March 2026

CURRICULUM VITAE

Michael L. Pace
Department of Environmental Sciences
University of Virginia
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Charlottesville, Virginia 22904-4123
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Professional Experience

Emeritus, W.W. Corcoran Professor of Natural History, Dept. of Environmental Sciences, University of Virginia, 2025-Present
W.W. Corcoran Professor of Natural History, Dept. of Environmental Sciences, University of Virginia, 2021-2025
Commonwealth Professor, Dept. of Environmental Sciences, University of Virginia, 2018-2020
Chair, Dept. of Environmental Sciences, University of Virginia, 2014-2019
Professor, Dept. of Environmental Sciences, University of Virginia, 2008-2018
Adjunct Scientist, Cary Institute of Ecosystem Studies, 2008-2023
Assistant Director, Cary Institute of Ecosystem Studies, 2000-2008
G. Evelyn Hutchinson Chair in Ecology, Cary Institute of Ecosystem Studies, 2005-2008
Senior Scientist, Cary Institute of Ecosystem Studies, 1994-2008
Acting Director, Cary Institute of Ecosystem Studies, 1996, 2004
Associate Scientist, Cary Institute of Ecosystem Studies, 1989-1994
Assistant Scientist, Cary Institute of Ecosystem Studies, 1986-1989
Assistant Professor, Dept. of Oceanography, University of Hawaii, 1983-1985
Postdoctoral Fellow, Dept. of Biology, McGill University, 1981-1983

Education

Ph.D. Ecology, University of Georgia, 1981
M.S. Zoology, University of Georgia, 1977
B.A. Biology & English, University of Virginia, 1974

Research Interests

Aquatic Ecosystems, Food Webs, Microbial Ecology, Biogeochemistry

Honors and Awards

A.C. Redfield Lifetime Achievement Award, Association for the Sciences of Limnology and Oceanography 2025
Sustaining Fellow, Association for the Sciences of Limnology and Oceanography 2024
Kaeser Scholar, Center for Limnology, University of Wisconsin 2023
Appointed to Endowed Professorship, University of Virginia 2018
President, Association for the Sciences of Limnology and Oceanography 2018-2020
Naumann-Thienemann Medal, International Society of Limnology, 2016
Keynote Speaker, Australian Society of Limnology, September 2017
Visiting Scholar, Virginia Institute of Marine Sciences, June 2013
Candidate, President Ecological Society of America, Fall 2012
Synthesis Speaker, Final Meeting of Lake Ecosystem Response to Environmental Change program, Abisko, Sweden, September 2010
Keynote Address, Brazilian Congress of Limnology, August 2009
G. Evelyn Hutchinson Medal, American Society of Limnology and Oceanography, 2009
Visiting Faculty, Agouron Institute Course: Microbial Oceanography: Genomes to Biomes, University of Hawaii, Honolulu, Hawaii, July 2008
University of Minnesota, Water Resources Science Program, Distinguished Visitor Series, April 2008
Citation, Outstanding Reviewer *Limnology and Oceanography* in *L&O Bulletin* Vol. 16: 85, American Society of Limnology and Oceanography
Guest Researcher with Lake Ecosystem Response to Environmental Change (LEREC) Group, Universities of Umea and Uppsala, Sweden, September 2006
Eminent Ecologist, Kellogg Biological Station, Michigan State University, June 2005
Elected Fellow, American Association for the Advancement of Science, 1995
Citation, American Fisheries Society for Most Significant Paper in *Transactions of the American Fisheries Society* Volume 121, 1992
Sigma Xi Award for Outstanding Ph.D. Dissertation, University of Georgia, 1981
Magna Cum Laude Graduate, University of Virginia, 1974
Phi Sigma Award in Biology, University of Virginia, 1974
Elected, Phi Beta Kappa, 1974

Selected Service

Interim Editor in Chief, *Limnology and Oceanography Letters*, 2025-present
External Reviewer, Department of Biology, Temple University, 2025
External Reviewer, The River Basin Center, Institute of Ecology, University of Georgia, 2024
Treasurer, Association for the Sciences of Limnology and Oceanography, appointed by the ASLO Board to complete term, 2023
Guest Editor, Special Issue of *Limnology and Oceanography* on Nonlinear Dynamics, Publication 2022
Reviewer, Candidates for Appointment to Professor, University of Innsbruck, 2018
President-Elect, President, and Past-President, Association for the Sciences of Limnology and Oceanography, 2016-2022
Reviewer, Candidates for Appointment to Professor, University of Vienna, 2017

Co-Chair, Association for the Sciences of Limnology and Oceanography Meeting, 2015 Granada, Spain
Editorial Board, *Ecosystems*, 1998-2000, 2008-2017
Science Advisory Committee for NSERC Industrial Research Chair in Carbon Biogeochemistry in Boreal Aquatic Systems, University of Quebec at Montreal, 2010- 2015
External Review Committee, Cornell Biological Field Station, Bridgeport, New York, July 2008,
Faculty 1000, Section Marine & Freshwater Ecology "Faculty Member", 2005-2012
Editorial Board, *Frontiers in Ecology and the Environment*, 2006-2010
Rapid Response Team on Aquatic Ecology, Ecological Society of America, 2004- 2012
Committee of Visitors (Chair), Division of Environmental Biology, National Science Foundation, June 2006
Science Committee (Chair), International Limnology Society Triennial Meeting, 2006-2007
Organizing Committee, American Society of Limnology and Oceanography Annual Meeting, Santiago de Compostela, Spain, 2005
Review Committee for Editor in Chief of *Ecological Applications*, Ecological Society of America, 2004-2005 (Chair)
Publications Committee (Chair), American Society of Limnology and Oceanography, 2002-2004, 2015-2016
Ecosystem Studies Panel, National Science Foundation 2000-2004, 2012, 2013, 2016
Visions Committee, Ecological Society of America, 2002-2004
National Research Council, Committee on Endangered and Threatened Fishes of the Klamath Basin 2001-2004
Nominations Committee, American Society of Limnology and Oceanography, 1993-1994, 1999-2001 (Chair 2000-2001)
Scientific Advisory Board, National Center for Ecological Analysis and Synthesis, 1998-2001, (Chair 2000-2001)
Advisory Review Committee of the Cornell Biology Field Station, Bridgeport, New York, November 1999, external committee member
G. Evelyn Hutchinson Award Subcommittee, American Society of Limnology and Oceanography, 1999-2001, 2010-2011
Panel, EPA Star Program on Regional Scale Analysis and Assessment, 1999
Judge and Advisory Panel for Dutchess County Science Fair 1998, 2001-2002
Scientific Advisory Committee, Multiscale Experimental Ecosystem Research Center, Center for Environmental Sciences, University of Maryland, 1998-2000
Associate Editor, *Limnology and Oceanography*, 1994-1999
Grant Review Panels, Hudson River Foundation, 1996, 1997
Board Member, Association of Ecosystem Research Centers, 1994-1997
Grant Review Panels, National Science Foundation, 1990, 1994, 2010

Courses Taught at the University of Virginia

Limnology: Inland Water Ecosystems (EVSC 4290/7290) – Fall Semesters 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018; Spring Semesters 2021, 2023, 2024. 2025
Ecology (EVSC 3200): Spring Semesters 2010 and 2012; Fall Semesters 2020. 2022, 2024
Ecology Lab (EVSC 3201): Spring Semesters 2010 and 2012; Fall Semesters 2020, 2022, 2024
Ecosystem Ecology (EVSC 4250/7250): Fall Semesters 2021, 2022; Spring Semesters 2009, 2011, 2013
Professional Development in the Environmental Sciences: Spring Semester 2015
Long-Term Ecological Research – Advancing Ecological Theory: Spring Semester 2016
Estuarine Ecology (EVSC 4110/7110) – Fall Semester 2020

Graduate Students and Postdoctoral Associates Supervised

Dat Ha, M.S., 2023, Dept. of Environmental Sciences, University of Virginia, Currently Lab Specialist, University of Virginia
Spencer Tassone, Ph.D., 2023, Dept. of Environmental Sciences, University of Virginia, Currently USGS Scientist
Jonathan Walter, Postdoctoral Associate, 2019-2021, Dept. of Environmental Sciences, University of Virginia, Currently Senior Researcher, University of California Davis
Cal Buelo, Ph.D. 2021, Dept. of Environmental Sciences, University of Virginia, Currently Physical Scientist, U.S. Environmental Protection Agency
Alice Besterman, Ph.D. 2019, Dept. of Environmental Sciences, University of Virginia. Currently Assistant Professor, Towson State University
Jessica Gephart, Ph.D. 2016, Dept. of Environmental Sciences, University of Virginia. Currently Assistant Professor, University of Washington
Kyle Emery, M.S., 2015, Dept. of Environmental Sciences, University of Virginia Currently Assistant Researcher, University of California Santa Barbara
Grace Wilkinson, Ph.D., 2015 and Postdoctoral Associate 2015-2016, Dept. of Environmental Sciences, University of Virginia, Currently Associate Professor University of Wisconsin
David Seekell, Ph.D. 2014, Dept. of Environmental Sciences, University of Virginia. Currently Head of Sustainable Investing, Atle, Stockholm, Sweden
Kelly Hondula, M.S. 2012, Dept. of Environmental Sciences, University of Virginia, Currently Associate Research Scientist, Arizona State University
James Coloso, M.S. 2010, Dept. of Environmental Sciences, University of Virginia, Currently Data Scientist, National Ecological Observatory Network
Caroline Turner, M.S. 2008, Dept. of Ecology and Evolutionary Biology, Cornell University, Currently Assistant Professor, Dept. of Biology, Loyola University
Roxane Maranger, Postdoctoral Associate 2000-2002; Currently Professor, Dept. of Biological Sciences, University of Montreal
Francis Chan, Ph.D. 2001, Dept. of Ecology and Evolutionary Biology, Cornell University; Currently Research Associate Professor, Dept. of Integrative Biology, Oregon State University

David Post, Ph.D. 2000, Dept. of Ecology and Evolutionary Biology, Cornell University; Currently Professor, Dept. of Ecology and Evolution, Yale University
Isabel Reche, Postdoctoral Associate 1995-1997; Currently Professor, Dept. of Zoology and Ecology, University of Granada
Karin Limburg, Postdoctoral Associate 1994-1997; Currently Distinguished Professor, Environmental and Forest Biology, SUNY College of Environmental Science and Forestry, Syracuse, New York
Stephen Baines, Ph.D. 1993, Biology Dept., Yale University; Currently Associate Professor, Dept. of Ecology and Evolution, SUNY Stony Brook
Hélène Cyr, Ph.D. 1992, Ecology Program, Rutgers University; Currently Associate Professor (retired), Dept. of Ecology and Evolutionary Biology, University of Toronto
Dolors Vaqué, Postdoctoral Associate 1990-1991; Currently Senior Research Scientist (retired), Institut de Ciencias del Mar, Barcelona, Spain
George McManus, Postdoctoral Associate 1986-1989; Currently Professor, Marine Sciences, University of Connecticut

