When the Land Meets the Sea

Della A. Scott-Ireton *Editor*

Between the Devil and the Deep

Meeting Challenges in the Public Interpretation of Maritime Cultural Heritage

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Foreword

Archaeologists, cultural resource managers, and heritage professionals have long been engaged in developing effective strategies for interpreting heritage sites for the public and in encouraging public participation with preservation efforts. Heritage attractions, interpreted displays, and museum exhibits draw local visitors and tourists and provide opportunities for education through recreation while promoting the local economy through heritage tourism. Maritime archaeologists and managers of underwater cultural resources recognize the benefits of interpretation as a tool for educating people about the value of nonrenewable resources and the need for protection of maritime sites on land and underwater. Popular strategies include developing shipwreck parks and heritage trails to encourage responsible visitation while providing recreational and educational experiences. Interpretive approaches including literature, Web-based products, and various media enable diving and nondiving visitors to learn about our maritime past. In creating interpretive strategies for maritime sites, however, archaeologists and resource managers often are required to think creatively to meet challenges and to overcome problems. These issues include interpreting sites in inaccessible locations and extremely deep water, enabling and/or controlling access to fragile sites and restricted areas, monitoring visitor behavior, making information interesting to a wide audience, and creating opportunities for public engagement, among other concerns. This volume brings together a diverse group of heritage professionals to discuss issues they have encountered and to present ideas and case studies for adapting, improvising, and overcoming.

The following chapters are based on papers presented at the Society for Historical Archaeology's 45th Conference on Historical and Underwater Archaeology, held in Baltimore, Maryland, in 2012. Symposium participants were invited to expand their papers for publication in this volume, paying special attention to the unique challenges they face and offering suggestions and ideas for meeting them. This volume is intended to impart cutting-edge interpretation and public engagement strategies for maritime heritage sites, both on land and under water, with an emphasis on solving the unique problems often associated with presenting

these fragile, limited-accessible sites as heritage attractions and with developing effective visitation and civic engagement opportunities. The ideas, case studies, and examples presented will serve as models for resource managers, archaeologists engaged in interpretation, and site administrators, and, we hope, will offer inspiration for future generations of heritage professionals.

Pensacola, FL, USA Della A. Scott-Ireton

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Many thanks are extended to the contributors to this volume, whose groundbreaking research and cutting-edge interpretive strategies enable us all to know more about our maritime past. Their willingness to share their challenges, thoughts, ideas, and lessons learned is most appreciated.

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Part I
Challenges in Public Access and Engagement

Chapter 1
Toward Multivocality in Public Archaeology: Public Empowerment Through Collaboration

John H. Jameson Jr.

Abstract Archaeology, especially underwater and marine archaeology, stirs public interest like few other topics. The specter of solving the detective story is seen by the public as the ultimate adventure. Many are increasingly participating in global discourses about the meaning and importance of archaeological investigations and are drawn into public debates about underwater heritage protection and conservation. To meet this surging interest, public archaeologists in Florida and elsewhere are using collaborative approaches to devise effective strategies for conveying archaeological information and significance in both academic and public arenas. Successful programs empower and motivate lay persons to more active involvement. These programs move beyond the concept of the public as recipients or "customers" of interpretation to focus on active public participation and multivocality within archaeological and interpretation processes. Examples are given of this new focus: how non-academics or lay persons use and create new knowledge gained through professional/private collaboration.

Historical Trends in Public Interpretation of Cultural Heritage

As a specialty within the sphere of public archaeology and cultural heritage management, the public interpretation of archaeological and cultural sites has become an essential component in the conservation and protection of cultural heritage values and sites. Beginning in the 1960s and 1970s in the USA, and developing later in other parts of the world, legal frameworks emerged to identify and protect cultural

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heritage assets. The resultant rapid accumulations of archaeological and historical site information and artifact assemblages led to heightened public and professional awareness and concern for protection and preservation. In the face of an increasing public interest and demand for information, archaeologists and their cultural heritage colleagues began to more actively collaborate to devise effective strategies for public presentation and interpretation. Until the 1990s, publications on public presentation and interpretation strategies and standards were rare and largely obscured in isolated accounts and academic gray literature (Jameson 2004).

By the latter part of the twentieth century, many archaeologists were addressing the contemporary context of their research as part of a growing practical and ethical awareness. The 1990s saw the emergence of greater energy and funding devoted to the public interface of archaeology as the professional community realized that intellectual introversion was no longer acceptable and that more attention should be paid to the mechanisms, programs, and standards of public interpretation and presentation. Inspired by visionaries such as Freeman Tilden (1957), interpretation practitioners increasingly rejected programs and presentations that did not attempt to go beyond a recitation of facts. Only programs that facilitated and provoked emotional and intellectual connections of the audience to meanings inherent in the resource were deemed acceptable.

By the early twenty-first century, the mechanisms and processes of public interpretation had reached a heightened level of sophistication and effectiveness. In North America, the U.S. National Park Service (NPS) and the National Association of Interpretation (NAI) took the lead in standards development. NPS, through its Interpretive Development Program (IDP), promulgated a multifaceted, delivery-mode-specific employee training program. Notably, the interdisciplinary NPS training module "Interpreting Archaeological Resources" focuses on the challenges of archaeology and cultural heritage interpretation, media, and public outreach (Jameson 2008; National Park Service 2010). NAI, a nongovernmental and nonprofit independent organization, provides a number of training and certification opportunities and is a major advocacy group for standards development among both government and nongovernment organizations and agencies. The NAI annual Interpreters Workshop is a major conference event among professional interpreters.

