Patrick J. Bartlein

CONTACT INFORMATION
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PERSONAL DATA
Date of Birth: October 21, 1950, (Milwaukee, WI); Married (Patricia F. McDowell); Citizenship: U.S.A.

EDUCATION
Univ. Wisconsin -- Madison, (Geography) B.A. June 1972; M.S. June 1975; Ph.D. August 1978

RESEARCH INTERESTS
Paleoclimatology; Data Analysis and Visualization; Environmental Modeling

TEACHING INTERESTS
Climatology; Environmental Change; Data Analysis and Visualization in Geography

EMPLOYMENT HISTORY
University of Oregon, Department of Geography: Professor (Sept. 1994 - present), Associate Professor (April 1986 - Sept. 1994), Assistant Professor (Sept. 1982 - April 1986). Climatology, environmental change, data analysis and visualization in geography.
Brown University, Department of Geological Sciences: Research Associate and Visiting Assistant Professor (Research) (May 1981 - Aug. 1984). Reconstruction of paleoclimatic variations in eastern North America.
Boston University, Department of Geography: Assistant Professor (Sept. 1979 - Aug. 1982). Introductory climatology, physical climatology, mathematical models for environmental assessment; Center for Energy and Environmental Studies: Research Associate (Sept. 1980 - Aug. 1982). Statistical consulting and program development.
University of Iowa, Department of Geography: Visiting Assistant Professor (Jan. 1979 - May 1979). Introduction to weather and climate, geographical analysis.
University of Wisconsin -- Madison, Institute for Environmental Studies: Research Associate (post-doc) (Sept. 1978 - Aug. 1979). Further studies of the effects of climatic variations on the water supplies and levels of the Great Lakes; Department of Geography: Teaching Assistant (Sept. 1973 - Dec. 1974). Laboratory instructor in physical geography;

HONORS
Fellow, American Association for the Advancement of Science (AAAS), 2008
American Quaternary Association (AMQUA) Distinguished Career Award, 2016
American Association of Geographers (AAG) Distinguished Scholarship Honors, 2017

PUBLICATIONS
(WOS: 264 indexed, 26,893 citations, h-index: 85; Google Scholar: 37,787 citations, h-index: 99)

Clark, P.U., Shakun, J.D., Rosenthal, Y., Pollard, D., Hostetler, S.W., Kohler, P., Bartlein, P.J., Gregory, J.M., Zhu, C., Schrag, D.P., Liu, Z. and Pisias, N.G., 2025. Global mean sea level over the past 4.5 million years. *Science*, 390(6770): eadv8389. https://doi.org/10.1126/science.adv8389.

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Clark, P. U., J. D. Shakun, Y. Rosenthal, P. Koehler, and P. J. Bartlein, 2024, Global and regional temperature change over the past 4.5 million years. *Science*, 383. https://doi.org/10.1126/science.adi1908

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Kageyama, M., P. Braconnot, S.P. Harrison, A.M. Haywood, J. Jungclaus, B.L. Otto-Bliesner, J.Y. Peterschmitt, A. Abe-Ouchi, S. Albani, P.J. Bartlein, C. Brierley, M. Crucifix, A. Dolan, L. Fernandez-Donado, H. Fischer, P.O. Hopcroft, R.F. Ivanovic, F. Lambert, D.J. Lunt, N.M. Mahowald, W.R. Peltier, S.J. Phipps, D.M. Roche, G.A. Schmidt, L. Tarasov, P.J. Valdes, Q. Zhang & T. Zhou, 2018, PMIP4-CMIP6: the contribution of the Paleoclimate Modelling Intercomparison Project to CMIP6. *Geosci. Model Dev*. 11:1033-1057. https://dx.doi.org/doi:10.5194/gmd-11-1033-2018

Otto-Bliesner, B.L., P. Braconnot, S.P. Harrison, D.J. Lunt, A. Abe-Ouchi, S. Albani, P.J. Bartlein, E. Capron, A.E. Carlson, A. Dutton, H. Fischer, H. Goelzer, A. Govin, A. Haywood, F. Joos, A.N. Legrande, W.H. Lipscomb, G. Lohmann, N. Mahowald, C. Nehrbass-Ahles, F.S.R. Pausata, J.Y. Peterschmitt, S. Phipps & H. Renssen, 2017, The PMIP4 contribution to CMIP6 - Part 2: Two Interglacials, Scientific Objective and Experimental Design for Holocene and Last Interglacial Simulations. *Geosci. Model Dev.* 10:39-403. https://dx.doi.org/10.5194/gmd-10-3979-2017

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Harrison, S.P., P.J. Bartlein & I.C. Prentice, 2016, What have we learnt from palaeoclimate simulations? *Journal of Quaternary Science* 31:363-385. https://doi.org/10.1002/jqs.2842

Marlon, J.R., R. Kelly, A.L. Daniau, B. Vannière, M.J. Power, P. Bartlein, P. Higuera, O. Blarquez, S. Brewer, T. Brücher, A. Feurdean, G.G. Romera, V. Iglesias, S.Y. Maezumi, B. Magi, C.J. Courtney Mustaphi & T. Zhihai, 2016, Reconstructions of biomass burning from sediment-charcoal records to improve data–model comparisons. *Biogeosciences* 13:3225-3244. https://doi.org/10.5194/bg-13-3225-2016

Marshall, J.A., J.J. Roering, P.J. Bartlein, D.G. Gavin, D.E. Granger, A.W. Rempell, S. Praskievicz, T.C. Hales, 2015, Frost for the trees: Did climate increase erosion in unglaciated landscapes during the Late Pleistocene? *Science Advances.* e1500715, http://dx.doi.org/10.1126/sciadv.1500715

Boslough, M., K. Nicoll, T.L. Daulton, A.C. Scott, P. Claeys, J.L. Gill, J.R. Marlon & P.J. Bartlein, 2015, Incomplete Bayesian model rejects contradictory radiocarbon data for being contradictory. *Proceedings of the National Academy of Sciences of the United States of America* 112**:**E6722-E6722. https://doi.org/10.1073/pnas.1519917112

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https://www.ncei.noaa.gov/pub/data/paleo/firehistory/charcoal/northamerica/uscyg001.txt

INVITED LECTURES AND SELECTED CONFERENCE PAPERS

"Wildfire during the Last Glacial-Interglacial Transition: No support for widespread synchronous biomass buringing from ice-core and sedimentary charcoal at the beginning fo the YD/GS-1 chronozone. P.J. Bartlein, and J.R. Marlon, AGU Fall Meeting Abstracts 2024, PP21E-0519.

