

**SHERILYN CLAIRE FRITZ**

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**EDUCATION**

1985 Ph.D. (Ecology), University of Minnesota, Minneapolis, MN  
1979 M.S. (Biology), Kent State University, Kent, Ohio  
1974 B.A. (Biology), Macalester College, St. Paul, MN, cum Laude, with honors in Biology

**PROFESSIONAL EXPERIENCE**

2010- George Holmes University Professor, University of Nebraska - Lincoln  
2017 Tage Erlander Visiting Professor, Lund University, Sweden  
2012 Visiting Research Professor, Geological Sciences, Stockholm University  
2004-2010 Willa Cather Professor, University of Nebraska – Lincoln  
2003 Visiting Professor, Department of Quaternary Geology, Lund University, Sweden  
1999- Professor (2002-) & Associate Professor (1999-2002), Department of Earth and Atmospheric Sciences, School of Biological Sciences, University of Nebraska  
1995-1998 Associate Professor (1998), Assistant Professor (1995-1998), Department of Earth & Environmental Sciences, Lehigh University  
1985-1994 Research Associate, Limnological Research Center, University of Minnesota  
1974-1977 Assistant Librarian, Chemistry Library, University of Minnesota

**CURRENT RESEARCH PROJECTS**

Paleoclimatology and paleohydrology of the NA Great Plains & Northern Rocky Mountains  
Climate history and the evolution of biodiversity in tropical South America

**AWARDS, HONORS**

2017 Tage Erlander Visiting Professorship, awarded annually by the Swedish Research Council to a single scientist in natural sciences and engineering  
Certificate of Reviewing Excellence, a top-25 reviewer in 2015, Journal of Paleolimnology  
Hans Oeschger Medal 2014, European Geophysical Union; for outstanding achievements in climate change science (past, present, future)  
Fellow (elected), American Association for the Advancement of Science (AAAS), 2014-  
Certificate of Reviewing Excellence, Quaternary Research, Elsevier Press, 2013  
The Bert Bolin Lecture on Climate Research, Stockholm University, May 2012. An annual lecture to commemorate the first Intergovernmental Panel on Climate Change (IPCC) chair  
George Holmes University Professor, University of Nebraska 2010 –  
Willa Cather Professor, University of Nebraska 2004-2010  
Fellow, Robert Daugherty Water for Food Institute, University of Nebraska, 2014-  
J.B. Coffman Faculty Excellence Award, EAS Department, University of Nebraska, 2000, 2001, 2004, 2014  
The Nebraska Lecturer, University of Nebraska 2007. Faculty member chosen to showcase University scholarship in a lecture for the general public  
Charles Bullard Fellowship in Ecology, Harvard University, 2006-2007  
Fellow, Center for Great Plains Studies, University of Nebraska 2000-present

**PROFESSIONAL ACTIVITIES & COMMITTEES**

President AMQUA (American Quaternary Association) 2016-2018; President-Elect 2014-2016  
 PAGES (Past Global Changes - A Future Earth Core Project) Co-chair 2016-2018; Executive  
 Committee 2014-2018; Scientific Steering Committee 2012-2018  
 The Holocene, Associate Editor, 2000-2005; Editorial Board, 2005 -  
 Journal of Paleolimnology, Editorial Board, 2000-  
 Palaeogeography, Palaeoclimatology, Palaeoecology; Editorial Board, 2006-  
 Diatom Monographs, Koeltz Scientific Publishers, Scientific Advisory Board, 2009-  
 Quaternary Research, Editorial Board, 2017 -  
 The Quaternary, Editorial Board, 2017 -  
 LacCore (NSF Lacustrine Core Repository), External Advisory Board, 2007-  
 International Paleolimnology Association, Council of Advisors, 2008-  
 European Geophysical Union (EGU), Climate Division, Medal Committee 2014-  
 The UArctic Council, Delegate 2016-  
 U.S. National Committee, International Union for Quaternary Research (under the auspices of  
 the US National Research Council/National Academy of Sciences), 2000-2007; 2016-2018  
 PAGES/IGBP. Salinization & Climate Impacts on Lakes, Project Co-director, 2003 -2012  
 AAAS, Section on Geology and Geography, Nominating Committee, 2007-2010  
 ASLO (American Society of Limnology and Oceanography): Nominating Committee 2008-  
 2010; Program Co-Chair, 2005 Aquatic Sciences Meeting; Nominating Committee - G.E.  
 Hutchinson Award, 1996-1998; Student Poster Award Judge, 1999  
 International Union for Quaternary Research (INQUA), Councilor, Commission for  
 Paleocology & Human Evolution, 2003- 2007  
 American Quaternary Association, Council of Advisors, 2000-2004  
 Center for Ecological Health Research (USEPA Research Center), University of California at  
 Davis, Science Advisory Committee, 1996-2000  
 Geology (Geological Society of America), Editorial Board, 1997-1999  
 NOAA Paleoclimate Program, Advisory Board, Diatom Databases, 1995-2000  
 IGBP-PAGES Course "Holocene Climate Reconstruction", Invited Instructor, London, 1998  
 ASLO Working Group: Freshwater Ecosystems & Climate Change (Great Plains), 1994-1995  
 International Society for Diatom Research, Chair, Nominating Committee, 1994

**PROFESSIONAL SOCIETIES**

American Association for the Advancement of Science, American Geophysical Union, American  
 Society of Limnology & Oceanography, American Quaternary Association, Geological Society  
 of America, International Paleolimnology Association, International Society of Diatom Research

**EXTERNAL GRANTS AND CONTRACTS**

- 2017-2020 International Continental Drilling Program. Trans-Amazon Drilling Project. P.  
 Baker, S. Fritz, C. Silva, A. Marzoli. \$1.5M.
- 2017-2018 National Geographic Society. Long-term perspectives on recent limnological  
 change in the Ecuadoran Andes. \$23,670.
- 2016-2018 NASA. Mapping Linkages between Geophysical and Biological Diversity Across  
 Space and Time in the Andes, Amazon, and Chocó of Peru, Ecuador, and  
 Colombia. \$60,170.
- 2015-2019 National Science Foundation (Integrated Earth Systems). The Response of Continental  
 Hydrothermal Systems to Tectonic, Magmatic, and Climatic Forcing. R. Sohn, K. Ding,

- S.C. Fritz**, R. Harris, C. Linder, K. Luttrell, W. Seyfried, C. Whitlock. \$2.99M (UNL Award \$160,000)
- 2014-2015 International Continental Drilling Program (ICDP). Trans-Amazon Drilling Project: History of the Neotropical Rain Forest. Funding for Workshop. P. Baker, **S.C. Fritz**, C. Silva, C. Rigsby, E. Schefuss, R. Trinidade. \$62,000
- 2013-2018 National Science Foundation (Frontiers in Earth System Dynamics). The Role of Mountains, Landscapes, and Climate in the Distribution and Generation of Biodiversity in the Amazon/Andean Forest. P. Baker, **S. Fritz**, C. Dick, B. Horton, D. Battisti. \$4.43M (UNL Award \$379,000)
- 2013-2016 National Science Foundation (Sedimentary Geology and Paleobiology). Morphology and Molecules: Diatom Diversification, Extinction, and Dispersal in an Ancient Tropical Lake System. **S.C. Fritz**, T. Spanbauer, P. Baker. \$185,000
- 2013-2015 National Geographic Society. Holocene Culture and Climate in the Southern Lake Titicaca Basin: clarifying lake levels and subsistence in the prehistoric Formative times. C. Hastorf, M. Bruno, **S.C. Fritz**. \$19,630
- 2012-2013 Organization for Tropical Studies (OTS), Emerging Frontiers in Tropical Science Working Group: Geogenomics – Linking Geology and Genomics to Understand the Evolutionary History of Tropical Forests in the Americas. Full funding for Workshop at Las Cruces, Costa Rica for 8 scientists. P. Baker, **S.C. Fritz**, and C. Dick, PIs
- 2012 National Evolutionary Synthesis Center (NESCent). The Role of Mountains, Climate, and Landscape in Generating Amazon/Andean Biodiversity. Full funding for workshop at NESCent Headquarters, NC for 30 people. P. Baker, **S.C. Fritz**, and C. Dick, PIs
- 2012-2014 Swedish Research Council. Asian Monsoon variability and its impact on terrestrial ecosystems in Thailand during the past 50,000 years. B. Wolfarth, **S.C. Fritz**, P. Reimer, R. Smittenberg, L. Lowemark. 2,573,000 SEK (~\$392,000 US)
- 2010-2011 Yellowstone Park Association (Canon Foundation). The last 2000 years of ecohydrology in Yellowstone National Park. Subcontract on grant to C. Whitlock. (UNL Award \$12,500)
- 2009-2015 NSF (IGERT). Resilience and adaptive governance in stressed watersheds. C. Allen, **S. Fritz**, A. Samal, A. Tomkins, D. Tyre. Total UNL Award = \$3,166,173
- 2009-2010 National Geographic Society. Catastrophic regime shifts in Amazon floodplain lakes. P. Baker, **S. Fritz**, J. Terborgh, L. Davenport, H. Ortega. \$22,000
- 2009-2011 Swedish Research Council. Asian Monsoon variability and its impact on terrestrial ecosystems in Thailand during the past 25,000 years. B. Wolfarth, **S.C. Fritz**, P. Reimer, J. Routh, L. Lowemark. 1,800,000 SEK (~\$260,000 US)
- 2008-2012 NSF (Paleoclimate and Sedimentary Geology). Controls on ecosystem development during periods of rapid environmental change. C. Whitlock and **S.C. Fritz**. Total Award = \$445,000; UNL Award = \$185,000
- 2008-2010 Swedish Research Council. Ecosystem thresholds in lakes in response to climate change. D. Conley, D. Hammarlund, J. Carstensen, **S.C. Fritz**. 2,000,000 SEK (US\$315,000)
- 2006-2011 NSF (ESH). Holocene drought in the North American interior. **S.C. Fritz**, P.A Baker, Y. Huang, and E. Grimm. Total Award = \$530,910, UNL Award = \$173,319
- 2006-2009 NSF (Hydrology). Mechanisms producing variation in lake salinity in dune environments: Nebraska Sand Hills. V. Zlotnik, **S.C. Fritz**, J. Swinehart, J. Lane, M. Person, T. Halihan. Total Award = \$322,000; UNL portion = \$219,958
- 2007-2008 National Geographic Society. The South American Summer Monsoon and Amazon precipitation variation since the Last Glacial Maximum. **S.C. Fritz** & P. Baker, \$21,255
- 2006-2007 National Park Service. Holocene climate variability of Yellowstone's Northern Range. C. Whitlock and **S.C. Fritz**. Total Award = \$51,175, UNL Award \$23,000