The evolving philosophies of NPS, NAI, and similar advocacy groups have emphasized that, at historic sites, monuments, and parks, the process of effective interpretation allows each visitor to find an opportunity to personally connect with a resource or place. Each individual may connect to the place in a different way, and some may not connect immediately, but everyone should have an opportunity to explore how that special site or place is meaningful to them. The goal of interpretation, then, is to increase each visitor's enjoyment and understanding of the site, monument, or park and to allow visitors to care about the parks on their own terms. Many have argued that such personal connections are crucial in gaining public support for conservation (Jameson 2012b, c).

In the international arena, a number of leading organizations have emerged that are carrying the banner of interpretation principles for access, inclusion, and respect

for multiple points of view. The NAI International Conference, held annually in different parts of the world, promotes international partnerships and instigation of interpretative facilities to enhance tourism experiences, benefit local economies, and sustain sensitive interpretation of heritage resources (National Association for Interpretation 2011). Interpret Europe, an independent organization established in 2010, espouses similar best practice principles in making interpretive programs locally relevant and sensitive to differences of culture, age, and gender, and in organizing complex networks and maintaining a "Transinterpret" database of best practices (http://www.interpret-europe.net). National organizations such as Interpretation Australia have been leaders in establishing communication networks and online access to information on best practices guidelines and case studies.

An important development in international public interpretation was the adoption by the International Council on Monuments and Sites (ICOMOS), chief advisor to UNESCO on cultural heritage matters, of the ICOMOS Charter on Interpretation and Presentation of Cultural Heritage Sites in 2008. Largely avoiding the questions of the "how and when" of interpretation, as emphasized by NPS and NAI, the Charter lays out seven principles, or key ingredients, of interpretation and presentation in reference to the conservation, education, and stewardship messages that represent the transcendent humanistic values of the resource. Originally drafted and promoted by the Ename Center for Public Archaeology and Presentation in Belgium, the Charter continues to be scrutinized by the international community of interpretation experts. The main body of the Charter is a set of basic principles for interpretation that provide an outline of professional and ethical standards. The principles place emphasis on the essential roles of public communication and education in heritage preservation and are presented under the following basic headings: Access and Understanding; Information Sources; Context and Setting; Authenticity; Sustainability; Inclusiveness; and Research, Education, and Training. On the surface, the principles are generally commonsensical in terms of conditions and prescriptions for effective public interpretation. Just *how* the principles are articulated, however, will determine how well they are received in international circles and whether they are considered desirable, practical, and feasible. In countries with little or no tradition of multiculturalism, poor human rights histories, and poorly developed infrastructure, practical applications of the Charter are especially challenging (Jameson 2008, 2012a, 2013).

The ICOMOS International Committee on Interpretation and Presentation of Cultural Heritage Sites (ICIP), in addition to promoting the development, adoption, and application of the Charter principles, studies the evolving techniques and technologies of public interpretation and presentation, evaluating their potential to enrich contemporary historical discourse and to heighten sensitivity to the universal values and particular modes of human expression embodied in cultural heritage sites. The work of the committee explicitly focuses on the experiential dimension of visits to cultural heritage sites, particularly by means of various media and methods of public communication (International Committee on Interpretation and Presentation 2012).

Recent Developments in Public Participation and Collaboration

Twenty-first-century archaeologists are increasingly engaged in publicly interactive research and interpretation programs that attempt to convey archaeological information to the lay public. A measure of success is the capacity to empower and motivate lay persons to more active involvement in archaeological and interpretation processes. Globalization forces have created a need for contextualizing knowledge in order to address complex issues and collaboration across and beyond academic disciplines, using more integrated methodologies that include nonacademics and increased stakeholder participation.

A conceptual shift is taking place that facilitates integrative and transdisciplinary approaches that foster public participation in the production of knowledge. This conceptual shift allows analyses of public participation in the production of "new" knowledge. Today, many public archaeologists are exploring how nonacademics and lay persons create, use, and react to this new knowledge, and how, in these variable relationships, professional and lay researchers interact. They are attempting to identify what sorts of pasts are being created and how these interpretations complement or compete with traditional archaeological knowledge claims. In these increasingly transdisciplinary approaches, this conceptual shift also facilitates analyses of public participation in the production of knowledge. Transdisciplinarity is rooted in the rise of the so-called knowledge society, which refers to the growing importance of scientific knowledge in all societal fields. It recognizes that knowledge is produced in societal fields other than science. It also acknowledges that systematization leading to specialization is more pronounced in science than in other societal fields. Transdisciplinary research focuses on the links between different sciences *and* between scientific specialty fields and other parts of society. Transdisciplinary research, therefore, transgresses boundaries between scientific disciplines *and* between science and other societal fields, including deliberation about facts, practices, and values. The transdisciplinarity of these cases implies that the precise nature of investigative questions and goals is not predetermined but rather is defined cooperatively and collectively by participating specialists and nonspecialists (Jameson 2012a).

