

William Berry Lyons

Curriculum Vita

Education	Brown University	Geology	A.B.	1969
	University of Connecticut	Chemical Oceanography	M.Sc.	1972
	University of Connecticut	Chemical Oceanography	Ph.D.	1979

Research Interests

Environmental geochemistry. Geochemistry of streams and rivers. The geochemistry of lakes and lacustrine sediments. Trace metal dynamics and speciation. Global change, particularly in arid, semi-arid and polar regions. Isotope geochemistry as it relates to tracers of hydrologic and low-temperature geologic processes. Biogeochemistry in the investigation of landscape evolution and biogeography.

Memberships

- American Geophysical Union
- The Geochemical Society
- The American Society of Limnology & Oceanography
- Geological Society of America
- International Assoc. of Geochemistry & Cosmochemistry
- Phi Kappa Phi
- Sigma Xi
- American Chemical Society
- American Assoc. for the Advancement of Science
- American Institute of Biological Sciences
- Ecological Society of America

Awards/Honors

- 2013-14 The International Association of Geochemistry's (IAGC) Ingerson International Lecturer
- 2012 University Distinguished Undergraduate Research Mentor presented by Undergraduate Research Office, The Ohio State University
- 2012 Moore Lecturer, Dept. of Environmental Science, University of Virginia
- 2011 Geological Society of America's Limnogeology Division's Israel C. Russell Award winner
- 2009 The Geochemical Society's F.E. Ingerson Lecturer at annual Geological Society of America Meeting
- 2008 Nominated for Distinguished Undergraduate Research Mentor of the Year Award, The Ohio State University
- 2008 Distinguished Teaching Award, School of Earth Sciences, The Ohio State University
- 2007 Lowell Thomas Award Winner, The Explorers Club
- 2006-11 Distinguished Professor of Mathematical and Physical Sciences, The Ohio State University
- 2006 Recognized for Involvement in International Engagement at OSU
- 2005 Distinguished Teaching Award, Department of Geological Sciences, The Ohio State University
- 2005 Fellow, Geological Society of America
- 2003 Fellow, American Association for the Advancement of Science
- 2003 Recognition of commitment and service to ACS's Project SEED
- 2000 Fellow, American Geophysical Union
- 1994 Elected Member—Phi Kappa Phi

- 1992 Fellow, The Explorers Club
- 1989-90 National Academy of Sciences Visiting Scholar, Yugoslavia, 1989-1990
- 1982 Antarctic Service Medal (United States Congress)

Experience

- Senior Research Scientist, Byrd Polar Research Center, The Ohio State University, 2009 - present
- Director, School of Earth Sciences, The Ohio State University, 2009 - present
- Professor, School of Earth Sciences, The Ohio State University, 1999-present
- Director, Byrd Polar Research Center, The Ohio State University, 1999-2009
- Director, Climate, Water and Carbon Advisory Board, The Ohio State University, 2006 – 2008
- Benjamin Meaker Visiting Professor, School of Geographical Sciences, University of Bristol, May, 2009
- Affiliated Faculty Member, Center for Latin American Studies, 2007 – present
- Representative of OSU to Arctic Research Consortium (ARCUS), 2002 - present
- Affiliated Faculty Member, John Glenn School of Public Affairs, The Ohio State University, 2000-present
- Scientist/PI—McMurdo Dry Valley Long-Term Ecological Research (LTER) Field Team, 1993-present
- Lead PI—McMurdo Dry Valley Long Term Ecological Research (LTER) Site, 1997-2008
- Visiting Scientist - Stone Laboratory, Lake Erie, 2005
- Adjunct Professor, Department of Geological Sciences, University of Alabama, 2000-2002
- Adjunct Senior Marine Scientist, Dauphin Island Sea Lab, University of Alabama, 1998-2000
- Acting Chair, Department of Geology, University of Alabama, 1998-1999
- Loper Chair of Environmental Geology and Professor, Department of Geology, University of Alabama, 1993-1999
- Adjunct Professor, Hydrologic Sciences Program, University of Nevada, Reno, 1993-1999
- Professor, Department of Geological Sciences, University of Nevada, Reno, 1990-1993
- Director, Hydrology/Hydrogeology Program, University of Nevada, Reno, 1990-1993
- Adjunct Associate Professor, Department of Earth Sciences, University of New Hampshire, 1990-1993
- Coordinator, EOS Clean Laboratory Facilities, University of New Hampshire, 1989-1990
- Acting Director, Glacier Research Group, EOS, University of New Hampshire, 1989-1990
- Director, Biogeochemical Systems Center, EOS, University of New Hampshire, 1988-1989
- Visiting Research Fellow, Research School of Earth Sciences, Australian National University and Baas Becking Geobiology Laboratory, Bureau of Mineral Resources, Canberra, Australia, 1986-1987
- ASEE Summer Fellow, Atmospheric Sciences Division, NASA Langley Research Center, Summer 1986
- Coordinator, Geochemical Systems Laboratory, University of New Hampshire, 1986
- Member, Research Council, University of New Hampshire, 1985-1988
- Associate Professor, Department of Earth Sciences, University of New Hampshire, 1985-1990
- Member, Faculty of Institute for the Study of Earth, Oceans and Space, (EOS), University of New Hampshire, 1985-1990
- Member, University of New Hampshire Marine Program Faculty, 1984-1987

- Adjunct Faculty Member, Department of Oceanography, University of Maine, 1981-1990
- Coordinator, Ocean Process Analysis Laboratory (OPAL), University of New Hampshire, 1981-1983
- Assistant Professor, Department of Earth Sciences, University of New Hampshire, 1980-1985
- Part-time Faculty, University of Southern Maine, 1980, 1982-1983
- Research Scientist, Department of Earth Sciences, University of New Hampshire, 1979-1980
- Visiting Faculty, Shoals Marine Laboratory, Cornell University, Summer, 1979, 1982, 1983
- Post-Doctoral Research Associate, Department of Earth Sciences and Chemistry, University of New Hampshire, 1976-1979
- Research Staff Member, Department of Oceanography, University College, Galway, Ireland, 1973
- Graduate Research Assistant, Department of Geology & Geophysics, University of Connecticut, 1970-1972, 1974-1976
- Oceanographic Technician, U.S. Naval Oceanographic Office, 1969-1970

Courses Taught

Introductory Oceanography	Environmental Geochemistry	Geothermal Geochemistry – Graduate Seminar
Historical Geology	Aqueous Geochemistry	Isotope Hydrology
Environmental Geology	Geochemical Cycles	Continental Fluids – Graduate Seminar
Low Temperature Geochemistry	Advanced Aqueous Geochemistry	Introduction to Freshwater Science
Climatic Change	Organic Geochemistry	Sedimentation
Climate Change and Soil Carbon Dynamics	Freshman Seminar – Polar Science: An Intro to the Earth’s Cold Regions	Chemical Oceanography
Introductory Geochemistry	Trace Metal Environmental Geochemistry – Graduate Seminar	Freshman Seminar – The Science of Baseball and Softball
Geomorphology	Non-traditional Stable Isotope Tracers	Scientific Writing

Professional Activities

Service – Professional/University

- Member, Outside Review Team, Hydrologic Sciences Graduate Program, University of Nevada, Reno 2013
- Member, International Steering Committee, SCAR Antarctic and Southern Ocean Science Horizon Scan, 2013-2014
- Co-Convener, Memorial Session for Dr. Robert Warton, Jr., Annual ASLO meeting, 2013
- Member, Implementation Committee, College of Arts and Sciences Internationalization of the Curriculum, 2012-2013
- Invitation to review Working Group II IPCC 5th Assessment Report
- Chief Officer, Geosciences Standing Science Committee, SCAR, 2012-2016
- Member, University Senate Committee on Faculty Compensation and Benefits, 2012-2015
- Member of Panel, “Faculty Perspectives in Undergraduate Research,” OSU Undergraduate Research Week, 2012

