# Pamela H. Templer, PhD

Professor and Chair

Boston University, Dept of Biology 5 Cummington Mall Boston, MA 02215 Phone: 617-353-6978 email: ptempler@bu.edu web: people.bu.edu/ptempler

### **EDUCATION**

Ph.D. in Ecology and Evolutionary Biology, Cornell University, Ithaca, NY	2001
B.A. in Environmental Studies and Biology (double major), University of California Santa Cruz, CA	1995
PROFESSIONAL APPOINTMENTS	
Distinguished Professor, Boston University Arts & Sciences	2024-present
Chair, Department of Biology, Boston University	2022-present
Charles Bullard Fellow, Harvard University	2021-2022
Professor, Boston University	2017-present
Director, BU URBAN Ph.D. Program, Boston University	2017-present
Faculty Research Fellow, Pardee Center, Boston University	2015-present
Associate of the Arnold Arboretum, Harvard University	2015-present
Director, Ph.D. Program in Biogeoscience, Boston University	2014-2021
Associate Chair, Department of Biology, Boston University	2014-2020
Charles Bullard Fellow and Sustainability Science Fellow, Harvard University	2013-2014
Associate Professor, Boston University	2012-2017
Assistant Professor, Boston University	2005-2012
Co-Director, Stable Isotope Laboratory, Boston University	2007-present
Postdoctoral Fellow, University California Berkeley	2001-2005
Research Assistant, Cary Institute	1996
HONORS AND AWARDS	
Invited Member, U.S. National Committee for the International Union of Biological Sciences	2024-2028

٠.	101074127171120	
	Invited Member, U.S. National Committee for the International Union of Biological Sciences	2024-2028
	Invited Author, First National Nature Assessment, U.S. Global Change Research Program	2024
	Provost's Scholar-Teacher of the Year Award, Boston University	2021
	Assoc for Advancement Sustainability Higher Educ (AASHE) Campus Sustainability Research Award	2021
	Elected Fellow, Ecological Society of America (ESA)	2019
	Elected Vice President for Education & Human Resources, ESA	2018-2021
	Metcalf Award for Excellence in Teaching, Boston University	2015
	National Science Foundation CAREER Grant	2012-2017
	Elected member of Scientific Coordinating Committee, Hubbard Brook Experimental Forest	2010-2022
	Andrew W. Mellon Foundation's Junior Faculty Research Grant	2007-2011
	Teresa Heinz Environmental Scholars Award (Ph.D. Dissertation Research Fellowship)	1999
	President, Graduate Student Association, Department of Ecology & Evol Bio, Cornell Univ	1998
	Polgar Fellowship, Hudson River Foundation	1995
	Honors undergraduate senior thesis, University California Santa Cruz	1995
	National Science Foundation – Research Experience for Undergraduates (REU), Cary Institute	1994

## **EXAMPLES OF RESEARCH IN THE NEWS**

PBS News Hour: <a href="https://www.pbs.org/newshour/science/love-it-or-hate-it-winter-plays-an-important-role-heres-how-its-changing">https://www.pbs.org/newshour/science/love-it-or-hate-it-winter-plays-an-important-role-heres-how-its-changing</a>

NPR Science Friday: https://www.sciencefriday.com/segments/beech-leaf-disease/

NPR WBUR's Morning Edition: https://www.wbur.org/news/2023/10/24/beech-tree-disease-massachusetts

NPR WNYC, <a href="https://www.wnyc.org/story/how-climate-change-making-maple-syrup-less-sweet-and-sapping-production-ny-nj/">https://www.wnyc.org/story/how-climate-change-making-maple-syrup-less-sweet-and-sapping-production-ny-nj/</a>

NPR WBUR, https://www.wbur.org/news/2021/04/07/faculty-air-travel-environment

NPR WGBH, https://www.wgbh.org/news/local-news/2020/09/08/western-mass-blaze-serves-as-reminder-of-states-rich-history-of-wildfire

NPR, www.npr.org/sections/thesalt/2018/12/07/673713824/not-so-sweet-climate-change-means-slow-growing-sugar-maples-study-finds

HBO Vice News Tonight, <a href="https://news.vice.com/story/forest-climate-change-simulation">https://news.vice.com/story/forest-climate-change-simulation</a>

Boston Globe, http://www.bostonglobe.com/ideas/2014/11/07/the-city-ecosystem-pipes-and-all/HjLVemBs9nPiuE53PjPSLK/story.html

CBS Boston Evening News, http://boston.cbslocal.com/2014/03/29/eye-on-weather-the-spring-forecast/

Car Talk, <u>www.cartalk.com/content/losing-winter-climate-change-will-hit-new-england-hard</u>

Scientific American, <a href="http://www.scientificamerican.com/article.cfm?id=wired-forest-may-reveal-how-new-england-forests-respond-climate-change">http://www.scientificamerican.com/article.cfm?id=wired-forest-may-reveal-how-new-england-forests-respond-climate-change</a>

 $CBS\ Boston\ Evening\ News,\ \underline{http://boston.cbslocal.com/2012/11/21/researchers-say-new-england-winters-getting-shorter/\#respond}$ 

#### **COURSES TAUGHT:**

BI303 Ecology (2006)

Biology of Global Change (2006, 2008-2012, 2014-2020, 2022-2024)

BI/EE 530 Forest Ecology (2007, 2009-2013, 2015, 2017-2021)
GRS BI/EE 719 Terrestrial Biogeoscience Colloquium (2012)
GRS BI/EE 720 Terrestrial Biogeoscience Practicum (2013)

GRS BI/EE 764 Urban Biogeoscience and Environmental Health Colloquium (Fall 2019)
SPH EH765 Urban Biogeoscience and Environmental Health Colloquium (Fall 2019)

GRS BI/EE 765 URBAN Biogeoscience and Environmental Health Applied Research Methods (Spring 2020) SPH EH797 URBAN Biogeoscience and Environmental Health Applied Research Methods (Spring 2020)

### POSTDOCTORAL FELLOWS AND VISITING SCIENTISTS:

Tiphaine Chevallier, PhD (2008-2009), Joanna Carey, PhD (2014-2015), Thomas Dirnboeck, PhD (2015-2017), Alix Contosta (2018-2020)

#### **GRADUATE STUDENTS:**

Anne Socci (Ph.D., 2006-2011, Impact of winter climate change on nutrient & water uptake in a northern forest ecosystem)

Andrew Reinmann (Ph.D., 2008-2014, Effects of winter climate change on carbon & nitrogen losses from temperate forest ecosystems)

Patrick Sorensen (Ph.D., 2011-2016, Effects of winter snowpack on microbial activity, community composition, and plant-microbe interactions in mixed-hardwood temperate forests)

Rebecca Sanders-DeMott (Ph.D., 2011-2016, Effects of climate change across seasons on forest ecosystems)

Stephen Decina (Ph.D., 2013-2018, Controls on atmospheric nitrogen deposition and cycling in urban ecosystems)

Jamie Harrison (Ph.D., 2016-2020, Water & carbon uptake & soil nitrogen cycling in a northern hardwood forest under a changing climate))

Jenna Rindy (MS, 2019-2022, Effects of urbanization and forest fragmentation on atmospheric nitrogen inputs)

Steve Gougherty (PhD, 2018-2023, Nutrient allocation and conservation mechanisms in trees: intraspecific variation, reproductive costs, and global scale comparisons)

Erin Pierce (MS. 2017-2019, Effects of tropospheric ozone & nitrogen on carbon cycling in northern forests)

Stephen Caron (PhD, 2019-present, Effects of urbanization & climate change on nitrogen availability in northern forests)

Emma Conrad-Rooney (PhD, 2021-present, Effects of urbanization & climate change on forest ecosystems)

Emma Daily (PhD, 2023-present)

Visiting Ph.D. graduate students: Dries Huygens (University of Ghent, Belgium, 2005); Lilia L. Roa Fuentes (National University of Mexico, 2010); Christine Bollig (University of Bern, Switzerland, 2011); Maria Moser (ETH Zürich; Swiss Federal Institute of Technology; 2021-22); Robert Weigel (University of Greifswald, Germany, 2016); John Allen (University of Helsinki, Finland, 2018); Chikae Tatsumi (Kyoto University, Japan, 2019); Yihan Cai (Hokkaido University, Japan, 2023)

## **UNDERGRADUATE STUDENTS:**

Mentor to more than 45 undergraduate research assistants and 20 students in Boston University's Undergraduate Research Opportunities Program (UROP), Summer Undergraduate Research Fellowship (SURF) and the National Science Foundation's Research Experience for Undergraduates (REU) program.

## **PUBLICATIONS**

REFEREED ARTICLES (117 total; Google Scholar h-Index = 48; \*Graduate Student; \*\*Undergraduate)

Smith I\*, **PH Templer**, L Hutyra. 2024. Water sources for street trees in mesic urban environments. <u>Science of the Total Environment</u> 908:168411.

**Templer PH**, KF Atherton\*, A Conrad-Rooney\*, H Ho, LR Hutyra, CF Ianniello\*, DR Kashian, JI Levy, D Meshoulam, MC Urban. 2024. Strengthening graduate education and addressing environmental challenges through solutions-oriented partnerships and interdisciplinary training. Sustainable Earth Reviews 7:3.

Blake K\*\*, **PH Templer**. 2023. Interacting effects of urbanization and climate on atmospheric deposition of phosphorus around the globe: a meta-analysis. <u>Atmospheric Environment</u> 309:119940.