- 2005-2008 USEPA. Solving complex water issues in Nebraska: modeling the Western Platte River Valley. K. Hoagland and **S.C. Fritz**. \$522,200
- 2005-2006 Lithochimiea, Inc. The recent trophic history of Tenkiller Lake, Tulsa, OK. \$12,750
- 2004-2005 USGS. Hydrogeological controls on salinity patterns in Sand Hill lakes, NE. V. Zlotnik, **S.C. Fritz**, D. Loope, J. Swinehart. \$19,975
- 2003-2006 NSF (Ecosystems). The role of dissolved organic material in regulating primary production in prairie saline lakes. J. Saros, **S.C. Fritz**, & C. Osburn. Total Award = \$250,000; UNL portion = \$30,000
- 2003-2007 NSF (Biocomplexity). Spatiotemporal coupling of ecological and geological dynamics in the Nebraska Sandhills. D. Wedin, D. Loope, G. Henebry, **S.C. Fritz** & 11 additional UNL faculty. \$1,800,000
- 2003-2005 National Park Service. Climatic and hydrologic variability of Yellowstone's Northern Range during the past millennium. C. Whitlock, **S.C. Fritz**, L. Stevens, L. Graumlich, & J. Rosenbaum. Total Award = \$50,000, UNL portion = \$20,000
- 2002-2004 NSF (ESH). Understanding the record of rapid and gradual climate change in large lakes. Subcontract on grant to M. Hendrix & J. Moore. Fritz Award = \$16,000
- 2002-2004 NSF (Ecology). Climate and ecological controls on the Holocene range expansion of western hemlock and western red cedar in the interior Pacific. Subcontract on grant to F. Hu & D. Gavin. Fritz award = \$25,000
- 2001-2002 NSF (DBI). Multi-user and multi-disciplinary ion and element analyzers. J. Knops, **S. Fritz**, T. Joern, D. Wedin, & A. Zera. Total Award = \$63,618
- 2001-2004 Department of Education (GAANN). Multidisciplinary graduate student training in environmental biology. T. Joern, PI + multiple UNL co-PIs. Fritz was a member of the grant steering committee. DOE Award = \$432,855 + \$158,856 UNL match
- 2000-2003 USEPA. A lake classification system for agriculturally dominated landscapes. J. Holz, A. Gittleson, J. Merchant, **S.C. Fritz**, K. Hoagland, I. Boardi, & D. Rundquist. Total UNL Award = \$1,224,706
- 2000-2005 NSF (Earth Systems History). Lake Titicaca Drilling Project. P. Baker, **S.C. Fritz**, & G. Seltzer. Total Award \$1,550,000 (includes drilling costs); Fritz portion = \$324,967
- 2000-2001 International Continental Drilling Program. Lake Titicaca Drilling Project. P. Baker, **S.C. Fritz**, & G. Seltzer. Total Award = \$275,000
- 2000-2004 NSF (Earth Systems History/Polar Programs). Modern & Holocene limnological gradients at the western edge of the Greenland Ice Sheet. sole PI. \$438,790
- 2000-2002 NSF (Paleoclimatology). Lake records of vegetational and climatic history of SW Siberia. Subcontract on grant to H.E. Wright, Jr. Fritz Award = \$57,465
- 2000-2001 NSF (Biocomplexity). Spatiotemporal coupling of ecological and geological dynamics in the Nebraska Sandhills. D.A. Wedin, T.J. Arkebauer, **S.C. Fritz**, G.M. Henebry, & D. Loope. Incubation Grant. Total Award = \$100,000
- 1999-2002 NSF (Earth Systems History). Early- versus late-Holocene drought variation in the Northern Rocky Mountains. L.R. Stevens, **S.C. Fritz**, & C. Whitlock. Total Award = \$410,052; UNL portion = \$266,147
- 1999-2001 NSF (Earth Systems History). A Quaternary paleoclimatic record from tropical South America: drilling the Salar de Uyuni. P. Baker, **S.C. Fritz**, G. Seltzer, & T. Lowenstein. Total Award \$760,400; Fritz portion = \$78,500
- 1999-2000 Science Museum of Minnesota. The trophic history of the Marine-Carnelian watershed. sole PI. \$30,000 (no indirect)

- 1999-2001 State of Minnesota. Atmospheric & non-point pollution trends in Minnesota lakes. E.B. Swain, D.R. Engstrom, **S.C. Fritz**, & D. Swackhammer. Total Award \$325,000 (no indirect); Fritz portion = \$61,240
- 1997-2000 NSF (Paleoclimatology). A Quaternary paleoclimatic record from tropical South America: Lake Titicaca. P. Baker, G. Seltzer, **S.C. Fritz**, & R. Dunbar. Total Award \$621,168; Fritz portion = \$109,500
- 1997-1999 NSF (Ecological & Evolutionary Physiology). The role of ionic concentration and composition in determining diatom species distribution in saline lakes. sole PI. \$95,000
- 1997-1998 International Continental Drilling Program. Drilling for scientific purposes in the tropical-subtropical Andes: Lake Titicaca, Bolivia/Peru. Workshop funding. P. Baker, **S.C. Fritz**, G. Seltzer. Total Award = \$25,000
- 1996-1998 NSF (Earth Systems History). Reconstruction of drought patterns in North America's arid interior. sole PI. \$125,000
- 1996-1997 NSF (Paleoclimatology). Lake Titicaca: Toward a detailed record of Late Quaternary climate in subtropical South America. P. Baker, G. Seltzer, **S.C. Fritz**, & R. Dunbar. Total Award = \$105,000
- 1995-1996 NSF (Climate Dynamics). High-resolution paleoclimatic record of a closed-basin lake. **S.C. Fritz** & K.R. Laird. Total Award = \$40,000
- 1994-1995 NSF (Climate Dynamics). SGER: Paleoclimatic research in Lake Titicaca. P. Baker, G. Seltzer, **S. Fritz**, & R. Dunbar. Total Award \$15,000
- 1993-1995 NOAA (Paleoclimatology). High-resolution climate reconstruction from saline-lake sediments in the northern Great Plains. **S.C. Fritz**, D.R. Engstrom, & E. Ito. Total Award = \$150,000
- 1991-1994 NSF (Climate Dynamics). Climate history from the paleosalinity of lakes in the northern Great Plains. D.R. Engstrom & **S.C. Fritz**. Total Award \$275,000
- 1991-1994 NSF (Systematics). A multidisciplinary study of the evolution of the diatom *Stephanodiscus yellowstonensis*. Subcontract on grant to E.C. Theriot. \$30,000
- 1991-1993 Minnesota Department of Natural Resources. Trophic response of lakes to aeration. sole PI. \$10,000
- 1990-1991 Michigan Department of Natural Resources. The recent paleolimnology of the Elk River Watershed. **S.C. Fritz**, D.R. Engstrom, J.C. Kingston, & J.P. Smol. Total Award = \$45,000
- 1990-1991 Glen Lake, Michigan Lake Association. Historical trends in water-quality in Glen Lake Michigan. sole PI. \$10,000
- 1990-1992 National Environmental Research Council (NERC), U.K. Diatom/water-chemistry transfer-functions for paleoclimate reconstruction. R.W. Battarbee, **S.C. Fritz**, S. Juggins, & A. Street-Perrot. Total Award = £30,000
- 1986-1988 National Park Service Research Center, University of Wyoming. Erosion rates and recent paleolimnology of lakes in Yellowstone National Park. H.E. Wright, C.W. Barnosky, D.R. Engstrom, & **S.C. Fritz**. Total Award = \$50,000
- 1981-1982 NSF (Ecology) Doctoral Dissertation Research Grant. Lake evolution and human habitation in southeastern England. Total Award = \$2000

#### **MEETING SESSIONS AND WORKSHOPS CONVENED**

Amazon-Andes Geophysical and Biophysical Diversity (NASA funded workshop), Nebraska City, NE, February 2017, workshop organizer  
 PAGES Open Science Meeting, Zaragoza, Spain, May 2017, planning committee

International Continental Drilling Program (ICDP) Workshop: “Trans-Amazon Drilling Project: History of the Neotropical Rain Forest”, March 2015, Manaus, Brazil. Co-organizer

Association for the Sciences of Limnology and Oceanography (ASLO), February 2015, Granada, Spain. “Recent Ecological Change in Ancient Lakes”, session co-chair

American Geophysical Union, December 2014, San Francisco. “A Living Planet – Biotic Responses to Past Changes in Earth’s Climate and Geology”, session co-chair

Association for Tropical Biology and Conservation/Organization for Tropical Studies Meeting, June 2013, San Jose, Costa Rica. “Geogenomics – Linking Geology and Genomics to Understand the Evolutionary History of Tropical Forests in the Americas”. Session co-chair

Organization of Tropical Studies (OTS), Emerging Frontiers in Tropical Science Working Group, March 2013, Las Cruces, Costa Rica “Geogenomics – Linking Geology and Genomics to Understand the Evolutionary History of Tropical Forests in the Americas”. Workshop co-organizer

PAGES Open Science Meeting, February 2013, Goa, India “Biodiversity and Refugia – Lessons Learned from the Past”. Session co-chair

National Evolutionary Synthesis Center (NESCent) Workshop, November 2012, “The Role of Mountains, Climate, and Landscape in Generating Amazon/Andean Biodiversity”. Workshop co-organizer

International Paleolimnology Association 2012, Glasgow, Scotland. “Understanding low-latitude climate change”, Session co-chair

INQUA 2011, Bern, Switzerland. “Late Quaternary climate trends: expression and causation”. Session co-convenor.

PAGES/LIMPACS Workshop “Climate Impacts and Salinization of Lakes”, Nanjing, China, April 2007. Co-convenor and guest editor of special issue of Quaternary International, vol. 212 (1), January 2010

“Teaching Climate Change: Lessons from the Past”, Bozeman, Montana, August 2006. NAGT On the Cutting Edge Workshop; co-convenor

ASLO Aquatic Sciences Meeting, 2005, Salt Lake City, UT, Meeting Co-chair

ASLO Aquatic Sciences Meeting, 2005, Salt Lake City, UT, “Siliceous records of marine and lacustrine systems”. Session chair

PAGES Workshop “Salinization and Climate Impacts on Saline Lakes”, Mildura, Australia, October 2004, Meeting co-chair

3<sup>rd</sup> International Limnogeology Conference, Tucson Arizona, March 2003. “Lakes in Arid Climates”, Session co-chair

ASLO 2003, Salt Lake City, UT. “Lacustrine Hydrology – Past and Present”. Session chair

ASLO 2002, Victoria, BC “Climate-Lake Interactions”, Session chair

NSF-Sponsored Workshop “Drilling in the Tropical Andes”, Lake Titicaca, March 1995, Workshop Co-Organizer

### **INVITED WORKSHOPS**

IODP-PAGES Workshop on the Global Monsoon, September 2017, Shanghai, China.