- Member, International Science Panel of New Zealand Antarctic Research Institute, 2012-present
- Convener, Ecosystem Change in Polar and Alpine Environments, ECO-Summit, 4th International meeting – Ecological Sustainability, 2012
- Member, Outside Review Team, Dept. of Earth Sciences, Univ. of Maine, Orono, April, 2012
- Member, Steering Group on Deglaciation, NASA Cryosphere and Astrobiology programs, March, 2012-present
- Judge, Student presentations at North Central GSA meeting, April 2012
- Lead Convener, Multi-Disciplinary Sciences Session, Ecosystem Change in Antarctica, The Importance of Long-Term Data, SCAR Science meeting, 2012
- Invited Discussant, Antarctic Conservation Workshop: Science, Policy and Effective Environmental Management, 2012
- Co-Leader of Urban Geochemistry Working Group, International Association of Geochemistry (IAGC), 2012-present
- Invited Speaker, Society for Conservation Biology, Think-Tank Implications of Environmental Change to Antarctic Marine Ecosystem, 2011
- Member, Executive Committee, Board of Natural Resources, APLU, 2011-present
- Member, Board of Natural Resources, Ecology Section, Assoc. Public Land Grant Universities, 2011-present
- Member, Environmental Sciences Graduate Program Committee, 2011-14
- Board Member, OSU Local Chapter, Sigma Xi, 2011-2012
- Member, University (OSU) Task Force on Environmental Sciences, 2008 - present
- Invited Member, U.S. Delegation, Antarctic Treaty Consultative Meetings, Montevideo, Uruguay, May 2010 (unable to attend)
- Facilitator, SCAR-COMNAP Active Group, 2010
- Member, SCAR Capacity Building, Education and Training Committee, 2009 - present
- Member, NAS/NRC Committee, *National Security Implications of Climate Change on U.S. Naval Forces*, 2009-2010
- Member, NAS/NRC Committee, *Challenges and Opportunities in the Hydrologic Sciences*, 2009-2012
- Member, PolarTREC Selection Committee, 2009-2010
- Member, Scientific Board, International Geosciences Program, 2008-2011
- Participant, Buckeyes Beyond Ohio Program, 2008 – 2010
- Treasurer, International Association of Geochemistry (IAGC), 2007-present
- The Ohio State University Senate Committee on Honorary Degrees, 2006-2011
- Participant, U.S. Department of State's Office of International Information Programs, U.S. Speaker and Specialist program: Uruguay and Chile – Antarctic Research, 2009
- Member, U.S. Delegation, Antarctic Treaty Consultative Meetings, Baltimore, MD, April 2009
- Reviewer, Applied Earth Science Program, IUPUI, 2009
- Member, Review Team of Dept. of Environmental Sciences, University of Virginia, April 2009
- Reviewer of SCAR's EBA program, 2008
- Chair, Graduate Program Committee, School of Earth Sciences, The Ohio State University, 2007-2009
- Member, Curriculum Committee, Environmental Sciences Graduate Program, The Ohio State University, 2007-2008
- Visiting Scholar – North American short term program, Royal Society, Keele University and University of Bristol, 2007
- Member, Advisory Board, OSU's Institute for Energy and the Environment, 2007-2008

- Member, CUAHSI (Consortium of Universities for Advancement of Hydrological Sciences), Audit Committee, 2006
- Initiating Member, Scientific Committee on Antarctic Research (SCAR), Scientific Action Group: Pan-Antarctic Observations Network (PAN-TOS), 2006–2009
- Initiating Member and Member of Steering Committee, SCAR Scientific Action Group: Environment Contamination in Antarctica (ECA), 2006-present
- University of Auburn, Outside Evaluator for the Department of Geology and Geography's Ph.D. program in Environmental Geosciences, 2006
- Member, LTER Network's Executive Board, 2006-2009
- One of three U.S. Representatives on Geosciences Standing Scientific Group - SCAR, 2006-2016
- Chair - U.S. Subglacial Antarctic Lake Environments (SALE), Communications/Public Relationship Committee, 2005 – 2008
- Member - U.S. SALE Program Executive Committee, 2005 – 2008
- Member - International Association of Geochemistry (IAGC) Publications Committee, 2004-2007
- Chair – National Academy of Sciences Study Committee, Designing an Arctic Observing Network, 2004-2006
- Elected Member - of Council of IAGC, 2004-2007
- Member, OSU President's AAAS Fellow Committee 2004-2006
- Alternate Representative - Standing Committee on Hydrologic Observatories, CUAHSI for The Ohio State University, 2002-2010
- Member - Science Advisory Committee for University of Colorado's Institute for Arctic and Alpine Research, 2001-2008
- Member, OSU Representative, Ecology Section, National Association of State Universities and Land Grant Colleges (NASULGC), 2001-present
- Member—NSF's Teachers Experiencing Antarctica and the Arctic (TEA) Advisory Board, 1999-2001
- Member—NSF LTER Steering Committee, 1997-2006
- Member - Proposal Review Panel, Cold Climate/Central Response Research-NOAA, 2006
- Member – NSF Office of Polar Programs OAC Subcommittee on Icebreakers and Resupply, 2005
- Member - Review Team of SCAR/COMNAP's Joint Committee on Antarctic Data Management, 2005
- Member - National Research Council's Polar Research Board, 2002-2005
- Member - Conservation Committee, The Explorer's Club, 2002-2003
- Member - Review Team, School of Life and Environmental Sciences, University of Nottingham, England, 2002
- Member - Fellows Nominating Committee, Hydrology Section, AGU, 2002-2005
- Chair - Nominating Committee for ARCUS Board, 2002
- Chair - Review Team, Graduate Program in Geology, IUPUI, 2002
- Invited Participant - NSF Antarctic Drilling (ANDRILL) Workshop, Oxford, England, April 2001
- Co-Convener - Workshop on Victoria Land Latitudinal Gradient, NSF-OPP supported, April 2001
- Member - Hydrogeology Division of GSA's Distinguished Service Award selection committee, 2001-2003
- Invited Participant—SCAR-Sponsored Workshop, Lake Vostok, September 1999
- Invited Participant-NSF-Sponsored Workshop, "Winter over Science in the McMurdo Region," 1999
- Member—U.S. EPA's Computing Technology for Ecosystem Modeling Review Panel, 1999
- Co-Convener—Special Session, "Environmental Tracers of Biogeochemical Processes in Aquatic Systems," Spring AGU, 1999
- AWRA Representative to Section Committee of AAAS, 1999-2003
- Delegate - University of Alabama NASULGC Section on Ecology, 1998-1999

- Invited Participant—NSF-Sponsored Workshop, "Why Lake Vostok?" 1998
- Convener—LTER Working Group on "Chemical Weathering Rates and Landscape Development," 1998-2000
- Member—Panel for GSA's Donath (Young Scientist) Award, 1998-2001
- Invited Participant—NSF-Sponsored Workshop, "Impact of Research on the McMurdo Dry Valley Lakes," 1998
- Judge—2nd Annual ARCUS Award for Arctic Research Excellence, 1998
- Member—NSF Science and Technology Centers' Review Panel, 1998
- Contributor—ARCSS Science Plan, "Toward Prediction of the Arctic System," 1998
- Member—U.S. EPA's Environmental Biology Review Panel, 1998
- Peer Review Team of U.S. EPA Technical Report, "25 Years of Progress in Water Quality: The 1972 Clean Water Act's Construction Grants Program"
- National Representative—International ANTIME (Antarctic Ice Margin) Workshop, Hobart, Tasmania, 1997
- Invited Member—NASA Solid Earth Natural Hazards Panel, 1997
- Invited Participant—EPA-NASA Workshop on Water Monitoring, Remote Sensing and Advanced Technologies, December 1996
- Member—NOAA's National Undersea Research Program Peer Review Panel, 1996
- National Research Council Visiting Scholar—Kyrgyzstan, 1996
- Member—AGU's Snow, Ice and Permafrost Committee, 1996-2000
- Organizing Committee—International Symposium/Workshop, Polar Desert Ecosystems, Christchurch, New Zealand, July 1996
- Member—U.S. EPA Fate and Mobility Peer Review Panel, 1996
- Member—U.S. Steering Committee, International Trans-Antarctica Scientific Expedition (ITASE), 1996-1998
- Member—Panel for the O.E. Meinzer Award, GSA-Hydrogeology Division, 1996-1999
- Member—Technical Review Panel, C.A. and A.M. Lindbergh Foundation, 1996, 1998, 1999 & 2000
- Chair—ARCSS Advisory Committee, 1996-97
- Member—Steering Committee, University of Alabama, Center for Freshwater Studies, 1995-1999
- Member—Science Steering Committee, ARCSS, Human Dimensions, 1995-1997
- Invited Participant—ARCSS, Human Dimensions Workshop, October 1995
- Special Session Organizer—Annual ASLO Meeting, June 1995, The Geochemistry of Saline Lakes
- Field Trip Leader—Great Basin lakes field trip, Annual ASLO Meeting, June 1995
- Member—NSF's Arctic System Science (ARCSS) Advisory Committee, 1995-1996
- Member—Joint EPA/NSF Water and Watersheds Proposal Review Panel, 1995
- Invited Participant—NSF Funded Workshop, CO₂ in Aquatic Systems, Woods Hole, Mass., February 1995
- Member—U.S. Environmental Protection Agency (EPA) Office of Exploratory Research Chemistry and Physics of Water and Soils Grants Program Panel, 1995
- Member—Geology and Public Policy Committee, Geological Society of America, 1995-1997
- Member—NSF Hydrologic Sciences Program, Proposal Review Panel, 1994-1996
- Consultant—Playa Lake-Groundwater Interactions, Carlsbad Environmental Monitoring and Research Center, New Mexico State University, 1993
- Member—Organizing Committee, Cord.-Rocky Mountain GSA Meeting, May 1993
- Co-Host—Paleoclimatology of the Great Basin, Reno, May 1993, Sponsored by USGS/DRI/UNR
- Co-Chair—Technical Sessions, Nevada Water Resources Assoc. Meeting, 1993
- Member—Education Committee, AWRA, 1993-1995

