

## James M. Russell, Curriculum Vitae

Deputy Dean of the Faculty  
Professor of Earth, Environmental, and Planetary Sciences  
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### 1. Educational Background

- 1999-2004     **Ph.D. Ecology.** University of Minnesota (Minneapolis, MN).  
Thomas C. Johnson, advisor. Minor in Quaternary Paleoecology.
- 1994-1998     **Bachelor of Arts, Earth and Environmental Science** Wesleyan University  
(Middletown, CT). Junior Phi Beta Kappa.

### 2. Professional Experience

- 2025 -         **Deputy Dean of the Faculty**
- 2023 - 2025   **Senior Associate Dean of the Faculty**
- 2020 - 2023   **Chair of the Department of Earth, Environmental, and Planetary Sciences**
- 2018 - 2021   **Royce Family Professor of Teaching Excellence**
- 2018 -         **Professor of Earth, Environmental, and Planetary Sciences**
- 2011- 2018    **Associate Professor** of Geological Sciences, Brown University.
- 2008-2011    **Joukowsky Family Assistant Professor of Geological Sciences**, Brown University.
- 2006-2008    **Assistant Professor of Geological Sciences**, Brown University.
- 2004-2005    **Postdoctoral Research Associate.** Large Lakes Observatory, U. Minnesota Duluth.
- 2004 & 2005   **Paleoclimatology Instructor.** Nyanza Project, University of Arizona (NSF-REU field  
course on Lake Tanganyika, Africa)
- 1999-2004    **Ph.D. candidate.** University of Minnesota.
- 1998-1999    **Junior Scientist.** Limnological Research Center, University of Minnesota.

### 3. Publications (\* denotes student or post-doctoral advisee)

#### **A. Book Chapters**

5. Mohtadi, M, Abram, NJ, Clemens, SC, Pfeiffer, M, **Russell, J.M.**, Steinke, S, Zinke, J (2024). Paleoclimate evidence of Indian Ocean variability across a range of timescales. In: Ummerhofer, C, Hood, R (Eds.), *The Indian Ocean and its role in the global climate system*. Elsevier, Amsterdam, ISBN: 978-0-12-822698-8
4. Doughty, A.M., Kelly, M.A., **Russell, J.M.**, Jackson, M.S., Anderson, B.A., Chipman, J., Nakileza, B., and Dee, S.G., 2020, Modeling glacier extents and equilibrium line altitudes in the Rwenzori Mountains, Uganda, over the last 31,000 yr, *in* Waitt, R.B., Thackray, G.D., and Gillespie, A.R., eds., *Untangling the Quaternary Period: A Legacy of Stephen C. Porter*: Geological Society of America Special Paper 548.
3. Eggermont, H., Russell, J. M., van Damme, Kay, 2009. Rwenzori: Headwaters of the Nile. In: (Dumont, H., ed.), *The River Nile*. Monographiae Biologicae. Springer-Verlag, Berlin, pp. 243-262.
2. Brigham-Grette, J., et al., 2007. Chapter 1. Climate dynamics and global environments. In: Harms, U., Koeberl, C., Zoback, M. (eds.): *Continental Scientific Drilling: A Decade of Progress and Challenges for the Future*. Springer-Verlag, Berlin.

1. Laerdal, T, Talbot, MR, Russell, JM, 2002. Late Quaternary sedimentation and climate in the Lake Edward and George area, Uganda-Congo. In: Olago, D, Odada, EO (eds): *The East African Great Lakes: Limnology, Palaeolimnology, and Biodiversity*. Kluwer Academic Publishers, Dordrecht, The Netherlands, pp. 429-470.

## B. Refereed Journal Articles (\* denotes student or post-doctoral advisee)

191. \*Mason, A., \*Pereboom, E., \*Ivory, S.J., \*Vachula, R.S., \*Garellick, S., Kelly, M.A., Nakileza, B., **Russell, J.M.**, 2025. Afroalpine fire is a novel and transformative disturbance. *Nature*.
190. Benfield, A., Ivory, S.J. Hamilton, R., Stevenson, J., \*Parish, M.C., Bijaksana, S., Vogel, H., **Russell, J.M.**, Climate drove gradual rainforest transitions in Wallacea (Sulawesi, Indonesia) during the Last Glacial-Interglacial Transition (24,000 – 9000 years BP). *Quaternary Science Reviews*.
189. \*Yeo, D., Huang, Y., Guo, F., Vachula, R., Wang, K., O'Donnell, J.A., Clemens, S.C., **Russell, J.M.**, 2026. New evidence for a 179 ka age of the Old Crow tephra. *Quaternary Science Reviews*.
188. \*Novak, J.B., Prokopenko, A.A., Tarasov, P.E., **Russell, J.M.**, Lindemuth, E.R., Shichi, K., Kashiwaya, K., Peck, J., Vachula, R.S., Swann, G.E.A., Polissar, P.J., 2026. Early Pleistocene ecosystem turnover in South Siberia linked to abrupt regional cooling. *Nature Geoscience* 10.1038/s41561-025-01914-x.
187. \*Perez-Angel, L., Sepúlveda, J., Molnar, P., Mora-Perez, H., Parrado, A., Eaman, K., **Russell, J.M.**, Rajagopalan, B., González-Aranga, C., Snell, K.E., Montes, C., Crowley, J.L., Schmitz, M., Trayler, R.B., in press. Evolution of Plio-Pleistocene Tropical Temperature Amplification. *Proceedings of the National Academy of Sciences USA* 10.1073/pnas.2520191123.
186. Moreland, E., Dee, S., Jiang, Y., Bischof, G., Mischna, M., Hartigan, N., **Russell, J.M.**, Moores, J., Siebach, K., 2025. Seasonal ice cover could allow liquid lakes to persist in a cold Mars paleoclimate. *AGU Advances* 10.1029/2025AV001891.
185. Ruiz-Blas, F., Bartholomäus, A., Henny, C, **Russell, J.M.**, Kallmeyer, J., Vuillemin, A., 2025. Cryptic sulfur cycling in the deep biosphere of ferruginous Lake Towuti, Indonesia. *Frontiers in Microbiology*, 10.3389/fmicb.2025.1725877.
184. Damanik, A., Wille, M., Ahmad, Q., Crowe, S.A., Bauer, K.W., Grosjean, M., Cahyarini, S.Y., **Russell, J.M.**, Vogel, H., 2025. Sedimentary Mo isotope variability reflects climate-driven water column oxygenation changes in ferruginous Lake Towuti, Indonesia, over the last ~30 ka BP. *Quaternary Science Reviews* 10.1016/j.quascirev.2025.109607
183. Rigterink, S., Parth, S., Waldmann, N., **Russell, J.M.**, Schmidt, J., Schwalb, A., 2025. Hydroclimate variability and human influence in Southern Yemen over the past 1,100 years: insights from subfossil midge (Diptera: Chironomidae, Certopogonidae) assemblages from paleolake Gayal el Bazal. *The Holocene*, 10.1177.09596836251366210.
182. \*Karp, A.T., **Russell, J.M.**, Abraham, J.O., Strydom, T., Staver, A.C., 2025. Fecal biomarkers in soils record landscape-scale wild herbivore abundance, 2025. *Geochemistry, Geophysics, Geosystems* 10.1029/2025GC012285.
181. Herzsuh, U., Liu, Y., Liu, S., Stoof-Leichsenring, K.R., Porada, J., Courtin, J., Farkas, L.Z., Böhmer, T., Biskaborn, B.K., Diekmann, B., Huang, Y., Kaufman, D., Melles, M., Meyer, H., Pestryakova, L.A., **Russell, J.M.**, Wagner, B., 2025. Arctic-boreal bryophyte dynamics since the last glacial from ancient DNA metabarcoding. *Journal of Biogeography* 10.1011/jbi.70015.
180. Marshall, C., Morrill, C., Dee, S.G., **Russell, J.M.** 2025. Proxy System Biases partially resolve long-standing paleoclimate data-model discrepancies in Tropical Africa. *Quaternary Science Reviews*. DOI: 10.1026/j.quascirev.2025.109426.
179. Ekram, M.A-E., Wuchter, C., Bijaksana, S., Grice, K., Russell, J.M., Stevenson, J.A., Vogel, H., Coolen, M.J., 2025. A Quaternary sedimentary environmental ancient DNA (sedaDNA) record of fungal-terrestrial ecosystem dynamics in a tropical biodiversity hotspot (Lake Towuti, Sulawesi, Indonesia). *Microorganisms* doi: 10.3390/microorganisms13051005.