DFG-IODP-ICDP 2017 Colloquium, March 2017, Braunschweig, Germany

CSDCO Continental Scientific Drilling Planning Workshop, October 2016, Washington, DC

ICDP Training Course on Planning, Management and Realization of Continental Scientific Drilling Projects, October 2015, Windischenbach, Germany

USGS Powell Center, Fort Collins, CO. Workshop on North America 2K Paleoclimate Synthesis, June 2014, October 2015

- IODP Workshop “Deep Drilling of the Amazon Continental Margin”, March 2014, Buzios, Brazil
- NSF Workshop on Scientific Drilling and the Evolution of the Earth System, Norman, OK, May 2013
- SynTraCE-21, “Data-Model Comparisons of the Last 21K”, Brown University, November 2012
- Royal Swedish Academy of Sciences. “Natural and man-made climate change: a symposium in honour of Bert Bolin”, May 2012, Stockholm
- ICDP Workshop: “Scientific Drilling of Lake Chalco, Basin of Mexico”, March 2012, Mexico City
- ICDP Workshop: “Climate Evolution in Central Asia during the Past Few Million Years: A case study from Issyk-Kul.” June 2011, Bishkek, Kyrgyzstan
- NSF Workshop on the NEOTOMA Database Consortium, September 2010, Madison, WI
- PAGES International Workshop on Floodplain Lakes, September 2010. Fayetteville, AK
- IODP-ICDP Workshop: “Acquiring High to Ultra-high Resolution Geological Records of Past Climate Change by Scientific Drilling”. October 2008, Potsdam, Germany
- Chapman Conference on Lakes and Climate Change, Lake Tahoe, September 2008. Working group co-chair
- Swedish Research Council, “Regime Shifts in Aquatic Ecosystems”, Lund, Sweden, May 2008
- USEPA Workshop “Climate Change Effects on Biological Indicators”, Washington, DC, February 2008. Invited plenary speaker
- USGS/NCAR Workshop “Paleoclimatic Variability & Its Role in Understanding Climate Change”, Boulder, CO, July 2004
- CLIVAR/PAGES/IPCC Workshop “A Multi-Millennia Perspective on Drought and Implications for the Future”, Tucson, AZ, November 2003
- NSF-ASLO Workshop “Emerging Research Issues for Limnology”, Boulder, CO, December 2002
- NSF-Sponsored Workshop “Late Quaternary Paleoclimate of the Central Andes”, Tucson, AZ, January 2001
- PAGES/NSF-Workshop “High-resolution Climate Variability of the Holocene”, Avignon, France, October 2000
- NOAA-NASA Workshop “Central North American Drought and Associated Land Cover Change”, Boulder, CO, June 1999
- PEPI Workshop, “Paleoclimate of the Americas: Interhemispheric Comparisons”, Merida, Venezuela, March 1998
- NSF Earth Systems History Program: Workshop and Planning Meeting (PEPI), Albuquerque, January 1995
- NOAA Workshop on Diatom Taxonomy & Paleolimnological Databases, San Francisco, December 1994
- NOAA Workshop on Paleolimnological Databases for Climate Reconstruction, Philadelphia, April 1993

### **LECTURES & PAPERS PRESENTED (since 2005)**

- 2017 Lund University, June 2017. “The Cenozoic evolution of geophysical and biotic diversity in the tropical Andes and Amazon” (Tage Erlander inaugural lecture)
- 017 PAGES Young Scientists Meeting, Morillo de Tou, Spain, May 2017. “The Cenozoic evolution of geophysical and biotic diversity in tropical South America” (invited talk)
- 2017 DFG-IODP-ICDP 2017 Colloquium, March 2017. “The Trans-Amazon Drilling Project” (invited lecture)

- 2016 University of Wisconsin-Madison, November 2016. “The Cenozoic evolution of geophysical and biotic diversity in the tropical Andes and Amazon” (invited seminar)
- 2016 Indiana State University, February 2016. “The Cenozoic evolution of geophysical and biotic diversity in the tropical Andes and Amazon” (invited seminar)
- 2015 CEREGE, Aix-en-Provence, France, July 2015. “Insights on diatoms, hydrology, and climate: the contributions of Francoise Gasse” (invited lecture)
- 2015 Department of Quaternary Geology, Lund University, Sweden, June 2015. “Landscape evolution in the wake of retreating glaciers” (invited lecture)
- 2015 Paleobiology Program, University of Washington, April 2015. “Quaternary climate variation in tropical South America and the evolution of tropical biodiversity” (invited seminar)
- 2015 Institute for Pyrenean Ecology, Zaragoza, Spain, February 2015. “Variation in the South American Summer Monsoon on decadal to evolutionary time scales”. (invited seminar)
- 2015 PAGES SA Paleoscience Symposium, January 2015, Las Cruces, Chile. “Quaternary variation in the South American Summer Monsoon and its biotic impacts” (invited talk)
- 2014 LOTRED Climate and Human Impact in South and Central America, July 2014, Medellin, Colombia. “Diatom diversification, dispersal, and extinction in an ancient tropical lake”
- 2014 European Geophysical Union, Vienna, Austria, April 2014. “Through layers of mud and time”, The Hans Oeschger Medal Lecture
- 2014 University College London, The Richard Battarbee Annual Lecture, May 2014. “From microscopic to macroscopic – Insights on climate and environment from diatoms” (invited)
- 2014 40<sup>th</sup> Annual Great Plains Symposium, Lincoln, NE, April 2014. “Great Plains droughts and megadroughts in prehistory” (invited plenary lecture)
- 2014 IODP Workshop on Deep Drilling of the Amazon Continental Margin, Buzios, Brazil, March 2014. “The history of the composition and diversity of the Amazon tropical forest” (invited talk)
- 2013 Association for Tropical Biology and Conservation/Organization for Tropical Studies Meeting, June 2013, San Jose, Costa Rica. “Climate and refugia: new insights on Quaternary climate variation in tropical South America”
- 2013 Indiana State University (Earth and Environmental Sciences). “Quaternary climate variation and its implications for the evolution of biodiversity” (invited seminar)
- 2012 SynTraCE-21 Workshop, Providence, RI. “Patterns and controls of moisture variation in tropical South America during the past 21 ka” (invited talk)
- 2012 Stockholm University. “Through the looking glass: perspectives on climate from the last ~11,500 years” (invited lecture)
- 2012 Royal Swedish Academy of Sciences, Stockholm. “The climate of the Holocene and its landscape and biotic impacts” (invited lecture)
- 2012 University of Wyoming, Laramie (Geology). “Quaternary hydrology and climate in tropical South America – implications for neotropical biodiversity” (invited seminar)
- 2012 North Dakota Grass and Beef Producers Annual Meeting, Streeter, ND. “Through layers of mud and time: an environmental history of the Great Plains since the end of the last ice age” (invited talk)
- 2010 University of Maine, Orono (Climate Change Center). “Landscape evolution in the wake of retreating glaciers” (invited lecture)
- 2010 AGU Meeting of the Americas, Foz do Iguassu, Brasil. “Patterns and controls of moisture variation in tropical South America during the Holocene and late-glacial periods as inferred from lacustrine records” (invited speaker)

- 2010 Southern Connections Congress, Bariloche, Argentina. “Toward an integrated understanding of patterns and processes of climate variation in tropical South America at orbital to multi-decadal scales” (invited speaker)
- 2009 North Dakota State University (Biology and Conservation). “The climate history of tropical South America and its biological consequences” (invited lecture)
- 2008 Stockholm University (Quaternary Geology), “Late Quaternary climate variability in tropical South America” (invited lecture)
- 2008 Braunschweig University (Geology), “Late Quaternary climate variability in the tropical Andes” (invited lecture)
- 2008 Lund University (Quaternary Geology), “Paleolimnological perspectives on abrupt shifts in lacustrine ecosystems” (invited talk)
- 2008 USEPA Workshop - Climate Impacts on Biological Indicators, Washington, D.C. “Long-term perspectives on climate impacts on aquatic ecosystems” (invited plenary lecture)
- 2007 Kansas State University (Geology). “Late Quaternary climate variability in the tropical Andes” (invited seminar)
- 2007 North Carolina State University (Earth and Atmospheric Sciences). “Late Quaternary climate variability in the tropical Andes” (invited seminar)
- 2007 University of Adelaide, Australia (Geography). “Quaternary limnologic and climatic variability in the southern tropical Andes” (invited seminar)
- 2007 International Quaternary Association Congress, Cairns, Australia. “Late Quaternary hydrologic variability in the southern tropical Andes and its relationship to the adjoining Amazon Basin and major climate drivers” (invited session keynote talk)
- 2007 PAGES/LIMPACS Workshop on Climate/Human Impacts on Lakes, Nanjing, China. “Late-Holocene eolian activity and drought in the Nebraska Sand Hills, USA”
- 2007 University of Edinburgh (Geosciences), “Climate variability in the tropical Andes during the last 400,000 years” (invited lecture)
- 2007 CEREGE, Aix-en-Provence, France, “Climate variability in the tropical Andes during the last 400,000 years” (invited lecture)
- 2006 American Geophysical Union, San Francisco. “Holocene multi-Decadal to millennial-scale hydrologic variability on the South American Altiplano” (invited talk)
- 2006 Queens University, Kingston, ON (Biological Sciences). “Limnological and climatic variability in the southern tropical Andes during the last 400,000 years” (invited seminar)
- 2006 University of Wisconsin – Madison (Center for Climatic Research) “Holocene hydrologic variability in the North American interior” (invited seminar)
- 2006 Brown University, Providence, RI (Geological Sciences) “Holocene hydrologic variability in the North American interior” (invited seminar)
- 2006 Harvard Forest, Petersham, MA “Deciphering long-term hydrologic variability from lake sediments” (invited seminar)
- 2006 10<sup>th</sup> International Paleolimnology Conference, Duluth, MN “Deciphering hydrologic variability from lacustrine deposits” (invited plenary lecture)
- 2006 Groundwater Foundation Conference “Nebraska’s Water Future”, Kearney, NE. “A long-term perspective on drought in the Great Plains” (invited talk)
- 2006 Creighton University (Environmental Sciences). “Climate history of the tropical Andes over the last 400,000 years” (invited lecture)
- 2006 European Geosciences Union, Vienna. “Multi-decadal to millennial scale variation in the South American summer monsoon during the Holocene”
- 2006 Louisiana State University (Geology). “Glaciation and hydrologic variation in the tropical Andes during the last 400,000 years” (invited seminar)

2006 Institute of Ecosystem Studies. “Lakes in the North American interior across gradients of space and time” (invited lecture)

### **MAJOR UNIVERSITY SERVICE**

Department of Geosciences Executive Committee (2002-present); Graduate Committee (2014-present)

UNL Faculty of Life Sciences Executive Committee (2009-2014); Arts and Sciences Life Science Task Force (2015-2016)

UNL Search Committee, Dean of Arts and Sciences (2013-2014); Senior Vice Chancellor for Academic Affairs (2014-2015); Executive Vice Chancellor 2016

UNL IGERT Graduate Training Course in Resilience, Coordinating Committee (2009-2015)  
University of Nebraska Water for Food Institute, Advisory Committee (2009-2015), Executive Director Search Committee (2010-2011)

UNL Distinguished Professorships Committee (2009-2014)

UNL Water Initiative Co-Director (2003-2011): Planning and coordination of campus-wide activities related to water and of university interactions with national and regional water-resource agencies and groups; oversight of budget.