- Bowser G, **PH Templer**, SS Ho, SA Green, S Hautzinger, I Zhu-Maguire, A Connaughton, L Dundon, D Husic, M Urban. 2023. Fierce urgency of now: integrating the youth voice at COP. <u>Frontiers in Ecol & Environment</u> 21:164-165.
- Buckley S\*, CL Connolly\*, JI Levy, **PH Templer**, J Ashmore, L Carvalho, N Phillips, P Fabian. 2023. Carbon, indoor air, energy and financial benefits of coupled ventilation upgrade and enhanced rooftop garden installation: an interdisciplinary climate mitigation approach. <u>Sustainable Cities & Society</u> 97:104792.
- Caron S\*, S Garvey\*, J Gewirtzman, K Schultz\*, J Bhatnagar, CT Driscoll, L Hutyra, **PH Templer**. 2023. Urbanization and fragmentation have opposite effects on soil nitrogen availability in temperate forest ecosystems. <u>Global Change Biology</u> 29:2156-2171.
- Conrad-Rooney E\*, J Gewirtzman, Y Pappas\*\*, VJ Pasquarella, LR Hutyra, **PH Templer**. 2023. Atmospheric wet deposition in urban and suburban sites across the United States. <u>Atmospheric Environment</u> 305:119783.
- Contosta A, C Driscoll, J Battles, **PH Templer**, G Likens, R Holmes, NL Rodenhouse, M Vadeboncouer, J Campbell, S Garlick, M Green, S Rogers, P Groffman. 2023. Early warning signals of changing resilience in the biogeochemistry and biology of a northern hardwood forest. Environmental Research Letters 305:119783.
- Garvey S\*, **PH Templer**, JM Bhatnagar, LR Hutyra. 2023. Soils at the temperate forest edge: an investigation of soil characteristics and carbon dynamics. <u>Science of the Total Environment</u>, *in press*.
- Gougherty S\*, B Cowart\*\*, **PH Templer**. 2023. Macroscale variation in red maple (*Acer rubrum*) foliar carbon, nitrogen, and nitrogen resorption. Ecosystems 26:937-950.
- Green M, L Pardo, J Campbell, E Rosi, E Bernhardt, C Driscoll, T Fahey, N LoRusso, J Matthes, **PH Templer**. 2023. Combination of factors rather than single disturbance drives perturbation of the nitrogen. <u>Biogeochemistry</u> 166:1399-157.
- Ho SS, G Bowser, **PH Templer**, SA Green. 2023. Learning for sustainability: partnerships for the goals. <u>Sustainable</u> Earth Reviews 6:8.
- Primack R, T Miller, C Terry\*\*, E Marin-Spiotta, **PH Templer**, A Berhe, E Diaz-Vallejo, M Hastings, V Magley, A Mattheis, B Schneider, R Barnes. 2023. Historically excluded groups in ecology are undervalued and poorly treated. Frontiers in Ecology and the Environment 21:363-369.
- Reeve C, JA Robichaud, T Fernandes, AE Bates, AJ Bramburger, J Brownscombe, CM Davy, HAL Henry, BC McMeans, ERD Moise, S Sharma, PA Smith, EK Studd, AO Sutton, **PH Templer**, SJ Cooke. 2023. Applied winter biology: threats, conservation, and management of biological resources during winter in cold climate regions. <u>Conservation Physiology</u> 11:1.
- Rindy JE\*, EA Pierce\*, J Geddes, SM Garvey\*, J Gewirtzman, C Driscoll, L Hutyra, **PH Templer**. 2023. Effects of urbanization and forest fragmentation on atmospheric nitrogen inputs and ambient nitrogen oxide and ozone concentrations in mixed temperate forests. Journal Geophysical Research <u>Biogeosciences</u> 128.
- Tatsumi C, KF Atherton\*, S Garvey\*, E Conrad-Rooney\*, LL Morreale\*, LR Hutyra, **PH Templer**, JM Bhatnagar. Urbanization and fragmentation interact to drive mutualism breakdown and the rise of unstable pathogenic communities in the forest soil microbiome. 2023. Proceedings of the National Academy of Sciences 120:e230751920.
- Templer PH, J Harrison\*, F Pilotto, A Flores-Diaz, P Haase, WH McDowell, R Sharif\*, H Shibata, D Blankman, A Avila, U Baatar, HR Bogena, I Bourgeois, J Campbell, T Dirnbock, WK Dodds, M Hauken, I Kokorite, K Lajtha, IL Lai, H Laudon, TC Lin, SRM Lins, H Meesenburg, P Pinho, A Robinson, M Rogora, B Scheler, P Schleppi, R Sommaruga, T Staszewski, M Taka. 2022. Atmospheric deposition and precipitation are important predictors of inorganic nitrogen export to streams from forest and grassland watersheds: large-scale data synthesis. Biogeochemistry 160:219-41.
- Blagden M\*\*, JL Harrison\*, R Minocha, R Sanders-DeMott\*, S Long, **PH Templer**. 2022. Experimental changes in climate influence foliar nutrition and metabolism of red maple (Acer rubrum) trees in a northern hardwood forest. Ecosphere 13:e03859.
- Finestone J\*\*, **PH Templer**, JM Bhatnagar. 2022. Soil fungi exposed to warming temperatures and shrinking snowpack in a northern hardwood forest have lower capacity for growth and nutrient cycling. <u>Frontiers in Forests and Global Change</u> 5:800335.
- Garvey S\*, **P Templer**, E Pierce\*, A Reinmann, L Hutyra. 2022. Diverging patterns at the forest edge: soil respiration dynamics of fragmented forests in urban and rural areas. <u>Global Change Biology</u> 28: 3094-3109.
- Kobayashi M, **P Templer**, A Katayama, O Seki, K Takagi. 2022. Early snowmelt by an extreme warm event affects understory more than overstory trees in Japanese temperate forests. <u>Ecosphere</u> e4182.
- Mason R, N Lany, J Craine, M Jonard, S Ollinger, P Groffman, R Fulweiler, J Angerer, Q Read, P Reich, **PH Templer**, A Elmore. 2022. Evidence, causes, consequences of declining nitrogen availability in terrestrial ecosystems. Science 376.
- Mason R, J Craine, N Lany, M Jonard, S Ollinger, P Groffman, R Fulweiler, J Angerer, Q Read, P Reich, PH Templer, A Elmore. 2022. Response to "Explanations for nitrogen decline." Science 376:1170.
- Guerrieri R, **P Templer**, F Magnani. 2021. Canopy exchange and modification of nitrogen fluxes in forest ecosystems. Current Forestry Reports 7:115-137.

- Hundertmark WJ\*\*, M Lee\*\*, IA Smith\*\*, AHY Bang\*\*, V Chen\*\*, C Gately, **PH Templer**, LR Hutyra. 2021. Influence of landscape management practices on urban greenhouse gas budgets. <u>Carbon Balance and Management</u> 16:1.
- Rivero-Villar A, G Ruíz-Suárez, **PH Templer**, V Souza, J Campo. 2021. Nitrogen cycling in tropical dry forests are sensitive to changes in rainfall regime and nitrogen deposition. <u>Biogeochemistry</u> 153:283-302.
- Studd EK, AE Bates, AJ Bramburger, T Fernandes, B Hayden, HAL Henry, MM Humphries, R Martin, BC McMeans, ERD Moise, AM O'Sullivan, S Sharma, BJ Sinclair, AO Sutton, **PH Templer**, SJ Cooke. 2021. Nine maxims for the ecology of cold-climate winters. *BioScience* 71:820-830.
- Sutton A, E Studd, T Fernandes, A Bates, A Bramburger, SJ Cooke, B Hayden, HAL Henry, M Humphries, R Martin, B McMeans, E Moise, AM O'Sullivan, S Sharma, **PH Templer**. 2021. Frozen out: unanswered questions about winter biology. <u>Environmental Reviews</u> 29.
- Tatsumi C; F Hyodo, T Taniguchi, W Shi, F Koba, K Fukushima, S Du, N Yamanaka, **P Templer**, R Tateno. 2021. Arbuscular mycorrhizal community in roots and nitrogen uptake patterns of understory trees beneath ectomycorrhizal and non-ectomycorrhizal overstory trees. Frontiers in Plant Science 11.
- Whipple S\*, S Tiwari, T Osborne, G Bowser, SA Green, **PH Templer**, S Ho. 2021. Engaging the Youth Environmental Alliance in Higher Education to Achieve the Sustainable Development Goals. <u>Scholarship and Practice of Undergraduate Research</u> 5:4-15.
- Bowser G, SA Green, SS Ho, **PH Templer**. 2020. Educating students in solutions-oriented science. <u>Frontiers in Ecology and the Environment</u> 18:171.
- Garcia MO\*, **PH Templer**, PO Sorensen\*, R Sanders-DeMott\*, P Groffman, JM Bhatnagar. 2020. Soil microbes trade-off biogeochemical cycling for stress tolerance traits in response to year-round climate change. <u>Frontiers in Microbiology</u> 11:616.
- Harrison JL\*, K Schultz\*\*, M Blagden\*\*, R Sanders-DeMott\*, **PH Templer**. 2020. Growing season soil warming may counteract trend of nitrogen oligotrophication in a Northern hardwood forest. <u>Biogeochemistry</u> 151:139-152.
- Harrison JL\*, R Sanders-DeMott\*, AB Reinmann\*, P Sorensen\*, **PH Templer**. 2020. Growing season warming and winter soil freeze/thaw cycles increase transpiration in a northern hardwood forest. <u>Ecology</u> 101:e03173.
- Harrison JL\*, M Blagden\*\*, MB Green, G Salvucci, **PH Templer**. 2020. Water sources for red maple trees in a northern hardwood forest under a changing climate. <u>Ecohydrology</u> 13:e2248.
- Harrison JL\*, AB Reinmann\*, A Socci Maloney\*, N Phillips, SM Juice, AJ Webster, **PH Templer**. 2020. Transpiration of dominant tree species varies in response to projected changes in climate: implications for composition and water balance of temperate forest ecosystems. <u>Ecosystems</u> 23:1598-1613.
- Winbourne JB, T Jones, SM Garvey, JL Harrison\*, L Wang, D Li, **PH Templer**, L Hutyra. 2020. Tree transpiration and urban temperatures: current understanding, implications, and future research directions. <u>BioScience</u> 70:576-588.
- Contosta A, N Casson, S Garlick, S Nelson, M Ayres, E Burakowski, J Campbell, I Creed, C Eimers, C Evans, I Fernandez, C Fuss, T Huntington, K Patel, R Sanders-DeMott, K Son, **PH Templer**, C Thornbrugh. 2019. Northern forest winters have lost cold, snowy conditions that are important for ecosystems and human communities. <a href="Ecological Applications"><u>Ecological Applications</u></a> 29: e01974.
- Craine JM, AJ Elmore, L Wang, P Boeckx, S Delzon, Y Fang, A Gray, R Guerrieri, MJ Gundale, P Hietz, DM Nelson, PL Peri, **PH Templer**, C Werner. 2019. Reply to: Data do not support large-scale oligotrophiaction of terrestrial ecosystems. Nature Ecology and Evolution 3:1287-1288.
- Decina, L Hutyra, PH Templer. 2019. Hotspots of nitrogen deposition in the world's urban areas: a global data synthesis Frontiers in Ecology & Environment 18:92-100.
- Dirnbock T, P Haase, M Mirtl, J Pauw, **PH Templer**. 2019. Contemporary international long-term ecological research (ILTER) from biogeosciences to socio-ecology and biodiversity research. <u>Regional Environmental Change</u> 19:309-11.
- Reinmann\* AB, J Susser\*\*, EMC Demaria, and **PH Templer**. 2019. Declines in northern forest tree growth following snowpack decline and soil freezing. <u>Global Change Biology</u> 25:420-430.
- Song J, S Wan, S Piao, A Knapp, A Classen, S Vicca, P Ciais, M Hovenden, S Leuzinger, Claus Beier, P Kardol, J Xia, Q Liu, J Ru, Z Zhou, Y Luo, D Guo, J. Langley, J Zscheischler, J Dukes, J Tang, J Chen, K Hofmockel, L Kueppers, L Rustad, L Liu, M Smith, **PH Templer**, R Quinn Thomas, R Norby, R Phillips, S Niu, S Fatichi, Y Wang, P Shao, H Han, D Wang, L Lei, J Wang, X Li, Q Zhang, X Li, F Su, B Liu, F Yang, G Ma, G Li, Y Liu, Y Liu, Z Yang, K Zhang, Y Miao, M Hu, C Yan, A Zhang, M Zhong, Y Hui, Y Li, M Zheng. 2019. A meta-analysis of 1119 manipulative experiments on terrestrial carbon cycling responses to global change. Nature Ecology & Evolution 3:1309-1320.
- Sorensen\* PO, JM Bhatnagar, L Christenson, J Duran, T Fahey, MC Fisk, AC Finzi, PM Groffman, JL Morse, **PH Templer**. 2019. Roots mediate the effects of snowpack decline on soil bacteria, fungi, and nitrogen cycling in a northern hardwood forest. Frontiers in Microbiology 10:926.
- Walker J, G Beachley, HM Amos, R Baumgardner, J Baron, J Bash, MD Bell, KB Benedict, X Chen, DW Clow, A Cole, JG Coughlin, K Cruz, RW Daly, SM Decina, EM Elliott, ME Fenn, L Ganzeveld, K Gebhart, SS Isil, BM Kerschner, RS Larson, T Lavery, GG Lear, T Macy, MA Mast, K Mishoe, KH Morris, PE Padgett, RV Pouyat, M Puchalski, H Pye, AW

