

BRENDAN PATRICK FOLEY

ADDRESS

Woods Hole Oceanographic Institution
Deep Submergence Laboratory
Blake Bldg - Mail Stop #7
266 Woods Hole Rd.
Woods Hole, MA 02543 USA
tel: +1.508.289.3766, email: bfoley@whoi.edu

EDUCATION

- **Massachusetts Institute of Technology** Doctor of Philosophy, 2003: History and Archaeology of Technology
- **University of Southampton** Master of Science, 1996: Maritime Archaeology
- **Tufts University** Master of Arts, 1995: History. Fields of study: Social and Economic History of Maritime America, 1580-1860
- **University of New Hampshire** Bachelor of Arts, 1991: History

PROFESSIONAL EXPERIENCE

- 2011-present **Woods Hole Oceanographic Institution**: Research Specialist, Deep Submergence Laboratory, Department of Applied Ocean Physics and Engineering
- 2011-present **American School of Classical Studies at Athens**, member, Managing Committee
- 2005-present **Massachusetts Institute of Technology**: Visiting Scholar, Program in Science, Technology, and Society
- 2002-2012 **Commonwealth of Massachusetts Board of Underwater Archaeological Resources**: Maritime Archaeologist
- 2006-2011 **Woods Hole Oceanographic Institution**: Research Associate III, Deep Submergence Laboratory, Department of Applied Ocean Physics and Engineering
- 2007-2009 **Massachusetts Institute of Technology**: Lecturer in Ethics of Scientific Practice, STS.011 “American Science: Ethical Conflicts and Political Choices”
- 2004-2005 **Massachusetts Institute of Technology**: Lecturer in the History of Technology, STS.001 “Technology in American History”
- 2004-2005 **Woods Hole Oceanographic Institution**: Postdoctoral Investigator, Department of Applied Ocean Physics and Engineering
- 2003-2004 **Woods Hole Oceanographic Institution**: Postdoctoral Fellow, Marine Policy Center and Department of Applied Ocean Physics and Engineering

PUBLICATIONS

ARTICLES AND CHAPTERS

- B. Foley, M. Hansson, D. Kourkoumelis, T. Theodoulou, “Aspects of Ancient Greek trade re-evaluated with amphora DNA evidence” *Journal of Archaeological Science* 39 (2012): 389-398 doi:10.1016/j.jas.2011.09.025.
- B. Bingham, B. Foley, H. Singh, R. Camilli, K. DellaPorta, R. Eustice, A. Mallios, D. Mindell, C. Roman, D. Sakellariou, “Robotic Tools for Deep Water Archaeology: Surveying an Ancient Shipwreck with an Autonomous Underwater Vehicle” *Journal of Field Robotics* (June 2010) doi:10.1002/rob20350.
- B.P. Foley, K. DellaPorta, D. Sakellariou, B. Bingham, R. Camilli, R. Eustice, D. Evagelistis, V. Ferrini, M. Hansson, K. Katsaros, D. Kourkoumelis, A. Mallios, P. Micha, D. Mindell, C. Roman, H. Singh, D. Switzer, T. Theodoulou, “The 2005 Chios Ancient Shipwreck Survey: New Methods for Underwater Archaeology” *Hesperia* 78 (2009): 269-305.
- B. Foley, “Greek Deepwater Survey” in J. Delgado (ed.), “Nautical and Maritime Archaeology, 2006-2007 Seasons” *American Journal of Archaeology* 112.2 (April 2008).

- M. Hansson and B. Foley, "Ancient DNA fragments inside Classical Greek amphoras reveal cargo of 2400-year-old shipwreck" *Journal of Archaeological Science* 35.5 (May 2008): 1169-1176.
- R. Camilli, D. Sakellariou, B. Foley, C. Anagnostou, A. Malios, B. Bingham, R. Eustice, J. Goudreau, K. Katsaros. 2007. "Investigation Of Hydrothermal Vents In The Aegean Sea Using An Integrated Mass Spectrometer And Acoustic Navigation System Onboard A Human Occupied Submersible" *Rapp. Comm. int. Mer Médit.*, 38.
- B. Foley and R.D. Ballard, "Amphora Alleys I and II" in A.M. McCann, et al., *Deep-Water Shipwrecks off Skerki Bank: The 1997 Survey. Journal of Roman Archaeology Supplementary Series Number 58* (Portsmouth, Rhode Island: 2004).
- J. Manley and B. Foley, "Deep Frontiers, Ocean Exploration in the 20th Century" in Daniel Finamore (ed.), *Maritime History as World History: New Perspectives on Maritime History and Nautical Archaeology* (Gainesville: University Press of Florida, 2004).
- B. Foley and D. Mindell, "Precision Survey and Archaeological Methodology in Deep Water" *ENALIA Annual Journal of the Hellenic Institute of Marine Archaeology* Vol. VI (2002): 49-56.
- R. D. Ballard, F. T. Hiebert, D. F. Coleman, C. Ward, J. Smith, K. Willis, B. Foley, K. Croff, C. Major, and F. Torre, "Deepwater Archaeology of the Black Sea: The 2000 Season at Sinop, Turkey" *American Journal of Archaeology* Vol. 105 No. 4 (October 2001).
- B. Foley, "Slaves in the American Maritime Economy, 1638-1865: Economic and Cultural Roles" *The Dolphin, Quarterly Publication of the Long Island Maritime Museum* Vol. 32 Nos. 1 & 2 (Winter and Spring 2001).
- H. Singh, D. Mindell, B. Foley, J. Adams, "Imaging for Underwater Archaeology," *Journal of Field Archaeology* Vol. 27 No. 3 (Fall 2000).
- R.D. Ballard, A.M. McCann, D.R. Yoerger, L.L. Whitcomb, D. A. Mindell, J. Oleson, H. Singh, B. Foley, J. Adams, and D. Piechota, "The Discovery of Ancient History in the Deep Sea Using Advanced Deep Submergence Technology," *Deep Sea Research I*, Vol. 47 (2000): 1591-1620.

