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Education

- Nov. 1995 to Jan. 1997, University of Massachusetts, Amherst, Post-doc Geosciences.
Advisor: Raymond Bradley
- Sept. 1991 to Nov. 1995, University of Minnesota, Minneapolis, Ph.D. Geology.
Advisor: Kerry Kelts (deceased)
Thesis Title: *Holocene Climate Variability for Lake Sites in the Bolivian Andes and Interior Alaska Based on Sedimentology and Radiocarbon Dating by Accelerator Mass Spectrometry*
- Aug. 1989 to Dec. 1991, University of Colorado, Boulder, M.S. Geology.
Advisor: John Andrews
Thesis Title: *Radiocarbon Dating and Interpretation of Sediments from Five Lake Systems Along Frobisher Bay, N.W.T., Canada*
- Aug. 1985 to Dec. 1987, University of Colorado, Boulder, B.A. Biology
- Aug. 1982 to May 1984, Alfred University, Alfred, NY, Biology program

Employment

- Sept. 2007 to present. Associate Professor with tenure, University of Pittsburgh Department of Geology and Planetary Science and Core Faculty Member of the Center for Latin American Studies (Jan. 2002 to present).
- Sept. 2001 to Aug. 2007. Assistant Professor, University of Pittsburgh Department of Geology and Planetary Science and Core Faculty Member of the Center for Latin American Studies (Jan. 2002 to present).
- March 2002 to present. Research Associate, Carnegie Museum of Natural History Anthropology Section.
- Jan. 1997 to 2005. Adjunct Assistant Professor, University of Massachusetts Department of Geosciences and Climate System Research Center.
- Jan. 1997 to Aug. 2001. Research Assistant Professor, University of Massachusetts Department of Geosciences and Climate System Research Center.
- Nov. 1995 to Jan. 1997. Senior Postdoctoral Research Fellow, University of Massachusetts Department of Geosciences and Climate System Research Center with Raymond Bradley.
- Sept. 1991 to Nov. 1995. Research and/or teaching assistant, University of Minnesota, Department of Geology and Geophysics and Limnological Research Center (LRC) with Kerry Kelts
- June 1989 to Aug. 1991. Research assistant University of Colorado Institute of Arctic and Alpine Research (INSTAAR) with John Andrews.
- Oct. 1988 to May 1989. United States Geological Survey, Reston VA Hydrology technician in a radioisotope laboratory.
- Sept. 1987 to Sept. 1988. Institute of Arctic and Alpine Research University of Colorado, Boulder. Undergraduate researcher.

Funded Principal Investigator Grants

- ***Reconstruction of Pre-Incan Metallurgy Using Lake Sediments from Southern and Central Peru:***
Role: Principal Investigator
Funding Agency: National Geographic Society
Dates: 6/05-7/06
- ***Late Holocene Climate of the Central Andes Identified from Sedimentary, Stable Isotopic, Geochemical and Biological Proxies:*** Collaborative research and RUI with D. Rodbell (Union College)
Role: Principal Investigator
Funding Agency: NSF-Earth System History
Dates: 5/05-4/09
- ***A Synthesis of the Last 2000 Years of Climatic Variability from Arctic Lakes:*** Collaborative research with D. Kaufmann (Northern Arizona University), J. Overpeck (University of Arizona), R. Bradley (University of Massachusetts), J. Briner (SUNY Buffalo), D. Francis (University of Massachusetts), F.S. Hu (University of Illinois), K. Hughen (Woods Hole), G. McDonald (University of California, Los Angeles), G. Miller (University of Colorado), B. Otto-Bliesner (NCAR), D. Porinchu (Ohio State University), M. Retelle (Bates College) and A. Werner (Mt Holyoke College)
Role: Principal Investigator
Funding Agency: NSF-Arctic System Science
Dates: 3/05-2/09
Amount: Total award \$1,800,000, Pitt portion \$174,551
- ***Hydrologic Variability in the Pacific Northwest During the Past 13,000 Years from High-Resolution Studies of Finely Laminated Lake Sediments:*** Collaborative research with B. Finney (University of Alaska, Fairbanks)
Role: Principal Investigator
Funding Agency: NSF-Earth System History
Dates: 4/04-3/07
- ***Documenting Holocene Paleohydrology Using Multiproxy Lake Core Studies in the Yukon Territory, Canada:*** Collaborative research with B. Finney (University of Alaska, Fairbanks) and M. Edwards (University of Alaska, Fairbanks, now at the University of Southampton)
Role: Principal Investigator
Funding Agency: NSF-Earth System History
Dates: 4/01-3/03
- ***Biocomplexity in the Pacific Northwest: Salmon, Climate, and Hydrologic Variability:***
Role: Principal Investigator
Funding Agency: NSF - Biocomplexity (CBC)
Dates: 9/02-8/04
- ***The Late Quaternary Water Balance of the Venezuelan Andes Inferred from Lake Records: Applications to the Interplay of Insolation and Ocean Circulation as Paleoclimatic Controls in the Tropics:*** Collaborative research with A. Wolfe (University of Colorado, now at the University of Alberta)
Role: Principal Investigator
NSF-Earth System History
Dates: 1/99-12/03

- ***Paleohydrology Across Central Alaska: A Multiproxy Approach to Lake-Level Records:*** Collaborative research with B. Finney (University of Alaska, Fairbanks) and M. Edwards (University of Alaska, Fairbanks, now at the University of Southampton)
 Role: Principal Investigator
 Funding Agency: NSF – Paleocology of Lakes and Estuaries
 Dates: 9/97-8/01
- ***Holocene Paleohydrology of the Subtropical Andes from Lake Records:*** Collaborative research with G. Seltzer (deceased, formally at Syracuse University)
 Role: Principal Investigator
 Funding Agency: NSF – Earth System History
 Dates: 9/96-8/00

Peer-Reviewed Publications

PDF downloads available at: <http://www.pitt.edu/~mabbott1/climate/mark/index.html> - see pubs

- * University of Pittsburgh student
- ** University of Massachusetts student
- ***Former University of Pittsburgh student

In Review

- ***Cooke, C.A., Wolfe, A.P., Abbott, M.B., and Balcom, P. (*In Review*). Pre-Colonial Mercury Pollution in the Bolivian Andes. *Science*.
- **Polissar, P.J., Abbott, M.B., Wolfe, A.P., and Bezada, M. (*In preparation*). The Role of Insolation and the Equatorial Pacific in South American Climate during the Holocene: A New Andean Paleoclimate Record from Laguna Blanca, Venezuela. *The Holocene*.