Extramural Grants

National Science Foundation – Collaborative Research: Whole ecosystem test of restoring resilience in lakes. 2023-2026, $399,132
National Science Foundation – IRES Track III – International Research Engagement for Graduate Level Professional Development: Limnology and Oceanography Research Exchange (LOREX), 2018-2025, $1,104,122
National Science Foundation – LTER: Climate drivers, dynamics, and consequences of ecosystem state change in coastal barrier systems, 2018-2025, $6,762,000
National Science Foundation – Collaborative research: Spatial dynamics and early warnings of harmful algal blooms. 2018-2024, $442,999 (completed)
National Science Foundation - EAGER Collaborative Research: Synchronization between terrestrial and aquatic ecosystems, 2018-2020, $163,673 (completed)
National Science Foundation – EAGER research: An instrument setup for measuring air –water gas exchange by eddy covariance in shallow-water marine systems. 2018-2022, $279,142 (completed)
National Science Foundation - OPUS: Collaborative research: analysis of cross-boundary fluxes, trophic cascades, and ecosystem stability based on 32 years of whole-lake experiments. 2015-2019, $71,190 (completed)
National Science Foundation – EAGER research: Gas exchange over the air-water interface of freshwater systems, 2015-2018, $284,994 (completed)
National Science Foundation - LTER: Drivers, dynamics and consequences of non-linear change in coastal barrier systems, 2012-2018, $5,880,000 (completed)
National Science Foundation - Collaborative Research: Whole Ecosystem Experiments on Early Warnings for Regime Shifts to Cyanobacteria in Lakes, 2012-2017, $377,901(completed)
National Science Foundation –LTREB: Long-term effects of a species invasion on an aquatic ecosystem, 2011-2016, $450,000 (completed)

NASA Virginia Space Grant Consortium – Spatial organization of lake size distributions and biogeochemical processes. 2013-2014, $5000 (completed)
National Science Foundation - Collaborative research: Terrestrial support of lake food webs: A multi-isotope approach, $244,884 (completed)
National Science Foundation – Collaborative research: leading indicators of regime shift – an ecosystem experiment, $462,185 (completed)
National Science Foundation – QEIB: A spatially-explicit watershed-scale analysis of nutrient loading to Adirondack lake ecosystems, $300,000 (completed)
National Science Foundation – LTREB: Long term response of an aquatic ecosystem to an invasive species, $300,000 (completed)
National Science Foundation – Frontiers in sustainability science: biofuels as a critical test, $49,900 (completed)
McCann Foundation – Boat engine replacement, $10,000 (completed)
Hudson River Foundation - Boat Engine to Support Hudson River Activities, $10,000 (completed)
Hudson River Foundation – Freshwater flow and benthic grazing as controls on the Hudson River food web: a synthesis of long-term data, $92,982 (completed)
National Science Foundation –Collaborative Research: Terrestrial carbon subsidies of aquatic food webs, $700,000 (completed)
Hudson River Foundation – Bacterial activity in the upper Hudson Estuary: Do sewage nutrients stimulate degradation of organic matter? $193,100 (completed)
National Science Foundation – Collaborative Research: Alternative carbon sources for lake food webs, $611,000 (completed)
National Science Foundation – LTREB: Developing a long-term perspective on the response of an aquatic ecosystem to an invasive bivalve, $300,000 (completed)
Hudson River Foundation – Hot spots of bacterial activity in the Hudson River Estuary, $190,495 (completed)
Environmental Protection Agency – Regional analysis of variation in Adirondack lake ecosystems: landscape scale determinants of dissolved organic carbon, $453,775 (completed)
Department of Energy - Seventh Cary Conference: Successes, limitations and frontiers in ecosystem ecology to be held May 1997, $25,000 (completed)
National Aeronautics and Space Administration - Successes, limitations and frontiers in ecosystem ecology. $30,000 (completed)
National Science Foundation - Cary Conference VII: Successes, limitations and frontiers in ecosystem ecology: May 6-8, 1997, $41,000 (completed)
Cornell University - Subcontract on National Science Foundation Grant - Do top-down and bottom-up controls interact to exclude N-fixing cyanobacteria from the plankton of estuaries? $147,443 (completed)
National Science Foundation - Alternative states and ecosystem metabolism in lakes: interactions of nutrients and DOC, $316,097 (completed)
National Science Foundation - Response and compensation to a bivalve invasion by an aquatic ecosystem, $900,000 (completed)
Hudson River Foundation - Are spawners the first to go? Retrospective otolith analysis of successfully recruited American shad. $41,000 (completed)

New York Sea Grant Institute - Hudson River food web dynamics and the recruitment of striped bass, $115,000 (completed)
National Science Foundation - Research Opportunity Award supplement for Dr. William Shaw, Sullivan Community College, $15,000 (completed)
Hudson River Foundation - Cladoceran dynamics and the recruitment of larval *Morone* in the Hudson River Estuary, $79,000 (completed)
Hudson River Foundation - Synthesis of information on the lower food web of the tidal freshwater Hudson River, $66,000 (completed)
National Science Foundation - Regulation of heterotrophic microbial processes in lake ecosystems, 652,000 (completed)
National Science Foundation - Microbial investigations of north temperate lakes: A supplement for research at LTER sites, $45,000 (completed)
Hudson River Foundation - Significance of bacterial production in the lower food web of the Hudson River, $132,000 (completed)
Hudson River Foundation - Hudson River fish populations: analysis of distribution and abundance from existing data, $122,000 (completed)
Lehigh University from a Mellon Foundation grant to Lehigh - Studies of the fate of algal production: sedimentation and grazing in three Poconos lakes, $5000 (completed)
University of Rhode Island, subcontract from an Environmental Protection Agency grant to URI - A nitrogen mass balance of the New York Bight ecosystem, $45,000 (completed)
National Science Foundation - Cascading trophic interactions in lake ecosystems: effects on bacteria and their consumers, $150,000 (completed)
Hudson River Foundation - Regulation of crustacean zooplankton in the Hudson River, $72,000 (completed)
Hudson River Foundation - Grazing on algae and bacteria by crustacean zooplankton in the Hudson River, $67,000 (completed)

Presentations (2021-2026)

Abstracts from Presentations at Scientific Meetings

Pace, M. L., S. R. Carpenter, D. Ha, M. McCarthy, D. K. Szydlowski, G. M. Wilkinson. Measuring resilience and stability with dissolved oxygen and pH data from whole lake nutrient additions. Aquatic Sciences Meeting, Associate for the Sciences of Limnology and Oceanography, Charlotte, North Carolina, March 27, 2025
Pace, M. L. Jon Cole in 5 Graphs Summer Meeting, Association for the Sciences of Limnology & Oceanography, Madison, Wisconsin, June 6, 2024.
Pace, M. L. Steve Carpenter and the Cascade Project. Summer Meeting, Association for the Sciences of Limnology & Oceanography, Madison, Wisconsin, June 5, 2024.
Szydlowski, D. K., K. Bollini, M. L. Pace, G. M. Wilkinson. Aquatic heatwaves increase primary production in three north temperate lakes. Association for the Sciences of Limnology & Oceanography, Madison, Wisconsin, June 3, 2024.

Pace, M. L., A. F. Besterman, C. D. Buelo, S. Carpenter, D. T. Ha, S. J. Tassone, J. A. Walter, and G. M. Wilkinson. Quantifying stability and resilience in estuaries and lakes using high frequency data. Aquatic Sciences Meeting, Association for the Sciences of Limnology & Oceanography, Palma, Spain, June 6, 2023.

Ha, D. T., C. D. Buelo, S. J. Tassone, J. A. Walter, and M. L. Pace. Quantifying algal blooms with high frequency data and a disturbance-recovery algorithm. Aquatic Sciences Meeting, Association for the Sciences of Limnology & Oceanography, Palma, Spain, June 6, 2023.

Tassone, S. J., and M. L. Pace. Seagrass Resilience Experiment. Long Term Ecological Research Network - All Scientist Meeting. Pacific Grove, CA, September 19-23, 2022

Walter, J. A., N. J. Coombs, M. Pace. Timescale-specific, spatially synchronous fluctuations in dissolved organic carbon of Adirondack lakes are linked to precipitation and biogeochemistry. Joint Aquatic Sciences Meeting, Grand Rapids, Michigan, May 20, 2022.

Ortiz, D. A., S. R. Carpenter, D. T. Ha, M. L. Pace, E. H. Stanley, and C. J. Vines, Diel spatial heterogeneity among north temperate lakes with differing trophic status. Joint Aquatic Sciences Meeting, Grand Rapids, Michigan, May 19, 2022.

Maas, C. M. and others. Past, present, and future of freshwater salinization syndrome in the Anthropocene. Joint Aquatic Sciences Meeting, Grand Rapids, Michigan, May 17, 2022.

Schieler, B., L. Duguay, M. Pace, and A. Paytan. Adventures, challenges, and benefits of conducting international collaborative research. Joint Aquatic Sciences Meeting, Grand Rapids, Michigan, May 17, 2022.

Szydlowski, D. K., S. R. Carpenter, M. L. Pace, E. H. Stanley, and G. M. Wilkinson. Phytoplankton response to storm conditions is mediated by antecedent hydrologic conditions. Joint Aquatic Sciences Meeting, Grand Rapids, Michigan, May 16, 2022.

Pace, M. L., C. D. Buelo, S. R. Carpenter, D. T. Ha, D. A. Ortiz, E. H., Stanley, and G. M. Wilkinson. Threshold for phytoplankton blooms indicated by whole lake nutrient additions. Joint Aquatic Sciences Meeting, Grand Rapids, Michigan, May 16, 2022.

Buelo, C. D., A. F. Besterman, J. A. Walter, M. L. Pace, D. T. Ha, and S. J. Tassone. Quantifying disturbance and recovery in estuaries: tropical cyclones and high frequency measures of oxygen and salinity. Ocean Sciences Meeting, Virtual, March 1, 2022.

Pace, M. L., C. D. Buelo, and S. R. Carpenter. Phytoplankton biomass, dissolved organic matter and temperature drive respiration in whole lake nutrient additions. Association for the Sciences of Limnology and Oceanography Virtual Meeting, June 24, 2021

Walter, J. A, R. Fleck, J. H. Kastens, M. L. Pace, and G. M. Wilkinson. Temporal coherence between lake and landscape primary productivity. Association for the Sciences of Limnology and Oceanography Virtual Meeting, June 25, 2021.

Buelo, C. D., M. L. Pace, S. R. Carpenter, E. H. Stanley, D. A. Ortiz, and D. T. Ha. Evaluating temporal and spatial early warning statistics of algal blooms.

Association for the Sciences of Limnology and Oceanography Virtual Meeting, June 24, 2021.

Carpenter, S. R., M. L. Pace, and G. M. Wilkinson. How to measure resilience of an ecosystem. Plenary talk, Virtual Conference on Tropical Forest Resilience, Leige, Belgium, October 18, 2021.

Invited Seminars and Presentations

Integrative Biology Colloquium, Department of Integrative Biology, University of Wisconsin, October 2023

Kaeser Scholar Seminar, Center for Limnology, University of Wisconsin, October 2023

Publications

Michael Pace - Google Scholar

Books

Pace, M.L., and P.M. Groffman (eds.). 1998. Successes, limitations, and frontiers in ecosystem science. Springer-Verlag.

