

SONJA HAUSMANN

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PROFILE

Paleolimnologist specialized in the quantitative reconstruction of past climate and human impact inferred from lake sediments using diatoms. My special interests are the understanding of modern processes and multi-proxy approaches for climate reconstructions.

EDUCATION

- 2001 PhD in Paleolimnology, University of Bern, Switzerland; Advisor: André Lotter
- Participated in EU-Advanced Holocene Climate Course (Battarbee 1998)
 - Multivariate Statistics course (Birks 1999)
 - NCCR Summer Climate School (Stocker & Lotter 2000)
- 1997 Diploma in Biology, with specialisation in limnology at TU Munich
- 1996 - 1997 • Diploma thesis EAWAG, Ecotoxicology, Switzerland
- 1993 - 1996 • Graduate studies in Arizona, USA and Munich, Germany
- 1991 - 1993 • Undergraduate studies in Würzburg, Germany
- 1989 - 1991 College graduate
- 1985 - 1987 Training as a research technician, University of Munich, Germany

APPOINTMENTS

Since 2006 *Assistant Professor*, Department of Geosciences, University of Arkansas
 2007 - 2009 *Adjunct Professor*, Department of Geography, University Laval, Canada
 2005 - 2006 *Research Associate* in ArcticNet University of Laval, Geography Department

- 2002 - 2005 *Post-Doctoral researcher*, Department of Geography, Université Laval, Québec, Canada
 Advisor: Reinhard Pienitz
- Development of a seasonal diatom inference model based on sediment traps
 - Reconstruction of seasonal temperatures for the past 10 000 years in the Laurentian Mountains, Canada
 - Diatom inferred lake level changes in Lac Hertel, Canada Collaboration with Prof. Pierre Richard (UQAM Montréal)
 - Teaching and supervising of two students
- 1997- 2001 *Research Associate*, Institute of Plant Sciences, University of Berne, Switzerland
 Advisor: André Lotter
- Topic: Developed and applied training sets for temperature and nutrients
 Challenge: Training set contained confounding variables
 Solution: Developed a statistical approach to reduce the impact of background variables (Palaeo 3, 2006)
- Topic: High resolution multi-proxy study during Little Ice Age
 Challenge: A hypertrophic period was reconstructed
 Solution: Developed varve chronology which enabled the comparison with tree ring data and disentanglement of human and climatic impact on the lake (The Holocene, 2002)
- Topic: Reconstructed temperature of a high alpine site
 Challenge: The common diatom had no clear relationship to climate
 Solution: Numerical taxonomy was used to define ecomorphs (Freshwater Biology, 2001)
- Topic: Biogenic silica analysis of a low productive alpine site
 Challenge: Diatom signal was diluted by erosion
 Solution: Improved the sensitivity of the analysis, which revealed significant changes of lake productivity (Journal of Paleolimnology, 2003)
- 1996 - 1997 *Research Assistant in Ecotoxicology*, Swiss Federal Institute for Environmental Science and Technology (EAWAG), Zurich, Switzerland
 Impact of temperature combined with the exposition to copper on the growth and morphology of *Oocystis nephrocytioides*
- 1992 *Intern*, Ecological Station Wadden sea, Friedrichskoog, Germany
- Sediment analyses of the tidal flats
 - Helped to establish an ecological interpretation centre
 - Guide for eco-tours into the tidelands
 - Bird counting and beach monitoring

- 1988 – 1989 *Research Technician*, University of Munich, Germany
 Topic: HIV-related research (Cryptosporidiosis)
 Challenge: Parasites were cultivated in mice
 Solution: Initiated cell cultures as alternative cultivation methods
- 1988 *Intern*, Mission Hospital Machame, Tanzania
 Challenge: Toxic-shock reactions occurred
 Solution: Identified micro flora sources in the unit where infusions were prepared
 Knowledge-transfer

FUNDING

- 2009** PAGES (Past Global Change) International Floodplain Lake workshop \$5,000
 UA Graduate school workshop support \$5,000
 STRATA Raglan Mine \$1,000 isotope analysis

2008

Sampling of the recent 100-year flood event in SE Arkansas

PIs: **Sonja Hausmann**
 Co-PIs: Steven Boss and Ruchi Bhattacharya
 Funding agency: National Science Foundation
 Active period: 05/15/08 - 07/31/09
 Amount: \$37,620

Acquisition of Instrumentation and Expanded use of Existing Instrumentation for Identifying Nutrient Sources and Quantifying Taste -and Odor Producing-Compounds in Drinking Waters

PIs: Sonja Hausmann
 Co-PIs: Thad Scott, Phil Hays, Ralph Davis, Erik Pollock, Jack Lay
 Funding agency: University of Arkansas
 Active Period: 07/01/08 - 05/15/09
 Amount: \$92,839