In Revision

- Abbott, M.B. and Edwards, M.E. (*In Revision*). A 40,000-Year Record of Environmental Change from Burial Lake, Northwest Alaska. *Quaternary Research*.
- **Besonen, M.R. Bradley, and Abbott, M.B. (*In Revision*) AMS ¹⁴C Dates and the Reworking of Terrestrial Macrofossils. (*Journal of Paleolimnology*).
- *Robinson, K., Abbott, M.N., Rosenmeier, M.F., Soninkihishig, N., and Fitzhugh, W.W. (*In Press* 2009). A 2600-Year Record of Aquatic Productivity from Lake Sediments in the Horidol Saridag Mountains, Northern Mongolia. *Journal of Paleolimnology*.

In Press

- Francus, P., Bradley, R.S., Lewis, T., Abbott, M.B., Retelle, M. and Stoner, J.S. (*In Press* 2009). Limnological and Sedimentary Processes at Sawtooth Lake, Canadian High Arctic, and Their Influence on Varve Formation. *Journal of Paleolimnology*.
- Kurek, J., Cwynar, L.C., Ager, T.A., Abbott, M.B., Edwards, M.E. (*In Press* 2009) Paleoclimate of Western Alaska Inferred from Fossil Chironomids. (*Quaternary Science Reviews*).
- Rull, V., Abbott, M. B., Vegas-Vilarrúbia, T., Bezada, M., Montoya, E., Nogué, S. and González, C. (*In Press* 2009). Paleoenvironmental trends in Venezuela during the last glacial cycle. In Sánchez-Villagra, M. R., Aguilera, O. & Carlini, A. (eds.), *Urumaco and Venezuelan Palaeontology - The fossil record of the Northern Neotropics*. Indiana University Press, Indiana.

2009

*Bird, B.W., Abbott, M.B., *Kutchko, B. and Finney, B.P. (2009). A 2000-year Varve-Based Climate Record from the Central Brooks Range, Alaska. *Journal of Paleolimnology* **41**, 25-41.

2008

Abbott, M.B. and **Anderson, L. (2008). Lake-Level Fluctuations as an Indicator of Hydrological and Climatic Change. In: *Encyclopedia of Paleoclimatology and Ancient Environments*, V. Gornitz (ed.), Encyclopedia of Earth Science Series, Springer, Dordrecht, The Netherlands.

Besonen, M.R. Bradley, R.S., Mudelsee, M., Abbott, M.B. and Francus, P. (2008) A Thousand Year Record of Hurricanes from Boston, Massachusetts. *Geophysical Research Letters* **35. DOI:1029/2008GL033950.

Besonen, M.R. Bradley, R.S., Francus, P., Stoner, J. and Abbott, M. (2008). A Record of Climate over the Last Millennium Based on Varved Lake Sediments from the Canadian High Arctic, *The Holocene* **18, 169-180.

*Cooke, C.A., Abbott, M.B. and Wolfe, A.P. (2008). Late-Holocene Atmospheric Lead Deposition in the Peruvian and Bolivian Andes. *The Holocene* **18**, 353-359.

*Cooke, C.A. and Abbott, M.B. (2008). A Paleolimnological Perspective on Industrial-ERA Metal Pollution in the Central Andes, Peru. *Science of the Total Environment* **393**, 262-272. DOI: 10.1016/j.scitotenv.2007.12.034.

*Cooke, C.A., M.B. Abbott and A.P. Wolfe. (2008). Metallurgy in Southern South America. In: *Encyclopedia of the History of Science, Technology, and Medicine in Non-Western Cultures Vol. 2*, H. Seline (ed.), Kluwer Science, Dordrecht, The Netherlands.

Rodbell, D.T., Seltzer, G.O., Mark, B.G., Smith, J.A. and Abbott, M.B. (2009). Clastic Sediment Flux to Tropical Andean Lakes: Records of Glaciation and Soil Erosion. *Quaternary Science Reviews* **27**, 1612-1626.

2007

*Cooke, C.A., Abbott, M.B., Wolfe, A.P. and Kittleson, J.L. (2007). A Millennium of Metallurgy Recorded by Lake Sediments in Morococha, Peruvian Andes. *Environmental Science and Technology* **41**, 3469-3474.

Anderson, L., Abbott, M.B., and Finney, B.P. and Burns, S.J. (2007). Late Holocene Moisture Balance Variability in the Southwest Yukon Territory, Canada. *Quaternary Science Reviews* **26, 130-140.

*Stansell, N.D., **Polissar, P.J. and Abbott, M.B. (2007). Last Glacial Maximum Equilibrium-Line Altitude and Paleo-Temperature Reconstructions for the Cordillera de Mérida, Venezuelan Andes. *Quaternary Research* **67**, 115-127.

*Stansell, N.D., Abbott, M. B., **Polissar, P. J., Wolfe, A. P., Rull, V. and Bezada, M. (2007). Reply: Late Quaternary Deglacial History of the Merida Andes, Venezuela: Response to Comment. *Journal of Quaternary Science*. DOI: 10.1002/jqs.1109.

2006

Polissar, P.J., Abbott, M.B., Wolfe, A.P., Bezada, M., Rull, V. and Bradley, R.S. (2006). Solar Modulation of Little Ice Age Climate in the Tropical Andes. *The Proceedings of the National Academy of Sciences* **103, 8937-8942.

Polissar, P.J., Abbott, M.B., Shemesh, A., Wolfe, A.P. and Bradley, R.S. (2006). Holocene Hydrologic Balance of Tropical South America from Oxygen Isotopes of Lake Sediment Opal, Venezuelan Andes. *Earth and Planetary Science Letters* **242, 375-389.