Journal Articles and Book Chapters

Brock, W. A., S. R. Carpenter, M. L. Pace, and G. M. Wilkinson. 2026. Ecosystem Experiments: How does manipulation rate affect indicators of resilience? Ecosystems **29:** 23.10.1007/s10021-025-01042-y

Ewers Lewis, C.J., K.J. McGlathery, S.J. Tassone, M.L. Pace, and P.L. Wiberg. 2026. Disturbance and recovery of seagrass blue carbon: A large-scale in situ experiment. Science of the Total Environment 1013 https://doi.org/10.1016/j.scitotenv.2025.181279

Reche, I., M.L. Pace, I. Peralta-Maraver, I.P. Mazuecos, A. Fernandez-Barbero, J. Calvo, P. Verdugo. 2025. Calcium and iron promote reversible self-assembly of dissolved organic matter into particles. Biogeochemistry 168:95. https://doi.org/10.1007/s10533-025-01284-x

Breitenbeck, G.A., C.J. Johnston, D.J. Wilcox, M.L. Pace, K.A. Emery, and C.J. Patrick. 2025. Bottom-use conflict in shallow coastal zones: Hard clam aquaculture (Mercenaria mercenaria) aquaculture and restored seagrass (Zosteria marina). Estuaries and Coasts 48: 154. https://doi.org/10.1007/s12237-025-01593-2

Szydlowski, D.K., K.A. Bolini, M.L. Pace, and G.M. Wilkinson. 2025. Aquatic heatwaves increase surface chlorophyll concentrations in experimental and reference lakes. Limnology and Oceanography Letters 10: 453-463. http://doi.org/10.1002/lol2.70024

Tassone, S.J., Kelly,, M.C., Beidler, O.N, Pace, M.L., and Marcarelli, A.M. 2025. Impacts of riverine heatwaves on rates of ecosystem metabolism in the United States. Limnology and Oceanography Letters http://doi.org/10.1002/lol2.70014

Gephart, J.A., R.A. Bejarano, K. Goropse, A. Goodwin, C.D. Golden, R.L. Naylor, K.L. Nash, M.L. Pace, and M. Troell. 2024. Globalization of wild capture and farmed aquatic foods. Nature Communications https://doi.org/10.1038/s41467-024-51965-8

Cagle, S.E., J.M. Fadum, L.S. Jansen, S.H. Burnet, and M.L. Pace. 2024. Evaluating mentorship in the aquatic sciences in the context of a global pandemic (COVID-19). Limnology and Oceanography Bulletin 33: 97-100 http://dx.doi.org/10.1002/lob.10635

Ranjbar, M.H., D.P, Hamilton, M.L. Pace, A. Etemad-Shahidi, C.C. Carey, and F. Helfer. 2024. Individual-based modelling of adaptive physiological traits of cyanobacteria: Responses to light history. Ecological Modeling 495: 110803 https://authors.elsevier.com/sd/article/S0304-3800(24)00191-1

Tassone, S.J., C. J. Ewers Lewis, K. J. McGlathery, M. L. Pace, 2024. Seagrass ecosystem recovery: Experimental removal and synthesis of disturbance studies. Limnology and Oceanography 69: 1593-1605 http://doi.org/10.1002/lno.12608

Tassone, S.J. and M.L. Pace 2023. Increased frequency of sediment heatwaves in a Virginia seagrass meadow. Estuaries and Coasts 47: 656-669 https://doi.org/10.1007/s12237-023-01314-7

Schmidt, D.F., K.M. Grise, and M.L. Pace. 2023. Does the 11-year solar cycle affect lake and river ice phenology. PLoS One 18: e0294995. https://doi.org/10.1371/journal.pone.0294995

Smith, A.J., K. McGlathery, Y, Chen, C. J. Ewers Lewis, S. C. Doney, K. Gedan, C. K. LaRoche, P. Berg, M. L. Pace, J. C. Zinnert, and M. L. Kirwan 2023. Compensatory mechanisms absorb regional carbon losses within a rapidly shifting coastal mosaic. Ecosystems 27: 122-136 https://doi.org/10.1007/s10021-023-00877-7

Buelo, C.D., A.F. Besterman, J.A. Walter, M.L. Pace, D.T. Ha, and S.J. Tassone. 2023. Quantifying disturbance and recovery in estuaries: tropical cyclones and high frequency measures of oxygen and salinity. Estuaries and Coasts 47: 18-31. https://doi.org/10.1007/s12237-023-01255-1

Walter, J.M., N.J. Coombs, and M.L. Pace. 2023. Synchronous variation of dissolved organic carbon in Adirondack lakes at multiple timescales. Limnology and Oceanography Letters 8: 649-656. http://dx.doi.org/10.1002/lol2.10328

Tassone, S.J., A.F. Besterman, C.D. Buelo, D.T. Ha, J.A. Walter, and M.L. Pace. 2023. Increasing heatwave frequency in streams and rivers of the United States. Limnology and Oceanography Letters 8: 295-304. http://doi.org/10.1002/lol2.10284

Kaushal, S.J. and others. 2023. State factors control progressive stages of freshwater salinization syndrome. Limnology and Oceanography Letters 8: 190-211 https://doi.org10.1002/lol2.10248

Cole, J.J., and M.L. Pace. 2022. The discipline of limnology. In Encyclopedia of Inland Waters, 2nd Edition, pp. 11-18. Edited by: K. Tockner and T. Mehner. 2nd Edition

Carpenter, S.R., M.L. Pace, and G.M. Wilkinson. 2022. Organic color and resilience of phytoplankton to enrichment. Limnology and Oceanography Letters 7:466-474 https://doi.org/10.1002/lol2.10280

Buelo, C. D., M L. Pace, S R. Carpenter, E H. Stanley, D A. Ortiz, D.T. Ha. 2022. Evaluating the performance of temporal and spatial early warning statistics of algal blooms. Ecological Application https://doi.org/10.1002/eap.2616

Walter, J. A, C. D. Buelo, A. F. Besterman, S. J. Tassone, J. Atkins, and M. L. Pace. 2022. An algorithm for detecting and quantifying disturbance and recovery in high frequency time series. Limnology and Oceanography Methods 20: 338-349. https://doi.org/10.1002/lom3.10490

Seekell, D.A., M.L. Pace, J.B. Heffernan, and S.J. Holbrook. 2022. Limnology and Oceanography 67: S1-S4.

Tassone, S.J., A.F. Besterman, C.D. Buelo, J.A. Walter, and M.L. Pace. 2022. Co-occurrence of aquatic heatwaves with atmospheric heatwaves, low oxygen, and low pH events in estuarine ecosystems. Estuaries and Coasts 45: 707-720. https://doi.org10.1007/s12237-021-01009-x

Wilkinson, G.M., J.A. Walter, C.D. Buelo, and M.L. Pace. 2022. No evidence of widespread algal bloom intensification in hundreds of lakes. Frontiers in Ecology and Environment 20: 16-21

Besterman, A.F. and M. L. Pace. 2021. Mudflat geomorphology determines invasive macroalgal effect on invertebrate prey and shorebird predators. Ecology 102: e03540 https://doi.org/10.1002/ecy.3540

Kaushal, S.S., G.E. Likens, M.L. Pace and others. 2021. Freshwater salinization syndrome: from emerging global problem to managing risks. Biogeochemistry 154: 255-292.

Carpenter, S.R., B.M.S. Arani, E. H. Van Nes, M. Scheffer, and M. L. Pace. 2021. Resilience of phytoplankton to trophic cascades and nutrient enrichment. Limnology and Oceanography 67: S258-S265. https://doi.org/10.1002/lno.11913

Pace, M.L. 2021. Revisiting the ecosystem concept: important features that promote generality and understanding, p. 217-226. In K. Weathers, D. Strayer and G. E. Likens (editors). Fundamentals of Ecosystem Ecology 2nd Edition

Pace, M. L., G. M. Lovett, C. C. Carey, and R Q. Thomas. 2021 Primary production the foundation of ecosystems, p. 29-53. In K. Weathers, D. Strayer and G. E. Likens (editors). Fundamentals of Ecosystem Ecology 2nd Edition.

Pace, M.L., C.D. Buelo, and S.R. Carpenter. 2021. Phytoplankton biomass, dissolved organic matter, and temperature drive respiration in whole lake nutrient additions. Limnology and Oceanography 66: 2174-2186.

Bianchi, T.S., M. Anand, C.T. Bauch, D.E. Canfield, K. Fennel, P.M. Groffman, M.L. Pace, M. Saito, and M.J. Simpson. 2021. Ideas and perspectives: Some key foci for the future. Biogeosciences 18: 1305-1313.

Besterman, A.F., K. McGlathery, M. Reidenbach, P. Wiberg, and M.L. Pace. 2020 Predicting benthic macroalgal abundance in shallow coastal lagoons from geomorphology and hydrologic flow patterns. Limnology and Oceanography 66: 123-140. https://doi.org10.1002/lno.11592

Walter, J.A., R. Fleck, J. H. Kastens, M.L. Pace, and G.M. Wilkinson. 2020 Temporal coherence between lake and landscape primary production. Ecosystems 24: 502-515. https://doi.org/10.1007/s10021-020-00531-6

Berg, P., M. L. Pace, and C.D. Buelo. 2020. Air-water gas exchange in lakes and reservoirs measured from a moving platform by underwater eddy covariance.

Limnology and Oceanography Methods 18: 424-436. https://doi.10.1003/lom3.10373

Walter, J.A., R. Fleck, J. H. Kastens, M.L. Pace, and G.M. Wilkinson. 2020. Scaling relationship between lake surface area and catchment area. Aquatic Sciences 82: 47 https://doi.org/10.1007/s00027-020-00726-y

Besterman, A.F., M.L. Pace, S. Karpanty. 2020. Impact of exotic macroalga on shorebirds varies with foraging specialization and spatial scale. Plos One 15: e0231337. https://doi.org/ 10.1371/journal.pone.0231337

Wilkinson, G.M., J. Walter, R. Fleck, M.L. Pace. 2020. Beyond the trends: The need to understand multiannual dynamics in aquatic ecosystems. Limnology and Oceanography Letters 5: 281-286. https://doi.org/10.1002/lol2.10153

Strayer, D.L., D.T. Fischer, S.K. Hamilton, H.M. Malcom, M.L. Pace, and C.T. Solomon. 2019. Long-term variability and density dependence in Hudson River Dreissena populations. Freshwater Biology 65: 474-489. https://doi.org/10.1111/fwb.13444

Geraldi, N.R., A. Ortega, O. Serrano, P.I. Macreadie, C, Lovelock, D. Krause-Jensen, H.A. Kennedy, P.S. Lavery, M.L. Pace, J. Kaal, C.M. Duarte. 2019. Fingerprinting blue carbon: Rationale and tools to determine the source of organic carbon in marine depositional environments. Frontiers in Marine Science https://doi.org/10.339/fmars.2019.00263

Pace, M. L., S. R. Carpenter, and G. M. Wilkinson. 2019. Long-term studies and reproducibility: Lessons from whole-lake experiments. Limnology and Oceanography 54: S22-S33.

Schmidt, D.F., K.M. Grise, and M.L. Pace. 2019. High-frequency climate oscillations drive ice-off variability for Northern Hemisphere lakes and rivers. Climate Change 152: 517-532.

