

JASON K. KELLER

Kravis Professor of Integrated Sciences: Ecology
Kravis Department of Integrated Sciences
Claremont McKenna College

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PROFESSIONAL EXPERIENCE

2023-present Kravis Professor of Integrated Sciences: Ecology, Claremont McKenna College
2022-2023 Vice Provost for Graduate Education, Chapman University
2019-2023 Full Professor, Chapman University
2014-2022 Program Director, Environmental Science & Policy, Chapman University
2019-2020 Interim Dean, Schmid College of Science and Technology, Chapman University
2014-2019 Associate Professor, Chapman University
2008-2014 Assistant Professor, Chapman University
2006-2008 Post-doctoral Fellow, Smithsonian Environmental Research Center
1998-2000 Research Technician, Peatland Warming Experiment, University of Notre Dame

EDUCATION

2006 Ph.D. University of Notre Dame. Department of Biological Sciences
Dissertation: Controls of microbial carbon cycling in northern peatlands
1998 B.S. (*cum laude*) University of Notre Dame. Department of Biological Sciences

FELLOWSHIPS

2006-2008 Smithsonian Institution Post-doctoral Fellow
2000-2005 Arthur J. Schmitt Graduate Fellowship
2001-2004 National Science Foundation Graduate Research Fellowship
2001-2002 Kaneb Center for Teaching and Learning Graduate Teaching Fellowship

TEACHING EXPERIENCE

2024-Present Codes of Life, Claremont McKenna College
2016-2022 Environmental Problem Solving: Energy and Matter Flow, Chapman University
2014-2022 Senior Research: Data Analysis and Presentation (Biology Honors Course),
Chapman University
2011-2022 Environmental Seminar Series, Chapman University
Spring 2021 Biological Sciences Capstone, Chapman University
2009-2019 Ecosystems Ecology (and laboratory), Chapman University
2008-2018 Introduction to Environmental Science, Chapman University
2014-2018 Darwin and the Galapagos (travel course), Chapman University
Fall 2012 Stable Isotope Ecology, Chapman University
2008-2010 Introduction to Biological Sciences Laboratory, Chapman University
Fall 2006 Adjunct Professor, Environmental Science, Anne Arundel Community College
2000, 2002 Teaching Assistant, General Ecology, University of Notre Dame

AWARDS AND HONORS

- 2023 Claremont McKenna College, Kravis Professor of Integrated Sciences: Ecology
- 2018 Chapman University, Wang Fradkin Professorship for exceptional scholarship
- 2018 Chapman University, Award in Mentorship of Undergraduate Research and Creative Activity
- 2017 Chapman University, Office of Residence Life and First Year Experience, My Favorite Professor Award
- 2016 Chapman University Valerie Scudder Award for Outstanding Achievement in Teaching, Scholarly/Creative Activity and Service to the University
- 2016 Chapman University Office of Sponsored Research Million Dollar Club
- 2015 Chapman University Ally Award from Student and Campus Life
- 2015 Chapman University Curriculum Innovation in Sustainability Faculty Teaching Award
- 2013 Chapman University Wang-Fradkin Assistant Professorship for exceptional scholarship
- 2012 Chapman University Faculty Excellence Award for Teaching
- 2012 Chapman University Office of Sponsored Research Young Investigator Award
- 2012 Chapman University Ally Award from Student and Campus Life
- 2011 Chapman University Valerie Scudder Award for Outstanding Achievement in Teaching, Scholarly/Creative Activity and Service to the University
- 2011 Chapman University Curriculum Innovation in Sustainability Faculty Teaching Award
- 2010 Chapman University Faculty Excellence Award for Research
- 2010 Member of National Center for Ecological Analysis and Synthesis (NCEAS) working group on tidal wetland carbon sequestration and greenhouse gas emissions
- 2007 Participant in the Dissertation Initiative for the Advancement of Climate Change Research Symposium (DISCCRS III)
- 2006 University of Notre Dame, Department of Biological Sciences Award for Outstanding Graduate Research
- 2003 Best Student Oral Paper Award, Society of Wetland Scientists