BOOK REVIEWS AND OTHER PUBLICATIONS

- B. Foley, "Αρχαία ελληνικά ναυάγια στα βάθη της Μεσογείου" *ΑΩ The Journal of the Alexander Onassis Public Benefit Foundation* Vol. 44 (2009): 36-39.
- George Bass (ed.), *Beneath the Seven Seas: Adventures with the Institute of Nautical Archaeology* (Thames and Hudson, London 2005). In: *AJA Online Reviews* 111.4 (October 2007): <http://ajaonline.org/onlinebookreviews>
- Brian Hicks and Schuyler Kropf, *Raising the Hunley: The Remarkable History and Recovery of the Lost Confederate Submarine* in *Virginia Magazine of History and Biography* Volume 110 No. 1 (Fall 2002).
- Jack D. Coombe, *Gunsmoke Over the Atlantic: First Naval Actions of the Civil War* in *Virginia Magazine of History and Biography* Volume 110 No. 1 (Fall 2002).

AWARDS, GRANTS, AND HONORS

- 2011-2013 United States Department of State Bureau of Oceans and International Environmental and Scientific Affairs Agreement Number S-LMAQM-11-CA-1018 – "Algerian Underwater Investigation: Earthquake Hazard Assessment and Submerged Cultural Heritage Survey"
- 2010-2011 National Oceanic and Atmospheric Administration Office of Ocean Exploration and Research Grant # NA10OAR0110188 – "AUV and Diver Archaeological Survey of Greek Marine Park"
- 2009-2011 National Oceanic and Atmospheric Administration Office of Ocean Exploration and Research Grant # NA09OAR4600083 – "Ancient Egyptian Shipwreck Survey with REMUS AUV"

- 2009-2011 National Science Foundation Office of International Science and Engineering Research Grant #0923229 – “US Egypt Cooperative Research: Advanced Underwater Archaeological Survey of the North West Coast of Egypt”
- 2008-2009 Woods Hole Oceanographic Institution Wheeler Award for Ocean Science and Society
- 2008-2009 Archaeological Institute of America, McCann Taggart Lectureship in Underwater Archaeology
- 2008 United States Department of State Certificate of Appreciation for science diplomacy in the People’s Democratic Republic of Algeria
- 2005-2006 National Oceanic and Atmospheric Administration Office of Ocean Exploration Grant # NA06OAR4600092 “Autonomous Rapid High Resolution Mapping of Ancient Deep Water Shipwrecks and Geological Features”
- 2002-2003 National Science Foundation, Dissertation Improvement Grant #SES-0220910
- 2002-2003 and 2001-2002 MIT / Dibner Institute for the History of Science and Technology, Graduate Fellowship
- 2000-2001 United States Naval Historical Center, Rear Admiral John D. Hayes Pre-doctoral Fellowship in U. S. Naval History
- 2000 Teknik- och Vetenskapshistoria, Kungl Tekniska Hogskolan, Stockholm, Sweden Visiting Scholar (Royal Institute of Technology)
- 1995-1996 Rotary Foundation Ambassadorial Scholarship, University of Southampton, United Kingdom