- Chair—American Water Resources Association (AWRA) - Water Quality Working Group - 1993-1996
- Invited Participant—NATO Advanced Workshop: Ice Core Studies of Global Biogeochemical Cycles, 1993
- Fellowship Coordinator—University of Nevada-Reno for DOE's Civilian Radioactive Waste Management Fellowship Program, 1992-1993
- Member—International Association of Volcanism and Chemistry of the Earth's Atmosphere Task Group on Volcanism and the Earth's Atmosphere, 1992-1995
- Member—International Commission on Snow and Ice (ICSI) Working Group for Snow/Atmosphere Chemical Exchange, 1991-1993
- Member—Nevada Groundwater Protection Task Force, 1992-1993
- Member—U.S.G.S. Nevada Basin and Range National Water-Quality Assessment Liaison Committee, 1991-1993
- Member—State Advisory Council on Water Resources Research of the Desert Research Institute, 1991-1993
- Co-Chairman—All Union Session, "Climate Change Since the Little Ice Age," at Fall AGU Meeting, 1991
- Invitee—NSF/NASA Sponsored "Antarctic Dry Valleys Workshop," October 1991
- Chief Scientist—Leg 3, GISP II Ice Core Drilling Project, Greenland, 1991
- Preceptor—American Chemical Society's SEED Project, 1991-1998
- Delegate—Universities Council on Water Resources, University of Nevada System, 1990-1993
- Member—U.S. Ice Core Working Group, 1989-1992
- Invited Participant—U.S.A.P. Workshop on Antarctic Environmental Monitoring, September 1989
- President-Elect—University of New Hampshire, Sigma Xi, 1989-1990
- Chief Scientist—Leg 3, Greenland Ice Sheet Project (GISP) II Ice Core Drilling Project, Greenland, 1989
- Co-Convener—Joint U.S.-Australian Workshop on Acid Groundwater Systems, March 1989
- Invited Participant—U.S. Ice Core Research Workshop, June 1988
- Member—International Union for Quaternary Research (INQUA) Working Group on Long Terrestrial Records, 1988-1989
- Convener—Special Session at International Estuarine Research Conference, 1987 ("Iron and Manganese Reduction in Estuarine Sediments-Geochemical and Microbial Evidence")
- Member—National Research Council Workshop on Polar Ice Coring, 1985
- Member—Snow Chemistry Working Group of International Commission of Snow and Ice, 1985-1989
- Member—Society for Sedimentary Geology (SEPM) Clastic Diagenesis Research Group, 1984-1989
- Co-Chairperson—Estuarine Research Federation Biennial Meeting, 1985
- Member—International Geological Correlation Project 219 (Comparative-Lacustrine Sedimentology in Time and Space)
- Secretary—New England Estuarine Research Society, 1982-1984
- Member—University of New Hampshire Ice Coring Team, Indian Himalayas, 1980; Northern Victoria Land, Antarctica, 1981-82; Dye 3, Greenland, 1984; Antarctica, 1984; Iceland, 1985; Antarctica, 1987, 1988; Greenland, 1989, 1991
- Secretary—University of New Hampshire Chapter of Sigma Xi, 1981-1983

Professional Activities, continued

Editing

- Guest co-editor, *Elements*, Issue – Urban Geochemistry, 2012
- Guest co-editor, *Antarctic Science*, Special Issues – Byers Peninsula Livingston Island Issue, 2013
- Guest co-editor, *Applied Geochemistry*, Special Issue – Watershed Scale Geochemistry, 2007
- Associate Editor, *Water Resources Research*, 2004 – 2006
- Editorial Board - *Chemical Geology*, 2001-present
- Associate Editor - *Applied Geochemistry*, 2001 -2012
- Member, AGU's Book Board, 2002 – 2012
- Associate Editor—*Ground Water*, 1996-2005
- Guest editor - *Aquatic Geochemistry*, Special Issue on McMurdo Dry Valley, Antarctica, 2004
- Guest co-editor- *Marine Chemistry*, Special Issue in honor of W.F. Fitzgerald, 2004
- Guest co-editor - *Applied Geochemistry*, Special Issue in honor of Gunter Faure, 2004
- Deputy Editor—*Water Resources Research*, 1996-2000
- Editorial Board, International Journal on Salt Lake Research, 1991-1999
- Editor—Hydrology Section, *EOS, Transactions of American Geophysical Union*, 1991-1993
- Editor—Special Edition of *Chemical Geology*, "Acid Groundwater Systems," 1992
- Editorial Board—*International Journal of Inland Salt Lake Research*, 1989-1992
- Editorial Board—*Estuaries*, 1981-1982

Speaking

- Invited Speaker, 2013 Gordon Conference, Catchment Science: Interactions in Hydrology, Biology and Geochemistry
- Invited Speaker, Frontiers in Climate Change symposium for Alabama science teachers, Auburn University, April, 2012- Bringing Climate Change to the Classroom
- Invited Speaker, Processes in Extreme Lakes Session, GSA Annual Meeting, Oct. 2011
- Invited Speaker, Drylands, Deserts and Desertification, 2010 conference, Sede Boker, Israel
- Invited Keynote Speaker – 2010 Goldschmidt Conference, Theme 13, *Hydrogeochemistry of Surface Earth Processes*
- Invited Plenary Speaker – International Symposium on Terminus Lakes, Reno, NV, October, 2009
- Invited Speaker – “Varazones y Mortandades de Organismos Marinos en la Costa de Chile, Cambio Global o Contaminacion local, Santiago, Chile, August, 2009
- Invited Speaker – Tropical Hydrology Symposium, Panama City, Panama, March 2009.
- Invited Speaker – Undergraduate Global Change Symposium – Annual American Chemical Society Meeting, August, 2008
- Invited Keynote Speaker – Joint International Symposia for Subsurface Microbiology and Environmental Biogeochemistry (ISEB XVII) – “Environmental Biogeochemistry at the Extremes”, Taupo, NZ, November 2007
- Invited Speaker – Antarctica: 50 Years on the Ice – Antarctic New Zealand, Wellington, NZ, July 2007
- Invited Speaker – 6th PNRA (Italian Antarctic Program) Meeting on Antarctic Biology: Critical Issues and Research Priorities for the IPY, Follonica, Italy, June 2007
- Invited Participant – NSF-OPP, Setting a Course for Antarctic Integrated System Science Workshop, June 2007
- Co-convenor and Speaker – AAAS Annual Meeting – “Antarctica, Harbinger of Change – What’s Next?”, San Francisco, February 2007
- Invited Keynote Speaker - International SALE Meeting, Grenoble, France, April 2006
- Invited Speaker – Limper Geology Lecture Series, Miami University, November 2004

- Invited Banquet Speaker – Omicron Kappa Upsilon Honorary Society, The Ohio State University, 2003
- Invited Plenary Speaker - Workshop on Mercury in the Idrija Region and Northern Adriatic, Portoroz, Slovenia, May 2001
- Invited Speaker, Development of a North American Regional Action Plan for Environmental Monitoring and Assessment, Toronto, March 2001
- Invited Keynote Speaker - GSA-GSL Earth System Processes Meeting, Edinburgh, June 2001
- Invited Speaker - American Polar Society Meeting, 2000
- Invited Speaker- NSF-Sponsored Workshop, “Source to Sink”, 2000
- Invited Participant - New Zealand Workshop on Victoria Land Latitudinal Gradient, 2000
- Invited Speaker—Making Meaning Workshop—Lakeside School, Seattle, WA, October 1999
- Invited Speaker—Alabama Geological Society 150th Anniversary Symposium, August 1998
- Invited Speaker—Chinese Academy of Science Sponsored Tour, "Global Change in Polar Regions," May 1998
- Invited Speaker—Danish/US Scientific Seminar, The Commission for Scientific Research in Greenland, Copenhagen, 1993
- Invited Speaker—"Geologic Reason" Symposium, American Institute of Professional Geologists (AIPG), 1992
- Invited Speaker—NATO Advanced Research Workshop on Processes of Chemical Changes in Snowpacks, July 1990
- Keynote Speaker—43rd Annual Convention of National Forest Recreation Association, 1990

Service – Outreach and Engagement (since 2003)

