Brian A. Schubert, Associate Professor
School of Geosciences
University of Louisiana at Lafayette
schubert@louisiana.edu
http://schubertlab.weebly.com/

Experience
Associate Professor, University of Louisiana at Lafayette (2017-present)
Assistant Professor, University of Louisiana at Lafayette (2013-2017)
Assistant Researcher, University of Hawaii (2010-2012)
Postdoctoral Researcher, University of Hawaii (2008-2010)
Ph.D. in Geology, Binghamton University (2008)
B.S. in Geology with Honors, Lafayette College (2004)

Administrative Service
Program Coordinator, Geology BS Program (2018-present)
Graduate Coordinator, Geology MS Program (2015-present)
Academic Graduate Coordinator, Earth and Energy Sciences PhD Program (2018-present)

Awards/Honors
Rising Star Award, Ray P. Authement College of Sciences, UL Lafayette (2016)
Robert C. and Barbara Pettit Endowed Professorship in Geology (2015-2018)
Certificate of Achievement in Research and Sponsored Activities, UL Lafayette (2013, 2017)
Best University Research Award, Department of Energy, Basic Energy Sciences (2013)
Exceptional Reviewer, Geological Society of America Bulletin (2011)
W.D. Williams Award, International Society for Salt Lake Research (2008)

Grants
National Science Foundation, Paleo Perspectives on Climate Change, "Development of new high-resolution pCO_2 records for quantifying Earth system climate sensitivity," 2016-2019 (P.I.), $347,945.

National Science Foundation, Water Sustainability and Climate, "A surface water management framework to counterbalance groundwater withdrawals in wetter regions of the U.S.," 2014-2017 (Senior Personnel), $483,914.

US Geological Survey, Cooperative Ecosystems Studies Unit National Network, "Forest hydrology and accretion modeling to evaluate the impacts of Hurricane Sandy," 2013-2014, (co-P.I.), $105,000.

U.S. Department of Energy, Basic Energy Sciences, Geosciences and Biosciences Division, "Fundamental research on the fractionation of carbon isotopes during photosynthesis: new interpretations of terrestrial organic carbon within geologic substrates," 2013-2016 (P.I.), $195,745.

National Science Foundation, Sedimentary Geology and Paleobiology, "Paleoclimate analysis of a Miocene Arctic forest from the Kolyma River Basin, Northeastern Russia," 2013-2015 (P.I.), $63,306.

Board of Regents Support Fund, Enhancement Program, "Acquisition of a pyrolysis instrument to characterize organic carbon in support of a shale gas resource education and research initiative," 2013-2015 (co-P.I.), $229,500.

U.S Fish and Wildlife Service, Pacific Islands Climate Change Cooperative, "Reconstructing past Hawaiian precipitation using stable carbon isotope analysis of Māmane trees," 2011-2013 (P.I.), $42,888.

National Geographic Society Research and Exploration Grant, "Microbial survival in salt from Death Valley and Saline Valley, CA." 2007-2008 (P.I.).

Peer-reviewed Publications (Postdoc or student co-author)

Jones, MT, Percival, LME, Stokke, EW, Frieling, J, Mather, TA, Riber, L, **Schubert, BA**, Schultz, B, Tegner, C, Planke, S, Svensen, HH. 2019. "Mercury anomalies across the Palaeocene–Eocene Thermal Maximum," *Climate of the Past*, 15: 217-236, doi: 10.5194/cp-15-217-2019.

Cui, Y and **Schubert, BA**. 2018 (invited research article). "Towards determination of the source and magnitude of atmospheric pCO_2 change across the early Paleogene hyperthermals," *Global and Planetary Change*, doi: 10.1016/j.gloplacha.2018.08.011.

Hagopian, WM, **Schubert, BA**, Graper, RA, Jahren, AH. 2018. "Plant growth chamber design for subambient pCO_2 and $\delta^{13}C$ studies," *Rapid Communications in Mass Spectrometry*, 32: 1296-1302, doi: 10.1002/rcm.8176.

