

RICHARD M. SULLIVAN

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PROFILE

Coastal researcher specializing in submerged landscapes, geophysics, GIS, and geologic processes
Performed marine geoarchaeological and geological fieldwork at both the professional and academic levels
Conducted laboratory research into the physical modeling of scour created under bidirectional flow conditions
Former NOAA hydrographer with extensive familiarity with seabed mapping methods and technologies
Experienced with marine and terrestrial geophysics including multi-beam, single beam, side scan sonar systems, sub-bottom profilers, magnetometry, and GPR
Proven ability to troubleshoot mechanical, electrical, computer, and logistical problems under field conditions
Certified Scuba diver with small vessel operation experience

EDUCATION

University of Southampton , Southampton, United Kingdom	2009
Master of Science, Maritime Archaeology <i>Awarded with Distinction</i>	
University of Massachusetts Boston , Boston, MA United States	2007
Certificate in Geographic Information Technology	
Boston University , Boston, MA United States	2003
Bachelor of Arts, Archaeology	

CONFERENCE PAPERS & PRESENTATIONS

"Changes in Hurricane Activity in Northeastern Gulf of Mexico during last 8500 yrs. – A Hurricane Record from Choctawhatchee Bay, Destin FL.", American Geophysical Union Conference, San Francisco, CA December 3 -7, 2012 (Contributor).

"Changes in Mid-late Holocene Hurricane Activity Influence Coastal Dynamics in Northeastern Gulf of Mexico – A case study in the Choctawhatchee Bay, Destin FL.", American Geophysical Union Conference, San Francisco, CA, December 5 - 9, 2011 (Contributor).

"Landscape and Materiality and Maritime Archaeology", Theoretical Archaeology Group Conference, Brown University, Providence RI, April 30 – May 2, 2010 (Presenter)

RECENT EXPERIENCE

Woods Hole Oceanographic institution, Woods Hole, MA United States *2010 to Present*
Research Assistant II

Acquired and processed sub-bottom and bathymetric data for ongoing climate research
Planned and supervised numerous projects and personnel with both terrestrial and marine components
Performed lab work including prepping and running samples for Gamma Spectroscopy, X-Ray Fluorescence, Particle Size Analysis, and C-14 dating
Participated in and led coring expeditions both onshore and off across North America
Modeled barrier inundation using available LiDAR datasets in ArcGIS
Developed 3D models of subsurface features identified from geophysical data
Maintained a geospatial archive for data analysis and interpretation
Managed Summer Students and interns both in the lab and the field

PRINCIPLE PROJECTS:

Shoreline Evolution and Coastal Resiliency at Three Military Installations: Investigating the Potential for and Impacts of Loss of Protecting Barriers

Collected and interpreted bathymetric data and sub-bottom imagery
Selected coring targets and collected sediment cores based on data interpretation
Deployed aeolian sediment traps across the Santa Rosa barrier island to quantify sediment flux
Organized expeditions and led teams of researchers and students on multiple field campaigns

Integrated Studies of Early Stages of Continental Extension: From Incipient (Okavango) to Young (Malawi) Rifts

Party chief for one of two teams consisting of WHOI researchers, students, and local geologists in the deployment of Magnetotelluric instruments across portions of Botswana, Zambia, and Malawi during the 2011 and 2012 survey season
Liaised with representatives of local governments and tribal chiefs
Processed MT data in the field to judge the integrity and usefulness of the data

Tracking Sea-level Source Contributions: A Hemispheric Approach to High Resolution Sea-level Variation Over the Last Two Millennia

Assisted in a collaborative project between WHOI, Argentinian researchers, and UNCW
Deployed tide gauges and prospected for salt marshes along the Argentinian coast line
Identified paleo-coastal landforms and collected samples for OSL dating

Hurricane Sandy Rapid Response

Led a team of students and researchers into CT, NY, and NJ to collect sediment cores in the aftermath of Hurricane Sandy
Generated SLOSH models of Hurricane Sandy using Best Track datasets

Tropical Storm Debby Rapid Response

Led a team of students and researchers on a return trip to Apalachee Florida to survey the impact of tropical storm Debbie on a region of high vulnerability to inundation

Using Sedimentary Deposits from Oxbow Lakes for Reconstructing Floods and Anthropogenic Impacts on the Mississippi Delta

Managed a team of students in the bathymetric survey of two Ox Bow lakes in Louisiana
Collected sediment cores and generated bathymetric models from the acquired data