2005

- **Anderson, L., Abbott, M.B., Finney, B.P. and Edwards, M.E. (2005). Paleohydrology of the Southwest Yukon Territory, Canada, Based on Multiproxy Analyses of Lake Sediment Cores from a Depth Transect. *The Holocene* **15**, (8).
- **Anderson, L., Abbott, M.B., Finney, B.P. and Burns, S. (2005). Regional Atmospheric Circulation Change in the North Pacific during the Holocene Inferred from Lacustrine Carbonate Oxygen Isotopes, Yukon Territory, Canada. *Quaternary Research*, **64**, 21-35.
- Bush, M.B., Hansen, B.C.S., Rodbell, D., Seltzer, G.O., Young, K.R., Leon, B., Abbott, M.B., Silman, M.M.R. and Gosling, W.D. (2005). A 17,000 Year History of Andean Climate and Vegetation Change from Laguna de Chochos, Peru. *Journal of Quaternary Science* **20**, 703-714.
- Rull, V., Abbott, M.B., **Polissar, P., Wolfe, A.P., Bezada, M. and Bradley, R.S. (2005). Late Quaternary Paleoeology and Paleolimnology of High-Altitude Tropical Environment in the Venezuelan Andes. *Quaternary Research* **64**, 308-317.
- *Stansell, N.D., Abbott, M. B., **Polissar, P. J., Wolfe, A. P., Rull, V. and Bezada, M. (2005). Late Quaternary Deglacial History of the Merida Andes, Venezuela. *Journal of Quaternary Science* **20**, 801-812.

2004

- Fisher, D.A., Wake, C., Kreutz, K., Yalcin, K., Steig, E., Mayewski, P., **Anderson, L., Sheng, J., Rupper, S., Zdanowiz, C., Demuth, M., Waszkiewicz, M., Dahl-Jensen, D., Goto-Azuma, K., Bourgeois, J.B., Koener, R.M., Sekera, J., Osterberg, E., Abbott, M.B., Finney, B.P. and Burns, S.J. (2004). Stable Isotope Records from Mount Logan, Eclipse Ice Cores and Nearby Jellybean Lake. Water Cycle of the North Pacific Over 2000 Years and Over Five Vertical Kilometers: Sudden Shifts and Tropical Connections. *Géographie et Quaternaire* **58**, 337-352.
- **Smith, S.V. Bradley, R.S. and Abbott, M.B. (2004). A 300 Year Record of Environmental Change from Lake Tuborg, Ellesmere Island, Nunavut, Canada. *Journal of Paleolimnology* **32**, 137-148.

2003

- Abbott, M.B. and Wolfe, A. (2003). Intensive Pre-Incan Metallurgy Recorded by Lake Sediments from the Bolivian Andes. *Science* **301**, 1893-1895.
- Abbott, M.B., Wolfe, B., Wolfe, A.P., Seltzer, G.O., Aravena, R., Mark, B.G., **Polissar, P.J., Rodbell, R.T., Rowe, H.D. and Vuille, M. (2003). Holocene Paleohydrology and Glacial History of the Central Andes using Multiproxy Lake Sediment Studies. *Palaeogeography, Palaeoclimatology, Palaeoecology* **194**, 123-138.
- Hansen, B.S.C., Rodbell, D.T., Seltzer, G.O., Leon, B., Young, K.R. and Abbott, M.B. (2003). Late-Glacial and Holocene Vegetation History from Two Sites in the Western Cordillera of Southwestern Ecuador. *Palaeogeography, Palaeoclimatology, Palaeoecology* **194**, 79-108.

2002

- Francus P., Bradley R., Abbott M.B., **Patridge W. and Keimig F. (2002). Paleoclimate Studies of Minerogenic Sediments Using Annually Resolved Textural Parameters. *Geophysical Research Letters* **29**, 20, 1998, doi:10.1029/2002GL015082.
- Rodbell, D. T., Bagnato, S., Nebolini, J. C., Seltzer, G. O. and Abbott, M.B. (2002). A Late Glacial-Holocene Tephrochronology for Glacial Lakes in Southern Ecuador. *Quaternary Research*, **57**, 343-354.

2001

- **Anderson, L., Abbott, M.B. and Finney, B.P. (2001). Holocene Climate Inferred from Oxygen Isotope Ratios in Lake Sediments, Central Brooks Range, Alaska. *Quaternary Research* **55**, 313-321.

Brenner, M., Hodell, D.A., Curtis, J.H., Rosenmeier, M. and Abbott, M.B. (2001). Abrupt Climate Change and Pre-Columbian Cultural Collapse. In "Interhemispheric climatic linkages" (V. Markgraf Ed), pp. 87-103.

Wolfe, B.B., Aravena, R., Abbott, M.B., Seltzer, G.O. and Gibson, J.J. (2001). Reconstruction of Paleohydrology and Paleohumidity from Oxygen Isotope Records in the Bolivian Andes. *Palaeogeography, Palaeoclimatology, Palaeoecology* **176**, 177-192.

2000

Abbott, M.B., Wolfe, B., Aravena, R., Wolfe, A.P. and Seltzer, G.O. (2000). Holocene Hydrological Reconstructions from Stable Isotopes and Palaeolimnology, Cordillera Real, Bolivia. *Quaternary Science Reviews* **19**, 1801-1820.

Abbott, M.B., Finney, B.P., Edwards, M. and Kelts, K.R. (2000). Paleohydrology of Birch Lake, Central Alaska: Lake-Level Reconstructions Using Seismic Reflection Profiles and Core Transect Approaches. *Quaternary Research* **23**, 154-166.

1999

Rodbell, D.T., Seltzer, G.O., Anderson, D.M., Abbott, M.B., Enfield, D.B. and Newman, J.H. (1999). An ~15,000-Year Record of El-Niño Alluviation in Southwestern Ecuador. *Science* **283**, 516-520.

1997

Abbott, M.B., Binford, M.W., Brenner, M. and Kelts, K.R.. (1997). A 3500 ¹⁴C yr High-Resolution Record of Lake Level Changes in Lake Titicaca, Bolivia/Peru. *Quaternary Research* **47**, 169-180.

Abbott, M.B., Seltzer, G.O., Kelts, K.R. and Southon, J. (1997). Holocene Paleohydrology of the Tropical Andes from Lake Records. *Quaternary Research* **47**, 70-80.

Binford, M.W., Kolata, A.L., Brenner, M., Janusek, J., Abbott, M.B. and Curtis, J (1997). Climate Variation and the Rise and Fall of an Andean Civilization. *Quaternary Research* **47**, 171-186.