"Paleofire reconstructions from sedimentary charcoal analyses: review and improvement of the approaches =for decomposing, compositing, and synthesizing records", P.J. Bartlein, J.R. Marlon, and N O'Mara AGU Fall Meeting Abstracts 2023, PP44A-07

"Simulated Last Interglacial and Projected Future Global Biomes at High Latitudes", S. Shafer, P.J. Bartlein, AGU Fall Meeting Abstracts 2023, PP03-03.

"Expanding the palette of potential explanations for change and variability in paleoclimatic reconstructions by applying data-science and machine-learning methods to diagnose climate change and climate variability in transient and long-run snapshot simulations. P.J. Bartlein, AGU Fall Meeting Abstracdts 2022.

"LPJ-GUESS Simulated Vegetation Changes from 21-0 ka for the HJ Andrews Experimental Forest Long Term Ecological Research Site (Oregon, USA)", S Shafer, P Bartlein, AGU Fall Meeting Abstracts 2021, PP15E-0971.

"Climatic Controls on Wildfire Regimes and Vegetation from 15-10 ka in the Pacific Northwest (USA)," SL Shafer, PJ Bartlein, AGU Fall Meeting Abstracts 2020, PP047-0006.

"Expanding the palette of potential explanations for change and variability in paleoclimatic reconstructions by applying data-science and machine-learning methods to diagnose data-model mismatches." PJ Bartlein, AGU Fall Meeting Abstracts 2020, PP045-02.

"Disentangling the Hierarchy of Controls and Responses in Paleoclimatic Variations: A Diagnostic Study of the Mid-Holocene Drought in the Mid-Continent of North America Using Paleohydrological Data Syntheses and Transient Climate Simulations (Invited), P.J. Bartlein and S.P. Harrison, Abstract PP21B-02 presented at the 2018 Fall Meeting, AGU, Washington D.C., 10-14 December 2018.

"The calendar effect in PMIP4 time-slice and transient experiments: overall impact and strategies for data analysis." P.J. Bartlein and S.L. Shafer, 1st PMIP4 Conference, Swedish Museum of Natural History, Stockholm, Sep. 25-29, 2017.

"The impact of the calendar effect and pseudo-daily interpolation algorithms on paleoclimatic data-model comparisons." P.J. Bartlein and S.L. Shafer, Abstract PP31C-2296 presented at 2016 Fall Meeting, AGU, San Francisco, Calif., 11-15 Dec.

"Diagnosing mismatches between simulations and observations in data-model comparisons using the CMIP5.PMIP3 simulations", Eos Trans. AGU, 95, Fall Meet. Suppl., Abstract PP42A-08 (2015)

"Time" (with Stephen Daniels), in "Radical Intradisciplinairity", 2015 Association of American Geographers Presidential Plenary Session "

"Global and regional variations in biomass burning since the last glacial maximum" (invited), J.R. Marlon and P.J. Bartlein, Syntraces Workshop, Providence RI, November 2012.

"The sedimentary charcoal record of regional and global biomass burning on multi-decadal-to-orbital time scales" (invited), P.J. Bartlein and J.R. Marlon, Eos Trans. AGU, 91, Fall Meet. Suppl., Abstract GC33E-06 (2011)

"Evaluation of the CMIP-5 paleo-simulations" (Invited), S.P. Harrison and P.J. Bartlein (2011) World Climate Research Program Open Science Conference, Denver, October 2011.

"The terrestrial paleoclimatic record of climate-system reorganization over the past 21,000 years" (Invited) Eos Trans. AGU, 90(52), Fall Meet. Suppl., Abstract PP13G-01 (2010)

"Pollen-based reconstructions of bioclimatic variables for the mid-Holocene and LGM: issues and strategies in diagnosing and benchmarking paleoclimatic simulations", P.J. Bartlein and Late-Quaternary Quantitative Climate Reconstruction Working Group, PMIP-3 Kyoto Workshop, (invited) November 2010.

"The past as a key to the future: why paleoclimatology tells us that global warming is real and may be worse than we think" Roy J. Shlemon Center for Quaternary Research, University of Wyoming, April 2010.

"Climate modes and their role in climate variations in the western United States: past, present, and future" Department of Geography, University of Utah (invited) April 2009.

"Data-Model Comparisons: Overview" S.P. Harrison and P.J. Bartlein, Palaeoclimate Modelling Intercomprison Project, Phase II. Workshop, Estes Park, CO (invited) September 2008.

"Abrupt climate change in a warming world: lessons from Holocene droughts," Dickey Center for International Understanding Lecture Series on Social Dimensions of Global Environmental Change (invited), May 2007.

"Applicability of Oscillatory Climate-Mode Indices for the Diagnosis and Prognosis of Interannual and Longer Time Scale Climate Variability of the Northeastern Pacific and Western North America", American Geophysical Union Fall Meeting, San Francisco, December 2006.