PROFESSIONAL SERVICE

Associate Editor for *Biogeochemistry* (2022-present)

Panelist for National Science Foundation Ecosystems Ecology, Department of Energy Terrestrial Ecosystem Science Panel, National Science Foundation Graduate Research Fellowship Program Panel, and Environmental Protection Agency panel reviewer for Science to Achieve Results (STAR) Fellowship Program in Global Change

Ad hoc reviewer for *American Midland Naturalist*, *Atmospheric Environment*, *Australian Journal of Soil Research*, *Biogeochemistry*, *Biogeosciences Discussions*, California Ocean Trust, *Geochimica et Cosmochimica Acta*, *Ecosystems*, Environmental Protection Agency, *Environmental Science & Technology* *European Journal of Soil Science*, *Geomicrobiology Journal*, *Global Biogeochemical Cycles*, *Global Change Biology*, *Journal of Geophysical Research-Biogeosciences*, National Science Foundation, *Nature*, *Nature Communications*, *New Phytologist*, *Organic Geochemistry*, *Plant Ecology*, *Proceedings of the National Academy of Sciences of the United States*, *Soil Biology & Biochemistry*, *Wetlands*, *Wetlands Ecology and Management*

RESEARCH GRANTS

- LTREB: Collaborative Research: Long-term changes in peatland C fluxes and the interactive role of altered hydrology, vegetation, and redox supply in a changing climate. National Science Foundation. August 2020 – July 2025. (co-PI, \$591,307 total award; \$74,588 to Chapman University). *Grant transferred to Claremont McKenna College (2023)*.
- Collaborative Research: Does tree encroachment with altered hydrology in peatlands accelerate or suppress decomposition? National Science Foundation. May 2021 – April 2024. (co-PI, \$739,282 total award; \$92,031 to Chapman University). *Grant transferred to Dr. Cassandra Zalman at Chapman University (2023)*.
- Environmental Metabolomics: Understanding the electron accepting capacity of soil organic matter as a control of peatland greenhouse gas production. Chapman University Kay Family Foundation – Data Analytics Grant Program. September 2020 – August 2022. (PI, \$89,261 total award).
- EAGER: Are methylotrophic substrates important in northern peatland methane cycling? National Science Foundation. January 2017 – December 2019. (co-PI; \$195,544 total award; \$195,544 to Chapman University).
- Greenhouse gas fluxes in the Seal Beach Thin Layer Sediment Augmentation Project Subcontract from Southwest Wetlands Interpretive Association. October 2015 - September 2018. (PI, \$56,680 total award; \$56,680 to Chapman University).
- MRI: Acquisition of a cavity ring down spectroscopy analyzer for research in wetland carbon cycling by faculty and undergraduates at Chapman University. National Science Foundation. September 2015 - August 2018. (PI, \$200,785 total award; \$200,785 to Chapman University).
- Understanding mechanistic controls of heterotrophic CO₂ and CH₄ fluxes in a peatland with deep soil warming and atmospheric CO₂ enrichment. Department of Energy Terrestrial Ecosystem Science. August 2015-July 2018. (PI; \$1,495,783 total award; \$608,603 to Chapman University).
- Collaborative Research: Long-term changes in peatland C fluxes and the interactive roles of soil climate, vegetation, and redox supply in governing anaerobic microbial activity. National Science Foundation, July 2014 – June 2019 (co-PI; \$429,563 total award; \$0 to Chapman University).
- Climate Ready Estuaries, Coastal Blue Carbon Proposal. Environmental Protection Agency via the South Bay Salt Pond Restoration Project. August 2016 - July 2017. (PI; \$50,000 total award; \$50,000 to Chapman University).
- Understanding the Mechanisms Underlying Heterotrophic CO₂ and CH₄ Fluxes in a Peatland with Deep Soil Warming and Atmospheric CO₂ Enrichment. Department of Energy Terrestrial Ecosystem Science. August 2012 – July 2015 (co-PI; \$1,050,000 total award; \$407,001 to Chapman University).
- MRI: Acquisition of a CHN elemental analyzer for research in plant and ecosystem ecology by faculty and undergraduates at Chapman University. National Science Foundation, September 2011 – August 2014. (lead PI; \$52,793)
- MRI: Acquisition of a Triple Quadrupole Mass Spectrometer for Interdisciplinary Undergraduate Research and Teaching in Chemistry and Biology, National Science Foundation, September 2009 – August 2012. (co-PI; \$414,521)
- Collaborative Research: Why does the efficiency of methane production vary dramatically among wetlands?, National Science Foundation, August 2008 – July 2011 (co-PI; \$1,040,000 total award; \$150,000 to Chapman University).
- Supplemental Research Experience for Undergraduates, National Science Foundation, Summer 2010 and Summer 2009 (\$14,500)

