

SIMONE REBECCA ALIN

Curriculum Vitae

National Oceanic and Atmospheric Administration
Pacific Marine Environmental Laboratory
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EDUCATION

- Ph.D. University of Arizona**, Department of Geosciences, Ph.D. Minor in the Department of Ecology and Evolutionary Biology—2001.
- B.S. Stanford University**, Department of Biological Sciences, with departmental honors —1993.

PROFESSIONAL EXPERIENCE

Oceanographer

- Pacific Marine Environmental Laboratory, National Oceanic and Atmospheric Administration, Seattle, Washington, October 2007–present

Research Associate

- River Systems Research Group, School of Oceanography, University of Washington (carbon cycling in large tropical rivers), July 2003–October 2007
- Alaska Salmon Program, School of Aquatic and Fishery Sciences, University of Washington (terrestrial inputs to Alaskan lakes), May 2006–October 2007
- NOAA Climate and Global Change Postdoctoral Fellowship, Large Lakes Observatory, University of Minnesota Duluth (large lake carbon cycling), December 2001–June 2003

Instructor

- Introduction to Environmental Science, The Colorado College (Colorado Springs, Colorado), Environmental Science Program, 1999–2000 (Blocks 4 and 6)

Graduate Teaching Associate

- Analysis of Biological Diversification, University of Arizona, Departments of Geosciences and Ecology and Evolutionary Biology, 2000
- Principles of Sedimentology and Stratigraphy, University of Arizona, Department of Geosciences, 1999
- Analysis of Biological Diversification, University of Arizona, Departments of Geosciences and Ecology and Evolutionary Biology, 1998

Graduate Research Associate

- University of Arizona, Department of Geosciences (paleoecology), 1997–1999

Life Sciences Technician

- Stanford University, Hopkins Marine Station (molecular biology, neurobiology), 1992–1994

Student Researcher

- Stanford University, Hopkins Marine Station (electrophysiology), 1990–1991

Research Assistant

- Stanford University, Hopkins Marine Station (molecular biology, aquaculture), 1992
- Stanford University, Hopkins Marine Station (marine ecology), 1991
- Stanford University Medical Center, Developmental Biology Department (molecular biology), 1989–1990
- University of Nebraska at Lincoln, Tumor Biology Department (tumor biology), 1988

FELLOWSHIPS & AWARDS

Fellowships

National Oceanic and Atmospheric Administration Postdoctoral Fellowship in Climate and Global Change, University Corporation for Atmospheric Research, 2001–2003

Dean's Doctoral Fellowship, Graduate College, University of Arizona, 2000–2001

National Science Foundation Graduate Research Fellowship, 1995–1997, 1999–2000

National Security Education Program Graduate International Fellowship, 1997–1998

Analysis of Biological Diversification - Research Training Group Graduate Fellowship, University of Arizona, 1994–1995

Awards

Top-50 Most Cited Papers award from the journal *Palaeogeography, Palaeoclimatology, Palaeoecology*, 2003–2007

Best Sedimentology/Stratigraphy/Paleobiology Talk, GeoDaze Student Symposium, University of Arizona, 2001

Biological Science Division, Second Place Poster, Student Showcase, University of Arizona, 1995

SOCIETY MEMBERSHIPS

American Geophysical Union

American Society of Limnology and Oceanography

FIELD EXPERIENCE

Shipboard

Inorganic carbon measurements, NOAA Ship *Ronald H. Brown*, CLIVAR cruise P18, leg 1, San Diego-Easter Island, 12/2007–1/2008 (36 days)

Geological coring and seismic surveys, R/V *Explorer*, Lake Tanganyika, East Africa, 1/1997–2/1997 (30 days)

Other

- Field limnology and coring work on large lakes in Southwest Alaska, 2005–2007 (1.5 months)
- Field research on river carbon cycling in the Mekong and Chao Phraya rivers at sites in three countries (Cambodia, Thailand, Lao PDR) in Southeast Asia, 2003–2004 (2 months)
- Field research on river carbon cycling at four sites throughout the Amazon River basin in Brazil, 2004 (2 months)
- SCUBA-based research on biodiversity in Lake Tanganyika, based at the Tanzanian Fisheries Research Institute in Kigoma, Tanzania, 1997-1998 (one year)

SYNERGISTIC ACTIVITIES

- Article Reviews: *Journal of Geophysical Research—Biogeosciences*, Chapter in SCOPE volume “*Dynamics and Vulnerability of Semi-Enclosed Marine Systems: The Integrated Effects of Changes in Sediment and Nutrient Input from Land,*” *Limnology and Oceanography: Methods, Quaternary International, Journal of Paleolimnology*, 2001–present
- Proposal Reviews: NASA Terrestrial Ecology Program, NASA Carbon Cycle Science Program, International START Secretariat Doctoral Fellowship Program in Global Change Science, Lincoln Park Zoo Africa/Asia Conservation Fund, 2001–present
- Member, Search Committee for Assistant Professor in Physical, Chemical or Biological Limnology/Oceanography, Large Lakes Observatory, 2002–2003
- Member and Reviewer, Society for Conservation Biology Contributed Oral and Poster Presentations Committee for the 2003 Annual Meeting, 2002–2003
- Volunteer (exhibit preparation), Great Lakes Aquarium, Duluth, Minnesota, 2002
- Organizing Committee, GeoDaze Student Symposium (Program and Abstracts Volume Czar), University of Arizona, 2000–2001
- Treasurer, Sigma Gamma Epsilon/S.G.E., Inc. (departmental graduate student organization), University of Arizona, Department of Geosciences, 1999–2001

