

## Curriculum Vitae

1. Sara B. Pruss, Assistant Professor

2. Work address:

Department of Geosciences

Smith College

Northampton, MA 01063

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3. Degrees

University of Southern California, Ph.D. in Geology, 2004

Advisor: David J. Bottjer, *The Global Occurrence of Anachronistic Facies in Lower Triassic Strata: Implications for a Prolonged Recovery Following the End-Permian Mass Extinction*

University of Southern California, M.S. in Geology, 2001

Advisor: David J. Bottjer, *Analysis of Biofabric Trends in the Lower Triassic Virgin Limestone, Southern Nevada*

University of Rochester, B.S. in Biology-Geology, Minor in French, May 1999

4. Awards and Honors

Most cited paper award for 2003-2007, Paleo3

Agouron Post-doctoral Fellowship for research at Harvard University 2004-2007

College Doctoral Prize for Outstanding Research 2005

Geological Society of America Grant 2003

USC Dept of Earth Sciences Research Grant 2003

USC Dept of Earth Sciences Research Grant 2002

Honorable Mention, Outstanding TA, Fall 2002

American Museum of Natural History Grant 2001

Paleontological Society Research Grant 2001

USC Dept of Earth Sciences Research Grant 2001

Teaching Assistant Mentor Program 2001

Wrigley Institute Research Grant 2000

USC Dept. of Earth Sciences Research Grant 2000

Awarded Outstanding TA for General Education for the 1999-2000 teaching year

Awarded Outstanding TA Award for Fall 1999 and Spring 2000

Awarded merit fellowship for graduate work, University of Southern California, 1999

Awarded Keck Fellowship, University of Southern California, 1999

5. Employment History

Assistant Professor of Geology, Smith College, 2007-

Agouron Geobiology Post-doctoral Fellow, Harvard University, 2004-2007

Teaching Fellow, Harvard University

Spring 2006, Undergraduate, Core Class: How to Build a Habitable Planet  
Teaching Assistant, University of Southern California  
Fall 1999-Spring 2000, Undergraduate, general education class: Planet Earth  
Summer 2000, Undergraduate, general education class: Crisis of a Planet  
Summer 2001, Undergraduate, general education class: Oceanography  
Fall 2001, Undergraduate, geology major class: Invertebrate Paleontology  
Spring 2002, Undergraduate, general education class: Planet Earth  
Fall 2002-Spring 2003, Undergraduate, general education class: Oceanography

6. National Science Foundation Sedimentary Geology and Paleobiology Grant: Origin of Enigmatic Microbial Structures in the Aftermath of Neoproterozoic Glaciations: Experiments and Observations, September 1, 2009 through August 2011. Total Award: \$249, 829; Award to co-PI S. Pruss: \$48,843

#### 7. Publications

- Pruss, S. B.**, and Clemente, H.\*, in press, Quantifying skeleton-poor seas in the Early Paleozoic, *in* LaFlamme, M. E., Dornbos, S. Q., and Schiffbauer, J., Quantifying the Early Evolution of Life: Numerical and technological approaches to the study of fossils and ancient ecosystems
- Pruss, S. B.**, Bosak, T., Macdonald, F. A., McLane, M.\*, and Hoffman, P. 2010, Microbial facies in a Sturtian cap carbonate, the Rasthof Formation, northern Namibia, *Precambrian Research*, v. 181, p. 187-198.
- Pruss, S. B.**, Finnegan, S., Fischer, W. W., and Knoll, A. H., 2010. Carbonates in skeleton-poor seas: New insights from Cambrian and Ordovician strata of Laurentia, *Palaios*, v. 25, 73-84.
- Pruss, S. B.**, and Payne, J. L., 2009, Early Triassic microbial oncoids in the Virgin Limestone Member of the Moenkopi Formation, Nevada, USA, *Palaios*, v. 24, p. 131-136.
- Sumrall, C. D., Sprinkle, J. , Pruss, S. B., Finnegan, S., 2009, *Cardiocystella*, a new cornute stylophoran from the Upper Cambrian Whipple Cave Formation, eastern Nevada, USA, v. 83, n. 2, p. 307-312.
- Hurtgen, M. T., Pruss, S. B., and Knoll, A. H., 2009, Evaluating the relationship between the carbon and sulfur cycles in later Cambrian ocean: An example from the Port au Port Group, western Newfoundland, Canada, *Earth and Planetary Science Letters*, v. 281, p 288-297.
- Pruss, S. B.**, Corsetti, F. A., and Fischer, W. W., 2008, Seafloor-precipitated carbonate fans in the Neoproterozoic Rainstorm Member, Johnnie Formation, Death Valley Region, USA, *Sedimentary Geology*, v. 207, p. 43-40.
- Clapham, M. E., Bottjer, D. J., Jamet, C. M., Bonuso, N., Fraiser, M. L., Marengo, P. J., Dornbos, S. Q., and **Pruss, S. B.**, 2007, The Phanerozoic trends in ecological dominance, *Palaios*, v. 21, p. 431-441.
- Baud, A., Richoz, S. and **Pruss, S. B.**, 2007, The Lower Triassic anachronistic carbonate facies in space and time, *Global and Planetary Change*, v. 55, p. 81-89.
- Pruss, S. B.**, Payne, J. L. and Bottjer, D. J., 2007, *Placunopsis* bioherms: The first metazoan buildups following the end-Permian mass extinction, *Palaios*, v. 22, p. 17-23.