Spatial and historical distribution of Geosmin and MIB producers in Beaver Reservoir, northwest Arkansas

PI: **Sonja Hausmann**
 Co-PIs: Steven Boss and Ralph Davis
 Funding agency: USGS 104 B
 Amount: \$77,458
 Active period: 02/29/08 - 02/28/09

Pingualuit Crater Lake Project

PI: **Sonja Hausmann**
 Funding agency: Subaward University Laval
 Amount: \$82,404
 Active period: 01/01/2008 - 12/31/2009

2007*Identifying the source and mechanisms of taste and odor compounds at the Beaver Lake, Northwest Arkansas*

PIs: **Sonja Hausmann**
 Co-PIs: Steven Boss and Ralph Davis
 Funding agency: USGS 104 B
 Active Period: 02/29/07 - 02/28/08
 Amount: \$68,755

Funding agency: **Travel Grant Fulbright College**
 \$1,000

2006*The New Quebec Crater Lake Project*

Pi: Reinhard Pientiz,
 Co-PIs: **Sonja Hausmann**, Warwick Winston, Martin Lavoie, Isabelle Larocque, Guillaume St-Onge, Veli-Pekka Salonen
 Funding agency: Canadian Foundation of climate and Atmospheric sciences
 Amount: \$376,000 CAD (\$82,404 to UA, see sub award 2008)
 Active period: 01/01/2006 - 12/31/2009

Funding agency: **Travel Grant Fulbright College**
 Amount: \$1,000

Funding agency: **Teaching Support**
 \$400

2003 *Post-Doctoral Fellowship,*

Pi: **Sonja Hausmann**
 Funding agency: LEOPOLDINA
 Amount: \$106,045
 Active period: 2002 - 2005

2002 *Fellowship for prospective researchers,*

Pi: **Sonja Hausmann**
 Funding agency: Swiss National Science Foundation, Switzerland
 Amount: \$US 43,431
 Active period: 2002 - 2003

2001 Travel grant to participate at the PEP III conference in France, Amount: \$1,200

1996

Pi: **Sonja Hausmann**

Funding agency: Karolina Rüdi scholarship for my master thesis, Switzerland,

Amount: \$7,310

Active period: 1996 -1997

AWARDS

2008 Connor Faculty Fellow: I got awarded with the Sandra Connor Endowed Faculty Fellowship for highest quality teaching, research and service to the college, \$ 1,500

2008 New Faculty Commendation for Teaching Commitment at the University of Arkansas

1998 Best poster at the advanced EU course “Climate reconstruction of Holocene“, University College London, U.K.

PUBLICATIONS

In peer reviewed journals (143 citations)

Hausmann S., Larocque I., Pienitz R. and St-Onge G. (in review) Diatom-inferred wind activity at Lac du Sommet, southern Québec, Canada: adding coherence to a multi-proxy paleoclimate reconstruction based on diatoms, chironomids and pollen for the past 9500 years submitted to *The Holocene* January 2010.

Gantner N., Michaud W.K., Veillette J., Bajno R., Muir D.C., Vincent W.F., Power M., Dixon B., Reist J.D., Pienitz R. and **Hausmann S.** (in review) ‘Pingualuk Crater Lake (Nunavik, Canada): limnology, Arctic Char (*Salvelinus alpinus*), and contaminants’ submitted to *AMBIO* December 2009.

Winston B., **Hausmann S.**, Scott J.T., Boss S.K., Davis R.K., Green R., Robert Morgan R. (in review) Climatic Control of Taste and Odor Production in a South Central U.S Reservoir, submitted to *Harmful Algae* March 2009.

Hausmann S. and Pienitz R. (2009) Seasonal water chemistry and diatom changes in six boreal lakes of the Laurentian Mountains (Québec, Canada): impacts of climate and timber harvesting, *Hydrobiologia*, 635, 1-14. Cited 0 times.

Laperrière L., Fallu M.A., **Hausmann S.**, Pienitz R. and Muir D. (2008). Paleolimnological evidence of mining and demographic impacts on lac Dauriat, Schefferville (subarctic Québec, Canada). *Journal of Paleolimnology*, 40(1), 309-324. Cited 0 times.

Hausmann S. and Pienitz R. (2007) Seasonal climate inferences from high-resolution modern diatom data along a climate gradient: A case study, *Journal of Paleolimnology*, 73-96. Cited 4 times, 3 times in 2009.

Bigler Ch., von Gunten L., Lotter A., **Hausmann S.**, Blass A., Ohlendorf Ch., Sturm M. (2007) Quantifying human-induced eutrophication in Swiss mountain lakes since AD 1800 using diatoms. *The Holocene*, 17 (8), 1141-1154. Cited 4 times in 2009.