Most public archaeologists perceive nonprofessionals as consumers, with many forms of successful interpretive schemes. "Participatory culture" is a term used in contrast to "consumer culture." It refers to a culture in which individuals and the public do not act only as consumers but also as contributors or producers. Participatory culture models can be applied to the many ways that archaeologists are increasingly using collaborative approaches in working with the public. Successful programs empower and motivate lay persons to more active involvement in not only archaeological fieldwork but also interpretation/dissemination processes of archaeologist/lay person collaborative relationships and multivocality within a participatory culture model (Jameson and Mytum 2012).

When dealing with volunteers and non-archaeologist stakeholders, participatory archaeology often combines traditional archaeological techniques with

stakeholder knowledge and understanding of the past and its role in the present. Stakeholders can introduce distinctive forms of argument and dissemination methods that are less often recognized in professional arenas. Participatory approaches can apply principles of public interpretation and public/professional mediation. At times, this complements the academic perceptions of the past, but in others it challenges or replaces them. As cultural resource specialists, we should embrace these collaborative opportunities that will ultimately strengthen public support and appreciation of archaeology.

These developments in public archaeology are helping to return the focus of archaeology to a truly public endeavor, one in which communities, the true owners of their pasts, use the past for their current purposes. In these projects, community needs and values play a leading role, where the study of the past is used as a means to engage with contemporary issues (Carman 2011).

An impressive number of examples have emerged in recent years. For example, at two cemetery sites, the First African Baptist Church Cemetery in Philadelphia, Pennsylvania, and the African Burial Ground in lower Manhattan, New York, decedent communities struggled to take control of the research process and the fate of ancestral remains. The archaeological investigators were able to work closely with descendant communities to identify research issues of concern to community members. The lessons learned from both projects are examples of participatory descendent community involvement in archaeological research projects that move beyond "consultation" to establish new directions and outcomes for research and public interpretation (McCarthy 2011).

Another example is the city of Niles in western Michigan. In association with archaeologists, the city has established an archaeology advisory committee charged with recommending and promoting the course of action for excavation, preservation, and development of the Fort St. Joseph site. Since its inception, the advisory committee worked side by side with a varying public to uncover and interpret the shared history of French occupation in at the site (Beaupre and Nassaney 2011).

Other notable examples can be cited. Excavations at the President's House in Independence National Historical Park in effect remade how history is told. The overwhelming public interest compelled a redesign of the commemoration to add an in-ground archaeological display to anchor a compelling presentation about freedom and slavery at the birth of the nation. In this case the city and the public, not the participating archaeologists, were the driving forces behind the commemoration (Jeppson and Levin 2012). In Florida, the Bernardo Plantation Archaeology Project involved a design and research plan that involved professionals and avocationals in all stages of research: design, fieldwork, scientific interpretation, and public interpretation (Marcom et al. 2011). Also in Florida, the Florida Public Archaeology Network and the University of South Florida collaborated on the nineteenth century Pinellas Village project, where community knowledge, in the form of oral histories as well as a map created by longtime residents, was utilized from the very beginning of the project to direct the survey and inform the interpretation of what was uncovered (O'Sullivan and Moates 2011).

New Web-based technologies, particularly wikis and other participatory applications, may offer ways for archaeologists to resolve participatory issues and to develop a more pluralistic and inclusive archaeology. Using the case study of a newly developing archaeological wiki in Turkey, such a tool was used as both inclusive in practice and productive for archaeological inquiry (Bauer 2012).

These examples show how public benefits are gained through participatory archaeology and professional/private collaboration toward new horizons of knowledge making, as well as how the study of the past is used as a means to engage with contemporary issues.

Applications at Underwater and Marine Sites

Archaeology, especially underwater and marine archaeology, stirs public interest like few other topics. The specter of solving the detective story is seen by the public as the ultimate adventure. Members of the public are increasingly participating in global discourses about the meaning and importance of archaeological investigations and are drawn into public debates about underwater heritage protection and conservation. This volume chronicles a number of outstanding examples of participatory and collaborative approaches.

To meet surging public interest, public archaeologists in Florida and elsewhere are using collaborative approaches in working with the public to devise effective strategies for conveying archaeological information and significance in both academic and public arenas. Successful programs empower and motivate lay persons to more active involvement. These programs move beyond the concept of the public as recipients or "customers" of interpretation to focus on active public participation in archaeological and interpretation processes. Examples are given of this new focus: how nonacademics or lay persons use and create new knowledge gained through professional/private collaboration. For example, a state-level Public Archaeology network in Florida (FPAN) is developing a new program in the creation and development of the Submerged Sites Education & Archaeological Stewardship (SSEAS) program. Working with professional archaeologists, SSEAS-trained divers are able to recognize historic shipwrecks and cultural sites, to record the site using photography and hand-drawn site plans, fill out site forms, and help monitor nearby Underwater Archaeological Preserves and other submerged sites (Scott-Ireton, Chap. 11). Also in Florida, an impressive program of professional/volunteer collaboration has emerged through the development of submerged underwater heritage trails and shipwreck preserves.