178. Park, J., Bijaksana, S., Forni, F., \*Parish, M., **Russell, J.M.**, Smith, V.C., Vogel, H., Lane, C., 2025. Cryptotephra from a ~120 ka Tondano eruption in a sediment core from Lake Towuti, Sulawesi, Indonesia. *Journal of Quaternary Science* 10.1002/jqs.3730.
177. Ruiz-Blas, F., Friese, A., Bartholomaüs, A., Henny, C., **Russell, J.M.**, Kallmeyer, J., Vuillemin, A., 2025. The deep subsurface biosphere and its substrates along a one-million-year ferruginous lake archive. *Microbial Ecology*. DOI: 10.1007/200248-025-02559-4.
176. \*Mitsunaga, B., Jewell, A.M., Buckanan, S., Crocker, A.J., Wilson, P.A., Herbert, T.D., **Russell, J.M.**, 2025. The North African summer monsoon remained stable across the Plio-Pleistocene boundary. *Science Advances*. DOI: 10.1126/sciadv.ads3149.
175. \*Novak, J.B., **Russell, J.M.**, Lindemuth, E., Prokopenko, A., Perez-Angel, L., Zhao, B., Swann, G., Polissar, P., 2025. The branched GDGT isomer ratio refines middle and high latitude lacustrine paleothermometers. *Geochemistry, Geophysics, Geosystems* 10.1029/2024GC012069.
174. Crocker, A., Jewell, A., \*Mitsunaga, B., \*Buchanan, S., Brombacher, A., Hambach, B., Wilding, M., Westerhold, T., **Russell, J.M.**, Herbert, T., Xuan, C., Wilson, P., 2025. Stronger trade winds drove increased North African dust fluxes and higher productivity in the Eastern Equatorial Atlantic about 2.7 million years ago. *Paleoceanography and Paleoclimatology* 10.1029/2024PA004891
173. Courtin, J., Stoof-Leichsenring, K., Lisovski, S., Liu, Y., Alsos, I.G., Biskaborn, B., Diekmann, B., Melles, M., Wagner, B., Pestryakova, L., **Russell, J.M.**, Huang, Y., Herzschuh, U., 2025. Potential plant extinctions with the loss of the Pleistocene mammoth steppe. *Nature Communications* 10.1038/s41467-024-55542-x.
172. Ivory, S.J., \*MacDougall, E., \*Mason, A., \*Pereboom, E., \*Garellick, S., Nakileza, B., **Russell, J.M.**, 2024. Highland forest dynamics across Equatorial East Africa during the end of the African Humid Period. *Quaternary International* doi: 10.1016/j.quaint.2024.10.007.
171. \*Mason, A., **Russell, J.M.**, \*Garellick, S., Ivory, S.J., Kelly, M.A., Nakileza, B., Anderson, N., 2024. Hydroclimatic change in tropical African alpine environments over the Holocene. *Quaternary Science Reviews*, 10.1016/j.quascirev.2024.108947
170. Arnold, A., Mering, J., Santi, L., Roman-Palacios, C., Li, H., Petryshyn, V., **Mitsunaga, B.**, Elliott, B., Wilson, J., Lucarelli, J., Boch, R., Ibarra, D., Li, L., Fan, M., Kaufman, D., Cohen, A., Dunbar, R. **Russell, J.M.**, Lalonde, S., Roy, P., Dietzel, M., Liu, X., Chang, F., Eagle, R., Tripathi, A., 2024. Comparative clumped isotope temperature relationships in freshwater carbonates. *Depositional Record* 00: 1-26.
169. \*Zhao, B., **Russell, J.M.**, Blaus, A., Freeman, A., Bush, M., 2024. Tropical Andean climate variations since the last deglaciation. *Proceedings of the National Academy of Sciences, USA*. 10.1073/pnas.2320143121.
168. Ruiz-Blas, R., Bartholomaüs, A., Yang, S., Wagner, D., Henny, C., **Russell, J.M.**, Kallmeyer, J., Vuillemin, A., 2024. Metabolic features that select Bathyarchaeia in modern ferruginous lacustrine subsurface sediments. *ISME Communications*: 10.1093/ismeco/ycae112.
167. \*Parish, M., **Russell, J.M.**, Konecky, B., Bijaksana, S., 2024. Changes in Indo-Pacific Warm Pool hydroclimate and vegetation during the last deglaciation. *Quaternary Science Reviews*, 10.1016/j.quascirev.2024.108755
166. Damanik, A., Wille, M., Ahmad, Q., Chatterjee, S., Crowe, S.A., Bauer, K.W., Grosjean, M., Chayarini, S.Y., Bijaksana, S., **Russell, J.M.**, Vogel, H., 2024. Low Mo mobility during the laterization of ultramafic bedrock: evidence from the East Sulawesi Ophiolite, Indonesia. *Chemical Geology*, 10.1016/j.chemgeo.2024.122150.
165. Ekram, M., Campbell, M., Plet, C., Kose, S., Vogel, H., Bijaksana, S., Grice, K., Hamilton, R., Stevenson, J., **Russell, J.M.**, Coolen, M., 2024. A 1Ma sedimentary ancient DNA (*sedaDNA*) record of catchment vegetation changes and the developmental history of tropical Lake Towuti (Sulawesi, Indonesia). *Geobiology* doi: 10.1111/gbi/12599