MEDIA COVERAGE

- Research Highlights section. 2007. “Carbon lost from lakes,” *Nature*, 448: 390.
- Dispatches section. 2007. “Carbon balance of the world’s large lakes,” by Kumar P. Mainali, *Frontiers in Ecology and the Environment*, 5(7): 348.

PUBLICATIONS

- Rasera, M.F.F.L., M.V.R. Ballester, A.V. Krusche, C. Salimon, L.A. Montebelo, **S.R. Alin**, R.L. Victoria, and J.E. Richey. Accepted. Estimating the surface area of small rivers in the southwestern Amazon and their role in CO₂ outgassing. *Earth Interactions*.
- Alin, S.R.**, R. Aalto, M. A. Goni, J. E. Richey, and W. E. Dietrich. 2008. Biogeochemical characterization of carbon sources in the Strickland and Fly rivers,

- Papua New Guinea. *Journal of Geophysical Research*, 113, F04S05, doi:10.1029/2006JF000625.
- Goni, M.A., N. Monacci, R. Gisewhite, J. Crockett, C. Nittrouer, A. Ogston, **S.R. Alin**, and R. Aalto. Terrigenous organic matter in sediments from the Fly River Delta (Papua New Guinea). *Journal of Geophysical Research*, 113, F01S10, doi:10.1029/2006JF000653.
- Alin, S.R.**, and T.C. Johnson. 2007. Carbon cycling in large lakes of the world: A synthesis of production, burial, and lake-atmosphere exchange estimates. *Global Biogeochemical Cycles*, 21, doi: 10.1029/2006GB002881.
- O'Reilly, C.M., **S.R. Alin**, P.-D. Plisnier, and A.S. Cohen. 2006. The potential influence of climate change on productivity of the East African Rift Valley Lakes. Pgs. 73-83 in M. Kumagai and K. Ishikawa (Eds.), *World Lakes in the Global Environment*, Kokon-Shoin, Tokyo (in Japanese).
- Cohen, A.S., M.R. Palacios-Fest, J. McGill, P. Swarzenski, D. Verschuren, R. Sinyinza, T. Songori, B. Kakagozo, M. Syampila, C. O'Reilly, and **S.R. Alin**. 2005. The Lake Tanganyika Biodiversity Project's Paleolimnological Investigations of Anthropogenic Environmental Change in Lake Tanganyika: I. An introduction to the project. *Journal of Paleolimnology* 34: 1-18.
- McKee, B.A., A.S. Cohen, D.L. Dettman, M.R. Palacios-Fest, **S.R. Alin**, and G. Ntungumburanye. 2005. The Lake Tanganyika Biodiversity Project's Paleolimnological Investigations of Anthropogenic Environmental Change in Lake Tanganyika: III. Geochronologies and mass sedimentation rates based on ^{14}C and ^{210}Pb data. *Journal of Paleolimnology* 34: 19-29.
- Palacios-Fest, M.R., **S.R. Alin**, A.S. Cohen, B. Tanner, and H. Heuser. 2005. The Lake Tanganyika Biodiversity Project's Paleolimnological Investigations of Anthropogenic Environmental Change in Lake Tanganyika: IV. Lacustrine paleoecology. *Journal of Paleolimnology* 34: 51-71.
- Cohen, A.S. M.R. Palacios-Fest, E.S. Msaky, **S.R. Alin**, B. McKee, C. O'Reilly, D.L. Dettman, H. Nkotagu, and K.E. Lezzar. 2005. The Lake Tanganyika Biodiversity Project's Paleolimnological Investigations of Anthropogenic Environmental Change in Lake Tanganyika: IX. Summary of paleorecords of environmental change and catchment deforestation at Lake Tanganyika and impacts on the Lake Tanganyika ecosystem. *Journal of Paleolimnology* 34: 125-145.
- Alin, S.R.**, and A.S. Cohen. 2004. The live, the dead, and the very dead: taphonomic calibration of the recent record of paleoecological change in Lake Tanganyika, East Africa. *Paleobiology* 30(1): 44-81.
- O'Reilly, C.M., P.-D. Plisnier, A.S. Cohen, and **S.R. Alin**. 2004. Reply to Climate change effect on Lake Tanganyika? *Nature* doi 10.1038/nature02737.
- Alin, S.R.**, and A.S. Cohen. 2003. Lake-level history of Lake Tanganyika, East Africa, for the past 2500 years based on ostracode-inferred water-depth reconstruction. *Palaeogeography, Palaeoclimatology, Palaeoecology* 199: 31-49.
- O'Reilly, C.M., **S.R. Alin**, P.-D. Plisnier, A.S. Cohen, and B.A. McKee. 2003. Climate warming decreases aquatic ecosystem productivity of Lake Tanganyika, Africa. *Nature* 424: 766-768.
- Alin, S.R.**, C.M. O'Reilly, A.S. Cohen, D.L. Dettman, M.R. Palacios-Fest, and B.A. McKee. 2002. Effects of land-use change on aquatic biodiversity: a view from the paleorecord at Lake Tanganyika, East Africa. *Geology* 30: 1143-1146.