ARTICLES IN REFERRED JOURNALS (* = UNDERGRADUATE STUDENT COLLABORATOR)

- Keller, J.K.**, S.D. Bridgham, K.K. Takagi, C.A. Zalman, J.E. Rush*, C. Anderson*, J.M. Mosolf*, and K.N. Gabriel*. 2023. Microbial organic matter reduction regulates carbon dioxide and methane production across an ombrotrophic-minerotrophic peatland gradient. *Soil Biology & Biochemistry* 182:109045.
- Defrenne, C.E., J.A.M. Moore, C.L. Tucker, L.J. Lamit, E.S. Kane, R.K. Kolka, R.A. Chimner, **J.K. Keller**, and E.A. Lilleskov. 2023. Peat loss collocates with a threshold in plant-mycorrhizal associations in drained peatlands encroached by trees. *New Phytologist* 240: 412-425.
- Song, T., Y. Liu, M. Kolton, R. Wilson, **J. Keller**, J. Rolando, J. Chanton, and J. Kostka. 2023. Porewater inhibits greenhouse gas production and regulates the response of organic matter decomposition to warming in anoxic peat from a *Sphagnum*-dominated bog. *FEMS Microbiology Ecology* 99: 1-15.
- Brown, M., **J.K. Keller**, and C.R. Whitcraft. 2022. Relationship of *Sphaeroma quoianum* to sediment characteristics and invertebrate community. *Biological Invasions* 24:3631-3645.
- LeeWays, C., L.L. McCullough, A.M. Hopple, **J.K. Keller**, and S.D. Bridgham. 2022. Homoacetogenesis competes with hydrogenotrophic methanogenesis for substrates in a peatland experiencing ecosystem warming. *Soil Biology & Biochemistry* 172: 108759.
- Ma, S. L. Jiang, R.M. Wilson, J.P. Chanton, S. Bridgham, S. Niu, C.M. Iversen, A. Malhotra, J. Jiang, X. Lu, Y. Huang, **J. Keller**, X. Xu, D.M. Ricciuto, P.J. Hanson, and Y. Luo. 2022. Evaluating alternative ebullition models for predicting peatland methane emissions and its pathways via data-model fusion. *Biogeosciences* 19:2245-2262.
- Rush*, J.E., C.A. Zalman, G. Woerndle, E.L. Hanna*, S.D. Bridgham, and **J.K. Keller**. 2021. Warming promotes the use of organic matter as an electron acceptor in a peatland. *Geoderma* 410:115303.
- Wilson, R.M., N.A. Griffiths, A. Visser, K.J. McFarlane, S.D. Sebestyen, K.C. Oleheiser, S. Bosman, A.M. Hopple, M.M. Tfaily, R.K. Kolka, P.J. Hanson, J.E. Kostka, S.D. Bridgham, **J.K. Keller**, and J.P. Chanton. 2021. Radiocarbon analyses quantify peat carbon losses with increasing temperature in a whole ecosystem warming experiment. *Journal of Geophysical Research: Biogeosciences* 126, e2021JG006511.
- Ricciuto, D.M., X. Xu, X. Shi, Y. Wang, X. Song, C.W. Schadt, N.A. Griffiths, J. Mao, J.M. Warren, P.E. Thorton, J. Chanton, **J.K. Keller**, S.D. Bridgham, J. Gutknecht, S.D. Sebestyen, A. Finzi, R. Kolka, and P.J. Hanson. 2021. An integrative model for soil biogeochemistry and methane processes: I. Model structure and sensitivity analysis. *Journal of Geophysical Research: Biogeosciences* 126: e2019JG005468.
- Yuan, F., Wang, Y., D.M. Ricciuto, X. Shi, Yuan, F., Hanson, P.J., S. Bridgham, **J. Keller**, P.E. Thorton, and X. Xu. 2021. An integrative model for soil biogeochemistry and methane processes: II. Warming and elevated CO₂ effect on peatland CH₄ emissions. *Journal of Geophysical Research: Biogeosciences* 126: e2020JG005963.
- Wilson, R.M., M.M. Tfaily, C.A. Zalman, M.M. Kolton, E. Johnston, C. Petro, P.J. Hanson, H.M. Heyman, J. Kyle, D.W. Hoyt, E.K. Eder, S.O. Purvine, R.K. Kolka, S.D. Sebestyen, N.A. Griffiths, C.W. Schadt, **J.K. Keller**, S.D. Bridgham, J.P. Chanton, and J.E. Kostka. 2021. Soil metabolome response to whole ecosystem warming at the Spruce and Peatland Responses Under Changing Environments experiment. *Proceedings of the National Academy of the United States* 118: e2004192118.

