

Simon James Goring

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Contact

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EDUCATION

2012 Ph.D. Biological Sciences, Simon Fraser University, Vancouver BC - Thesis

2003 B.Sc. Plant Science, University of Northern British Columbia Prince George, BC

1999 Forest Technician Diploma, Sir Sandford Fleming College Lindsay, ON

PROFESSIONAL EXPERIENCE

Research Positions

January 2022 – Current

Data Scientist II. Department of Geography, University of Wisconsin. Madison, WI

July 2014 – December 2021

Assistant Scientist. Department of Geography, University of Wisconsin. Madison, WI

July 2011 – July 2014

Post-Doctoral Researcher. Department of Geography, University of Wisconsin. Madison, WI

Adjunct Positions

2019 – 2023 University of British Columbia – Department of Computer Science, Adjunct Professor

Undergraduate Research Experience

2004 – 2005 Dr. Staffan Lindgren (University of Northern BC)

2003 – 2004 Dr. Josef D Ackerman (University of Guelph)

Spring 2002 Dr. Michael Gillingham (UNBC)

Summer 2000 Dr. Dale Vitt (University of Alberta)

PUBLICATIONS

2023

Thomer, A. K., Wofford, M. F., Lenard, M. C., Dominguez Vidana, S., & Goring, S. J. (2023). Revealing Earth science code and data-use practices using the Throughput Graph Database. In X. Ma, M. Mookerjee, L. Hsu, & D. Hills (Eds.), *Recent advancement in geoinformatics and data science* (Vol. 558). The Geological Society of America.

2021

Goring, S., Marsicek, J., Ye, S., Williams, J. W., Meyers, S., Peters, S. E., ... Marcott, S. (2021). A model workflow for GeoDeepDive: Locating Pliocene and Pleistocene ice-rafted debris. <https://doi.org/10.31223/X54312>

Uhen, M. D., Buckland, P. I., Goring, S. J., Jenkins, J. P., & Williams, J. W. (2021). The EarthLife Consortium API: An extensible, open-source service for accessing fossil data and taxonomies from multiple community paleodata resources. *Frontiers of Biogeography*, 13(2).

Mottl, O., Flantua, S. G., Bhatta, K. P., Felde, V. A., Giesecke, T., Goring, S., et al.others. (2021). Global acceleration in rates of vegetation change over the past 18,000 years. *Science*, 372(6544), 860–864.

Loeffler, S., Roth, R. E., Goring, S., & Myrbo, A. (2021). Mobile UX design: Learning from the Flyover Country mobile app. *Journal of Maps*, 17(2), 39–50.

Lawing, A. M., Blois, J. L., Maguire, K. C., Goring, S. J., Wang, Y., & McGuire, J. L. (2021). Occupancy models reveal regional differences in detectability and improve relative abundance estimations in fossil pollen assemblages. *Quaternary Science Reviews*, 253, 106747.

2020

Trachsel, M., Dawson, A., Paciorek, C. J., Williams, J. W., McLachlan, J. S., Cogbill, C. V., et al.others. (2020). Comparison of settlement-era vegetation reconstructions for STEPPS and REVEALS pollen–vegetation models in the northeastern United States. *Quaternary Research*, 95, 23–42.

Chevalier, M., Davis, B. A., Heiri, O., Seppä, H., Chase, B. M., Gajewski, K., et al.others. (2020). Pollen-based climate reconstruction techniques for late Quaternary studies. *Earth-Science Reviews*, 210, 103384.

2019

Wang, Y., Goring, S. J., & McGuire, J. L. (2019). Bayesian ages for pollen records since the last glaciation in North America. *Scientific Data*, 6(1), 1–8.