Another intriguing example is a program of interpretation of battlefield sites that involves painful and tragic cultural memories (McKinnon, Chap. 16). McKinnon makes an important point: an awareness and acknowledgement of the social and political context in which one is working is fundamental to understanding how practitioners negotiate a process of interpretation that is inclusive of various stakeholders and what is being excluded or inadequately represented in the interpretation. Listening to the multiple stakeholders' views about the significance of such events

and sites, and incorporating those into interpretive and management practices, is key to an inclusive, shared, and collaborative interpretation of heritage.

The chapters in this volume highlight many of the more innovative programs using more integrated methodologies that include nonacademics and increased stakeholder participation. These examples demonstrate a participatory model of public engagement and empowerment in preservation efforts in the production of collaboratively produced "new" knowledge about our very rich underwater and marine heritage.

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Chapter 2
Connecting the Wrecks: A Case Study in Conveying the Importance of Submerged Cultural Heritage Through a Scaled Outreach Approach

Alexis Catsambis and Kate Morrand

Abstract As an essential component of its mission, the Naval History & Heritage Command's Underwater Archaeology Branch has developed a multifaceted and scaled public education and outreach strategy based on a combination of initiatives aimed at creating both direct connections with individuals on personal level, as well as broad connections with the public at large. This chapter is intended to serve as a case study, illustrating how an outreach strategy based on the aforementioned framework is employed, taking into account the organization's available resources, limited staff numbers, and complex scope. The authors endeavor to convey the importance of crafting an organization's message to create the most relevant form of outreach according to the medium, the audience, and their frame of reference, in order to best inspire and enhance public appreciation for submerged cultural heritage.

Introduction

Historic preservation and archaeology are both disciplines heavily dependent upon public support. Not only do the cultural resources that stewards aim to preserve and illuminate ultimately belong to the public, but it is the public's perception of their value that directly influences the abilities of cultural heritage specialists to execute their missions. Funding, policies, and laws can all ultimately be traced back to the value the public attributes to these resources and to related preservation efforts. This is a concept that does not elude maritime heritage stewards, as demonstrated clearly in a recent survey of almost 80 germane organizations in the public, social, and

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private sectors (Catsambis 2012b: 380–382). The public, however, rarely maintains a monolithic set of priorities and does not place a specific value on collections of resources as a whole; what is moderately important to one individual, group, or subset may be either very important or insignificant to another.

When conceptualizing an organization's outreach approach, it is, naturally, essential to place importance on appealing to a majority of the public that are within an organization's reach. At the same time, however, recent studies have shown in various fashions that what a visitor or audience member leaves with following an educational experience within a museum setting is highly individualized, personalized, unique, and malleable (Garnett 2002; Newman and Fiona 2002). What this suggests is that heritage outreach professionals should also attempt to reach out and connect on a personal level with members of the public as this experience can have a powerful effect on individuals. These individuals, in turn, may serve as catalysts for spreading an organization's message even further. It is important to recognize that public outreach efforts tied to the former, broader public approach necessarily focus on the priorities and controlled message of the organization itself. In order to achieve the latter objective of affecting members of the public at the individual level, which when dealing with complex subject matter may transform a person's views on the subject, an organization must craft its message in such a way that it resonates within the frame of reference of its potential ambassadors.

The Naval History & Heritage Command's (NHHC) Underwater Archaeology Branch (UAB), which aims to continually enhance public appreciation for the US Navy's submerged cultural heritage, has developed a public outreach strategy based on an approach that spans from the entirely personal to the public at large. Such an approach has the potential to reach members of the public who are amenable to receiving the historic preservation message, but also those who feel strongly about related frames of reference and who can be brought into the preservation community and disseminate the message further. This chapter presents an outline of the UAB's outreach strategy as a case study based on the aforementioned framework, taking into account the organization's available resources, small staff numbers, and complex scope. While being an internal plan developed for a specific organization, this case study may introduce the reader to a conceptual approach that has thus far proven promising. While the reader may not necessarily be introduced to new outreach methods, the aim here is to address how those methods interrelate and the philosophy that underpins them within an organization with modest resources.

The Naval History and Heritage Command's Underwater Archaeology Branch

The UAB was founded in 1996 due to an emerging need for the Department of the Navy (DoN) to manage, study, conserve, and curate its submerged cultural resources. UAB acts as the center of expertise and recognized authority for DoN in all matters related to the science of underwater archaeology and the identification, analysis,

interpretation, preservation, conservation, and management of Navy's historic ship and aircraft wrecks, as well as their associated contents. The Branch is, therefore, multidimensional and serves a number of functions which can be classified into four main areas of responsibility: cultural resource management and policy development; archaeological research; conservation and curation of submerged cultural resources; and public education and outreach.