Alin, S.R., A.S. Cohen, R. Bills, M.M. Gashagaza, E. Michel, J.J. Tiercelin, K. Martens, P. Coveliers, S. Mboko, K. West, M. Soreghan, S. Kimbadi, and G. Ntakimazi. 1999. Effects of landscape disturbance on animal communities in Lake Tanganyika, East Africa. *Conservation Biology* 13: 1017–1033.

RECENT PRESENTATIONS

- Alin, S.R.,** D.E. Schindler, and A.E. Ingalls. 2007. Estimating the importance of terrestrial inputs to lake ecosystems in Southwest Alaska using the BIT index and lignin phenols. *American Society for Limnology and Oceanography Aquatic Sciences Meeting Abstracts*.
- Alin, S.R.,** C. Salimon, J. Richey, A. Krusche, G. Holtgrieve, and V. Neu. 2006. Carbon dioxide flux and transfer velocity measurements in the Amazon (Brazil) and Mekong (Southeast Asia) river basins. *Eos Transactions, AGU*, 87(52): Abstract B31C-1135.
- Alin, S.,** C. Salimon, J. Richey, A. Krusche, N. Leite, S. Neto, M. Rasera, K. Munhoz, H. da Cunha, A. Montebelo, and B. Gomes. 2005. Carbon dioxide evasion from large tropical rivers: measurements from the Amazon and Mekong River basins. 37th International Liège Colloquium on Ocean Dynamics “*Gas Transfer at Water Surfaces*,” Liège, Belgium.
- Alin, S.R.,** S.D. Miller, A.V. Krusche, J.E. Richey, and H. Freitas. 2004. Pilot experiments on air-water exchange of carbon dioxide in the Amazon Basin. *III LBA Scientific Conference*, Brasilia, Brazil.
- Alin, S.R.,** R. Aalto, S.M. Remington, and J.E. Richey. 2003. Preliminary characterization of organic geochemistry in the Fly–Strickland river system, Papua New Guinea. *Eos Transactions, AGU*, 84(46): Abstract OS12A-0186.
- Alin, S.R.,** and T.C. Johnson. 2003. Organic carbon in large lakes of the world: estimates of production, burial, and lake-atmosphere exchange. *Geological Society of America*.
- Alin, S.R.,** and T.C. Johnson. 2003. Carbon cycle dynamics in large lakes of the world: production, evasion, and burial. *Third International Limnogeology Congress*, Tucson, Arizona.
- Alin, S.R.,** and T.C. Johnson, 2003. Carbon storage and evasion rates in large lakes. *American Society for Limnology and Oceanography Aquatic Sciences Meeting Abstracts*: p. 19.

INVITED PRESENTATIONS

- 2007 Seminar, NOAA Pacific Marine Environmental Laboratory.
- 2007 Seminar, University of Alaska Fairbanks, School of Ocean and Fishery Sciences.
- 2006 Seminar, Department of Geography, University of Oregon.
- 2003 Conference Symposium “*Limnogeology: Carbon in Lake Systems*,” Geological Society of America annual meeting.
- 2003 Conference Symposium “*Bridging the Gap: Ostracodes in the Earth Sciences*,” Geological Society of America annual meeting.
- 2003 Seminar, Large Lakes Observatory, University of Minnesota, Duluth.
- 2003 Seminar, Chemical Oceanography Program, School of Oceanography, University of Washington.

- 2003 Seminar, Department of Geology, University of Minnesota, Duluth.
- 2002 Seminar, Quaternary Paleoecology Program, University of Minnesota, Twin Cities.
- 2001 Conference Symposium “*New Uses for the Dead: Paleobiological Contributions to Conservation Biology*,” North American Paleontological Convention, Berkeley, California.

LANGUAGES & CERTIFICATIONS

French, scientific reading proficiency

Portuguese, scientific reading proficiency

Swahili, Advanced Oral Proficiency Certification (American Council on the Teaching of Foreign Languages), 1998

Oxygen First Aid Certification (Divers Alert Network), 1997

Open Water II Scuba Diver Certification (National Association of Underwater Instructors), 1991