164. Marshall, C., Dee, S., Morrill, C., Pausata, F.S.R., **Russell, J.M.**, 2024. Causes of African temperature change during the Mid-Holocene in PMIP simulations. *Paleoceanography and Paleoclimatology*, 10.1029/2023PA004706.
163. Ageli, M., Hamilton, P.B., Bramburger, A.J., **Russell, J.M.**, Vogel, H., Bijaksana, S., Haffner, G.D., 2024. Morphological variation and novel species of historical *Aulacoseira* populations of ancient Lake Towuti. *Journal of Great Lakes Research*, doi: 10.1016/j.jglr.2023.09.001
162. \*Zhao, B., **Russell, J.M.**, Tsai, V.C., Blaus, A., \*Parish, M.C., Liang, J., \*Wilk, A., \*Du, X., Bush, M.B., 2023. Evaluating global temperature calibrations for lacustrine branched GDGTs: seasonal variability, paleoclimate implications, and future directions. *Geochimica et Cosmochimica Acta* 108124.
161. Vuillemin, A., Morlock, M., Paskin, A., Benning, L.G., Henny, C., Kallmeyer, J., **Russell, J.M.**, Vogel, H., 2023. Authigenic minerals reflect microbial control on pore waters in a ferruginous lake. *Geochemical Perspectives Letters* doi: 10.7185/geochemlet.2339
160. \*Mitsunaga, B., \*Lupien, Ru. \*Ouertani, S., \*Stubbs, B., Deino, A., Kingston, J., Stockhecke, M., Brown, E., **Russell, J.M.**, 2023. High-latitude, Indian Ocean, and orbital influences on East African hydroclimate across the Plio-Pleistocene boundary. *Paleoceanography and Paleoclimatology* doi: 10.1029/2023PA004671
159. Tournier, N., Fabbri, S.C., Anselmetti, F.S., Cahyarini, S.Y., Bijaksana, S., Wattrus, N., **Russell, J.M.**, Vogel, H., submitted. Climate controls sensitivity of lake sediments to record earthquake-related mass wasting in tropical Lake Towuti during the past 40 kyr BP. *Quaternary Science Reviews* 305: 10.1016/j.quascirev.2023.108015
158. Shah, P., Yadav, A., Rigterink, S., Mazzini, S., **Russell, J.M.**, Anoop, A., Waldmann, N., 2023. The influence of climate change on biological indicators during the late Holocene in the southern Arabian desert, Yemen. *Science of the Total Environment* j.scitotenv.2023.165835
157. Zhang, R., Pei, W., Wang, Y., Wang, X., Wang, J., Li, T., **Russell, J.M.**, Zhang, F., Liu, Z., Guan, M., Han, Q., Tian, C., Li, S., 2023. High-resolution records of sea surface temperature and salinity in the East China Sea over the past 14.2 kyr: implication from alkenone and its hydrogen isotopes. *Global and Planetary Change* 10.1016/j.gloplacha.2023.104099.
156. \*Parish, M., **Russell, J.M.**, \*Du, X., Bijaksana, S., 2023. A brGDGT-based reconstruction of terrestrial temperature from the Maritime Continent spanning the Last Glacial Maximum. *Paleoceanography and Paleoclimatology*. Doi: 10.1029/2022PA004501
155. \*Karp, A., Uno, K.T., Berke, M.A., **Russell, J.M.**, Scholz, C.A., Marlona, J.R., Faith, J.T., Staver, C.A., 2023. Nonlinear effects on savannah fire activity across the African Humid Period. *Quaternary Science Reviews* 10.1016/j.quascirev.2023.107994.
154. \*Liang, Jie, \*Richter, N., Xie, H. Si, G., Wang, J., **Russell, J.M.**, Zhang, G., 2023. Branched glycerol dialkyl glycerol tetraether (brGDGT) distributions influenced by bacterial community composition in various vegetational soils on the Tibetan Plateau. *Palaeogeography, Palaeoclimatology, Palaeoecology* 611: 11358.
153. Doughty, A., Kelly, M.A., **Russell, J.M.**, Jackson, M., Anderson, B., Chipman, J.W., Nakileza, B., 2023. Last Glacial Maximum reconstructions of Rwenzori Mountain glaciers. *Paleoceanography and Paleoclimatology* doi.org/10.1029/2022PA004527.
152. \*Du, X., **Russell, J.M.**, Liu, Z., Otto-Bliesner, B.L., Oppo, D.W., Mohtadi, M., Zhu, C., Galy, V.V., Schefuß, E., Yan, Y., Rosenthal, Y., Dubois, N., Arbuszewski, J., Gao, Y., 2023. North Atlantic cooling triggered a zonal mode over the Indian Ocean during Heinrich Stadial 1. *Science Advances* doi.org/10.1126/sciadv.add4909
151. Fastovich, D., **Russell, J.M.**, Marcott, S., Williams, J.W., 2022. Spatial fingerprints and mechanisms of precipitation and temperature changes during the Younger Dryas in eastern North America. *Quaternary Science Reviews* 294: 107724.
150. Bitner, L., de Jonge, C., Gil-Romera, G. Lamb, H.F., **Russell, J. M.**, Zech, M., 2022. A Holocene temperature (brGDGT) record from Garba Guracha, a high-altitude lake in Ethiopia. *Biogeosciences* 10.5194/bg-2022-95.

149. \*Lupien, R.L., **Russell, J.M.**, Pearson, E.J., Castañeda, I.S., Asrat, A., Foerster, V., Lamb, H.F., Roberts, H.M., Schäbitz, F., Trauth, M.H., Beck, C.C., Feibel, C.S., Cohen, A.S., 2022. Orbital controls on eastern African hydroclimate in the Pleistocene. *Scientific Reports* doi.org/10.1038/s41598-022-06826-z
148. \*Perrotti, A.G., Kiahtipes, C., **Russell, J.M.**, Jackson, S.T., Gill, J.L., Robinson, G., Krause, T., Williams, J.W., 2022. Diverse responses of vegetation and fire after Pleistocene megaherbivore extinction across the Eastern US. *Quaternary Science Reviews* 294: 107696.
147. \*Garelick, S., **Russell, J.M.**, \*Richards, A., \*Smith, J.J., Kelly, M.A., Anderson, N., Jackson, M., Doughty, A., Nakileza, B., 2022. The timing and magnitude of last deglacial warming in high-elevation regions of eastern equatorial Africa. *Quaternary Science Reviews* 10.1016/j.quascirev.2022.107416
146. Ageli, M., Hamilton, P.B., Weidman, P., **Russell, J.M.**, Vogel, H., Bijaksana, S., Haffner, G.D., 2022. Benthic-pelagic state changes in the primary trophic level of an ancient tropical lake. *Journal of Paleolimnology* 594: 110937.
145. Cohen, A.S., Du, A., Rowan, J., Yost, C.L., Billingsley, A.L., Campisano, C.J., Brown, E., Deino, A.L., Feibel, C.S., Grant, K., Kingston, J.D., \*Lupien, R.L., Muiruri, V., Owen, R.B., Reed, K.E., **Russell, J.M.**, Stockhecke, M., 2022. Plio-Pleistocene African environmental variability and mammalian evolution. *PNAS* 10.1073/pnas.2107393119
144. Cohen, A.S., Campisano, C., Arrowsmith, R., Asrat, A., Beck, C., Behrensmeier, A.K., Deino, A., Deocampo, D., Feibel, C., Foerster, V., Kingston, J., Lamb, H., Lowenstein, T., Lupien, R., Muiruri, V., Olago, D., Owen, R.B., Potts, R., **Russell, J.M.**, Schaebitz, F., Stone, J., Trauth, C., HSPDP Science team, 2022. Reconstructing the environmental context of human origins in East Africa through scientific drilling. *Annual Reviews in Earth and Planetary Sciences* 10.1146/annurev-earth-031920-081947
143. Vuillemin, A., Mayr, C., Schuessler, J., Friese, A., Bauer, K., Lücke, A., Heuer, V., Glombitza, C., Henny, C., von Blackenberg, F., **Russell, J.M.**, Bijaksana, S., Vogel, H., Crowe, S., Kallmeyer, J., 2022. A one-million year record from siderites formed in modern ferruginous sediment. *Geological Society of America Bulletin* 10.1130/B36211.1
142. \*Richter, N., **Russell, J.M.**, Amaral-Zettler, L., \*DeGroot, W., Raposeiro, P.M., Gonçalves, V., de Boer, E.J., Pla-Rabes, S., Hernández, A., Sáez, A., Bao, R., Trigo, R., Giral, S., 2022. Long-term hydroclimate variability in the sub-tropical North Atlantic and anthropogenic impacts on lake ecosystems: A case study from Flores Island, the Azores. *Quaternary Science Reviews* 285: 107525.
141. \*Liang, J., Guo, Y., \*Richter, N., Xie, H., \*Vachula, R., \*Lupien, R., Zhao, B., Wang, M., Yao, Y., Hou, J., Liu, J., **Russell, J.M.**, 2022. Calibration and application of branched GDGTs to Tibetan lake sediments: the influence of temperature on the fall of the Guge Kingdom in Western Tibet, China. *Paleoceanography and Paleoclimatology* 10.1029/2021PA004393.
140. \*Richter, N., **Russell, J.M.**, Garfinkel, J., Huang, Y., 2021. Impacts of Norse settlement on terrestrial and aquatic ecosystems in southwest Iceland. *Journal of Paleolimnology* 10.1007/s10933-020-00169-3
139. Shah, P., **Russell, J.M.**, Waldmann, N., 2021. Reconstructing 1200 years of hydroclimate variability in the southern margins of the Arabian Desert: insights from a paleo-lake in southern Yemen. *Frontiers in Earth Science* doi: 10.3389/feart.2021.712443.
138. \*Du, X., **Russell, J.M.**, Liu, Z., Otto-Bliesner, B.L., Gao, Y., Zhu, C., Oppo, D.W., Mohtadi, M., Yan, Y., Galy, V.V., He, C., 2021. Deglacial trends in Indo-Pacific warm pool hydroclimate in an isotope-enabled Earth system model and implications for isotope-based paleoclimate reconstructions. *Quaternary Science Reviews* 270: 107188.
137. \*Daniels, W.C., **Russell, J.M.**, Morrill, C., Longo, W.M., Giblin, A.E., \*Holland-Stergar, P., Welker, J.M., Wen, X., Huang, Y., 2021. Lacustrine leaf wax hydrogen isotopes indicate strong regional climate feedbacks in Beringia since the last ice age. *Quaternary Science Reviews* 269: 107130.