North East Lake Survey: Early Holocene Aridity

Conducted GPR and Chirp surveys of numerous ponds and lakes between New York and Ohio as part of a project exploring the aridity of the early Holocene

Decadal Scale Patterns in Hurricane Activity Over the Last Several Millennia: Exploring Geographic Patterns and Climatic Forcing

Collected sediment cores at locations between Cape Cod and Puerto Rico as for the creation of a large scale hurricane record
Supervised students and researchers in the field
Conducted sub-bottom surveys to characterize the sub-surface topology and identify suitable coring locations
Generated 3D flooding models to highlight the vulnerability of key project locations

Affects of Warming on Arctic Barrier Beaches

Collected sediment cores in isolated bays and ponds on the island of Unalaska in the Aleutians for the development of regional climate records
Acquired sub-bottom imagery for use in target identification and bathymetric modeling

PRIOR EXPERIENCE

Massachusetts Board of Underwater Archaeological Resources, Boston, MA United States

Research Fellow

September to October 2010

Drafted policies pertaining to the survey, protection, and excavation of submerged cultural resources in Massachusetts State Waters
Assisted in the spatial definition of "exclusion zones" surrounding protected wreck sites and those sites awaiting assessment by the MBUAR
Maintained and updated an extensive archive of Shipwreck sites throughout the Northeast United States

Institute for Exploration, Nautilus Expedition 2010 Aegean/Mediterranean

Marine Archaeology Technician

July 2010

Analyzed and interpreted side scan sonar and video feeds in real time during a deep water sea floor imaging project off the coast of Turkey
Reviewed photographs collected over shipwrecks ranging from the Roman to the Byzantine periods
Worked with colleagues to identify artifacts observed insitu
Assisted in the launch and recovery of ROVs and Sonar Towfish

NOAA's Atlantic Hydrographic Branch, Norfolk, VA United States

Hydrographic Contractor

2007 to 2008

Processed and collected hydrographic survey data for NOAA's Office of Coast Survey
Identified and analyzed contacts in side scan, multi-beam, and LIDAR coverages
Surveyed US coastal waters aboard NOAA's S/V *Thomas Jefferson*
Recognized and troubleshoot systematic and random errors in bathymetric and side scan data
Worked to develop the Pre-Compilation processing stage of nautical chart production
Customized and maintained data repositories to ensure that NOAA products adhered to international specifications

Boston Public Schools, Boston, MA United States

Substitute Teacher

2002 to 2005

Instructed classes ranging from kindergarten to high school in a variety of topics
Presented class material in a patient and effective manner
Assisted students with assignments when appropriate
Reported students' progress to appropriate parties

Volunteer Work and Outreach

Volunteer Presenter, Boston Museum of Science: High Impact Weather Event

June 2012

Represented the Woods Hole Oceanographic Institution at the museum's annual Climate event and engaged with the general public answering questions about how past hurricanes are identified in the geologic record.

Volunteer Clean-up, Falmouth Area Beaches

Spring 2012

Organized a cleanup of local beaches in the Falmouth Massachusetts area as a joint venture between personnel at the Woods Hole Oceanographic Institution's Coastal Research Lab and the Sea Grant organization. The goal is to remove trash from local beaches prior to the start of the summer season as well as monitor beach use and condition.

Lecturer/Guide, Woods Hole Oceanographic Institution

Ongoing

Meet with visiting students from Pre-school to College age, as needed, to discuss and demonstrate the type of research conducted at the Woods Hole Oceanographic Institution and get kids excited the oceans and discovery.

Volunteer Presenter, Boston Museum of Science: Archaeology Fair

October 2010

Engaged with the general public to illustrate the importance of exploring and preserving our cultural heritage through archaeology, as well as demonstrating some of the methods employed by underwater archaeologists in the field.

Volunteer Demonstrator, The New Forest, Hampshire England

May 2009

Participated in an open air demonstration of medieval shipwrightery at the sight of a historic shipyard in the UK's New Forest National Park. Open to the public, the event was intended to demonstrate a fraction of the skill and labor that went into advancing England's status as a maritime nation.

Beach Clean-up, NOAA Restoration Day York River State Park

June 2008

Assisted NOAA personnel and volunteers in an annual clean-up along Virginia's York River. Activities included rebuilding boardwalks and park features in addition to planting beach grass and other vegetation.