The Branch's first function surrounds the management of the US Navy's sunken military craft, which comprise a collection of over 3,000 historic shipwrecks and over 14,000 historic aircraft wrecks dispersed in domestic, international, and foreign waters. These submerged cultural heritage resources date back to the American Revolution and extend beyond World War II to the present day. It is important to note that, in addition to their historical significance, many of these vessels also serve as war graves or present environmental, safety, or security hazards as their compromised structural integrity may contain harmful materials such as oil, unexploded ordnance, or classified information. In large part, these supplementary characteristics augment the respect afforded to these sites beyond what historic preservation alone could achieve among members of the public. At the same time, recent advances in technology have made an increasing number of these sites accessible, facilitating unauthorized disturbance and potentially compromising the integrity of sunken military craft and the historical information they retain. Accordingly, all DoN sunken military craft, regardless of their age or location, are protected by federal laws such as the National Historic Preservation Act and the Sunken Military Craft Act (United States Code 2011a, b). Whereas UAB policy encourages noninvasive in situ preservation and research of DoN submerged cultural heritage, the Branch also recognizes that responsible site disturbance and artifact removal may be justified for academic research, for mitigating impacts that could compromise site integrity, or for public education opportunities.

This leads to a discussion of the second of UAB's main functions—archaeological research. Such research takes many forms and is undertaken by both the Branch and qualified external organizations. Internally, the UAB has engaged in a number of archaeological surveys, excavations, and site assessments focusing on resources such as those associated with *Congress*, CSS *Alabama*, *H. L. Hunley*, the Penobscot Expedition, and suspected USS *Scorpion* (Murphy 1998; Cohn 2001; Hunter 2003; Watts 2004; Schwarz et al. 2012). These investigations are often accomplished in partnerships with other Navy Commands, federal agencies, academia, the nonprofit sector, the private sector, or even foreign governments. In itself, therefore, such research can be viewed as raising public awareness within the professional community. At the same time, UAB also issues research permits to third-party organizations seeking permission to disturb sunken military craft for scientific purposes. Besides purely scientific research, in certain cases, such as the installation of an underwater pipeline or the widening of a shipping channel, site disturbance is also necessary to mitigate potential harm to a threatened resource. Irrespective of objective, however, authorized archaeological fieldwork provides valuable opportunities to reach out to members of the public from a personal to a mass-media level.

The third of the Branch's principal functions pertains to the conservation and curation of archaeological artifacts recovered from DoN sunken military craft. To care for the over 9,000 artifacts in its collection, the UAB operates the Archaeology & Conservation Laboratory (Lab), a well-equipped and professionally staffed facility at NHHC headquarters on the Washington Navy Yard, in Washington, DC. The Lab serves both as the treatment center for artifacts recovered from DoN submerged archaeological sites, whether licitly or illicitly, as well as an environmentally controlled curatorial repository for treated artifacts. Among the most prominent collections of artifacts curated on site are those related to CSS *Alabama*, USS *Housatonic*, and the Penobscot Expedition, while two substantial collections under Lab oversight reside at the Clemson Conservation Center and the Lake Champlain Maritime Museum. The latter facilities serve as host institutions for the Lab artifact loan program, which allows qualified organizations to exhibit conserved artifacts recovered from DoN sunken military craft. This program has been very successful, with over 70 % of the collection on loan to museums across the country. The artifact loan program, together with facility visits and the training opportunities the laboratory provides, substantially enhances the outreach potential of the UAB by providing both an intimate setting that enables direct connections with interns and visitors but also a means through which to reach a nation-wide audience. The in-house expertise present at the Lab also means that the organization serves as a center of expertise pertaining to archaeological conservation, prompting or supporting publications that further the preservation of submerged cultural resources (Hamilton 1997; Peachey 2001; Mardikian 2004).

Finally, the fourth of the Branch's functions and potentially the most significant one, is public education and community outreach. Intrinsically tied to the three aforementioned focal areas, public education is an increasingly important function for the organization. As part of the NHHC, the UAB is tasked with making the history, legacy, and traditions of the US Navy come alive for both US Navy sailors and the civilian public. Accordingly, the UAB's outreach initiatives disseminate information on naval heritage, focusing on the importance of cultural resource management, the science of underwater archaeology, archaeological conservation, and site preservation.

From the Personal to the Public: A Multifaceted Outreach Approach

UAB has elected to divide limited time and resources among a wide number of different outreach approaches that scale from the level of an individual to the breadth of international mass media. This strategy is underpinned on the aforementioned dual objective of reaching both sensitized members of the broad public with the message of historic preservation, as well as discussing the intricacies of submerged cultural resources on a personal level according to individualized frames of reference and values. The former enables the UAB to reach a much wider audience; the

latter provides for a much more powerful and effective outreach experience. What follows below is a review of the components of this multifaceted approach, whose ultimate objective is to connect people with their submerged cultural heritage. The various components are arranged from the most direct forms of contact to general impressions that the UAB can impart through mass outreach efforts.

Academic Internship Program

Since the UAB Academic Internship Program was established in 2008, it has proven to be a very successful outreach tool used to educate university students pursuing diverse academic fields on the importance of submerged cultural heritage. The program is designed to accommodate upper-level undergraduate and graduate students for full-time, semester-long internships at UAB headquarters. The Branch's multifaceted scope allows the internship program to include students engaged in a variety of disciplines including underwater and terrestrial archaeology, anthropology, historic preservation, public policy, maritime security, engineering, environmental studies, chemistry, conservation, fine art, and history. The UAB has presently welcomed over 40 interns from 15 American and international universities including American University, École de Condé (France), George Washington University, St. Andrews University (UK), Texas A&M University, the United States Naval Academy, the University of California at Berkeley, and the University of Maryland.