- Knoll, A. H., Bambach, R. K., Payne, J. L., **Pruss, S. B.**, and Fischer, W. W., 2007, Paleophysiology and end-Permian mass extinction, *Earth and Planetary Science Letters*, v. 256, p. 295-313.
- Pruss, S. B.**, Bottjer, D. J., Corsetti, F. A., and Baud, A., 2006, A global marine sedimentary response to the end-Permian mass extinction: Examples from southern Turkey and the western United States, *Earth Science Reviews*, v. 78, p.193-206.
- Pruss, S. B.**, Corsetti, F. A., and D. J. Bottjer, 2005, The unusual sedimentary rock record of the Early Triassic: A case study from the Southwestern United States, *Palaeogeography, Palaeoclimatology, Palaeoecology*, v. 222, p. 33-52.
- Pruss, S. B.**, and D. J. Bottjer, 2005, The reorganization of reef communities following the end-Permian mass extinction, *in* Bottjer, D. J., and J. C. Gall (eds.), *The biotic recovery from the end-Permian mass extinction*, *Comptes Rendus Palevol*, v. 6, p. 485-500.
- Pruss, S. B.**, Corsetti, F. A., and D. J. Bottjer, 2005, Environmental trends of Early Triassic biofabrics: Implications for understanding the aftermath of the end-Permian mass extinction, *in*: Morrow, J. D., Over, D. J., and P. B. Wignall (eds.), *Understanding Late Devonian and Permian-Triassic Biotic and Climatic Events: Towards and Integrated Approach*, p. 313-332.
- Pruss, S. B.**, Fraiser, M. L., and D. J. Bottjer, 2004, The proliferation of Early Triassic wrinkle structures: Implications for environmental stress following the end-Permian mass extinction, *Geology*, v. 32, 461-464.
- Pruss, S. B.**, and D. J. Bottjer, 2004, Late Early Triassic microbial reefs of the Western United States: A description and model for their deposition in the aftermath of the end-Permian mass extinction, *Palaeogeography, Palaeoclimatology, Palaeoecology*, v. 211, p. 127-137.
- Pruss, S. B.**, and D. J. Bottjer, 2004, Early Triassic trace fossils of the western United States and their implications for prolonged environmental stress from the end-Permian mass extinction, *Palaaios*, v.19, p. 559-571.
- Corsetti, F. A., Lorentz, N. J., and **S. B. Pruss**, 2004, Formerly-aragonite seafloor fans from Neoproterozoic strata, Death Valley and southeastern Idaho, United States: Implications for "Cap Carbonate" Formation and Snowball Earth, *in* Jenkins, G. (ed.), *Multidisciplinary Studies Exploring Extreme Proterozoic Environment Conditions*, AGU Special Publication, p. 33-44.
- Pruss, S. B.**, and F. A. Corsetti, 2002, Unusual aragonite precipitates in the Neoproterozoic Rainstorm Member of the Johnnie Formation, p. 51-59, *in*: Corsetti (ed.), *Proterozoic-Cambrian of the Great Basin and Beyond*, SEPM Field Trip Guidebook, 186 pp.

**\*denotes student author**

8. Publications in prep: not listed

9. Lectures and Professional Presentations

- Pruss, S. B. and D. J. Bottjer. 2000. Early Triassic onshore-offshore biofabric trends: Implications for the end-Permian mass extinction, *Geological Society of America, Abstracts with Programs, GSA*, v. 32, n. 7, p. 369.