- Seeley, M., Goring, S., & Williams, J. W. (2019). Assessing the environmental and dispersal controls on *Fagus grandifolia* distributions in the Great Lakes region. *Journal of Biogeography*, 46(2), 405–419.
- Mustaphi, C. J. C., Brahney, J., Aquino-Lopez, M. A., Goring, S., Orton, K., Noronha, A., ... Brushworth, J. P. (2019). Guidelines for reporting and archiving ²¹⁰Pb sediment chronologies to improve fidelity and extend data lifecycle. *Quaternary Geochronology*, 52, 77–87.
- Khider, D., Emile-Geay, J., McKay, N. P., Gil, Y., Garijo, D., Ratnakar, V., et al.others. (2019). PaCTS 1.0: A crowdsourced reporting standard for paleoclimate data. *Paleoceanography and Paleoclimatology*, 34(10), 1570–1596.
- Dawson, A., Paciorek, C. J., Goring, S. J., Jackson, S. T., McLachlan, J. S., & Williams, J. W. (2019). Quantifying trends and uncertainty in prehistoric forest composition in the upper Midwestern United States. *Ecology*, 100(12), e02856.

2018

- Goring, S. J., Graham, R., Loeffler, S., Myrbo, A., Oliver, J. S., Ormond, C., & Williams, J. W. (2018). The Neotoma Paleoecology Database: A research outreach nexus. *Elements of Paleontology*.
- Goring, S. J., Whitney, K. S., & Jacob, A. L. (2018). Accessibility is imperative for inclusion. *Frontiers in Ecology and the Environment*.
- Williams, J. W., Grimm, E. C., Blois, J. L., Charles, D. F., Davis, E. B., Goring, S. J., et al.others. (2018). The Neotoma Paleoecology Database, a multiproxy, international, community-curated data resource. *Quaternary Research*, 89(1), 156–177.
- Salonen, J. S., Helmens, K. F., Brendryen, J., Kuosmanen, N., Välranta, M., Goring, S., et al.others. (2018). Abrupt high-latitude climate events and decoupled seasonal trends during the Eemian. *Nature Communications*, 9(1), 1–10.
- Lewthwaite, J., Angert, A., Kembel, S., Goring, S., Davies, T., Mooers, A., ... Kerr, J. (2018). Canadian butterfly climate debt is significant and correlated with range size. *Ecography*, 41(12), 2005–2015.
- Farley, S. S., Dawson, A., Goring, S. J., & Williams, J. W. (2018). Situating ecology as a big-data science: Current advances, challenges, and solutions. *BioScience*, 68(8), 563–576.
- Cogbill, C. V., Thurman, A. L., Williams, J. W., Zhu, J., Mladenoff, D. J., & Goring, S. J. (2018). A retrospective on the accuracy and precision of plotless forest density estimators in ecological studies. *Ecosphere*, 9(4), e02187.

2017

- Goring, S., Whitney, K. S., Jacob, A., Bruna, E., & Poisot, T. (2017). Making scientific content more accessible. *Authorea Preprints*.
- Goring, S. J., & Williams, J. W. (2017). Effect of historical land-use and climate change on tree-climate relationships in the upper Midwestern United States. *Ecology Letters*, 20(4), 461–470.
- Tipton, J., Hooten, M., & Goring, S. (2017). Reconstruction of spatio-temporal temperature from sparse historical records using robust probabilistic principal component regression. *Advances in Statistical Climatology, Meteorology and Oceanography*, 3(1), 1.
- Peyron, O., Combourieu-Nebout, N., Brayshaw, D., Goring, S., Andrieu-Ponel, V., Desprat, S., et al.others. (2017). Precipitation changes in the Mediterranean basin during the Holocene from terrestrial and marine pollen records: A model–data comparison. *Climate of the Past*, 13(3), 249–265.
- Paciorek, C. J., Goring, S. J., Thurman, A. L., Cogbill, C. V., Williams, J. W., Mladenoff, D. J., ... McLachlan, J. S. (2017). Correction: Statistically-estimated tree composition for the Northeastern United States at Euro-American settlement. *Plos One*, 12(1), e0170835.
- Marlon, J. R., Pederson, N., Nolan, C., Goring, S., Shuman, B., Robertson, A., et al.others. (2017). Climatic history of the northeastern United States during the past 3000 years. *Climate of the Past*, 13(10), 1355–1379.