- Rea, MF Rhodes, CM Rogers, R Saylor, R Scheffe, BA Schichtel, DB Schwede, GA Sexstone, BC Sive, R Sosa, **PH Templer**, T Thompson, DTong, GA Wetherbee, TH Whitlow, Z Wu, Z Yu, L Zhang. 2019. Toward the improvement of total nitrogen deposition budgets in the US. <u>Science of the Total Environment</u> 691:1328-1352.
- Yang Y, L Meng, R Yani, C Driscoll, M Montesdeoca, **PH Temple**r, L Rustad, H Asbjornsen. 2019. Climate change may alter mercury fluxes in northern hardwood forests. <u>Biogeochemistry</u> 146:1-16.
- Amos HM, CF Miniat, J Lynch, J Compton, **PH Templer**, LA Sprague, D Shaw, D Burns, A Rea, D Whitall, L Myles, D Gay, M Nilles, J Walker, A Rose, J Bales, J Deacon, R Pouyat. 2018. What goes up must come down: integrating atmospheric air and water quality monitoring. <u>Environmental Science & Technology</u> 52: 11441-11448.
- Asbjornsen H, JL Campbell, KA Jennings, MA Vadeboncoeur, C McIntire, **PH Templer**, RP Phillips, TL Bauerle, MC Dietze, SD Frey, PM Groffman, R Guerrieri, PJ Hanson, EP Kelsey, AK Knapp, NG McDowell, P Meir, KA Novick, S Ollinger, W Pockman, P Schaberg, S Wullschleger, M Smith, L Rustad. 2018. Guidelines and considerations for designing precipitation manipulation experiments in forest ecosystems. Methods in Ecology & Evolution 9:2310-25.
- Craine JM, AJ Elmore, L Wang, J Aranibar, M Bauters, P Boeckx, BE Crowley, MA Dawes, S Delzon, A Fajardo, Y Fang, L Fujiyoshi, A Gray, R Guerrieri, MJ Gundale, DJ Hawke, P Hietz, M Jonard, E Kearsley, T Kenzo, M Makarov, S Marañón-Jiménez, TP McGlynn, BE McNeil, SG Mosher, DM Nelson, PL Peri, JC Roggy, R Sanders-DeMott, M Song, P Szpak, **PH Templer**, DV Colff, C Werner, X Xu, Y Yang, G Yu, K Zmudczyńska-Skarbek. 2018. Isotopic evidence for oligotrophication of terrestrial ecosystems. Nature Ecology and Evolution 2:1735-1744.
- Crowther TW, MB Machmuller, JC Carey, SD Allison, JM Blair, SD Bridgham, AJ Burton, FA Dijkstra, B Elberling, M Estiarte, KS Larsen, H Laudon, M Lupascu, S Marhan, J Mohan, S Niu, J Penuelas, IK Schimdt, **PH Templer**, G Kroel-Dulay, S Frey, and MA Bradford. 2018. Predicting soil carbon loss with warming reply. Nature 554: E7-E8.
- Decina\* SM, **PH Templer** and LR Hutyra. 2018. Atmospheric inputs of nitrogen, carbon, and phosphorus across an urban area: unaccounted fluxes and canopy influences. Earth's Future 6: 134-148.
- Groffman P, C Driscoll, J Duran, J Campbell, L Christenson, T Fahey, M Fisk, C Fuss, G Likens, G Lovett, L Rustad, PH Templer. 2018. Nitrogen oligotropication in northern hardwood forests. Biogeochemistry 141: 523-39.
- Harada Y, TH Whitlow, **PH Templer**, RW Howarth, MT Walter, JM Russel-Anelli, NL Bassuk. Nitrogen biogeochemistry of an urban rooftop farm. 2018. Frontiers in Ecology and Evolution 6: 1-14.
- Reinmann\* AB, **PH Templer**. 2018. Increased soil respiration in response to experimentally reduced snow cover and increased soil freezing in a temperate deciduous forest. <u>Biogeochemistry</u> 140: 359-371.
- Rivero-Villar A, **PH Templer**, V Parra-Tabla, J Campo. 2018. Differences in nitrogen cycling revealed by stable isotopes of nitrogen in plants and soils. <u>Biotropica</u> 50: 859-867.
- Sanders-DeMott\* R, R McNellis\*\*, M Jabouri\*\*, **PH Templer**. 2018. Snow depth, soil temperature, and plant-herbivore interactions mediate plant response to climate change. <u>Journal of Ecology</u> 106:1508-1519.
- Sanders-DeMott\* R, PO Sorensen, AB Reinmann, and **PH Templer**. 2018. Growing season warming and winter freeze-thaw cycles reduce root nitrogen uptake capacity and increase soil solution nitrogen in a northern forest ecosystem. Biogeochemistry 137: 337-349.
- Sorensen PO\*, AC Finzi, M Giasson, AB Reinmann\*, R Sanders-DeMott\*, **PH Templer**. 2018. Winter soil freeze-thaw cycles lead to reductions in soil microbial biomass and activity not compensated for by soil warming. Soil Biology and Biochemistry 116:39-47.
- Christenson L, H Clark, L Livingston, E Hefferman, J Campbell, C Driscoll, P Groffman, T Fahey, M Fisk, M Mitchell, **PH Templer**. 2017. Winter climate change and soil faunal distribution and abundance: implications for decomposition in the northern forest. Northeastern Naturalist 24: B209-B234.
- Coble AP, MA Vadeboncoeur, ZC Berry, KA Jennings, C McIntire, JL Campbell, LE Rustad, **PH Templer**, H Asbjornsen. 2017. Are northeastern U.S. forests vulnerable to extreme drought? <u>Ecological Processes</u> 6:34.
- Decina SM\*, **PH Templer**, LR Hutyra, CK Gately, P Rao. 2017. Variability, drivers, and effects of atmospheric nitrogen inputs across an urban area: emerging patterns among human activities, the atmosphere and soils. <u>Science of the Total Environment</u> 609:1524-1534.
- Duran J, JL Morse, A Rodriguez, JL Campbell, LM Christenson, CT Driscoll, TJ Fahey, MC Fisk, MJ Mitchell, **PH Templer**, PM Groffman. 2017. Differential sensitivity to climate change of C and N cycling processes across soil horizons in a northern hardwood forest. Soil Biology & Biochemistry 107:77-84.
- Maguire\* T, **P Templer**, J Battles, R Fulweiler. 2017. Winter climate change decreases fine root biogenic silica in sugar maple trees (*Acer saccharum*): implications for silica export in the Anthropocene. <u>Journal of Geophysical Research</u>: <u>Biogeosciences</u> 122: 708-715.
- Meredith LK, R Commane, TF Keenan, ST Klosterman, JW Munger, **PH Templer**, J Tang, SC Wofsy, and RG Prinn. 2017. Ecosystem fluxes of hydrogen in a mid-latitude forest driven by soil microbes and plants. <u>Global Change Biology</u> 23:906-919.
- Sanders-DeMott\* R, **PH Templer**. 2017. What about winter? Integrating the missing season into climate change experiments in seasonally snow covered ecosystems. <u>Methods in Ecology & Evolution</u> 8:1183-1191.