136. \*Liang, J., \*Lupien, R.L., Xie, H., \*Vachula, R.S., Stevenson, M.A., Han, B.-P., Lin, Q., He, Y., Wang, M., Liang, P., Huang, Y., McGowan, S., Hou, J., **Russell, J.M.**, 2021. Lake ecosystem on the Qinghai-Tibetan Plateau severely altered by climatic warming and human activity. *Palaeogeography, Palaeoclimatology, Palaeoecology* doi.org/10.1016/j.palaeo.2021.110509.
135. Ulfers, A., Hesse, K., **Russell, J.M.**, Vogel, H., Wonik, T., 2021. Paleoenvironmental and cyclostratigraphic results from downhole logging of sediments from tropical Lake Towuti, Indonesia. *Journal of Paleolimnology*. 10.1007/s10933-020-00171-9.
134. \*Xie, H., \*Liang, J., \*Vachula, R.S., **Russell, J.M.**, Chen, S., Guo, M., Wang, X., Huang, X., Chen, F., 2021. Changes in the hydrodynamic *intensity* of Bosten Lake and its impact on early human settlement in the northeastern Tarim Basin, Arid Central Asia. *Palaeogeography, Palaeoclimatology, Palaeoecology* Doi: 10.1016/j.palaeo.2021.110499
133. \*Lupien, R.L., **Russell, J.M.**, \*Subramanian, A., Kinyanjui, R. Beverly, E.J., Uno, K.T., de Menocal, P.B., Potts, R., 2021. The history of eastern African environmental variation and its role in the evolution and technological advancement of *Homo* since 1 Ma. *Journal of Human Evolution*, doi: 10.1016/j.jhevol.2021.103028
132. \*Garelick, S.G., **Russell, J.M.**, Dee, S, Verschuren, D., Olago, D., 2021. Assessing the controls on hydroclimate and hydrogen isotopes of precipitation in high-elevation regions in Eastern Africa since the LGM. *Earth and Planetary Science Letters* 567: 116984.
131. Morlock, M., Vogel, H., **Russell, J.M.**, Anselmetti, F., Bijaksana, S., 2021. Quaternary environmental changes in tropical Lake Towuti, Indonesia, inferred from end-member modelling of X-ray fluorescence core-scanning data. *Journal of Quaternary Science* 10.1002/jqs.3338
130. \*Richter, N., **Russell, J.M.**, Garfinkel, J., Huang, Y., 2021. Winter-spring warming in the North Atlantic during the last 2,000 years: Evidence for southwest Iceland. *Climates of the Past* 17: 1363-1383.
129. Liu, Z., Otto-Bliesner, B.L., Clark, P.U., Lynch-Stieglitz, J., **Russell, J.M.**, 2021. SynTRACE-21: Synthesis of Transient Climate Evolution of the last 21,000 years. *Past Global Changes* 29: doi.org/10.22498/pages.29.1.13
128. \*Sheppard, R.Y., Milliken, R., **Russell, J.M.**, Sklute, E.C., Dyar, M.D., Vogel, H., Melles, M., Bijaksana, S., Hasberg, A., Morlock, M., 2021. Iron mineralogy and sediment color in a 100 m drill core from Lake Towuti, Indonesia reflect catchment and diagenetic conditions. *Geochemistry, Geophysics, Geosystems* doi:10.1029/2020GC009852.
127. Bauersachs, T., Schwarck, L., **Russell, J.M.**, 2021. A heterocyte glycolipid-based calibration to reconstruct past continental climate change. *Nature Communications* 10.1038/s41467-021-22739-3.
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1. Beuning, K.R.M., Kelts, K.R., **Russell, J.M.**, Wolfe, B., 2002. Oxygen isotope stratigraphy of sediment cellulose from two cores, Lake Victoria, East Africa. *Geology* 30 (6): 559-562.

### C. Non-Refereed Articles

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6. **Russell, J. M.**, Otto-Bliesner, B., Liu, Z., 2014. Synthesis and modeling of the Earth's climate since 21 kyr BP. *PAGES News* 22 (1): pp. 87.
5. **Russell, J. M.**, Bijaksana, S., Towuti Project Members, 2012. The Towuti Drilling Project: Paleoenvironments, biological evolution, and geomicrobiology of a tropical Pacific lake. *Scientific Drilling* doi:10.2204/iodp.sd.14.11.2012
4. **Russell, J. M.**, Cohen, A. S., Johnson, T. C., Scholz, C. A., 2012. A strategic plan for continental drilling in the East African lakes. *PAGES News*.
3. Eggermont, H.R., **Russell, J.M.** 2010. Paleoclimate, paleolimnology, and glacier history of the East African Mountains. *Mountain Research Initiative News* 4.
2. **Russell, J. M.**, 2007. Rainfall and drought in lowland Indonesia: opportunities for paleoclimate research in the Malili Lakes. In: Hehanussa, P., Haryani, G. S, Ridwansyah, I., eds., *The Ecology and Limnology of the Malili Lakes*. LIPI (Indonesian Institute of Science) Press, pp. 9-17.
1. **Russell, J.M.**, Kelts, K.R., 2000. The sedimentologic history of Lake Edward, Uganda. *IDEAL Bulletin* (summer): 1-3.

