

James M. Russell

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Educational Background:

- 1994-1998 Wesleyan University (Middletown, CT).
Bachelor of Arts, Earth and Environmental Science. Junior Phi Beta Kappa.
- 1999-2004 University of Minnesota (Minneapolis, MN).
Ph.D. Ecology. Thomas C. Johnson, advisor. Minor in Quaternary Paleoecology. The Holocene paleolimnology and paleoclimatology of Lake Edward, Uganda/Congo,

Positions Held:

- 2006-present *Assistant Professor.* Dept. of Geological Sciences, Brown University.
- 2004-2005 *Post-doctoral Research Associate.* Large Lakes Observatory, University of Minnesota Duluth. Thomas C. Johnson. High-resolution geochemical and paleoclimatic analyses of piston cores from Lake Edward, Uganda-Congo.
- Summer, 2004, 2005 *Paleoclimatology Instructor.* Nyanza Project, University of Arizona. Piston coring and seismic survey of central Lake Tanganyika for paleoclimatic and limnogeologic research.
- 1999-2004 *Ph.D. candidate.* University of Minnesota. The Holocene paleolimnology and paleoclimatology of Lake Edward, Uganda/Congo, Thomas C. Johnson, advisor.
- 1998-1999 *Junior Scientist.* Limnological Research Center, University of Minnesota, Kerry R. Kelts. Analysis of lake sediment cores from Lakes Edward, Victoria, and Bosumtwi, Africa. Design, construction, and implementation of piston coring platforms and devices.

Publications:

1. **Russell, J.M.**, Johnson, T.C., 2005. An equatorial harmonic of the high latitude's 1500-year cycle. *Geophysical Research Letters* 32: doi:10.1029/2005GL023295.
2. **Russell, J.M.**, Johnson, T.C., accepted. The water balance and stable isotope hydrology of Lake Edward, Uganda-Congo. *Journal of Great Lakes Research*.
3. Crausbay, S., **Russell, J.M.**, Schnurrenberger, D.W., Cushing, E.J., accepted. A 750-year lithologic record of rainfall and drought from sub-annually laminated lake sediments of Ranu Lamongan, East Java. *Journal of Paleolimnology*.
4. **Russell, J.M.**, Johnson, T.C., 2005. A high-resolution geochemical record from Lake Edward, Uganda Congo and the timing and causes of tropical African drought during the Late Holocene. *Quaternary Science Reviews* 24: 1375-1389.
5. Brooks, K., Scholz, C.A., King, J.W., Peck, J., Overpeck, J.T., **Russell, J.M.**, Amoako, P.Y.O., 2005. Late-Quaternary lowstands of Lake Bosumtwi, Ghana: evidence from high-resolution seismic reflection and sediment-core data. *Palaeogeography, Palaeoclimatology, Palaeoecology* 216: 235-249.

6. Beuning, K.R.M., **Russell, J.M.**, 2004. Vegetation and sedimentation in the Lake Edward basin, Uganda-Congo during the late Pleistocene and early Holocene. *Journal of Paleolimnology* 32: 1-18.
7. **Russell, J.M.**, Johnson, T.C., Talbot, M.R., 2003. A 725 yr cycle in the climate of central Africa during the Late Holocene. *Geology* 31 (8): 677-680.
8. **Russell, J.M.**, Talbot, M.R., Haskell, B.J., 2003. Mid-Holocene climate change in Lake Bosumtwi, Ghana. *Quaternary Research* 60: 133-141.
9. Schnurrenberger, D.W., **Russell, J.M.**, Kelts, K.R., 2003. A component-based lacustrine sediment classification system. *Journal of Paleolimnology*.29 (2): 141-154.
10. **Russell, J.M.**, Johnson, T.C., Kelts, K.R., Laerdal, T., Talbot, M.R., 2002. An 11,000 year lithostratigraphic and paleohydrologic record from equatorial Africa: Lake Edward, Uganda-Congo. *Palaeogeography, Palaeoclimatology, Palaeoecology* 193: 25- 49.
11. 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.
12. 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.