UNL NSF ADVANCE Award (to promote women in STEM fields), Internal Advisory Board (2009-2013)

### **GRADUATE STUDENTS AND POST-DOCTORAL ADVISEES**

#### *Post-doctoral Associates:*

Cumming, Brian F. (1993-1994) Distribution and Taxonomy of Diatoms in Closed-Basin Lakes of Western Canada. (NSERC Postdoctoral Fellow) (Professor, Queens U)

Bennett, Danuta (2002- 2005). Using paleolimnology to evaluate a lake classification system developed from contemporary data sets in an agricultural landscape (Research Assoc. UCSB)

Ekdahl, Erik (2004-2006). High-resolution records of Quaternary climate in the Lake Titicaca drainage basin (Research Scientist, California State Water Board, Sacramento, CA)

Hobbs, William (2008-2009). Holocene paleohydrology of central North America (Ecologist, Washington State Department of Ecology)

Shinneman, Avery (2008-2009). Shallow lakes in central North America as paleoenvironmental recorders (Instructor, University of Washington-Bothell)

#### *Graduate Students – Degree Completed:*

Laird, Kathleen (1992 – 1996). Ph.D. “A High Resolution Paleoclimatic Record of a Closed-Basin Lake in the Northern Great Plains” (Research Professor, Queens U)

Olson, Olaf G. (1994 – 1998). Ph.D. “Mechanisms Controlling Long-Term Changes in Periphytic Diatom Community Structure”

Saros, Jasmine E. (1995 – 1999). Ph.D. “The Role of Ionic Concentration and Composition in Determining Diatom Distributions in Saline Lakes” (Professor, U Maine)

Ramstack, Joy (1997 – 1999). M.S. “Pollution Trends in Minnesota Lakes: The Use of Fossil Diatoms as Paleoindicators of Human Impact” (Research Scientist, Science Museum MN)

Campbell, Joshua (1999-2001). M.S. “Diatom Distribution and Response to Climate in Lakes of the Northern Rocky Mountains” (Assistant Professor, Highpoint U, NC)

Jovanelly, Tamie (1999-2001). M.S. “Groundwater-Surfacewater-Climate Interactions of Two Lakes in Southeastern North Dakota” (Associate Professor, Berry College, GA)

- Tapia, Pedro (1998 - 2003). Ph.D. “Late-Quaternary Diatom Stratigraphy, Paleoenvironments, and Climate Variability in Lakes Titicaca and Junin (Peru and Bolivia)” (Scientist, Peruvian Ministry of Culture)
- Jacobs, Kimberly (2002-2004), M.S. “Lacustrine Evidence for Moisture Changes during Marine Isotope Stage 3 in the Nebraska Sand Hills”
- Stone, Jeffery (2000 - 2005) Ph.D. “Diatom Records of Early- versus Late-Holocene Drought Variability in the Northern Rocky Mountains” (Assistant Professor, Indiana State U)
- Westover, Karlyn (2000-2006), Ph.D. “Diatom-Inferred Records of Paleolimnological and Holocene Paleoclimate Variability from the Altai Mountains (Siberia) and Columbia Mountains (British Columbia)” (Research Scientist, Indiana State U)
- Aebly, Frank (2001 - 2006), Ph.D. “Geomorphic Records of Holocene Lake-Level History in West Greenland” (Hydrologist, US Forest Service, Mendocino, CA)
- Schneider, Jens (2005-2009), Ph.D. “Linking Eolian and Lacustrine Records of Late Holocene Climate in the Nebraska Sand Hills” (Geologist, BHP Billiton, Houston)
- Bracht, Brandi (2005-2009), Ph.D. “Evaluating Lake Response to Environmental and Climate Change using Lake Core Records and Modeling” (Senior Hydrologist, NE Department of Natural Resources)
- Lu, Yanbin (2010 - 2014), Ph.D. “Watershed and Aquatic Ecosystem Evolution during the Late Glacial and Early Holocene in the Greater Yellowstone Region” (Micropaleontologist, PaleoData Inc, New Orleans)
- Spanbauer, Trisha (2010 - 2015), Ph.D. “Sizes, Shifts, and Structures: A Statistical Exploration of Changes in Diatom Morphologies and Communities” (NRC Research Associate, USEPA, Cincinnati)
- Chraibi, Victoria (2012-2016), Ph.D. “A Paleolimnological Analysis of the Hierarchy of Environmental Controls on the Resilience of Aquatic Communities in Yellowstone National Park, USA” (Assistant Professor, Tarleton State University, Texas)
- Whiting, Evan (2014-2016), M.S. “Constraining Neogene Temperature and Precipitation Histories in the Central Great Plains using the Fossil Record of *Alligator*” (PhD Candidate, University of Minnesota)
- Weide, D. Marie (2012-2016), Ph.D. “Environmental variability on the Bolivian Altiplano during the middle and late Holocene inferred from paleoenvironmental records from the southern basin of Lake Titicaca and Andean ice cores”

*Current Graduate Students and Postdocs:*

- Jones, Amanda (2015- ), M.S. “Neogene paleoenvironments in the Lauca Basin of Chile”
- Brown, Sabrina (2016- ), Ph.D. “Hydrothermal impacts on aquatic ecosystems in Yellowstone National Park”
- Melina, Feitl (2016- ), Ph.D. “Climate impacts on South American diatom communities across scales”
- Benito, Xavier (2016- ), Postdoc. “Diatom biogeography in tropical South America”
- Zahajská, Petra (2017-) Ph.D, Lund University, co-advisor. “Silica cycling in Yellowstone Lake”
- Cartier, Rosine (2017-), Postdoc, Lund University, co-supervisor. “Isotopic perspectives on the paleohydrology of the Yellowstone region”

**TEACHING EXPERIENCE**

Undergraduate: Biogeography; Plant Ecology; Introduction to Environmental Science; Climate, Geosphere, & Biosphere; The Politics of Water

Graduate: Quaternary Paleoclimatology and Paleoecology; Biogeochemical Cycles; Ecosystem Ecology; Aquatic Ecosystems; Geological Limnology; Advanced Limnology

**REFEREED PUBLICATIONS** (\*indicates work completed by a grad student or postdoc during their tenure in Fritz's lab)

\*Benito, X., **S.C. Fritz**, M. Steinitz-Kannan, \*P. Tapia, M. Kelly, T. Lowell. 2018. Geo-climatic factors drive diatom community distributions in tropical South American freshwaters. *Journal of Ecology* (accepted)

\*Spanbauer, T.L., \*S.R. Brown, \*R. Cartier, D.J. Conley, **S.C. Fritz**, C.M. Schiller, E.C. Theriot, C. Whitlock, P. Zahajka. 2018. Yellowstone Lake coring: research with a history. *Limnology and Oceanography Bulletin* (accepted).

**Fritz, S.C.**, P.A. Baker 2107. Geogenomics – integrating geology and phylogenetics to unravel the evolutionary history of Earth and its biota. *Past Global Changes Magazine* 25: 90-91.

\*Spanbauer, T.L., **S.C. Fritz**, P.A. Baker. 2017. Punctuated change in the morphology of an endemic diatom from Lake Titicaca. *Paleobiology*, doi: 10.1017/pab.2017.27

Vélez, M.I., C. Jaramillo, A. Salazar, \*X. Benito, **S. Fritz**, \*P. Tapia, D. Lubiniecki, N. Kar, J. Escobar. 2017. Aquatic ecosystems on a newly formed eco-space: Early Pliocene lakes in the central Andean Altiplano. *Paleo3* doi.org/10.1016/j.palaeo.2017.11.001

Shuman, B., C. Rouston, N. McKay, **S. Fritz**, D. Kaufman, M. Kirby, C. Nolan, G. Pederson, J. St. Jacques. 2017. Placing the Common Era in a Holocene context: millennial-to-centennial patterns and trends in the hydroclimate of North America over the past 2 ka. *Climate of the Past Discussions*, doi.org/10.5194/cp-2017-35

Terborgh, J.W., L.C. Davenport, A. Belcon, G. Katul, J.J. Swenson, **S.C. Fritz**, P.A. Baker. 2017. Twenty-three-year timeline of ecological stable states and regime shifts in upper Amazon oxbow lakes. *Hydrobiologia* DOI 10.1007/s10750-017-3384-z

\*Weide, D.M., **S.C. Fritz**, C.A. Hastorf, M. Bruno, P.A. Baker, S. Guedron, W. Salenbien. 2017. A ~6000-year diatom record of mid- to late-Holocene fluctuations in the level of Lago Wiñaymarca, Lake Titicaca, (Peru/Bolivia). *Quaternary Research* 88: 179-182, doi:10.1017/qua.2017.49

\*Weide, D.M., **S.C. Fritz**, B.A. Brinson, L. Thompson, W.E. Billups. 2017. Freshwater diatoms in the Sajama, Quelccaya, and Coropuna glaciers of the South American Andes. *Diatom Research* 32: 153-162, doi:10.1080/0269249X.2017.1335240

\*Lu, Y., **S.C. Fritz**, \*J.R. Stone, T.R. Krause, C. Whitlock, E.T. Brown, \*J.V. Benes. 2017. Trends in catchment processes and lake evolution during the late-Glacial and early- to mid-Holocene inferred from high-resolution XRF data in the Yellowstone region. *Journal of Paleolimnology* 58: 551-569, doi 10.1007/s10933-017-9991-x

\*Lu, Y., \*J. R. Stone, **S.C. Fritz**, \*K. Westover. 2017. Major climatic influences on Yellowstone region lake ecosystems suggested by synchronous transitions in Late Glacial and early Holocene diatom assemblages. *Palaeogeography, Palaeoclimatology, and Palaeoecology* 485: 178-188, doi: 10.1016/j.palaeo.2017.06.011

Anderson, N.J., J. Saros, J.E. Bullard, S.M. Cahoon, S. McGowan, E. Bagshaw, C.D. Berry, R. Bindler, B.T. Burpee, L.L. Carrivick, R.A. Fowler, A.D. Fox, **S.C. Fritz**, and 14 others. 2017. The Arctic in the twenty-first century: changing biogeochemical linkages across a paraglacial landscape of Greenland. *Biosciences* doi:10.1093/biosci/biw158

\*Spanbauer, T., C.R. Allen, D.G. Angeler, T. Easton, **S.C. Fritz**, A.S. Garmestani, K.L. Nash, \*J.R. Stone, C. Stow, S. Sundstrom. 2016. Microscopic body size distributions signal a regime shift in a lake ecosystem. *Proceedings, Royal Society B* 283: 20160249.

Martel-Cea, A., M. Grosjean, I. Alvial, R. de Jong, **S.C. Fritz**, L. von Gunten. 2016. Late Holocene environmental changes as recorded in the sediments of high Andean Laguna Chepical, Central Chile (32°S; 3050 masl.). *Paleo3* doi:10.1016/j.palaeo.2016.08.003

\*Bracht-Fly, B., **S.C. Fritz**. 2016. Combining lake core records with the limnologic model DYRESM-CAEDYM to evaluate lake response during the Little Ice Age and Medieval Climate Anomaly. *Journal of Paleolimnology* 56: 79-92.