1996

Abbott, M.B. and Stafford, T.W. (1996). Radiocarbon Geochemistry of Ancient and Modern Arctic Lakes, Baffin Island. *Quaternary Research*. **45**, 300-311.

1993

Seltzer, G.O., Rodbell, D.T. and Abbott, M.B. (1995). Andean Glacial Lakes and Climate Variability Since the Last Glacial Maximum. *Bull. Inst fr. études andines* **24**, 539-549.

Meeting Abstracts

2008

*Bird, B.W., Abbott, M.B., Vuille, M., Rodbell, D.T. and Rosenmeier, M. (2008). A ~2500 Year Sub-Decadal Oxygen-Isotope Record of Late Holocene Tropical South American Hydroclimate From Laguna Pumacocha, Peru. AGU Annual Meeting, San Francisco, CA.

*Blotzer, L. and Abbott M.B. (2008). Climate Change Recorded in Scout Lake, Southwestern Yukon Territory, Canada Based on Stable Isotope Measurements. Arctic Workshop, Boulder, CO. March.

*Blotzer, L. and Abbott M.B. (2008). Drought History of Scout Lake, Southwestern Yukon Territory, Canada Based on Stable Isotope Measurements. Northeast GSA Annual Meeting, Buffalo, NY.

*Mur, A., Steinman, B. and Abbott, M.B. (2008). Lake Sediment Records of Late Holocene Drought from Northern Washington. Northeast GSA Annual Meeting, Buffalo, NY.

Rodbell, D.T. and Abbott, M.B. (2008). Lake Junin, Peru, as a Potential International Continental Scientific Drilling Program (ICDP) Site. Acquiring high to ultra-high resolution geological records of past climate change by scientific drilling. Potsdam, 29th September – 1st October 2008.

- *Rubinov, M., *Stansell, N.D., Rosenmeier, M.F., Abbott, M.B., Roman-Lacayo, M. (2008). A stable isotopic record of late Holocene climate change in Nicaragua. AGU Annual Meeting, San Francisco, CA.
- *Stansell, N.D., Abbott, M. B., **Polissar, P. J., Wolfe, A. P., Rull, V. and Bezada, M. (1988). Abrupt Late Glacial and Preboreal climate variability in the northern tropical Andes. AGU Annual Meeting, San Francisco, CA.
- *Steinman, B., Rosenmeier, M.F. and Abbott, M.B. (2008). Lumped parameter, isotopic model simulations of closed-basin lake response to drought in the Pacific Northwest and implications for lake sediment oxygen isotope records. AGU Annual Meeting, San Francisco, CA.
- *Steinman, B. and Abbott, M.B. (2008). Isotopic And Hydrological Modeling of a Closed Basin Lake and Comparison to Instrumental Records of Drought, Scanlon Lake, North-Central Washington. Northeast GSA Annual Meeting, Buffalo, NY.

2007

- *Bird, B.W. and Abbott, M.B. Late Holocene Temperature Reconstruction Inferred from a Varved Glacial Lake in the Central Brooks Range, Alaska. AGU Annual Meeting, San Francisco, CA.
- *Stansell, N.D., Abbott, M. B., **Polissar, P. J., Bezada, M. A Younger Dryas Glacierization in the Venezuelan Andes. AGU Annual Meeting, San Francisco, CA.
- *Robinson, K., Abbott, M.N., Rosenmeier, M.F., Soninkihishig, N., and Fitzhugh, W.W. (2007). A 2600-Year Record of Aquatic Productivity from Lake Sediments in the Horidol Saridag Mountains, Northern Mongolia. Arctic Workshop, Iceland, March.

2006

- **Anderson, L., Abbott, M.B., Finney, B.P. Late Holocene North Pacific Atmospheric Circulation and Effective Moisture in the Southwest Yukon Territory, Canada. (2006). PACLIM (Climate Variability of the Eastern North Pacific and Western North America), Pacific Grove, CA, 3/06.
- **Anderson, L., Abbott, M.B., and Finney, B.P. (2006). North Pacific Atmospheric Circulation from Lake Sediment Records in the Southwest Yukon Territory: Evidence for Ocean Atmosphere Climate Forcing. North Pacific Climate Workshop, Institute of Ocean Sciences, Sydney British Columbia 3/06.
- **Anderson, L. Abbott, M.B., Finney, B.P., Edwards, M.E., *Witthaus, L., Franklen-Smith, L. and **Tsukernik, M. (2006). Holocene Paleoclimate and Ecosystem Change in the Alaskan and Yukon Subarctic from Lake Sediment Records. 34th Arctic Workshop, Boulder, CO. 4/2006.
- *Cooke, C.A., Abbott, M.B. and Wolfe, A.P. (2006). Lake Sediment Archives of Archaeometallurgy from the Central Peruvian Andes. 10th International Paleolimnology Symposium, Duluth MN, 6/2006.
- **Nelson, D.B., Abbott, M.B., **Polissar, P.J., and Finney, B.P. (2006). Late Holocene Drought Reconstruction From North-Central Washington State Identifies Possible Changes in Patterns of Pacific Ocean Variability. AGU Annual Meeting, San Francisco, CA.
- *Stansell, N.D. and Abbott, M.B. Lake sediment record of neo-glacial advances in the southwestern Cordillera Raura, Peruvian Andes. AGU Annual Meeting, San Francisco, CA.
- *Witthaus, L., Abbott, M.B., **Anderson, L. and Ortiz J. (2006). Holocene Paleoclimate from Stable Isotope Geochemistry of Squanga Lake, Southern Yukon Territory, Canada. AGU Annual Meeting, San Francisco, CA.

2005

- Abbott, M.B., *Nelson, D. and Finney, B.P. (2005). Invited talk. A 6,000-Year Record of Drought in North-Central Washington from Laminated Lake Sediments. GSA annual meeting, Salt Lake City, 11/05.
- Abbott, M.B., *Nelson, D. and Finney, B.P. (2005). Invited talk. A 6,000-year record of drought in north-central Washington State from laminated lake sediments. PAGES Workshop Akamel, Mexico.