Schubert, BA and Jahren, AH. 2018 (invited review). "Incorporating the effects of photorespiration into terrestrial paleoclimate reconstruction," *Earth-Science Reviews*, 177: 637-642, doi: 10.1016/j.earscirev.2017.12.008.

Cui, Y and **Schubert, BA**. 2017. "Atmospheric pCO_2 reconstructed across five early Eocene global warming events," *Earth and Planetary Science Letters*, 478: 225-233, doi: 10.1016/j.epsl.2017.08.038.

Schubert, BA, Jahren, AH, Davydov, SP, Warny, S. 2017. "The transitional climate of the late Miocene Arctic: Winter-dominated precipitation with high seasonal variability," *Geology*, 45(5): 447-450, doi: 10.1130/G38746.1.

Hobbie, EA, **Schubert, BA**, Craine, JM, Linder, E, and Pringle, A. 2017. "Increased C_3 productivity in Midwestern lawns since 1982 revealed by carbon isotopes in *Amanita thiersii*," *Journal of Geophysical Research: Biogeosciences*, 122(2): 280-288, doi: 10.1002/2016JG003579.

Trahan, MW and **Schubert, BA**. 2016. "Temperature-induced water stress in high-latitude forests in response to natural and anthropogenic warming." *Global Change Biology*, 22(2): 782-791, doi: 10.1111/gcb.13121.

Cui, Y and **Schubert, BA**. 2016. "Quantifying uncertainty of past pCO_2 determined from changes in C_3 plant carbon isotope fractionation." *Geochimica et Cosmochimica Acta*, 172: 127-138, doi: 10.1016/j.gca.2015.09.032.

Schubert, BA and Timmermann, A. 2015. "Reconstruction of seasonal precipitation in Hawai`i using high-resolution carbon isotope measurements across tree rings." *Chemical Geology*, 417: 273-278, doi: 10.1016/j.chemgeo.2015.10.013.

Schubert BA, and Jahren AH. 2015 (invited review). "Seasonal temperature and precipitation recorded in the intra-annual oxygen isotope pattern of meteoric water and tree-ring cellulose." *Quaternary Science Reviews*, 125: 1-14, doi: 10.1016/j.quascirev.2015.07.024.

Schubert, BA and Jahren, AH. 2015. "Global increase in plant carbon isotope fractionation following the Last Glacial Maximum caused by increase in atmospheric pCO_2," *Geology*, 43(5): 435-438, doi: 10.1130/G36467.1.

Hagopian, WM, **Schubert, BA**, and Jahren, AH. 2015. "Large-scale plant growth chamber design for elevated pCO_2 and $\delta^{13}C$ studies," *Rapid Communications in Mass Spectrometry*, 29: 440-446, doi: 10.1002/rcm.7121.

Sankaranarayanan, K, Lowenstein, TK, Timofeeff, MN, **Schubert, BA**, and Lum, JK. 2014. "Characterization of ancient DNA supports long-term survival of haloarchaea," *Astrobiology*, 14(7): 553-560, doi: 10.1089/ast.2014.1173.

Jahren, AH, **Schubert, BA**, Marynowski, L, and Wilson, JA. 2013. "The carbon isotope organic geochemistry of Early Ordovician rocks from the Annascaul Formation, County Kerry," *Irish Journal of Earth Sciences*, 31: 1-12, doi: 10.3318/IJES.2012.31.1.

Schubert, BA and Jahren, AH. 2013. "Reconciliation of marine and terrestrial carbon isotope excursions based on changing atmospheric CO_2 levels," *Nature Communications*, 4: 1653, doi: 10.1038/ncomms2659.

Schubert, BA and Jahren, AH. 2012. "The effect of atmospheric CO_2 concentration on carbon isotope fractionation in C_3 land plants," *Geochimica et Cosmochimica Acta*, 96: 29-43, doi: 10.1016/j.gca.2012.08.003.

King, DC, **Schubert, BA**, Jahren, AH. 2012. "Practical considerations for the use of pollen $\delta^{13}C$ value as a paleoclimate indicator," *Rapid Communications in Mass Spectrometry*, 26: 2165-2172, doi: 10.1002/rcm.6333.