Kaushal, S.S., G.E. Likens, M.L. Pace, S. Haq, K.L. Wood, J.G. Galella, C. Morel, T.R. Doody, B. Wessel, P. Kortelainen, A. Räike, V. Skinner, R. Utz, and N. Jaworski. 2018. Novel chemical cocktails in inland waters as a consequence of the freshwater salinization syndrome. Philosophical Transactions of the Royal Society of London B 374: article 20180017.

Carpenter, S.R., and M.L. Pace 2018. Synthesis of a 33-year series of whole-lake experiments: effects of nutrients, grazers, and precipitation-driven water color on chlorophyll. Limnology and Oceanography Letters 3: 419-427

Wilkinson, G.M., A. Besterman, C. Buelo, J. Gephart, and M.L. Pace. 2018. A synthesis of modern organic carbon accumulation rates in coastal and aquatic inland ecosystems. Scientific Reports 8: e15736

Buelo, C.D., S.R. Carpenter, and M.L. Pace. 2018. A modeling analysis of spatial indicators of thresholds for algal blooms. Limnology and Oceanography Letters 3: 384-393.

Eskinazi-Sant'Anna, E.M. and M.L. Pace. 2018. The potential of the zooplankton resting-stage bank to restore communities in permanent and temporary water bodies. Journal of Plankton Research 40: 458-470.

Besterman, A.F., and M.L. Pace 2018. Do macroalgal mats impact microphytobenthos on mudflats? Evidence from a meta-analysis, comparative survey, and large-scale manipulation. Estuaries and Coasts 41: 2304-2316.

Wilkinson, G. M., S. R. Carpenter, J. J. Cole, M. L. Pace, R. D. Batt, C. D. Buelo, and J. T. Kurtzweil. 2018. Early warnings signals precede cyanobacterial blooms in multiple whole-lake experiments. Ecological Monographs 88: 188-203.

Kaushal, S.S., G.E. Likens, M.L. Pace, R.M. Utz, S. Haq, J. Gorman, and M. Grese. 2018. Freshwater salinization syndrome on a continental scale. Proceedings of the National Academy of Sciences, U.S.A. 115: e574-583.

Berg, P., and M.L. Pace. 2017. Continuous measurement of air-water gas exchange by underwater eddy covariance. Biogeosciences 14: 5595-5606

Soranno, P.A. and 80 coauthors. 2017. LAGOS-NE: A multi-scaled geospatial and temporal database of lake ecological context and water quality for thousands of U.S. lakes. GigaScience doi.org/10.1093/gigascience/gix101

Butitta, V.L., S.R. Carpenter, L.C. Loken, M.L. Pace, and E.H. Stanley. 2017. Spatial early warning signals in a lake manipulation. Ecosphere 8: e01941

Berg, P, M.L. Delgard, R.N. Glud, M. Huettel, C.E. Reimers, and M.L. Pace. 2017. Non-invasive flux measurements at the benthic interface: The aquatic covariance technique. L&O e-lectures 7: 1-50.

D'Odorico, P., J.L. Natyzak, E.A. Castner, K.F. Davis, K.A. Emery, J.A. Gephart, A.M. Leach, M.L. Pace, and J.N. Galloway. 2017. Ancient water embodied in today's energy. Earth's Future doi 10.1002/2017EF000544.

Tanentzap, A.J., B.W. Kielstra, G.M. Wilkinson, M. Berggren, N. Craig, P.A. del Giorgio, J. Grey, J.M. Gunn, S.E. Jones, J. Karlsson, C.T. Solomon, and M.L. Pace. 2017. Terrestrial support of lake food webs: Synthesis reveals controls over cross-ecosystem resource use. Science Advances 3: e1601765.

Pace, M.L., R.D. Batt, C.D. Buelo, S.R. Carpenter, J.J. Cole, J.T. Kurtzweil, and G.M. Wilkinson. 2017. Reversal of a cyanobacterial bloom in response to early warnings. Proceedings of the National Academy of Sciences USA 114: 352-357.

Gephart, J.A., L. Deutsch, M.L. Pace, M. Troell, and D.A. Seekell. 2017. Shocks to fish production: identification, trends, and consequences. Global Environmental Change 42: 24-32.

Pace, M.L. and J.A. Gephart. 2017. Trade: a driver of present and future ecosystems. Ecosystems 20: 44-53.

Murphy, A.E., K.A. Emery, I.C. Anderson, M.L. Pace, M.J. Brush, and J.E. Rheuban. 2016. Quantifying the effects of commercial clam aquaculture on C and N cycling: an integrated ecosystem approach. Estuaries and Coasts 39:1746-1761.

Leach, A.M., K.A. Emery, J. Gephart, K.F. Davis, J.W. Erisman, A. Leip, M.L. Pace, P. D'Odorico, J. Carr, L. Cattell Noll, E. Castner, and J.N. Galloway. 2016. Environmental impact food labels combining carbon, nitrogen, and water footprints. Food Policy 61: 213-223.

Emery, K.A., G.M. Wilkinson, V.F. Camacho-Ibar, M.L. Pace, K.J. McGlathery, J. M. Sandoval-Gil, and J. Hernandez-Lopez. 2016. Resource use of an aquacultured oyster (*Crassostrea gigas*) in the reverse estuary Bahia San Quintin, Baja California, Mexico. Estuaries and Coasts 39: 866-874.

Emery, K.A., J.A. Gephart, G.M. Wilkinson, A.F. Besterman, and M.L. Pace. 2016. Exploring trophic cascades in lake food webs with a spreadsheet model, p. 111-

115. In L.B. Byrne (ed.). Learner-centered teaching activities for environmental and sustainability studies. Springer International Publishing, Switzerland.
Wilkinson, G.M, C.D. Buelo, J.J. Cole, and M.L. Pace. 2016. Exogenously produced CO_2 doubles the CO_2 efflux from three north temperate lakes. Geophysical Research Letters 43: 1996-2003.
Gephart, J.A., K.F. Davis, K.A. Emery, A.M. Leach, J.N. Galloway, and M.L. Pace. 2016. The environmental cost of subsistence: optimizing diets to minimize footprints. Science of the Total Environment 553: 120-127.
Gephart, J.A., E. Rovenskaya, U. Dieckmann, M.L. Pace, A. Brannstrom. 2016. Vulnerability to shocks in the global seafood trade network. Environmental Research Letters 11: 035008 (10 pages).
Carpenter, S.R., J.J. Cole, M.L. Pace, and G.M. Wilkinson. 2016. Response of plankton to nutrients, planktivory and terrestrial organic matter: a model analysis of whole-lake experiments. Ecology Letters 19: 230-239.
Gephart, J.A. and M. L. Pace. 2015. Structure and evolution of the global seafood trade network. Environmental Research Letters 10: 125014 (11 pages).
Pace, M.L., S.R. Carpenter, and J.J. Cole. 2015. With and without warning: managing ecosystems in a changing world. Frontiers in Ecology and Environment 13: 460-467.
Emery, K.A., G.M. Wilkinson, F.G. Ballard, and M.L. Pace. 2015. Erratum to: Use of allochthonous resources by zooplankton in reservoirs. Hydrobiologia 758: 271-273.
Emery, K.A., G.M. Wilkison, F.G. Ballard. 2015. Use of allochthonous resources by zooplankton in reservoirs. Hydrobiologia 758: 257-269.
Wilkinson, G.M., J.J. Cole, M.L. Pace, R.A. Johnson, and M.J. Kleinhaus. 2015. Physical and biological contributions to metalimnetic oxygen maxima. Limnology and Oceanography 60: 242-251.
Wilkinson, G.M., J.J. Cole, and M.L. Pace. 2015. Deuterium as a food source tracer: Sensitivity to environmental water, lipid content, and hydrogen exchange. Limnology and Oceanography Methods 13: 213-223.
Batt, R.D., S.R. Carpenter, J.J. Cole, M.L. Pace, R.A. Johnson, J.T. Kurtzweil, and G.M. Wilkinson. 2015. Altered energy flow in the food web of an experimentally darkened lake. Ecosphere Vol. 6, Article 33, 16 pages.
Hanson, P.C., M.L. Pace, S.R. Carpenter, J.J. Cole, E.H. Stanley. 2015. Integrating landscape carbon cycling: research needs for resolving organic carbon budgets in lakes. Ecosystems 18: 363-365.
Cline, T.J., D.A. Seekell, S.R. Carpenter, M.L. Pace, J.R. Hodgson, J.F. Kitchell, and B.C. Weidel. 2014. Early warnings of regime shifts: evaluation of spatial indicators from a whole-ecosystem experiment. Ecosphere Vol. 5, Article 102, 13 pages.
Seekell, D.A., J.-F. Lapierre, M.L. Pace, C. Gudasz, S. Sobek, and L.J. Tranvik. 2014. Regional-scale variation of dissolved organic carbon concentrations in Swedish lakes. Limnology and Oceanography 59: 1612-1620.
Strayer, D.L., J.J. Cole, S.E.G. Findlay, D.T. Fischer, J.A Gephart, H.M. Malcom, M.L. Pace, and E.J. Rosi-Marshall. 2014. Decadal-scale change in a large-river ecosystem. BioScience 64: 496-510.

Yang, C., G.M. Wilkinson, J.J. Cole, S.A. Macko, and M.L. Pace. 2014. Assigning hydrogen, carbon, and nitrogen isotope values for phytoplankton and terrestrial detritus in aquatic food web studies. Inland Waters 4: 233-242.

Wilkinson, G.M., S.R. Carpenter, J.J. Cole, and M.L. Pace 2014. Use of deep autochthonous resources by zooplankton: Results of a metalimnetic addition of ^{13}C to a small lake. Limnology and Oceanography 59: 986-996

Hondula, K.L., M.L. Pace, J.J. Cole, R.D. Batt. 2014. Hydrogen isotope discrimination in aquatic primary producers: implications for aquatic food web studies. Aquatic Sciences 76: 217-229.

Carpenter, S.R., W.A. Brock, J.J. Cole, and M.L. Pace. 2014. A new approach for rapid detection of nearby thresholds in ecosystem time series. Oikos 123: 290-297.

Hondula, K.L., and M.L. Pace. 2014. Macroalgal support of cultured hard clams in a low nitrogen coastal lagoon. Marine Ecology Progress Series 498: 187-201.

Gephart, J.A., M.L. Pace, P. D'Odorico. 2014. Freshwater savings from marine protein consumption. Environmental Research Letters 9: 014005 (8 pages).

Cardosa, S.J., A. Enrich-Prast, M.L. Pace, and F. Roland. 2014. Do models of organic carbon mineralization extrapolate to warmer tropical sediments? Limnology and Oceanography 59: 48-54.

Batt, R.D., S.R. Carpenter, J.J. Cole, M.L. Pace, and R.A. Johnson. 2013. Changes in ecosystem resilience detected in automated measures of ecosystem metabolism during a whole lake manipulation. Proceedings of the National Academy of Sciences 110: 17398-17403

Kaushal, S.S., G.E. Likens, R.M. Utz, M.L. Pace, M. Grese, and M.Yepsen. 2013. Increased river alkalization in the Eastern U.S. Environmental Science and Technology 47: 10302-10311.

McGlathery, K.J., M.A. Reidenbach, P. D'Odorico, S. Fagherazzi, M.L. Pace, and J.H. Porter. 2013. Nonlinear dynamics and alternative stable states in shallow coastal systems. Oceanography 26: 220-231.