2016

- Goring, S. J., Mladenoff, D. J., Cogbill, C. V., Record, S., Paciorek, C. J., Jackson, S. T., et al.others. (2016). Novel and lost forests in the Upper Midwestern United States, from new estimates of settlement-era composition, stem density, and biomass. *PLoS One*, 11(12), e0151935.
- Paciorek, C. J., Goring, S. J., Thurman, A. L., Cogbill, C. V., Williams, J. W., Mladenoff, D. J., ... McLachlan, J. S. (2016). Statistically-estimated tree composition for the northeastern United States at Euro-American settlement. *PLoS One*, 11(2), e0150087.
- Matthes, J. H., Goring, S., Williams, J. W., & Dietze, M. C. (2016). Benchmarking historical CMIP5 plant functional types across the Upper Midwest and Northeastern United States. *Journal of Geophysical Research: Biogeosciences*, 121(2), 523–535.
- Kujawa, E. R., Goring, S., Dawson, A., Calcote, R., Grimm, E. C., Hotchkiss, S. C., et al.others. (2016). The effects of anthropogenic land cover change on pollen-vegetation relationships in the American Midwest. *Anthropocene*, 15, 60–71.
- Dawson, A., Paciorek, C. J., McLachlan, J. S., Goring, S., Williams, J. W., & Jackson, S. T. (2016). Quantifying pollen-vegetation relationships to reconstruct ancient forests using

19th-century forest composition and pollen data. *Quaternary Science Reviews*, 137, 156–175.

2015

Goring, S. J., Mladenoff, D. J., Cogbill, C. V., Record, S., Paciorek, C. J., Jackson, S. T., et al.others. (2015). Changes in forest composition, stem density, and biomass from the settlement era (1800s) to present in the Upper Midwestern United States. *bioRxiv*, 026575.

Walsh, M. K., Marlon, J. R., Goring, S. J., Brown, K. J., & Gavin, D. G. (2015). A regional perspective on Holocene fire–climate–human interactions in the Pacific Northwest of North America. *Annals of the Association of American Geographers*, 105(6), 1135–1157.

Goring, S., Dawson, A., Simpson, G., Ram, K., Graham, R., Grimm, E., & Williams, J. (2015). Neotoma: A programmatic interface to the Neotoma Paleocological Database. *Open Quaternary*, 1(1).

Combourieu-Nebout, N., Bertini, A., Russo-Ermolli, E., Peyron, O., Klotz, S., Montade, V., et al.others. (2015). Climate changes in the central Mediterranean and Italian vegetation dynamics since the Pliocene. *Review of Palaeobotany and Palynology*, 218, 127–147.

2014

Goring, S. J., Weathers, K. C., Dodds, W. K., Soranno, P. A., Sweet, L. C., Cheruvilil, K. S., ... Utz, R. M. (2014). Improving the culture of interdisciplinary collaboration in ecology by expanding measures of success. *Frontiers in Ecology and the Environment*, 12(1), 39–47.

Heffernan, J. B., Soranno, P. A., Angilletta Jr, M. J., Buckley, L. B., Gruner, D. S., Keitt, T. H., et al.others. (2014). Macrosystems ecology: Understanding ecological patterns and processes at continental scales. *Frontiers in Ecology and the Environment*, 12(1), 5–14.

Cheruvilil, K. S., Soranno, P. A., Weathers, K. C., Hanson, P. C., Goring, S. J., Filstrup, C. T., & Read, E. K. (2014). Creating and maintaining high-performing collaborative research teams: The importance of diversity and interpersonal skills. *Frontiers in Ecology and the Environment*, 12(1), 31–38.

2013

Goring, S., Lacourse, T., Pellatt, M. G., & Mathewes, R. W. (2013). Pollen assemblage richness does not reflect regional plant species richness: A cautionary tale. *Journal of Ecology*, 101(5), 1137–1145.

Peyron, O., Magny, M., Goring, S., Joannin, S., De Beaulieu, J.-L., Brugiapaglia, E., et al.others. (2013). Contrasting patterns of climatic changes during the Holocene across the Italian Peninsula reconstructed from pollen data. *Climate of the Past*, 9(3), 1233–1252.