Schubert, BA, Jahren, AH, Eberle, JJ, Sternberg, LSL, and Eberth, DA. 2012. "A summertime rainy season in the Arctic forests of the Eocene," *Geology*, 40(6): 523–526, doi: 10.1130/G32856.1.

Schubert, BA and Jahren, AH. 2011. "Quantifying seasonal precipitation using high-resolution carbon isotope analyses in evergreen wood," *Geochimica et Cosmochimica Acta*, 75(22): 7291-7303, doi: 10.1016/j.gca.2011.08.002.

Marynowski, L, Rakociński, M, Borcuch, E, Kremer, B, **Schubert, BA**, and Jahren, AH. 2011. "Molecular and petrographic indicators of redox conditions and bacterial communities after the F/F mass extinction (Kowala, Holy Cross Mountains, Poland)," *Palaeogeography, Palaeoclimatology, Palaeoecology*, 306: 1-14, doi: 10.1016/j.palaeo.2011.03.018.

Schubert, BA and Jahren, AH. 2011. "Fertilization trajectory of the root crop *Raphanus sativus* across atmospheric pCO_2 estimates of the next 300 years," *Agriculture, Ecosystems, and Environment*, 140(1-2): 174-181, doi: 10.1016/j.agee.2010.11.024.

Lowenstein, TK, **Schubert, BA**, and Timofeeff, MN. 2011. "Microbial communities in fluid inclusions and long-term survival in halite," *GSA Today*, 21(1): 4-9, doi: 10.1130/GSATG81A.1.

Jahren, AH and **Schubert, BA**. 2010. "The corn content of French-fry oil from national chain vs. small business restaurants," *Proceedings of the National Academy of Sciences USA*, 107(5): 2099-2101, doi: 10.1073/pnas.0914437107.

Schubert, BA, Timofeeff, MN, Polle, JEW, and Lowenstein, TK. 2010. "*Dunaliella* cells in fluid inclusions in halite: Significance for long-term survival of prokaryotes," *Geomicrobiology Journal*, 27(1): 61-75, doi: 10.1080/01490450903232207.

Schubert, BA, Lowenstein, TK, Timofeeff, MN, and Parker, MA. 2010. "Halophilic *Archaea* cultured from ancient halite, Death Valley, California," *Environmental Microbiology*, 12(2): 440-454, doi: 10.1111/j.1462-2920.2009.02086.x.

Schubert, BA, Lowenstein, TK, Timofeeff, MN, and Parker, MA. 2009. "How can prokaryotes survive in fluid inclusions in halite for 30,000 years?" *Geology*, 37(12): 1059-1062, doi: 10.1130/G30448A.1.

Schubert, BA, Lowenstein, TK, and Timofeeff, MN. 2009. "Microscopic identification of prokaryotes in modern and ancient halite, Saline Valley and Death Valley, California," *Astrobiology*, 9(5): 467-482, doi: 10.1089/ast.2008.0282.

Invited Conference Presentations

Lukens, WE, Eze, P, and **Schubert, BA**. 2018. "The carbon isotope value of whole wood versus cellulose as a proxy for environmental change," Goldschmidt Conference.

Schubert, BA and Cui, Y. 2016. "Atmospheric carbon dioxide persisted at near modern levels before and after the PETM," American Geophysical Union Fall Meeting.

Schubert, BA and Jahren, AH. 2014. "Reconstructing seasonal climate from high-resolution carbon and oxygen isotope measurements across tree rings," American Geophysical Union Fall Meeting.

Schubert, BA and Jahren, AH. 2014. "Interpreting terrestrial organic carbon isotope records across natural and anthropogenic pCO_2 change," American Geophysical Union Fall Meeting.

Schubert, BA and Jahren, AH. 2014. "Seasonal temperature and precipitation amount recorded in monthly oxygen isotope measurements of meteoric water," Geological Society of America, Vancouver, BC, Canada.

Schubert, BA and Jahren, AH. 2014. "The influence of atmospheric carbon dioxide concentration on the carbon isotope composition of plant tissues," Goldschmidt Conference.

Schubert, BA and Jahren, AH. 2014. "A unified interpretation of carbon and oxygen isotope records from tree rings: A quantitative reflection of seasonality," Goldschmidt Conference.