#### D. Work in Review

8. Ageli, M.K., Hamilton, P.B., Weidman, R.P., **Russell, J.M.**, Vogel, H., Bijaksana, S., Haffner, G.D., submitted. Deterministic patterns regulate paleo-diatom community assembly in ancient, tropical Lake Towuti *Journal of Paleolimnology*.
7. Zhang, C., Zhang, Y., Xue, B., Yu, S.-Y., **Russell, J.M.**, Kong, X., Wang, J., Zhang, E., Smol, J.P. Woolway, R.I., submitted. Modern lake warming at rates unprecedented over the past 20,000 years. *Nature Communications*.
6. \*Perrotti, A.G., Williams, J.W., Asena, Q., Schlenker, N., Lam, J., Siedelman, M., **Russell, J.M.**, Ives, A., submitted. Past novel ecosystems in Florida driven by fluctuating climate, fire, and megaherbivory. *Proceedings of the National Academy of Sciences, U.S.A.*
5. \*Parish, M.C., **Russell, J.M.**, King, J.W., Deino, A.L., Harpel, C.J., Vogel, H., Bijaksana, S., \*Wilk, A., \*Traietti, G., in revision. The couple climatic and ecological history of the Maritime Continent since 1.1 Ma. *Nature Geoscience*.
4. Mohtadi, M., Hollstein, M., Karami, M.P., Dang, H., Jian, Z., Lückge, A., **Russell, J.M.**, Steinke, S., submitted. The Australian-Indonesian monsoon through time. *National Science Review*.
3. Marshall, C., Dee, S., Morrill, C., Gan, R., & **Russell, J.M.**, submitted. New synthesis of African paleoclimate reconstructions reveals climate models underestimate rates of deglacial and mid-Holocene warming. *Earth and Planetary Science Letters*.
2. Guo, F., Huang, Y., Vachula, R.S., Wang, K., O'Donnell, J., Du, X., **Russell, J.M.**, Clemens, S., Yeo, D., Andreev, A.A., Herzschuh, U., Liu, X, Liu, Y., Su, B., Santon, E., Bobik, T., Brown, M.C., Sun, Y., Lu, Z., Liu, Z., submitted. Precession and ice sheets controlled hydroclimatology in the Arctic East Beringia over the past 240 kyrs. *Nature Communications*.
1. \*Mitsunaga, B., \*Lupien, R. \*Ouertani, S., \*Stubbs, B., Deino, A., Kingston, J., Stockhecke, M., Brown, E., **Russell, J.M.**, in revision. Higher rainfall, expanding grasslands: Evidence for an enhanced seasonal rainfall regime in Plio-Pleistocene eastern Africa. *Geology*.

#### E. Recent Invited Talks

29. Sept. 2024. Climate, fire, and ecosystem transformation in tropical alpine environments. Rice University.
28. October 2022. "The thermal evolution of tropical lands". U. Mass Amherst.
27. June, 2022. "Tropical Africa's Thermal Past". Woods Hole Oceanographic Institution.
26. June, 2020, "Plio-Pleistocene environments of tropical Africa: climate change and human evolution". University of Haifa, Israel.
25. August 2019. "Environmental change in the heart of the Indo-Pacific through the mid- to late Pleistocene." University of Bern, Switzerland.

24. July, 2019. Asia-Oceania Geosciences Society 16<sup>th</sup> Annual Meeting, Singapore. “Climate and Vegetation Change in central Indonesia during the Pleistocene”.
23. March, 2018. Princeton University. “Just how sensitive are tropical mountain climates?”
22. September, 2017. University at Albany, Dept. of Atmospheric Sciences. “How sensitive is tropical mountain climate?”
21. August, 2017. 3<sup>rd</sup> Southeast Asian Gateway Evolution Meeting, Bogor Indonesia. Plenary, “The Towuti Drilling Project: understanding geological and biological evolution of ancient lakes in Central Indonesia.”
20. June, 2017. Wesleyan University. Climate change and tropical mountain glaciers: a view from the geological past.
19. December, 2016. American Geophysical Union Fall Meeting. “Late Pleistocene temperature, hydrology, and glaciation in equatorial East Africa. “
18. November, 2016. Continental Scientific Drilling Coordination Meeting, National Science Foundation, Washington D.C. “The Towuti Drilling Project: Scientific Advances and Lessons Learned.”
17. November, 2016. University of Pennsylvania. “Tropical African temperatures, glaciation, and lapse rates during the last ice age.”
16. September, 2016. Earth Observatory of Singapore. “Tropical African temperatures, glaciation, and lapse rates during the last ice age.”
15. August, 2016. The Southeast Asian Conference on Geophysics, Bali, Indonesia. “A New, Long, Geophysical and Geochemical Record of Indo-Pacific Climate from Lake Towuti, Indonesia.”
14. June, 2016. University of Basel, Switzerland. “A Neogene Tropical Paleoclimate Record from Lake Tanganyika, Africa: Progress and Challenges”.
13. April, 2016. European Geophysical Union General Assembly. “A new Pleistocene record of Indo-Pacific paleoclimate: The Lake Towuti Drilling Project”.
12. January, 2016. University of Minnesota. “Tropical lapse rates since the Last Glacial Maximum: insight into our future?”
11. December, 2015. STEPPE/GeoPrisms workshop. “Continental Scientific Drilling for Paleoclimate in Lake Tanganyika, Africa.”
10. December, 2015. University of Rhode Island. “Tropical lapse rates since the Last Glacial Maximum: insight into our future?”
9. November, 2015. University of Windsor, Ontario. “The Lake Towuti Drilling Project: Indo-Pacific hydrology since 1 Myr BP”.
8. August, 2015. International Paleolimnology Symposium, Lanzhou, China. Plenary Address: Continental Scientific Drilling for Paleoclimate: Progress and Future Challenges.
7. January, 2015. Universitas Hasanuddin, Indonesia. The Lake Towuti Drilling Project.
6. December, 2014. American Geophysical Union. Multiproxy records of Indo-Pacific climate from Lake Towuti, Indonesia, since 60 kyr BP.
5. November, 2014. Massachusetts Institute of Technology. The deglacial evolution of tropical African climate.
4. August, 2014. The Lake Towuti Drilling Project. Sam Ratulangi University, Indonesia.
3. April, 2014. Plenary speaker. brGDGTs in lakes: Progress and Challenges. GDGTs 2014 Workshop, Royal Netherlands Institute for Sea Research.
2. April, 2014. Dartmouth College. Tropical African glaciation: temperature vs. hydrology.
1. February 2014. University of Connecticut. Late Pleistocene climates of Tropical Africa: A molecular perspective.

#### **4. Research Grants and Support**

##### **A. Current**

- 2025-2027 **NSF-P4.** Pliocene-Pleistocene hydroclimate in northern South America as an analogue for future rainfall regimes in the 21st century. Co-PI. \$349,971.
- 2025-2026. **NSF-MRI.** Acquisition of an ultra-performance-Orbitrap mass spectrometer at Brown University. Co-PI. \$898,865.
- 2023-2027 **NSF-DEB.** Collaborative Research: BoCP-Implementation: The impact of climate change on functional biodiversity across spatiotemporal scales at Lake Tanganyika, Africa. \$247,080.
- 2021-2025 **NSF-DEB.** Collaborative Research: Are Amazonian and Andean ecosystems close to a tipping point? \$436,560 (PI).
- 2021-2025 **NSF-DEB.** Collaborative Research: Fire, ecosystem, and landscape dynamics in Afroalpine environments in a warmer world. \$511,577 (PI)
- 2022-2025 **NSF-P2C2.** A one-million record of orbital-scale changes in temperature and precipitation from the Indo-Pacific Warm Pool. \$399,747.
- 2020-2024 **ICDP.** The Lake Tanganyika Scientific Drilling Project. \$1,500,000 (Lead PI).
- 2018-2022 **NSF-REU.** REU Site: Dynamic Earth in the 21<sup>st</sup> century: undergraduate research on the evolution of the Earth's interior, surface, and climate. Co-coordinator.
- 2020-2026 **Seismic Micro Technology,** The Kingdom Software Suite Brown Site License (software site license), **PI,** \$310,708.