Hausmann S. and Kienast, F. (2006) Optimisation of transfer functions by homogenisation of environmental variables: A validated case study for Greifensee in central Europe. *Palaeogeography, Palaeoclimatology, Palaeoecology*, 233, 96-112. Cited 7 times, 1 time in 2010.

Heiri O., Lotter A.F., **Hausmann S.** and Kienast F. (2003) A chironomid-based Holocene summer air temperature reconstruction from the Swiss Alps. *The Holocene*, 13(4), 477-484. Cited 79 times, 9 times in 2009

Ohlendorf C., Sturm M. and **Hausmann S.** (2003) Natural environmental changes and human impact reflected in sediments of a high alpine lake in Switzerland *Journal of Paleolimnology*, 30 (3), 297-306. Cited 17 times, 3 times in 2009 and 2010.

Hausmann S., Lotter A.F., Leeuwen J.F.N., Sturm M., Ohlendorf Ch. and Lemcke G. (2002) Interactions of climate and land use documented in the varved sediments of Seebergsee in the Swiss Alps. *The Holocene*, 12 (3), 279-289. Cited 22 times, 2 times in 2009.

Hausmann S. and Lotter A.F. (2001). Numerical *Cyclotella comensis* taxonomy and its importance for quantitative temperature reconstruction, *Freshwater Biology*, 46 (10), 1323-1333. Cited 10 times, 1 time in 2009

Hausmann S., v. Leuween J., Lotter A.F., Ohlendorf C., and Sturm M. (1999). Étude à haute résolution des derniers siècles dans les sédiments laminés du lac subalpin de Seeberg (Suisse). *Cryptogamie Algologie*, 20 (2), 111-112. Cited 0 times.

In other Journals

Laperrière L., Pienitz R., Fallu M.A., Hausmann S. and Muir D. (2009) Impact de l'activité minière et des eaux usées sur la santé du lac Dauriat à Schefferville: données paléolimnologiques. *Le Naturaliste Canadien* (133)2, 83-95.

Hausmann S., Lotter A.F., Leeuwen J.F.N., Ohlendorf C. and Sturm M. (2001) The influence of land-use and climate change on Alpine lakes: a high-resolution study focusing on the past 1000 years. *Terra Nostra*, 3, 96-99. Cited 2 times.

Hausmann S., (1999). *Cyclotella comensis*-Typen als Temperaturzeiger. *Berichte des IGB*, 7, 27-29. Cited 1 times.

Hausmann S., Grönlund E., Lemcke G., and Lotter A.F. (1997). High-resolution study of the last 400 years in the laminated sediments of subalpine Seebergsee (Switzerland). *Würzburger Geographische Manuskripte*, 41, 91.

Book review

Pollution of Lakes and Rivers – A paleoenvironmental Perspective by John Smol, Reviewed by S. Hausmann, *Limnology and Oceanography Bulletin*, Volume 17(2) June 2008, 65

In preparation

► *Indicates student manuscripts*

- Black, J.L., **Hausmann, S.**, Pienitz, R. and Edlund, M.B. (in prep.) *Cyclotella Pingualuitii*, sp. nov a new Pleistocene diatom from Pingualuit Crater Lake, northern Quebec, Canada. To be submitted to *Botany*.
- Black, J.L., **Hausmann, S.** and Pienitz, R. (in prep.) Diatom stratigraphy covering three interglacials from Pingualuit Crater Lake, northern Quebec, Canada. To be submitted to *Geology*.
- Bhattacharya R., **Hausmann S.**, Hubeny B., Boss S.K. and Black J.L. (in prep.) Water chemistry of 30 oxbow lakes at the lower White River, Lower Mississippi Valley, Arkansas along a flooding gradient. To be submitted to *Journal of Paleolimnology*
- Bhattacharya R., **Hausmann S.**, Hubeny B., Boss S.K. and Black J.L. (in prep.) Diatom response on water chemistry of 30 oxbow lakes of the lower White River, Lower Mississippi Valley, Arkansas along a flooding gradient.
- Winston B, **Hausmann S.**, Davis R. K., Boss. S.K. Lanayha Turley, Troy Munhofen and Marty Matlock (in prep.) Long-term impact of climate on phytoplankton growth in Beaver Reservoir, AR.
- Keveren R., **Hausmann S.**, Kaufman D. and Dixon J. (in prep.) Younger Dryas archived by diatoms in Greyling Lake southern Alaska to be submitted to the *Journal of Paleolimnology* in summer 2010.

Hausmann S., Fye F. and Pientiz R. Anthropogenic versus natural driving climate factors to be submitted to *Geophysical Research Letters* summer 2010

MONOGRAPHS

Hausmann S., (2001), Potential and limitations of quantitative environmental reconstructions, University of Bern, Bern, Switzerland. Dissertation.