- Speaker, The Arctic Age – Great Decisions 2009, Delaware, OH, March 2009; Worthington, OH, June, 2009
- Speaker, Polar Adventure, COSI, Columbus, OH, February 2009
- Panel Member, OSU Dept. of Theatre, Drama and Science Speaker on OSU Honors Day to high school students and their parents, Fall 2008
- Invited Speaker, ACS Annual Meeting, Undergraduate Symposium on Climate Change
- Discussant, National Public Radio’s Earth and Sky Program, 2007
- Speaker at Columbus State Community College Lifelong Learning Institute’s four-part series, “The Byrd Polar Research Center: An Up to Date Sampling of Current Research”, September 2006
- Seminar entitled “Undergraduate Research: Examples from Antarctica”. Given at OSU’s College of Math and Physical Sciences Undergraduate Research Forum, May 10, 2006
- Review of film “The Day After Tomorrow”, with Lonnie Thompson and Jason Box. Article in Columbus Dispatch, June 8, 2004
- Central Ohio’s Center of Science and Industry (COSI), Electronic Experts Program, 2003-present

Refereed Journal Publications (204 total)

- Levy, J.S., A.G. Fountain, M.N. Gooseff, J.E. Barrett, R. VanTreese, K.A. Welch, W.B. Lyons, U.N. Nielsen and D.H. Wall, 2013, Water track modification of soil ecosystems in the Lake Hoare basin, Taylor Valley, Antarctica, *Antarctic Science* 25 doi: 10.1017/5095410201300045x.
- Dowing, C.B., W.B. Lyons, K.A. Welch, 2013, Strontium isotopic signatures of streams from Taylor Valley, Antarctica, Revisited: The role of carbonate mineral dissolution, *Aquatic Geochemistry*, 19, 231-240.
- Lyons, W.B., K.A. Welch, S.A. Welch, A. Camacho, C. Rochera, L. Michaud, R. Dewit and AE Carey, 2013, Geochemistry of streams from Byers Peninsula, Livingston Island, *Antarctic Science*, 25, 181-190.

- Lyons, W.B., D.L. Lesile, R.S. Harmon, K. Newman, K.A. Welch, K.M. Bisson and D.M. McKnight, 2013, The Carbon stable isotope biogeochemistry of streams, Taylor Valley, Antarctica, *Applied Geochemistry*, **32**, 26-36.
- Lyons, W.B. and Harmon, R.S. 2012. Why urban geochemistry, *Elements*, **8**(6), 417-422.
- Jackson, W.A., A.F. Davila, N. Estrada, W.B. Lyons, J.D. Coates and J.C. Priscu (2012), Perchlorate and chlorate biogeochemistry in ice-covered lakes of the McMurdo Dry Valleys, Antarctica, *Geochimica et Cosmochimica Acta*, **98**, 19-30.
- Levy, J.S., A.G. Fountain, K.A. Welch and W.B. Lyons (2012), Hypersaline 'wet patches' in Taylor Valley, Antarctica, *Geophys. Res. Letters*, **39**, LOS402, doi: 10.1029/2012GL050898.
- Lyons, W. B., K. A. Welch, C. B. Gardner, C. Jaros, D. Moorhead, J. L. Knoepfle, and P. T. Doran (2012), The Geochemistry of upland ponds, Taylor Valley, Antarctica, *Antarctic Science*, **24**(1), 3-14, doi: 10.1017/S0954102011000617.
- Fortner, S.K., W.B. Lyons, A.E. Carey, M. Shipitalo, S.A. Welch and K.A. Welch (2012), Silicate weathering and CO₂ consumption within agricultural landscapes, the Ohio-Tennessee River Basin, USA, *Biogeosciences*, **9**, 1-15.
- Fortner, S.K., Lyons, W.B. and Munk, L.A. (2012), Diel stream geochemistry, Taylor Valley, Antarctica, *Hydrol. Processes*, DOI:10.1002/hyp.9255.
- Witherow, R. A., and W. B. Lyons (2011), The fate of minor alkali elements in the chemical evolution of salt lakes, *Saline Systems*, **7**(2), doi: 10.1186/1746-1448-7-2.
- Levy, J. S., A. G. Fountain, M. N. Gooseff, K. A. Welch, and W. B. Lyons (2011), Water tracks and permafrost in Taylor Valley, Antarctica: Extensive and shallow groundwater connectivity in a cold desert ecosystem, *Geological Society of America Bulletin*, **123**(11-12), 2295-2311, doi: 10.1130/B30436.1.
- Gooseff, M. N., D. M. McKnight, P. T. Doran, A. G. Fountain, and W. B. Lyons (2011), Hydrological connectivity of the landscape of the McMurdo Dry Valleys, Antarctica, *Geography Compass*, **5**(9), 666-681, doi: 10.1111/j.1749-8198.2011.00445.x.
- Fortner, S. K., W. B. Lyons, and J. Olesik (2011), Eolian deposition of trace elements onto Taylor Valley Antarctic glaciers, *Applied Geochemistry*, **26**, 1897-1904.
- Witherow, R. A., W. B. Lyons, and G. M. Henderson (2010), Lithium isotopic composition of the McMurdo Dry Valleys aquatic systems, *Chemical Geology*, **275**(3-4), 139-147, doi: 10.1016/j.chemgeo.2010.04.017.
- Welch, K. A., W. B. Lyons, C. Whisner, C. B. Gardner, M. N. Gooseff, D. M. McKnight, and J. C. Priscu (2010), Spatial variations in the geochemistry of glacial meltwater streams in the Taylor Valley, Antarctica, *Antarctic Science*, **22**(Special Issue 06), 662-672, doi: doi:10.1017/S0954102010000702.
- Wadham, J. L., M. Tranter, M. Skidmore, A. J. Hodson, J. Priscu, W. B. Lyons, M. Sharp, P. Wynn, and M. Jackson (2010), Biogeochemical weathering under ice: Size matters, *Global Biogeochem. Cycles*, **24**(3), GB3025, doi: 10.1029/2009gb003688.
- Herbei, R., W. B. Lyons, J. Laybourn-Parry, C. Gardner, J. C. Priscu, and D. M. McKnight (2010), Physiochemical properties influencing biomass abundance and primary production in Lake Hoare, Antarctica, *Ecological Modelling*, **221**(8), 1184-1193, doi: 10.1016/j.ecolmodel.2009.12.015.
- Goldsmith, S. T., A. E. Carey, B. M. Johnson, S. A. Welch, W. B. Lyons, W. H. McDowell, and J. S. Pigott (2010), Stream geochemistry, chemical weathering and CO₂ consumption potential of andesitic terranes, Dominica, Lesser Antilles, *Geochimica Et Cosmochimica Acta*, **74**, 85-103.
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- *Lyons, W. B., M. E. Hines, W. M. Last, and R. M. Lent. 1994. Sulfate reduction, organic matter preservation and anionic geochemistry of brines. Pages 13-20 *Sedimentology and geochemistry of modern and ancient saline lakes: based on a symposium sponsored by SEPM (Society for Sedimentary Geology)*. SEPM (Society for Sedimentary Geology).
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- Quesada, A., Camacho, A. and Lyons, W.B. 2013. Multidisciplinary research in Byers Peninsula, Livingston Island: A future benchmark for change in Maritime Antarctica, *Antarctic Science*, doi: 10.1017/S0954102013000023.
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- Mayewski, P. A., W. B. Lyons, and M. S. Twickler. 1989. Detailed glaciochemical investigations in Southern Victoria Land, Antarctica, 1988-89—a proxy climate record. *Antarctic Journal of the United States* **24**, 96-97.
- Burnett, W. C., W. M. Landing, W. B. Lyons, and W. H. Orem. 1989. Jellyfish Lake, Palau: A model anoxic environment for geochemical studies. *EOS* **70**, 777-783.
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- Lyons, W. B., P. A. Mayewski, M. J. Spencer, and N. T. Mooney. 1984. A possible new technique for a relative age dating using closed-basin lakes in Antarctica. *Antarctic Journal of the United States* **12**, 13-16.

Publications in Press

- Bagshaw, E.A., Tranter, M., Fountain, A., Welch, K.A., Basagic, H. and Lyons, W.B. Do cryoconite holes have the potential to be significant sources of C, N and P to downstream depauperate ecosystems of Taylor Valley, Antarctica? AAAR.
- Convey, P., Lyons, W.B. and 20 others. Spatial Structure and Patterns in Antarctic Biodiversity, *Ecol. Reviews*.
- Dowling, C.B., Poreda, R.J., and Lyons, W.B., The effects of a high meltwater year on the physical limnology of Lake Fryxell and Lake Hoare, Taylor Valley, Antarctica, as evidenced by dissolved gas, tritium and chlorofluorocarbons, *Antarctic Science*.
- Levy, J.S., Fountain, A.G., O'Connor, J.E., Welch, K.A. and Lyons, W.B. Garwood Valley, Antarctica: A new record of last glacial maximum to Holocene glacio-fluvial processes in the McMurdo Dry Valleys, *GSA Bulletin*.