SELECTED CONFERENCE PAPERS AND INVITED TALKS

- January 2012 Archaeological Institute of America, Philadelphia, PA. “Greek Underwater Surveys and Amphora DNA Evidence of Ancient Trade”
- October 2011 Keynote Address, American School of Classical Studies at Athens Annual Trustees Meeting, New York City. “Talus to REMUS: Underwater Robotic Survey off Knossos”
- April 2009 Keynote Address, U.S.-Egypt Joint Science and Technology Fund annual meeting, Department of State, Washington, D.C. “International Partnerships for Maritime Heritage, Science, and Technology”
- March 2008 Alexandria Biblioteca, Alexandria, Egypt “Ancient Shipwrecks in the Deep Mediterranean Sea”
- January 2008 Archaeological Institute of America, Chicago, IL “Damaged Underwater Landscapes”
- December 2007 ArchaeoMed Conference, Castellamare di Stabia, Italy “Recent Advances in Underwater Archaeology”
- April 2007 Jet Propulsion Laboratory, Pasadena, CA “Autonomous Underwater Robots, Ancient Shipwrecks, and the Invention of Civilization”
- November 2006 American Schools of Oriental Research Annual Conference, Washington, D.C. “2006 Deep Water Aegean Survey: New Methods for Archaeology”
- October 2006 Museum of Fine Arts, Boston “Robots and Ancient Shipwrecks in the Deep Aegean Sea”
- October 2006 Joukowsky Center for Archaeology and the Ancient World, Brown University, Providence, RI, Underwater Archaeology around the Ocean State Colloquium “Shipwreck Archaeology in the Deep Aegean”
- May 2006 Maurice and Yetta Glicksman Lecture, Brown University, Providence, RI “Ancient Shipwrecks in the Deep Sea: The 2005 Classical Shipwreck Project at Chios, Greece”
- November 2005 American Schools of Oriental Research Annual Conference, Philadelphia, PA. “Collaborative Advances in Deep Water Archaeological Research”

- February 2005 National Oceanic and Atmospheric Administration Directors' Meeting, Waimea, Kaua'i, Hawaii "Autonomous Robots and Methods"

ARCHAEOLOGICAL EXPERIENCE

Twenty years experience in innovative research programs with advanced technologies, maritime archaeological survey, and excavation in intertidal zone, shallow water, and deep water.

Extensive experience with remote sensing, remotely operated vehicles, autonomous underwater vehicles, human occupied vehicles, advanced diving techniques, and international collaboration. Seven most recent field seasons outlined below; additional details provided upon request.

- 2011 season
Co-Chief Scientist, Crete Underwater Survey, Greece. Survey conducted around Dia island and in the Heraklion-Dia Strait, using Autonomous Underwater Vehicles, ship-based mapping sensors, and advanced diving techniques including Closed Circuit Rebreather. In partnership with Hellenic Centre for Marine Research and Hellenic Ministry of Culture and Tourism Ephorate of Underwater Antiquities.
- 2010 season
Co-Chief Scientist, Northern Sporades Ancient Shipwreck Survey, Greece. Autonomous Underwater Vehicle and diver survey of archipelago in northwest Aegean Sea. In partnership with Hellenic Ministry of Culture Ephorate of Underwater Antiquities.
- 2009 season
Co-Principal Investigator, Ancient DNA from Ceramic Artifacts Program, Greece (cont.). Interdisciplinary research to develop technique for identifying contents of ceramic containers, performed with molecular biologist Dr. Maria Hansson, Lund University, Sweden and archaeologists of the Hellenic Ministry of Culture Ephorate of Underwater Antiquities. Chief Scientist, 3D Stereo Camera trials, Stockholm Archipelago, Sweden. Conducted in partnership with Prof. Jonathan Adams, Southampton University and Jonathan Howland, Woods Hole Oceanographic Institution. 3D documentation of historic shipwrecks in Baltic Sea.
- 2008 season
Co-Principal Investigator, Chios Ancient Shipwreck Survey, Greece. Photodocumentation and DNA investigation of ten ancient shipwrecks around Chios island. Partnership with Hellenic Ministry of Culture Ephorate of Underwater Antiquities.
- 2007 season
Co-Principal Investigator, Ancient DNA from Ceramic Artifacts Program. Interdisciplinary research to develop technique for identifying contents of ceramic containers. Partnership with Lund University, Sweden and Hellenic Ministry of Culture Ephorate of Underwater Antiquities.
- 2006 field season
Co-Chief Scientist, Project PHAEDRA Ancient Shipwreck and Geochemical Mapping Survey, R/V *Aegaeo*. Using Human Occupied Vehicle *Thetis* and Autonomous Underwater Vehicle: acoustic, optical, and chemical survey of geological features near Milos and within the Santorini caldera; surveyed Greek War of Independence shipwreck at Andros island. In partnership with Hellenic Ministry of Culture Ephorate of Underwater Antiquities and Hellenic Centre for Marine Research.
Chief Scientist, *Paul Palmer* Shipwreck Survey, Stellwagen Bank National Marine Sanctuary, F/V *Kathy Marie*. Optical survey of 19th century collier schooner wreck.
- 2005 field season
Chief Scientist, Chios (Greece) Classical Shipwreck Survey, R/V *Aegaeo*. Using SeaBED AUV, surveyed acoustically and optically a 4th century B.C. shipwreck and a 2nd century B.C. shipwreck off island of Chios. Conducted in partnership with Hellenic Ministry of Culture Ephorate of Underwater Antiquities and Hellenic Centre for Marine Research.