- **Templer PH**, Reinmann\* AB, R Sanders-DeMott\*, S Juice, F Bowles, L Sofen, J Harrison\*, I Halm, L Rustad, M Martin, N Grant. 2017. Climate change across seasons experiment (CCASE) at Hubbard Brook Experimental Forest: Combined effects of increased growing season temperatures and winter freeze-thaw cycles on the northern forest. PLOS ONE 12(2): e0171928.
- Capps SL, CT Driscoll, H Fakhraei, **PH Templer**, KJ Craig, JB Milford and KF Lambert. 2016. Estimating potential productivity co-benefits for crops and trees from reduced ozone with U.S. coal power plant carbon standards. <u>Journal of Geophysical Research: Atmospheres</u> 121: 14,679-90.
- Carey J, J Tang, **PH Templer**, K Kroeger, T Crowther, A Burton, J Dukes, B Emmett, S Frey, M Heskel, L Jiang, M Machmuller, J Mohan, A Panetta, P Reich, S Reinsch, X Wang, S Allison, C Bamminger, S Bridgham, S Collins, G de Dato, W Eddy, B Enquist, M Estiarte, J Harte, A Henderson, B Johnson, K Larsen, Y Luo, S Marhan, J Melillo, J Peñuelas, L Pfeifer-Meister, C Poll, E Rastetter, A Reinmann\*, L Reynolds, I Schmidt, G Shaver, A Strong, V Suseela, A Tietema. 2016. Temperature response of soil respiration largely unaltered with experimental warming. Proceedings of the National Academy of Sciences 113: 13797-13802.
- Crowther T, K Todd-Brown, C Rowe, W Wieder, J Carey, M Machmuller, L Snoek, S Fang, G Zhou, S Allison, J Blair, S Bridgham, A Burton, Y Carrillo, P Reich, J Clark, A Classen, F Dijkstra, B Elberling, B Emmett, M Estiarte, S Frey, J Guo, J Harte, L Jiang, B Johnson, G Kröel-Dulay, K Larsen, H Laudon, J Lavallee, Y Luo, M Lupascu, L Ma, S Marhan, A Michelsen, J Mohan, S Niu, E Pendall, J Peñuelas, L Pfeifer-Meister, C Poll, S Reinsch, L Reynolds, I Schmidt, S Sistla, N Sokol, **PH Templer**, K Treseder, J Welker, M Bradford. 2016. Quantifying global soil carbon losses in response to warming. Nature 540: 104-108.
- Decina\* S, LR Hutyra, CK Gately, JM Getson, AB Reinmann\*, AG Short Gianotti, and **PH Templer**. 2016. Soil respiration contributes significantly to urban carbon fluxes. <u>Environmental Pollution</u> 212:433-439.
- Duran J, JL Morse, PM Groffman, JL Campbell, LM Christenson, CT Driscoll, TJ Fahey, MC Fisk, GE Likens, JM Melillo, MJ Mitchell, **PH Templer**, and MA Vadeboncoeur. 2016. Climate change decreases nitrogen pools and mineralization rates in northern hardwood forests. <u>Ecosphere</u> 7(3):e01251.
- Fuss CB, CT Driscoll, PM Groffman, CL Campbell, LM Christenson, TJ Fahey, MC Fisk, MJ Mitchell, **PH Templer**, J I Duran, JL Morse. 2016. Nitrate and dissolved organic carbon mobilization in response to soil freezing variability. Biogeochemistry 131:35-47.
- Juice SM, **PH Templer**, NG Phillips, AM Ellison, and SL Pelini. 2016. Ecosystem warming increases sap flow rates of northern red oak trees. <u>Ecosphere</u> 7(3):e01221.
- Niu S, AT Classen, J Dukes, P Kardol, L Liu, Y Luo, L Rustad, S Vicca, J Tang, **PH Templer**, RQ Thomas, D Tian, YP Wang, J Xia and S Zahle. 2016. Global patterns and fundamental mechanisms of the terrestrial nitrogen cycle. <u>Ecology Letters</u> 13:819-828.
- Reinmann\* A and **PH Templer**. 2016. Reduced winter snowpack and greater soil frost reduce live root biomass and stimulate radial growth and stem respiration of red Maple (*Acer rubrum*) trees in a mixed-hardwood forest. Ecosystems 19:129-141.
- Sorensen PO\*, **PH Templer**, L Christenson, J Duran, T Fahey, M Fisk, P Groffman, J Morse, A Finzi. 2016. Reduction in snow cover alters root-microbe interactions and decreases nitrification in a northern hardwood forest. <u>Ecology</u> 97: 3359-3368.
- Sorensen PO\*, **PH Templer** and AC Finzi. 2016. Contrasting effects of winter snowpack and soil frost on growing season microbial biomass and enzyme activity in two mixed-hardwood forests. <u>Biogeochemistry</u> 128:141-154.
- Sanders-DeMott\* R, Smith N, **PH Templer**, J Dukes. 2016. Toward an integrated understanding of terrestrial ecosystem feedbacks to climate change. New Phytologist 209:1363-1365.
- **Templer PH**, KF Lambert, M Weiss, JS Baron, CT Driscoll and DR Foster. 2016. Using science-policy integration to improve ecosystem science and inform decision-making: lessons from U.S. LTERs. <u>Bulletin of the Ecological Society of America</u> 97: 123-128.
- Commane R, LK Meredith, IT Baker, JA Berry, JW Munger, SA Montzka, **PH Templer**, SM Juice, MS Zahniser, SC Wofsy. 2015. Seasonal fluxes of carbonyl sulfide in a mid-latitude forest. <u>Proceedings of the National Academy of Sciences</u>, 112: 14162-14167.
- Fahey TJ, **PH Templer**, BT Anderson, JJ Battles, JL Campbell, CT Driscoll, AR Fusco, MB Green, KK Kassam, NL Rodenhouse, L Rustad, PG Schaberg, MA Vadeboncoeur. 2015. The promise and peril of intensive-site based ecological research: insights from the Hubbard Brook Ecosystem Study. <u>Ecology</u> 96: 885-901.
- Gill AL\*, AS Gallinat\*, R Sanders-DeMott\*, AJ Rigden\*, DJ Short Gianotti\*, JA Mantooth\*, and **PH Templer**. 2015. Change in autumn senescence in northern hemisphere deciduous trees: a meta-analysis of autumn phenology studies. Annals of Botany 116:875-888. (Publication from students enrolled in my course at BU, GRS BI/EE 720)
- Roa-Fuentes LL, **PH Templer** and J Campo. 2015. Leaf traits in tropical forests: a comparison along a precipitation gradient in the Yucatan Peninsula. Oecologia 179: 585-597.

- Rodriguez A, GM Lovett, KC Weathers, MA Arthur, **PH Templer**, CL Goodale and LM Christenson. 2014. Lability of C in temperate forest soils: assessing the role of nitrogen addition and tree species composition. <u>Soil Biology and Biochemistry</u> 77:129-140.
- **Templer PH**, KC Weathers, HA Ewing, TE Dawson, S Mambelli, AM Lindsey, J Webb\*\*, VK Boukili, and MK Firestone. 2015. Fog as a source of nitrogen for redwood trees: evidence from fluxes and stable isotopes. <u>Journal of Ecology</u>: 103: 1397-1407. (Editor's Choice for this issue of journal) <a href="https://iecologyblog.wordpress.com/2015/10/20/editors-choice-1036">https://iecologyblog.wordpress.com/2015/10/20/editors-choice-1036</a>)
- **Templer PH**, JW Toll\*\*, LR Hutyra, and SM Raciti. 2015. Nitrogen and carbon export from urban areas through removal and export of litterfall. <u>Environmental Pollution</u> 197: 256-261.
- **Templer PH**, KC Weathers, A Lindsey, K Lenoir, and L Scott. 2015. Atmospheric inputs and nitrogen saturation status in and adjacent to Class I wilderness areas of the northeastern United States. Oecologia 177:5-15.
- Campbell J, AM Socci\* and **PH Templer**. 2014. Increased nitrogen leaching following soil freezing is due to decreased root uptake in a northern hardwood forest. <u>Global Change Biology</u> 20:2663-2673.
- Campbell J, A Reinmann\* and **PH Templer**. 2014. Soil freezing effects on sources of nitrogen and carbon leached during snowmelt. Soil Science Society of America Journal 78:297-308.
- Duran J, JL Morse, PM Groffman, JL Campbell, LM Christenson, CT Driscoll, TJ Fahey, MC Fisk, MJ Mitchell, and **PH Templer**. 2014. Winter climate change affects growing-season soil microbial biomass and activity in northern hardwood forests. <u>Global Change Biology</u> 20:3568-3577.
- Frey SD, S Ollinger, K Nadelhoffer, R Bowden, E Brzostek, A Burton, BA Caldwell, S Crow, CL Goodale, AS Grandy, A Finzi, MG Kramer, K Lajtha, J LeMoine, M Martin, WH McDowell, R Minocha, JJ Sadowsky, **PH Templer**, and K Wickings. 2014. Chronic nitrogen additions suppress decomposition and sequester soil carbon in temperate forests. Biogeochemistry, 121:305-316.
- Rao P\*, LR Hutyra, SM Raciti, and **PH Templer**. 2014. Atmospheric nitrogen inputs and losses along an urbanization gradient from Boston to Harvard Forest, MA. <u>Biogeochemistry</u>121:229-245.
- Comerford DP, PG Schaberg, **PH Templer**, AM Socci\*, JL Campbell, and KF Wallin. 2013. Influence of experimental snow removal on root and canopy physiology of sugar maple trees in a northern hardwood forest. <u>Oecologia</u> 171:261-269.
- Lovett GM, MA Arthur, KC Weathers, RD Fitzhugh, and **PH Templer**. 2013. Nitrogen addition increases carbon storage in soils, but not in trees, in an eastern U.S. deciduous forest. <u>Ecosystems</u> 16:980-1001.
- Thomas RG, S Zaehle, **PH Templer**, and CL Goodale. 2013. Global patterns of nitrogen limitation: confronting two global biogeochemical models with observations. <u>Global Change Biology</u>19:2986-2998.
- Templer PH. 2013. Limits on carbon uptake by plants (Invited). Nature Climate Change 3:184-185.
- Groffman PM, LE Rustad, **PH Templer**, JL Campbell, LM Christenson, NK Lany, AM Socci\*, MA Vadeboncoeur, PG Schaberg, GF Wilson, CT Driscoll, TJ Fahey, MC Fisk, CL Goodale, MB Green, SP Hamburg, CE Johnson, MJ Mitchell, JL Morse, LH Pardo, and NL Rodenhouse. 2012. Long-term integrated studies show complex and surprising effects of climate change in the northern hardwood forest. BioScience 62: 1056-1066.
- Reinmann AB\*, **PH Templer** and JL Campbell. 2012. Severe soil frost reduces losses of carbon and nitrogen from the forest floor during simulated snowmelt: a laboratory experiment. <u>Soil Biology & Biochemistry</u> 44:65-74.
- **Templer PH**, RW Pinder, and CL Goodale. 2012. Effects of nitrogen deposition on greenhouse gas fluxes for forests and grasslands of North America (Invited). <u>Frontiers in Ecology and the Environment</u> 10: 547-553.
- **Templer PH**, MC Mack, FS Chapin III, LM Christenson, JE Compton, HD Crook, WS Currie, C Curtis, B Dail, CM D'Antonio, BA Emmett, H Epstein, CL Goodale, P Gundersen, SE Hobbie, K Holland, DU Hooper, BA Hungate, S Lamontagne, KJ Nadelhoffer, CW Osenberg, SS Perakis, P Schleppi, J Schimel, IK Schmidt, M Sommerkorn, J Spoelstra, A Tietema, WW Wessel, and DR Zak. 2012. Sinks for nitrogen inputs in terrestrial ecosystems: a meta-analysis of enriched <sup>15</sup>N field tracer studies. <u>Ecology</u> 93: 1816-1829. Selected by Faculty of 1000.
- **Templer PH**. 2012. Changes in winter climate: soil frost, root injury, and fungal communities (Invited). <u>Plant and Soil</u> 35: 15-17.
- **Templer PH**, AF Schiller\*\*, NW Fuller, AM Socci\*, JL Campbell, JE Drake, and TH Kunz. 2012. Impact of a reduced winter snowpack on litter arthropod abundance and diversity in a northern hardwood forest ecosystem. <u>Biology and Fertility of Soils</u> 48:413-424.
- Brooks PD, P Grogan, **PH Templer**, P Groffman, M Oquist, and J Schimel. 2011. Carbon and nitrogen cycling in snow-covered environments. <u>Geography Compass</u> 5: 682-699.
- Socci AM\* and **PH Templer**. 2011. Temporal patterns of inorganic nitrogen uptake by mature trees in a northern forest using two common approaches. <u>Plant Ecology & Diversity</u> 4:141-152.
- **Templer PH** and AB Reinmann\*. 2011 Multi-factor global change experiments: what have we learned about terrestrial carbon storage and exchange? New Phytologist 192:797-800.
- **Templer PH** and KC Weathers. 2011. Use of mixed ion exchange resin and the denitrifier method to determine isotopic values of nitrate in atmospheric deposition and canopy throughfall. <u>Atmospheric Environment</u> 45: 2017-2020.