Publications in Review or in Final Preparation

- Barker, J, Dubnick, D., Lyons, W.B. and Chin, Y. Changes in dissolved organic matter composition in proglacial Antarctic streams, *Arctic, Antarctic and Alpine Research*.
- Barker, J.D., Lyons, W.B., Grottoli, A.G. and Wolfe, P.A. $\delta^{15}\text{N}$ evidence for the degradation of ancient organic matter beneath Suess Glacier, Antarctica, *Polar Biology*.
- Castendyk, D.N., H.A. Gallagher, W.B. Lyons and J.C. Priscu, Seiche observations in an ice-covered lake in Antarctica using an Acoustic Doppler Current Profile, *Antarctic Science*.
- Deuerling, K., Lyons, W.B., Welch, K.A. and Welch, S.A., The characterization and role of Aeolian transport in cold, arid ecosystems, *Aeolian Research*.
- Doran, P.T., F. Kenig, J. Lawson Knoepfle, J.A. Mikucki and W.B. Lyons, Radiocarbon abundance in lakes of the McMurdo Dry Valleys, Antarctica, *Limnology and Oceanography*.
- Dowling, C.B. and Lyons, W.B. The geochemistry of glacial deposits in Taylor Valley, Antarctica: Comparison to upper continental crustal abundances, *Polar Science*.
- Michaud, A.B., J.E. Dore, D. Leslie, W.B. Lyons, D.E. Sands and J.C. Priscu, The contribution of Biological ice nucleation to hailstone formation, *Nature*.
- Steffler, A., A. Lewis, B. Sani-Eidukat, F. Zamora and W.B. Lyons, Chemical weathering of Miocene Sediments from the McMurdo Dry Valleys, Antarctic, *Geology*.
- Bisson, K., S.A. Welch, K.A. Welch, J. Sheets, W.B. Lyons, J. Levy and A Fountain, Spatial distribution of visible salts in soils from the McMurdo region, Antarctica.
- Leslie, D., W.B. Lyons, N. Warner, A. Vengosh, J. Olesik, K.A. Welch and K. Deuerling, Boron isotopic Geochemistry of the McMurdo Dry Valleys Lakes, Antarctica. *Chemical Geology*.
- Leslie, D.L., K.A. Welch and W.B. Lyons, A spatial and temporal stable isotope comparison of glacial meltwater streams, Taylor Valley, Antarctica, *Hydrological Process*.
- Dailey, K., W.B. Lyons, SA Welch, KA Welch, K. Deuerling and DM McKnight, Dissolved Iron in Antarctic Streams:
Potential contribution to the Southern Ocean, *Geophysical Research Letter*.
- Lyons, W.B., Foley, K.K., Bowen, G. and Cerling, T. The isotopic geochemistry of CaCO_3 encrustations in Taylor Valley, Antarctica: Implications for their origin, *Geochimica et Cosmochimica Acta*.

B.S., M.S. and Ph.D. Major Advisees: (Totals: 16 BS; 27 MS, 9 PhD)

University of New Hampshire

J.A. Kent Simmons	M.S.	1983	The Biogeochemistry of the Devonshire Lens, Bermuda
David Spader	M.S.	1983	Early Diagenesis of Carbonate Sediments in a Supratidal Environment: Bonaire, Netherlands Antilles
Dion A. Lewis	M.S.	1984	The Geochemistry of Cadmium in Selected New Hampshire Ponds
Eileen M. Fanelli	M.S.	1985	The Adsorption of Cadmium, Copper and Chromium from a Synthetic Leachate Medium by Three Earth Materials
Frederick Chormann, Jr.	M.S.	1985	The Occurrence of Arsenic in Soils and Stream Sediments, Town of Hudson, New Hampshire
Michael L. Hurd	M.S.	1986	The Geochemistry of Chromium in the Great Bay Estuary and the Gulf of Maine
J.A. Kent Simmons	Ph.D.	1987	Major and Minor Ion Geochemistry of Groundwaters from Bermuda
Carol-Anne Kling	M.S.	1989	Trace Metal Geochemistry of Saline Lakes, Western Australia
Robert Lent	Ph.D.	1992	Isotope Geochemistry and Paleobiology of the Devils Lakes System, North Dakota

University of Nevada, Reno

Philip A. Murphree	M.S.	1992	Trace Metal Concentrations in Recent Lacustrine Sediments
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			from the Devils Lake Basin, North Dakota
Bwire Ojiambo	M.S.	1992	Hydrologic, Hydrogeochemical, and Stable Isotopic Study of Possible Interactions between Lake Naivasha, Shallow Subsurface and Olkaria Geothermal Waters, Central Rift Valley, Kenya
Daniel Wendell	M.S.	1993	North Los Posas Basin Aquifer Storage and Recovery Demonstration Project
David A. Bird	M.S.	1993	An Assessment of Hydrogeochemical Computer Codes Applied Toward Modeling and Predicting Post-Mining Pit Water Geochemistry
Georgia A. Doyle	M.S.	1993	The Geochemistry of Selenium in Surface Waters of the Eastern Sierra Nevada
Karen H. Johannesson	Ph.D.	1993	Rare Earth Elements in Terrestrial Waters: Speciation Modeling in Acidic and Alkaline Waters
William Ludwick	M.S.	1993	Colloidal Fouling in Shallow Injection Wells: A review of Physical and Chemical Processes
Jayanta Das	M.S.	1994	Application of Mathematical Modeling to the Analysis of Groundwater Flow and Levels near a mine site at Elko, Nevada
James Thomas	Ph.D.	1996	Geochemical and Isotopic Interpretation of Groundwater Flow, Geochemical Processes, and Age Dating of Groundwater in the Carbonate-Rock Aquifers of the Southern Basin & Range
Bwire Ojiambo	Ph.D.	1996	Characterization of Subsurface Outflow from a Closed-Basin Freshwater Tropical Lake, Rift Valley, Kenya
Eric E. Swanson	M.S.	1998	Aqueous and Sorbed Metal Associations Found in Ancient and Actively Forming Iron Oxyhydroxide Sediment Coatings: Determinations of pre-mining aqueous metal concentrations in Cement Creek, Colorado

University of Alabama

Jason Mastrine	M.S.	1996	Mercury Concentrations in Fluvial Systems Historically Contaminated from Precious Metal Mining
Carmen Nezat	M.S.	1998	Chemical Weathering in Taylor Valley Streams, Southern Victoria Land, Antarctic: Rates and Reactions
Laurel Ramsey	M.S.	1999	Historic Chromium Fluxes and Sources to the Apalachicola-Chattahoochee-Flint River Basin
David Vinson*	B.S.	1999	Urban Stream Water Chemistry in a Geological Context: Watersheds in and around Tuscaloosa, Alabama
Klaus Neumann	Ph.D.	1999	Stable Carbon Isotope Dynamics of the McMurdo Dry Valley Lakes: Influence of Primary Production and Calcium Carbonate Formation
Brian Astor	M.S.	1999	Influence of Coal-bearing Sequences on the Aqueous Geochemistry of Sb, As, Mo and Ba, Tuscaloosa County, Alabama
Adrian Green	M.S.	2000	Mercury Concentrations and Speciation in the Pearl River, Mississippi
Melissa Buciak	M.S.	2000	Comparison of Seasonal Wetland and Reservoir

Tracy Jones Ph.D. 2002 Concentrations of Mercury, Tuscaloosa County, Alabama
Trace Element Concentrations in the Black Warrior River System, Alabama: Influences of Natural and Anthropogenic Activities