The internship program provides an opportunity for a concentrated symbiotic type of outreach initiative with students on the most direct level. During their lengthy internship, students work closely with UAB staff to carry out assignments that touch each of the Branch's four main functions while simultaneously developing more detailed, long-term projects focusing on a particular area of interest related to their individual academic goals. This internship style/method is generally positively received by the students as it allows them to enhance their understanding of their own specific area(s) of interest while concurrently gaining a broader perspective through exposure to potentially career-orienting subject matter. Long-term internship projects are quite diverse and have included such tasks as the development of a site stewardship program, drafting of archaeological field reports, research and analysis of the UAB's artifact collection, and three-dimensional virtual reconstructions of shipwrecks. Additionally, US Navy midshipman at the US Naval Academy have produced projects such as a GIS map of a historical site in the Patuxent River, MD, and analysis of various cofferdam designs for a specific archaeological project. On occasion, interns have used these long-term projects as foundations for academic theses and award-winning research papers.

Every intern is expected to internalize the basic principles of maritime archaeology, conservation, and submerged cultural resource preservation, and in turn contribute to the UAB's broader public outreach initiatives through activities such as researching and writing articles for the Naval History Blog, the UAB Web site, and other social media outlets (see below). University students often maintain a

significant presence on the Internet and social media Web sites and fluidly disseminate messages regarding their experiences to fellow academic peers, family members, and friends. The UAB interns also contribute to more direct outreach initiatives by coordinating speaking engagements for UAB staff members at local universities, arranging UAB facility tours for local university students, and encouraging their fellow students to apply for UAB internship positions.

One significant challenge presented to the academic internship initiative pertains to available resources and limiting federal appropriations guidelines. The Branch is presently working with partners to develop additional funding avenues that may be able provide interns with appropriate compensation. In the interim, however, a number of students are able to receive housing or compensation for the duration of their internship through university-based programs, external grants, or scholarship awards. Additionally, the UAB consistently collaborates with university departments to provide students with academic credit for their internship experience.

Notwithstanding the aforementioned challenges, the Academic Internship Program has been one of the UAB's most successful direct outreach initiatives. Intern feedback provided during exit interviews has been consistently positive, many students finding the experience so satisfying that they later return to the UAB as volunteers. The Branch has also seen a steady increase in the number of applications for the internship program submitted each semester. Ultimately, the UAB endeavors to create a positive internship experience in the hope that interns will continue to promote the Branch's mission and will become informed advocates for submerged cultural heritage.

UAB Facility Tours

UAB staff-guided tours of the Archaeology & Conservation Laboratory present an equally direct but less intensive opportunity for interaction with a spectrum of visitors. The tours offer a guided, behind-the-scenes look at the Lab during which guests are invited to experience its dual roles as both a conservation facility, by viewing the artifacts currently undergoing treatment, and as a curation facility, by viewing conserved artifacts from the collection (Fig. 2.1). This venue also allows UAB staff to communicate information about underwater archaeology, archaeological conservation, and US Navy submerged cultural resources, prioritizing concepts in such a way as to best complement the particular interests of a visiting audience. The intimacy of the setting also often encourages a more detailed dialogue with visitors that may not be as easily facilitated during other, broader outreach initiatives. While usually limited in time to an hour, facility tours allow for candid discussions on complex subject matter such as military gravesites, looting of heritage resources, environmental concerns, as well as the interdisciplinary nature of the field of maritime archaeology as a whole. It is often a transformative experience for visitors who have not always considered the preservation perspective or been as close to a historic artifact, whether proximity-wise or emotionally.

Fig. 2.1 NHHC underwater archaeologist George Schwarz (*left*) leads a visiting group of Australian university students through the Archaeology & Conservation Laboratory (Photo by Kenneth Takada, 2008)

This particular outreach endeavor also faces certain challenges. At the time of this writing, due to limited space and safety restrictions within the Lab, typically only a small number of guests may be accommodated per tour. This is a positive trait in the sense that it promotes the open discussion that characterizes smaller groups, but is a concern when wanting to accommodate larger numbers of visitors. To address this issue, the UAB has often been able to successfully break up larger groups into smaller subsets and coordinate multisegment, customized tours with other facilities on the Washington Navy Yard such as the National Museum of the United States Navy, the Display Ship USS *Barry*, the Navy Art Gallery, and the Navy Department Library Special Collections. Customized tours allow larger groups to comfortably and safely experience the Lab while gaining a well-rounded view of US Navy history by visiting other NHHC departments.

Another challenge presently hindering this endeavor is the number of UAB staff available to lead facility tours. Although staff levels may increase in the future, the Branch does not currently have a full-time staff member exclusively dedicated to public outreach, so tours and other initiatives are conducted as a collateral duty by all UAB staff. While the UAB strives to accommodate every interested tour group, field projects, time-sensitive issues, and other scheduling conflicts can limit the availability of UAB staff members to guide a tour. The UAB also recognizes that this particular initiative is an option mostly available to local visitors. Finally, security requirements at the Washington Navy Yard can intimidate visitors and discourage them from accessing the facility.