- **Templer PH** and TM McCann\*\*. 2010. Effects of the hemlock woolly adelgid on nitrogen losses from urban and rural northern forest ecosystems. <u>Ecosystems</u> 13:1215-1226.
- Craine J, A Elmore, M Aidar, M Bustamante, T Dawson, E Hobbie, A Kahmen, M Mack, K McLauchlan, A Michelsen, G Nardoto, L Pardo, J Peñuelas, P Reich, E Schuur, W Stock, **PH Templer**, R Virginia, J Welker, and I Wright. 2009. Global patterns of foliar nitrogen isotopes and their relationships with climate, mycorrhizal fungi, foliar nutrient concentrations, and nitrogen availability. New Phytologist 183:980-992. (Co-authors in alphabetical order after Elmore)
- Ewing HA, KC Weathers, **PH Templer**, TE Dawson, MK Firestone, AM Elliott and VKS Boukili. 2009. Fog water and ecosystem function: heterogeneity in a California redwood forest. <u>Ecosystems</u> 12:417-433.
- Miller-Rushing AJ\*, RB Primack, **PH Templer**, S Rathbone\*\* and S Mukunda\*\*. 2009. Long-term relationships among atmospheric CO<sub>2</sub>, stomata, and intrinsic water use efficiency in individual trees. <u>American Journal of Botany</u> 96:1779-1786. \*Graduate student with Prof. Richard Primack; \*\*Undergraduate student.
- Huygens D\*, P Boeckx, **P Templer**, L Paulino, O Van Cleemput, C Oyarzun, C Müller and R Godoy. 2008. Mechanisms for retention of bioavailable nitrogen in volcanic rainforest soils. Nature Geoscience 1:543-548.
- **Templer PH,** WL Silver, J Pett-Ridge, K DeAngelis and MK Firestone. 2008. Plant and microbial controls on nitrogen retention and loss in a humid tropical forest. <u>Ecology</u> 89: 3030-3040.
- **Templer PH,** MA Arthur, GM Lovett and K Weathers. 2007. Plant and soil natural abundance  $\delta^{15}$ N: indicators of relative rates of nitrogen cycling in temperate forest ecosystems. <u>Oecologia</u> 153:399-406.
- Pardo L, **PH Templer,** C Goodale, S Duke, P Groffman, MB Adams, P Boeckx, J Boogs, J Campbell, B Colman, J Compton, B Emmett, P Gundersen, J Kjonaas, G Lovett, M Mack, A Magill, M Mbila, M Mitchell, G McGee, S McNulty, K Nadelhoffer, S Ollinger, D Ross, H Rueth, L Rustad, P Schaberg, S Schiff, P Schleppi, J Spoelstra and Wessel W. 2006. Regional assessment of N saturation using foliar and root δ<sup>15</sup>N. <u>Biogeochemistry</u> 80:143-171.
- **Templer PH**, G Lovett, K Weathers, S Findlay and T Dawson. 2005. Influence of tree species on forest nitrogen retention in the Catskill Mountains, New York, USA. <u>Ecosystems</u> 8:1-16.
- **Templer PH**, P Groffman, A Flecker and A Power. 2005. Land use change and soil nutrient transformations in the Los Haitises region of the Dominican Republic. Soil Biology and Biochemistry 37:215-225.
- **Templer PH** and TE Dawson. 2004. Nitrogen uptake by four tree species of the Catskill Mountains, NY: implications for forest N dynamics. <u>Plant and Soil</u> 262:251-261.
- **Templer PH**, S Findlay and G Lovett. 2003. Soil microbial biomass and nitrogen transformations among five tree species of the Catskill Mountains, NY, USA. <u>Soil Biology and Biochemistry</u> 35:607-613.
- Dawson TE, S Mambelli, AH Plamboeck, **PH Templer** and KP Tu. 2002. Stable isotopes in plant ecology. <u>Annual Review of Ecology and Systematics</u> 33:507-559. (Co-authors in alphabetical order)
- Silver WL and **PH Templer**. 2002. A walk through the Amazon from a biogeochemical perspective. Book review of: Biogeochemistry of the Amazon Basin. Eds. McClain, M., R.L. Victoria and J.E. Richey. Oxford University Press, New York, 365 pages. <u>Ecology</u> 83:3237-3238.
- **Templer PH**, S Findlay and C Wigand. 1998. Sediment chemistry associated with native and non-native emergent macrophytes of a Hudson River marsh ecosystem. Wetlands 18:70-78.

## REPORTS, BOOK CHAPTERS, AND POPULAR ARTICLES

- **Templer PH**. 2021. Sugar maples in the northern forest. Timber Crier: Spring Edition.
- Weathers K, **PH Templer**, and C O'Riordan. Diversity, Equity, Inclusion, and Justice Blog Series: Advancing Science through Diversity, Equity, Inclusion, and Justice. Ecological Society of America Blog. November 20, 2020.
- **Templer PH**, A Boyd. Diversity, Equity, Inclusion, and Justice Blog Series: Let's Get to Work. Ecological Society of America Blog. October 9, 2020.
- **Templer PH**, T Mourad. Diversity, Equity, Inclusion, and Justice Blog Series: Speaking of Race. Ecological Society of America Blog. July 6, 2020.
- Sanders-DeMott R, JL Campbell, PM Groffman, LE Rustad, **PH Templer**. 2019. Soil warming and winter snowpacks: implications for northern forest ecosystem functioning. *In* Ecosystem Consequences of Soil Warming, JE Mohan, Editor. Academic Press.
- Walker JT, GM Beachley, HM Amos, JS Baron, J Bash, R Baumgardner, MD Bell, KB Benedict, X Chen, DW Clow, A Cole, JG Coughlin, K Cruz, RW Daly, SM Decina, EM Elliott, ME Fenn, L Ganzeveld, K Gebhart, SS Isil, BM Kerschner, RS Larson, T Lavery, GG Lear, T Macy, MA Mast, K Mishoe, KH Morris, PE Padgett, RV Pouyat, M Puchalski, HOT Pye, AW Rea, MF Rhodes, CM Rogers, R Saylor, R Scheffe, BA Schichtel, DB Schwede, GA Sexstone, BC Sive, PH Templer, T Thompson, D Tong, GA Wetherbee, TH Whitlow, Z Wu, Z Yu, L Zhang. 2019. Science needs for continued development of total nitrogen deposition budgets in the United States. U.S. Environmental Protection Agency, Washington, DC, EPA 601/R-19/001.
- Decina S, **P Templer**, and L Hutyra. A surprising source of phosphorus in cities? Medium. June 12, 2018. <a href="https://medium.com/@BUexperts/a-surprising-source-of-phosphorus-in-cities-7688b0261c22">https://medium.com/@BUexperts/a-surprising-source-of-phosphorus-in-cities-7688b0261c22</a>