ARTICLES IN REFERRED JOURNALS (* = UNDERGRADUATE STUDENT COLLABORATOR)

- Waldrop, M.P., J.W. McFarland, K.L. Manies, M.C. Lewis, S.J. Blazewicz, M.C. Jones, R.B. Neumann, **J.K. Keller**, L. Cohen, E.S. Euskirchen, C. Edgar, M.R. Turetsky, and W.L. Cable. 2021. Carbon fluxes and microbial activities from boreal peatlands experiencing permafrost thaw. *Journal of Geophysical Research: Biogeosciences* 126: e2020JG005869.
- Hanna*, E., **J.K. Keller**, D. Chang*, W. de Bruyn, and C. Zalman. 2020. The potential importance of methylated substrates in methane production within three northern Minnesota peatlands. *Soil Biology & Biochemistry* 50: 107957.
- Rosenfield*, M., J. Funk, **J. Keller**, C. Clausen* and K. Cyphers*. 2020. Leaf traits can be used to predict rates of litter decomposition. *Oikos* 10: 589-1596.
- Hopple, A.M., R.M. Wilson, M. Kolton, C.A. Zalman, J.P. Chanton, J. Kostka, P.J. Hanson, **J.K. Keller**, and S.D. Bridgham. 2020. Massive peatland carbon banks vulnerable to rising temperatures. *Nature Communications* 11:1-7.
- Zhuang, Q., S. Wang, B. Zhao, F. Aires, C. Prigent, Z. Yu, J.K. Keller, and S. Bridgham. 2020. Modeling Holocene peatland carbon accumulation in North America. *Journal of Geophysical Research: Biogeosciences* 125: e2019JG005230.
- Rupp, D., E.S. Kane, C. Dieleman, **J.K. Keller**, and M. Turetsky. 2019. Plant functional group effects on peat carbon cycling in a boreal rich fen. *Biogeochemistry* 144:305-327.
- Hopple, A.M., L. Pfeifer-Meister, C.A. Zalman, **J.K. Keller**, M.M. Tfaily, R. M. Wilson, J.P. Chanton, and S.D. Bridgham. 2019. Does dissolved organic matter or solid peat fuel anaerobic respiration in peatlands? *Geoderma* 349:79-87.
- Clark, C.D., J.C. Bowen*, W.J. de Bruyn and **J.K. Keller**. 2019. Optical characterization of chromophoric dissolved organic matter (CDOM) and Fe(II) concentrations in soil porewaters along a channel-bank transect in a salt marsh. *Estuaries and Coasts* 42:1297-1307.