"Temporal and Spatial Structure in the Climatic Controls of Wildfire in the Western United States" P.J. Bartlein and S.W. Hostetler, invited presentation, 3rd International Fire Ecology & Management Congress, San Diego, November 2006.

"Climate and fire in the western United States," Trewartha lecture (invited), Department of Geography, University of Wisconsin, April 2006.

"A hierarchical view of the climatic controls of wildfire in the western United States," invited lecture, Department of Geography, University of Minnesota, April 2005.

"Using the Paleorecord to Evaluate Climate-Model Performance in Projecting Changes in Climate Variability," P.J. Bartlein, invited presentation, American Geophysical Union Fall Meeting, San Francisco, December 2004.

"Using Model Simulations to Improve Interpretations of Paleoclimate Variability and Estimates of Potential Future Droughts," S.L. Shafer and P.J. Bartlein, American Geophysical Union Fall Meeting, San Francisco, December 2004.

"Hierarchical controls of fire weather and fire climate in the western United States," P.J. Bartlein, S.W. Hostetler, S.L. Shafer J.O. Holman, and A.M. Solomon, American Geophysical Union Fall Meeting, San Francisco, December 2004.

"Broad-scale climatic controls on fire regimes in the western United States -- today and during the Holocene," P.J. Bartlein, C. Whitlock, and S. Hostetler, invited presentation, Ecological Society of America, Annual Meeting, August 2004.

"Development of Modern Analogue and Mutual Overlap Techniques for Paleoclimatic Reconstructions and Model Validation from Plant Macrofossil Assemblages in North America," R.S. Thompson, K.H. Anderson, L.E. Strickland, P.J. Bartlein, S.L. Shafer, American Geophysical Union Fall Meeting, San Francisco, December 2003.

"Assessment of Modern Climate Baselines for Paleoclimatic Reconstructions and Model Testing in North America," S.L. Shafer, P.J. Bartlein, K.H. Anderson, R.S. Thompson, American Geophysical Union Fall Meeting, San Francisco, December 2003.

"Disturbance Frequency Changes in Western North and South America During the Holocene," C. Whitlock, P.Bartlein, M.M. Bianchi, C. Briles, A. Brunelle, C. Long, V. Markgraf, J. Marlon, C. Meeker, M. Power, M. Walsh, American Geophysical Union Fall Meeting, San Francisco, December 2003.

"Holocene fire reconstructions from the northwestern U.S.: an examination at multiple time scales" C. Whitlock, P.J. Bartlein, J. Marlon, A. Brunelle and C. Long, 5th Symposium on Fire and Forest Meterology, and 2nd

International Wildland Fire Ecology and Fire Management Congress, American Meterological Society, Orlando FL, November 2003.

"Using a regional climate model to diagnose climatological and meteorological controls of wildfire in the western United States," S.W. Hostetler, P.J. Bartlein, J.O. Holman, A.M. Solomon and S.L. Shafer, 5th Symposium on Fire and Forest Meterology, and 2nd International Wildland Fire Ecology and Fire Management Congress, American Meterological Society, Orlando FL, November 2003.

"The seasonal cycle of wildfire and climate in the western United States" P.J. Bartlein, S.W. Hostetler, S.L. Shafer J.O. Holman, and A.M. Solomon, 5th Symposium on Fire and Forest Meterology, and 2nd International Wildland Fire Ecology and Fire Management Congress, American Meterological Society, Orlando FL, November 2003.

"Comparisons of paleoenvironmental observations and paleoclimatic simulations: principal results and strategies for the next iteration" P.J. Bartlein and S.P. Harrison, Invited presentation, XVI International Quaternary Association Congress, Reno NV, July 2003

"Examining the Pacific airmass model of Holocene Aridity in the Mid-Continent of North America" J.J. Shinker, B.N. Shuman and P.J. Bartlein, American Geophysical Union Fall Meeting, San Francisco, December 2002.

"Hydrologic and vegetation changes in the northwestern U.S. and their role in shaping past and future fire regimes" C. Whitlock, P.J. Bartlein and S.L. Shafer, American Geophysical Union Fall Meeting, San Francisco, December 2002.

"Spatial Relationships Between Patterns of Woody-Plant Taxonomic Richness and Environmental and Bioclimatic Variables in North America" Robert S. Thompson, Sarah L. Shafer, Katherine H. Anderson, Patrick J. Bartlein, American Geophysical Union Fall Meeting, San Francisco, December 2001

"North American mid-continental aridity: atmospheric circulation, moisture flux, and surface water- and energy-balance controls" Peter V. Killoran, J.J. Shinker, and P.J. Bartlein, American Geophysical Union Fall Meeting, San Francisco, December 2000.

"Arctic Land-Atmosphere Interactions Since the Last Glacial Maximum: Perspectives from Models of Climate, Vegetation, Ice Sheets, and Continental Hydrology, and from Paleoenvironmental Data Syntheses." Invited presentation, American Geophysical Union Fall Meeting, San Francisco, December 2000.

"The Westerlies." Invited presentation, InterPEP Linkages workshop, PAGES International Project Office, Bern, Switzerland, September 1999.

"The northern continental interiors during the Holocene: pattern, timing and possible mechanisms of dry phases." Invited lecture, European Science Foundation, European Reasearch Conference, Albufiera, Portugal, May 1999.

"The role of vegetation in paleoclimatic variations." Invited lecture, Earth Sciences Dept., University of California, Santa Cruz, May 1999.

"Controls and effects of orbital-timescale paleoclimatic variations." Invited presentation, *Mechanisms of Millennial-Scale Global Climatic Changes*, American Geophysical Union Chapman Conference, June 1998.

"Characteristic features of climatic variations on timescales from 10^1 to 10^7 years." Invited lecture, Ecological Society of America Annual Meeting, August 1997.