Randsalu-Wendrup, L., D.J. Conley, J. Carstensen, **S.C. Fritz**. 2016. Paleolimnological records of regime shifts in lakes in response to climate change and anthropogenic activities. *Journal of Paleolimnology* 56: 1-14, doi 10.1007/s10933-016-9884-4

Chawchai, S., K.A. Yamoah, R.H. Smittenberg, J. Kurkela, M. Valiranta, A. Chabangborn, M. Blaauw, **S.C. Fritz**, P.J. Reimer, B. Wohlfarth. 2016. Lake Kumphawapi revisited: the complex climatic and environmental record of a tropical wetland in NE Thailand. *The Holocene* 26: 614-626.

Wigdahl-Perry, C., J. Saros, **S.C. Fritz**, C.T. Hess. 2015. Investigating potential effects of zooplankton grazing on diatom-inferred drought reconstructions. *Hydrobiologia* DOI 10.1007/s10750-015-2529-1

Baker, P.A., **S.C. Fritz**, C. Silva, and Trans-Amazon Drilling Project Members. 2015. Origins and evolution of the forests, climate, and hydrology of the South American tropics. *Scientific Drilling* 20: 41-49.

**Fritz, S.C.**, B.A. Brinson, W.E. Billups, L. Thompson. 2015. Diatoms at greater than 5000 meters in the Quelccaya Summit Dome Glacier, Peru. *Arctic, Antarctic, and Alpine Research* 47: 369-374.

Baker, P.A. and **S.C. Fritz**. 2015. Nature and causes of Quaternary climate variation of tropical South America. *Quaternary Science Reviews* 124: 31-47.

Chawchai, S., A. Chabangborn, **S.C. Fritz**, M. Blaauw, L. Löwemark, P.J. Reimer, P.J. Krusic, M.Väliranta, C-M.Mörth, B. Wohlfarth. 2015. Monsoon variability in northeast Thailand during the last two millennia as inferred from Lake Pa Kho. *Quaternary Science Reviews* 111: 62-71.

Krause, T.R., \*Y Lu, C. Whitlock, **S. C. Fritz**, K.L. Pierce. 2015. Patterns of terrestrial and limnologic development in the northern Greater Yellowstone Ecosystem (USA) during the late-glacial/early-Holocene transition. *Palaeogeography, Palaeoclimatology, and Palaeoecology* 422: 56-56.

Baker, P.A, **S.C. Fritz**, C.W. Dick, A.J. Eckert, B.K. Horton, S. Manzoni, C.C. Ribas, C.N. Garzione, D.S. Battisti. 2014. The emerging field of geogenomics: constraining geologic problems with genetic data. *Earth Science Reviews* 135: 38-47.

\*Spanbauer, T.L., C.R. Allen, D.G. Angeler, T. Eason, **S.C. Fritz**, A.S. Garmestani, K.L. Nash, J. R. Stone. 2014. Prolonged instability prior to a regime shift. *PLoS ONE* 9: e108936, doi:10.1371/journal.pone.0108936

Fornace, K.L., K.A. Huguen, T.M. Shanahan, **S.C. Fritz**, P.A. Baker, S.P. Sylva. 2014. A 60,000-year record of hydrologic variability in the Central Andes from the hydrogen isotopic composition of leaf waxes in Lake Titicaca sediments. *Earth and Planetary Science Letters* 408: 263-271.

Wigdahl, C., J. Saros, **S.C. Fritz**, J. Stone, D.R. Engstrom. 2014. The influence of basin morphometry on the regional coherence of patterns of diatom-inferred salinity in lakes of the northern Great Plains (USA). *The Holocene* 24: 603-613, DOI: 10.1177/0959683614523154.

Randsalu-Wendrup, L., D.J. Conley, J. Carstensen, L-A. Hansson, C. Brönmark, **S.C. Fritz**, P. Choudhary, J. Routh, D. Hammarlund. 2014. Combining limnology and paleolimnology to investigate recent regime shifts in a shallow, eutrophic lake. *Journal of Paleolimnology* 51: 437-448, DOI: 10.1007/s10933-014-9767-5.

**Fritz, S. C.** 2013. Salinity and climate reconstruction from diatoms in continental lake deposits. *In Encyclopedia of Quaternary Science*, 2<sup>nd</sup> edition, S. Elias, ed. Oxford, Elsevier. Volume 1, pp. 507-515.

\*Stone, J.R. and **S. C Fritz**. 2013. Lake-level studies: North America. *In Encyclopedia of Quaternary Science*, 2<sup>nd</sup> edition, S. Elias, ed. Oxford, Elsevier. Volume 2, pp. 537-548.

**Fritz, S.C.** 2013. The climate of the Holocene and its landscape and biotic impacts. *Tellus Series B* 65: 20602, <http://dx.doi.org/10.3402/tellusb.v65i0.20602>.

**Fritz, S.C.** and N.J. Anderson. 2013. The relative influences of climate and catchment processes on Holocene lake development in glaciated regions. *Journal of Paleolimnology* 49: 349-362, DOI: 10.1007/s10933-013-9684-z

\*Schmieder, J., **S.C. Fritz**, E.C. Grimm, \*K.C. Jacobs, K.J. Brown, J.B. Swinehart, S.C. Porter. 2013. Holocene variability in hydrology, vegetation, fire, and eolian activity in the Nebraska Sand Hills, USA. *The Holocene* 23: 515-527, doi:10.1177/0959683612463100

\*Bracht-Flyr, B., E. Istanbuluoglu, **S.C. Fritz**. 2013. A hydro-climatological lake classification model and its evaluation using global data. *Journal of Hydrology* 486: 376- 383, [doi.org/10.1016/j.jhydrol.2013.02.003](https://doi.org/10.1016/j.jhydrol.2013.02.003)

Chawchai, S., A. Chabangborn, B. Wohlfarth, M. Kylander, L. Lowemark, C-M Morth, M. Blaauw, W. Klubseang, P.J. Reimer, **S.C. Fritz**. 2013. Lake Kumphawapi – an archive of Holocene paleoenvironmental and paleoclimatic change in northeast Thailand. *Quaternary Science Reviews* 68: 59-75.

Reuss, N., N.J. Anderson, **S.C. Fritz**, G. Simpson. 2013. Phototrophic microbial community responses to late-Holocene environmental forcing of SW Greenland lakes. *Freshwater Biology* 58: 690-704, DOI: 10.1111/fwb.12073.

Randsalu-Wendrup, L., D.J. Conley, J. Carstensen, I. Snowball, C. Jessen, **S.C. Fritz**. 2012. Ecological regime shifts in Lake Kälksjön, Sweden in response to abrupt climate change around the 8.2 ka cooling event. *Ecosystems* 15: 1336-1350, DOI: 10.1007/s10021-012-9588-1.

\*Bracht-Flyr, B. and **S.C. Fritz**. 2012. Synchronous climate change inferred from diatom records in four western Montana lakes in the US Rocky Mountains. *Quaternary Research* 77: 456-467 DOI 10.1016/j.yqres.2011.12.005

Wohlfarth, B.W., W. Klubseang, \*S. Inthongkaew, **S.C. Fritz**, M. Blaauw, P.J. Reimer, A. Chabangborn, L. Löwemark, S. Chawchai 2012. Holocene environmental changes in Northeast Thailand as reconstructed from a tropical wetland. *Global and Planetary Change* 92-93: 148-161.

Whitlock, C., W.E. Dean, **S.C. Fritz**, L.R. Stevens, \*J.R. Stone, M.J. Power, J.R. Rosenbaum, K.L. Pierce, \*B. Bracht-Flyr. 2012. Holocene seasonal variability inferred from multiple proxy records from Crevice Lake, Yellowstone National Park, USA. *Palaeogeography, Palaeoclimatology, and Palaeoecology* 331-332: 90-103.

Zlotnik, V.A., J.B. Ong, J.A. Lenters, \*J. Schmieder, **S.C. Fritz**. 2012. Quantification of salt dust pathways from a groundwater-fed lake: implications for solute budgets and dust emission rates. *Journal of Geophysical Research - Earth Surface* Vol.117, F02014

**Fritz, S.C.**, P.A. Baker, \*P. Tapia, \*T. Spanbauer, \*K. Westover. 2012. Evolution of the Lake Titicaca basin and its diatom flora over the last ~370,000 years. *Palaeogeography, Palaeoclimatology, and Palaeoecology* 317-318: 93-103. DOI 10.1016/j.palaeo.2011.12.013

Perren, B., N.J. Anderson, M. Douglas, **S.C. Fritz**. 2012. The influence of temperature, moisture, and eolian activity on Holocene lake development in West Greenland. *Journal of Paleolimnology* 48: 223-239, DOI 10.1007/s10933-012-9613-6.

Matthews, J.A., P.J. Bartlein, K.R. Briffa, A.G. Dawson, A. DeVernal, **S.C. Fritz**, F. Oldfield. Editors. 2012. *The Handbook of Environmental Change*. London, Sage Publishers, 2 volumes.

Matthews, J.A., P.J. Bartlein, K.R. Briffa, A.G. Dawson, A. DeVernal, **S.C. Fritz**, F. Oldfield. 2012. Background to the science of environmental change. *In* The Handbook of Environmental Change. London, Sage Publishers, volume 1, pp. 1-33.

Cumming, B.F., K. Laird, **S.C. Fritz**, D. Verschuren. 2012. Tracking Holocene climatic change with aquatic biota from lake sediments: case studies of commonly used numerical techniques. *In* H.J.B. Birks, A. Lotter, S. Juggins, J.P. Smol (Eds), Tracking Environmental Change Using Lake Sediments: Data Handling and Statistical Techniques, New York, Springer. pp. 615-642.

Osburn, C.L., C. Salm, **S.C. Fritz**, J.E. Saros. 2011. Dissolved organic matter composition and photoreactivity in lakes of the US Great Plains. *Limnology and Oceanography* 56: 2371-2390.

**Fritz, S.C.**, S. Björck, C.A. Rigsby, P.A. Baker, A. Calder-Church, D.J. Conley. 2011. Caribbean hydrological variability during the Holocene as reconstructed from crater lakes on the island of Grenada. *Journal of Quaternary Sciences* 26: 829-838. DOI: 10.1002/jqs.1512.

\*D'Andrea, W., Y. Huang, **S.C. Fritz**, N.J. Anderson. 2011. Abrupt climate change as a factor in human migration in West Greenland. *Proceedings of the National Academy of Sciences* 108: 9765-9769. doi/10.1073/pnas.1101708108.

\*Jovanelly, T.J. and **S.C. Fritz**. 2011. Morphometric and chemical response of two contrasting lake systems to modern climate change. *Journal of Paleolimnology* 46: 89-98.

\*Schmieder, J., **S.C. Fritz**, J.B. Swinehart, \*A. Shinneman, A.P. Wolfe, G. Miller, N. Daniels, \*K. Jacobs, E.C. Grimm. 2011. A regional-scale climate reconstruction of the last 4000 years from lakes in the Nebraska Sand Hills, USA. *Quaternary Science Reviews* 30: 1797-1812.

\*Hobbs, W.O., **S. C. Fritz**, \*J. R. Stone, J. J. Donovan, E. C. Grimm, J.E. Almendinger. 2011. Environmental history of a closed-basin lake in the US Great Plains: diatom response to variations in groundwater flow regimes over the last 8500 cal yrs BP. *The Holocene* 21: 1203-1216. DOI: 10.1177/0959683611405242

Gavin, D.G., A.C. Henderson, \*K.S. Westover, **S.C. Fritz**, I.R. Walker, M.J. Leng, F.S. Hu. 2011. Abrupt Holocene climate change and potential response to solar forcing in western Canada. *Quaternary Science Reviews* 30: 1243-1255, doi:10.1016/j.quascirev.2011.03.003.