- **Anderson, L., Abbott, M.B., Finney, B.P. and Burns, S. (2006).** North Pacific Atmospheric Circulation Change and Effective Moisture Variability in the Yukon Territory, Canada. AGU Annual Meeting, San Francisco, CA.
- *Cassidy, B.M., Abbott, M.B. and Rosenmeier, M.F. (2005).** Reconstruction of Pittsburgh's Recent Industrial History Using Lake Sediments. NE GSA, Saratoga Springs.
- *Stansell, N.D., **Polissar, P.J., Abbott, M.B. (2005).** Late-Quaternary equilibrium-line altitude and climate reconstruction from the Cordillera de Merida, Venezuela. European Geophysical Union, Austria.
- *Stansell, N.D., **Polissar, P.J., Abbott, M.B. (2005).** Last Glacial Maximum Equilibrium-Line Altitude And Paleo-Temperature Reconstructions for the Cordillera de Mérida, Venezuelan Andes. GSA annual meeting, Salt Lake City, 11/05.
- Stoner, J.S., Francus, P., Bradley, R.S., **Patridge, W., Abbott, M.B., Retelle, M., Lamoureux, S., James and Channell, E. T. (2005).** Abrupt shifts in the position of the North Magnetic Pole delineated from Arctic lake sediments: Relationship to Archeomagnetic Jerks. AGU Annual Meeting, San Francisco, CA.
- *Witthaus, L., Abbott, M.B., Ortiz J., and **Anderson, L. (2005).** Holocene paleoclimate reconstructions from stable isotope geochemistry in carbonate lakes from the southern Yukon Territory, Canada. NE GSA, Saratoga Springs.

2004

- Abbott, M.B., *Nelson, D. and Finney, B.P. (2004).** Hydrologic Variability in the Pacific Northwest During the Past 8,000 Years from High-Resolution Studies of Finely Laminated Lake Sediments. Mountain Climate Symposium, Lake Tahoe, CA, 6/2004.
- **Anderson, L., Abbott, M.B., Finney B.P., and Burns, S.J. (2004).** Regional Atmospheric Circulation Change in the North Pacific During the Holocene Inferred from Carbonate Oxygen Isotopes, Yukon Territory, Canada. AGU Annual Meeting, San Francisco, CA.
- *Hill, E., Abbott, M.B. and Finney. (2004).** Comparison of Seismic Stratigraphy from Two Lakes in Eastern Beringia. 32nd Arctic Workshop, Boulder, CO. 4/2004.
- Isaacs, R., Dull, R., Dominguez-Vazquez, T., *Stansell, N. and Abbott, M.B. (2004).** Late Holocene Human Settlement and Vegetation Change from Ometepe Island, Nicaragua. Association of American Geographers Annual Meeting.
- **Polissar, P.J., Abbott, M.B., Wolfe, A.P. and Rull, V. (2004).** Solar and Volcanic Modulation of Little Ice Age Climate in the Tropical Andes, Venezuela. AGU Annual Meeting, San Francisco, CA.
- *Osgood-Kutchko, B., Abbott, M.B., and Finney, B.P. (2004).** A 1000-Year Varved Sediment Record from the Brooks Range, Alaska. 32nd Arctic Workshop, Boulder, CO. 4/2004.
- *Stansell, N.D., Abbott, M. B., **Polissar, P. J., Wolfe, A. P., Rull, V. and Bezada, M. (2004).** Late-Quaternary Glacial History of the Venezuelan Andes. AGU Annual Meeting, San Francisco, CA.
- Stoner, J.S., Francus, P., Bradley, R., *Patridge, W., Abbott, M.B. and Channell, J.T.E. (2004).** Late Holocene Paleomagnetic Secular Variation from Ellesmere Island. AGU Annual Meeting, San Francisco, CA.

2003

- Abbott, M.B. and Wolfe, A. (2003).** Intensive Pre-Incan Metallurgy Recorded by Lake Sediments from the Bolivian Andes. GSA annual meeting, Seattle, 11/03.
- Abbott, M.B. and Wolfe, A.P. (2003).** A Millennium of Mining Activity at Cerro Rico de Potosi (Central Bolivian Tin Belt) Reconstructed from Lake Sediment Geochemistry. Page 2. Third International Limnology Congress, Tucson, AZ March 29-2.
- **Anderson, L., Abbott, M.B., Finney, B.P., Burns, S.J., Edwards, M.E. and Bradley, R.S. (2003).** Low Arctic Temperature and Moisture: Holocene estimates from small carbonate lakes. 33rd Arctic Workshop, Tromsø, Norway, 4/03.

- **Anderson, L., Abbott, M.B., Finney, B.P. and Burns, S.J. (2003). An 8,000-year Record of Meteoric ^{18}O in the Northwest Aub-Arctic from Jellybean Lake, Yukon Territory, Canada. GSA annual meeting, Seattle, 11/03.
- **Besonen, M., Abbott, M.B., Francous, P. Bradley, R., and Ridge, J.C. (2003). High Resolution Hurricane Activity Record for Southern New England from a 1200 Year Long Varved Coastal Sedimentary Record. Third International Limnology Congress, Tucson, AZ March 29-2.
- *Cassidy, B., Abbott, M., and Rosenmeier, M.F. (2003). Reconstruction of Pittsburgh's Recent Industrial History Using Lake Core Sediments. GSA annual meeting, Seattle, 11/03.
- Ficken K.J., Street-Perrott F.A., Evershed R.P., Abbott M., Grosjean M., Rodbell D.T., Seltzer G.O. and Wirmman D. (2003). Impact Of CO_2 And Aridity On Carbon Cycling By Tropical Ecosystems: A Molecular Carbon-Isotope Study of Late Quaternary Lake Sediments from the Andes. European Association of Organic Geochemists Meeting.
- Francus, P., *Patridge, W., Bradley, R.S., Abbott, M.B., Keimig, F., and Stoner, J.S. (2003). Annually Resolved Environmental Reconstruction in Two Arctic Varved lake Sediment Records Using Image Analysis of Thin-Sections. Page 93. Third International Limnology Congress, Tucson, AZ March 29-2.
- *Nelson, D.B., Abbott, M.B., **Polissar, P.J., and Reidel, J. (2003). Holocene Paleoenvironmental Analyses from Multiple Lake Sediment Cores in North-Central Washington State. GSA annual meeting, Seattle, 11/03.
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- *Osgood-Kutchko, B., Abbott, M.B., and Finney, B.P. (2003). A 1000-Year Varved Sediment Record from the Brooks Range, Alaska. GSA annual meeting, Seattle, 11/03.
- *Robinson, K.D., Abbott, M.B., Rosenmeier, M.F. (2003). Late Holocene Paleoclimate Analysis Using Lake Cores from the Hovsgol Aimag Region of Northern Mongolia. GSA annual meeting, Seattle, 11/03
- *Stansell, N.D., Abbott, M.B., Roman-Lacayo, M., and Dull, R.A. (2003). Lacustrine Records of Paleoenvironmental Change and Geologic Risk from Nicaragua. GSA annual meeting, Seattle, 11/03.