Hausmann S., (1997), Impact of temperature combined with the exposition to copper on the growth and morphology of *Oocystis nephrocytioides*, EAWAG, Ecotoxicology, ETH Zurich, Switzerland. Diploma thesis.

PRESENTATIONS AT INTERNATIONAL CONFERENCES

➤ Indicates students presentations

2009

- Winston B., **Hausmann S.**, Scott T, Boss S., Davis R. and Morgan B. Climatic *Control of Taste and Odor episodes at Beaver Reservoir*, Ecomunch, UA Biology Department Jan 27 2010 (invited).

Hausmann S., Bhattacharya R., Hubeny, J.B., Black J.L, Boss S.K. and Brown E. (2009), *Floodplain Lake Sediments as Flood Archives*, 11th International Paleolimnology Symposium, 14 – 19 Dec, 2009, Guadalajara, Mexico

- Black J, **Hausmann S.**, Pientiz R., St-Onge G., Guyard H. and Salonen V.-P. (2009) *A paleoenvironmental reconstruction of Pingualuit Crater Lake sediments: A long-term record in the terrestrial Canadian arctic spanning more than 200,000 years*, 11th International Paleolimnology Symposium, 14 – 19 Dec, 2009, Guadalajara, Mexico

Salonen V.-P., Luoto T.P., Virkanen J., Pienitz R., **Hausmann S.** and St-Onge G. (2009) *ICP-MS trace metal geochemistry of glacial and interglacial layers in the Pingualuit core*, Nunavik, Québec, Canada, 11th International Paleolimnology Symposium, 14 – 19 Dec, 2009, Guadalajara, Mexico

Guyard H., St-Onge G., Francus P., Pienitz R., **Hausmann S.**, Zolitschka B., Lamothe M., Salonen V.-P., Luoto T., Black J., Larocque I. (2009) Long-term paleoclimatic record in the Terrestrial Canadian Arctic from Pingualuit Crater Lake sediments (Nunavik), 11th *International Paleolimnology Symposium*, 14 – 19 Dec, 2009, Guadalajara, Mexico

- Keveren R., **Hausmann S.**, Kaufman D.S., Black J.L., and Dixon J.C. (2009), *Reconstruction of Paleolimnological Changes through the Holocene: Preliminary Diatom Analysis of Greyling Lake, Chugach Range, South-Central Alaska*, North American Diatom Symposium, 23 – 27 September, 2009, IOWA

- Black J.L., **Hausmann S.**, Pienitz R. Niederreiter R., Salonen V.-P., St-Onge G., Bouchard M.A., Cunningham L., Francus P. and Lamothe M., (2009) *The „Crystal Eye of Nunavik“ (Pingualuit Crater Lake): Diatom-inferred paleoenvironmental record for three previous interglacial periods*, North American Diatom Symposium, 23 – 27 September, 2009, IOWA
- Ruchi Bhattacharya, **Sonja Hausmann S.**, Bradford Hubeny B.J., Stephen Boss S.K., Black J.L., and Brown E. (2009), *Past flood reconstruction from Lower White River, Arkansas using diatoms and sediment geochemistry as proxies*, North American Diatom Symposium, 23 – 27 September, 2009, IOWA
- Winston B., **Hausmann S.**, Scott Thad, Boss S., Davis R., Morgan R., Green R., (2009), *Climate, Cyanobacteria and MIB a Bad Tasting Combination*, National Association of Black Geologists & Geophysicists, Fayetteville, Arkansas, September 2009, (Byron Winston was Co-Chairperson)

Hausmann S., Russell J., Fye F., Pienitz R., St-Onge G, (2009), *NAO impact on summer winds over the past 9500 years as recorded by Diatoms in Lake du Sommet in southern Québec, Canada*, 3rd open science meeting, Corvallis, Oregon, July, 2009.
<http://www.pages-osm.org/osm/abstracts/posters.html>

Black J.L., **Hausmann S.**, Pienitz R. Niederreiter R., Salonen V.-P., St-Onge G., Bouchard M.A., Cunningham L., Francus P. and Lamothe M., (2009) *The „Crystal Eye of Nunavik“ (Pingualuit Crater Lake): Diatom-inferred paleoenvironmental record for three previous interglacial periods*, 3rd open science meeting, Corvallis, Oregon, July, 2009.

