

# Nathan Phillips

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PROFESSOR, Earth & Environment

## Address

Earth & Environment, College of Arts & Sciences  
Boston University  
675 Commonwealth Ave, 441A  
Boston  
MA  
02215  
United States

## Phone

Work: (617) 353-2841

## Experience

### Academic Appointments

Director, Earth House Living Learning Community	2016-2021
Professor, Earth & Environment, College of Arts & Sciences, Boston University	2013-present

## Education

### Degrees

PhD Duke University	1997
BS California State University Sacramento	1989

## Memberships

BU Experiential Education Connector	2023
BU General Education Committee	2022-2023
Sierra Club Massachusetts	2017

## Teaching Activity

### Courses taught

Sustainability Science: Earth House Practicum 1, course code: CAS-EE-395-A1	2023
Interdisciplinary Perspectives on Global Challenges I, course code: KHC-HC-301-A1	2023
Sustainability Science: Earth House Practicum 2, course code: CAS-EE-396-A1	2023
Plant Physiological Ecology, course code: CAS-EE-525-A1	2023
Sustainability Science: Earth House Practicum 1, course code: CAS-EE-395-A1	2022
Interdisciplinary Perspectives on Global Challenges I, course code: KHC-HC-301-A1	2022
Sustainability Science: Earth House Practicum 2, course code: CAS-EE-396-A1	2022
Sustainability Science: Earth House Practicum 1, course code: CAS-EE-395-A1	2021
Problems in Energy, course code: GRS-EE-948-A1	2021
Interdisciplinary Perspectives on Global Challenges I, course code: KHC-HC-301-A1	2021
Plant Physiological Ecology, course code: CAS-EE-525-A1	2021
Problems in Environment, course code: GRS-EE-995-A1	2021
Keystone Independent Study II, course code: KHC-HC-504-A7	2021
Sustainability Science: Earth House Practicum 2, course code: CAS-EE-396-A1	2021
Sustainability Science: Earth House Practicum 1, course code: CAS-EE-395-A1	2020
Directed Study in Earth & Environment, course code: CAS-EE-491-A1	2020

Keystone Independent Study, course code: KHC-HC-503-E4	2020
Sustainability Science: Earth House Practicum 2, course code: CAS-EE-396-A1	2020
Directed Study in Earth Sciences, course code: CAS-ES-492-P1	2020
Sustainability Science: Earth House Practicum 1, course code: CAS-EE-395-A1	2019
Interdisciplinary Perspectives on Climate Change, course code: KHC 301	2019
Directed Study, course code: CAS-GE-491-P1	2019
Environmental and Urban Geology, course code: GRS-ES-913-P1	2019
Sustainability Science: Earth House Practicum 2, course code: CAS-EE-396-A1	2019
Environmental and Urban Geology, course code: GRS-ES-914-P1	2019
Teaching College Geography, course code: GRS-GE-699-P1	2019
Biogeography, course code: CAS-BI-307-A1; CAS-GE-307-A1	2019
Sustainability Science: Earth House Practicum 1, course code: CAS-EE-395-A1	2018
Environmental and Urban Geology, course code: GRS-ES-913-P1	2018
Teaching College Geography, course code: GRS-GE-699-W3	2018
Physical Principles of the Environment, course code: CAS-GE-510-A1	2018
Senior Independent Work, course code: CAS-GE-401-P1	2018
Senior Independent Work, course code: CAS-GE-402-P1	2018
PROB IN ENVIRON, course code: GRS-GE-996-P1	2018
TEACHNG COLL GG, course code: GRS-GE-699-P1	2018
Directed Study in Earth Sciences, course code: CAS-ES-492-P1	2018
Sustainability Science: Earth House Practicum 2, course code: CAS-EE-396-A1	2018
Sustainability Science: Earth House Practicum 1, course code: CAS-EE-395-A1	2017
Directed Study, course code: CAS-GE-491-P1	2017
Plant Physiological Ecology, course code: CAS-GE-525-A1	2017
Environmental and Urban Geology, course code: GRS-ES-913-A1	2017
TEACHNG COLL GG, course code: GRS-GE-699-W3	2017
PROB IN ENVIRON, course code: GRS-GE-995-P1	2017
First Year Experience Topics, course code: CAS-FY-103-F5	2017
Biogeography, course code: CAS-GE-307-A1; CAS-BI-307-A1	2017
Sustainability Science: Earth House Practicum 2, course code: CAS-EE-396-A1	2017
TEACHNG COLL GG, course code: GRS-GE-699-P1	2017
Sustainability Science: Earth House Practicum 1, course code: CAS-EE-395-A1	2016
Directed Study, course code: CAS-GE-491-P1	2016
TEACHNG COLL GG, course code: GRS-GE-699-W3	2016
Physical Principles of the Environment, course code: CAS-GE-510-A1	2016
Directed Study, course code: CAS-GE-492-P1-S	2016
Biogeography, course code: CAS-BI-307-A1; CAS-GE-307-A1	2016
First Year Experience Topics, course code: CAS-FY-103-F5	2016
Earth House Sustainability Practicum 2, course code: CAS-EE-196-A1	2016
PROB IN ENVIRON, course code: GRS-GE-996-P1	2016
Physical Principles of the Environment, course code: CAS-GE-510-A1	2015

