

Global Aquatic Research Bios

Stella C Woodard

Dr. Woodard earned a B.A. in English and Writing from SUNY Oswego in 2001, where she received the Academy of American Poet's prize. She then worked for several years with local youth as an after-school program coordinator and 4-H Community Educator in Wayne County. After pursuing additional science coursework at SUNY Brockport, she went on to earn her Ph.D. in Geological Oceanography from Texas A&M University in 2011. In addition to being awarded a Merit Fellowship at Texas A&M, she was the recipient of a national Schlanger Ocean Drilling Fellowship in 2009. Dr. Woodard has logged over 150 days at sea by working on several oceanographic research cruises, including as a sedimentologist for the International Ocean Discovery Program (IODP). She has travelled in the Northwestern and Equatorial Pacific Ocean as well as to Baffin Bay in the Arctic Circle off western Greenland. Her methods primarily use geochemical and physical properties measurements of sediments, biota and water to reconstruct environmental conditions from deep geologic time to near present day. As a postdoctoral researcher at the Institute of Marine and Coastal Sciences at Rutgers University, her work investigating the role deep ocean currents and temperatures play in affecting global climate and sea-level during the Pliocene (the most recent geologic period when atmospheric CO₂ levels were similar to modern) was featured in *Science Magazine*.

As part of Global Aquatic Research, Stella has focused primarily on questions related to climate, water quality and erosion. She has designed shoreline protection structures along Lake Ontario, and is collaborating with SUNY Brockport to develop a HAB research/monitoring laboratory. Presently she is completing work for the Department of Energy at the Smithsonian Environmental Research Center, designing and building a large scale irrigation system that will flood two half-acre forest plots to simulate storm surge events related to hurricanes and exacerbated by sea level rise.

Richard W Smith

Dr. Smith earned a B.S. degree with a dual major in Chemistry and Environmental Science from SUNY Brockport in 2007. He was awarded a Ph.D in Chemical Oceanography from Texas A&M University in 2011, and his dissertation research on the natural carbon storage capacity of fjords in New Zealand has been featured in *National Geographic* and *Wired* magazine. Dr. Smith has 3 years of postdoctoral research experience at the University of Connecticut's Department of Marine Sciences. There his research using stable isotopic tracer molecules to determine the fate of explosive compounds (TNT and RDX) leaked from bomb disposal sites in the marine environment received a Project of the Year Award in Environmental Restoration from the Department of Defense. Dr. Smith has published over 30 peer-reviewed articles and has participated in oceanographic research expeditions to the Arctic Ocean, Gulf of Mexico, and coastal New Zealand. After starting Global Aquatic Research in 2014, he has spent the last several years researching the effect of hurricanes on earth's carbon cycle, manufacturing and installing custom lab equipment in government and academic labs, developing an aquatic geochemistry research lab in collaboration with SUNY Brockport, mentoring students, and building infrastructure at the Smithsonian Environmental Research Center to study large storms and sea-level rise.