Hausmann S., Bhattacharya R., Hubeny, J.B., Black J.L, Boss S.K. and Brown E. (2009), *Floodplain Lake Sediments as archives for Environmental Change*, GSA North Eastern Meeting, Portland, Maine, March 2009 (invited)

- Black J.L., **Hausmann S.**, Pienitz R. Niederreiter R., Salonen V.-P., St-Onge G., Bouchard M.A., Cunningham L., Francus P. and Lamothe M., (2009) *The „Crystal Eye of Nunavik“ (Pingualuit Crater Lake): Diatom-inferred paleoenvironmental record for three previous interglacial periods*, GSA North Eastern Meeting, Portland, Maine, March 2009 (invited)

Hubeny J.B., Bhattacharya R., **Hausmann S.**, Black J.L, Boss. S.K. (2009) *Environmental correlations between surface sediments trace metal concentrations and limnological variables during flood conditions in 30 White River Oxbow Lakes, AR*, GSA North Eastern Meeting, Portland, Maine, March 2009 (Brad Hubeny was co-organizer)

- Winston B., **Hausmann S.**, Scott T., Boss S.K., Davis R.K., Bob Morgan B., Green R. (2009) *Climate, Cyanobacteria and MIB – A Bad Tasting Combination*, Annual Arkansas Water Resource Conference, Fayetteville, April 2009 (invited)

2008

Invited to give an ADVANCE lecture at the University of Arizona, Tucson

Invited to give a talk at the North Eastern GSA meeting, Portland, Maine, March 2009

- Bhattacharya R., **Hausmann S.** and Boss S.K., (2008), Past Flood Reconstruction from Lower White River, Arkansas using Diatoms and Sediment Geochemistry as Proxies, 39th Annual Binghamton Geomorphology, Austin TX, October 2008

Hausmann S., Fye F., Pienitz R. and St-Onge G., (2008), Inferred Climatological Summer Wind Regimes for the past 9500 years as recorded by Diatoms in a Lake in Québec, Canada, GSA, Houston, October 2008

- Bhattacharya R., **Hausmann S.** and Boss S.K., (2008), Past Flood Reconstruction from Lower White River, Arkansas using Diatoms and Sediment Geochemistry as Proxies, GSA, Houston, October 2008
- Winston B. and **Hausmann S.**, (2008), Understanding Reservoir Aging Through Paleolimnological and Modern techniques, National Association of Black Geologists & Geophysicists "Advancing the Geosciences – The Next Generation". Atlanta, September 24 – 27, 2008 (invited).

Salonen V.-P., Pienitz R., **Hausmann S.**, St-Onge G., Guyard H., Luoto T., Bouchard M.A., Francus P., Lamothe M., Larocque I., Lavoie M., Vincent W.F. and Niederreiter R., (2008), Quaternary strata from the Pingualuit meteorite crater, Nunavik, Quebec, Canada, Nordic Geological Winter meeting in Aalborg, Denmark, January 2008

- Bhattacharya R. and **Hausmann S.**, (2008), Projected Flood Reconstruction of the White River, AR, Floodplain Ecosystem Symposium, Little Rock, March 2008

Pienitz R., **Hausmann S.**, St-Onge G., Guyard H., Salonen V.-P., Luoto T., Francus P., Larocque I., Lavoie M., Lamothe M., Vincent W.F. and Niederreiter R., (2008), Research at *Pingualuit* Crater Lake, the "Crystal Eye of Nunavik", 38th Arctic Workshop, Boulder Colorado, March 2008

Hausmann S., (2008), Seasonal Limnological Changes of Beaver Reservoir, Annual Research and Watershed Conference, Fayetteville, April 2008

- Bhattacharya R. and **Hausmann S.**, (2008), Projected Flood Reconstruction of the White River, AR, Annual Research and Watershed Conference, Fayetteville, April 2008

Pienitz R.; **Hausmann S.**; Bouchard M.; Cunningham L.; Francus P., Guyard H.; Larocque I.; Lavoie M.; Luoto T.; and Niederreiter R., (2008), Research at Pingualuit Crater Lake, the “Crystal Eye of Nunavik”, Joint Meeting of the Geological Association of Canada, Mineralogical Association of Canada, Society of Economic Geologists and the Society for Geology Applied to Mineral Deposits. May, 2008, Québec

Hausmann S., Fye F., Pienitz R. and St-Onge G. (2008), Inferred Climatological Summer Wind Regimes for the past 9500 years as recorded by Diatoms in a Lake in Québec, Canada, AGU, Fort Lauderdale, May 2008

Hausmann S., Fye F., Pienitz R. and St-Onge G., (2008), Inferred Climatological Summer Wind Regimes for the past 9500 years as recorded by Diatoms in a Lake in Québec, Canada, AMQUA, College State, June 2008

Hausmann S., Black J.L., Pienitz R., St-Onge G., Guyard H., Salonen V.-P. and Niederreiter R., (2008), Pingualuit Impact Crater Lake Sediments (Nunavik, Canada): A Possible Arctic Terrestrial Record of Several Glacial/Interglacial Cycles, AMQUA, College State, June 2008