Earth House Sustainability Practicum 1, course code: CAS-EE-195-A1	2015
Directed Study, course code: CAS-GE-491-P1	2015
PROB IN ENVIRON, course code: GRS-GE-995-P1	2015
Biogeography, course code: CAS-BI-307-A1; CAS-GE-307-A1	2015
Directed Study in Earth Sciences, course code: CAS-ES-492-P1	2015
Senior Independent Work, course code: CAS-GE-402-P1	2015
PROB IN ENVIRON, course code: GRS-GE-996-P1	2015
Senior Independent Work, course code: CAS-GE-401-P1	2014
Plant Physiological Ecology, course code: CAS-GE-525-A1	2014
Directed Study, course code: CAS-GE-492-P1-S	2014
Directed Study in Earth Sciences, course code: CAS-ES-492-P1	2014

### **Courses developed**

Bike2BU - XCC 433 D1, Cross College Challenge	2022
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### **Other teaching activities**

KHC 301 Interdisciplinary Perspectives on Climate Change	2020
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## **Professional Activity**

### **Administrative Efforts**

Chair, BU Advising Network	2023
Member	2022-2024
Chair	2022
Chair, BU Advising Network	2020-2021
Chair, BU Advising Network	2019

### **Editorships**

Editorial in Tree Physiology	2017-2018
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### **Outreach or Community services**

Gas Leak Allies, I participate and provide science advising to a bi-weekly roundtable of 20 non-profit organizations and individuals known as the Gas Leak Allies. This group has won 2 signed state laws (2014 and 2016) and a first-of-its-kind city ordinance (Boston) to address and accelerate the repair of natural gas pipeline leaks	2019
Petitioner, Mass DEP appeal hearing on air permit to Enbridge Corporation Compressor Station in Weymouth, Filed 17 pages of scientific testimony for an appeal to an air permit granted by the Mass DEP to Enbridge. This testimony critiqued flaws in the air dispersion modeling conducted by the applicant, and financial conflicts of interest by the Baker administration which constitute scientific misconduct	2019
Merrimack Valley Gas Disaster Relief, Sept 13, 2018 gas disaster. No heat, no cooking for 8517 addresses. Started a gofundme, raised ~17k (with funds additional to the \$14.4k gofundme) and organized volunteers to deliver over 700 cooktops to residents to cook and heat hot water	2018
Council of Environmental Deans and Directors, National Council for Science and the Environment, United States: Served as Acting President and Vice President during 2017	2017
BU CAS Diversity and Inclusion Committee, Boston University, United States: Serve on Diversity and Inclusion Committee for CAS. Contribute governance section for report	2017