- Domke G, CA Williams, R Birdsey, J Coulston, A Finzi, C Gough, B Haight, J Hicke, M. Janowiak, B. de Jong, W. A. Kurz, M. Lucash, S. Ogle, M. Olguín-Álvarez, Y. Pan, M. Skutsch, C Smyth, C Swanston, **P Templer**, D Wear, and CW Woodall. 2018. Chapter 9: Forests. In Second State of the Carbon Cycle Report (SOCCR2): A Sustained Assessment Report. Edited by N Cavallaro, G Shrestha, R Birdsey, MA Mayes, RG Najjar, SC Reed, P Romero-Lankao, Z Zhu. U.S. Global Change Research Program, Washington, DC, USA, pp. 365-398. https://doi.org/10.7930/SOCCR2.2018.Ch9.
- Janowiak M, AW D'Amato, CW Swanston, L Iverson, FR Thompson III, WD Dijak, S Matthews, MP Peters, A Prasad, JS Fraser, LA Brandt, P Butler-Leopold, SD Handler, DP Shannon, D Burbank, J Campbell, C Cogbill, MJ Duveneck, MR Emery, N Fisichelli, J Foster, J Hushaw, L Kenefic, A Mahaffey, TL Morelli, NJ Reo, PG Schaberg, KR Simmons, A Weiskittel, S Wilmot, D Hollinger, E Lane, L Rustad, **PH Templer**. 2018. New England and northern New York forest ecosystem vulnerability assessment and synthesis: a report from the New England Climate Change Response Framework project. Gen. Tech. Rep. NRS-173. Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northern Research Station. 234 p. <a href="https://doi.org/10.2737/nrs-gtr-173">https://doi.org/10.2737/nrs-gtr-173</a>.
- Reinmann AR, **PH Templer**. 2018. Climate change is shrinking winter snowpack, which harms Northeast forests year-round. The Conversation. December 3, 2018. <a href="https://theconversation.com/climate-change-is-shrinking-winter-snowpack-which-harms-northeast-forests-year-round-103410">https://theconversation.com/climate-change-is-shrinking-winter-snowpack-which-harms-northeast-forests-year-round-103410</a>
- Decina SM, LR Hutyra, CK Gately, JM Getson, AB Reinmann, AG Short Gianotti, **PH Templer**. 2017. Urban Climate News 64:15-21.
- Pollack N, **PH Templer**, JV Shah, JM Tam. May 23, 2017. Mainstream media should stop selling out science with misleading ads. Op Ed in WBUR CommonHealth.
- Templer PH, L Hutyra, and S Decina. 2016. It's raining nitrogen. Silva: Fall/Winter 2016-17.
- Sleeper D and **PH Templer**. A climate change call to arms. Don't let snowy predictions fool you. Winter is going away. Boston Globe Magazine Perspective, October 14, 2012.
- Ewing HA, KC Weathers, AM Lindsey, **PH Templer**, TE Dawson, DC Bradbury, MK Firestone, and VKS Boukili. 2012. Fog and soil weathering as sources of nutrients in a California redwood forest. In RB Standiford, TJ Weller, DD Piirto, and JD Stuart (eds.), Proceedings of coast redwood forests in a changing California: a symposium for scientists and managers: General Technical Report PSW-GTR-238. Albany, CA: Pacific Southwest Research Station, Forest Service, U.S. Department of Agriculture, p. 265-272.
- **Templer PH.** 2005. Tree species effects on nitrogen cycling and retention: a synthesis of studies using <sup>15</sup>N Tracers. *In* Tree Species Effects on Soils: Implications for Global Change. D. Binkley, O. Menyailo, eds. NATO Science Series, Kluwer Academic Publishers, Dordrecht.
- Harris GP, SW Bigelow, JJ Cole, H Cyr, LL Janus, AP Kinzig, JF Kitchell, GE Likens, K.H. Reckhow, D Scavia, D Soto, L.M. Talbot, and **PH Templer**. 2003. The Role of Models in Ecosystem Management. *In* C.D. Canham, J.J. Cole, W.K. Lauenroth (eds.), Role of Models in Ecosystem Science. Princeton University Press.

## **RESEARCH GRANT SUPPORT**

## **Active Grants**

- National Science Foundation. "Long-Term ecological research at the Hubbard Brook Experimental Forest." \$420,000 total to **PH Templer**, Co-Pl; \$330,330 direct costs; \$86,664 indirect costs (03/01/23-02/28/29).
- National Science Foundation. "Climate Leaders Academy: A professional development opportunity in the Geosciences." \$301,317 total to **PH Templer**, Co-PI; \$182,616 direct costs; \$118,701 indirect costs (01/2023-12/31/2025)
- National Science Foundation. "Advancing public engagement with science across the Long-Term Ecological Research Network." \$635,157. Garlick, Pl. \$29,057 total to **PH Templer**, Co-Pl; \$23,061 direct costs; \$5,996 indirect costs (08/01/2022-07/31/2025).
- Department of Energy. "Linking root and soil microbial stress metabolism to watershed biogeochemistry under rapid year-round environmental change." Bhatnagar, Pl, **PH Templer**, Co-Pl. \$989,201 total; \$23,122 direct costs to Templer; \$15,029 indirect costs to Templer. (08/15/2021-08/14/2024)
- National Science Foundation. "Changing seasonality and declining nitrogen in the northern hardwood forest." \$538,487 to **PH Templer**, PI; \$\$435,662 direct costs; \$101,825 indirect costs (10/01/20-09/30/24).
- National Science Foundation. "RCN-UBE: Youth Environmental Alliance in Higher Education (YEAH)." \$50,000 total to **PH Templer**, Co-PI; \$39,682 direct costs; \$10,318 indirect costs (8/01/20-07/31/25).
- National Science Foundation. "Long-Term ecological research at the Hubbard Brook Experimental Forest." \$269,335 to **PH Templer**, Co-PI; \$213,758 direct costs; \$55,577 indirect costs (02/01/17-02/29/24).

## Completed Grants

National Science Foundation. "NRT: Boston UniverCity - Partnering graduate students with cities to tackle urban environmental challenges." **PH Templer**, Pl. \$2,999,530 total; \$2,754,212 direct costs; \$245,318 indirect costs; one year no-cost extension (09/01/17-08/31/23).

- Charles Bullard Fellowship in Forest Research, Harvard University. "Controls on carbon sequestration by forest ecosystems: implications for forest health and global climate change." \$60,000 total funds for entire award to **PH Templer**, Pl. (09/01/21-08/31/22).
- United States Department of Agriculture. "Coupled carbon and nitrogen cycling under changing land cover and air quality: Improving regional estimates of carbon dynamics for the Northeastern U.S." \$634,141 to **PH Templer**, PI (05/15/17-05/14/21).
- National Science Foundation. "ADVANCE Partnership: From the classroom to the field: improving the workplace in the geosciences." 01/01/19-12/31/21 \$137,950 total, \$53,677 subcontract to Boston University.
- Boston University Initiative on Cities. "Effects of greenspace structure on urban tree health and human exposure to fine particulate matter: a biogeochemical analysis and exposure assessment." \$10,000 to **PH Templer**, Co-PI (06/01/20-05/31/21).
- National Science Foundation. "Collaborative Research: Embedding public engagement with science at long-term ecological research sites." \$49,450 to **PH Templer**, PI (08/01/17-07/31/21).
- National Science Foundation. "A comprehensive regional framework for sustainability." \$49,990 to **PH Templer**, Co-PI (05/01/19-10/31/20).
- National Science Foundation. "CAREER: Role of plant nutrient uptake in forest nutrient retention and carbon sequestration: an integrated research, teaching and outreach program." \$755,640, total funds for entire award (03/01/12-02/28/19). **PH Templer**, Pl.
- National Science Foundation. "Collaborative Research: IDBR: TYPE A: The NANAPHID: A novel aphid-like nanosensor network for real-time measurements of carbohydrates in live plant tissue." A Lapenis, State University New York Albany, PI; \$33,810 total funds to **PH Templer**, Co-PI (02/01/15-01/31/19).
- National Science Foundation. "Long-Term ecological research at the Hubbard Brook Experimental Forest." T Fahey, Cornell University, PI with 20 Co-Pls; \$101,000 total funds to **PH Templer**, Co-Pl (02/01/11-01/31/18).
- National Oceanic and Atmospheric Administration. "Quantifying carbon signatures across urban-to-rural gradients: advancing the capacity for monitoring, reporting, and verification through observations, models and remote sensing." Lucy Hutyra, Pl. M Friedl, T Nehrkorn, S Raciti, **PH Templer**, S Wofsy, and C Woodcock, Co-Pl's. \$795,495 total. \$78,078 total funds to **PH Templer**. (08/01/14-07/31/17).
- United States Department of Agriculture, Northeastern States Research Cooperative. "Understanding impacts of precipitation change and drought on the northern forest." Asbjornsen H, L Rustad and **PH Templer**. \$111,926 total funds to H Asbjornsen. (04/01/14-09/30/16).
- John Wesley Powell Center for Synthesis and Analysis. U.S. Geological Survey. "Advancing understanding of ecosystem responses to climate change with warming experiments: what have we learned and what is unknown?" \$149,460 to fund postdoc (Joanna Carey) and travel for participants to attend two synthesis workshops at Powell Center in Fort Collins, CO. K Kroeger, Pl. J Tang and **PH Templer**, Co-PI (09/01/13-08/31/15).
- Charles Bullard Fellowship in Forest Research, Harvard University. "Winter climate change and regional estimates of primary productivity of northeastern U.S. forests: using long-term data, remote sensing and future scenarios." \$40,000 total funds for entire award to **PH Templer**, Pl. (09/01/13-06/01/14).
- National Science Foundation. "Collaborative Research: Winter climate change in a northern hardwood forest." P Groffman, Cary Institute, PI; \$114,828 total funds to **PH Templer**, Boston University, PI (09/01/10-08/31/13).
- National Science Foundation. "STATS4STEM.ORG: Enriching STEM education through real-world data sets, computing and statistical analysis." E Simoneau, Boston Latin School (high school), PI; \$14,936 total funds to **PH Templer**, Co-PI (10/01/09-09/30/12).
- United States Department of Agriculture, Northeastern States Research Cooperative. "Assessing the role of tree species and nitrogen deposition in mediating carbon storage in northern hardwood forests." GM Lovett, Cary Institute, PI; \$5760 total funds to **PH Templer** (10/01/09-09/30/12).
- United States Department of Agriculture, Northeastern States Research Cooperative. "Effects of winter climate change on growing season sap flow and carbon exchange in the northern hardwood forest," \$131,391, total funds for entire award (09/01/09-08/31/12). **PH Templer**, PI with M Friedl and N Phillips, Co-PI's. All funds allocated to **PH Templer** at Boston University.
- Andrew W. Mellon Foundation. "Impacts of winter dynamics on growing season plant nutrient uptake and forest productivity in a northeastern hardwood forest," \$300,000 (05/01/07-12/31/11). **PH Templer**, Pl.
- United States Department of Agriculture, Northeastern States Research Cooperative. "Determination of atmospheric deposition and nitrogen saturation status in Class I wilderness areas of the northeastern United States," \$63,730, total funds for entire award (06/01/06-05/31/11) **PH Templer, PI**, with K Weathers, Cary Institute, Co-PI. All funds allocated to PH Templer at Boston University.
- Harvard University, Arnold Arboretum. "Impacts of the hemlock woolly adelgid and atmospheric nitrogen deposition on forest nitrogen saturation status," \$5,000, total funds for entire award (05/22/06-05/21/07). **PH Templer**, Pl.