2007

St-Onge G., Guyard H., Pienitz R., **Hausmann S.**, Salonen V.-P., Luoto T., Francus P., Larocque I., Lavoie M., Lamothe M., Vincent W.F. and Niederreiter R., (2007), Preliminary Chronostratigraphy of Pingualuit Impact Crater Lake Sediments (Nunavik, Canada): a Possible Arctic Terrestrial Record of Several Glacial/Interglacial Cycles, AGU Fall Meeting, San Francisco, December 2007

- Winston B., **Hausmann S.**, Davis R.K., Morgan B. and Green R., (2007), Taste and Odor in NW Arkansas drinking water, 30th Congress of the International Association of Theoretical and Applied Limnology, SIL Montreal, August 2007
- Winston B., **Hausmann S.** and Davis R.K., (2007), Taste and Odor in NW Arkansas Drinking Water, Black Geoscientists, Phonix, September 2007

Pienitz R., **Hausmann S.**, Bouchard M.A., Larocque I., Lavoie M., Niederreiter R., Salonen V.-P., St-Onge G. and Vincent W.F., (2007), RESEARCH AT PINGUALUIT CRATER LAKE: “THE CRYSTAL EYE OF NUNAVIK”, 30th Congress of the International Association of Theoretical and Applied Limnology, SIL Montreal, August 2007

- Bhattacharya R., **Hausmann S.** and Cohen A. (2007), Planned Reconstruction of Paleofloods in the Congaree River using diatoms, 4th International Limnogeology Congress, Barcelona, July 2007.

Hausmann S., Pienitz R. and St-Onge G., (2007), Summer Lake Circulation Influenced by Solar Activity, 4th International Limnogeology Congress, Barcelona, July 2007.

Pingualuit a terrestrial impact Crater Lake in the Canadian Arctic (ILIC, group poster), 4th International Limnogeology Congress, Barcelona, July 2007.

2006

Invited Talk:

Hausmann S., Pienitz R., St-Onge G., Larocque I. and Richard P.J.H (2006) Lake Circulations influenced by Solar Activity? Annual meeting of the Geological Society of America, October 2006

This was a recorded presentation and can be visited at:

http://gsa.confex.com/gsa/2006AM/finalprogram/abstract_111365.htm

Hausmann S., Köster D., Pienitz R., St-Onge G., Larocque I. and Richard P.J.H (2006) Lake Circulations Inferred from High Resolution Modern Diatom Data 10th International Paleolimnology Symposium, Duluth, June 2006

2002- 2004

Hausmann S. and Pienitz R. (2004) Seasonal Climate Dynamics Inferred From High Resolution Modern Diatom Data, AGU Fall Meeting, San Francisco, USA.

Hausmann S. and Pienitz R. (2003) Seasonal thermal variability as driving factor for diatom composition and production in boreal lakes, 9th International Palaeolimnology Symposium, Espoo, Finland.

Hausmann S. and Pienitz R. (2003) A novel approach in climate reconstruction using the seasonality of diatoms, Poster, Third International Limnogeology Congress, Tucson, Arizona, USA.

2001 – 2002

Hausmann S. and Pienitz R. (2002) Reconstitution du climat par l'étude de la succession chez les diatomées: Une nouvelle approche, Oral, XXIII^{ème} Colloque annuel du centre d'études nordiques, Québec, Canada.

Hausmann S. and Pienitz R. (2002) Understanding of climate archives by increasing temporal resolution, 17th International Diatom Symposium, Ottawa, Canada.

Hausmann S. (2001) The reduction of secondary gradients: A new tool to improve diatom-inference models? Past Climate Variability through Europe and Africa, Aix-en-Provence, France.

Hausmann S., Ammann B. and Tinner W. (2001) High resolution alpine lake sediments depict natural and anthropogenic changes in the Alps, Climate Change at High Elevation Sites: Emerging Impacts (HIGHEST II), Davos, Switzerland.

Hausmann S. (2001) Are independent diatom-inferred reconstructions possible? Nordic Meeting of Diatomists 2001, Turku, Finland.

1999 – 2000

Hausmann S., Lotter A.F., Leeuwen J., Sturm M., Ohlendorf Ch. and Lemcke G. (2000) Climatic Impact on grazing: A quantitative multi-proxy, high-resolution study of varved sediment from a small lake in the Swiss Alps, Oral, 8th International Symposium on Palaeolimnology, Kingston, Canada.

Hausmann S. and Lotter A.F. (2000) Eutrophierung des subalpinen Seebergsees zwischen der Mittelalterlichen Wärmeperiode und der Kleinen Eiszeit im Berner Oberland, Oral, Schweiz, 14. Treffen Deutschsprachiger DiatomologInnen, Geobotanisches Institut, Bern, Switzerland (Co-organisation).

Hausmann S. and Lotter A.F. (1999) *Cyclotella comensis* -Typen als Temperaturzeiger, Oral, 3. Algensymposium, Universität Bern, Switzerland.

