. C. Cary, and J. M. Aislabie. 2006. Effects of taxonomic precision on studies of distribution ecology and the relationship between biodiversity and ecosystem functioning. All Scientists Meeting, LTER network, Estes Park, Colorado. September 2006.

Blackburn, D.*[†], J. Chaston* and B. J. Adams. Investigating why luminescence genes have been evolutionarily preserved in *Photorhabdus luminescens*. 2006. American Society for Microbiology Intermountain Branch Annual Meeting, Provo, UT, March 2006.

Bliss, T.*, D. Blackburn*, C. Bailey*, A. Smith*, J. M. Chaston* and B. J. Adams. 2006. Development and isolation of a stable primary phase variant of *Photorhabdus luminescens*. Published abstract, Journal of Nematology 38(2):264. Annual Meeting, Society of Nematologists, Kauai, HI, July 2006.

Smith, A*. and B. J. Adams. 2006. The role of *Photorhabdus luminescens* phase variants and nematode-bacteria signaling in the adult stage entomopathogenic nematode *Heterorhabditis bacteriophora*. Rocky Mountain Virology Club and American Society for Microbiology Rocky Mountain Branch Annual Meetings, Pingree Park, CO.

Blackburn, D.*, J. M. Chaston*, T. Bliss*, A. Dillman* and B. J. Adams. 2006. Conservation of luminescence genes in *Photorhabdus luminescens*. Rocky Mountain Virology Club and American Society for Microbiology Rocky Mountain Branch Annual Meetings, Pingree Park, CO.

Bailey, G. C.*, T. Bliss*, K. C. Krasmil-Osterfeld and B. J. Adams. 2006. The stability of primary phase in *Photorhabdus luminescens*. Rocky Mountain Virology Club and American Society for Microbiology Rocky Mountain Branch Annual Meetings, Pingree Park, CO.

Bailey, G. C.*, T. Bliss*, K. C. Krasmil-Osterfeld and B. J. Adams. 2006. Osmolarity and the stability of primary phase in *Photorhabdus luminescens*. Published abstract, Journal of Nematology 38(2):260. Annual Meeting, Society of Nematologists, Kauai, HI, July 2006.

Dillman, A. R.*, J. M. Chaston* and B. J. Adams. Amelioration of the nucleotide usage patterns and the role of horizontal gene transfer in the evolution of plant parasitism by nematodes. Annual Meetings of the Society for the Study of Evolution, Fairbanks Alaska, June 2005.

Chaston, J. M.*, A. R. Dillman*, R. Gaugler, A. Bilgrami, D. I. Shapiro-Ilan and B. J. Adams. The effects of inbreeding on the fecundity and heat tolerance of *Heterorhabditis bacteriophora* and *Steinernema carpocapsae*. Annual Meetings of the Society for the Study of Evolution, Fairbanks Alaska, June 2005.

Nkem, J.N, D.H. Wall, R.A. Virginia, J.E. Barrett, and B.J. Adams. Groundwater seeps in a Cold Desert Ecosystem: Community changes in soil invertebrates in the McMurdo Dry Valleys. Soil Ecology Society 10th Biennial International Conference, Argonne National Laboratory, May 2005.

Nkem, J.N, D.H. Wall, R.A. Virginia, J.E. Barrett, and B.J. Adams. Sources of soil moisture additions and their impacts on soil biodiversity in Taylor Valley, Antarctica. 90th Annual Meeting of the Ecological Society of America (ESA), and the 1X International Congress of Ecology (INTECOL). Montreal, Canada August 7-12, 2005.

Broos, E., D. H. Wall, R. A. Virginia, J. Nkem, L. E. Powers and B. J. Adams. Trampling effects on soil invertebrate communities. Synthesis of Soil Biodiversity and Ecosystem Functioning in Victoria Land, Antarctica: An NSF Sponsored Workshop, Jekyll Island, GA, April 21-23 2005.

Nkem, J., D. H. Wall, R. A. Virginia, E. Broos, J. E. Barrett and B. J. Adams. Evaluating salinity thresholds for soil nematode survival: Implications for community establishment in the McMurdo Dry Valleys, Antarctica. Synthesis of Soil Biodiversity and Ecosystem Functioning in Victoria Land, Antarctica: An NSF Sponsored Workshop, Jekyll Island, GA, April 21-23 2005.

J.M. Aislabie, M.R. Balks, J. E. Barrett, D.J. Saul, B.J. Adams, R. A. Virginia, and D. H. Wall. Soils of a penguin rookery, Seebee Hook, Cape Hallett: preliminary investigations of chemical and microbial properties. Antarctica New Zealand Annual Antarctic Conference, University of Canterbury, Christchurch, New Zealand, July, July 4-6, 2005.

Hilton, L*, P. Wang, Y. Xu and B. J. Adams. Finding Structure Matches for the DR5 Ligand. 2nd annual Rocky Mountain Regional Bioinformatics Conference, Given Institute, Aspen, CO, December 2004.