Gas Leak Allies, Science advisor to grassroots roundtable consisting of Mothers Out Front, Conservation Law Foundation, Sierra Club, Clean Water Action, Boston Climate Action Network, Massachusetts Climate Action Network, 350 Lowell, Salem Alliance for the Environment, Home Energy Efficiency Team. This group successfully developed and won passage of two laws in the Commonwealth (2014 and 2016) to address the problem of gas leaks which research I led (Phillips et al. 2013) first uncovered. Moreover, this group wrote and won passage of Boston's 2017 ordinance to accelerate gas leak repair

2017

**Other professional activities**

Energy Shift Boston 2019

**Grants**

Zero Carbon Massachusetts, Household methane sampling, \$60,000	2023-present
NOAA, Measuring residential methane emissions across the United States using mailed sampling kits., \$250,000	2022-present
National Science Foundation, Collaborative Research: Geospatial Science for All - Broadening Environmental Research Participation with Accessible Sensors & Mobility, \$500,401	2021-present
The Hideo Sasaki Foundation, Energy Shift Boston, \$15,000	2019-2020
The Hideo Sasaki Foundation, Energy Shift Boston extension, \$10,000	2019-2021
National Science Foundation, NRT: Boston UniverCity - Partnering Graduate Students and Cities to Tackle Urban Environmental Challenges, \$2,998,000	2017-present
California Council on Science and Technology, Science Policy Fellowship in the Massachusetts Legislature, \$25,000	2017-present
California Council on Science and Technology, Science Policy Fellowship in the Massachusetts Legislature, \$27,115	2017-2020
National Science Foundation, Coupling of infrastructure, Green Infrastructure, And communities, \$465,832	2016-2021
National Science Foundation, INFEWS/T1: Modeling resilient, efficient and secure urban FEW networks, \$882,631	2016-present
Environmental Protection Agency, Impact of fugitive methane emissions on ecosystem services across a gradient of shale gas extraction to nature, \$34,000	2014-2016
Picarro, Inc, Picarro-BU Methane Surveyor Project, \$14,780	2013-2014
Conservation Law Foundation, Analysis of Natural Gas Leak Problem in Boston, \$41,560	2013-2014
Barr Foundation, Inc., Analysis of Natural Gas Leak Problem in Boston, \$41,560	2013-present
National Science Foundation, Collaborative Research: CyberSEES: Type 2: Genome: A Spatio-Temporal-Spectral Landsat Archive to Monitor Human Sustainability, \$802,207	2013-present
Picarro, Inc, Picarro-BU Methane Surveyor Project, \$49,628	2013-present
National Science Foundation, CNH-Ex: Uncovering Hidden Interactions Among Leaking NaturalGas Infrastructure, Green Infrastructure, and Communities, \$231,997	2012-present
Environmental Defense Fund, Methane Inputs from Natural Gas Infrastructure in Greater Metropolitan Boston, \$89,906	2012-2013
Environmental Defense Fund, Methane Inputs from Natural Gas Infrastructure in Greater Metropolitan Boston, \$89,964	2012-present
National Science Foundation, Collaborative Research: ULTRA-Ex: Metabolism of Boston, \$44,408	2012-present
National Science Foundation, CNH-Ex: Uncovering Hidden Interactions Among Leaking NaturalGas Infrastructure, Green Infrastructure, and Communities, \$213,939	2011-present
Conservation Law Foundation, Natural Gas Leaks in Massachusetts, \$66,000	2011-present
Conservation Law Foundation, Nautral Gas Leaks in Massachusetts, \$66,000	2011

National Science Foundation, Geospatial Technologies to Measure, Map, Assess, and Analyze Boston's Carbon Footprint, \$1,160,297	2011-present
National Science Foundation, NSF GK-12 GRADUATE STEM FELLOWS IN K-12 EDUCATION GLACIER - GLOBAL EXCHANGE INITIATIVE - EDUCATION & RESEARCH, \$2,828,286	2010-2017
National Science Foundation, COLLABORATIVE RESEARCH: ULTRA-EX: METABOLISM OF BOSTON, \$254,361	2009-2013
National Science Foundation, Coupling of infrastructure, Green Infrastructure, And communities, \$484,136	
National Science Foundation, CNH-Ex: Toward a Healthy Coupling of Natural Gas Infrastructure, Green Infrastructure, and Communities, \$281,835	
Environmental Protection Agency, Impact of fugitive methane emissions on ecosystem services across a gradient of shale gas extraction to nature, \$34,000	