Teaching Experience:

- 2004-2005 *Student Supervision*. Matthew Steinkamp, Oregon State University, Laura Wetter, U.C. Davis on diatom paleoecological and paleomagnetic analyses of piston cores from Lake Tanganyika, East Africa.
- 2004-2005 *Paleoclimatology Instructor*. University of Arizona, Nyanza Project.
- 2002 *Teaching Assistant*. University of Minnesota, EEB/GEO 4601 Limnology.
- 1998 *Teaching Assistant*. Wesleyan University. BIOL 349 Evolution.

Informal Teaching and Service Activities:

- 2002-present *Reviewer*. Quaternary Research, The Holocene, Palaeogeography, Palaeoclimatology, Palaeoecology, Journal of Sedimentary Research, Geology, Chemical Geology.
- 2001-2003 *Student Committee Member*. Quaternary Paleoecology Seminar Series, University of Minnesota. Committee chair: 2002-2003.
- 2003 *Facilitator*. U of MN, Duluth. Seminar in lake sediment description and classification.

Fellowships and Awards:

- 2005 Best Dissertation in the Biological and Medical Sciences. University of Minnesota.
- 2003 *Kerry R. Kelts Memorial Foundation Student Travel Award*.
- 2000-2003 National Science Foundation Graduate Fellow. University of Minnesota.

Grants:

- 2003-2005 NSF-ATM # 0314832. A high-resolution record of Holocene climate variability from Lake Edward, central Africa. Authored with Thomas C. Johnson, P.I. \$190,856.
- 2002 U of MN Research Training Group in Paleorecords research award: Late Holocene arid events in the West African tropics. \$1500.

- 2000 U of MN Research Training Group in Paleorecords travel award: Summer travel to laboratory of Françoise Gasse, CEREGE, Aix-en-Provence, France. \$4000.
- 2000 U of MN Research Training Group in Paleorecords Short Course award: Diatoms: Taxonomy and Applications to the Paleoenvironmental Sciences. A short course for the University of Minnesota Paleorecords community. \$5000.

Invited Talks and Workshops:

1. November, 2005. Lake Drilling and Human Evolution, Smithsonian Institution, Washington, D.C. Session group leader: “Time-specific Environmental Reconstruction.”
2. University of Minnesota Duluth, Dept. of Geology
3. April, 2005. Brown University, Dept. of Geology, Providence, RI.
4. April, 2005. Université de Bretagne Occidentale, Domaine Oceaniques.
5. March, 2005. International Continental Drilling Program “Continental Scientific Drilling 2005: A Decade of Progress and Challenges for the Future”, Potsdam.
6. November, 2005. University of Wisconsin Center for Climatic Research.
7. March, 2004. University of Minnesota Paleocology Seminar Series.

Selected Abstracts (National and International Meetings):

1. . Detection of Silica-Mediated Dissolution of Magnetic Grains in Sediments Using FORC Diagrams. Wetter, L., Verosub, K., **Russell, J. M.** American Geophysical Union 2005.
2. A High-Resolution Drought Record Spanning the Past ca. 800 Years From Sub-annually Laminated Lake Sediment, East Java. Crausbay, S., **Russell, J.M.**, Schnurrenberger, D.W. American Geophysical Union 2005.
3. Geochemical and Sedimentological Records of Late Quaternary Climate Change, Lake Tanganyika, East Africa. Felton, A., **Russell, J.M.**, Cohen, A. S., Baker, M., Lezzar, K.E. American Geophysical Union 2005.
4. A high-resolution late Holocene record of rainfall from Lake Edward, equatorial Africa: Linkages between the African and Indian monsoons. **Russell, J.M.**, Johnson, T.C., American Geophysical Union 2005.
5. Biogenic silica and organic carbon burial rates in the large lakes of the world. American Society of Limnology and Oceanography Aquatic Sciences Meeting, Johnson, T.C., Alin, S., **Russell, J.M.**, Salt Lake City, UT, Feb., 2005.
6. An Equatorial Harmonic of the Holocene’s 1,500-year cycle: Cycle geochemical variability in Lake Edward, Uganda-Congo. **Russell, J.M.**, Johnson, T.C., American Geophysical Union 2004.
7. The Lake Tanganyika Accommodation Zone Structural Highs: Probable Archive of Continuous Miocene to Recent Paleoenvironmental and Paleoclimatic Information for East Africa. Cohen, A.S., Lezzar, K., **Russell, J.M.**, Tiercelin, J.J., Scholz, C. American Geophysical Union 2004.
8. Environmental Magnetism as an Instrument for Characterizing Paleoclimatic Variations in the Sediment Record of Lake Tanganyika, East Africa. Wetter, L., Verosub, K., Acton, G., **Russell, J.M.**, American Geophysical Union Fall Meeting 2004.
9. A Continuous High-Resolution Climate-Proxy Record of the past 2600 Years from the Central Sahara Desert. Verschuren, D., Schuster, M., Cocquyt, C., **Russell, J.M.**, Engstrom, D.R., Kroepelin, S., American Geophysical Union Fall Meeting 2004.
10. Annually-resolved climate-proxy records from African lakes to link European and tropical climate variability. Verschuren, D., Kröpelin, S., Russell, J. R., Schuster, M., Bessems, I. & Eggermont, H. Palaeoclimate conference of the European Committee, Utrecht University, the Netherlands, July 2004