National Science Foundation Graduate Research Fellowship awarded to **E Conrad-Rooney**. "Interacting Effects of Growing Season and Winter Climate Change on Forest Carbon Sequestration," (05/01/23-04/30/26).

Arnold Arboretum of Harvard University, Deland Award for Student Research to J Rindy. "Effects of urbanization and forest fragmentation on tree health: removal of fine particulate matter by forest trees." \$10,000 (05/01/20-05/01/21).

New England Botanical Club, Graduate Student Research Award to **J Harrison**. "Combined effects of winter and growing season climate on northern hardwood forest ecosystems of New England." \$3000 (06/01/19-05/31/20)

Arnold Arboretum of Harvard University, Deland Award for Student Research to **E Pierce**. "Impact of tropospheric ozone and nitrogen deposition on urban forest health and carbon sequestration." \$4750 (05/01/18-05/01/19).

Boston University, Research in Biogeoscience Award to J Harrison. \$500 (05/31/17-04/30/18).

National Science Foundation Graduate Research Fellowship awarded to **S Decina**. "Assessing the effects of soil freezing on populations of arbuscular mycorrhizal fungi associated with *Acer saccharum* in a northern hardwood forest" (06/01/14-05/31/17).

Boston Area Research Initiative Research seed grant awarded to **S Decina**. "Assessing total atmospheric deposition of nitrogen and phosphorus throughout the Greater Boston Area," \$5,000 for graduate research (08/01/16-12/31/16).

National Science Foundation Doctoral Dissertation Improvement Grant (DDIG) to **P Sorensen**. "Direct and indirect effects of winter climate change on microbes: implications for nitrogen retention in temperate hardwood forests." \$21,254 (06/01/14-05/31/16).

Arnold Arboretum of Harvard University, Deland Award for Student Research to **S Decina**. "Comparing methods of measurement for atmospheric nitrogen deposition and assessing urban dry nitrogen deposition fluxes." \$10,000 (05/01/15-05/01/16).

Environmental Protection Agency, Science to Achieve Results (STAR) Program awarded to **A Reinmann**. "Impact of winter climate change on soil, canopy, and ecosystem carbon exchange in a northern deciduous forest," \$126,000 (09/01/11-08/31/14).

Boston University, Research in Biogeoscience Award to R Sanders-Demott. \$500 (05/31/13-04/30/14).

Boston University, Research in Biogeoscience Award to P Sorensen. \$500 (05/31/12-04/30/13).

Boston University, competitive Dean's Fellowship awarded to R Sanders-Demott, \$19,800 (09/01/11-05/30/12).

Boston University, Research in Biogeoscience Award to **A Reinmann**. "Coupled response of above- and belowground carbon fluxes in a temperate deciduous forest to reduced winter snow pack," \$500 (05/31/11-04/30/12).

National Science Foundation Graduate Research Fellowship awarded to **A Socci**. "Potential effects of climate change-induced soil freezing on plant nutrient uptake and productivity" (06/01/07-05/31/11).

United States Department of Agriculture, Northeastern States Research Cooperative, Northern Forest Scholars Graduate Fellowship awarded to **A Socci**. "Assessing the impacts of climate change-induced soil freezing on plant nutrient uptake and productivity in a northern hardwood forest," \$40,000 (09/01/07-12/31/09).

Boston University, competitive Dean's Fellowship awarded to A Socci, \$16,500 (09/01/06-05/30/07).

### PROFESSIONAL SERVICE AND ACTIVITIES

DEPARTMENTAL SERVICE AT BOSTON UNIVERSITY:			
Chair, Department of Biology	2022-present		
Chair, Global Change Biology Faculty Search Committee (Biology)	2018-2019		
Associate Chair, Department of Biology (Ecology, Behavior & Evolution)	2014-2020		
Chair, Graduate Committee	2012-2013		
Member of Microbial Ecologist Faculty Search Committee (Biology)	2012-2013		
Member of Belamarich Award Committee to select Outstanding Doctoral Dissertation	2011 & 2012		
Member of Department of Biology Graduate Student Committee	2009-2013		
Member of Marine Biology Faculty Search Committee (Biology)	2008-2009		
Member, Chairman's Advisory Committee	Fall 2006-2010		
Member, Graduate Admissions Committee, Department of Biology	Fall 2005-2007		
Coordinator of Spring 2006 Ecology, Behavior & Evolution Seminar Series	Spring 2006		
UNIVERSITY SERVICE AT BOSTON UNIVERSITY:			
Member, BU Provost's Task Force on Future of PhD Education	2022-2023		
Member, BU Initiative on Cities Faculty Advisory Board	2022-present		
Member, BU Photonics Center Academic Advisory Committee	2022-present		
Member, BU Institute Global Sustainability Faculty Advisory Board	2017-present		
Member, BU University Lecture Committee	2019		

Member, BU Climate Action Plan Task Force Member, BU Hub Learning Outcomes Com, Satellite Com on Scientific Social Inquiry Member, University Council Committee on Research & Scholarly Activity Member, Provost's Faculty Teaching Awards Committee Director, NSF NRT Program in Biogeoscience & Environmental Health Director, Ph.D. Program in Biogeoscience Co-Chair, BU Child Care Advisory Committee Trustee Scholars Selection Committee (BU's top merit-based scholarship) Member, Biogeoscience Research and Travel Award Committee for PhD students Member, Advisory Committee for Global Ecology Education Masters Program BioBugs (Biology Inquire and Outreach to High School Students) Member, Marine Biogeochemistry Faculty Search Committee (Earth Sciences) Member, MMEDIC BA/MD Program Admissions Committee Co-Director, Boston University Stable Isotope Laboratory Member, Seven-Year BU BA/MD Program Admissions Committee Faculty participant, "Freshman Fridays" orientation events for prospective students Facilitator, Responsible Conduct of Research Program at Boston University	2016-2017 2016 2016-2021 2015-2016 2017-present 2014- 2021 2014-2015 2011-2013 2011 & 2012 2011-2015 2010 & 2011 2008 2008 2007-present 2007-2008 2006-2015 2005-2006
SERVICE OUTSIDE OF BOSTON UNIVERSITY:  Ecological Society of America Fellows/Early Career Fellows Selection Committee Invited Moderator, United Nations Conference of the Parties, Sharm El Sheikh, Egypt Appointed Member, Town of Brookline Tree Planting Committee Appointed Member, Lost Women in Science Advisory Board Chair of Diversity, Equity, Inclusion, and Justice Task Force, Ecological Society of America Invited Member, MA Executive Office of Energy and Environmental Affairs Steering Committee for the MA Decarbonization Roadmap Member, Rapid Response Team, Ecological Society of America Elected Vice President for Education and Human Resources, Ecological Society of America Ph.D. Jury Member, Ghent University, Belgium Ecological Society of America, Mercer Award Subcommittee Subject Matter Editor for the journals Ecology & Ecological Monographs Invited member, Governing Council of the Science Policy Exchange Board of Trustees, Hubbard Brook Research Foundation Co-Chair, Natl Atmos Deposition Program Sub-committee on Urban Atmos Monitoring Editorial Review Board, Associate Editor for the journal Biogeochemistry Elected member of Scientific Coordinating Committee, Hubbard Brook Exper Forest Served on National Science Foundation Ecosystem Science Grant Panels	2023-2026 2022 2021-2023 2021-present 2020-2021 2019-2020 2019-2022 2018-2021 2018 2016-2017 2013-2021 2013-2020 2012-present 2012-2018 2011-2013 2010-2022 2009-2021

## REVIEWER FOR THE FOLLOWING PEER REVIEWED JOURNALS AND PROPOSAL PANELS:

Amer Assoc for Advanc Science Program Europe & Central Asia Proposal Review, Analy Chem, Applied Soil Ecology, Atmos Envir, Biogeochemistry, Bio Invasions, Bio & Fert Soils, Can J Forest Research, Ecol Apps, Ecological Monographs, Ecology, Ecosystems, European Journal of Soil Biology, Forest Ecology & Management, Functional Ecology, Global Biogeochemical Cycles, Global Change Biology, Journal Arid Environments, Journal of Plant Nutrition & Soil Science, Journal of Plant Nutrition and Soil Science, Journal of Trop Ecology, Kearney Foundation Proposal Review, Natl Sci Foundation Ecosy Studies & Globe Prop Reviews, Nature, Nature Clim Change, Nature Geoscience, Nature Sust, New Phytologist, Oecologia, Plant and Soil, Plant Biology, Plant Ecology & Diversity, Proceedings of the National Academy of Sciences, Rapid Comm in Mass Spectrometry, Science, Soil Bio & Biochemistry, Soil Science Society America, Tree Phys.