Adams, B. J. and D. H. Wall. Trophic Phylogeography: A Research Program for Examining Ecosystem Function within a Historical and Evolutionary Framework. NSF sponsored International Symposium on Impacts of Soil Biodiversity on Biogeochemical Processes in Ecosystems / International Workshop on Molecular Methods in Soil Biological and Biochemical Diversity in Terrestrial Ecosystems. Taipei, Taiwan, April 2004.

Nkem J.N., D.H. Wall, R.A. Virginia, E.J. Broos, J.E. Barrett, B.J. Adams and A.N. Parsons. 2004. Response of soil nematodes to moisture additions from snow fences in Taylor Valley, Antarctica. Annual meeting of the Society of Nematologists, Estes Park, CO, August 2004.

Dillman, A. R.* and B. J. Adams. 2004. Evolutionary analysis of horizontal gene transfer in *Meloidogyne*. Annual meeting of the Society for the Study of Evolution, Fort Collins, CO, June 2004.

Gozel, U., K. B. Nguyen, F. Lamberti, L. W. Duncan, and B. J. Adams. 2003. Morphological and molecular analysis of four *Xiphinema* species belonging to the *Xiphinema americanum* (Nemata: Longidoridae) group in Florida. Annual meeting of the Society of Nematologists, Ithaca, New York, 2003.

Jackson, P. A.*, R. W. Poon*, T. D. Phan*, M. Garcia-Varela, K. B. Nguyen, S. Perlman, U. Gozel, and B. J. Adams. 2003. The phylogenetic position of *Deladenus siricidicola*. Annual meeting of the Society of Nematologists, Ithaca, New York.

Phan, T. D.*, P. A. Jackson*, R.W. Poon*, K. B. Nguyen, K. M. Fritz[†], and B. J. Adams. 2003. Identification of *Meloidogyne* sp. associated with the water willow, *Justricia americana*. Annual meeting of the Society of Nematologists, Ithaca, New York.

Poon, R.* , P. A. Jackson*, T. D. Phan*, K. B. Nguyen, K. A. Bloem and B. J. Adams. A nematode approach to management and control of *Cactoblastis*?. 2003. Annual meeting of the Society of Nematologists, Ithaca, New York. (presenter is an undergraduate student).

Tigano, M. S., R. G. Carneiro, M. Garcia-Varela, I. T. De Ley and B. J. Adams. 2003. Phylogeny of *Meloidogyne* spp. Based on 18s rDNA sequences. Annual meeting of the Society of Nematologists, Ithaca, New York.

Tartar, A.[‡], Boucias, D.G., Adams, B.J. & Becnel, J.J. 2002. Biology and phylogeny of the protist *Helicosporidium* sp. Annual Meeting of the International Society for Evolutionary Protistology. Vancouver, British Columbia.

Smith, H. L.[‡], B. J. Adams and J. B. Jones 2002. Genomic fingerprinting of the bacterial symbionts of entomopathogenic nematodes using repetitive sequences and PCR. Annual meeting of the Entomological Society of America, Ft. Lauderdale, FL.

Smith, H. L.[‡], S. E. Webb and B. J. Adams. 2002. Polymerase chain reaction-restriction fragment length polymorphism as a diagnostic tool to distinguish between *Frankliniella* species (Thysanoptera: Thripidae) Annual meeting of the Entomological Society of America, Ft. Lauderdale, FL.

Invited Participant

National Science Foundation, McMurdo Station Redesign Charette. I was invited by NSF to be a part of the McMurdo Station redesign effort. National Science Foundation, Arlington VA, July 2015.

McMurdo Dry Valleys LTER Science Meeting, University of Illinois at Chicago, July 2008.

United States Department of Agriculture, National Research Initiative, Panel Member (Panel C, Tools, Resources & Genomics; Panel B, Suborganismal Biology), September, 2008.

International Conference: Conservation and Sustainable Use of Soil Biodiversity: Predicting Soil Biodiversity Patterns under Climate Change; Colorado State University, June 4-6 2008.

National Science Foundation (NSF) Office of Polar Programs, "Setting a Course for Antarctic Integrated and Systems Science (AISS): A Workshop and Report". Arlington, VA June 13-15, 2007.

United States Department of Agriculture (USDA) Cooperative State Research, Education, and Extension Service (CSREES) National Research Initiative (NRI) Awardee Workshop. San Diego, CA December 12-13, 2007.

The National Science Teachers Association (NSTA) Western Area Conference. Panelist, "Evolution: A Forum with Scientists." Salt Lake City, UT December 8, 2006.

USDA CSREES NRI Workshop for Awardees. Gordon Conference on Plant Herbivore Interaction. February 18, 2007, Ventura, CA.

NSF Office of Polar Programs, Transantarctic Mountains (TAM) Workshop. Byrd Polar Research Center, Ohio State University. September 6-9, 2006. Columbus, OH.