Gill, J. L., McLauchlan, K. K., Skibbe, A. M., Goring, S., Zirbel, C. R., & Williams, J. W. (2013). Linking abundances of the dung fungus *sporormiella* to the density of bison: Implications for assessing grazing by megaherbivores in palaeorecords. *Journal of Ecology*, 101(5), 1125–1136.

Combourieu-Nebout, N., Peyron, O., Bout-Roumazeilles, V., Goring, S., Dormoy, I., Joannin, S., ... Magny, M. (2013). Holocene vegetation and climate changes in the central Mediterranean inferred from a high-resolution marine pollen record (Adriatic Sea). *Climate of the Past*, 9(5), 2023–2042.

2012

Pellatt, M. G., Goring, S. J., Bodtke, K. M., & Cannon, A. J. (2012). Using a down-scaled bioclimate envelope model to determine long-term temporal connectivity of Garry oak (*quercus garryana*) habitat in western North America: Implications for protected area planning. *Environmental Management*, 49(4), 802–815.

Joannin, S., Brugiapaglia, E., De Beaulieu, J.-L., Bernardo, L., Magny, M., Peyron, O., ... Vannière, B. (2012). Pollen-based reconstruction of Holocene vegetation and climate in southern Italy: The case of Lago Trifoglietti. *Climate of the Past*, 8(6), 1973–1996.

Goring, S., Williams, J., Blois, J., Jackson, S., Paciorek, C., Booth, R., ... Christen, J. (2012). Deposition times in the northeastern United States during the Holocene: Establishing valid priors for Bayesian age models. *Quaternary Science Reviews*, 48, 54–60.

Gill, J. L., Blois, J. L., Goring, S., Marlon, J. R., Bartlein, P. J., Nicoll, K., ... Whitlock, C. (2012). Paleocological changes at Lake Cuitzeo were not consistent with an extraterrestrial impact. *Proceedings of the National Academy of Sciences*.

2007 - 2011

Peyron, O., Goring, S., Dormoy, I., Kotthoff, U., Pross, J., De Beaulieu, J.-L., ... Magny, M. (2011). Holocene seasonality changes in the central Mediterranean region reconstructed from the pollen sequences of Lake Accesa (Italy) and Tenaghi Philippon (Greece). *The Holocene*, 21(1), 131–146.

Blois, J., S, G., & A., S. (2011). Integrating paleoecological databases: The Neotoma Consortium Workshop, September 23- 2 26, 2010. *EOS Transactions of the AGU*, 92, 48.

Goring, S., Lacourse, T., Pellatt, M. G., Walker, I. R., & Mathewes, R. W. (2010). Are pollen-based climate models improved by combining surface samples from soil and lacustrine substrates? *Review of Palaeobotany and Palynology*, 162(2), 203–212.

Goring, S., Pellatt, M. G., Lacourse, T., Walker, I. R., & Mathewes, R. W. (2009). A new methodology for reconstructing climate and vegetation from modern pollen assemblages: An example from British Columbia. *Journal of Biogeography*, 36(4), 626–638.

Dormoy, I., Peyron, O., Combourieu Nebout, N., Goring, S., Kotthoff, U., Magny, M., & Pross, J. (2009). Terrestrial climate variability and seasonality changes in the Mediterranean region between 15 000 and 4000 years BP deduced from marine pollen records. *Climate of the Past*, 5(4), 615–632.

Vamosi, J. C., Goring, S. J., Kennedy, B. F., Mayberry, R. J., Moray, C. M., Neame, L. A., ... Elle, E. (2007). Pollination, floral display, and the ecological correlates of polyploidy. *Functional Ecosystems and Communities*, 1(1), 1–9.