Despite the aforementioned challenges, facility tours have been a successful public outreach tool used to impress the importance of submerged cultural heritage through a direct connection with visitors on a personal or near-personal level. In 2011, the UAB welcomed over 150 guests at the Lab which included military personnel, middle and high school students, home–school groups, university students, researchers, historians, corporate technology groups, and professionals in archaeology and conservation fields. For many visitors, especially the younger ones, the facility tours serve as an introduction to underwater archaeology and conservation, expose them to new subject matter, and, ideally, instill new-found interest in the preservation of submerged cultural heritage. For others, facility tours and accompanying discussions allow for UAB staff to illustrate how submerged cultural heritage is directly associated with something that a particular visitor already values within their frame of reference. The result is that each tour is customized to the particular visiting audience and addresses individualized subject matter. Post-visit verbal and written feedback from visitors indicates their reception of a more complete understanding of issues pertaining to submerged cultural heritage and many communicate a renewed appreciation for the Branch's mission.

Speaking Engagements

The UAB's multiple areas of expertise allow staff members to publicly present on a number of different topics related to underwater archaeology, conservation, and cultural resource management, customizing their message according to a particular audience. The benefit of speaking engagements is that they provide the opportunity to disseminate information in a more direct and personalized manner to larger audiences, thereby addressing both ends of the outreach scale. In fact, other than websites, maritime heritage organizations found lectures and presentations to be the most effective means of public outreach (Catsambis 2012b: 380–381).

UAB staff members have been invited to speak at large-scale venues including both military and civilian events, development workshops, and professional conferences (Schwarz and Peter 2011). At the same time, lectures are also offered in smaller settings typically to avocational archaeology organizations, historical societies, or cultural resource manager workgroups (Catsambis and Lickliter-Mundon 2011; Catsambis 2012a). Among the most fulfilling are presentations to local elementary and secondary schools, as well as public, private, and military universities (Montgomery County Public Schools 2011; United States Naval Academy 2012). Academic lectures and presentations naturally are tailored to best suit a particular age group or, in the case of upper-level students, a particular area of study.

While speaking engagements allow UAB staff the opportunity for off-site public outreach, the physical distance staff can travel is restricted and therefore the majority of speaking engagements are concentrated in the Washington, DC region. Additionally, time restrictions allotted during speaking engagements sometimes suppress the presenter's ability to examine the more complex issues related to a

particular topic, while larger venues sometimes discourage dialogue. To compensate for this, presenters typically designate a prearranged amount of time for question-and-answer sessions, as well as take with them pertinent artifacts that serve as conduits for introducing key subjects. Regardless of challenges, however, it is important to note that on the spectrum from direct contact to broad appeal, a speaking engagement is often the outreach method that best balances the need to connect effectively in an interactive manner with the largest number of people within the same space.

Science, Technology, Engineering and Mathematics Curriculum Outreach

The UAB's multiple functions and the unique nature of maritime archaeology present many opportunities to promote education in the fields of science, technology, engineering, and mathematics (STEM). In recent years, STEM subjects have received ever-increasing emphasis in elementary and secondary education curriculums in the USA. A report compiled by The President's Council of Advisors on Science and Technology (2010) indicates that along with a lack of proficiency in STEM subjects among American students, there is also a lack of interest in these fields. Therefore, to improve STEM education it is important both to prepare students to be proficient in STEM subjects and to inspire them to learn about STEM.

One of the ways the UAB is currently working to contribute to this national initiative is through the development of a STEM-based underwater archaeology curriculum. Through complementary public outreach initiatives, the UAB often directly communicates with groups of K-12 students who are intrigued by submerged cultural heritage, but are not necessarily aware of the importance of STEM in nearly all aspects of underwater archaeology. In an effort to tie cultural heritage preservation with cutting-edge technology, the Branch is developing a modular, STEM-based curriculum that can be inserted into school or museum classes as 1-h courses. During the initial pilot phase of the curriculum, UAB reached out to local elementary and high school educators, administrators, and other academic professionals, receiving substantive feedback and ensuring that classroom activities address national and statewide education requirements.

The curriculum will employ activities of varying academic levels which reinforce STEM concepts through their application to real-world experiential scenarios such as ocean mapping, diving physiology, buoyancy studies, and materials science. For example, a high school chemistry class studying electrical currents could learn about how electrolysis aids in the conservation of archaeological artifacts such as an iron cannon from the nineteenth-century shipwreck USS *San Jacinto*. Following the pilot phase, the UAB intends to disseminate the curriculum through the NHHC museums system for the use of museum educators nationwide, as well as for further distribution to local school systems.

Archaeological Artifact Loan Program

The UAB Archaeological Artifact Loan Program presents an additional opportunity to bring US Navy history to a broader audience through the exhibition and interpretation of stabilized artifacts recovered from sunken military craft. While this particular outreach initiative is aimed at broad dissemination of submerged cultural heritage data to a much larger audience in a number of different physical locations, inspiring a personal connection between a museum visitor and the object on display remains the ultimate goal. In this manner, the UAB hopes to increase knowledge surrounding submerged cultural resources and the importance of their preservation.