2002

- Abbott, MB. (2002). Late Holocene Environmental Change Across the Central Andes. Northeast Andean Archaeology Conference. Pittsburgh, PA.
- Abbott, M.B., Wolfe, B., Wolfe, A.P., Seltzer, G.O., Aravena, R., Mark, B.G., **Polissar, P.J., Rodbell, R.T., Rowe, H.D., and Vuille, M. (2002). Holocene Environmental Change Across the Central Andes. Northeast GSA Annual Meeting, Springfield, MA.
- **Anderson, L., Abbott, M.B., Finney, B.P., and Burns, S.J. (2002). A Reconstruction of Humidity Changes for the Last 1,200 Years for the Yukon Territory Canada. AGU Annual Meeting, San Francisco, CA.
- **Anderson, L., Abbott, M.B., Finney, B.P., and Edwards, M.E. (2002). The Holocene Lake-Level History of Marcella Lake, Yukon Territory, Canada. Northeast GSA, Springfield, MA
- **Anderson, L., Abbott, M.B., Finney B.P., Edwards, M.E. (2002). Holocene Climate from Arctic Lake Sediment, Yukon Territory, Canada. ARCSS All-Hands Workshop, Seattle, WA.
- **Besonen, M., Abbott, M.B., Francous, P., Bradley, R. and Ridge, J. (2002). High Resolution Hurricane Activity Record For Southern New England From 1,200 Year Long Varved Coastal Sedimentary Record. Northeast GSA Annual Meeting, Springfield, MA.
- *Deemer, D., McNeil, S., Abbott, MB., and Finney, B. (2002). Studies of seismic Stratigraphy in Arctic Lakes. Arctic System Science Program All-Hands Workshop, Seattle, WA.
- **Polissar, P., Abbott, M.B., Shemesh, A., Finney, B.P., Wolfe, A.P., Bezada, M. and Bradley, R.S. (2002). Deglacial and Holocene Records of Climate Change in the Tropics from Lake Sediments, Cordillera de Merida, Venezuela. AGU Annual Meeting, San Francisco, CA.

- **Polissar, P., Abbott, M.B., and Wolfe, A.P. (2002) Alpine Lake Records of Venezuelan Climate During the Last 1,000 Years. Northeast GSA Annual Meeting, Springfield, MA.
- Willis, K., Abbott, M.B., and Weiss, H. (2002). Biotic response to the mid-Holocene (4.2 ka BP) aridification event in the Mediterranean. Workshop on Holocene Environmental Catastrophes and Recovery, London, England.

2001

- Abbott, M.B., **Anderson, L., **Tsukernik, M., Finney, B.P., and Edwards, M.E. (2001). Holocene paleoclimate from closed basin marl lakes in the Yukon Territory, Canada. CAMQUA Annual Meeting, Whitehorse, Aug 20-24.
- Abbott, M.B., *Nelson, D., **Polissar, P.J., Riedel, J., and Finney, B.P. (2001). Lake Sediment Records of Holocene Environmental Change from the North Cascades, Washington. Northeast GSA Annual Meeting, Burlington, VT.
- Abbott, M.B. (2001). Glacial lake records from the Central Andes: A multiproxy approach to paleohydrology studies. Central Andean Paleoclimate Workshop, Tucson, Jan 12-15.
- **Anderson, L., Abbott, M.B., Finney, B.P., and Edwards, M.E. (2001). Holocene Paleoclimate from Closed Basin Marl Lakes in the Yukon Territory, Canada. GSA Annual meeting, Boston, 10/01.
- **Anderson, L., Abbott, M.B., Finney, B.P., and Edwards, M.E. (2001). Holocene moisture balance variability in the Yukon Territory from lake sediment oxygen isotope ratios and lake level reconstructions. 31st Arctic Workshop, University of Massachusetts, Amherst. Presented March 20.
- **Anderson, L., Abbott, M.B., Finney, B.P., Edwards, M.E. (2001). Holocene Paleoclimate of Alaska and the Yukon Territory from Oxygen Isotope Studies of Lake Sediment. Northeast GSA, Burlington, VT.
- **Besonen, M., Abbott, M.B., Francus, P. and Bradley, R. (2001). High Resolution Hurricane Activity Record for Southern New England from 1,200 Year Long Varved Coastal Sedimentary Record. GSA Annual meeting, Boston, 10/01.
- **Polissar, P.J., Abbott, M. B., Wolfe, A. P., Finney, B.P., Bradley, R.S. and Bezada, M. (2001). Holocene Glacial Activity in the Venezuelan Andes: Preliminary Results From Laguna Mucubaji. Northeast GSA Annual Meeting, Burlington, VT.
- Stoner, J.S., Verosub, K.L., **Patridge, W., Francus, P., Abbott, M.B., Bradley, R.S. and Andrews, J. (2001). Holocene Records of Paleosecular Variation from the Arctic: Ellesmere Island Lakes and a Marine Core North of Iceland. AGU Annual meeting, San Francisco, CA, 10/01.
- Stoner, J.S., Verosub, K.L., **Patridge, W., Francus, P., Abbott, M.B., Bradley, R.S. and Andrews, J. (2001). Holocene Records of Paleosecular Variation from the Arctic: Ellesmere Island Lakes and a Core North of Iceland (MD99-2269). Geological Society of America Annual meeting, Boston, 10/01