OTHER PUBLICATIONS

Software

Goring S., Dominguez S. 2022. neotoma2 – an improved R package for the Neotoma Paleocological Database. [GitHub]

Goring S., Stryker M., Nelson JK. 2022. Neotoma API Implementation. [GitHub]

Blaauw M & Goring SJ. 2014. clam: Classic age modeling in R. [GitHub]

Goring S. (2013) *neotoma* – an R package for the Neotoma Paleocological Database. [GitHub]

Chapters, Comments & Opinion

Keenlyside K, Nantel P, Pellatt M, Goring S, Gray P. (2014) Chapter 6: Natural environment and biodiversity. In: From Impacts to Adaptation – Assessment Update. Natural Resources Canada. [Open Access]

Gill JL, Blois JL, Goring S, Marlon JR, Bartlein PJ, Nicoll K, Scott AC, Whitlock C. (2012) Paleocological changes at Lake Cuitzeo were not consistent with an extraterrestrial impact. *Proceedings of the National Academy of Science*. **109**: E2243. [Link]

Blois J, Goring S, Smith A. (2011) Integrating paleocological databases: the Neotoma Consortium Workshop, September 23- 26, 2010. *EOS Transactions of the AGU*. **92**:48. [Link]

Mooers AO, Goring SJ, Turvey S, Kuhn T. (2009) “Holocene extinctions and the loss of feature diversity”. *Holocene Extinctions* (S. Turvey, ed.) Oxford University Press, Oxford. [Link]

GRANTS

Awarded

2022 Collaborative Research: Disciplinary Improvements for Past Global Change Research: Connecting Data Systems and Practitioners (\$250,464 – NSF 2226369)

2020 Collaborative Research: Neotoma Paleoecology Database, a Multi-Proxy, International, Community-Curated Data Resource for Global Change Research (\$318,563 – NSF 1948926)

2019 EarthCube Data Capabilities: Collaborative Proposal: Reducing Time-To-Science in the Earth Sciences: Annotations to foster convergence, inclusion, and credit (\$616,613 – NSF 1928366)

2019 Belmont Forum Collaborative Research: Abrupt Change in Climate and Ecosystems: Where are the Tipping Points? (\$150,000 – NSF ICER 1929476)

2017 Collaborative Proposal: EarthCube Integration: THROUGHPUT: Standards and Services for Community Curated Repositories (\$179,739 – NSF 1740699)

2015 Collaborative Research: Leveraging domain repositories in Flyover Country, a mobile app for geoscience outreach, data discovery, and visualization (\$162,778 – NSF 1550855)

2015 Collaborative Research: Neotoma Paleoecology Database, Integrative Cyberinfrastructure for Global Change Research (\$353,394 – NSF 1550707)

2015 Building Interoperable Cyberinfrastructure (CI) at the Interface between Paleogeoinformatics and Bioinformatics (\$285,000 – NSF EarthCube Integrative Activities)

2014 Climate Prediction in No-Analogue Space – PI (Amazon Web Services in Education Grant, 1yr – \$6000)

2014 Memorandum of Understanding – United States Forest Service Forest Inventory and Analysis Program

TEACHING

2023 DSCI591: Data Science Capstone Project (University of British Columbia)

2022 DSCI591: Data Science Capstone Project (University of British Columbia)

2021 DSCI591: Data Science Capstone Project (University of British Columbia)

2020 DSCI591: Data Science Capstone Project (University of British Columbia)

2020 DSCI513: Databases and Data Retrieval (University of British Columbia)

2019 DSCI591: Data Science Capstone Project (University of British Columbia)

2015 GEOG378: Hybrid-online - Introduction to Geocomputing (University of Wisconsin)

2014 Pollen: Field, Laboratory, and Data Analysis workshop. Instructor & co-lead. University of Maine, June 2014

2013 Climatic Environments of the Past University of Wisconsin – Madison. Guest lecturer (Dating Techniques, The Anthropocene)

2013 Quaternary Vegetation Dynamics – University of Wisconsin – Madison. Some course design, multiple (4) lectures & some lab design.

2012 Conservation Paleoecology University of Wisconsin – Madison Seminar, co-instruction with J. Williams, J. Blois, A. Ordonez.

2012 Camp PalEON – University of Notre Dame Environmental Research Center. Age-depth modeling unit, support for student projects & lake coring module.