### **INVITED LECTURES**

Boston University, Epsilon Eta Pre-Professional Environmental Fraternity	April 2024
Tennessee State University, Environmental Sciences Department	February 2024
Brookline High School, Climate Leaders Class, Brookline, MA	November 2023
Harvard University, Department of Organismic & Evolutionary Biology	November 2023
Harvard University, Arnold Arboretum, DaRin Butz Internship Program	June 2023
Harvard University, Atmospheric Chemistry Group, Cambridge, MA	February 2023
Brookline High School, AP Environmental Science Class, Brookline, MA	December 2022
Williams College, Department of Biology, Williamstown, MA	September 2022

Harvard University, Arnold Arboretum, DaRin Butz Internship Program July 2022 Northern Arizona University, EcoInformatics Seminar Series January 2022 Massachusetts General Hospital Grand Rounds Webinar Series November 2021 Harvard Forest, Harvard University, Petersham, MA October 2021 Brookline High School, Environmental Science Class, Brookline, MA October 2021 City University of New York, Advanced Science Research Center, New York, NY September 2021 Harvard University, Arnold Arboretum, DaRin Butz Internship Program June 2021 Brandeis University National Committee, San Fernando Valley, CA Chapter May 2021 Williams College, Department of Biology, Williamstown, MA April 2021 Brookline High School, Environmental Science Class, Brookline, MA April 2021 University of Southern California, Environment & Sustainability Seminar Series October 2020 City University of New York, Advanced Science Research Center, New York, NY March 2020 Arlington, MA Public Library, Science for the Public Series January 2020 October 2019 Quincy, MA Public Library Harvard University, Arnold Arboretum, DaRin Butz Internship Program lune 2019 Brookline High School, Environmental Science Class, Brookline, MA March 2019 City University of New York, Advanced Science Research Center, New York, NY March 2019 Harvard University, Arnold Arboretum, DaRin Butz Internship Program June 2018 Edward Devotion Public School, Fourth Grade Class, Brookline, MA May 2018 City University of New York, Advanced Science Research Center, New York, NY May 2018 Wayne State University, Department of Biological Sciences, Detroit, MI April 2018 Ghent University, Department of Green Chemistry and Technology, Gent, Belgium January 2018 Brookline High School, AP Environmental Science Class, Brookline, MA December 2017 Mothers Out Front, Newton, MA lune 2017 Caitlin Gabel K-12 School, Portland, OR May 2017 May 2017 Brookline, MA Public Library Carleton College, Department of Biology, Northfield, MN April 2017 University of Minnesota, Dept of Ecology, Evol & Behavior, Minneapolis and St. Paul, MN April 2017 Pierce Public School, Brookline, MA March 2017 University of Vermont, Rubenstein School of Envir & Natural Resources, Burlington, VT December 2016 Squam Lakes Natural Science Center, Holderness, NH July 2016 Tufts University, Department of Biology, Medford, MA March 2016 University of Western Ontario, Department of Biology, Ontario, Canada March 2016 University Massachusetts Lowell, Department of Biological Sciences, Lowell, MA February 2016 February 2016 Edward Devotion Public School, Brookline, MA University of Granada, Dept de Ecologia Facultad de Ciencias, Granada, Spain April 2015 University of Connecticut, Nat Resources and the Environment, Storrs, CT September 2014 Harvard University, Environmental Science and Engineering, Cambridge, MA April 2014 Boston University Academy, Boston, MA February 2014 January 2014 Newton Free Library, Newton, MA Brookline High School, AP Environmental Science Class, Brookline, MA April and November 2013 Harvard Forest, Harvard University, Petersham, MA October 2013 Columbia University, Department of Ecology, Evolution & Envir Biology, New York, NY October 2012 Brown University, Department of Ecology & Evolutionary Biology, Providence, RI February 2012 Harvard University, Arnold Arboretum, Boston, MA February 2012 Brookline High School, AP Environmental Science Class, Brookline, MA December 2011 Cornell University, Program in Biogeochemistry, Ithaca, NY November 2010 Wellesley College, Department of Biological Sciences, Wellesley, MA March 2010 Plymouth State University, Department of Biology, Plymouth, NH February 2010 Hubbard Brook Experimental Forest, Winter Ecology Course, North Woodstock, NH January 2010 Massachusetts Institute of Technology (MIT), Cambridge, MA November 2009 Boston College, Department of Biology, Chestnut Hill, MA November 2009 Boston University, Program in Terrestrial Biogeosciences, Boston, MA October 2009 Marine Biological Laboratory, Woods Hole, MA March 2009 Hubbard Brook Experimental Forest, REU Program, North Woodstock, NH July 2008 University of New Hampshire (Declined, on maternity leave) Fall 2007 Harvard Forest, Harvard University, Petersham, MA May 2007

University of Connecticut, Storrs, Department of Ecology & Evolutionary Biology March 2007 Boston University, Department of Biology, Women in Biology Series October 2006 University of New Hampshire, Department of Plant Biology April 2006 Marine Biological Lab, Woods Hole, MA March 2006 Harvard University, Cambridge, MA February 2006 Boston University, Department of Geography, Boston, MA October 2005 United States Department of Agriculture, Davis, CA April 2004 University of Pennsylvania, Department of Biology, Philadelphia, PA April 2004 California State University, Department of Biology, Northridge, CA February 2004 University of Granada, Department of Animal Biology and Ecology, Granada, Spain November 2003 University of Calif, Dept of Ecology, Evolution, & Marine Biology, Santa Barbara, CA February 2003

### **INVITED CONFERENCE LECTURES AND PANELS**

٠.	TED CONTENENCE EEC TORES AND TANGES	
	NPR WBUR CitySpace, Choose Your Own Climate Disaster Panelist, Boston, MA	April 2024
	United Nations Conference of the Parties (COP28), Dubai, United Arab Emirates	Dec 2023
	Young Voices of Science (Virtual)	March 2023
	United Nations Conference of the Parties (COP27), Sharm El-Sheikh, Egypt	Nov 2022
	National Science Foundation Research Traineeship (NRT) Annual Meeting	Oct 2022
	Harvard Forest Symposium, Harvard Forest, Petersham, MA	Oct 2022
	Technical University of Madrid Environmental Leaders Program, Boston, MA	July 2022
	2022 Winter Biology Virtual Symposium (Virtual)	June 2022
	U.S. Congressional Briefing (Virtual)	June 2022
	Harvard Arnold Arboretum Annual Plant Biology Symposium, Boston, MA	May 2022
	Boston University Experiential Learning for Social Impact Summit, Boston, MA	May 2022
	Coolidge Corner Theatre – Science on Screen Series, Brookline, MA	April 2022
	Harvard Forest Symposium, Harvard Forest, Petersham, MA	March 2022
	Forests and Climate Science Briefing for the British Consulate (Virtual)	March 2022
	Ecological Society of America – COP26 Debrief	January 2022
	Climate Change & Health, Boston University Research on Tap, Boston, MA	January 2022
	Road to COP26: Climate Negotiations	October 2021
	Pushing Boundaries – Women Scientists at the Forefront of Comm Engaged Research	October 2021
	Ecological Society of America, Annual Meeting in Long Beach, CA (Virtual)	August 2021
	Greater Boston Area K12 Teacher Training	August 2021
	Climate Science Symposium, Brookline High School	June 2021
	Quincy, MA Public Library – Your Big Backyard - Quincy's Fabulous Trees Panel	January 2021
	Ecological Society of America, Annual Meeting in Salt Lake City, UT (Virtual).	August 2020
	Session titled "Research Agenda for Tackling Global Change"	J
	Forest Stewards Guild "Forest Adaptation" Webinar Series	March 2020
	University of California, Berkeley, Berkeley Atmospheric Science Conference	February 2020
	Climate Change Adaptation in New England Forested Watershed Management	November 2019
	CO <sub>2</sub> -URBAN Synthesis & Analysis Meeting, Boston, MA	October 2019
	National Atmospheric Deposition Program, Annual Meeting, Albany, NY	November 2018
	500 Women Scientists Meeting, Boston, MA	September 2018
	Harvard University, Arnold Arboretum Science Institute, Boston, MA	August 2018
	Climate Smart Land Network, 2 <sup>nd</sup> Annual Member Gathering, North Woodstock, NH	May 2018
	Harvard Forest Ecology Symposium, "Synthesizing, evaluating, and learning from long-term ecological data", Harvard University, Petersham, MA.	March 2018
	ILTER-Nitrogen Initiative International Training course titled "Long-term Trends in Nitrogen Cycles in Ecosystems, Field Monitoring and Global Comparisons" at Hokkaido University in Sapporo, Japan.	June 2016
	Sustainability Science Symposium, John F. Kennedy School of Government, Harvard University. Cambridge, MA.	May 2016
	Environmental History Working Group Panel on "Approaching the Anthropocene: Perspectives from the Humanities and the Sciences", Harvard University, Cambridge, MA.	May 2016
	Ecological Society of America, Annual Meeting in Baltimore, MD. Session titled "Using science-policy integration to improve ecosystem science to inform decision-making"	August 2015
	Conference of the Northeastern Ecosystem Research Cooperative. Saratoga Springs, NY.	March 2015

University Massachusetts Boston, "Dimensions of Sustainability Winter Symposium"	December 2014
National Autonomous University of Mexico (UNAM), Institute of Ecology, "Frontiers in	October 2014
Ecology and Evolution" Symposium in Mexico City, Mexico.	
INTERFACE workshop on "Using results from global change experiments to inform land model development and calibration" in Beijing, China.	May 2014
Environmental Monitoring, Eval & Protection in NY: Linking Science & Policy, Albany, NY	November 2013
New Hampshire Association of Natural Resource Scientists, Watershed Ecology Workshop	May 2013
Darwin Festival, Salem State University in Salem, MA.	February 2013
Eastern CANUSA Forest Science Conference in Durham, NH. Keynote address.	November 2012
National Atmospheric Deposition Program, Annual Meeting in Portland, ME.	October 2012
EUROSOIL 2012 in Bari, Italy. "Influence of tree species on forest soils."	July 2012
American Geophysical Union, Annual Meeting in San Francisco, CA. "Controls on nitrogen losses from managed landscapes."	December 2011
National Atmospheric Deposition Program, Annual Meeting in Providence, RI.	October 2011
CLIMMANI/INTERFACE joint workshop. "Nutrient constraints on the net carbon	June 2011
Balance" in Keflavik, Iceland.	
Symposium at the University of California Davis, "From Sources to Scapes:	December 2010
Contributions of Light Stable Isotopes to Environmental Sciences" in Davis, CA.	
Soil Science Society of America Meeting in Pittsburg, PA.	November 2009
Annual Meeting of the Ecological Society of Germany, Austria and Switzerland in Bayreuth, Germany.	September 2009