- Zalman, C., **J.K. Keller**, M. Tfaily, L. Pfeifer-Meister, R.M. Wilson, M. Kolton, X. Lin, J. Chanton, J.E. Kostka, A. Gill, A. Finzi, A.M. Hopple, B.J.M. Bohannon, and S.D. Bridgham. 2018. Small differences in ombrotrophy control regional-scale variation in methane cycling among *Sphagnum*-dominated peatlands. *Biogeochemistry* 139:155-177.
- Zalman, C.A., N. Meade*, J. Chanton, J.E. Kostka, S.D. Bridgham and **J.K. Keller**. 2018. Methylophilic methanogenesis in *Sphagnum*-dominated peatland soils. *Soil Biology & Biochemistry* 118:156-160.
- Keller, J.K.** and J. Wade*. 2018. No evidence for trace metal limitation on anaerobic carbon mineralization in three peatland soils. *Geoderma* 314:95-101.
- Gabriel, K.N.*, C.A. Medvedeff, and **J.K. Keller**. 2017. Microbial organic matter reduction in a peatland soil: the importance of water-table level. *BIOS* 88:39-45.
- Wilson, R.M., M.M. Tfaily, V.I. Rich, **J.K. Keller**, S.D. Bridgham, C. Medvedeff, L. Meredith, P.J. Hanson, M. Hines, L. Pfeifer-Meister, S.R. Saleska, P. Crill, W.T. Cooper, J.P. Chanton and J.E. Kostka. 2017. Hydrogenation of organic matter as a terminal electron sink sustains high CO₂:CH₄ production ratios regulating climate feedbacks in boreal peatlands and thawing permafrost. *Organic Geochemistry* 112:22-32.
- Bowen, J.C.*, C.D. Clark, **J.K. Keller**, and W.J. DeBruyn. 2017. Optical properties of chromophoric dissolved organic matter (CDOM) in surface and pore waters adjacent to an oil well in a Southern California salt marsh. *Marine Pollution Bulletin* 114:157-168.
- Wilson, R.M., A.M. Hopple, M.M. Tfaily, S.D. Sebestyen, C.W. Schadt, L. Pfeifer-Meister, C. Medvedeff, K.J. McFarlane, J.E. Kostka, M. Kolton, R. Kolka, L.A. Kluber, **J.K. Keller**, T.P. Guilderson, N.A. Griffiths, J.P. Chanton, S.D. Bridgham and P.J. Hanson. 2016. Stability of a peatland carbon bank to rising temperatures. *Nature Communications* 7:13723.

ARTICLES IN REFERRED JOURNALS (* = UNDERGRADUATE STUDENT COLLABORATOR)