## Publications

- Michanowicz, D. R., Dayalu, A., Nordgaard, C. L., Buonocore, J. J., Fairchild, M. W., Ackley, R., . . . Spengler, J. D. (2023). Rebuttal to the Correspondence on Home is Where the Pipeline Ends: Characterization of Volatile Organic Compounds Present in Natural Gas at the Point of the Residential End User.. *Environ Sci Technol*, 57(39), 14624-14625. doi:[10.1021/acs.est.3c05355](https://doi.org/10.1021/acs.est.3c05355)
- Buckley, S., Connolly, C. L., Levy, J. I., Templer, P. H., Ashmore, J., Carvalho, L., . . . Fabian, M. P. (2023). Carbon, indoor air, energy and financial benefits of coupled ventilation upgrade and enhanced rooftop garden installation: An interdisciplinary climate mitigation approach. *Sustainable Cities and Society*, 97, 104792. doi:[10.1016/j.scs.2023.104792](https://doi.org/10.1016/j.scs.2023.104792)
- Phillips, N., & Ackley, R. (2023). *Strategic Electrification in Washington, D.C.: Neighborhood Case Studies of Transition From Gas to Electric-based Building Heating* (F.C. Nos. 1167\_1154\_1130 DCG Strategic Electrification Study). DC: Washington, DC Department of Energy and Environment.
- Nicholas, D., Ackley, R., & Phillips, N. G. (2023). A simple method to measure methane emissions from indoor gas leaks.. *PLoS One*, 18(11), e0295055. doi:[10.1371/journal.pone.0295055](https://doi.org/10.1371/journal.pone.0295055)
- Phillips, N., & Oren, R. (2023). Duke Forest FACE (FACTS-I): Plant and Soil Response Data. doi:[10.15485/2283434](https://doi.org/10.15485/2283434)
- Buckley, S., Sparks, R., Cowdery, E., Stirling, F., Marsching, J., & Phillips, N. (n.d.). Enhancing crop growth in rooftop farms by repurposing CO2 from human respiration inside buildings. *Frontiers in Sustainable Food Systems*, 6. doi:[10.3389/fsufs.2022.918027](https://doi.org/10.3389/fsufs.2022.918027)
- Michanowicz, D. R., Dayalu, A., Nordgaard, C. L., Buonocore, J. J., Fairchild, M. W., Ackley, R., . . . Spengler, J. D. (2022). Home is Where the Pipeline Ends: Characterization of Volatile Organic Compounds Present in Natural Gas at the Point of the Residential End User.. *Environ Sci Technol*, 56(14), 10258-10268. doi:[10.1021/acs.est.1c08298](https://doi.org/10.1021/acs.est.1c08298)
- Wright, J., Ackley, R., Gopal, S., & Phillips, N. (n.d.). The BosWash Infrastructure Biome and Energy System Succession. *Infrastructures*, 7(7), 95. doi:[10.3390/infrastructures7070095](https://doi.org/10.3390/infrastructures7070095)
- Buckley, S., Phillips, N., & Phillips, N. (2021). Repurposing CO2 from Human Respiration Inside Buildings to Enhance Growth in Rooftop Gardens. *Research Square*. doi:[10.21203/rs.3.rs-163704/v1](https://doi.org/10.21203/rs.3.rs-163704/v1)
- Harrison, J. L., Reinmann, A. B., Maloney, A. S., Phillips, N., Juice, S. M., Webster, A. J., & Templer, P. H. (2020). Transpiration of Dominant Tree Species Varies in Response to Projected Changes in Climate: Implications for Composition and Water Balance of Temperate Forest Ecosystems. *Ecosystems*, 23(8), 1598-1613. doi:[10.1007/s10021-020-00490-y](https://doi.org/10.1007/s10021-020-00490-y)
- Harrison, J. L., Sanders-DeMott, R., Reinmann, A. B., Sorensen, P. O., Phillips, N. G., & Templer, P. H. (2020). Growing-season warming and winter soil freeze/thaw cycles increase transpiration in a northern hardwood forest.. *Ecology*, 101(11), e03173. doi:[10.1002/ecy.3173](https://doi.org/10.1002/ecy.3173)
- Keyes, T., Ridge, G., Klein, M., Phillips, N., Ackley, R., & Yang, Y. (2020). An enhanced procedure for urban mobile methane leak detection.. *Heliyon*, 6(10), e04876. doi:[10.1016/j.heliyon.2020.e04876](https://doi.org/10.1016/j.heliyon.2020.e04876)
- Templer, P., Harrison, J., Reinmann, A., Soccia Maloney, A., Phillips, N., Juice, S., & Webster, A. (2020). Sap Flow in the Soil Freezing Study at the Hubbard Brook Experimental Forest. Environmental Data Initiative. doi:[10.6073/pasta/0091815dab851bf053528c878f963ec1](https://doi.org/10.6073/pasta/0091815dab851bf053528c878f963ec1)