Hausmann S. (1999) Lake sediments as archives of past environment-organism interactions, Oral, Commission of oceanography and limnology (COL) Symposium 1999, Looking into the Sediment Subsurface of Lakes, ETH, Zürich, Switzerland.

Hausmann S., Lotter A.F., Leeuwen J, Sturm M., Ohlendorf Ch. and Lemcke G. (1999) A Diatom-inferred Hypertrophy in a Subalpine Swiss lake between AD 1300 and 1700, Oral, AG Hochgebirgsökologie Jahrestreffen 1999, Geographisches Institut, Universität Bern, Switzerland.

Hausmann S., Lotter A.F., Leeuwen J, Sturm M., Ohlendorf Ch. and Lemcke G. (1999) A Diatom-inferred Hypertrophy in a Subalpine Swiss lake between 1300 and 1700 AD, Oral, The 2nd International Congress of Limnogeology, Institut Universitaire Européen de la Mer Université de Bretagne Occidentale, Brest, France.

Hausmann S. and Lotter A.F. (1999) *Cyclotella comensis* -Typen als Temperaturzeiger, Oral, 13. Treffen Deutschsprachiger DiatomologInnen, Tagungs und Bildungszentrum Schloss Kröchlendorf, Germany.

1997 – 1998

Hausmann S., Lotter A.F., Leeuwen J, Sturm M., Ohlendorf Ch. and Lemcke G. (1998) Etude à haute résolution des derniers siècles dans les sédiments laminés du lac subalpine de Seeberg (Suisse), Oral, 17ème Colloque de l'Association des Diatomistes de langue Française, Luxembourg, Luxembourg.

Hausmann S. and Lotter A.F. (1998) A Diatom-inferred Hypertrophy in a Subalpine Swiss lake between 1300 and 1700 AD, 12. Treffen Deutschsprachiger DiatomologInnen, Trento, Italy.

Hausmann S. and Lotter A.F. (1997) High-resolution study of the last 400 years in the laminated sediments of subalpine Seebergsee (Switzerland), 7th International Symposium on Palaeolimnology, Heiligkreuztal, Germany.

Hausmann S. and Behra R. (1997) Kupfertoleranz und Kälteschock bei der Grünalge *Oocystis nephrocystioides*, 2. Algensymposium, Universität Zürich, Switzerland.

PRESS RELEASES

Northwest Arkansas Democrat Gazette, Isotopes help experts study lake's bottom, Findings figure into lawsuit, November 27, 2009

<http://comp.uark.edu/%7Eshausman/paleolimnology/news.html>

PAGES Newspaper October 2009, Advances in Paleolimnology

<http://www.pages.unibe.ch/products/newsletters/NL2009-3-lowres.pdf>

Video Interview Research Frontiers, *Preserving Pingualuit*,

<http://researchfrontiers.uark.edu/12813.php>

University Research TV Station

www.youtube.com/watch?v=A2pB4G0SvJQ

Democrat Gazette, Mustiness in water already begins as lake experts blame moths of rain, <http://www.nwanews.com/adg/News/238595/>, September 28, 2008

Science Now, Remote Lake May Be Treasure Trove of Climate Data

<http://sciencenow.sciencemag.org/cgi/content/full/2007/1213/3>, December 14, 2007,

Daily Headlines, Arctic Impact Crater Lake Reveals Interglacial Cycles in Sediments,

<http://dailyheadlines.uark.edu/11974.htm>, December 11, 2007,

Democrat Gazette, Yucky water, <http://www.nwanews.com/adg/Editorial/201721>, September 17, 2007

Democrat Gazette, Beaver Lake: Water quality under microscope,

<http://nwanews.com/adg/News/200926/>, September 9, 2007

Research Frontiers, Preserving Pingualuit, Video Interview,

<http://researchfrontiers.uark.edu/12813.php>

Universitas Helsingiensis, Tales from an Arctic crater lake,

<http://www.helsinki.fi/uh/2-2007/juttu1.html>, 2007

CBC radio interview,

http://www.cbc.ca/quirks/media/2007-2008/mp3/qq-2008-01-12_04.mp3

<http://www.cbc.ca/quirks/archives/07-08/jan12.html>, released January 18, 2007

Daily Headlines, Small Organisms, Great Proxies,

<http://dailyheadlines.uark.edu/9494.htm>, October 23, 2006,

Arkansas Democrat Gazette, Water quality under the microscope, September 9, 2006,