Ballantyne, A., P. Baker, **S.C. Fritz**, B. Poulter. 2011. Climate mediated nitrogen and carbon dynamics in a tropical watershed. *Journal of Geophysical Research – Biogeosciences* 116, G02013 doi:10.1029/2010JG001496, 2011.

Hanselman J., M.B. Bush, W.D. Gosling, A. Collins, C. Knox, P.A. Baker, **S.C. Fritz**. 2011. A 370,000-year record of vegetation and fire history around Lake Titicaca (Bolivia/Peru). *Palaeogeography, Palaeoclimatology, Palaeoecology* 305: 201-214.

Efting, A., D. Snow, **S.C. Fritz**. 2011. Cyanobacteria and microcystin in the Nebraska (USA) Sand Hills Lakes before and after modern agriculture. *Journal of Paleolimnology* 46: 17-27, DOI 10.1007/s10933-011-9511-3.

- McWethy, D.B., C. Whitlock, J.M. Wilmschurst, M.S. McGlone, M. Fromont, X. Li, A. Dieffenbacher-Krall, \*W.O. Hobbs, **S.C. Fritz**, E.R. Cook. 2010. Rapid landscape transformation in South Island, New Zealand following initial Polynesian settlement. *Proceedings of the National Academy of Sciences* 107: 21343-21348.
- Fritz, S.C.**, B.F. Cumming, F. Gasse, K.R. Laird. 2010. Diatoms as indicators of hydrologic and climatic change in saline lakes. *In* J.P. Smol & E.F. Stoermer, eds. "The Diatoms: Applications to Environmental and Earth Sciences, 2<sup>nd</sup> edition". London, Cambridge University Press pp. 186-208.
- Schwab, A., W. Dean, **S.C. Fritz**, C. Geiss, B. Kromer. 2010. Centennial eolian cyclicity in the Great Plains: a dominant climate pattern of wind transport over the past 4000 years. *Quaternary Science Reviews* 29: 2325-2339. doi:10.1016/j.quascirev.2010.06.007.
- \*Shinneman, A., \*D. Bennett, **S.C. Fritz**, \*J. Schneider, D. Engstrom, A. Eging, J. Holz. 2010. Inferring lake depth using diatom assemblages in the shallow, seasonally variable lakes of the Nebraska Sand Hills (USA): calibration and validation of a 69-lake training set. *Journal of Paleolimnology* 44: 443-464, DOI 10.1007/s10933-010-9427-3
- Toney, J., Y. Huang, **S.C. Fritz**, P.A. Baker, P. Nyren, E. Grimm. 2010. Climatic and environmental controls on the occurrence and distribution of long-chain alkenones in lakes of the interior United States. *Geochimica Cosmochimica Acta* 74: 1563-1578. doi:10.1016/j.gca.2009.11.021
- Fritz, S.C.**, P.A. Baker, \*E. Ekdahl, G.O. Seltzer, \*L.R. Stevens. 2010. Millennial-scale climate variability during the last glacial period in the tropical Andes. *Quaternary Science Reviews* 29: 1017-1024, doi:10.1016/j.quascirev.2010.01.001
- Salm, C.R., Saros, J.E., **Fritz, S.C.**, Osburn, C.L., Reieneke, D.M. 2009. Phytoplankton productivity across prairie saline lakes of the Great Plains (USA): A step toward deciphering patterns through lake classification models. *Canadian Journal of Fisheries and Aquatic Sciences* 66: 1435-1448.
- Shuman, B., A. Henderson, S.M. Colman, \*J.R. Stone, **S.C. Fritz**, \*L.R. Stevens, M.J. Power, C. Whitlock. 2009. Holocene lake level trends in the Rocky Mountains, USA. *Quaternary Science Reviews* 28: 1861-1879. doi:10.1016/j.quascirev.2009.03.003.
- Leavitt, P.R., **S.C. Fritz**, N. J. Anderson, P.A. Baker, T. Blenkner, L. Bunting, J. Catalan, D. Conley, \*W. Hobbs, E. Jeppesen, A. Korhola, S. McGowan, K. Ruhland, J. Rusak, N. Solovieva, J. Werne. 2009. Paleolimnological evidence for the effects on lakes of energy and mass transfer by climate and humans. *Limnology and Oceanography* 54: 2330-2348.
- Baker, P.A., **S.C. Fritz**, S.J. Burns, E. Ekdahl, C.A. Rigsby. 2009. The nature and origin of decadal to millennial scale climate variability in the southern tropics of South America. *In* Vimeux, F., F. Sylvestre, M. Khodri (eds) "Past Climate Variability from the Last Glacial Maximum to the Holocene in South America and Surrounding Regions". Springer. pp. 301-322

Anderson, N.J.; \*W. D'Andrea, **S.C. Fritz**. 2009. Holocene carbon burial in lakes of SW Greenland. *Global Change Biology* 15: 2590-2598.

\*Aebly, F.A. and **S.C. Fritz**. 2009. Paleohydrology of Kangerlussuaq, West Greenland during the last ~8000 yr. *The Holocene* 19: 91-104.

Ryves, D.B., R. Battarbee, **S.C. Fritz**. 2009. The dilemma of disappearing diatoms: incorporating dissolution into paleoenvironmental modeling and reconstructions. *Quaternary Science Reviews* 28: 120-136.

**Fritz, S.C.** 2008. Deciphering climatic history from lake sediments. (Deevey Frey invited review). *Journal of Paleolimnology* 39: 5-16.

\*Ekdahl, E., **S.C. Fritz**, P.A. Baker, C.A. Rigsby, K. Coley. 2008. Holocene multi-decadal to millennial scale hydrologic variability on the South American Altiplano. *The Holocene* 18: 867-876.

\*Aebly, F.A., Q. Hu, and **S.C. Fritz**. 2008. Alternative indices for the warm season NAO and precipitation variability in West Greenland. *Journal of Climate* 21: 532-541.

\*Bracht, B., \*J.R. Stone, **S.C. Fritz**. 2008. A diatom record of late-Holocene climate variation in the northern range of Yellowstone National Park, USA. *Quaternary International* 188: 149-155.

Whitlock, C.A., W. Dean, J. Rosenbaum, \*L. Stevens, **S. Fritz**, \*B. Bracht, M. Power. 2008. A 2650-yr record of ecological and hydrological change in Yellowstone's Northern Range derived from multiple proxies. *Quaternary International* 188: 126-138.

**Fritz, S.C.**, P.A. Baker, G.O. Seltzer, A. Ballantyne, \*P. Tapia, H. Cheng, R.L. Edwards. 2007. Quaternary glaciation and hydrologic variation in the South American tropics as reconstructed from the Lake Titicaca drilling project. *Quaternary Research* 68: 410-420.

**Fritz, S. C.** 2007. Salinity and climate reconstruction from diatoms in continental lake deposits. *In Encyclopedia of Quaternary Science*, S. Elias, ed. Oxford, Elsevier. Volume 1, pp. 514-522.

\*Jacobs, K.C, **S.C. Fritz**, J.B. Swinehart. 2007. Lacustrine evidence for moisture changes in the Nebraska Sand Hills during Marine Isotope Stage 3. *Quaternary Research* 67: 246-254.

Zlotnik, V.A., M. Burbach, J. Swinehart, \*D. Bennett, **S.C. Fritz**, D.B. Loope, F. Olaguera, 2007. A case study of direct push methods for aquifer characterization in dune-lake environments. *Environmental and Engineering Geology*, 13: 205-216.

\*Bennett, D.M., **S.C. Fritz**, J. Holz, A. Holz, V. Zlotnik. 2007. Evaluating climatic and non-climatic influences on natural and man-made lakes in Nebraska, USA. *Hydrobiologia* 591: 103-115.

\*Stone, J.R. and **S.C. Fritz**. 2006. Multi-decadal drought frequency and Holocene drought instability in the northern Rocky Mountains. *Geology* 34: 409-412.

Engstrom, D.R. and **S.C. Fritz**. 2006. Coupling between primary terrestrial succession and the trophic development of lakes at Glacier Bay, Alaska. *Journal of Paleolimnology* 35: 873-880.

**Fritz, S.C.**, P.A. Baker, \*P. Tapia, J. Garland. 2006. Spatial and temporal variation in cores from Lake Titicaca, Bolivia/Peru during the last 13,000 years. *Quaternary International* 158: 23-29.

\*Tapia, P., **S.C. Fritz**, G.O. Seltzer, D. Rodbell, S. Metivier. 2006. Contemporary distribution and late-Quaternary stratigraphy of diatoms in the Junin Plain, central Andes, Peru *Boletín de la Sociedad Geológica del Perú* 101: 19-42.

Theriot, E.C., **S.C. Fritz**, C. Whitlock, D.J. Conley. 2006. Late Quaternary rapid morphological evolution of an endemic diatom in Yellowstone Lake, USA. *Paleobiology* 32: 38-54.

\*Westover, K.S., **S.C. Fritz**, T.A. Blyakharchuk, H.E. Wright. 2006. Diatom paleolimnological record of environmental change in the Altai Mountains, Siberia. *Journal of Paleolimnology* 35: 519-541.

\*Stevens, L.R., \*J.R. Stone, \*J. Campbell, **S.C. Fritz**. 2006. A 2200-year record of hydrologic variability from Foy Lake, MT inferred from diatom and geochemical data. *Quaternary Research* 65: 264-274.

Ryves, D., R.W. Battarbee, S. Juggins, **S.C. Fritz**, N.J. Anderson. 2006. Physical and chemical predictors of diatom dissolution in freshwater and saline lake sediments of North America and West Greenland. *Limnology and Oceanography* 51: 1355-1368.

Baker, P.A., **S.C. Fritz**, J. Garland, \*E. Ekdahl. 2005. Holocene hydrologic variation at Lake Titicaca, Bolivia/Peru and its relationship to North Atlantic climate variation. *Journal of Quaternary Science* 20: 655-662.

**Fritz, S.C.** and J.E. Saros. 2005. Paleolimnology and paleohydrology. *In Encyclopedia of Hydrological Sciences, volume 3: Ecological and Hydrological Interactions.* M.G. Anderson, editor-in-chief. Chichester: John Wiley & Sons. Volume 3: 1681-1704.

Yu, S., B.E. Berglund, P. Sandgren, **S.C. Fritz**. 2005. Holocene palaeoecology and shoreline displacement along the western Blekinge coast, SE Sweden and implications for climate and sea-level changes. *The Holocene* 15: 278-292.

Chepstow-Lusty, A., M.B. Bush, M.R. Frogley, P.A. Baker, **S.C. Fritz**, J. Aronson. 2004. Vegetation and climate change on the Bolivian Altiplano between 109,000 and 18,000 years ago. *Quaternary Research* 63: 90-98.