- Ma, Y., Wright, J., Gopal, S., & Phillips, N. (2020). Seeing the invisible: From imagined to virtual urban landscapes. *Cities*, *98*, 102559.
- Phillips, N., magavi, Z., hendrick, M., Salgado, E., Schulman, A., & Ackley, B. (2019). Identification of Large Volume Leaks in Natural Gas Distribution Systems. In <https://agu.confex.com/agu/fm19/meetingapp.cgi/Paper/625052>. San Francisco: AGU.
- wright, J., pitts, J., ackley, B., Gopal, S., & ma, Y. (2019). The Impacts of Leaked Natural Gas on the Integrity of Urban Street Trees. In <https://agu.confex.com/agu/fm19/meetingapp.cgi/Paper/625990>. San Francisco: AGU.
- Phillips, N. (2019). *Rolling the Dice: Assessment of Gas System Safety in Massachusetts*. Boston, MA: Gas Leak Allies. Retrieved from <https://www.gasleaksallies.org/rolling-the-dice>
- Phillips, N. (2019). *PRE-FILED TESTIMONY IN SUPPORT OF THE TEN PERSONS GROUP BY NATHAN G. PHILLIPS* (none). Mass DEP: MassDEP file room.
- Phillips, N. (2019). Science Legislative Fellow Advisors for State Legislatures. In <https://ui.adsabs.harvard.edu/abs/2019APS..MARX60004P/abstract>. Boston: APS.
- Ward, E. J., Oren, R., Kim, H. S., Kim, D., Tor-ngern, P., Ewers, B. E., . . . Schafer, K. V. R. (2018). Evapotranspiration and water yield of a pine-broadleaf forest are not altered by long-term atmospheric [CO<sub>2</sub>] enrichment under native or enhanced soil fertility. *GLOBAL CHANGE BIOLOGY*, *24*(10), 4841-4856. doi:[10.1111/gcb.14363](https://doi.org/10.1111/gcb.14363)
- Yang, Y., Saatchi, S. S., Xu, L., Yu, Y., Choi, S., Phillips, N., . . . Myneni, R. B. (2018). Post-drought decline of the Amazon carbon sink. *NATURE COMMUNICATIONS*, *9*, 9 pages. doi:[10.1038/s41467-018-05668-6](https://doi.org/10.1038/s41467-018-05668-6)
- Zhang, Y. -B., Wang, Y. -Z., Phillips, N., Ma, K. -P., Li, J. -S., & Wang, W. (2017). Integrated maps of biodiversity in the Qinling Mountains of China for expanding protected areas. *BIOLOGICAL CONSERVATION*, *210*, 64-71. doi:[10.1016/j.biocon.2016.04.022](https://doi.org/10.1016/j.biocon.2016.04.022)
- Hendrick, M. F., Cleveland, S., & Phillips, N. G. (2017). Unleakable carbon. *CLIMATE POLICY*, *17*(8), 1057-1064. doi:[10.1080/14693062.2016.1202808](https://doi.org/10.1080/14693062.2016.1202808)