"Forward and inverse modeling approaches for data-model comparisons," Invited lecture, European Science Foundation, European Reasearch Conference, Il Ciocco, Italy, May 1997.

"Climate-simulations of the glacial-interglacial transition. Invited lecture, Quaternary Research Center, University of Washington, Seattle, March 1997.

"Applications of paleoclimatic simulations and data syntheses to understanding the climate system." oral presentation, First GAIM Science Conference, Garmisch-Partenkirchen, Germany, Sept. 1995.

“Past environmental changes: characteristic features of Quaternary climate variations.” invited paper, NATO Past and Future Rapid Envionmental Changes: The Spatial and Evolutionary Responses of Terrestrial Biota, Crieff, Scotland, June 1995.

“Application of lake status data in testing palaeoclimatic hypotheses.” invited paper, ESF/EPC Workshop on Paleohydrology as reflected in lake-level changes as climatic evidence for Holocene times, Hörby, Sweden, May 1995.

"Past and potential future vegetation responses to climatic variations in the western United States," and "The spectrum of climatic variations and its ecological and evolutionary implications." invited lectures, Univ. Minnesota, April 1993.

"Forward- and inverse-modeling approaches to paleodata interpretation," invited presentation, NATO Advanced Research Workshop, Aussois, France, October 1993.

"The forward-modeling approach in paleoclimatic analysis: middle-Pliocene vegetation distributions in North America," invited presentation, U.S. Geological Survey, Pliocene Research, Interpretation and Synoptic Mapping (PRISM) Project Workshop, Reston, Virginia, May 1993.

"What past climates can tell us about the future," and "A framework for paleoclimatic variations in Beringia," invited lectures, Alaska Quaternary Center and Global Change Institute, University of Alaska, Fairbanks, October 1992.

"Biotic responses to climatic changes during the Quaternary," and "Validation of climate simulation models using paleoecological data," invited lectures, University of Arizona, Tucson, April 1992.

"Large-scale controls of paleoclimatic variations in northwestern North America," invited symposium lecture, Quaternary Research Center, Seattle, May 1992.

"Analysis of the patterns of Holocene climatic change in the Northern Rocky Mountains," C. Whitlock and P.J. Bartlein, 1991 Annual Meeting, Geological Society of America, San Diego, October 1991.

"Environmental controls of playa status and processes, Western U.S.," P.F. McDowell, P.J. Bartlein and S.P. Harrison, 1991 Annual Meeting, Geological Society of America, San Diego, October 1991.

"Large-scale controls of the seasonal variations of temperature, precipitation and effective moisture in the Western United States," P.J. Bartlein and C. Whitlock, invited paper presented at the 1991 Annual Meeting, Geological Society of America, San Diego, October 1991.

"Modern vegetation/climate relationships, changes in plant distributions and paleoclimatic estimates in the western United States," R.S. Thompson and P.J. Bartlein, invited paper presented at the 76th Annual Meeting, Ecological Society of America, San Antonio, August 1991

"Paleoclimatic simulations and the interpretation of Quaternary records," invited lecture, Department of Quaternary Geology, Lund University, May 1991.

"Climatic variability on all time scales" and "What paleoclimatic models can tell us about Quaternary climatic variations," invited lectures, Department of Physical Geography, Uppsala University, May 1991.

"Climatic assessment of the last deglaciation in the Pacific Northwest as inferred from paleobotanical data," C. Whitlock, R.S. Thompson and P.J. Bartlein, 1990 Annual Meeting, Geological Society of America, Dallas, October 1990.

"Reconciliation of paleoclimatic simulations and the paleoecological and geological record," presented at the 43rd Annual Meeting of the Rocky Mountain Section of the Geological Society of America, Jackson, Wyoming, May 1990.

"Paleoecological contributions to climatological research," presented at the 1990 Annual Meeting of the Association of American Geographers, Toronto, April 1990.

Rapporteur, Second Global Change Institute, Snowmass, Colorado, July 1989.

"Large-scale controls of late-Quaternary climatic variations in the Pacific Northwest," invited paper presented at a symposium in honor of Henry P. Hansen, Quaternary Research Center, University of Washington, Seattle, May 1989.

"Paleoclimatic responses to changing ice-sheet size, sea-ice extent, sea-surface temperature and insolation," invited paper presented at the Tenth Biennial Conference, American Quaternary Association (AMQUA), Amherst, June 1988.

"Paleoclimatic implications of regional patterns in the late-glacial vegetation of the northwestern U.S.," C.W. Barnosky and P.J. Bartlein, Geological Society of America, Rocky Mountain Section Meetings, Sun Valley, May 1988.

"Paleoclimatic simulations for the past 18,000 years: The role of boundary condition changes in determining regional climatic chronologies," invited paper presented at IGCP 158: Palaeohydrological Changes in the Temperate Zone in the Last 15000 Years, Symposium, Lund, Sweden, May 1987.

"Climatic response surfaces for dynamic plant geography," P.J. Bartlein and I.C. Prentice, invited paper presented at the Ecological Society of America Symposium, "Vegetation Response to Temporal Climatic Change", Minneapolis, June 1985.

"Warm Holocene climates: analogs for the future?" invited lecture, Quaternary Research Center, University of Washington, May 1985.

"Time series analysis of a 1000-year high-resolution pollen record from north-central Wisconsin," J.T. Overpeck and P.J. Bartlein, VIth International Palynological Conference, Calgary, August 1984.

"Climatic response surfaces for some eastern North American pollen types," P.J. Bartlein, I.C. Prentice and T. Webb III, presented at the Eighth Biennial Conference American Quaternary Association (AMQUA), Boulder, August 1984.

"Predictable components of climatological data sets," presented at the 1984 Annual Meeting of the Association of American Geographers, Washington D.C., April 1984.