- Pruss, S. B. and D. J. Bottjer. 2001. Development of microbial fabrics in Early Triassic oceans, *Paleobios*, v. 21, p. 8.
- Pruss, S. B. and D. J. Bottjer. 2001. Geobiology of mass extinction recovery interval anachronistic facies: Microbial reefs in the Early Triassic, *Geological Society of America Abstracts with Programs*, GSA, v. 33, p. 142.
- Pruss, S. B. and D. J. Bottjer. 2002. Anachronistic facies in the Early Triassic: Implications for a prolonged recovery from the end-Permian extinction event, *Paleobios*, v. 22.
- Pruss, S. B. and D. J. Bottjer, 2002, Microbial reefs in the Early Triassic: *Geological Society of America Abstracts with Programs*, GSA, v. 34, n. 6, p. 66.
- Pruss, S. B., Bottjer, D. J., and F. A. Corsetti, 2003, The prolonged recovery from the end-Permian mass extinction: Anachronistic facies and anomalous environmental conditions, *Geological Society of American Abstracts with Programs*, GSA, v. 35, n. 6, p. 386.
- Corsetti, F.A., Pruss, S. B., Marenco, P., Kaufman, A. J., and D. J. Bottjer, 2003, Calcium carbonate seafloor fans from Neoproterozoic and Lower Triassic strata, Death Valley region: A snowball's chance? *Geological Society of America Abstracts with Programs*, GSA, v. 35, n. 6, p. 471
- Jamet, C.M., D.J. Bottjer, N. Bonuso, M.E. Clapham, S.Q. Dornbos, M.L. Fraiser, P.J. Marenco, and S. B. Pruss, 2003, Assessing ecological dominance from the fossil record, *Geological Society of America Abstracts with Programs*, GSA, v. 35, n. 6, p. 589.
- Clapham, M. E., Bottjer, D. J., Pruss, S. B., Marenco, P. J., Jamet, C. M., Fraiser, M. L., Dornbos, S. Q., and N. Bonuso, 2003, Phanerozoic trends in ecological dominance, *Geological Society of America Abstracts with Programs*, GSA, v. 35, n. 6, p. 589.
- Pruss, S. B., and D. J. Bottjer, 2004, The proliferation of Early Triassic disaster microbialites and their relationship to long-term environmental stress following the end-Permian mass extinction, *Geological Society of American Abstracts with Programs*, GSA, v. 36, n. 5, p. 182.
- Pruss, S. B., Bottjer, D. J., Corsetti, F. A., and A. Baud, 2005, Unusual facies and substrate transitions following the end-Permian mass extinction: A new perspective on Early Triassic seafloors, *North American Paleontological Conference*, Halifax, Nova Scotia.
- Baud, A., Richoz, S. and Pruss, S. B., 2005. The Lower Triassic anachronistic carbonate facies in space and time, *Albertiana, Programs and Abstracts*, v. 33, pp. 17-19.
- Pruss, S. B., Payne, J. L., and Bottjer, D. J., 2005, The first metazoan build-ups following the end-Permian mass extinction, *Geological Society of America Abstracts with Programs*, GSA.
- Pruss, S. B., and Knoll, A. H., 2006. Carbonates in skeleton-poor seas: New insights from the Middle and Upper Cambrian March Point and Petit Jardin formations, western Newfoundland. *Geological Society of America Abstracts with Programs*, GSA, v. 38, no. 7, p. 304.
- Hurtgen, M., Pruss, S. B., and Knoll, A. H., 2006, Sulfur and carbon isotope systematics in Middle-Upper Cambrian Port au Port Group from western Newfoundland, Canada: Implications for seawater sulfate concentrations, *American Geophysical*