## **B. Completed**

- 2022-2024 **NSF-P2C2.** Tropical hydroclimate change during the last deglaciation: a synthesis of transient isotope-enabled model simulations and proxy data. Co-PI. \$343,657.
- 2019-2022 **NSF-P2C2.** Constraining African climate since the last glacial maximum via integrated climate and proxy system modeling. Co-PI, \$78,509.
- 2018-2021 **NSF-SGP.** A 750,000 year leaf wax biomarker record to assess environmental change across the Plio-Pleistocene Boundary in tropical East Africa. PI, \$302,491.
- 2018-2021 **NSF-P2C2.** Collaborative Research: New perspectives on the thermal history of tropical East Africa. PI, \$249,801 to Brown.
- 2020-2021 **NSF-EAR.** Acquisition of a continuous flow isotope ratio mass spectrometer system for the Organic Geochemistry Core Facility at Brown University. Co-PI, \$387,476.
- 2019-2021 **NSF-EAR.** Developing the Lake Tanganyika Drilling Project. PI, \$36,537.
- 2018-2019 **ICDP.** The Lake Tanganyika Scientific Drilling Project: a planning workshop. PI. \$83,550
- 2017-2018 **NGS-CRE.** "Holocene environmental and human cultural dynamics in Sulawesi, Indonesia, inferred from lake sediment cores." \$20,000 to Brown.
- 2017-2018 **NSF-OISE.** International Conference: The Towuti Drilling Project: Paleoenvironments, Biological Evolution, and Geomicrobiology of a Tropical Western Pacific Lake. \$24,695.
- 2013-2018 **NSF-FESD.** Earth System Dynamics and its role in human evolution in Africa. **Co-PI.** \$139,234 to Brown.
- 2014-2018 **NSF-P2C2.** Collaborative Research: A 650,000 year record of hydroclimate in the Western Pacific Warm Pool: Scientific Drilling at Lake Towuti, Indonesia. **PI** \$488,911.
- 2014-2018 **NSF-DEB.** Collaborative Research: Megaherbivore and climatic controls on fire and vegetation dynamics during the last deglaciation. **Co-PI** \$81,955.
- 2014-2018 **ICDP.** The Lake Towuti Drilling Project: Paleoclimates, biological evolution, and paleobiogeochemistry of a tropical Pacific ultramafic lake. **Lead PI,** \$1,200,000
- 2015-2018 **NSF-OPP.** Collaborative research: Reconciling conflicting Arctic temperature and fire reconstructions using multi-proxy records from lake sediments north of the Brooks Range, Alaska. **Co-PI** with Yongsong Huang (Brown), Carrie Morrill (UC Boulder). \$556,190 to Brown.

- 2012-2015 **NSF-BCS**. Collaborative Research: A high-resolution analysis of unique paleoenvironmental data from key hominin sites in East Africa. **Co-PI**, \$71,391.
- 2012-2015 **NSF-EAR**. Collaborative Research: Climate controls on the formation of glacier moraines in the Rwenzori Mountains, Uganda-Congo. **Lead PI**, \$139,854 to Brown.
- 2013-2015 **NSF-IF. PI**. Logistical planning for scientific drilling in Lake Towuti, Indonesia. \$39980.
- 2012-2014 **NSF-OISE. EAGER**: Exploring scientific drilling in Lake Towuti, Indonesia: Paleoclimate, Biological Evolution, and Geomicrobiology in a tropical Pacific lake. \$91,586.
- 2012-2013 **Brown University Seed Fund**. Sedimentation and biogeochemical cycling in a ferruginous, ultramafic-hosted lake. \$85,000.
- 2012-2013 **NSF-AGS & PAGES**. Workshop Proposal: Synthesis of Transient Climate Evolution of the last 21 kyr (SynTraCE-21). \$45,000.
- 2011-2012 **National Geographic Society** Sr-isotopic evaluation of hydrological connectivity of an Ancient Lake Chain: Impacts on biological endemism in the Malili Lakes, Indonesia. \$20,000.
- 2009-2012 **NSF-P2C2**. Collaborative Research: Reconstructing millennial-scale trends and variability in western Pacific convection and hydrology from large lakes on Sulawesi, central Indonesia.” **Lead PI**, \$312,192 to Brown.
- 2011-2012 **NSF-OISE**. Lake Towuti: A Planning Workshop for Scientific Drilling. **PI** \$18,900.
- 2011-2012 **NSF-EAR & PAGES** Drilling Workshop: A community vision for scientific drilling in the East African Rift Lakes. **PI**, \$69,800.
- 2011-2012 **ICDP**: Lake Towuti: A Lake Drilling Planning Workshop. **PI** \$60,000.
- 2009-2011 **NOAA-CCDD**. High-frequency variations in the Indian Ocean Dipole during the past millennium reconstructed from East African and Indonesian lake sediment cores. **Lead PI**, \$215,570 to Brown (collaborative with Mathias Vuille, University at Albany).
- 2009-2011 **ACS-PRF**. The Methylation Index of Branched Tetraethers (MBT) as a paleotemperature proxy in lakes: investigation, calibration, and validation. **PI**, \$100,000.
- 2009-2011 **NSF-MRI**. Acquisition of a Multi-Collector Inductively-Coupled Mass Spectrometer. **Co-PI** with Alberto Saal (Brown), \$677,890.
- 2008-2010 **National Geographic Society**. Crater lakes in eastern Java, Indonesia: Archives of the History of the El Niño Southern Oscillation? **PI**. \$19,400.
- 2007-2011 **NSF-EAR**. Abrupt Climate Change during Marine Isotope Stage 3 in Southern Tropical Africa: Multiproxy reconstructions from Lake Tanganyika. **PI**, \$288,682.
- 2007-2008 **NSF-IF**. Acquisition of a high-performance liquid chromatograph-mass spectrometer (HPLC-MS). **Co-PI** with Yongsong Huang (Brown), \$162,522.
- 2007-2008, **Richard B. Salomon Research Award** (Brown University). Paleoclimate changes and tropical glacier dynamics in the Rwenzori Mountains, Uganda-Congo. **PI**. \$14,800.
- 2006-2008 **NSF-EAR**. SGER: Exploratory Seismic Reflection and Gravity Coring Survey of Lakes Matano and Towuti, South Sulawesi. \$80,000.
- 2005-2006 **National Geographic Society**. Aquatic biota from Ruwenzori mountain lakes as paleothermometers in African climate reconstruction. **Co-PI** with Hilde Eggermont (U. Ghent) \$19,840.
- 2003-2005 **NSF-ATM** A high-resolution record of Holocene climate variability from Lake Edward, central Africa. **Authored** with Thomas C. Johnson, P.I. \$190,856.

### C. Pending Proposals

- 2026-2029. **NSF-MSRI**. Transforming continental scientific drilling through the Earth Exploration Platform. Co-PI. \$19,990,000.