**Fritz, S.C.**, P.A. Baker, T. Lowenstein, G.O. Seltzer, C.A. Rigsby, G. Dwyer, \*P. Tapia, K. Arnold, T-H Ku, S. Luo. 2004. Hydrologic variation during the last 170,000 years in the southern hemisphere tropics of South America. *Quaternary Research* 61: 95-104.

**Fritz, S.C.**, S. Juggins, D.R. Engstrom. 2004. Patterns of early lake evolution in boreal landscapes: a comparison of stratigraphic inferences with a modern chronosequence in Glacier Bay, Alaska. *The Holocene* 14: 828-840.

\*Stone, J.R. and **S.C. Fritz**. 2004. Three-dimensional modeling of lacustrine diatom habitat areas: improving paleolimnological interpretation of planktic:benthic ratios. *Limnology & Oceanography* 49: 1540-1548.

\*Ramstack, J.M., **S.C. Fritz**, D.R. Engstrom. 2004. 20<sup>th</sup>-century water-quality trends in Minnesota lakes compared with pre-settlement limnological variability. *Canadian Journal of Fisheries and Aquatic Sciences* 61: 561-576.

\*Tapia, P.M., E.C. Theriot, **S.C. Fritz**, F. Cruces, P. Rivera. 2004. Distribution and morphometric analysis of *Cyclostephanos andinae* comb. nov., a planktonic diatom from the Central Andes. *Diatom Research* 19: 311-327.

**Fritz, S.C.** 2003. Lacustrine perspectives on Holocene climate. In Mackay, A., R.W. Battarbee, H.J.B. Birks, & F. Oldfield (eds). *Global Change in the Holocene: Approaches to Reconstructing Fine-Resolution Climate Change*. Edward Arnold Press, London. pp. 227-241.

\*Ramstack, J.M., **S.C. Fritz**, D.R. Engstrom, S. Heiskery. 2003. The application of a diatom-based transfer function to evaluate regional water-quality trends in Minnesota since 1970. *Journal of Paleolimnology* 29: 79-94.

\*Tapia, P.M., **S.C. Fritz**, P.A. Baker, G.O. Seltzer, R.B. Dunbar. 2003. A Late Quaternary diatom record of tropical climatic history from Lake Titicaca (Bolivia/Peru). *Palaeogeography, Palaeoclimatology, and Palaeoecology* 194: 139-164.

Baker, P.A., M. Bush, **S.C. Fritz**, C.A Rigsby, G.O. Seltzer, M. Silman. 2003. Last Glacial Maximum in an Andean cloud forest environment (Eastern Cordillera, Bolivia): Comment on Mourguiart and Ledru. *Geology* 31 DOI 10.1130/0091-7613(2003)31

Paduano, G., M. Bush, P. Baker, **S. Fritz**, G. Seltzer. 2003. A vegetation and fire history of Lake Titicaca since the Last Glacial Maximum. *Palaeogeography, Palaeoclimatology, and Palaeoecology* 194: 259-279.

Rowe, H.D., T.P. Guilderson, R.B. Dunbar, J.R. Southon, G.O. Seltzer, D.A. Mucciarone, **S.C. Fritz, S.**, P.A. Baker. 2003. Timing of late Quaternary lake level change: Lake Titicaca, South America. *Global and Planetary Change* 38: 273-290.

Laird, K.R., B.F. Cumming, S. Wunsam, J. Rusak, R.J. Oglesby, **S.C. Fritz**, P.R. Leavitt. 2003. Lake sediments record large-scale shifts in moisture regimes across the northern prairies of North America during the past two millennia. *Proceedings of the National Academy of Sciences* 100: 2483-2488.

Seltzer, G.O., D.T. Rodbell, P.A. Baker, **S.C. Fritz**, \*P.M. Tapia, H.D. Rowe, R.B. Dunbar. 2002. Early deglaciation in the tropical Andes. *Science* 298: 7a.

- Seltzer, G.O., D.T. Rodbell, P.A. Baker, **S.C. Fritz**, \*P.M. Tapia, H.D. Rowe, R.B. Dunbar. 2002. Early warming of tropical South America at the last glacial-interglacial transition. *Science* 296: 1685-1686.
- D'Agostino, K., G. Seltzer, P. Baker, **S.C. Fritz**, R. Dunbar. 2002. Late-Quaternary lowstands of Lake Titicaca (Peru/Bolivia): evidence from high-resolution seismic data. *Palaeogeography, Palaeoclimatology, and Palaeoecology* 179: 97-111.
- Rowe, H.D., R.B. Dunbar, D.A. Mucciarone, G.O. Seltzer, P.A. Baker, **S. Fritz**. 2002. Insolation, moisture balance and climate change on the South American Altiplano since the Last Glacial Maximum. *Climatic Change* 52: 175-199.
- Yu, Z., E. Ito, D.R. Engstrom, **S.C. Fritz**. 2002. A 2100-year-decadal-resolution trace-element and stable-isotope record from Rice Lake in the northern Great Plains, USA. *The Holocene* 12: 605-617.
- \*Saros, J.E. and **S.C. Fritz**. 2002. Resource competition among saline-lake diatoms: shifts in taxon abundance in response to variations in salinity, brine type, and N:P ratios. *Freshwater Biology* 46:1-9.
- Clark, J.S., E.C. Grimm, J. Donovan, **S.C. Fritz**, D. Engstrom, J. Almendinger. 2002. Drought cycles and landscape responses to past aridity in the Northern Great Plains, USA. *Ecology* 83: 595-601.
- Baker, P.A., G.O. Seltzer, **S.C. Fritz**, R.B. Dunbar, M. Grove, \*P. Tapia, S. Cross, H. Rowe, J. Broda. 2001. The history of South American tropical climate for the past 25,000 years. *Science* 291: 640-643.
- Cross, S.L., P.A. Baker, G.O. Seltzer, **S.C. Fritz**, R. B. Dunbar. 2001. Isotopic and chemical modeling of Lake Titicaca. *Quaternary Research* 56: 1-9.
- Baker, P.A., C.A. Rigsby, G.O. Seltzer, **S.C. Fritz**, T. Lowenstein, N. Bacher, & Y. Veliz. 2001. Tropical climate changes at millennial and orbital timescales revealed by deep drilling on the South American Altiplano. *Nature* 409: 698-701.
- Ryves, D., S. Juggins, **S.C. Fritz**, R.W. Battarbee. 2001. Experimental diatom dissolution and the quantification of microfossil preservation in sediments. *Palaeogeography, Palaeoclimatology, and Palaeoecology* 172: 99-113.
- Pawley, A., **S.C. Fritz**, P. Baker, G.O. Seltzer, R. Dunbar. 2001. The biological, chemical, and physical limnology of Lake Titicaca. *In* Munawar, M. and R. Hecky (eds.). *Great Lakes of the World. Aquatic Ecosystem Health and Management Society, Backhuys Publishers, The Netherlands.* pp. 195-215.
- Snyder, J.A., K. Wasylik, **S.C. Fritz**, H.E. Wright, Jr. 2001. A 40,000-year diatom-based paleoclimatic record from Lake Zeribar, Iran. *The Holocene* 11: 735-744.

Engstrom, D.R., **S.C. Fritz**, J.E. Almendinger, S. Juggins. 2000. Chemical and biological trends during lake evolution in recently deglaciated terrain. *Nature* 408:161-166.

**Fritz, S.C.**, E. Ito, Z. Yu, \*K.R. Laird, D.R. Engstrom. 2000. Hydrologic variation in the northern Great Plains over the last two millennia. *Quaternary Research* 53: 175-184.

**Fritz, S.C.**, S.E. Metcalfe, W. Dean. 2000. Holocene climate patterns in the Americas from paleolimnological records. *In* Markgraf, V. (ed.) *Interhemispheric Climate Linkages*. NY: Academic Press. Pp. 241-263.

\*Saros, J.E., **S.C. Fritz**, A. Smith. 2000. Shifts in mid- to late-Holocene anion composition in Elk Lake (Grant Co., MN): comparison of diatom and ostracode inferences. *Quaternary International* 67: 37-46.

\*Saros, J.E. and **S.C. Fritz**. 2000. Changes in the growth rate of saline-lake diatoms in response to variation in salinity, brine type, and nitrogen form. *Journal of Plankton Research* 22: 1071-1083.

\*Saros, J.E. and **S.C. Fritz**. 2000. Nutrients as a link between ionic concentration/composition and diatom distributions in saline lakes. *Journal of Paleolimnology* 23: 449-453.

Cross, S., P.A. Baker, G.O. Seltzer, **S.C. Fritz**, R. Dunbar. 2000. A new estimate of the Holocene low stand level of Lake Titicaca and its implications for regional paleohydrology. *The Holocene* 10: 21-32.

**Fritz, S.C.**, B.F. Cumming, F. Gasse, \*K.R. Laird. 1999. Diatoms as indicators of hydrologic and climatic change in saline lakes. *In* E.F. Stoermer & J.P. Smol, eds. *The Diatoms: Applications to Environmental and Earth Sciences*. London, Cambridge University Press. pp. 41-72.

Seltzer, G.O., P. Baker, S. Cross, R. Dunbar, **S.C. Fritz**. 1998. High-resolution seismic reflection profiles from Lake Titicaca, Peru/Bolivia: evidence for Holocene aridity in the tropical Andes. *Geology* 26: 167-170.

\*Laird, K.R., **S.C. Fritz**, \*B.F. Cumming. 1998. A diatom-based record of drought intensity, duration, and frequency from Moon Lake, North Dakota: a sub-decadal record of the last 2300 years. *Journal of Paleolimnology*: 19: 161-179.

\*Laird, K.R., **S.C. Fritz**, E.C. Grimm, \*B.F. Cumming. 1998. Early Holocene limnological and climatic variability in the northern Great Plains. *The Holocene*: 8: 275-285.

Theriot, E.C., **S.C. Fritz**, R. Gresswell. 1997. Long-term limnological data from the larger lakes of Yellowstone National Park. *Arctic & Alpine Research* 29: 304-314.

Valero-Garces, B., \*K.R. Laird, **S.C. Fritz**, K.R. Kelts, E. Ito, E.C. Grimm. 1997. Holocene climate in the northern Great Plains inferred from sediment stratigraphy, stable isotopes, carbonate geochemistry, diatoms, and pollen at Moon Lake, N.D., USA. *Quaternary Research* 48: 359-369.

Covich, A.P., **S.C. Fritz**, P.J. Lamb, R.G. Marzolf, W. Matthews, K. Poiani, E. Prepas, & T. Winter. 1997. Potential effects of climate change on aquatic ecosystems of the Great Plains of North America. *Hydrologic Processes* 11: 993-1021.

Gasse, F., P. Gell, P. Barker, **S.C. Fritz**, F. Chalieu. 1997. Diatom-inferred salinity of palaeolakes: an indirect tracer of climate change. *Quaternary Science Reviews* 16: 547-563.

**Fritz, S.C.**, D.R. Engstrom, B.J. Haskell. 1996. Nineteenth-century climate in the Devils Lake region as reconstructed from paleolimnological proxies: a reply to Wiche et al. *The Holocene* 6: 490-493.