2009 Using R for Paleoecological Research – University of the Fraser Valley, Abbotsford, BC. One day seminar introducing R workflows for paleoecological research

2008 Paleobiology and Palynology (TA; Simon Fraser University)

2007 General Biology (TA; Simon Fraser University)

Data Science Mentoring

UBC Master of Data Science Program.

2023

- Insurance Corporation of British Columbia - Object Detection and classification (cloud computing, object detection, OCR)
- GoldSpot Discoveries - Image Classification on highly unbalanced datasets (image analysis, Python package development, cloud computing)
- (Partner) Neotoma Paleoecology Database - Natural Language Processing and textual relevance from the scientific literature (NLP, SQL)

2022

- Properly - Predicting real estate closing sale price variance from realtor listings (image analysis, ML modeling)
- GoldSpot Discoveries - Classification of geological drill-core records (image classification)

2021

- Deetkin Consulting - Survival dynamics of small businesses in Vancouver over time (space-time analysis, survival analysis)
- Translink - Understanding the spatiotemporal patterns responsible for transit delays in Vancouver, BC (space-time analysis, data architecture, SQL)

2019

- E-Comm 911 - Predictive analysis for human resources management (survival analysis and scheduling)
- Quebec Iron Ore - Image classification of geological features (image classification, annotation)

- QxMD - Article relevance and recommendation systems from user behaviour in an mobile application (recommendation systems, NLP, data architecture, SQL)

PRESENTATIONS

Invited Presentations and Workshops

- Goring S. The neotoma package and semi-automated chronology construction for paleoecological databases. *Neotoma Chronology Workshop*. Belfast UK, January 2014.
- Goring S, Lacourse T, Pellatt MG, Mathewes RW. Pollen richness is not equivalent to plant species richness: a cautionary tale. *AASP 46th Annual Meeting*. San Francisco, October 2013.
- Goring S, Brewer S, Grimm E. Neotoma – Hands-on computing workshop. *AASP 46th Annual Meeting*. San Francisco, October 2013.
- Goring S. The more things change: Using the past to understand an uncertain future. Faculty of Environment; University of Waterloo. Waterloo, ON. July 30, 2013.
- Goring S, Weathers KC, Dodds WK, Soranno PA, Sweet LC, Cheruvilil KS, Kominoski JS, Rüegg J, Thorn AM, Utz RM. Cultural credit for collaborative contributions to support interdisciplinary ecology. *NSF Macrosystems Biology Meeting*. Washington DC. June 6, 2013.
- Goring S, Williams JW, Ruid M, MacLachlan JS, Jackson ST, Paciorek CJ, Thurman A, Zhu J, Brooks W, Mladenoff DJ, Cogbill C, Record S, Dietze MC. What the Public Lands Survey can tell us about climate change, vegetation and models of future (and past) change. Quaternary Paleoecology Series. University of Minnesota. April 10, 2013.
- Goring S, Williams JW, Ruid M, MacLachlan JS, Jackson ST, Paciorek CJ, Thurman A, Zhu J, Brooks W, Mladenoff DJ, Cogbill C, Record S, Dietze MC. Using the past to predict the future: The Public Land Survey, 19th century climate and the PaleON Project. Yi-Fu Tuan Seminar Series. University of Wisconsin – Madison. February 15, 2013

Selected Presentations

- Goring S, Williams JW, Ruid M, MacLachlan JS, Jackson ST, Paciorek CJ, Thurman A, Zhu J, Brooks W, Mladenoff DJ, Cogbill C, Record S, Dietze MC. Estimating pre-settlement vegetation in the American Midwest: Exploring climate relationships and links to proxy data for robust data assimilation. International Biogeography Society Biennial Meeting. January 2013, Miami, FL.
- Goring S. Holocene reconstructions for British Columbia, Canada using pollen as a proxy for climate: applications, validation and trepidation. Climate People and the Environment Program Seminar Series. Feb 24, 2012. Madison, WI.

Goring S, Mathewes R. Towards a comprehensive Holocene temperature and precipitation record for British Columbia using a pollen-based multi-method approach. CANQUA - GeoHydro 2011. August 28 – September 1, 2011. Quebec City, QC.

