

2008 MEDALS & AWARDS

SUBARU OUTSTANDING WOMAN IN SCIENCE AWARD

Presented to **Lorraine E. Lisiecki**



Lorraine E. Lisiecki
University of California, Santa Barbara

Citation by Maureen E. Raymo

It is my pleasure to present the citation for the 2008 Subaru Outstanding Woman in Science Award to my colleague, Professor Lorraine Lisiecki of UC-Santa Barbara. Quite simply, Lorraine produced a groundbreaking doctoral thesis that had, and continues to have, a wide-ranging impact on the climate sciences. An outstanding scientist with a unique

combination of geological and mathematical skills, Lorraine first developed the tools, a set of software packages, that allowed her (and now the scientific community) to analyze and understand the meaning and limitations of paleoclimate data. Using these tools, she was then able to make significant scientific contributions to the understanding of Plio-Pleistocene climate evolution through the construction of the "LR04 stack," a record of the behavior of global ice volume and temperature over the last 5.3 million years. The LR04 stack and timescale have, in an astoundingly short time, become the "gold standard" for global isotope stratigraphy, not just within the paleoceanographic community, but the international ice core community and terrestrial paleoclimate community as well. This data set is now also the standard representation of the climate history of the last five million years as reproduced in many media, education, and science resource outlets.

With her phenomenal database, Lorraine has been able to examine competing hypotheses proposed to explain the influence of orbital variations on climate and, with a companion set of carbon isotope records, has been able to map the geographic-time evolution of nutrient gradients in the deep ocean over the Pleistocene, again allowing us to test hypotheses about how deep ocean circulation responds to climate change. In summary, Lorraine's unique combination of scientific skills, combined with her drive and single-minded dedication to her long-term scientific goals, has resulted in one of the best, most interesting, and most influential doctoral theses I have ever seen.

Response by Lorraine E. Lisiecki

I am deeply honored to receive the Subaru Outstanding Woman in Science Award in memory of Doris Curtis. I sincerely thank the GSA, Subaru, my friends and family, and especially my mentors and advisors, Timothy Herbert at Brown University and Maureen Raymo at Boston University.

On my first day of graduate school at Brown, I announced that I wanted to switch from planetary science to paleoclimate. The department could not have been more supportive. With the help of my advisor Tim Herbert and, ironically, a conversation with my husband Philip Lisiecki over Valentine's dinner, I soon found my niche. Tim showed great faith in me by allowing me to pursue my own research direction, provided shrewd guidance, and even decided to forego co-authorship on some of my papers to ensure that I received appropriate recognition for my work.

I am also extremely fortunate to have had the opportunity to work with Maureen Raymo, a truly great scientist and an invaluable mentor. When I sent her drafts of my work, her responses were always incredibly insightful and remarkably prompt. She has offered great advice, shared with me some of the unwritten rules of science, and helped me get invitations to speak around the world.

My success would not have been possible without great mentors like Tim and Mo and opportunities to discover and research scientific questions about which I am truly passionate. I am proud to be recognized by an organization dedicated to providing these opportunities to all. Thank you again.

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