**Honors*

The Ohio State University

Steven Churchill	B.S.	2000	Groundwater/Surface Water Interaction: NW Ohio
Heather Pugh	B.S.	2002	Biogeochemistry of Si in Taylor Valley, Antarctica
Sarah (Tegt) Fortner	M.S.	2002	Meltwater Geochemistry from Taylor Valley Alpine Glaciers: Chemical and Hydrologic Processes
Jill Gudding	M.S.	2003	Phosphorus in Taylor Valley, Antarctica: Relationship of Landscape Age to Nutrient Limitations in Aquatic Ecosystems
Becki Witherow	M.S.	2005	The Geochemistry of Mercury in the Alpine Glaciers, Taylor Valley, Antarctica
Marinko Karanovic	M.S.	2005	Mathematical Modeling of a Hydrocarbon Spill on the Ice Cover of the Lake Fryxell, Antarctica
Kelly Foley	M.S.	2005	Pedogenic Carbonate Distribution within Glacial Till in Taylor Valley, Southern Victoria Land, Antarctica
April Jacobs	B.S.	2006	Environmental Geochemistry of the Olentangy River
Elizabeth Miller*	B.S.	2006	Weathering Rates of the McMurdo Volcanic Series Rocks
Gregg McElwee	B.S.	2008	Sediment Geochemistry of the Chagres Watershed, Panama
Sarah Fortner	Ph.D.	2008	The Geochemistry of Glacier Snow and Melt: The Oregon Cascades and the Taylor Valley, Antarctica
Catherine Maxwell	B.S.	2008	Environmental Geochemistry of Darby Creek
Carla Whisner ⁺	B.S.	2009	Dissolved Inorganic Carbon Fluxes and Speciation in Aquatic Systems of Agricultural Landuse
Becki Witherow	Ph.D.	2009	The Minor Element Geochemistry of Antarctic Closed-Basin Lakes
Lindsey Hannah*	B.S.	2009	The Geochemistry of Tropical Rain Forest Soils, Panama
Patrick Burns*	B.S.	2010	The Geochemistry of Glacier Meltwater Streams, Peru
Kelly Deuerling	M.S.	2010	The Geochemistry of Aeolian Materials in the McMurdo Dry Valleys, Antarctica: It's Source and Ecosystem Impact
Matt Knoblock	B.S.	2010	Using Cation Data to Investigate Weathering
John Volk*	B.S.	2011	Spatial and Temporal Variations of Water Quality in Hellbranch Run
Claire Westervelt ⁺	B.S.	2011	Geochemistry of surface water and groundwater on the campus of the Ohio State University
Steven Riley	B.S.	2011	GIS Analysis of unglaciated Allegheny Plateau bedrock as an abiotic component impacting regional forest type
Alex Rytel ⁺	B.S.	2012	Statistical Relationship between Physical, Chemical and Biological Properties, Lake Fryxell, Antarctica
Kelsey Bisson*	B.S.	2013	Spatial Distribution of visible Desert Salts in the McMurdo region, Antarctica.
Kelsey Daily ⁺	B.S.	2013	Chloride concentrations in Ohio rivers: A history of road salt addition

J.D. Stucker M.S. 2013 The Geochemistry of Low Order Urban Streams, Columbus, Ohio

**Honors w/ Distinction*

+Research Distinction

The Ohio State University (Present)

Deborah Leslie Ph.D. 2013
 Allie Fair M.S. 2014 The Geochemistry of Lake Miers, Antarctica
 Chris Gardner Ph.D. 2013
 Laura German Ph.D. 2017

Post-Doctoral Fellows/Research Scientists Supervised or Co-Supervised

M.E. Hines	1981-1983	J.-C. Bonzongo	1994-1998
M.J. Spencer	1981-1983	Klaus Neumann	1998-2000
J. Hayward-Fee	1989-1990	Carolyn Dowling	2002-2004
D. Wayne	1992-1993	Adam Lewis	2004-2006
K. Connors	1993-1996	Joel Barker	2006-2008
Sarah Fortner	2008-2010	Steven Goldsmith	2009-2010

External Examiner for Ph.D. Dissertation

Glenn Harrington Flinders University, Australia
 Scott Stark University of Tasmania, Australia
 Briar Wait University of Auckland, New Zealand
 Jennifer Lawson University of Illinois, Chicago
 Devin Castendyk University of Auckland, New Zealand
 Peter Cable Tulane University
 Chris Kantz University of Otago, New Zealand

Awards and Recognition of Lyons' Students

S. Bwire Ojiambo •Received the 1993 George Burke Maxey Fellowship in Hydrologic Sciences from University of Nevada System
 •Received a Rockefeller Foundation African Dissertation Internship Award, 1993-95

Klaus Neumann •Received a NASA Planetary Biology Summer Fellowship, 1994
 •Received a University of Alabama Dissertation Fellowship, 1996-97; 1997-98
 •Runner-up, University of Alabama Chapter of Sigma Xi Outstanding Graduate Research Award, 1998

Sonya Wilder •American Chemical Society, 1995-96, Minority Scholar

Robyn McArthur •American Chemical Society, 1997-98, Mettler-Toledo Scholarship

Jessica Kidd •Goldwater Scholarship Winner, 2000-01, State of Alabama

Heather Pugh	•McKenzie Undergraduate Research Award, 2002, Byrd Polar Research Center
Elizabeth Miller	•University Honors and Scholars Center, 2005 Summer Research Internship, OSU
Carla Whisner	•Research Scholarship, OSU, 2009
Lindsay Hannah	•Research Scholarship, OSU, 2009
Kelly Deuerling	•NSF Graduate Fellowship, OSU, 2009
J.D. Stucker	•NSF Graduate Fellowship, OSU, 2009
Patrick Burns	•Research Scholarship, OSU, 2010
John Volk	•Research Scholarship, OSU, 2010
Kelsey Daily	Research Scholarship, OSU, 2012-2013

Presentations at Scientific Meetings and Invited Lectures

Since 1976, I have given over 125 presentations at various professional meetings and educational and research institutions. These include presentations at Geological Society of American Meeting, American Geophysical Union Meetings, American Society of Limnology and Oceanography Meetings, a Penrose Conference, National Acid Precipitation Assessment Panel Meetings, Estuarine Research Federation Conferences as well as various international conferences on such topics as environmental biogeochemistry, glaciochemistry and salt lakes. These include four invited papers at AGU.

I have given invited lectures and seminars in the United States at the following places:

State University of New York at Stony Brook	University of Maine
University of New Hampshire	University of Massachusetts, Boston
University of Rhode Island	University of Rhode Island
Massachusetts Institute of Technology	University of Connecticut
New York University	University of Florida
Florida State University	Auburn University
Harvard University	Yale University
University of Maryland	University of Delaware
University of Massachusetts, Amherst	University of Nevada, Reno
North Carolina State University	Bryn Mawr College
UNLV	University of Utah
University of Alabama	University of California-Davis
University of New Mexico	Ball State University
University of Rochester	Georgia State University,
University of Washington	NASA-Langley Research Center
Portland State University	NASA-Johnson Center, Houston, TX
Desert Research Institute	Marathon Oil Research Center
Dauphin Island Marine Laboratory	The Ohio State University
Old Dominion University	University of Nebraska
University of Illinois - Chicago	Michigan State University
University of Toledo	Akron University
John Carroll University	The University of Michigan
Tulane University	University of South Florida
Dartmouth College	Miami University (Ohio)
University of Alaska-Anchorage	Duke University
USGS, Reston, VA.	Office of Polar Programs at NSF
Northwestern University	Explorers Club, New York
The College of Wooster	Brown University
University of Virginia	

I have also presented invited lectures at:

The Netherlands Institute for Sea Research
University of Tasmania
Trent University, Canada,
Antarctic Science Series at McMurdo Station
Academica Sinica, Taipei, Taiwan.
University of Auckland, New Zealand
University College, Galway, Ireland
Chilean Antarctic Institute
National University, Montevideo, Uruguay

Bermuda Biological Station for Research
University of Barcelona, Spain
Three institutes in Yugoslavia
National Taiwan University, Taipei, Taiwan
University of Melbourne
University of Canterbury, New Zealand
Australian National University
University of Andrés Bello, Santiago, Chile

International Collaboration

I have been or am currently involved in cooperative research efforts with international colleagues in India, Denmark, Russia, China, France, New Zealand, Great Britain, Brazil, Bermuda, Israel, Ireland, Iceland, Canada, Kenya, Kyrgyzstan, Germany, Serbia, Australia, Slovenia, Taiwan, Panama, Nicaragua, Spain, Italy and Chile. Current active international collaborators are: China, Israel, Italy, New Zealand, Spain, Uruguay and Panama.