Goring S, Mathewes RW, Lacourse T, Pellatt MG. Match and Mismatch: Pollen-Based Climate Reconstruction and the Instrumental Records from Southwestern British Columbia, Canada. 8th European Paleobotany – Palynology Conference. July 2010. Budapest, Hungary.

Goring SJ, Lacourse T, Pellatt MG, Walker IR & RW Mathewes. Multivariate climate reconstruction using a modern pollen database for British Columbia. IPC/IOPC. August 31, 2008. Bonn, Germany.

Goring SJ & RW Mathewes. Southwestern British Columbia Revisited: Paleoclimatic History. Botany 2008. July 28, 2008. Vancouver, British Columbia.

AWARDS AND RECOGNITION

2023 M. Lee Allison Award for Geoinformatics - Geological Society of America

2015 Earthcube Distinguished Lecturer - Early Career (\$600 – National)

2015 Climate Informatics 2015 (\$1100 Travel Grant – National)

2015 EarthCube Early Career Travel Grant (\$500 – National)

2011 CANQUA – Alexis Dreimanis Award (\$2000 – National Scholarship)

2011 President's Research Stipend (\$6,250 –Simon Fraser University)

2009 NSERC PGS-D3 Scholarship (\$63,000 – National Scholarship)

2009 AASP – The Palynological Society – Conference Travel Grant (\$250USD)

2009 CANQUA – Student Poster Award (3rd Place with TS Kuhn - \$100)

2008 Canadian Society of Ecology and Evolution, Poster Award (\$500)

2008 Simon Fraser University Graduate Fellowship (\$6000)

2007 Iowa Lakeside Laboratory Scholarship (\$390 - Iowa State University)

2004 van Adrichem Summer Research Bursary (\$600 – UNBC)

1999 JB Goodhew Award (Recognition, Sir Sanford Fleming College)

PUBLIC SERVICE

University Service

2022 - 2023 Diversity, Equity, Inclusion and Climate Committee (University of Wisconsin)

2009 Biological Sciences Graduate Student Council (SFU)

2006 Faculty Search Committee – Two NSERC Canada Research Chair Tier II positions (SFU)

2002 – 2004 Student Senator: Member of the Senate Committees for University Budget & Library (UNBC)

Academic Service

2023 Chair-Elect, Division of Geoinformatics - Geological Society of America

2019 - 2023 Lead, IT Committee - Neotoma Paleoecology Database

2015 Program Committee – Climate Informatics 2015

2015 Developed the Early Career Travel Grant program for EarthCube

2014 - 2015 Organizing Committee – NSF EarthCube All Hands Meeting

2014 - 2015 Engagement Team – NSF EarthCube Program

2013 Editorial Board - Open Quaternary

2013 Review Editor – Frontiers in Ecology and Evolution: Paleoecology

2013 PalEON Settlement Vegetation Workshop Organizer, Madison, WI

2012 – 2016 Canadian Association of Palynologists Executive, International Federation of Palynological Societies representative

2011 PalEON Settlement Vegetation Workshop Organizer, Madison, WI

2010 Neotoma Consortium Workshop, Participant, Madison, WI

2009 AASP – The Palynological Society Annual Meeting – Copy editor

Reviewer

Ecology Letters; Journal of Biogeography; Open Ecology Journal; Journal of Ecology; Environmental Modelling and Software; American Midland Naturalist, Climate of the Past; Earth Science Reviews; Quaternary Science Reviews; Frontiers in Ecology and Evolution: Paleoecology; Geology; PLOS One; Open Quaternary

Public Service

2015 Storytelling with Data – An introduction to data science (Two half day workshops) IT Academy, University of Wisconsin, Madison, WI.

2011 Big Brothers, In-School Mentoring Program, Vancouver, BC (since 2005)

2010 Why is Paleoecology Awesome? (Talk) East Side High School, Vancouver, BC

2009 Royal Canadian Mounted Police: Forensic analysis of pollen assemblages.