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- Abbott, M.B., Aravena, R., Binford, M., Brenner, M., Rodbell, D., Seltzer, G.O., Wolfe, A.P., and Wolfe, B. (2000). The Late Holocene Moisture Balance History of the Bolivian/Peruvian Altiplano: A Comparison of the Timing of Climatic and Cultural Changes. Invited talk at AGU Annual meeting, San Francisco 12/00.
- Abbott, M.B., Finney, B.P., Edwards, M.E., and Anderson, L. (2000). Lake Level Reconstructions from sites in Central Alaska, the Brooks Range, and the Yukon Territory. 30th Arctic Workshop, University of Colorado, Boulder. Presented 3/00.
- **Anderson, L., Abbott, M.B., Finney, B.P., and Edwards, M.E. (2000). Modern Surface Water Isotope Ratios: Relationships and Inferences for Lake Sediment Core $\delta^{18}\text{O}$ Paleoclimate Reconstructions. 30th Arctic Workshop, University of Colorado, Boulder. Presented 3/00.
- Edwards, M.E., Finney, B.P., Bigelow, N., and Abbott, M.B. (2000). Effective Moisture and Early-Holocene Spruce (*Picea*) Expansion in Eastern Interior Alaska. 30th Arctic Workshop, University of Colorado, Boulder. Presented 3/00.

- Finney, B.P., Edwards, M.E., Abbott, M.B., Barber, V., **Anderson, L. and Rohr, M. (2000). Holocene Precipitation Variability in Interior Alaska. 30th Arctic Workshop, University of Colorado, Boulder. Presented 3/00.
- Francus, P., Abbott, M.B., Bradley, R.S., Keimig, F., Perren, B. and **Patridge, W. (2000). An Annual Snow Melt Intensity Record in Lacustrine Sediments of Sawtooth Lake, Arctic Canada. 30th Arctic Workshop, University of Colorado, Boulder. Presented 3/00.
- **Mazzarino, M., Yuretich, R.,F. and Abbott, M.B. (2000). Clay and Evaporite-Mineral Geochemistry in the Lago de Urao Basin: Clues to Environmental Fluctuations I the Late Quaternary of Venezuela. GSA Northeast Regional meeting, spring 2000.
- **Polissar, P., Abbott, M.B., Wolfe, A.P., and Finney, B.P. (2000). Holocene Paleoclimatology of the Venezuelan Andes: Preliminary Results from Laguna Verdes Alta. AGU Annual meeting, San Francisco 12/00.
- Wolfe, B.B., R. Aravena, M.B. Abbott, G.O. Seltzer and J.J. Gibson (2000). Isotope-Inferred Paleohydrology And Paleohumidity On The Bolivian Altiplano. Paleolimnological Meetings, Queens University.

1999

- Abbott, M.B., Wolfe, A.P., Polissar, P.J., Seltzer, G.O., and Rodbell, D.T. (1999). Comparison of Holocene Paleoclimate Records from Mountain Lakes in the Northern and Southern Hemispheres of Tropical South America. AGU Annual meeting, San Francisco 12/99.
- **Anderson, L., Abbott, M.B., and Finney, B. (1999). Holocene Paleoclimatology of North Central Alaska from Oxygen Isotope Geochemistry of Organic Matter and Authigenic Carbonates in Lake Sediments. 29th Arctic Workshop, University of Washington, Seattle, Presented 3/99.
- **Anderson, L., Abbott, M.B., and Finney, B. (1999). Millennial and Sub-millennial Scale Holocene Paleoclimate Variations in Northern Alaska From Oxygen Isotope Ratios in Lake Sediment. AGU Annual meeting, San Francisco 12/99.
- Francus, P., Bradley, R.S., and Abbott, M.B. (1999). Annually Resolved Past Climate Reconstruction from Lacustrine Varved Sediments, Arctic, Canada. AGU Annual meeting, San Francisco 12/99.
- Francus, P., Perren, B., Hardy, D.R., Abbott, M.B., Bradley, R.S., and Braun, C. (1999). Canadian High Arctic Paleoclimatic Reconstruction: preliminary data from the laminated sediments of Sawtooth Lake. ARCUS meeting, Arlington, VA, Presented 3/99.
- Mark, B.G., Rodbell, D.T., Seltzer, G.O., Goodman, A.Y., Castiglia, P.J., Moy, C.M., and Abbott, M.B. (1999). Late-Glacial Fluctuations of Ice Volume Inferred from Lake-Sedimentology, Radiocarbon Dates, Soils and Terrain Modeling in the Cordillera Vilcanota-Queelccaya Ice Cap Region, SE Peru. AGU Annual meeting, San Francisco 12/99.
- **Polissar, P., Abbott, M., and CoBabe, E (1999). Holocene Changes in the Moisture Balance of the Northern Bolivian Andes: Lipid Biomarkers as Indicators of Low Lake-Levels. AGU Annual meeting, San Francisco 12/99.

1998

- Abbott, M.B. (1998). Lake-Level Records of Holocene Climate Change from the Tropical Andes. PAGES Open Science Meeting, London, England, April 20-23.
- Abbott, M.B., Wolfe, A.P., and Seltzer, G.O. (1998). Paleolimnic Records of Holocene Environmental Change in the Sub-Tropical Andes. Pole-Equator-Pole 1 (PEP-1) Conference, Merida, Venezuela, March 16-20.
- **Anderson, L., Abbott, M.B., and Finney, B. (1998). Paleohydrology of Tangled Up Lake, Central Brooks Range, Alaska Inferred from Oxygen Isotope Analysis of Sediment Cellulose. 28th Arctic Workshop, University of Colorado, Boulder. Presented 3/98.
- Aravena, R., Wolfe, B., Abbott, M.B., Seltzer, G.O., and Wolfe, A.P. (1998). Holocene Paleohydrology in the Bolivian Andes Inferred from Isotopic Analysis of Modern Water and Lake Sediment. GSA Annual meeting, Seattle, 10/98.

- **Besonen, M., Abbott, M.B., and Bradley, R. (1998). Development of a Late Holocene Record of Tropical Cyclone Activity in Southern New England Based on Annually Laminated Coastal Lake Sediments. Page 25. AGU Annual meeting, San Francisco 12/98.
- Moy, C.M., Rodbell, D.T., Castiglia, P.T., Seltzer, G.O., Bryan, M., Abbott, M.B., and Rosenbaum, R. (1998). A Lacustrine Sedimentologic Record of Holocene Glaciation in Peru. GSA Annual meeting, Seattle, 10/98.