## 5. Service

### **Departmental and University**

2025- Deputy Dean of the Faculty.  
2023- 2025 Senior Associate Dean of the Faculty, Physical Sciences  
2023- 2024 Research Faculty Appointments Working Group, Chair.  
2021- 2023 Chairs Agenda Committee.  
2021- 2023 Graduate Education Excellence Committee member  
2020-2023 Department Chair.  
2018-2021 University Resources Committee member, Vice Chair 2019-2020.  
2019-2020 Director of Undergraduate Studies, Earth, Environmental, and Planetary Sciences  
2016-2020 University Conflict of Interest Review Board member, Vice-Chair and Chair in 2019.  
2009-2020 Undergraduate concentration advisor for the Geo-Biology degree.  
2011-2020 Department Space and Facilities Committee, Environmental Chemistry Facilities Committee, XRF facility committee, Chair's Advisory Committee.  
2017-2019 University Human Resources Committee member  
2018 Department Undergraduate Spring Break Field Trip Leader, Big Bend and the Guadalupe Mountains.  
2017 Department Undergraduate Spring Break Field Trip Leader, Death Valley.  
2015 Search Committee Member, Atwater Chair in Physical Hydrology, IBES/DEEPS  
2013-2018 Brown Institute for the Study of Environment and Society (BISES) Steering Committee Member and "Food and Water" theme leader.  
2012 Search Committee Chair for Climate Modeling Position, Geological Sciences.  
2011 Faculty Advisor, Undergraduate Spring Field Trip to the Grand Canyon and northern Arizona.  
2007-2011 Dept. of Geological Sciences Curriculum Committee,  
2007-2011 X-ray Fluorescence Committee, Facilities Committee  
2009 Instructor, Watson International Scholars of the Environment Program, Brown University.  
2007-2008 Dept. of Geological Sciences Curriculum Committee, X-ray Fluorescence Committee, Facilities Committee  
2006, 2007 Geological Sciences Dept. fall field trip leader.  
2006-2009 Brown University Library Advisory Committee

### **Professional**

2024 **Reviewer, WG member**, ICDP lake drilling task force.  
2024 **Panelist**. Leadership Experiences, COLDEX Early Career Scientist Meeting.  
2021-2023 **American Geophysical Union** Dansgaard Award Committee member and chair, Paleooceanography and Paleoclimatology Executive Committee.  
2022 **Geological Society of America**. Member of the Working Group on Divisions.  
2021 **Panelist**. National Academies Workshop on Identifying New Community-Driven Science Themes for NSF's Support of Paleoclimate Research  
2020-2022 **Past Chair**, Geological Society of America Interdisciplinary Interest Group on Continental Scientific Drilling.  
2017-2020 **Chair (and founder)**. Geological Society of America Interdisciplinary Interest Group on Continental Scientific Drilling.  
2017-2021 **Associate Editor**. Paleooceanography and Paleoclimatology.  
2016-2021 **Editorial board member**. *Quaternary International*.  
2002-present **Reviewer**. Agencies/journals include: the National Science Foundation, European Science Foundation, Swiss National Science Foundation, German Science Foundation, Science, Nature, Geology, Quaternary Research, The Holocene, Palaeogeography, Palaeoclimatology, Palaeoecology, Journal of Sedimentary Research, Chemical Geology,

- Organic Geochemistry, *Geochimica et Cosmochimica Acta*, *Quaternary Science Reviews*, *Journal of Paleolimnology*, *Journal of Ecology*.
- 2013-2019 **Chairman of the Board of Directors**, Drilling, Observation, and Sampling of the Earth's Continental Crust (DOSECC).
- 2012-2017 **International Continental Drilling Program**, Science Advisory Group.  
2017 **Session Chair**, "Understanding African environmental history through continental scientific drilling." Geological Society of America Annual Meeting, Seattle, WA
- 2017 **Environmental Protection Agency Reviewer**. "Lakes and Climate Warming".
- 2015-2017 **Member**, American Association of the Advancement of Science Electorate Nominating Committee, Atmospheric and Hydrologic Science.
- 2016 **Theme Leader**. "Hydroclimate", Continental Scientific Drilling Coordination Meeting, National Science Foundation, Washington D.C.
- 2016 **Session Chair**, European Geophysical Union General Assembly. "New Insights in past African and Middle Eastern climates: A tribute to Francoise Gasse".
- 2014-2016 **Member-at-Large**. Geological Society of America External Awards Committee.  
2012 **Workshop Organizer, SynTraCE-21**. Synthesis and modeling of the transient evolution of Earth Climate since 21 kyr BP. Providence, RI, 46 participants.
- 2012 **Session Chair**, American Geophysical Union Fall Meeting. Asian and Indo-Pacific Climate Variability: Archive and Modeling Explorations. 53 abstracts.
- 2011 & 2012 **Panelist**, National Science Foundation.  
2011 **Session Chair**, American Geophysical Union Fall Meeting. Co-chaired two sessions: "Dynamics of Tropical Climate Change Across Glacial-Interglacial Cycles" (56 abstracts) and "Isotopes in Precipitation: Paleoclimate Archives, Modern Observations, and Modeling" (47 abstracts).
2011. **Brown International Advanced Research Institute for Climate Change**, Instructor. Led two-week institute on climate change for scientists from developing countries.
- 2010-2012 **Secretary, DOSECC Board of Directors**.
- 2009-2010 **Member Representative to DOSECC for Brown University**.
- 2009-2010 **SynTraCE-21 (Synthesis of Transient Evolution of the last 21-kyr)**. Project comparing paleoclimate records to transient model simulations with CCSM3 of the last 21 kyr (lead by Bette Otto-Bliesner, NCAR, Zhengyu Liu (Wisconsin), Peter Clark (OSU). Section leader for African paleoclimate and Tropical lake records in workshops Aug. 2009 (Boulder, CO) and Oct. 2010 (Portland, OR).
- 12/2008 **Session Chair**. American Geophysical Union Fall Meetings, GC-21. Tropical . Mountain Glaciers: Past, Present, and Future, 17 abstracts.
- 2/2008 **Invited Participant**. National Research Council Workshop on "The Earth System Context for Hominin Evolution." Irvine, CA, Feb. 21-22.
- 12/2006 **Session Chair**, American Geophysical Union Fall Meeting. PP41C, 42A, 43A: Climate Variability After Deglaciation: Regional Phasing and Mechanisms of Holocene Climate Events, 46 abstracts.
- 7/2006 **Organizing committee**, 10<sup>th</sup> International Paleolimnology Symposium, Duluth, MN.
- 11/2005 **Invited Participant**: Workshop on Lake Drilling and Human Evolution, Smithsonian Institution, Washington, D.C. Session leader: "Time-specific Environmental Reconstruction."
- 3/ 2005 **Invited Participant**: "Continental Scientific Drilling in the Next Decade: A community vision for the next decade. International Continental Drilling Program Decadal Meeting. GFZ, Potsdam, Germany.

## **6. Honors and Awards**

- 2026 Top Cited Article, *Paleoceanography and Paleoclimatology and Geobiology*

2025	Top Cited Article, <i>Paleoceanography and Paleoclimatology</i>
2024	Distinguished Alumnus, University of Minnesota
2023	Fellow, Geological Society of America
2022	Ganesa Widya Research Award, Institute of Technology Bandung, Indonesia
2020	American Geophysical Union Willi Dansgaard Award
2018	Royce Family Professor of Teaching Excellence, Brown University
2013	<i>Earth and Planetary Sciences</i> Award for Excellence in Reviewing
2008-2011	Joukowsky Family Assistant Professorship in Geological Sciences
2005	Best Dissertation in the Biological and Medical Sciences. University of Minnesota.
2000-2003	National Science Foundation Graduate Fellow. University of Minnesota.
1999-2000	Graduate School Fellow, University of Minnesota.