Reviewing Activities

1. National Science Foundation

- Earth Sciences (programs including Hydrologic Sciences, Geobiology & Low-Temperature Geochemistry, Stratigraphy & Paleontology, Experimental & Theoretical Geochemistry, Petrogenesis & Mineral Resources, as well as Surficial Processes-Geochemistry, Petrogenesis & Mineral Resources, as well as Surficial Processes-Geochemistry).
- Ocean Sciences (Chemical Oceanography and Geological Oceanography)
- Ecosystems Analysis Program
- Environmental Biology
- Polar Programs
(Geology & Geophysics, Organisms & Ecology, Glaciology & Atmospheric Sci.)
- Arctic System Science
- Continental Hydrologic Processes
- International Programs
- Lexen Program
- Infrastructure Programs (Major Research Instrumentation & Instrumentation & Facilities)
- Biocomplexity Program
- Water and Carbon; Biogeosciences and Carbon Cycle
- Hydrologic Observatories
- Geomorphology and Land Use Dynamics

2. Petroleum Research Fund of the American Chemical Society

3. NOAA—Sea Grant Program—Connecticut, New Hampshire, Maine, Massachusetts, Michigan, Alaska, Rhode Island, California, New York, Hawaii

4. NOAA—Office of Undersea Research Program

5. U.S. EPA—Ocean Pollution/Dumping Program

6. National Sciences and Engineering Research Council of Canada

7. Australian Research Council
8. The Universities Council of Water Resources
9. Earthwatch Research Program
10. Long Island Sound Research Fund
11. Hudson River Foundation
12. National Geographic Society
13. National Environmental Research Council—UK
14. U.S. Department of Energy—Office of Basic Energy Research
15. National Research Council—Office of Scientific and Engineering Personnel
16. NOAA—National Estuarine Research Reserve System Program
17. NASA—Biospherics Program
18. Israel Science Foundation
19. Lindbergh Foundation
20. The Leverhulme Trust
21. USGS- National Institutes of Water Resources
22. Antarctica – New Zealand
23. U.S./Israel Binational Science Foundation
24. NOAA’s Coastal Response Research Center
25. European Science Foundation: PolarCLIMATE
26. USDA/NRIGCP – Water Resources Program
27. Trans-Antarctic Association
28. Arkansas Science and Technology Authority
29. Italian Scientific Committee on Antarctic Research
30. Journals and Books
 - Geochimica et Cosmochimica Acta
 - Nature
 - Journal of Geophysical Research (Oceans, Atmosphere, Biogeosciences, Earth Surface)
 - Journal of Hydrology
 - Paleogeography, Paleoclimatology, Paleoecology
 - Annals of Glaciology
 - Limnology and Oceanography
 - Oceanologica Acta
 - Princeton University Press
 - GSA Special Publications
 - Harper Collins College Publishers
 - Antarctic Science
 - Special volume African Rift Valley Lakes (IDEAL)
 - Prentice Hall Publishers
 - Atmospheric Environment
 - Environmental Geology
 - Marine and Freshwater Research
 - Cambridge University Press
 - Applied Geochemistry
 - Earth and Planetary Science Letters
 - Marine Chemistry
 - Estuaries
 - Science
 - Estuarine, Coastal and Shelf Science
 - John Wiley and Sons Publishers
 - Biogeochemistry
 - Hydrobiologica
 - Chemical Geology
 - Ground Water
 - WICHE Program
 - Journal of Paleolimnology
 - Water Resources Research
 - Geophysical Research Letters
 - AGU-US National Rpt. to IUGG
 - Tellus
 - International Journal of Salt Lake Research
 - Science of the Total Environment
 - Brooks/Cole Publishing
 - Academic Press
 - Arctic, Alpine and Antarctic Research
 - Environmental Science and Technology

- Saline Systems
- Soil and Sediment Contamination
- Journal of Geology
- G³
- GSA Today
- Lakes and Reservoirs: Research and Management
- Oxford University Press
- Journal of Contaminant Hydrology
- Polar Geography
- University Press of New England
- Holocene
- Journal of Asian Earth Science
- Proceedings of the National Academy of Sciences
- Polar Biology
- British Journal of Environment & Climate Change
- EOS
- Marine Geology
- Continental Shelf Science
- Blackwell Publishers
- Jones and Bartlett Publishers
- Astrobiology
- Hydrological Processes
- Ecosystems
- Water, Air, Soil Pollution
- Water Research
- Journal of Glaciology
- Environmental Pollution
- Hydrogeology Journal
- Polar Research
- Environmental Science: Processes and Impacts

Grants and Contracts

1. “Collaborative Research: Submarine groundwater and freshwater inputs along the Western Antarctica Peninsula”, National Science Foundation, 2012-2015. NSF- Polar Programs, Oceanography.
2. “Collaborative Research: MIDGE: Minimally invasive direct glacial exploration of biogeochemistry, hydrology, and glaciology of Blood Falls, McMurdo Dry Valleys”, 2012-2016. NSF- Polar Programs.
3. Cryptic hydrology of the McMurdo Dry Valleys: Water track contributions to water and geochemical budgets in Taylor Valley, Antarctica, Univ. of Texas, Austin, via the National Science Foundation, 2012-2015, NSF- Polar Programs, Geosciences.
4. “Rapid Landscape Change in Garwood Valley: Monitoring buried glacier melt and exploring Pewe’s lost lake”, Univ. of Texas, Austin via National Science Foundation, 2012-2014. NSF- Polar Programs, Geosciences.
5. “Increased connectivity in a polar desert resulting from climate warming: The McMurdo Dry Valley LTER Program”, National Science Foundation, 2011-2017, NSF- Polar Programs.
6. “Collaborative Research: Hydrogeochemical investigation of seasonal transition and land use change effects on tropical hydrology”, National Science Foundation, 2010-2012, Hydrologic Sciences.
7. with Terry Wilson, “Group travel to the 11th International Symposium on Antarctic Earth Sciences (ISAES), Edinburgh, Scotland”, National Science Foundation, 2011, Polar Programs- Geosciences.
8. with Franklin Schwartz, Anne E. Carey, Ozeas Costa, Jr., Andrea Grottoli, Bryan Mark and Kathleen Welch, “Acquisition of a liquid water isotope analyzer for hydrological, glaciological and geochemical research”, National Science Foundation, 2009
9. with Byron Adams and Diana Wall, “Collaborative Research: Limits and Drivers of Metazoan Distributions in the trans Antarctic Mountains”, 2009-2011, National Science Foundation- Polar Programs- Biology.
10. with Ozeas Costa, Bryan Mark, Anne Carey and Franklin Schwartz, “Acquisition of an Automated Nutrient Analyzer”, 2008, National Science Foundation.
11. with Carol Landis and Michele Larrimer, “Global Climate Change: What do we know? What don’t we know?” 2006-2007, Battelle Endowment for the Arts and Humanities.
12. with Tim Fitzgibbon, “Mercury in the Water and Phytoplankton of Western Lake Erie”, 2005-2007, Ohio Sea Grant.
13. with Carolyn Dowling, “Collaborative Research: The Timing of Holocene Climate Change in the McMurdo Dry Valleys, Antarctica,” 2005-2007, NSF- Polar Programs.

14. with 7 Co-PIs, "The role of resource legacy on contemporary linkages between biodiversity and ecosystem processes in a cold desert ecosystem: the McMurdo Dry Valley LTER Program," 2005-2011, NSF.
15. "Soil biodiversity and response to climate change: a regional comparison of Cape Hallett and Taylor Valley, Antarctica," 2003-2005, NSF-OPP.
16. with A.E. Carey, "Field sampling coordination and mathematical modeling of a hydrocarbon spill on the ice cover of Lake Fryxell, Antarctica," 2004-2005, NSF SGER.
17. with A.E. Carey (P.I.), "Collaborative research: factors controlling chemical weathering in regions of very high physical weathering rates," 2003-2006, NSF Earth Sciences.
18. with D. Elliot, J. Olesik, L. Thompson and S. Traina, "Acquisition of an X-ray fluorescence spectrometer for geological and environmental analysis," 2002-2003, NSF-EAR Instrumentation and Facilities.
19. with B. McKee and R.C. Bradt, Collaborative Research, "Chemical weathering in Taylor Valley streams: sources, mechanisms, and global implications," 2001-2004, NSF-OPP.
20. with J.C. Priscu, E. Adams, M. Voytek, C. McKay and B. Price, "Collaborative research, Geomicrobiology of Vostok Ice: Implications for Life in Lake Vostok," 2000-2004, NSF-LEXEN Program.
21. with M.E. Hines, J.J. Warwick and T. Barkay, "Collaborative research, Mercury cycling in soils: dynamic sources for aquatic environments," 1999-2002, NSF-EGB Program.
22. with A. E. Carey, and W. W. Schroeder, "Collaborative research grant at Lake Issykul, Kyrgyzstan," 1999-2000, NATO Environmental Research.
23. with A.E. Carey, W.W. Schroeder, H.H. Stowell, and A.K. Ward, "Acquisition of a gas-source mass spectrometer facility for geological, hydrological and ecological research at The University of Alabama," 1999-2000, NSF-MRI Program.
24. with J.-C. Bonzongo, E. Roden, M. Ward, I. Chaubey, and H. Bryan, "Social impact assessment of human exposure to mercury related to landuse and physiochemical settings in the Alabama-Mobile River basin," 1999-2002, EPA-NSF Water/Watersheds.
25. with A.E. Carey, R. Poreda and S. Wheatcraft, "Greenhouse warming and the impact of sea level rise on water resources on the Coastal Plain of the Gulf Coast," 1998-2001, DOE-NIGEC.
26. with J. Meyer, "The effect of metal contamination on the Chattahoochee River food web," 1998-2000, Turner Foundation.
27. with A.E. Carey, J. Pennock and W. Schroeder, "The role of Mississippi River solutes in Gulf of Mexico hypoxia," 1997-98, TFI.
28. with seven other PI's, "The role of natural legacy on ecosystem structure and function in a polar desert: The McMurdo Dry Valley LTER Program," 1999-2005, NSF-OPP.
29. with J.-C. Bonzongo, "The geochemistry of river particulate matter from high-standing oceanic islands," 1998-2000, NSF-Hydrologic Sciences Program.
30. with N.L. Green, C.M. Leshner, W.E. Stone, J.A. Barnard, H.H. Stowell, and M.S. Drummond, "Acquisition of a computer-controlled X-ray fluorescence spectrometer," 1996-1997, NSF-ARI Instrumentation Program.
31. "Chemical Limnology of Issyk Kul, Kyrgyzstan," 1995-1996, National Research Council's Collaboration Basic Science and Engineering Program.
32. with M.E. Hines, T. Barkay, and J.J. Warwick, "Mercury Biogeochemistry in a Semi-Arid Aquatic Ecosystem: Processes Controlling Methylation and Demethylation," 1995-1998, NSF Environmental Geochemistry and Biogeochemistry Program.
33. with D. Kley and D. Wagenbach, "Stable Nitrogen Isotopes of Nitrate in Greenland Snow," 1995-1997, NATO Collaborative Research Grants Program.