Wilkinson, G.M, S.R. Carpenter, J.J. Cole, M.L. Pace and C. Yang. 2013. Terrestrial support of pelagic consumers: patterns and variability revealed by a multi-lake study. Freshwater Biology 58: 2037-2049.

Batt, R.D., W.A. Brock, S.R. Carpenter, J.J. Cole, M.L. Pace, and D.A. Seekell. 2013. Asymmetric response of early warning indicators of phytoplankton transition to and from cycles. Theoretical Ecology 6: 285-293.

Seekell, D.A. T.J. Cline, S.R. Carpenter, and M.L. Pace. 2013. Evidence of alternate attractors from a whole-ecosystem regime shift experiment. Theoretical Ecology 6: 385-394.

Solomon, C.T., D.A. Bruesewitz, D.C. Richardson, K.C. Rose, M.C. Van de Bogert, P.C. Hanson, T.K. Kratz, B. Larget, R. Adrian, B. Leroux Babin, C-Y. Chiu, D.P. Hamilton, E.E. Gaiser, S. Hendricks, V. Istvanovics, A. Laas, D.M. O'Donnell, M.L. Pace, E. Ryder, P.A. Staehr, T. Torgersen, M.J. Vanni, K.C. Weathers, and G. Zhu. 2013. Ecosystem respiration: Drivers of daily variabiltiy and background respiration in lakes around the globe. Limnology and Oceanography 58: 849-866.

Seekell, D.A., M.L. Pace, L.J. Tranvik, and C. Verpoorter. 2013. A fractal-based approach to lake size distributions. Geophysical Research Letters 40: 517-521.

Wilkinson, G.M., M.L. Pace, and J.J. Cole. 2013. Terrestrial dominance of organic matter in north temperate lakes. Global Biogeochemical Cycles 27: 1-9.

Pace, M.L. 2013. Trophic cascades. In: S.A. Levin (editor) Encyclopedia of Biodiversity, 2nd edition, Vol. 7, pp 258-263. Academic Press.

Pace, M.L., S.R. Carpenter, R.A. Johnson, J.T. Kurtzweil. 2013. Zooplankton provide early warnings of a regime shift in a whole lake manipulation. Limnology and Oceanography 58: 525-532.

Pace, M.L., and G.M. Lovett. 2013. Primary production: the foundation of ecosystems, pp 27-51. In: Fundamentals of Ecosystem Science, Edited by K.C. Weathers, D.L. Strayer and G.E. Likens. Elsevier.

Pace, M.L. 2013. The power and flexibility of the ecosystem concept, pp. 181-190. In: Fundamentals of Ecosystem Science, Edited by K.C. Weathers, D.L. Strayer and G.E. Likens. Elsevier

Brosseau, C.J., T.J. Cline, J.J. Cole, J.R. Hodgson, M.L. Pace, and B.C. Weidel. 2012. Do *Daphnia* use metalimnetic organic matter in a north temperate lake? An analysis of vertical migration. Inland Waters 2: 193-198

Van de Bogert, M.C., D.L. Bade, S.R. Carpenter, J.J. Cole, M.L. Pace, P.C. Hanson, and O.C. Langman. 2012. Spatial heterogeneity affects estimates of ecosystem metabolism in two northern lakes. Limnology and Oceanography 57:1689-1700.

Batt, R.D., S.R. Carpenter, J.J. Cole, M.L. Pace, T.J. Cline, R.A. Johnson, and D. A. Seekell. 2012. Resources supporting the food web of a naturally productive lake. Limnology and Oceanography 57: 1443-1452.

Seekell D.A., S.R. Carpenter, T.J. Cline, and M.L. Pace. 2012. Conditional heteroskedasticity forecasts regime shift in a whole-ecosystem experiment. Ecosystems 15: 741-747.

Canham, C.D., M.L. Pace, K.C. Weathers, E.W. McNeil, B.L. Bedford, L. Murphy, and S. Quinn. 2012. Nitrogen deposition and lake nitrogen concentrations: a regional analysis of terrestrial controls and aquatic linkages. Ecosphere 3: Article 66.

Pace, M.L, I. Reche, J.J. Cole, A. Fernández-Barbero, I.P. Mazuecos, and Y.T. Prairie. 2012. pH change induces shifts in the size and light absorption of dissolved organic matter. Biogeochemistry 108: 109-118.

Seekell, D.A., S.R. Carpenter, and M.L. Pace. 2011. Conditional heteroskedasticity as a leading indicator of ecological regime shifts. American Naturalist 178: 442-451.

Coloso, J.J., J.J. Cole, and M.L. Pace. 2011. Difficulty in discerning drivers of lake ecosystem metabolism with high frequency data. Ecosystems 14: 935-948.

Carlsson, N.O.L., H. Bustamante, D.L. Strayer, and M.L. Pace. 2011. Biotic resistance on the move: native predators structure invasive zebra mussel populations. Freshwater Biology 56: 1630-1637.

Seekell, D.A., and M.L. Pace. 2011. Climate change drives warming in the Hudson River Estuary, New York (USA). Journal of Environmental Monitoring 13: 2321-2327.

Seekell, D.A., P. D'Odorico, and M.L. Pace. 2011. Virtual water transfers unlikely to redress inequality in global water use. Environmental Research Letters 6: 024017 (6 pages).

Carpenter, S.R., J.J. Cole, M.L. Pace, R. Batt, W.A. Brock, T. Cline, J. Coloso, J.R. Hodgson, J.F. Kitchell, D.A. Seekell, L. Smith, and B. Weidel. 2011. Early

warnings of regime shifts: a whole-ecosystem experiment. Science 332: 1079-1082.

Solomon, C.T., S.R. Carpenter, M.K. Clayton, J.J. Cole, J.J. Coloso, M.L. Pace, M.J. Vander Zanden, B.C. Weidel. 2011. Terrestrial, benthic, and pelagic resource use in lakes: results from a three-isotope Bayesian mixing model. Ecology 92: 1115-1125.

Melack, J.M., A.C. Finzi, D. Siegel, S. MacIntyre, C.E. Nelson, A.K. Aufdenkampe, and M.L. Pace. 2011. New ways of seeing and measuring ecosystems advance understanding of biogeochemical cycles. Frontiers in Ecology and Environment 9: 37-43.

Cole, J.J., S.R. Carpenter, J. Kitchell, M.L. Pace, C. Solomon, and B. Weidel. 2011. Strong evidence for terrestrial support of zooplankton in small lakes based on stable isotopes of carbon, nitrogen, and hydrogen. Proceedings of the National Academy of Sciences USA 108:1975-1980.

Seekell D.A., and M.L. Pace. 2011. Does the Pareto distribution adequately describe the size-distribution of lakes? Limnology and Oceanography 56:350-356.

Coloso, J.J., J.J. Cole, and M.L.Pace. 2011. Short-term variation in thermal stratification complicates estimation of lake metabolism. Aquatic Sciences 73: 305-315.

De Vicente, I., E. Ortega-Retuerta, I.P-Mazuecos, M.L. Pace, J.J. Cole, and I. Reche. 2010. Variation in transparent exopolymer particles in relation to biological and chemical factors in two contrasting lake districts. Aquatic Sciences 72:443-453.

Kaushal, S.S., G. E. Likens, N. A. Jaworski, M.L. Pace, A M. Sides, D. Seekell, K.T. Belt, D.T. Secor, and R. Wingate. 2010. Rising stream and river temperatures in the United States. Frontiers in Ecology and Environment 10: 461-466.

Pace, M.L, D.L. Strayer, D. Fischer, and H.M. Malcom. 2010. Increased mortality of an invasive mussel associated with recovery of native zooplankton. Ecosphere Vol. 1, Article 3, 10 pages.

Pace, M.L., S.E. Hampton, K.E. Limburg, E.M. Bennett, E.M. Cook, A.E. Davis, J.M. Grove, K.Y. Kaneshiro, S.L. LaDeau, G.E. Likens, D. McKnight, D.C. Richardson, and D.L. Strayer. 2010. Communicating with the public: opportunities and rewards for individual ecologists. Frontiers in Ecology and Environment 8: 291-298.

Kaushal, S.S., M.L. Pace, P.M. Groffman, L.E. Band, K.T. Belt, P.M. Mayer, and C. Welty. 2010. Land us and climate variability amplify contaminant pulses. EOS 91: 221-228.

Cole, J.J., D.L. Bade, D. Bastviken, S.R. Carpenter, M.L. Pace, M. Van de Bogert. 2010. Multiple approaches to estimating air-water gas exchange in small lakes. Limnology and Oceanography Methods 8: 285-293.

Findlay, S., W.H. McDowell, D. Fischer, M.L. Pace, N. Caraco, S.S. Kaushal, and K.C. Weathers. 2010. Total carbon analysis may overestimate organic carbon content of fresh waters in the presence of dissolved inorganic carbon. Limnology and Oceanography Methods 8: 196-201.

Carpenter, S.R., J.J. Cole, J.F. Kitchell, and M.L. Pace. 2010. Trophic cascades in lakes: lessons and prospects, pp. 59-69. In: Trophic Cascades, Edited by J. Terbough and J.A. Estes. Island Press

Carpenter, S.R., W.A. Brock, J.J. Cole and M.L. Pace. 2009. Leading indicators of phytoplankton transitions caused by resource competition. Theoretical Ecology 2: 139-150.

Solomon, C.T., J.J. Cole, R. Doucette, M.L. Pace, N.D. Preston, L.E. Smith, B.C. Weidel. 2009. The influence of environmental water on the hydrogen stable isotope ratio in aquatic consumers. Oecologia 161: 313-324.

Canham, C.D., and M.L. Pace. 2009. A spatially-explicit, mass-balance analysis of watershed-scale controls on lake chemistry, pp 209-233 In M. Shili, S. Carstenn, and M. Nungesser (eds.), Real world ecology: large-scale and long-term case studies and methods. Springer-Verlag

Weidel, B.C., S.R. Carpenter, J.J. Cole, J. Hodgson, J.F Kitchell, M.L Pace, and C.T. Solomon. 2008. Carbon sources supporting fish growth in north temperate lakes. Aquatic Sciences 70: 446-458

Preston, N.D., S.R. Carpenter, J.J. Cole, and M.L. Pace. 2008. Airborne carbon deposition on a remote forested lake. Aquatic Sciences 70: 213-224.

Bastviken, D., J. J. Cole, M. L. Pace, and M. C. Van de Bogert. 2008. Fates of methane from different lake habitats: Connecting whole-lake budgets and CH_4 emissions, J. Geophysical Research 113: DOI:10.1029/2007JG000608..

Coloso, J.J., J.J. Cole, P.C. Hanson, M.L. Pace. 2008. Depth-integrated, continuous, estimates of metabolism in a clear water lake. Canadian Journal of Fisheries and Aquatic Science 65: 712-722.

Strayer, D.L., M.L. Pace, N.F. Caraco, J.J. Cole, and S. Findlay. 2008. Hydrology and grazing jointly control a large-river food web. Ecology 89:12-18

Solomon, C.T., S.R. Carpenter, J.J. Cole, and M.L. Pace. 2008. Support of benthic invertebrates by detrital resource and current autochthonous primary production: results from a whole lake ^{13}C addition. Freshwater Biology 53: 42-54.

del Giorgio, P.A. and M.L. Pace. 2008. Relative independence of dissolved organic carbon processing and transport in a large temperature river: the Hudson River as both pipe and reactor. Limnology and Oceanography 53: 185-197.