ONGOING RESEARCH PROJECTS

- Identifying the source and mechanisms of taste and odor compounds at the Beaver Lake, Northwest Arkansas, University of Arkansas
- Oxbow lake sediments as potential archives for paleofloods, University of Arkansas
- Periphytic diatoms along the shore of Beaver Reservoir as indicators for non-point water pollution, University of Arkansas
- The New Quebec Crater Lake Project. Funded by the Canadian Foundation for Climate and Atmospheric Sciences. Coring May 2007.
<http://www.cen.ulaval.ca/pingualuit/index.html>
- Lake Level Change of Lake Hertel. Collaboration with P.J. H. Richard, University of Montreal.
- Evidence for rerouting of the melt water stream of the Laurentian Ice Sheet 8500 BP: A multi-proxy approach. Collaboration with R. Pienitz, Ulaval, G. St-Onge, Ismer/Geotop, I. Larocque, INRS, P.J.H. Richard, University of Montreal
- Evidence for forcing on the summer lake circulation. Collaboration with G. St-Onge, Geotop & Ismer, R. Pienitz, ULAVAL
- Diatoms as indicators for nutrient concentrations. Collaboration with A. Lotter, University of Utrecht

SUPERVISION

- Byron Winston, PhD Thesis: Taste and Odour Problems of drinking water in NW Arkansas, University of Arkansas, anticipated defense Fall 2010
- Ruchi Bhattacharya, PhD Thesis: Reconstruction of Paleofloods in the Congaree River (SE USA) using diatoms, anticipated defense Spring 2010

- Jessica Black, Postdoctoral Researcher until December 2009: Reconstruction of past environment of Pingualuit crater Lake using diatoms (Co-supervision Reinhard Pienitz Ulaval)
- Raymond Keverern, Master Student: Diatom stratigraphy of Greyling Lake, Southern Alaska (Co-supervision with John Dixon, UA Geosciences), anticipated defense Spring 2010
- Renee Vardy, PhD student, Water quality of springs located in and near Eureka Springs, Arkansas (in collaboration with Dr. Phil Hays) started Fall 2009.
- Courtney Ciapciak, Master student, Spatial and temporal flood signal in the White River National Wildlife Refuge AR (in collaboration with Dr. Brad Hubeny, Salem State College and Adjunct Faculty UA), started Fall 2009
- Haley Hames, Master student, Impact of dams and levees on the discharge of the lower White River, AR a pilot project using GSflow (in collaboration with Dr. Van Brahana and Dr. Phil Hays) started Spring 2010.
- Lanayah Trolley and Troy Munhofen REU students summer 2009.

FACILITIES

Clean laboratory with two Leica high quality research microscopes equipped with digital camera. Identification literature for diatoms is available. Cold storage for sediment cores and wet lab with fume hood for the preparation of diatoms is available.

The UA paleolimnology laboratory has a varieties of sediment cores (gravity, two piston with core catchers), coring platform with tripod, two electric motors, one rubber boat, access to john boat with gas motor on trailer, water sampler, gps, temperature-oxygen-pH depth probe, conductivity meter, two ecosouders, access to subbottom profiler.

TEACHING AT THE UNIVERSITY OF ARKANSAS

Fall 2006, 2007, 2008, 2009 and Spring 2008, 2009
GEOG 3003-001 Conservation of Natural Resources (Lecture)

Spring 2007 and 2009
ENDY 5063-001 Climate through Time (Lecture)

Fall 2007
ENDY 6023 - 001 Assessment of Water Quality (Seminar)

Fall 2008
ENDY 6023 – 001, BIO 480 Pollution of Lakes and Rivers (Seminar/Special problem)

Fall 2009
GEOG 5333 Research Methods for Geographers

OTHER PROFESSIONAL ACTIVITIES

Service activities:

In the Sustainability Task Force we worked on creating a Master and a Minor in Sustainability. I serve as library representative for the Geography subdivision at the University of Arkansas and as member of the Environmental Dynamics Steering Committee. I am vice president for the Association Women in Science Ozark Chapter. In Sept 2010 I host an international PAGES floodplain lake workshop.

Reviewer for following peer-reviewed journals:

- The Holocene
- Journal of Paleolimnology
- Ecoscience
- Hydrobiologia
- Journal of Phycology
- Geology
- Quaternary Science Reviews

Member of the:

- American Geophysical Union (AGU)
- Geological Society of America (GSA)
- American Quaternary Association (AMQUA)
- Association Women in Science (AWIS)
- Association Women Geoscientist (AWG)
- International Paleolimnology Association (IPA)
- International Society for Diatom Research (ISDR)

LANGUAGE SKILLS

- English
- French
- German

TECHNICAL SKILLS

- Specialized in numerical modelling of environmental and biological data
- Scientific writing
- Ecological and taxonomical knowledge of diatom flora of North East America and Central Europe
- Coring: short cores, long cores and transects
- Sediment trap studies
- Limnological investigations (water samples, secchi depth, oxygen, pH and temperature profiles)
- Cultivation of algae in laboratory
- Photo spectrometric analysis of biogenic silica
- Electron microscopy