## **7. Teaching and Student Supervision**

### **A. Regular Courses, rating of instructor effectiveness 1 (lowest) – 5 (highest)**

<b>Term</b>	<b>Course</b>	<b>Rating</b>
Fall, 2024	EEPS 2350: Quaternary Paleoclimatology	
Fall, 2022	EEPS 1240: Stratigraphy and Sedimentation (12 students)	4.67
Fall, 2021	EEPS 1240: Stratigraphy and Sedimentation (21 students)	4.69
Summer, 2021	EEPS 0240: Earth, Evolution of a Habitable Planet (45 students)	4.74
Fall 2020	EEPS 2350: Quaternary Paleoclimatology	5.00
Spring 2020	GEOL 0240: Earth, Evolution of a Habitable Planet (41 students)	4.84
Fall 2019	GEOL 1240, Stratigraphy and Sedimentation (20 students)	4.85

### **A. Regular Courses, rating of instructor effectiveness 1 (highest) – 5 (lowest)**

<b>Term</b>	<b>Course</b>	<b>Rating</b>
Spring 2019	GEOL 1150: Limnology, the Study of Lakes (20 students)	1.20
Fall 2018	GEO 1240. Sedimentology and Stratigraphy (15 students)	1.36
Spring 2018	GE 2350. Quaternary Paleoclimatology seminar (8 students)	1.20
Fall 2017:	GEOL 1950M, Geoengineering Or, The Unnatural World (19 students)	1.33
Fall 2017:	GEO 1240. Sedimentology and Stratigraphy (18 students)	1.20
Spring 2017:	GEO 1150. Limnology (11 students)	1.25
Fall 2016.	GEO 1240. Sedimentology and Stratigraphy (25 students)	1.40
Spring 2016	GE 2350. Quaternary Paleoclimatology seminar (11 students)	1.20
Spring 2016	GE 1150. Limnology (11 students)	1.11
Fall 2015	GE 1240. Sedimentology and Stratigraphy (18 students)	1.31
Spring 2014	GE 2350. Quaternary Paleoclimatology seminar (5 students)	1.31
Spring 2014	GE 1150. Limnology (14 students)	1.25
Fall 2012.	GE 0030. Climate and Climate Change (22 students)	N/A
Fall 2012.	GE 1240. Sedimentology and Stratigraphy (9 students)	1.3
Spring 2012.	GE 2350. Quaternary Paleoclimatology seminar (7 students)	1.1
Spring 2012	GE 1150. Limnology (13 students)	1.2
Fall 2011	GE 1240. Sedimentology and Stratigraphy (23 students)	1.4
Spring 2011	GE 1150. Limnology (23 students)	1.0
Fall 2010	GE 1240 Sedimentology and Stratigraphy (17 students)	1.2
Fall 2009	GE 1240 Sedimentology and Stratigraphy. (8 students)	1.1
Spring 2009	GE 2350 Quaternary Paleoclimatology seminar (8 students)	1.8
Spring 2009	GE 1150 Limnology (12 students)	1.4
Fall 2008.	GE 1240 Sedimentology and Stratigraphy (15 students)	1.5
Spring 2008	GE 1150 Limnology (15 students)	1.5
Fall 2007	GE 1240 Sedimentology and Stratigraphy (10 students)	1.3

Fall 2007	GE 2910 Paleolimnology (11 students)	2.0
Spring 2007	GE 1150 Limnology: The study of lakes (10 students)	2.4
Fall 2006	GE 1240 Sedimentology and Stratigraphy (13 students)	2.4
Fall 2006	GE 2910 High Frequency Climate Variations and Coupled Modes (9 students)	1.6
Spring 2006	GE 0240 Introduction to Earth System History (16 students)	2.8

## **B. Mentoring and Advising**

### **Past Students:**

Jessica Tierney, Ph.D. 2010 (Professor, U. Arizona)  
 Shannon Loomis, Ph.D. 2013 (Sr. Data Scientist, Nimble Storage)  
 Bronwen Konecky, Ph.D., 2013 (Associate Professor, Washington University)  
 Jessica Rodysill, Ph.D. 2013 (Research Geologist, US Geological Survey)  
 Satrio Wicaksono, Ph.D., 2016 (Forest Restoration Manager, World Resources Institute)  
 William C. Daniels, Ph.D., 2017 (Assistant Professor, U. Minnesota Duluth)  
 Christopher Kelly, M.A., 2017 (Science Teacher, Dwight-Englewood School, NJ)  
 Ashling Neary, MA., 2018, Research Associate, University of Michigan.  
 Rachel Lupien, Ph.D., 2019 (Assistant Professor, Aarhus University)  
 Nora Richter, Ph.D., 2020 (Postdoctoral Researcher, NIOZ, The Netherlands)  
 Richard Vachula, Ph.D., 2020 (Assistant Professor, Auburn University)  
 Sloane Garelick Ph.D., 2022 (Science Educator, Science Museum of Boston)  
 Bryce Mitsunaga Ph.D. 2024 (Postdoctoral Researcher, Harvard University)  
 Meredith Parish, Ph.D. 2024 (Postdoctoral Scholar, George Mason University)

### **Former Postdocs:**

Jaquelyn Gill, 2012-2013 (Associate Professor, University of Maine)  
 Sarah Ivory, 2014-2016 (Associate Professor, Penn State University)  
 Sylvia Dee, 2015-2017 (Associate Professor, Rice University)  
 Xiaojing Du, 2020-2023 (Assistant Professor, George Mason University)  
 Allison Karp, 2022-2024 (Assistant Professor, University of Chicago)  
 Angie Perrotti, 2020-2023 (Research Scientist, University of Wisconsin)

### **Current Students:**

Andrea Mason (2021-present), Ellen Jorgensen (2023-present), Desmond Yeo (2022-present)

### **Current Postdocs:**

Boyang Zhang (2021-present), Lina Pérez-Angel (2022-present)

### **Undergraduate Thesis Supervision (2006-present):**

Sophie McCoy, Natacha Meyer, Marc Mayes (Honors), Ana Hereux (Honors), Bethany Ladd (Honors), Andrea Weber (Honors), Samuel Phelps (honors), Patrick Holland-Stergar (Honors), Rebecca Rose, Allison Cluett (Honors), Aaron Rachels (Honors), Danii Carrasco, James Napoli (Honors), Avinash Subramanian (Honors), Grace Molino (Honors), Nade Sae-Lim (Honors), Colette Bertschy, Tristan Reinecke, Rachel Gold (Honors), Ashley Bang (Honors), Hannah Yi, Eleanor Pereboom (Honors), Ella Wood (Honors), Alex Wilk (Honors), Kian Kafaie (Honors), Aaron Freeman (Honors).

### **Graduate Student Committees:**

**Past:** Juzhi Hou, Jaime Toney, Bethany Ehlmann, Paige Newby, Caitlin Chazen, Jon Nichols, David Baker, Li Gao, Alex Kasprak, Susie Theroux, Aron Buffen, Timothy Goudge,

Samantha Bova, Marc Mayes, Will Longo, Vivian Sun, James Cassanelli, Yinsui Zheng, Qing Li, Sarabeth George, Alyssa Pascuzzo.

**Current:** Kristin Kimble, Carol Hundal, Catherine Gagnon.

**External:** Ilse Bessems, Ph.D., Geology (2007), U. Ghent, Belgium (Geology); Matthew Steinkamp, M.A. Geology (2006), Oregon State University (Geology); Laura Wetter, M. A., 2006. U. C. Davis (Geology); Allison Burnett, M. A. Geology (Dec, 2008), Syracuse University, Amy Morissey (Syracuse), Cindy DeJonge (Utrecht University, 2015), Laura Buckles (Utrecht University, 2015), Parth Shah (University of Haifa)