"Holocene climatic change in the Midwest United States: temperature and precipitation maps," presented at the Second Conference on Climatic Variations of the American Meteorological Society, New Orleans, January 1983.

"Holocene precipitation variations in the midwestern United States," P.J. Bartlein and T. Webb III, presented at the Seventh Biennial Conference American Quaternary Association (AMQUA), Seattle, June 1982.

"Extent and duration of the mid-Holocene drought in the midwestern United States," P.J. Bartlein and T. Webb III, presented at the 1982 Annual Meeting of the Association of American Geographers, San Antonio, April 1982.

"Holocene patterns of moisture stress and airmasses in eastern North America," P.J. Bartlein and E.C. Fleri, Symposium on Variations in the Global Water Budget, Oxford, U.K., August 1981.

"Characterization of causality and feedback between climatic time series," presented at the First Conference on Climatic Variations, American Meteorological Society, San Diego, January 1981.

"Climatic anomalies and streamflow," invited paper presented at the 1980 Climate Symposium, Department of Geography, Louisiana State University, March 1980.

"Water years 1973 and 1977--Examples of the dependence of water supplies on short-period climatic variations," presented at the annual meeting of the Association of American Geographers, New Orleans, April 1978.

"Short period climatic variations and Lake Superior net basin supplies," presented at the 20th Conference of Great Lakes Research, Ann Arbor, May 1977.

"The influence of large-scale atmospheric circulation on Lake Superior levels and supplies," presented at the 1977 Annual Meeting of the Association of American Geographers, Salt Lake City, April 1977.

PROFESSIONAL MEMBERSHIPS

American Association for the Advancement of Science
American Geophysical Union
American Quaternary Association
Association of American Geographers

MANUSCRIPT REVIEWS

Annals, *Association of American Geographers*, *Ecology*, *Climate of the Past*, *Geographie Physique et Quateraire, Geological Society of America Bulletin, Geology, Global Change Biology, International Journal of Climatology, The Holocene, J. Biogeography, J. Geophysical Research*, *J. Quaternary Science, J. Vegetation Science, Nature*, *Professional Geographer*, *Quaternary Research*, *Quaternary Science Reviews, Reviews of Geophysics*, *Science, Water Resources Bulletin*.

EDITORIAL BOARDS

Current: *Quaternary Research* (Associate Editor); *Annals,* Association of American Geographers
Past: *Quaternary Science Reviews ,The Holocene* (Associate Editor)*; Geology*

PROPOSAL REVIEWS

National Science Foundation: Climate Dynamics Program, Division of Polar Programs, Ecology Program, Geography and Regional Science Program, Division of Earth Sciences, Instrumentation and Facilities, Continental Hydrologic Processes, Earth-System History Program, Arctic System Science, Paleoclimatology Program. NOAA: Office of Global Programs. European Science Foundation.

EXTERNAL REVIEWS OF PROMOTION-AND-TENURE CASES

2001 (1), 2002 (2), 2003 (1), 2004 (2), 2005 (2), 2006 (4), 2007 (4), 2008 (3), 2009 (2), 2010 (2); 2011 (4); 2012 (4); 2013 (3); 2014 (3); 2015 (1); 2016(3); 2017 (2)

OTHER PROFESSIONAL SERVICE

National Science Foundation, Earth-System History Program, Review Panel Member (2005)
National Science Foundation, Earth-System History Program, Paleoclimatology of the Arctic (PARCS) Steering Committee Member (1997-2000)
National Oceanic and Atmospheric Administration, Review Panel Member, Paleoclimatology Program, 1996-1997
National Science Foundation, Review Panel Member, Geography and Regional Science Program, 1994-95
Organizing Committee, NATO Advanced Research Workshop, "Strategies for the Use of Paleoclimate Data Sets in Climate Model Intercomparison and Evaluation," 1993.
Scientific Program Co-Chair, American Quaternary Association, 1994 Biennial Meeting
National Science Foundation, Paleoclimatology of Arctic Lakes and Estuaries, Steering Committee Member
American Quaternary Association, Council Member, 1991-92
Program Committee, Association of American Geographers, 1986 Annual Meeting

PARTICIPATION IN INTERNATIONAL COLLABORATIVE RESEARCH PROGRAMS

COHMAP -- Cooperative Holocene Mapping Project (NSF)
PMIP -- Paleoclimate Modelling Intercomparison Project (NATO, NOAA, IGBP-PAGES)
TEMPO -- Testing Earth-system Models using Paleoenvironmental Observations (NSF)
LIGA -- Last Interglacial in the Arctic (NATO)
Biome 6000 -- Paleovegetation Mapping (IGBP)
GPWG – Global Palaeofire Working Group (QUEST, NSF)
INQUA/PALCOMM – International Quaternary Union, Paleaeoclimatology Commission

OTHER

IPCC Fifth Assessment Report, Contributing Author, Ch. 5.
U.S. Climate Change Science Program, Synthesis and Assessment Product 3.4, Abrupt Climate Change, contributing author
U.S. National Assessment, *Climate Change Impacts on the United States*, member, forest sector assessment team.
IPCC Third Assessment Report, Expert Reviewer, Ch. 2, 3, 8 and 10.