Carpenter, S.R., W.A. Brock, J.J. Cole, J.F. Kitchell, and M.L. Pace. 2008. Leading indicators of trophic cascades. Ecology Letters 11: 128-138.

Weidel, B.C., T. Ushikubo, S.R. Carpenter, N.T. Kita, J.J. Cole, J.F. Kitchell, M.L. Pace, and J.W. Valley. 2007. Diary of a buegill (*Lempomis macrochirus*): daily $\delta^{13}C$ and $\delta^{18}O$ records in otoliths by ion microprobe. Canadian Journal of Fisheries and Aquatic Sciences 64: 1641-1645.

Pace, M.L., S.R. Carpenter, J.J. Cole, J. Coloso., J.F. Kitchell, J.R. Hodgson, J.J. Middelburg, N.D. Preston, C.T. Solomon, B. Weidel. 2007. Does terrestrial organic carbon subsidize the plankton food web in a clear-water lake? Limnology and Oceanography 52: 2177-2189.

Van de Bogert, M.C., S.R. Carpenter, J.J. Cole, and M.L. Pace. 2007. Assessing benthic and pelagic metabolism using free water measurements. Limnology and Oceanography Methods 5:145-155.

Bade, D.L., S.R. Carpenter, J.J. Cole, M.L. Pace, E.S. Kritzberg, M.C. Van De Bogert, R.M. Cory, and D.M. McKnight. 2007. Sources and fates of dissolved organic carbon in lakes as determined by whole-lake carbon isotope additions. Biogeochemistry 84: 115-129.

Chapin, F.S. Chapin, III, G.M Woodwell, J.T. Randerson, E.B. Rastetter, G.M. Lovett, D.D. Baldocchi, D.A. Clark, M.E. Harmon, D.S. Schimel, R. Valentini, C. Wirth, J.D. Aber, J.J. Cole, M.L. Goulden, J.W. Harden, M. Heimann, R.W. Howarth, P.A. Matson, A.D.

McGuire, J.M. Melillo, H.A. Mooney, J.C. Neff, R.A. Houghton, M.L. Pace, M.G. Ryan, S.W. Running, O.E. Sala, W.H. Schlesinger, and E.-D. Schulze. 2006. Reconciling carbon-cycle concepts, terminology, and methods. Ecosystems 9: 1041-1050.

del Giorgio, P.A., M.L. Pace, D. Fischer. 2006. The relationship of bacterial growth efficiency to spatial variation in bacterial activity in the Hudson River. Aquatic Microbial Ecology 45: 55-67.

Strayer, D.L, V.T. Eviner, J.M. Jeschke, and M.L. Pace. 2006. Understanding the long-term effects of species invasions. Trends in Ecology and Evolution 21: 645-651.

Bade, D.L., M.L. Pace, J.J. Cole, S.R. Carpenter. 2006. Can algal photosynthetic inorganic carbon isotope fractionation be predicted in lakes using existing models? Aquatic Sciences 68: 142-153.

Kritzberg E.S., J.J. Cole, M.L. Pace, and W. Granéli. 2006. Bacterial growth on allochthonous carbon in humic and nutrient enriched lakes: Results from whole lake experiments. Ecosystems 9: 489-499.

Cole, J.J., M.L. Pace, S.R. Carpenter, M.C. Van De Bogert, J.F. Kitchell, and J.R. Hodgson. 2006. Differential support of lake food webs by three types of terrestrial carbon. Ecology Letters 9: 558-568.

Marino, R., R.W. Howarth, F. Chan, M.L. Pace, and G.E. Likens. 2006. Experimental tests of ecological constraints on planktonic nitrogen fixation in saline estuaries I. Nutrient and trophic controls. Marine Ecology Progress Series 309: 25-39.

Chan, F., R.L. Marino, R.W. Howarth, and M.L. Pace. 2006. Experimental tests of ecological constraints on planktonic nitrogen fixation in estuaries II. Mechanisms of trophic control. Marine Ecology Progress Series 309: 41-53.

Lovett, G.M., J.J. Cole, and M.L. Pace. 2006 Is net ecosystem production equal to carbon storage? Ecosystems 9: 152-155.

Pace, M.L. and D.J. Lonsdale. 2006. Ecology of the Hudson zooplankton community, pp. 217-229. In J.S. Levinton and J.R. Waldman (eds.), The Hudson River Estuary. Cambridge University Press

Maranger, R.J., C.D. Canham, M.L. Pace, M.J. Papaik. 2006. A spatially explicit model of iron loading to lakes. Limnology and Oceanography 51: 247-256.

Carpenter, S.R., J.J. Cole, M.L. Pace, M. Van de Bogert, D.L. Bade, D. Bastviken, C. Gille, J.R. Hodgson, J.F. Kitchell, and E.S. Kritzberg. 2005. Ecosystem subsidies: Terrestrial support of aquatic food webs from ^{13}C addition to contrasting lakes. Ecology 86: 2737-2750.

Strayer, D. L., E. A. Blair, N. F. Caraco, J. J. Cole, S. Findlay, W. C. Nieder, and M. L. Pace. 2005. Interactions between alien species and restoration of large-river ecosystems. Archiv für Hydrobiologie Supplementband 155: 133-145.

Maranger, R.J., Pace, M.L., P.A. del Giorgio, N.F. Caraco, and J.J. Cole. 2005. A spatial analysis of bacterial production, respiration, and carbon consumption in a river-estuarine ecosystem. Ecosystems 8: 318-330.

Kritzberg, E.S., J.J. Cole, M.L. Pace, and W. Granéli. 2005. Does autochthonous primary production drive variability in bacterial metabolism and growth efficiency in lakes dominated by terrestrial C inputs? Aquatic Microbial Ecology 38: 103-111.

Palmer, M.A., E.S. Bernhardt, E.A. Chornesky, S.L. Collins, A.P. Dobson, C.S. Duke, B.D. Gold, R. Jacobson, S. Kingsland, R. Kranz, M.J. Mappin, M.L. Martinez, F.

Micheli, J.L. Morse, M.L. Pace, M. Pascual, S. Palumbi, O. J. Reichman, A. Townsend, and M.G. Turner. 2005. Ecological science and sustainability for the 21st Century. Frontiers in Ecology and the Environment 3: 4-11.

Pace, M.L., and Y.T. Prairie. 2005. Respiration in lakes, pp. 103-121 In P.J. le. B. Williams and P.A. del Giorgio (eds.). Respiration in Aquatic Ecosystems. Oxford University Press.

Bastviken, D., J. Cole, M.L. Pace, and L. Tranvik. 2004. Methane emissions from lakes: Dependence on lake characteristics, two regional assessments, and a global estimate. Global Biogeochemical Cycles 18: GB4009 10.1029/2004GB002238.

Chan, F., M.L. Pace, R.W. Howarth, and R.M. Marino. 2004. Bloom formation in heterocystic nitrogen-fixing cyanobacteria: the dependence of colony size and zooplankton grazing. Limnology and Oceanography 49: 2171-2178.

Canham, C.D., M.L. Pace, M.J. Papaik, A.G.B. Primack, K.M. Roy, R.J. Maranger, R.P. Curran, and D.M. Spada. 2004. A spatially-explicit watershed-scale analysis of dissolved organic carbon in Adirondack lakes. Ecological Applications 14: 839-854.

Palmer, M., E. Bernhardt, E. Chornesky, S. Collins, A. Dobson, C. Duke, B. Gold, R. Jacobsen, S. Kingsland, R. Kranz, M. Mappin, M.L. Martinez, F. Micheli, J. Morse, M. Pace, M. Pascual, S. Palumbi, O.J. Reichman, A. Simons, A. Townsend, and M. Turner. 2004. Ecology for a crowded planet. Science 304: 1251-1252.

Kritzberg, E.S., J.J. Cole, M.L. Pace, W. Granéli, and D.L. Bade. 2004. Autochthonous versus allochthonous carbon sources to bacteria – Results from whole lake ^{13}C addition experiments. Limnology and Oceanography 49: 588-596.

Pace, M.L., P. del Giorgio, D. Fischer, R. Condon, and H. Malcom. 2004. Estimates of bacterial production using the leucine incorporation method are influenced by differences in protein retention of microcentrifuge tubes. Limnology and Oceanography Methods 2: 55-61.

Pace, M.L., J.J. Cole, S.R. Carpenter, J.F. Kitchell, J.R. Hodgson, M. Van de Bogert, D.L. Bade, E.S. Kritzberg, and D. Bastviken. 2004. Whole lake carbon-13 additions reveal terrestrial support of aquatic food webs. Nature 427: 240-243.

Pace, M.L. 2003. The utility of simple models in ecosystem science, pp. 49-62. In C.D. Canham, J.J. Cole, and W.D. Lauenroth (eds.), Models in ecosystem science. Princeton University Press.

Duarte, C.M., J. Amthor, D. DeAngelis, L.A. Joyce, R. Maranger, M.L. Pace, J. Pastor, S. Running. 2003. The limits to models in ecology, pp. 437-451. In C.D. Canham, J.J. Cole, and W.D. Lauenroth (eds.), Models in ecosystem science. Princeton University Press.

Houser, J.N., D.L. Bade, J.J. Cole, and M.L. Pace. 2003. The dual influence of dissolved organic carbon on hypolimnetic metabolism: organic substrate and photosynthetic inhibition. Biogeochemistry 64: 247-269.

Marino, R., F. Chan, R.W. Howarth, M. Pace, and G.E. Likens. 2002. Ecological and biogeochemical interactions constrain planktonic nitrogen fixation in estuaries. Ecosystems 5: 719-725.

Cole, J.J., S.R. Carpenter, J.F. Kitchell, and M.L. Pace. 2002. Pathways of organic C utilization in small lakes: Results from a whole-lake ^{13}C addition and coupled model. Limnology and Oceanography 47:1664-1675.

Reche, I., and M.L. Pace. 2002. Linking dynamics of dissolved organic carbon in a forested lake with environmental factors. Biogeochemistry 61: 21-36.

Pace, M.L. and J.J. Cole. 2002. Synchronous variation of dissolved organic carbon in lakes. Limnology and Oceanography 47: 333-342.

Carpenter, S.R., J.J. Cole, J.R. Hodgson, J.F. Kitchell, M.L. Pace, D. Bade, K.L. Cottingham, T.E. Essington, J.N. Houser, and D.E. Schindler. 2001. Trophic cascades, nutrients, and lake productivity: experimental enrichment of lakes with contrasting food webs. Ecological Monographs 71: 163-186.

Pace, M.L. 2001. Getting it right and wrong: Extrapolations across experimental scales, pp. 157-177. In R.H. Gardner, W.M. Kemp, V.S. Kennedy, and J.E. Peterson (eds.) Scaling relations in experimental ecology. Columbia University Press, New York.

Pace, M.L. 2001. Prediction and the aquatic sciences. Canadian Journal of Fisheries and Aquatic Science 58: 63-72.