34. with J.J. Warwick, J. Miller, and P. Lechler, "The Concentration, Fate and Transport of Mercury in Fluvial Systems with Former Placer Gold Workings," 1994-1997, Generic Center—U.S. Bureau of Mines.
35. with S.B. Ojiambo, "Effect of Lake Naivasha on Olkaria Geothermal Field, Kenya," 1993-1995, Rockefeller Foundation African Dissertation Internship Awards.
36. with S.B. Ojiambo, "Characterization of surface outflow from Lake Naivasha towards Olkaria Geothermal Field, Kenya," 1994-1996, NSF-International Programs.
37. with J.J. Warwick, "Integrated Hydrologic Assessment of Area 3, NTS," 1993-1995, Dept. of Energy.
38. with seven other PI's, "McMurdo Dry Valleys: A Cold Desert Ecosystem LTER," 1993-1999, Division of Polar Programs—NSF.
39. with J.J. Warwick, "Research Experiences for undergraduates: Hydrology/Hydrogeology at UNR," 1993-1994, NSF—Office of Undergraduate Science, Engineering and Math.
40. with K. Connors, "Investigations of Pit water—Pit-Wall Interactions in Nevada Precious Metal Mines," 1993-1995, Bureau of Land Management.
41. with G. Miller, "Pit Waters from Precious Metal Mines", 1992-1993, U.S. EPA.
42. with S. Wesnousky, "Geothermal Systems in Dixie Valley, Nevada," 1992-1993, Lawrence Berkeley Laboratory, DOE.
43. with J. Miller, J. Price, J. Warwick, and D. Ritter, "Chemical Environmental Problems Associated with Mining," 1992-94, NIEHS; Storage, transport mechanics and dispersal patterns of trace elements in Lahontan Reservoir and the Carson River Basin, NV.
44. "Research Experiences of Undergraduates: Earth Sciences: Hydrology/Hydrogeology at UNR," 1992-93, NSF—Office of Undergraduate Science, Engineering and Math.
45. with R. Karlin and R. Watters, "Proposed Drilling of Washoe Lake, Nevada, for Paleoclimatic Studies," 1991-1992, Office of Energy Research, DOE.
46. with K.H. Johannesson, "Oxyanion concentrations and fluxes in the Walker and Truckee River Systems," 1991-1992, USGS - Water Resources Program.
47. with S.L. Dingman, F. Birch, and F. Hall, "Earth Sciences component of interdisciplinary hydrology major," 1989-1990, Instrumentation and Laboratory Improvement Program, NSF.
48. with P.A. Mayewski and M.J. Spencer, "Major anion and cations, total acidity and ionic balance for GISP II," 1989-1993, Division of Polar Programs, NSF.
49. with P.A. Mayewski, "Purchase of a Geochemical Dating Laboratory for Glacier Research Group," 1987-89, W.M. Keck Foundation.
50. with A.L. Herczeg, D.T. Long, and M.E. Hines, "U.S.-Australian Joint-Workshop on Acid Groundwaters in Australia: Geochemical Observations and Implications," March 1989, Division of International Programs-NSF.
51. "Trace metal geochemistry of Yugoslavian Lakes," September-October 1989, National Academy of Sciences Interacademy Exchange Programs.
52. with R. Lent and W.J. Showers, "The paleoclimatic history of Devils Lake, North Dakota," September 1988-August 1990, USGS - Water Resources Research Program.
53. with W.M. Last and M.E. Hines, "The geochemistry and sedimentology of Freeflight Lake: Implications of organic carbon preservation in a sulfate-rich system," September 1988-August 1990, Petroleum Research Fund-ACS.
54. with N.E. Kinner, M.R. Collins, and D.L. Gress, "Marine disposal of stabilized/solidified waste: Field studies," January 1988-December 1990, NOAA-Sea Grant.
55. with P.A. Mayewski and M.J. Spencer, "Detailed glaciochemical investigations in Southern Victoria Land, Antarctica—A proxy climate record," April 1987-April 1990, Division of Polar Programs—NSF.

56. with M.E. Hines, P.A. Mayewski, F.R. Hall, N. Kinner, and M.J. Spencer, "Acquisition of state of the art alpha counting equipment," July 1987, Division of Earth Sciences-Equipment, NSF.
57. with J.M. McArthur and J. Turner, "Acid ground water in western Australia," BMR/CSIRO, June 1987.
58. with D.A. Gust, "The generation of Cl⁻ in groundwaters from granite in New Hampshire and its role in the mobilization of naturally occurring radionuclides," Water Resources Research Grant—U.S. Dept. of Interior, June 1987-May 1989.
59. with P.A. Mayewski, M.E. Hines, and J.A.K. Simmons, "Geochemistry of the Vadose zone of Bermuda: Implications for groundwater chemistry and cave development," January 1987-December 1987, Bermuda Biol. Station for Research Grant.
60. with D.T. Long, P.A. Mayewski, and M.E. Hines, "Trace metal accumulation in modern hypersaline environments," December 1986-December 1988, Surficial Processes/Earth Sciences Division - NSF.
61. with W.C. Burnett, "Geochemistry of the Marine Lakes of Palau," Petroleum Research Fund of Am. Chemical Society, September 1986-August 1988.
62. with P.A. Mayewski, "Characterization of climatic events for the last 2x10³y. through the retrieval of ice cores from the Transantarctic Mountains, Antarctica," July 1984-June 1986, NSF-Polar Programs.
63. with F.E. Anderson and P.A. Mayewski, "Acquisition of a particle counter," June 1984, NSF-Equipment/Earth Sciences.
64. with P.A. Mayewski, "Production of a time-series record of acidic anions from Dye-3, Greenland," June 1983-June 1985, EPA-NCSU Acid Rain Program.
65. with M.E. Hines and H.E. Gaudette, "Terminal decomposition and gaseous sulfur release from tidal wetlands," October 1985, NASA Global Biology Program.
66. with G.E. Jones, M.E. Hines, and M.J. Spencer, "Metal concentration and speciation in pore waters of anoxic sediments as a function of bacterial activities," January 1983-December 1983, Biological and Chemical Oceanography Section, NSF.
67. with G.E. Jones and M.E. Hines, "Metal concentration and speciation in pore waters of anoxic marine sediments as a function of bacterial activities," January 1981-December 1982, Biological Oceanography Section, NSF.
68. with H.E. Gaudette, "Pollution history of New Hampshire-Maine nearshore waters," 1980, NOAA-Sea Grant.
69. with H.E. Gaudette, "Trace metal diagenesis of recent marine sabkha sediments," April 1980-April 1982, Geochemistry Section, NSF.
70. with H.E. Gaudette, "Benthic fluxes of C, N, P and Si in the nearshore environment of Bermuda: The role and rate of microbial and macrobenthic activity," June 1979-May 1980, Environ. Biol. Section, NSF.
71. with H.E. Gaudette and N.D. Chasteen, "Modeling of Fe, Mn, Cu and Mo sedimentary flux in the Great Bay Estuary, NH," January 1977-December 1979, NOAA-Sea Grant.
72. with H.E. Gaudette, "The degradation of organic matter in the nearshore carbonate sediments of Bermuda: Its effect on carbonate diagenesis," June 1978-May 1979, Environ. Biol. Section of NSF.
73. with H.E. Gaudette and N.D. Chasteen, "Early diagenesis of Fe, Mn, Cu, V and Mo in marine sedimentary systems," November 1, 1977-October 31, 1979, Marine Chemistry Section NSF.

Faculty Promotion/Tenure

Since 2001, I have reviewed P&T dossiers or have been asked to write support letters (i.e., University Distinguished Professor and National Research Chairs) for 38 faculty members and scientists at universities in the U.S., Canada, China and the UK.