UNIVERSITY COMMITTEE SERVICE

2015-2015	Faculty Personnel Committee (university P&T)
2011-2013	CAS Dean's Advisory Committee (college P&T), chair (2012-2013)
2007-2007	UO Educational Technology Committee
2005-2007	College of Arts and Science Curriculum Committee
2006-2007	University Undergraduate Council
2001	Outside member, Mikesell Chair (Economics) search committee
1998-2000	Faculty Personnel Committee (university P&T)
1993	Internal review committee, Dept. Mathematics
1992-1996	Data Services Laboratory Committee
1991-1993	University Graduate Council, Secretary
1987-2000	Social Sciences Instructional Computing Laboratory Committee (chair, 1993)
1986-87	Applications Committee, University Computing Center

DEPARTMENTAL COMMITTEE SERVICE

Computing and Equipment	1982/83-2009
Graduate Admissions	1987/88, 1988/89, 1989/90, 1992/93, 1995/96, 1996/97, 1997/98, 1999/00
Search Committee (*=chair)	1988/89, 1993/94*, 1996/97*(2), 1997/98*, 1998/99*, 1999/00*, 2000/01*, 2003/04*, 2005/06, 2006/07, 2010/11
Affirmative Action Liaison	1996/97-present
Personnel	1997/98-2001/02 ; 2006/07- ??

GRADUATE AND POST-GRADUATE STUDENT TRAINING

Post-doctoral advisor:

Shuman, B. Integrating Late-Quaternary lake-level Records with fossil -pollen data to document millennial-scale variations in North American climates. NOAA Postdoctoral Program in Climate and Global Change, August 2001-July 2003.

Advisor: (10 Ph.D., 8 Master's)

Izumi, K., 2014, Application of paleoenvironmental data for testing climate models and understanding past and future climate variations, Ph.D. Dissertation, University of Oregon, Department of Geography, 172 p.

Praskievicz, S., 2014, A hierarchical modeling approach to simulating the geomorphic response of river systems to climate change. Ph.D. Dissertation, University of Oregon, Department of Geography, 133 p.

Young, A., 2014, Analysis of spatiotemporal variations in human- and lightning-caused wildfires from the western United States (1992-2011). M.S. Thesis, University of Oregon, Department of Geography, 45 p.

Marlon, J., 2009, The geography of fire: A paleo perspective, Ph.D. Dissertation, University of Oregon, Department of Geography, 225 p.

Tang, G., 2008, An examination of vegetation modeling-related issues and the variation and climate sensitivity of vegetation and hydrology in China, Ph.D. Dissertation, University of Oregon, Department of Geography, 156 p.

Light, A. 2004, Reflexive design and design patterns for GIS and Cartography. Ph.D. Dissertation, University of Oregon, Department of Geography, 97p.

Holman, J.O., 2004, Quantitative comparison of categorical maps with applications for the analysis of global environmental data. Ph.D. Dissertation, University of Oregon, Department of Geography, 107p.

Shinker, J.J., 2003. Mechanistic controls of North American climate variability. Ph.D. Dissertation, University of Oregon, Department of Geography, 152 p.

Shafer, S.L., 2000. Potential vegetation response to future climate change in western North America and its implications for biological conservation and geographical conceptualizations of place. Ph.D. Dissertation, University of Oregon, Department of Geography, 150 p.

Killoran, P.V., 2000. Controls of surface temperature and precipitation patterns associated with the Asian summer monsoon. M.S. Thesis, University of Oregon, Department of Geography, 54 p.

Shinker, J.J., 1999. Development and persistence of North American mid-continental moisture anomalies. M.A. Thesis, University of Oregon, Department of Geography, 68 p.

Holman, J., 1996. Spatial interpolation of categorical data : an application for mapping global vegetation data. M.S. Thesis, University of Oregon, Department of Geography, 47 p.

Mock, C.J., 1994. Modern climate analogues of late-Quaternary paleoclimates for the Western United States. Ph.D. Dissertation, University of Oregon, Department of Geography, 286 p.

Shafer, S.L., 1993. The hydrologic response to landuse change in a small watershed in western Oregon. M.S. Thesis, University of Oregon, Department of Geography, 106 p.

Gottfried, C.E., 1992. Residential wood heating and urban air quality : evaluation of a voluntary wood-heating curtailment program. M.A. Thesis, University of Oregon, Department of Geography, 83 p.

McDowell, J.S. 1990. Monsoonal influences on vegetation distribution. Terminal Project -- University of Oregon, Interdisciplinary Studies Program, 1990. 56 p.

Lipsitz, B.B., 1988. Climatic estimates for locations between weather stations in the Pacific Northwest : comparison and application of two linear regression analysis methods. M.A. Thesis, University of Oregon, Department of Geography, 68 p.

Hostetler, S.W., 1987. Simulation of lake evaporation with an energy balance-eddy diffusion model of lake temperature: model development and validation, and application to lake-level variations at Harney-Malheur Lake, Oregon. Ph.D. Dissertation, University of Oregon, Department of Geography, 162 p.

Second Reader or Committee Member, Dept. Geography: (28 Ph.D.; 32 Masters)

Uscanga Castillo, Adriana, 2022, From plot to region: assessing the role of land use in tropical montane forest structure and dynamics. Ph.D. Dissertation, University of Oregon, Department of Geography, 141 p.

Hendricks, Lauren B., 2022, Fire in the rainforest: fire history and carbon pools in southwestern Borneos's tropical rainforest. Ph.D. Dissertation, University of Oregon, Department of Geography, 114 p.

Chen, Dongmei, 2019, Effects of climate change and forest governance on large-scale insect outbreaks: a socio-ecological systems case study of the Mountan Pine Beetle in North America. Ph.D. Dissertation, University of Oregon, Department of Geography, 213 p.

Brittell, M., 2019, Neuro-imaging support for the use of audio to represent geospatial location in cartographic design, Ph.D. Dissertation, University of Oregon, Department of Geography.

Herring, E., 2014, Late Quaternary and Holocene paleoecology of interior mesic forests of northern Idaho. Ph.D. Dissertation, University of Oregon, Department of Geography, 112 p.

Flower, A., 2013, Western spruce budworm, climate, and forest fire interactions in the Interior Pacific Northwest: a Multi-century Dendrochronological Analysis, Ph.D. Dissertation, University of Oregon, Department of Geography.