- Hendrick, M. F., Ackley, R., Sanaie-Movahed, B., Tang, X., & Phillips, N. G. (2016). Fugitive methane emissions from leak-prone natural gas distribution infrastructure in urban environments. *ENVIRONMENTAL POLLUTION*, *213*, 710-716. doi:[10.1016/j.envpol.2016.01.094](https://doi.org/10.1016/j.envpol.2016.01.094)
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- Gopal, S., Tang, X., Phillips, N., Nomack, M., Pasquarella, V., & Pitts, J. (2016). Characterizing urban landscapes using fuzzy sets. *COMPUTERS ENVIRONMENT AND URBAN SYSTEMS*, *57*, 212-223. doi:[10.1016/j.compenvurbsys.2016.02.002](https://doi.org/10.1016/j.compenvurbsys.2016.02.002)
- Verma, M., Friedl, M. A., Finzi, A. C., & Phillips, N. (2016). Multi-criteria evaluation of the suitability of growth functions for modeling remotely sensed phenology. *ECOLOGICAL MODELLING*, *323*, 123-132. doi:[10.1016/j.ecolmodel.2015.12.005](https://doi.org/10.1016/j.ecolmodel.2015.12.005)
- Juice, S. M., Templer, P. H., Phillips, N. G., Ellison, A. M., & Pelini, S. L. (2016). Ecosystem warming increases sap flow rates of northern red oak trees. *ECOSPHERE*, *7*(3), 17 pages. doi:[10.1002/ecs2.1221](https://doi.org/10.1002/ecs2.1221)
- Gallagher, M. E., Down, A., Ackley, R. C., Zhao, K., Phillips, N., & Jackson, R. B. (2015). Natural Gas Pipeline Replacement Programs Reduce Methane Leaks and Improve Consumer Safety. *ENVIRONMENTAL SCIENCE & TECHNOLOGY LETTERS*, *2*(10), 286-291. doi:[10.1021/acs.estlett.5b00213](https://doi.org/10.1021/acs.estlett.5b00213)
- McKain, K. K., Down, A., Raciti, S. M., Budney, J., Hutyrá, L. R., Floerchinger, C., . . . Wofsy, S. C. (2015). Methane emissions from natural gas infrastructure and use in the urban region of Boston, Massachusetts. *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*, *112*(7), 1941-1946. doi:[10.1073/pnas.1416261112](https://doi.org/10.1073/pnas.1416261112)
- Lewis, J. D., Phillips, N. G., Logan, B. A., Smith, R. A., Aranjuelo, I., Clarke, S., . . . Tissue, D. T. (2015). Rising temperature may negate the stimulatory effect of rising CO<sub>2</sub> on growth and physiology of Wollemi pine (*Wollemia nobilis*). *FUNCTIONAL PLANT BIOLOGY*, *42*(9), 836-850. doi:[10.1071/FP14256](https://doi.org/10.1071/FP14256)
- Zeppel, M. J. B., Lewis, J. D., Phillips, N. G., & Tissue, D. T. (2014). Consequences of nocturnal water loss: a synthesis of regulating factors and implications for capacitance, embolism and use in models. *TREE PHYSIOLOGY*, *34*(10), 1047-1055. doi:[10.1093/treephys/tpu089](https://doi.org/10.1093/treephys/tpu089)

