Understanding Global Change: Increasing public engagement in science through a new web resource at the University of California Museum of Paleontology.

Lisa D. White
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For more than 125 years, fossil vertebrates, invertebrates, microfossils, and plants from more than 10,000 localities worldwide have been housed at the University of California Museum of Paleontology (UCMP), a museum uniquely situated on the campus of UC Berkeley. The extensive fossil holdings (approximately 5 million specimens) and significant online resources are linked to UCMP educational websites, databases, specimen photographs, and digital archival materials and support the needs of both the research and teaching communities. Recent projects initiated by the UCMP support greater archiving and digitization of fossils and field materials and are providing new avenues and opportunities for public engagement.

The UCMP was an early proponent of the web and began to create online exhibits on paleontology and important events in the fossil record when the UCMP website was unveiled in 1992. More than 20 years of delivering paleontological information online produced two award-winning UCMP websites, *Understanding Evolution* (www.understandingevolution.org) and *Understanding Science* (www.understandingscience.org) that provide novel ways to engage the K-16 education community in scientifically valid, real-life portrayals of how evolution and science works. Together these websites receive 20 million pages views annually.

The success of these websites confirms that the education community values a “one-stop shop” for science resources and the next planned UCMP web resource, *Understanding Global Change*, will meet the need for resources on the complex topic of global change. Users will be able to explore changes in climate, multiple interactions and feedbacks between the climate systems, biodiversity, ocean composition, and sea level, while drawing relevance to societal impacts and how human activities have become a "force of nature." The site will build on direct feedback from educators, align with elements of Next Generation Science Standards, and provide new avenues and opportunities for public engagement on the biotic impacts of global change - from deep time to the Anthropocene. Through this resource, we hope to foster good communication about the nature of global change and demonstrate the connections between drivers and impacts of change.

UCMP Understanding Global Change

Biography

Lisa D. White is Director of Education and Outreach at the University of California Museum of Paleontology and Adjunct Professor of Geology at San Francisco State University. Past positions held at SF State include Professor of Geology, Chair of Geosciences, and Associate Dean of the College of Science and Engineering. Lisa has extensive experience with science outreach programs for urban youth and she is active in efforts to increase diversity in the geosciences. A micropaleontologist by training specializing in fossil diatoms and the stratigraphy of the Monterey Formation and related siliceous units around the Pacific Rim, she is a Fellow of the California Academy of Sciences and the Geological Society of America. Lisa was the inaugural recipient of the GSA Bromery Award for Minorities in 2008, an honor bestowed upon a geoscientist who has been instrumental in opening the geoscience field to other minorities. As the Principal Investigator of the SF-ROCKS (Reaching Out to Communities and Kids with Science in San Francisco) and SF-METALS (Minority Education through Teaching and Learning in the Sciences) programs, Lisa trains and guides diverse groups of students in wide-ranging geoscience learning experiences. She recently served on a National Academy of Sciences working group on Trends and Opportunities in Federal Earth Science Education and Workforce Development. As the education director at the UCMP, Lisa develops and disseminates learning materials on evolution and the Earth’s biota, global climate change, and the nature and process of science. Lisa earned degrees from San Francisco State University (B.A. in Geology) and the University of California at Santa Cruz (Ph.D. in Earth Sciences).