- Union (AGU) Fall Meeting.
- Pruss, S. B., Knoll, A. H., Finnegan, S., and Mushegian, A., 2007, The role of skeletons in the Early Paleozoic carbonate factory: Evidence from western Newfoundland and western Utah, Geological Society of America Abstracts with Programs, GSA, v. 39, n. 6, p. 333.
- Pruss, S. B., and Baud, A., Lower Triassic anomalous carbonate facies, latitudinal effects, and carbon cycle instability, Triassic Climate Workshop, Bolzano, Italy, June 3-7<sup>th</sup>, 2008.
- Pruss, S. B., \*McLane, M., and Hoffman, P.F., 2008, Microbial structures in an Early Cryogenian cap carbonate, Northern Namibia, Geological Society of America Annual Meeting, Houston
- Pruss, S. B., 2008, Taphonomy and ages of bivalve shells from San Salvador Island, Bahamas, Geological Society of America Annual Meeting, Houston
- \*Stevenson, M., and Pruss, S. B., 2008, One of these beaches is not like the other: Drilling frequencies in modern mollusk shells, San Salvador Island, Bahamas, Geological Society of America Annual Meeting, Houston
- Pruss, S. B., Hurtgen, M. T., and Knoll, A. H., Geochemical insights into paleobiological patterns of the Middle-Upper Cambrian Port au Port Group, western Newfoundland, Fall Meeting of the American Geophysical Union, San Francisco
- Pruss, S. B., Hurtgen, M. T., and \*Breus, A., 2009, An International Conference on the Cambrian Explosion, Banff, Alberta, August 3–8, 2009
- Pruss, S. B., \*Duffey, S., and \*Stevenson, M., 2009, Predation rates in a modern carbonate setting, San Salvador Island, Bahamas, Geological Society of America Annual Meeting Abstracts with Programs, v. 41, No. 7, p. 706.
- Curran, H. A., Glumac, B., Pruss, S. B., \*Motti, S. A., and \*Weigner, M. M., 2009, Diverse sedimentary structures of a Holocene carbonate eolianite complex on Cat Island, Bahamas, Geological Society of America Abstracts with Programs, v. No. 7, p. 117.
- Glumac, B., Curran, H. A., \*Weigner, M. M., \*Motti, S. A., and Pruss, S. B., 2009, Formation and distribution of ooids along a beach-to-offshore transect at Pigeon Cay, Cat Island, Bahamas, Geological Society of America Abstracts with Programs, Vol. 41, No. 7, p. 116
- \*Motti, S. A., and Pruss, S. B., 2010, High predation rates on a carbonate tidal flat, Cat Island, Bahamas, NE/SE Geological Society of America meeting.
- Pruss, S. B., Bosak, T., Macdonald, F. A., and Hoffman, P. F., 2010, The origin of roll-up structures and syndepositional folds in a Strutian cap carbonate, the Rasthof Formation, northern Namibia, Geological Society of America Abstracts with Programs, v. 42, n.5, p. 195.
- \*Dalton, L., Pruss, S. B., Bosak, T., Lahr, D. J. G., and Macdonald, F. A., 2010, Microfossils in the post-Sturtian cap carbonates of the Rasthof Formation, northern Namibia, Geological Society of America Abstracts with Programs, v. 42, n. 5, p. 259.
- Bosak, T., Lahr, D. J. G., Pruss, S. B., Macdonald, F. A., Agramakova, Y., 2010, Surviving the Sturtian Snowball, Geological Society of America Abstracts with Programs, v. 42, n. 5, p. 259.

- Matys, E. D., Pruss, S. B., \*Dalton, L., Lahr, D., MacDonald, F. A., and Bosak, T., 2010, Tubular microfossils from the Sturtian cap carbonates of the Rasthof Formation, American Geophysical Union Fall Meeting
- Bosak, T., Macdonald, F. A., Pruss, S. B., and Lahr, D., 2010, Evolution of modern eukaryotes in the context of Cryogenian geochemical, tectonic and climatic changes, American Geophysical Union Fall Meeting
- Summons, R. E., Bird, L. R., Gillespie, A. L., Pruss, S. B., and Sessions, A. L. 2010, Lipid biomarkers in ooids from different locations and ages provide evidence for a common bacterial flora, American Geophysical Union Fall Meeting
- Pruss, S. B., Bosak, T., Lahr, D., and Macdonald, F. A., 2010, Fossil evidence for life in post-Sturtian cap carbonates of the Rasthof Formation, northern Namibia, American Geophysical Union Fall Meeting
- \*Dalton, L., Pruss, S. B., Bosak, T., Lahr, D. J. G., and Macdonald, F. A., 2011, A microfossil assemblage from post-Sturtian cap carbonates of the Rasthof Formation, northern Namibia, Northeast Geological Society of America Meeting Abstracts with Programs, v. 43, n. 1, p. 68.
- \*Castagno, K. A., Pruss, S. B., and Hurtgen, M. T., 2011, Geochemical analysis of the Cambro-Ordovician Cow Head Group, western Newfoundland, v. 43, n. 1, p. 90.