- Kim, D., Oren, R., Oishi, A. C., Hsieh, C. -I., Phillips, N., Novick, K. A., & Stoy, P. C. (2014). Sensitivity of stand transpiration to wind velocity in a mixed broadleaved deciduous forest (vol 187, pg 62, 2014). *AGRICULTURAL AND FOREST METEOROLOGY*, 192, 41. doi:[10.1016/j.agrformet.2014.02.012](https://doi.org/10.1016/j.agrformet.2014.02.012)
- Kim, D., Oren, R., Oishi, A. C., Hsieh, C. -I., Phillips, N., Novick, K. A., & Stoy, P. C. (2014). Sensitivity of stand transpiration to wind velocity in a mixed broadleaved deciduous forest. *AGRICULTURAL AND FOREST METEOROLOGY*, 187, 62-71. doi:[10.1016/j.agrformet.2013.11.013](https://doi.org/10.1016/j.agrformet.2013.11.013)
- Jackson, R. B., Down, A., Phillips, N. G., Ackley, R. C., Cook, C. W., Plata, D. L., & Zhao, K. (2014). Natural Gas Pipeline Leaks Across Washington, DC. *ENVIRONMENTAL SCIENCE & TECHNOLOGY*, 48(3), 2051-2058. doi:[10.1021/es404474x](https://doi.org/10.1021/es404474x)
- Lewis, J. D., Smith, R. A., Ghannoum, O., Logan, B. A., Phillips, N. G., & Tissue, D. T. (2013). Industrial-age changes in atmospheric [CO<sub>2</sub>] and temperature differentially alter responses of faster- and slower-growing Eucalyptus seedlings to short-term drought. *TREE PHYSIOLOGY*, 33(5), 475-488. doi:[10.1093/treephys/tpt032](https://doi.org/10.1093/treephys/tpt032)
- Logan, B. A., Reblin, J. S., Zonana, D. M., Dunlavy, R. F., Hricko, C. R., Hall, A. W., . . . Tissue, D. T. (2013). Impact of eastern dwarf mistletoe (*Arceuthobium pusillum*) on host white spruce (*Picea glauca*) development, growth and performance across multiple scales. *PHYSIOLOGIA PLANTARUM*, 147(4), 502-513. doi:[10.1111/j.1399-3054.2012.01681.x](https://doi.org/10.1111/j.1399-3054.2012.01681.x)
- Renninger, H. J., & Phillips, N. (2013). SECONDARY STEM LENGTHENING IN PALMS: RESPONSE TO COMMENTARY BY TOMLINSON AND QUINN. *AMERICAN JOURNAL OF BOTANY*, 100(3), 465-466. doi:[10.3732/ajb.1300013](https://doi.org/10.3732/ajb.1300013)
- Phillips, N. G., Ackley, R., Crosson, E. R., Down, A., Hutyra, L. R., Brondfield, M., . . . Jackson, R. B. (2013). Mapping urban pipeline leaks: Methane leaks across Boston. *ENVIRONMENTAL POLLUTION*, 173, 1-4. doi:[10.1016/j.envpol.2012.11.003](https://doi.org/10.1016/j.envpol.2012.11.003)
- Renninger, H. J., McCulloh, K. A., & Phillips, N. (2013). A comparison of the hydraulic efficiency of a palm species (*Iriartea deltoidea*) with other wood types. *TREE PHYSIOLOGY*, 33(2), 152-160. doi:[10.1093/treephys/tps123](https://doi.org/10.1093/treephys/tps123)
- Phillips, N. G. (2013). Untangling the belowground knot. *TREE PHYSIOLOGY*, 33(1), 1-2. doi:[10.1093/treephys/tps130](https://doi.org/10.1093/treephys/tps130)
- Zeppel, M., Logan, B., Lewis, J. D., Phillips, N., & Tissue, D. (2013). Why Lose Water at Night? Disentangling the Mystery of Nocturnal Sap Flow, Transpiration and Stomatal Conductance - When, Where, Who?. *IX INTERNATIONAL WORKSHOP ON SAP FLOW*, 991, 307-312. Retrieved from <http://gateway.webofknowledge.com/>
- Miller-Rushing, A. J., Primack, R. B., Phillips, N., & Kaufmann, R. K. (2012). Effects of Warming Temperatures on Winning Times in the Boston Marathon. *PLOS ONE*, 7(9), 5 pages. doi:[10.1371/journal.pone.0043579](https://doi.org/10.1371/journal.pone.0043579)
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