- Wang, S., Q. Zhuang, Z. Yu, S. Bridgham, **J.K. Keller**, and P. Hanson. 2016. Quantifying peat accumulation in Alaska using a process-based biogeochemistry model. *Journal of Geophysical Research : Biogeosciences*. doi: 10.1002/2016JG003452
- Ye, R., **J.K. Keller**, Q. Jin, B.J.M. Bohannan and S.D. Bridgham. 2016. Peatland types influence the inhibitory effects of a humic substance analog on methane production. *Geoderma* 265:131-140.
- Keller, J.K.**, T. Anthony*, D. Clark*, K. Gabriel*, D. Gamalath*, R. Kabala*, J. King*, L. Medina* and M. Nguyen*. 2015. Soil organic carbon and nitrogen storage in two southern California salt marshes: the role of pre-restoration vegetation. *Bulletin of the Southern California Academy of Sciences* 114: 22-32.
- Medvedeff, C.A., S.D. Bridgham, L. Pfeifer-Meister and **J.K. Keller**. 2015. Can *Sphagnum* leachate chemistry explain differences in anaerobic decomposition in peatlands? *Soil Biology & Biochemistry* 86:34-41.
- Clark, C.D., P. Aiona*, **J.K. Keller** and W.J. DeBruyn. 2014. Optical characterization and distribution of chromophoric dissolved organic matter (CDOM) in soil porewater from a salt marsh ecosystem. *Marine Ecology Progress Series* 516:71-83.
- Ye, R., Q. Jin, B. Bohannan, **J.K. Keller**, and S.D. Bridgham. 2014. Homoacetogenesis: A potentially underappreciated carbon pathway in peatlands. *Soil Biology & Biochemistry* 68: 385-391.
- Keller, J.K.** and K.K. Takagi. 2013. Solid-phase organic matter reduction regulates anaerobic decomposition in bog soil. *Ecosphere* 4(5):54.
- Bridgham, S.D., H. Cadillo-Quiroz, **J.K. Keller** and Q. Zhuang. 2013. Methane emissions from wetlands: biogeochemical, microbial, and modeling perspectives from local to global scales. *Global Change Biology* 19:1325-1346.
- Keller, J.K.**, A.E. Sutton-Grier, A. Bullock, and J.P. Megonigal. 2013. Anaerobic metabolism in tidal freshwater wetlands: I. Plant removal effects on iron reduction and methanogenesis. *Estuaries and Coasts* 36:457-470.
- Emerson, D., W. Bellows, **J.K. Keller**, A.E. Sutton-Grier, and J.P. Megonigal. 2013. Anaerobic metabolism in tidal freshwater wetlands: II. Effects of plant removal on Archaeal microbial communities. *Estuaries and Coasts* 36:471-481.
- Keller, J.K.**, K.K. Takagi, M.E. Brown*, K.N. Stump*, C.G. Takahashi*, W. Joo*, K.L. Au*, C.C. Calhoun*, R.K. Chundu*, K. Hokutan*, J.M. Mosolf* and K. Roy*. 2012. Soil organic carbon storage in restored salt marshes in Huntington Beach, California. *Bulletin of the Southern California Academy of Sciences* 111:153-161.
- Ye, R., Q. Jin, B. Bohannan, **J.K. Keller**, S.A. McAllister and S.D. Bridgham. 2012. pH controls over anaerobic carbon mineralization, the efficiency of methane production and methanogenic pathways in peatlands across an ombrotrophic-minerotrophic gradient. *Soil Biology & Biochemistry* 54:36-47.
- Iversen, C.M., **J.K. Keller**, C.T. Garten, and R.J. Norby. 2012. Deep root inputs under elevated [CO₂] may increase soil C and N storage. *Global Change Biology*. 18:1684-1697.
- Weiler, C.S., **J.K. Keller**, and C. Olex. 2012. Personality type differences between Ph.D. climate researchers and the general public: Implications for effective communication. *Climatic Change*. 112:233-242.
- Sutton-Grier, A.E., **J.K. Keller**, R. Koch, C. Gilmour, and J.P. Megonigal. 2011. Electron donors and acceptors influence rates of decomposition in tidal marshes. *Soil Biology & Biochemistry* 43:1576-1583.

ARTICLES IN REFERRED JOURNALS (* = UNDERGRADUATE STUDENT COLLABORATOR)