NSF Office of Polar Programs, Joint McMurdo Dry Valleys (MCM) and Palmer Station (PAL) Long-Term Ecological Research (LTER) workshop. September 24-25, 2006. Fort Collins, CO.

McMurdo Dry Valleys LTER Workshop. July 14-15, 2005, Portland OR.

USDA Competitive Grant Programs: Success in Grant-Writing and Recent Changes at the NRI. "A Day in the Life of an NRI panel – A Mock Review Panel" (presenter). July 12, 2004, Ft. Lauderdale, FL.

Co-Chair, Global Marine Nematode Biodiversity: New Approaches to an Old Challenge. Annual Meetings of the Society of Nematologists, July 2005, Ft. Lauderdale, FL.

Chair, Plenary Session, 44th Annual Meetings of the Society of Nematologists, YMCA of the Rockies, Estes Park Colorado, July 2004,

USDA Regional Project: S-1024, Discovery of Entomopathogens and Their Integration and Safety in Pest Management Systems (2000-present)

Joint Task Group Chair, Standard Methods for the Examination of Water & Wastewater, section 10750, Nematological Examination. (American Public Health Association, American Water Works Association, Water Environment Federation).

National Science Foundation Tree of Life Project for the Nematoda. Coordinator, Working Group 3 (of 6); Tylenchida.

NSF Workshop on Systematics and Inventory of Soil Nematodes (DEB 96 26813). July 23-25, 1997, Tucson, Arizona.

Co chair, "Nematode Evolution" symposium session, annual meeting of the Society of nematologists, July 2003, Ithaca, NY.

Co-chair, "Taxonomy, Systematics, Phylogeny" paper session, joint annual meetings of the Society of Nematologists and American Society of Parasitologists, July 6-10, 1999, Monterey, California.

Co-chair, "Molecular systematics and diagnostics" Paper session, annual meeting of the Society of Nematologists, June 20-24, 1998, St. Louis, Missouri.

Professional Society Memberships

2009-present: Utah Science Teachers Association (USTA)
2007-present: American Institute of Biological Sciences (media representative, Society of Nematologists)
2007-present: Soil Ecology Society (member)
2000-present: Society for Invertebrate Pathology (member; 2002-2003 elected member at large)
1996-present: Society of Nematologists (member, Executive Board, systematic resources committee chair, 2003-2006; entomophilic nematodes, chair, 2004-2006; Vice President [elect] 2013, Vice President 2014-2015, President 2015-2016.
1997-present Willi Hennig Society (member)
1997-present Society of Systematic Biologists (member)
2000-2003 Soil and Crop Science Society of Florida (member)

Service as Grant Proposal Reviewer

National Science Foundation (Systematic and Population Biology)
National Science Foundation program panel member (Science and Technology Centers)
USDA National Research Initiative Competitive Grant Program, Biologically Based Pest Management Program; Organismal and Population Biology of Arthropods and Nematodes; Suborganismal Biology; Tools, Resources & Genomics
United States Civilian Research and Development Foundation
National Geographic Society
United States - Israel Binational Agricultural Research and Development Fund
United States - Israel Binational Science Foundation
Natural Environment Research Council (UK)
Research Council of Norway
Czech Science Foundation
Antarctica New Zealand
Australian Antarctic Division, Australian Antarctic Programme
Chilean Antarctic Institute (INACH)
Italian Programma Nazionale di Ricerche in Antartide

Service as Editor and Journal Article Reviewer

Web Editor, Society of Nematologists
Associate Editor, Zootaxa (2001-2014)
Joint Task Group, American Water Works (2001-present)
Editor, Nematology Newsletter (2006-2012)
Annals of Microbiology
Animal Conservation
Antarctic Science
Applied and Environmental Microbiology
Astrobiology
Bioinformatics
Biocontrol Science and Technology
Biological Control
Biological Journal of the Linnean Society
Comparative Parasitology
Cryo Letters
FEMS Microbiology & Ecology
Forest Pathology
Industrial Microbiology & Biotechnology
International Research Journal of Microbiology
Journal of Agricultural Science and Technology
Journal of Arid Environments
Journal of Bacteriology
Journal of Clinical Microbiology
Journal of Experimental Biology
Journal of Invertebrate Pathology
Journal of Nematology
Journal of Parasitology
Memorias do Instituto Oswaldo Cruz
Microbial Ecology
Molecular Ecology
Molecular Ecology Resources
Mycologia
National Geographic Society
Nature
Nature Climate Change
Nature Communications
Nematology
Nematropica
Netherlands Organisation for Scientific Research
New Zealand Journal of Zoology
Oecologia
Pedobiologia
Pedosphere
Phytopathology
Plant Disease
Polar Biology
Systematic Biology

Systematic Parasitology
The Florida Entomologist
The ISME Journal
The Royal Society (Proceedings B)