Cole, J.J., M.L. Pace, S.R. Carpenter, and J.F. Kitchell. 2000. Persistence of net heterotrophy in lakes during nutrient addition and food web manipulation. Limnology and Oceanography 45: 1718-1730.

Reche, I., M.L. Pace, and J. J. Cole. 2000. Photobleaching of colored dissolved organic matter: modeled effects of solar wavebands in lake ecosystems. Ecosystems 3: 419-432.

Pace, M.L., and J.J. Cole. 2000. Effects of whole lake manipulations of nutrient loading and food web structure on planktonic respiration. Canadian Journal of Fisheries and Aquatic Science 57: 487-496.

Caraco, N.F., J.J. Cole, S.E.G. Findlay, D.T. Fischer, G.G. Lampman, M.L. Pace, D.L. Strayer. 2000. Dissolved oxygen declines in the Hudson River associated with the invasion of the zebra mussel (*Dreissena polymorpha*). Environmental Science and Technology 34: 1204-1210.

Post, D.M., M.L. Pace, N.G. Hairston, Jr. 2000. Ecosystem size determines food-chain length in lakes. Nature 405: 1047-1049.

Pace, M.L., J.J. Cole, S.R. Carpenter, and J.F. Kitchell. 1999. Trophic cascades revealed in diverse ecosystems. Trends in Ecology and Evolution 14: 483-488.

Carpenter, S.R., J.F. Kitchell, J.J. Cole, and M.L. Pace. 1999. Predicting responses of chlorophyll and primary production to changes in phosphorus, grazing, and dissolved organic carbon (Reply to comment by Nürnberg). Limnology and Oceanography 44: 1179-1182.

Strayer, D.L., N.F. Caraco, J.J. Cole, S. Findlay, and M.L. Pace. 1999. Transformation of freshwater ecosystems by bivalves: a case study in the Hudson River. BioScience 49: 19-27.

Limburg, K.E., M.L. Pace, K.K. Arend. 1999. Growth and recruitment of larval *Morone* in relation to food availability and temperature in the Hudson River. Fisheries Bulletin 97: 80-91.

Reche, I., M.L. Pace, and J.J. Cole. 1999. Relationship of trophic and chemical conditions to photobleaching of dissolved organic matter in lake ecosystems. Biogeochemistry 44: 259-280.

Williamson, C.E., D.P. Morris, M.L. Pace, and O.G. Olson. 1999. Dissolved organic carbon and nutrients as regulators of lake ecosystems: Resurrection of a more integrated paradigm. Limnology and Oceanography 44: 795-803.

Findlay, S., M. L. Pace, D.T. Fischer. 1998. Response of heterotrophic bacteria to the zebra mussel invasion of the tidal freshwater Hudson River. Microbial Ecology 36: 131-140.

Reche, I., M.L. Pace, and J.J. Cole. 1998. Interactions of photobleaching and inorganic nutrients in determining bacterial growth on colored dissolved organic carbon. Microbial Ecology 36: 270-280.

Caraco, N.F., G. Lampman, J.J. Cole, K.E. Limburg, M.L. Pace, D. Fischer. 1998. Microbial assimilation of DIN in a nitrogen rich estuary: Implication for food quality and isotope studies. Marine Ecology Progress Series 167: 59-71.

Pace, M.L. and P.M. Groffman. 1998. Introduction: needs and concerns in ecosystem science, pp. 1-6. In M.L. Pace and P.M. Groffman (eds.) Successes, Limitations, and Frontiers in Ecosystem Science. Springer-Verlag.

Groffman, P.M. and M.L. Pace. 1998. Synthesis: What kind of discipline is this, anyhow?, pp. 473-481. In M.L. Pace and P.M. Groffman (eds.) Successes, Limitations, and Frontiers in Ecosystem Science. Springer-Verlag.

Pace, M.L., J.J. Cole, and S.R. Carpenter. 1998. Trophic cascades and compensation: differential responses of microzooplankton in whole lake experiments. Ecology 79: 138-152.

Pace, M.L., S.E.G. Findlay, and D. Fischer. 1998. Effects of an invasive bivalve on the zooplankton community of the Hudson River. Freshwater Biology 39: 103-116.

Carpenter, S.R., J.J. Cole, J.F. Kitchell, and M.L. Pace. 1998. Impact of dissolved organic carbon, phosphorus and grazing on phytoplankton biomass and production in lakes. Limnology and Oceanography 43: 73-80.

Pace, M.L. and P.M. Groffman. 1998. Successes, limitation, and frontiers in ecosystem science: A report on the 7th Cary Conference. Ecosystems 1: 137-142.

Cole, J.J. and M.L. Pace. 1998. Hydrologic variability of small, northern lakes measured by the addition of tracers. Ecosystems 1: 310-320.

Carpenter, S.R., J.J. Cole, T.E. Essington, J.R. Hodgson, J.N. Houser, J.F. Kitchell, and M.L. Pace. 1998. Evaluating alternative explanations in ecosystem experiments. Ecosystems 1: 335-340.

Carpenter, S.R., and M.L. Pace. 1997. Dystrophy and eutrophy in lake ecosystems: implications of fluctuating inputs. Oikos 78: 3-14.

Caraco, N.F., J.J. Cole, P.A. Raymond, D.L. Strayer, M.L. Pace, S.E.G. Findlay, and D.T. Fischer. 1997. Zebra mussel invasion in a large, turbid, river: phytoplankton response to increased grazing. Ecology 78: 588-602.

Cottingham, K.L., S.E. Knight, S.R. Carpenter, J.J. Cole, M.L. Pace, and A.E. Wagner. 1997. Response of phytoplankton and bacteria to nutrients and zooplankton: a mesocosm experiment. Journal of Plankton Research 29: 995-1010.

Limburg, K.E., M.L. Pace, D. Fischer, and K.K. Arend. 1997. Consumption, selectivity, and use of zooplankton by larval striped bass and white perch in a seasonally pulsed estuary. Transactions of the American Fisheries Society 126: 607-621.

Moore, M.V., M.L. Pace, J.R. Mather, P.S. Murdoch, R.W. Howarth, C.L. Folt, C.Y. Chen, H.F. Hemond, P.A. Flebbe, and C.T. Driscoll. 1997. Potential effects of climate change on freshwater ecosystems of the New England/Mid-Atlantic region. Hydrological Processes 11: 925-947.

Schindler, D.E., S.R. Carpenter, J.J. Cole, J.F. Kitchell, and M.L. Pace. 1997. Influence of food web structure on carbon exchange between lakes and the atmosphere. Science 277: 248-251.

Pace, M.L, and J.J. Cole. 1996. Regulation of bacteria by resources and predation tested in whole lake experiments. Limnology and Oceanography 41: 1448-1460.

Felip, M., M.L. Pace, and J.J. Cole. 1996. Regulation of planktonic bacterial growth rates: the effects of temperature and resources. Microbial Ecology 31: 15-28.

Findlay, S., M.L. Pace, and D. Fischer. 1996. Spatial and temporal variability in the lower food web of the tidal freshwater Hudson River. Estuaries 19: 866-893.

Strayer, D.L., J. Powell, P. Ambrose, L.C. Smith, M.L. Pace, and D.T. Fischer. 1996. Arrival, spread, and early dynamics of a zebra mussel (*Dreissena polymorpha*) population in the Hudson River estuary. Canadian Journal of Fisheries and Aquatic Science 53: 1143-1149.

Christensen, D.L., S.R. Carpenter, J. J. Cole, K.L. Cottingham, S.E. Knight, J. P. LeBouton, D.E. Schindler, N. Voichick, J.J. Cole, and M.L. Pace. 1996. Ecosystem and pelagic community responses to a DOC perturbation in a temperate stratified lake. Limnology and Oceanography 41: 553-559.

Carpenter, S.R., D.L. Christensen, J.J. Cole, K.L. Cottingham, X. He, J.R. Hodgson, J.F. Kitchell, S.E. Knight, M.L. Pace, D.M. Post, D.E. Schnidler, N. Voichick. 1995. Biological control of eutrophication in lakes. Environmental Science and Technology 29: 784-785.

Cole, J.J., and M.L. Pace. 1995. Why measure bacterial production? A reply to the comment by Jahnke and Craven. Limnology and Oceanography 40: 441-444.

Cole, J.J., and M.L. Pace. 1995. Bacterial production in oxic and anoxic freshwaters. Limnology and Oceanography 40: 1019-1027.

Pace, M.L., S.R. Carpenter, P.A. Soranno. 1995. Population variability in experimental ecosystems, p. 61-71. In C. Jones and J. Lawton [eds.] Linking species and ecosystems. Chapman & Hall.

Baines, S.B., and M.L. Pace. 1994. Sinking fluxes along a trophic gradient: patterns and their implications for the fate of primary production. Canadian Journal of Fisheries and Aquatic Science 51: 25-36.

Baines, S.B., M.L. Pace, D.M. Karl. 1994. Why does the relationship between sinking flux and planktonic primary production differ between lakes and the ocean? Limnology and Oceanography 39: 213-226.

Pace, M.L., and J.J. Cole. 1994. Primary and bacterial production: are they coupled over depth? Journal of Plankton Research 16: 661-672.

Pace, M.L., and D. Vaqué. 1994. The importance of *Daphnia* in determining mortality rates of protozoans and rotifers in lake. Limnology and Oceanography 985-996.

Pace, M.L., and J.J. Cole. 1994. Comparative and experimental approaches to top-down and bottom-up regulation of bacteria. Microbial Ecology 28: 181-193.

Vézina, A., and M.L. Pace. 1994. An inverse model analysis of planktonic food webs in experimental lakes. Canadian Journal of Fisheries and Aquatic Science 51: 2034-2044.

Cyr, H., and M.L. Pace. 1993. Magnitude and patterns of herbivory in aquatic and terrestrial ecosystems. Nature 361: 148-150.

Cyr, H., and M.L. Pace. 1993. Allometric theory: Extrapolations from individuals to communities. Ecology 74: 1234-1245.

Pace, M.L., S.B. Baines, H. Cyr, and J.A. Downing. 1993. Relationships among early life stages of *Morone americana* and *Morone saxatilis* from long term monitoring of the Hudson River Estuary. Canadian Journal of Fisheries and Aquatic Science 50: 1976-1985.

Cole, J.J., M.L. Pace, N.F. Caraco, and G.S. Steinhart. 1993. Bacterial biomass and cell size distributions in lakes: more and larger cells in anoxic waters. Limnology and Oceanography 38: 1627-1632.

Pace, M.L. 1993. Forecasting ecological responses to global change: The need for large-scale comparative studies, p. 356-363. In P.M. Karieva, J.G. Kingsolver, and R.B. Huey [eds.] Biotic interactions and global change. Sinauer.

Pace, M.L. 1993. Heterotrophic microbial processes, p. 252-277. In S.R. Carpenter and J.F. Kitchell [eds.] The trophic cascade in lake ecosystems. Cambridge University Press.

Cole, J.J., B. Peierls, N.F. Caraco, and M.L. Pace. 1993. Nitrogen loading of rivers as a human-driven process, p. 141-157. In M.J. McDonnell and S.T.A. Pickett [eds.] Humans as components of ecosystems. Springer-Verlag.

Vaqué, D., and M.L. Pace. 1992. Grazing on bacteria by flagellates and cladocerans in lakes of contrasting food web structure. Journal of Plankton Research 14: 307-321.