- Rabenhorst, M.C., J.P. Megonigal, and **J.K. Keller**. 2010. Synthetic iron oxides for documenting sulfide in marsh pore water. *Soil Science Society of America Journal*. 74: 1383-1388.
- Keller, J.K.**, A.A. Wolf, P.B. Weisenhorn, B.G. Drake, and J.P. Megonigal. 2009. Elevated CO₂ affects porewater chemistry in a brackish marsh. *Biogeochemistry* 96:101-117.
- Keller, J.K.**, P.B. Weisenhorn, and J.P. Megonigal. 2009. Humic acids as electron acceptors in wetland decomposition. *Soil Biology & Biochemistry* 41:1518-1522.
- Chen, J., S.D. Bridgham, **J. Keller**, J. Pastor, A. Noormets, and J.F. Weltzin. 2008. Temperature responses to infrared-loading and water table manipulations in peatland mesocosms. *Journal of Integrative Plant Biology* 50(11):1484-1496.
- Ma, S., G.W. Luther III, **J. Keller**, A.S. Madison E. Metzger, J.P. Megonigal, and D. Emerson. 2008. Solid-state Au/Hg microelectrode for the investigation of Fe and Mn cycling in a freshwater wetland: implications for methane production. *Electroanalysis* 20(3):233-239.
- Keller, J.K.** and S.D. Bridgham. 2007. Pathways of anaerobic carbon cycling across an ombrotrophic-minerotrophic peatland gradient. *Limnology and Oceanography* 52:96-107.
- Weltzin, J.F., R.T. Belote, L.M. Williams, **J.K. Keller**, and E.C. Engel. 2006. Authorship in ecology: attribution, accountability, and responsibility. *Frontiers in Ecology and the Environment* 4:435-441. (see also Weltzin, J.F., R.T. Belote, L.M. Williams, **J.K. Keller**, and E.C. Engel. 2007. Ensuring that "authors" write - The authors reply. *Frontiers in Ecology and the Environment* 5:11-11).
- Bridgham, S.D., J.P. Megonigal, **J.K. Keller**, N.B. Bliss, and C. Trettin. 2006. The carbon balance of North American wetlands. *Wetlands* 26(4):889-916.
- Keller, J.K.**, A.K. Bauers*, S.D. Bridgham, L.E. Kellogg, and C.M. Iversen. 2006. Nutrient control of microbial carbon cycling along an ombrotrophic-minerotrophic peatland gradient. *Journal of Geophysical Research* 111, G03006, doi:10.1029/2005JG000152.
- Keller, J.K.**, S.D. Bridgham, C.T. Chapin, and C.M. Iversen. 2005. Limited effects of long-term fertilization on carbon mineralization in a Minnesota fen. *Soil Biology & Biochemistry* 37:1197-1204.
- Weltzin, J.F., **J.K. Keller**, S.D. Bridgham, J. Pastor, P.B. Allen, and J. Chen. 2005. Litter controls plant community composition in a northern fen. *Oikos* 110:537-546.
- Keller, J.K.**, J.R. White, S.D. Bridgham, and J. Pastor. 2004. Climate change effects on carbon and nitrogen mineralization in peatlands through changes in soil quality. *Global Change Biology* 10:1053-1064.

OTHER PUBLICATIONS

- Keller, J.K.** 2011. Invited Commentary. Wetlands and the global carbon cycle: what might the simulated past tell us about the future? *New Phytologist* 192(4):789-792.

CHAPTERS IN BOOKS

- Keller, J.K.** 2018. Greenhouse gases. In: Windham-Myers, L., T. Troxler and S. Crooks (Eds.), *A Blue Carbon Primer: The State of Coastal Wetland Science, Practice, and Policy*. CRC Press, Boca Raton, FL.
- Keller, J.K.**, Medvedeff, C.A. 2016. Soil organic matter. In: Vepraskas, M.J., Craft, C.B., Richardson, J.L. (Eds.), *Wetland Soils: Genesis, Hydrology, Landscapes, and Classification*, Second Edition. CRC Press, Boca Raton, FL. Pages 165-188

Bridgham, S.D., J.P. Megonigal, **J.K. Keller**, N.B. Bliss, and C. Trettin. 2007. Wetlands. In: *The First State of the Carbon Cycle Report (SOCCR): The North American Carbon Budget and Implications for the Global Carbon Cycle*. A Report by the U.S. Climate Change Science Program and the Subcommittee on Global Change Research [King, A.W., L. Dilling, G.P. Zimmerman, D.M. Fairman, R.A. Houghton, G. Marland, A.Z. Rose, and T.J. Wilbanks (eds.)]. National Oceanic and Atmospheric Administration, National Climatic Data Center, Asheville, NC, USA, pp. 139-148.