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- Abbott, M.B., Seltzer, G.O., and Wolfe, A.P. (1997). Holocene Lake-Level Fluctuations in the Bolivian Andes. AGU Annual meeting, San Francisco 12/97.
- Abbott, M.B. and Finney, B.P. (1997). Paleohydrology of Birch Lake Alaska: A Multiproxy Approach to Lake-Level Records. 27th Arctic Workshop, University of Ottawa, Ottawa. Presented 2/97.
- **Polissar, P., CoBabe, E., and Abbott, M. (1997). Lacustrine Biomarkers as Paleolimnological Proxies: Preliminary Results from Lago Taypi Chaka Kkota, Bolivia. AGU Annual meeting, San Francisco 12/97.
- Rodbell, D.T., Seltzer, G.O., Abbott, M.B., and Newman, J.H. (1997). A Continuous Record of Holocene ENSO Events Preserved in a Lacustrine Sediment Core from southern Ecuador. AGU Annual meeting, San Francisco 12/97.
- Rodbell, D.T., Newman, J.H., Seltzer, G.O., Abbott, M.B. (1997). Sedimentology and Paleoclimatological Significance of a Laminated Lacustrine Sediment Core from a Glacial Lake in Ecuador. GSA Annual meeting, Salt Lake 10/97.
- **Polissar, P.J., E. CoBabe, M. Abbott. (1997). Lacustrine Sedimentary Biomarkers as Paleolimnological Proxies: Preliminary Results from Lago Taypi Chaka Kkota, Bolivia. AGU Annual meeting, San Francisco 12/97.

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- Abbott, M.B., Seltzer, G.O., and Wolfe, A.P. (1996). Century-Scale Shifts in the Precipitation-Evaporation Balance of the Bolivian Andes as Identified from Lake Records. AGU Annual meeting, San Francisco 12/96, A41A-07.
- Rodbell, D.T., Seltzer, G.O., Abbott, M.B., and Hanson, B.C.S. (1996). Tephrochronology, Sedimentology, and Palynology of Late Glacial-Holocene Lake Sediment Cores from Southern Ecuador. AGU Annual meeting, San Francisco 12/96.

1995

Abbott, M.B. and Seltzer, G.O. (1995). Evidence for a Prolonged Mid-Holocene Dry Phase in the Northern Bolivian Andes. AGU Annual meeting, San Francisco 12/95.

Abbott, M.B. and Stafford, T.W. (1995). Radiocarbon Reservoir Ages and Carbon Cycling in Arctic Lakes. 25th Arctic Workshop, Quebec City, Canada, March 16-18. 1-2.

1994

Abbott, M.B., Seltzer, G.O., and Binford, M.W. (1994). Holocene Climate Variability in the Northern Bolivian Altiplano. GSA Annual meeting, Seattle, 10/94.

Abbott, M.B. and Finney, B. (1994). Lake-Level Changes Revealed by Seismic- and Litho-Stratigraphic Records in Interior Alaska. AGU annual meeting, San Francisco 12/94.

Finney, B. Gardner, G. Edwards, M, and Abbott, M. (1994). Late Quaternary Lake-Level and Pollen Changes in Interior Alaska. GSA Annual Meeting, Seattle 1994.

Miller, G.H. Abbott, M.B. Stafford, T.W., and Sauer, P.J. (1994). Radiocarbon Dating Organic-Poor Arctic Lake Sediments. GSA Annual Meeting, Seattle 1994.

Rodbell, D.T. Nebolini, J. Seltzer, G.O., Abbott, M.B., Hanson, B.C.S., and Birkeland, P.W. (1994). The Glacial Geologic and Palynologic Record of the Last Deglaciation in the Andes of Northern Peru and Southern Ecuador. GSA Annual meeting, Seattle 10/94.

1993

Brenner, M., Schelske, C.L. Curtis, H.H., Hodell, D.A. Binford. M., Abbott, M. (1993). A High-Resolution Paleoclimatic Record from Lago Huinamaraca (Lago Titicaca Menor), Bolivia. Abstract presented at the 6th International Palaeolimnological Symposium, Canberra, Australia 19-21, 1993.

1992

Abbott, M.B., (1992). Radiocarbon Dating of Lacustrine Sediments: Advances and Complications. Environmental Isotopes in Lacustrine Sediments, Workshop, University of Minnesota, 12/92.

Abbott, M.B., (1992). Developmental Stages of Arctic Lakes and Drainage Basins. 21st Arctic Workshop, University of Colorado, Boulder: INSTAAR, pages 1-2. Presented 3/92

Seltzer, G.O. and Abbott, M.B. (1992). A 20,000-Year Record of Environmental Change from Laguna Kollpa Kkota, Bolivia. Geological Society of America Abstracts: A348.

1991

Abbott, M.B., and Stafford, T.W. (1991). Radiocarbon Dating of Five Lake Systems Along Frobisher Bay, N.W.T., Canada. 20th Arctic Workshop, University of Alaska, Fairbanks. Presented 5/91

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Abbott, M.B. (1990). The Nature of Rhythmic Sedimentation Patterns in Arctic lake Systems, on Southern Baffin Island, N.W.T., Canada. 19th Arctic Workshop, University of Colorado, Boulder: INSTAAR, pages 1-2. Presented 3/90.

Stafford, T.W. and Abbott, M.B. (1990). Accelerator ¹⁴C Dating of Organic Carbon Fractions in Lake Sediments from Baffin Island, Arctic Canada. Geological Society of America Abstracts, 22, A310.

List of Collaborators within the Past 48 Months

Maximiliano Bezada (The National Institute of Geology and Mines, Caracas Venezuela)

Raymond Bradley (University of Massachusetts)

Mary Edwards (University of Southampton)

Bruce Finney (University of Alaska, Fairbanks)

Donna Francis (University of Massachusetts)

Mike Retelle (Bates College)

Donald Rodbell (Union College)

Valentí Rull (Universitat Autònoma de Barcelona)
Geoffrey Seltzer (deceased, Syracuse University)
Joseph Stoner (Oregon State University)
Aldo Shemesh (Weizmann Institute of Science, Israel)
Alexander Wolfe (University of Alberta)