Fisher, D., 2013, Postglacial transient dynamics of Olympic Peninsula forests: Comparing predictions and observations, M.S. Thesis, University of Oregon, Department of Geography, 70 p.

Kelly, M., 2013, Route descriptions using maps, photomaps and imagery: an experimental analysis. Ph.D. Dissertation, University of Oregon, Department of Geography.

Massingill, C., 2011, Geomorphology, hydrology and biology of floodplain vegetation in the Sprague Basin, OR: history and potential for natural recovery. Ph.D. Dissertation, University of Oregon, Department of Geography.

Lawrence, M., 2011, Behavioral and neurological studies in tactile map reading and training by persons who are blind or visually impaired. Ph.D. Dissertation, University of Oregon, Department of Geography.

Hughes, M., 2008, Channel change of the Upper Umatilla River during and between flood periods: variability and ecological implications. Ph.D. Dissertation, University of Oregon, Department of Geography.

Walsh, M.K. 2008, Natural and Anthropogenic Influences on the Holocene Fire and Vegetation History of the Willamette Valley, Northwest Oregon and Southwest Washington. Ph.D. Dissertation, University of Oregon, Department of Geography, (co-advisor)

Briles, C.E., 2008, Vegetation and fire history of the biologically diverse Klamath Mountains, northern California, USA. Ph.D. Dissertation, University of Oregon, Department of Geography, (co-advisor)

Power, M. 2006. Recent and Holocene fire, climate and vegetation linkages in the northern Rocky Mountains, USA. Ph.D. Dissertation, University of Oregon, Department of Geography, 244 p. (co-advisor).

Day, J.W. 2005. Historical savanna structure and succession at Jim's Creek, Willamette National Forest, M.A. Thesis, University of Oregon, Department of Geography, 55p.

Kohler, N.P., 2005, Protected areas and landscape change in mainland southeast Asia. Ph.D. Dissertation, University of Oregon, Department of Geography, 129 p.

Rubenstein, V., 2005, Interpretation of charcoal accumulation rates in a sediment core from Carp Lake, Washington. M.A. Thesis, University of Oregon, Department of Geography,

Seralles, R.J., 2004, Landscape, electricity, and policy: an integrated geographic approach to renewable energy. Ph.D. Dissertation, University of Oregon, Department of Geography

Bandow, J.R., 2003. Holocene alluvial history of the Middle Fork John Day River, Oregon. M.A. Thesis, University of Oregon, Department of Geography. 106 p.

Minckley, T.A., 2003. Holocene environmental history of the northwestern Great Basin and the analysis of modern pollen analogues in western North America. Ph.D. Dissertation, University of Oregon, Department of Geography, 310 p.

Marlon, J., 2003. A meta-analysis of charcoal-based fire history records from the northwestern United States. M.S. Thesis, University of Oregon, Department of Geography.

Long, C.J., 2003. Holocene fire and vegetation history of the Oregon Coast Range, USA, Ph.D. Dissertation, University of Oregon, Department of Geography, 270 p.

Green, J.K., 2003, Influence of debris flow deposits on small stream channel morphology in the Oregon Coast Range. M.S. Thesis, University of Oregon, Department of Geography.

Dalldorf, G.K., 2003. Influences of wind direction, topography and Paleolake history on the formation of Aeolian deposits in the Connley Hills, Fort Rock Basin, Lake County, Oregon. M.A. Thesis, University of Oregon, Department of Geography, 122 p.

Briles, C.E., 2003. Postglacial vegetation and fire history near Bolan Lake in the northern Siskiyou Mountains of Oregon. M.S. Thesis, University of Oregon, Department of Geography. 149 p.

Fouty, S.C., 2003. Current and historic stream channel response to changes in cattle and elk grazing pressure and beaver activity. Ph.D. Dissertation, University of Oregon, Department of Geography, 646p.

Brunelle-Daines, A. 2002. Holocene changes in fire, climate and vegetation in the Northern Rocky Mountains of Idaho and western Montana. Ph.D. Dissertation, University of Oregon, Department of Geography, 178 p.