**\*denotes Smith College student author**

9. Invited Presentations

- Pruss, S. B., and D. J. Bottjer, 2004, Early Triassic microbial reefs: Case studies from the western United States and Southern Turkey, AAPG Annual Meeting, Dallas, April 18<sup>th</sup>-21<sup>st</sup>.
- Pruss, S. B., and D. J. Bottjer, 2004, The proliferation of Early Triassic disaster microbialites and their relationship to long-term environmental stress following the end-Permian mass extinction, Pardee Symposium: Adversity, Advantages, Opportunities: Phanerozoic Stromatolites as "Survivor" vs. "Disaster" Taxa, Geological Society of America Annual Meeting, Denver, November 7<sup>th</sup>-10<sup>th</sup>.
- Pruss, S. B., 2005, Sedimentologic evidence for long-term environmental instability following the end-Permian mass extinction: Implications for a delayed biotic recovery, Division of Geologic and Planetary Science Seminar Series, Caltech.
- Pruss, S. B., 2005, Anomalous facies after the end-Permian mass extinction: Do sediments reflect ecology? Department of Geological and Environmental Sciences, Stanford University.
- Pruss, S. B., 2005, Microbialites in space and time: Testing for biogenicity, Biosignatures Class Seminar, Department of Geological and Environmental Sciences, Stanford University.
- Pruss, S. B., 2006, The enigmatic disappearance of metazoan reefs for 40 million years during the Cambrian Period, Integrative Geosciences Department, University of Connecticut.
- Pruss, S. B., 2006, Phanerozoic marine diversity, Guest Lecture, Harvard University.
- Pruss, S. B., 2006, Unusual facies after the end-Permian mass extinction: Do sediments reflect ecology?, Department Seminar, Department of Geological Sciences, Michigan State University.

- Pruss, S. B., 2006, The Cambrian carbonate factory: A Precambrian relic? Brown Bag Seminar, Department of Geological Sciences, Michigan State University.
- Pruss, S. B., 2006, Carbonates in skeleton-poor seas of the Phanerozoic, EAPS Special Seminar, Department of Earth, Atmospheric and Planetary Sciences, MIT.
- Pruss, S. B., 2007, End-Permian extinction and lessons for the future, Department of Geology Seminar, Smith College.
- Pruss, S. B., 2007, An introduction to reefs, Department of Geological Sciences Special Seminar, University of Canterbury, NZ.
- Pruss, S. B., 2007, Why were there skeleton-poor seas in the Phanerozoic?, Departmental Seminar, Department of Geological Sciences, University of Canterbury, NZ.
- Pruss, S. B., 2007, Carbonates in skeleton-poor seas of the Phanerozoic, Departmental Seminar, Department of Geosciences, Georgia State University.
- Pruss, S. B., 2007, The rise of calcareous skeletons and implications for the carbonate cycle, *A world in transition: Geobiology of the Proterozoic-Cambrian Symposium*, Yale University, New Haven, CT.
- Pruss, S. B., 2008, Carbonates in skeleton-poor seas: New insights from Cambro-Ordovician carbonates of western Newfoundland, Syracuse University, Syracuse, NY.
- Pruss, S.B., 2009, The rise of skeletons in the Early Paleozoic: Paleobiological and geochemical insights from Cambro-Ordovician strata, western Newfoundland, Massachusetts Institute of Technology.
- Pruss, S. B., 2009, Investigating life in ancient oceans, Women in Science Project, Kutztown University, Kutztown, PA
- Pruss, S. B., 2010, Life after the Sturtian Snowball Earth, Kavli Frontiers of Science Conference, Irvine, CA
- Pruss, S. B., 2010, Life on a Frozen Earth, New evidence for survival and evolution after Sturtian (~716 Ma) global glaciation, Colby College, Waterville, ME
- Pruss, S. B., 2011, Life in older Cryogenian (Sturtian) cap carbonates of the Rasthof Formation, northern Namibia, Paleoenvironment Seminar, University of Southern California, Los Angeles, CA

#### 10. Professional activities:

- Peer-reviewer for the following journals: Science, Palaios, Geology, Palaeogeography, Palaeoclimatology, Palaeoecology, Sedimentary Geology, Global and Planetary Change, and Science. Reviewer of NSF, NASA Exobiology, and Petroleum Research Fund proposals.
- Associate editor of Paleontographic Electronica
- Invited participant of the National Geographic Special: Clash of the Continents: End of Man; Interview was filmed in western Australia December 2009; documentary aired on the NatGeo channel in July and August 2010.

#### 11. Professional Memberships

- Geological Society of America (GSA)
- International Association of Sedimentologists (IAS)
- Paleontological Society (PS)
- Society of Economic Paleontologists and Mineralogists (SEPM)

America Women Geoscientists (AWG)  
Sigma Xi

12. College or Departmental Committees, Smith College

Five College Marine Sciences steering committee (Fall 2008-present)

Co-Chair and member of Science Center Committee on Diversity (Fall 2009-present)

Committee of Educational Technology (Fall 2009-present)

Organizer of the Presentation of the Major for Geosciences (Fall 2009-present)