Schubert, BA and Jahren, AH. 2011. "Early Eocene Arctic seasonality quantified from high-resolution, intra-ring $\delta^{13}C$ analyses across fossil evergreen wood," Cretaceous-Paleogene Palaeoenvironments, Tectonics and Biostratigraphy of the Arctic and Subarctic, Tromsø, Norway.

Research Seminars

University of Oslo, Centre for Earth Evolution and Dynamics, January 18, 2019.
University of Oslo, Centre for Earth Evolution and Dynamics, April 24, 2018.
University of Texas, Jackson School of Geosciences, DeFord Lecture, November 2, 2017.
University of Texas, Jackson School of Geosciences, Paleontology Brown Bag, November 2, 2017.
University of Louisiana at Lafayette, College of Sciences, March 21, 2017.
University of Louisiana at Lafayette, Communities of Interest: Global Sustainability, October 28, 2016.
Pacific Islands Climate Change Cooperative, April 23, 2015.

University of Southern Mississippi, Department of Geography and Geology, Mar 27, 2015.
University of Florida, Department of Geological Sciences, Feb 19, 2015.
University of Louisiana at Lafayette, Department of Biology, Oct 17, 2013.
University of Louisiana at Lafayette, Department of Physics, Mar 6, 2013.
Louisiana State University, Wilbert Lecture, Department of Geology and Geophysics, Feb 22, 2013.
Southern Methodist University, Huffington Department of Earth Science, Mar 23, 2012.
University of Louisiana at Lafayette, Department of Geology, Feb 27, 2012.
University of Hawaii, Department of Geology and Geophysics, Feb 10, 2012.
Kansas State University, Department of Geology, Feb 7, 2012.
University of Hawaii, Oceanography Department, Feb 19, 2009.
University of Hawaii, Ecology, Evolution and Conservation Biology Program, Feb 6, 2009.
University of Hawaii, Department of Microbiology, Jan 23, 2009.
University of Hawaii, Department of Geology and Geophysics, Nov 7, 2008.
Binghamton University, Department of Geologic Sciences and Environmental Studies, Apr 2, 2008.
Lafayette College, Department of Geology and Environmental Geosciences, Apr 27, 2007.
Binghamton University, Department of Geologic Sciences and Environmental Studies, Feb 28, 2007.
Binghamton University, Department of Geologic Sciences and Environmental Studies, Oct 12, 2005.

Professional Development and Service

Convener, "Paleo-CO_2 reconstruction in the Phanerozoic," American Geophysical Union Fall Meeting, Washington, DC, 2018.
STEM Leadership Institute, Association of American Colleges and Universities, Project Kaleidoscope, 2018.
Convener, "Interpretations of stable carbon isotope records in sedimentary systems," American Geophysical Union Fall Meeting, San Francisco, CA, 2016.
Contributing Expert, RESTORE Act Center of Excellence for Louisiana, The Water Institute of the Gulf, 2016.
Convener, "Interpretations of Stable Carbon Isotope Excursions in the Geologic Record," American Geophysical Union Fall Meeting, San Francisco, CA, 2015.
Convener, "The Biogeochemistry of Biological Systems," Goldschmidt, Sacramento, CA, June 8-13, 2014.
Convener, "Interpreting Marine and Terrestrial Carbon Isotope Excursions," Ocean Sciences Meeting, Honolulu, HI, February 23-28, 2014.
International Program Committee Team Member, Biogeochemistry, 2014 Goldschmidt Conference.
NSF on the Cutting Edge Workshop for Early Career Geoscience Faculty, Washington DC, July 28-August 2, 2013.
NSF Workshop for EarthCube, Salt Lake City, UT, March 25-26, 2013.
Program Committee, American Geophysical Union, Biogeosciences (2011-2013; Chair in 2013).
Department of Energy Geosciences Symposium, Gaithersburg, MD, September 8-9, 2011.
NSF Workshop for the Deep Time Earth-Life Observatory Network (DETELON), Washington DC, February 1-4, 2011.
Outstanding Student Poster Award Committee, American Geophysical Union, Biogeosciences, 2011.
Convener, "Paleoecology of Climate Change in Pre-Neogene Continental Environments," American Geophysical Union Fall Meeting, San Francisco, CA, 2010.
Convener, Pardee Keynote Symposium, "Evidence for long-term survival of microorganisms and preservation of DNA," Geological Society of America Annual Meeting, Philadelphia, PA, 2006.