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1988-89 302 (F), 4/510 (W), 507 (W)
1989-90 302 (F), 4/510 (S), 314 (S)
1990-91 101 (F), 321 (F), 507 (F), 314 (W), 607 (W)
1991-92 4/514 (W), 4/525 (W), 4/526 (W), 607 (W)
1992-93 314 (F), 4/525 (F), 4/526 (F), 4/510 (S)
1993-94 314 (F), 4/510 (F), 4/514 (S), 4/525 (S), 4/526 (S)
1994-95 sabbatical leave
1995-96 102(W), 4/525(W), 4/514(S), 607(S)
1996-97 101(F), 4/525(F), 314 (S), 4/532(S)
1997-98 101(F)*, 4/530(F)*, 607(F)*, 4/525(F), 102(W), 4/514(W)
1998-99 321(F), 607(F), 102(W), 314(W)
1999-2000 321(F), 4/514(F), 102(W), 4/521(W)
2000-2001 321(F), 314(F), 143(S)*, 4/532(S), 607(S)
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143: Geog. 143 Global Environmental Change
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314: Geog. 314 Geographical Data Analysis (24)
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Title	Start Date	Duration	Source	U of O Budget
Prehistoric Climate Determined from Modern Pollen and Climate Relationships	9-82	1 yr	DOE, subcontract from ORNL	$ 15,000
Application of Pollen-Climate Response Surfaces to the Verification of Climate Model Simulations	8-84	2 yrs	NSF, subcontract from Brown Univ.	16,989
Vegetational and Climatic Histories of Northcentral Alaska During the Late Quaternary	12-84	3 yrs	NSF Division of Polar Programs	67,639
Methods for the Validation of Paleoclimatic Simulations	2-85	3.5 yrs	DOE, subcontract from Brown Univ.	52,987
Prehistoric Climate Determined from Modern Pollen and Climate Relationships	1-86	1 yr	DOE, subcontract from ORNL	8,993
Holocene Paleoclimatic Reconstructions for Europe, NATO Grant for International Collaboration in Research	6-87	2 yrs	NATO Intl. Collaboration in Research	0
COHMAP—Cooperative Holocene Mapping Project	9-87	4 yrs	NSF Climate Dynamics Program	184,650
Paleoclimatology of the Southern Great Basin: Reconstruction of Late-Quaternary Climatic Variations from Paleoecological Data	9-87	4 yrs	USDI, U.S. Geological Survey	115,555
Assessing the Response of Vegetation to Future Trace-Gas-Induced Climatic Change: The Application of Ecological Response Surfaces	1-88	1 yr	EPA, Center for Global Habitability	19,932
COHMAP--Cooperative Holocene Mapping Project	9-91	4 yrs	NSF Climate Dynamics Program	442,000
Paleoclimatic Reconstruction and Climate Model Validation using Paleoecological Data Sets	3-92	2 yr	USDI, U.S. Geological Survey	43,000
Potential Magnitude and Rate of Future Vegetation Change in the Western United States in Response to Global Warming (with C. Whitlock)	7-92	1 yr	DOE, Natl. Inst. Global Environ-mental Change	75,650
EPA Student Traineeship in Global Change	9-94	3 yrs	EPA, Student Research Traineeship	79,181
TEMPO—Testing Earth-system Models using Paleoenvironmental Observations	6-95	4 yrs	NSF, Paleo-climatology Program	496,868
Quaternary Paleoclimatic Variations in Beringia: Large-Scale Controls and Regional Responses (with C. Mock)	6-96	3 yrs	NSF, Arctic System Science	224,565
Applications of Continental-Scale Climate and Vegetation Data Sets to the Validation of Climate Models and the Projection of the Impacts of Future Climatic Changes	10-96	1 yr	USDI, U.S. Geological Survey	24,995
Collaborative Research: Late-Quaternary Climate of Northeast Asia: Temporal and Spatial Variations (with C. Mock)	10-98	3 yrs	NSF, Earth-System History Program	111,766
TEMPO—Testing Earth-system Models using Paleoenvironmental Observations	9-99	4 yrs	NSF, Earth-System History Program	286,383
Collaborative Research: Land-Atmosphere Interactions in Beringia over the Last 21,000 Years: An Investigation of Feedback Using the Arctic Regional Climate System Model	9-2000	4 yrs	NSF, Earth-System History Program	83,853
Methods for Projecting the Response of Vegetation to Regional Climate Change	9-2000	1 yr	USDI, U.S. Geological Survey	44,995
Collaborative ESH/PARCS Research: Centennial-to-Millennial-Scale Climatic Fluctuations in Northeast Siberia during the	9-2001	3 yrs	NSF, Earth-System History Program	0

Last Glacial Cycle (P. Anderson, L. Brubaker, PIs)				
Development and Testing of Process-Based Models and Datasets for Regional-Scale Modeling	3-2001	1 yr	USDI, U.S. Geological Survey	43,025
Climatic Controls of Fire in the Western United States: from the Atmosphere to Ecosystems (S. Hostetler, P. Bartlein, and A. Solomon, PIs, $572,136 total)	10-2001	3 yrs	USDI, Joint Fire-Science Program	0
Holocene Fire-Climate-Vegetation Linkages in the Western Mid-latitude Forests of North and South America (C. Whitlock and P. Bartlein, PIs)	10-2001	3 yrs	NSF, Earth-System History Program	418,634
Doctoral Dissertation Research: Visualizing Mechanistic Controls of North American Climate Variability Through Cartographic Animation. (J.J. Shinker and P. Bartlein)	8-2002	1.5 yrs	NSF, Geography and Regional Science Program	9,445
Collaborative Research: Surface-Atmosphere Feedbacks and Holocene Climate Variations in Eastern North America: Linkages, Impacts, and Governing Mechanisms (B. Shuman and P. Bartlein, PIs, $198,532 Transferred to Univ. Minnesota)	10-2003	4 years	NSF, Earth-System History Program	0
Methods for the interpolation of base-line climate data to regular grids or arbitrary point locations	8-2004	1 year	USDI, U.S. Geological Survey	9,724
Collaborative Research: Project PALEOVAR—Past Climatic variability: understanding mechanisms and interactions with the mean state	6-2006	5 years	NSF, Paleoclimatology	438,803
Collaborative Research: Holocene Fire-Climate Linkages In Southern South America: Explaining Regional Responses To Large-scale Climate Forcing	9-2007	3 yrs	NSF, Paleoclimatology	160,305
Doctoral Dissertation Research: Global Fire Since the Last Glacial Maximum	6-2007	1.5 yrs	NSF, Geography and Regional Science Program	7,585
Assessing and Visualizing the Effects of Past and Future Climate Change on Species and Ecosystems	8-2010	2 yr	U.S. Geological Survey	259,464
Doctoral Dissertation Research: A Hierarchical Modeling Approach to Simulating the Geomorphic Response of River Systems to Environmental Change	8-2012	2 yr	NSF, Geography and Spatial Sciences Program	13,726
Climate Change Effects on Ecosystems: Analysis of Simulated Climate Change Impacts on Ecosystems in the Western US	5-2014	1 yr	USGS, subcontract from OSU	28,440
Collaborative Research: Testing hypotheses about human and climate impacts on fire over the past millennium using paleodata syntheses and global fire modeling	9-2014	3 yrs	NSF, Geography and Spatial Sciences	27,370
Total External Funding				$3,649,914