\*Laird, K.R., **S.C. Fritz**, K.A. Maasch, \*B.F. Cumming. 1996. Greater drought intensity and frequency before AD 1200 in the northern Great Plains, USA. *Nature* 384: 552-554.

**Fritz, S.C.** 1996. Paleolimnological records of climatic change in North America. *Limnology and Oceanography* 41: 882-889.

\*Laird, K.R., **S.C. Fritz**, E.C. Grimm, P.G. Mueller. 1996. Century-scale paleoclimatic reconstruction from Moon Lake, N.D., a closed-basin lake in the northern Great Plains. *Limnology & Oceanography* 41: 890-902.

Kilham, S.S., E.C. Theriot, **S.C. Fritz**. 1996. Linking planktonic diatoms and climate change using resource theory in the large lakes of the Yellowstone Ecosystem. *Limnology & Oceanography* 41: 1052-1062.

Haskell, B., D.R. Engstrom, **S.C. Fritz**. 1996. Late Quaternary paleohydrology in the N.A. Great Plains inferred from the geochemistry of endogenic carbonates and fossil ostracodes from Devils Lake, N.D. *Palaeogeography, Palaeoclimatology, Palaeoecology* 124: 179-193.

Watts, W.A., J.R.M. Allen, B. Huntley, **S.C. Fritz**. 1996. Vegetation history and climate of the last 15,000 years at Laghi di Monticchio, Southern Italy. *Quaternary Science Reviews* 15: 113-132.

Carvahlo, L., E.J. Cox, **S.C. Fritz**, S. Juggins, P. Sims, F. Gasse, R.W. Battarbee. 1995. Standardizing the taxonomy of saline lake *Cyclotella* spp. *Diatom Research* 10: 229-240.

Juggins, S, R.W. Battarbee, **S.C. Fritz**, F. Gasse. 1994. The CASPIA project: diatoms, salt lakes, and environmental change. *Journal of Paleolimnology* 12: 191-196.

**Fritz, S.C.**, D.R. Engstrom, B. Haskell. 1994. "Little Ice Age" aridity in the North American Great Plains. *The Holocene* 4: 69-73.

Engstrom, D.R., C. Whitlock, **S.C. Fritz**, H.E. Wright, Jr. 1994. Reinventing erosion in Yellowstone's northern range: reply to Hamilton. *Journal of Paleolimnology* 10: 159-161.

- Fritz, S.C.**, S. Juggins, R.W. Battarbee. 1993. Diatom assemblages and ionic characterization of lakes in the northern Great Plains, N.A.: a tool for reconstructing past salinity and climate fluctuations. *Canadian Journal of Fisheries & Aquatic Sciences* 50:1844-1856.
- Fritz, S.C.**, J.C. Kingston, D.R. Engstrom. 1993. Quantitative trophic reconstruction from sedimentary diatom assemblages: a cautionary tale. *Freshwater Biology* 30: 1-23.
- Fritz, S.C.**, S. Juggins, R.W. Battarbee, D.R. Engstrom. 1991. A diatom-based transfer function for salinity, water-level, and climate reconstruction. *Nature* 352: 706-708.
- Whitlock, C., **S.C. Fritz**, D.R. Engstrom. 1991. A prehistoric perspective on the Northern Range. *In* Keiter, R. and M. Boyce (eds.) *The Greater Yellowstone Ecosystem: Redefining America's Wilderness Heritage*. Yale University Press pp. 289-305.
- Engstrom, D.R., C. Whitlock, **S.C. Fritz**, H.E. Wright. 1991. Recent environmental changes inferred from the sediments of small lakes in Yellowstone's Northern Range. *Journal of Paleolimnology* 5:139-174.
- Fritz, S.C.** 1990. Twentieth-century salinity and water-level fluctuations in Devils Lake, N.D.: test of a diatom-based transfer function. *Limnology & Oceanography* 35:1771-1781.
- Munro, M.A.R., **S.C. Fritz** and 14 others. 1990. Diatom quality control and data handling. *Phil. Trans. Royal Soc. London B* 327: 257-261.
- Flower, R.J., N. Cameron, N. Rose, **S.C. Fritz**, R. Harriman, A.C. Stevenson. 1990. Post-1970 water chemistry and diatom changes at several acidified upland lakes in the U.K. *Phil. Trans. Royal Soc. London B* 327: 427-438.
- Fritz, S.C.**, A.M. Kreiser, P.G. Appleby, R.W. Battarbee. 1990. Recent acidification of upland lakes in North and Mid-Wales: paleolimnological evidence. *In* R.W. Edwards, A.S. Gee, & J.H. Stoner (eds.), *Acid Waters in Wales*. Kluwer Academic Pub., Dordrecht. pp. 27-37.
- Fritz, S.C.** 1989. Lake development and limnological response to prehistoric and historic land-use in Diss, Norfolk, England. *Journal of Ecology* 77: 182-202.
- Fritz, S.C.**, A.C. Stevenson, S.T. Patrick, P.G. Appleby, F. Oldfield, B. Rippey, J. Natkanski, R.W. Battarbee. 1989. Paleolimnological evidence for the recent acidification of Llyn Hir, Dyfed, Wales. *Journal of Paleolimnology* 2: 245-262.
- Peglar, S.M., **S.C. Fritz**, H.J.B. Birks. 1989. Vegetation and land-use history in Diss, Norfolk, England. *Journal of Ecology* 77: 203-222.
- Fritz, S.C.** R.W. Battarbee. 1988. Sedimentary diatom assemblages in freshwater and saline lakes of the Northern Great Plains, N. America: preliminary results. *Proceedings, IX International Symposium on Living and Fossil Diatoms, Bristol, England*. J. Cramer Publishers, Stuttgart. pp. 246-252.

Foster, D.R. and **S.C. Fritz**. 1987. Mire development, pool formation, and landscape processes of patterned fens in Dalarna, central Sweden. *Journal of Ecology* 75: 409-437.

Peglar, S.M., **S.C. Fritz**, T. Alapieti, M. Saarnisto, H.J.B. Birks. 1984. Composition and formation of laminated sediments in Diss Mere, Norfolk, England. *Boreas* 13: 13-28.

**Fritz, S.C.** and R.E. Carlson. 1982. Stratigraphic diatom and chemical evidence for acid strip-mine lake recovery. *Water, Air, & Soil Pollution* 17: 151-163.

#### **NON-REFEREED PUBLICATIONS AND PROCEEDINGS**

Whitlock, C., J.K. Stein, **S.C. Fritz**. 2016. In memoriam: Herbert E. Wright, Jr. 1917-2015. *Quaternary Research* 85: 1-3

**Fritz, S.C.** and P. Gell. 2010. Past, recent, and future climate-change impacts on hydrologic and environmental variability in selected regions of Asia: Introduction to special issue. *Quaternary International* 212: 1, doi:10.1016/j.quaint.2009.08.008.

**Fritz, S.C.** 2007. A long-term perspective on drought in the Great Plains. *Prairie Fire* 1 (5):

**Fritz, S.C.** 2007. Brush Lake history studied from bottom. *Sheridan County News (MT)*. 1 August 2007.

Gell, P., **S.C. Fritz**, R. W. Battarbee, J. Tibbey. 2007. LIMPACS: human – climate impacts on lake ecosystems: setting research priorities in the study of salinisation and climate change on lakes. *Hydrobiologica* 591: 99-101.

Li, S., P. Gell, **S.C. Fritz**. 2007. Salinity, climate change, and salinization. *PAGES News* 15: 31.

**Fritz, S.C.**, T. Johnson, P.A. Baker, S. Colman, W. Dean, J. Peck. 2006. Large-lake drilling projects supported by the US National Science Foundation Earth Systems History Program. *PAGES News* 14: 19-20.

Dean, W., **S. Fritz**, C. Whitlock, W. Watts. 2005. In memoriam: John Platt Bradbury (1936-2005). *Journal of Paleolimnology* 34: ii-iv,

Anderson, N.J., **S.C. Fritz**, C.E. Gibson, B. Hasholt, M.J. Leng. 2002. Lake-climate interactions in the low Arctic of southern West Greenland. *Geology of Greenland Survey Bulletin* 191: 144-149

Baker, P.A., **S.C. Fritz**, G.O. Seltzer. 2001. Lake Titicaca: An archive of South American paleoclimate. *Geotimes* 46: 20-23.

Carvalho, L.R. **S.C. Fritz**. 1995. CASPIA: an update on saline lake diatoms. *Proceedings, 13th International Diatom Symposium, Naples, Italy*. Bristol: Biopress Ltd. pp. 573-576.

**Fritz, S.C.** and D.R. Engstrom. 1995. Patterns of early lake ontogeny in Glacier Bay as inferred from diatom assemblages. *Proceedings of the 3rd Glacier Bay Science Symposium*. U.S. National Park Service, Anchorage, AK. pp. 147-153.

Olson, O.G., D.R. Engstrom, **S.C. Fritz**. 1995. Long-term changes in zooplankton community structure inferred from a chronosequence of lakes in Glacier Bay National Park, Alaska. Proceedings of the 3rd Glacier Bay Science Symposium. U.S. National Park Service, Anchorage, AK. pp. 154-160.

**Fritz, S.C.** 1994. Diatom species in small lakes and ponds in Glacier Bay, Alaska. *In* P.B. Hamilton, ed., Proceedings of the 4th Arctic-Antarctic Diatom Symposium. Canadian Journal of Fisheries & Aquatic Sciences Technical Report 1957: 139 pp.

Hamilton, P.B., M.S.V. Douglas, **S.C. Fritz**, R. Pienitz, J.P. Smol, A. Wolfe. 1994. A compiled freshwater diatom taxa list for the Arctic and Subarctic regions of North America. *In* P. Hamilton, ed., Proceedings of 4th Arctic-Antarctic Diatom Symposium. Canadian Journal of Fisheries & Aquatic Sciences Technical Report 1957: 139 pp.

Juggins, S., R.W. Battarbee, **S.C. Fritz**. 1994. Diatom/salinity transfer functions and climate change: an assessment of methods and application to two Holocene sequences from the northern Great Plains. *In* Funnell, B.M. & R.L.F. Kay, Palaeoclimate of the Last Glacial/Interglacial Cycle. NERC Earth Sciences Special Publication No. 94/2. pp. 37-41.

Engstrom, D.R. and **S.C. Fritz**. 1990. Early lake ontogeny following neoglacial ice recession at Glacier Bay, Alaska. Proceedings of the Second Glacier Bay Science Symposium, Glacier Bay, AK. U.S. Department of the Interior Publication I29.2:G45/10.

Battarbee, R.W., **S.C. Fritz**, and 14 others. 1989. Lake Acidification in the United Kingdom 1800-1986: Evidence from Analysis of Lake Sediments. ENSIS Publishers, London. 68 pp.

#### **MANUSCRIPTS IN REVIEW**

Ribas, C.C., F.M. D'Horta, J. Bates, R.P. Almeida, P. Baker, J.P. Boubli, K.E., Campbell, F.W. Cruz, **S.C. Fritz** and 6 others. Contrasting visions of Amazonian biogeography and diversification. *Journal of Biogeography* (submitted January 2017)