Cyr, H., and M.L. Pace. 1992. Grazing by zooplankton and its relationship to community structure. Canadian Journal of Fisheries and Aquatic Science 49: 1455-1465.

Cyr, H., J.A. Downing, S. Lalonde, S. Baines, and M.L. Pace. 1992. Sampling larval fish populations: choice of sample number and size. Transactions of the American Fisheries Society 121: 356-368.

Pace, M.L., S.E.G. Findlay, and D. Lints. 1992. Zooplankton in advective environments: The Hudson River community and a comparative analysis. Canadian Journal of Fisheries and Aquatic Science 49: 1060-1069.

Findlay, S.E.G., M.L. Pace, and D. Lints. 1992. Bacterial metabolism of organic carbon in the tidal freshwater Hudson Estuary. Marine Ecology Progress Series 89: 147-153.

Vaqué, D., M.L. Pace, S.E.G. Findlay, and D. Lints. 1992. Fate of bacterial production in a heterotrophic ecosystem: Grazing by protists and metazoans in the Hudson Estuary. Marine Ecology Progress Series 89: 155-163.

Lints, D., S.E.G. Findlay, and M.L. Pace. 1992. Biomass and energetics of consumers the lower food web of the Hudson River, p. 446-457. In C.L. Smith [ed.] Estuarine research in the 1980s. SUNY Press.

Pace, M.L., S.E.G. Findlay, D. Lints. 1991. Variance in zooplankton samples: evaluation of a predictive model. Canadian Journal of Fisheries and Aquatic Science 48: 146-151.

Pace, M.L. 1991. Comparative and experimental approaches to the study of microbial food webs. Journal of Protozoology 38: 87-92.

Peierls, B., N.F. Caraco, M.L. Pace, J.J. Cole. 1991. River nitrogen export linked to human population density. Nature 350: 386-387.

Findlay, S.E.G., M. L. Pace, D. Lints, J.J. Cole, N.F. Caraco, and B. Peierls. 1991. Weak coupling of bacterial and algal production in a heterotrophic ecosystem, the Hudson Estuary. Limnology and Oceanography 36: 268-278.

Findlay, S.E.G., M. L. Pace, and D. Lints. 1991. Variability and transport of suspended sediment, particulate and dissolved organic carbon in the tidal freshwater Hudson River. Biogeochemistry 12: 35-55.

Pace, M.L., and E. Funke. 1991. Regulation of planktonic microbial communities by nutrients and herbivores. Ecology 72: 72: 904-914.

Baines, S.B., and M.L. Pace. 1991. The production of dissolved organic matter by phytoplankton and its importance to bacteria: patterns across marine and freshwater systems. Limnology and Oceanography 36: 1078-1090.

Pace, M.L. 1991. Summary of the third Cary Conference on comparative analyses of ecosystems, p. 361-368. In J.J. Cole, G.M. Lovett, and S.E.G. Findlay [eds.] Comparative analysis of ecosystems: Patterns, mechanisms, and theories. Springer-Verlag.

Pace, M.L., G.B. McManus, and S.E.G. Findlay. 1990. Plankton community structure determines the fate of bacterial production in a temperate lake. Limnology and Oceanography 35: 795-808.

Pernie, G.L., D. Scavia, M.L. Pace, and H.J. Carrick. 1990. Micrograzer impact and substrate limitation of bacterioplankton in Lake Michigan. Canadian Journal of Fisheries and Aquatic Science 47: 1836-1841.

Pace, M.L. and J.J. Cole. 1989. What questions, systems, or phenomena warrant long-term ecological study? p. 183-185. In G.E. Likens [ed.] Long-term studies in ecology: Approaches and alternatives. Springer-Verlag.

Pace, M.L. 1988. Bacterial mortality and the fate of bacterial production. Hydrobiologia 159: 41-49.

Porter, K.G., H. Paerl, R. Hodson, M. Pace, J. Priscu, B. Riemann, D. Scavia, and J. Stockner. 1988. Microbial interactions, p. 209-227. In S.R. Carpenter [ed.] Complex interactions in lake communities. Springer-Verlag.

Cole, J.J., S.E.G. Findlay, and M.L. Pace. 1988. Bacterial production in fresh and saltwater ecosystems: a cross-system overview. Marine Ecology Progress Series 43: 1-10.

Taylor, G.T., and M.L. Pace. 1987. Validity of eukaryote inhibitors for assessing production and grazing mortality of marine picoplankton. Applied and Environmental Microbiology 53: 119-128.

Pace, M.L., G.A. Knauer, D.M. Karl, and J.H. Martin. 1987. Primary production, new production and vertical flux in the eastern Pacific Ocean. Nature 325: 803-804.

Pace, M.L., and M.D. Bailiff. 1987. Evaluation of a fluorescent microsphere technique for measuring grazing rates of phagotrophic microorganisms. Marine Ecology Progress Series 40: 185-193.
Pace, M.L. 1986. An empirical analysis of zooplankton community structure. Limnology and Oceanography 31: 45-55.
Taylor, G.T., D.M. Karl, and M.L. Pace. 1986. Impact of bacteria and zooflagellates on the composition of sinking particles: an *in situ* experiment. Marine Ecology Progress Series 29: 141-155.
Porter, K.G., B.F. Sherr, E.B. Sherr, M.L. Pace, and R.W. Sanders. 1985. Protozoans in planktonic food webs. Journal of Protozoology 32: 409-414.
Pace, M.L., J.E. Glasser, and L.R. Pomeroy. 1984. A simulation analysis of continental shelf food webs. Marine Biology 82: 47-63.
Pace, M.L., K.G. Porter, and Y.S. Feig. 1984. Life history variation within a parthenogenetic population of *Daphnia parvula* (*Crustacea*, *Cladocera*). Oecologia 63: 43-51.
Pace, M.L. 1984. Zooplankton community structure but not biomass influences the phosphorus-chlorophyll relationship. Canadian Journal of Fisheries and Aquatic Science 41: 1089-1096.
Orcutt, Jr., J.D., and M.L. Pace. 1984. Seasonal dynamics of rotifer and crustacean zooplankton populations in a eutrophic monomictic lake with a note on rotifer sampling techniques. Hydrobiologia 119: 73-80.
Pace, M.L., K.G. Porter, and Y.S. Feig. 1983. Species- and age-specific differences in bacterial resource utilization by two co-occurring cladocerans. Ecology 64: 1145-1156.
Pace, M.L. 1982. Planktonic ciliates: their distribution, abundance, and relationship to microbial resources in a monomictic lake. Canadian Journal of Fisheries and Aquatic Science 39: 1106-1116.
Pace, M.L., and J.D. Orcutt, Jr. 1981. The relative importance of protozoans, rotifers, and crustaceans in a freshwater zooplankton community. Limnology and Oceanography 26: 822-830.
Montague, C.L., S.M. Bunker, E.B. Haines, M.L. Pace, R.L. Wetzel. 1981. Aquatic macroconsumers, p. 69-85. In L.R. Pomeroy and R.G. Wiegert [eds.] Ecology of a Salt Marsh. Springer Verlag.
Pace, M.L., S. Shimmel, and W.M. Darley. 1979. The effect of grazing by a gastropod, *Nassarius obsoletus*, on the benthic microbial community of a salt marsh mudflat. Estuarine and Coastal Marine Science 9: 121-134.
Porter, K.G., M.L. Pace, and J.F. Battey. 1979. Ciliate protozoans as links in freshwater planktonic food chains. Nature 277: 563-565.

Other Publications

Pace, M. L., S. R. Carpenter, and G. E. Likens. Jonathan J. Cole (1953-2023). 2023. Limnology and Oceanography Bulletin https://doi.org/10.1002/lob.10611
Besterman, A. F., and M. L. Pace. 2021. Effects of invasive seaweed depend on underlying physical habitat structure. Bulletin of the Ecological Society of America 103: e01944 htpps://doi.org/10.1002/bes2.1944

Pace, M.L. 2020. Message from the President: State of ASLO, Thanks, Have Fun, Postscript. Limnology and Oceanography Bulleting 29: 48-49.
Pace, M.L. 2020. Message from the President: Scientific overhead. Limnology and Oceanography Bulletin 29: 20.
Pace, M.L. 2019. Message from the President: All watched over. Limnology and Oceanography Bulletin 28: 139.
Pace, M.L. 2019. Message from the President: A special place for musing. Limnology and Oceanography Bulletin 28: 92-93.
Pace, M.L. 2019. Message from the President: Reflections from Puerto Rico. Limnology and Oceanography Bulletin 28: 67-68.
Pace, M.L. 2019. Message from the President: OA world. Limnology and Oceanography Bulletin 28: 31-32.
Pace, M.L. 2018. Message from the President: From ISLO to LOREX. Limnology and Oceanography Bulletin 27: 129-130.
Pace, M.L. 2018. Message from the President: Thanks and a deep dive into membership. Limnology and Oceanography Bulletin 27: 91-92.
Pace, M.L. 2018. The hard and the soft of freshwater. Post to Global Water Blog. https://blogs.darden.virginia.edu/globalwater/2018/02/15/the-hard-and-soft-of-freshwater/
Pace, M.L. and D. A. Seekell. 2009. The Hudson River is warming. The Newsletter of the Hudson River Environmental Society Vol. 38(1)
Pace, M.L. 2007, July 22. Ecofocus: Alien species can spur rapid change. Poughkeepsie Journal.
Pace, M.L. and G.E. Likens. 2006, March 2. Hiding scientific findings unfair to public. Poughkeepsie Journal.
Pace, M. L. 2004, June 6. Land plants fuel water life: Nutrients from shoreline leaves found throughout food chain. Poughkeepsie Journal.
NRC (National Research Council). 2004. Threatened and Endangered Fishes of the Klamath Basin: Causes of Decline and Strategies for Recovery. Washington, D.C. National Academy Press.
NRC (National Research Council). 2002. Scientific evaluation of biological opinions on endangered and threatened fishes in the Klamath River Basin. Washington, D.C. National Academy Press.
Kitchell, J.F., and M.L. Pace. 1998. Understanding human modifications of the ocean: Opportunities for large-scale experiments. www.joss.ucar.edu/joss_psg/project/oce_workshop/oeurve/kitchell_pace.html
del Giorgio, P., Y. Prairie, M. Pace. 1997. Robert H. Peters honored with ASLO's citation for scientific excellence. American Society of Limnology and Oceanography Bulletin 6: 23-25.
Pace, M.L. and P. del Giorgio. 1996. In memorium Dr. Robert H. Peters. Marine Ecology Progress Series 142: 1.
Pace, M.L. 1996, September 26. EcoNotes: Everything is not connected to everything else. Millbrook Round Table.
Pace, M.L. 1992. Review of The Uses of Ecology - Lake Washington and Beyond by W.T. Edmondson. National Geographic Research and Exploration. 8: 126-127.

Pickett, S.T.A., B.E. Hall, and M.L. Pace. 1991. Strategy and checklist for effective scientific talks. Bulletin of the Ecological Society of America 72: 8-11.

Pace, M.L. 1988. Review of A Eutrophic Lake: Lake Mendota, Wisconsin by Thomas Brock. American Scientist 76: 86-87.