University Service (current)

Dean's Appointee, Graduate Council (2018-present)
Chair, Coastal Wetland Ecology Faculty Search Committee, School of Geosciences (2018-present)
Member, Student Appeals Committee for the Graduate School (2017-present)

Member, Commencement Committee for Ray P. Authement College of Sciences (2017-present)
Member, Geology Graduate Student Appeals Committee (2015-present)
Member, Recruitment, Assessment, and Promotion Team for Ray P. Authement College of Sciences (2014-present)
Member, School of Geosciences Graduate Committee (2013-present)

University Service (past)
Assessment Coordinator, Geology BS Program (2018)
Chair, Search Committee for Director of School of Geosciences (2017-2018)
Member, Petroleum or Sedimentary Geology Search Committee (2017)
Member, Ecohydrology Search Committee (2017)
Mentor, Ronald E. McNair Post Baccalaureate Achievement Program (2014-2015)
Member, Geophysics Faculty Search Committee, School of Geosciences (2013)
Member, Physics Faculty Search Committee, School of Geosciences (2013)
Member, Structure Faculty Search Committee, School of Geosciences (2013)

Students
PhD Students (Dissertation Committee Member): Josh Bostic (in progress), Lesley Kim (in progress), Kory Evans (2017)

Masters Students (Thesis Advisor): Nicholas Geyer (in progress), Robert Narmour (in progress), Alex Reinkemeyer (in progress), Jamie Vornlocher (in progress), Collin Moore (2017), Rose Telus (2017), Leslie Valentine (2017), Taylor Chapman (2017), Dale Stephen Nevitt (2017), Umatu Orike (2017), Matthew Trahan (2015)

Masters Students (Thesis Committee Member): Kristin Ball (in progress), Heather Brissey (in progress), Victoria Chevrot (in progress), Forrest Frederick (in progress), John Goodin (in progress), Moira Lyons (in progress), Madison Miller (in progress), Ryan O'Quinn (in progress), Jack Simmons (in progress), Grace Stone (in progress), Andrew Whisnant (in progress), Sarah Zdanowski (in progress), Megan Borel (2018), Kohl Koppens (2018), Roxanna Vaught-Mijares (2018), Eric Muchiri (2018), Sydne Workman (2018), Cari Creed (2017), Daniel Friedman (2017), Luke Perreault (2017), John Kevin Reece (2017), Taylor Runyan (2017), Kody Shellhouse (2017), Hunter Lipman (2016), Maxwell Schaper (2016), Timothy Shane (2016), Christopher Baker (2015), Ethan VanHazebroeck (2015), Ayokomi Lasisi (2015), Olamide Dada (2014), Mark Etienne (2013)

Undergraduate Students: Peace Eze (2017), Nathan Zeller (2017), Bryce Landreneau (2016), Rose Telus (LS-LAMP and McNair mentor, 2013-2015), Celia Baumhoer (DAAD/RISE, German Academic Exchange Service, 2014), Roshan Poudel (2014)

Student Awards (advised by Schubert, BA):
Robert Narmour, Grand Prize, 18th Graduate Student Symposium Oral Session, University of Louisiana at Lafayette, 2018.
Jamie Vornlocher, Grand Prize, 18th Graduate Student Symposium Poster Session, University of Louisiana at Lafayette, 2018.
Peace Eze, Outstanding Graduate, University of Louisiana at Lafayette, Fall 2017.
Peace Eze, Outstanding Graduate, Ray P. Authement College of Sciences, Fall 2017.
Matthew Trahan, Conference of Southern Graduate Schools Master's Thesis Award nominee from UL Lafayette, 2016.
Kristen Grein, 3rd place, Lafayette Geological Society poster competition, LAGCOE, 2015.