11. Lake Edward, East Africa: Carbonates, the Silica Cycle, and Late Holocene Century-scale Drought. **Russell, J.M.**, Thomas C. Johnson. Geologic Society of America Paper 23-4, Seattle, Washington, Nov. 2003.
12. Widespread drought in tropical East Africa during the Grand Solar Maximum. Freiburger, N. C., **Russell, J. M.**, Beuning, K.R.M., Schnurrenberger, D.W. Geologic Society of America Paper 84-3, Seattle, Washington, Nov. 2003.
13. Super-ENSO cycles in African Lake and Indian Ocean late-Holocene Paleorecords. **Russell, J.M.**, Thomas C. Johnson, Michael R. Talbot. International Association of Limnogeology Congress, Tucson, AZ, April 2003.
14. Using Sr-isotopes to trace changes in basin configuration: the Holocene Sr-isotope stratigraphy of Lake Edward, Uganda-Congo. Talbot, M.R., Brendeland, K.I., **Russell, J.M.**, Lærdal, T. International Association of Limnogeology Congress, Tucson, AZ, April 2003.
15. Cyclic variability in moisture balance in central equatorial Africa during the past 5,000 years. **Russell, J.M.**, T. C. Johnson, AGU Fall Meeting 2002. EOS Trans AGU 82 (47): Abstract # PP61B-11.
16. The Mid- to Late Holocene History of Lake Edward, Uganda, and its Implications for Hydrologic Change in the African Tropics. **Russell, J.M.**, T. C. Johnson. 2001 AGU Fall Meeting. EOS Trans. AGU 82 (47) Abstract # PP21C-04.
17. A sediment record of abrupt lake level change from west central Minnesota. S. B. Mueller, L. Triplett, R. Clotts, A. Myrbo, **J.M. Russell**, M. D. Shapely. 2001 AGU Fall Meeting. EOS Trans. AGU 82 (47): Abstract # PP22A-0503.
18. An 11,000-year record of effective moisture balance from Lake Edward, Uganda-Congo. **J. M. Russell**, T. C. Johnson, K.R. Kelts. PAGES PEP III Conference, Aix-en-Provence, France, 2001.
19. Lake Edward, Uganda: African Climate Change and Tropical Connections. **J. M. Russell**, K. R. Kelts. Dec., 2000, AGU Fall Meeting. EOS Trans. AGU 81 (48): p. F7.
20. The Sedimentology and Paleolimnology of Lake Edward, Uganda. **J. M. Russell**, K.R. Kelts. 2000, International Paleolimnological Congress, Kingston, Ontario.
21. Sediment and Climate History based on piston cores from Lake Edward, Uganda-Congo. **J.M. Russell**, K.R. Kelts, T.C. Johnson. 2nd international IDEAL symposium, Club Makokola, Malawi., Jan. 2000.
22. Temperature Change During the African Younger Dryas. **J.M. Russell** and K. R. M. Beuning, ASLO/ESA Abstracts, St. Louis, Missouri, June 1998. p. A-79

Professional Memberships:

Geologic Society of America, American Geophysical Union, American Association for the Advancement of Science, American Society of Limnology and Oceanography