The loan program was developed to place conserved archaeological artifacts on short-term loan to qualified museums and institutions, both military and civilian, for education, appreciation, and research purposes. The artifacts, like the archaeological sites from which they originated, remain US government property, therefore the loan agreement documents are based on Code of Federal Regulations 36 C.F.R. 79 (2012). Artifacts recovered from an underwater context, even following conservation treatment, remain quite fragile and sensitive to their immediate environmental parameters. Therefore, they often require specific curation protocols beyond those stipulated in 36 C.F.R. 79 to maintain their long-term preservation. The loan agreement requires borrowing institutions to address these needs throughout the duration of the loan by maintaining optimal environmental conditions, providing physical protection and security, and conducting annual artifact condition assessments.

The vast majority of artifacts in the UAB collection were recovered from sunken military craft dating from the late eighteenth century to the mid-twentieth century. Some of the earliest artifacts in the assemblage were recovered from vessels which took part in the Penobscot Expedition of 1779, as well as later vessels serving in the Chesapeake Bay Flotilla during the War of 1812. The collection also has a very strong Civil War component, with artifacts from vessels such as USS *Tulip*, USS *Housatonic*, and CSS *Alabama*. More recently, the collection has been augmented to include additional artifacts recovered from twentieth-century military craft such as World War I Armored Cruiser USS *San Diego*, a World War II-era SB2C Helldiver aircraft, and German U-boat *U-1105*. The array of artifacts includes weaponry, ordnance, navigational tools, medical instruments, ceramics, glassware, personal effects, as well as parts of the ships or aircrafts themselves.

Currently, over 6,000 archaeological artifacts are on loan to over a dozen museums and institutions around the USA and in France. Typical loan agreements have a maximum duration of 5 years with an option of loan renewal, while, on average, all the current borrowing institutions combined welcome over one million visitors annually (Morrand 2012b). With such a large volume of visitors, this outreach initiative exponentially increases the likelihood of an individual's physical exposure to the artifacts and subsequent understanding of the importance of submerged cultural heritage. However, this particular initiative affords the UAB a diminished capacity to tailor the delivery of information to each visitor. Rather, successful dissemination of the UAB's message through this initiative hinges on both the borrowing institution's insightful presentation of the information and on the visitor's interpretation of

the cultural importance of the collection. Given the variety of host facilities and processes, uniformly applying metrics to study the impact of these artifact loans on the general public is challenging. However, the demand for artifacts recovered from sunken military craft, as indicated by the significant percentage of the collection that is on loan, indirectly suggests that they resonate with the public. Ultimately, the artifacts on exhibit have the ability to tell a variety of multifaceted and diverse stories, which can connect with both the military and civilian public on a personal level and can inspire a deeper interest in submerged cultural heritage.

Publications, Digital Outreach, and Mass Media

Two of the farthest reaching public outreach endeavors undertaken by the UAB are its publication program, as well as its presence in mass media. The publication program allows for a more concentrated effort geared towards priorities set by the UAB and in line with the message and information the Branch wishes to impart upon the reader. In addition to archaeological field reports, management plans, technical manuals, or cursory project summaries geared primarily to a professional audience, the UAB publication scheme also places priorities on popular publications in newsletters and magazines or in the form of posters and pamphlets (Maryland Historical Trust et al. 1991; West 1996; Hamilton 1997; Neyland and James 2002; Schmidt 2002; Naval Historical Center, Underwater Archaeology Branch 2008; Hayes and Robert 2009; Schwarz 2009; Morrand 2012a; Underwater Archaeology and Naval History and Heritage Command 2012e). Each publication is naturally tailored to the audience and subject of research, but all attempt to incorporate general preservation-minded themes.

A particular subset of UAB publications involves the organization's digital presence. Though restricted in its abilities by federal security and accessibility requirements, the Branch has dedicated significant effort to publishing reports, management plans, information sheets, and site-specific summaries on its Web site (Underwater Archaeology and Naval History and Heritage Command 2012a, b, c, d). Though limited in its interactivity, the Web site serves as the hub of information to which other digital outreach tools feed. The Naval History Blog, for example, enables UAB staff to directly post current, interactive material pertaining to archaeological investigations, conservation processes, or other material (U.S. Naval Institute and Naval History & Heritage Command 2012). The Blog, in turn, links directly to the UAB Web site where readers can find more in-depth information. A similar role is served by the Branch's Wikipedia page, which was initiated by a UAB intern and provides a summary of the UAB's functions (Underwater Archaeology and Naval History and Heritage Command 2009). It is intended to serve as a portal to the UAB Web site by taking advantage of the prominence of Wikipedia when readers are conducting basic searches. In all three cases, the Web site, the Blog, and the Wikipedia page, the UAB maintains general control of the length and framework of its outreach message. While blogs may be considered interactive in the sense that readers can post online feedback, the UAB has been more tentative in its embrace of other, more engaging, forms of social media such as Facebook or Twitter. The reasons for the trepidation

surround the limiting nature of the medium and internal UAB resources. To the first point, complex issues such as maritime graves, unethical disturbance of heritage sites, or liabilities for environmental pollution cannot be satisfactorily addressed in the limited space provided by an individual post. At the same time, without constant monitoring to ensure appropriate, credible, and honest information is being shared by participants in a Facebook or Twitter conversation, the UAB would see its heritage preservation message compromised in a public forum. It often takes an experienced professional to explain the benefits or drawbacks of complex subject matter and so social media outreach may not be assigned to an intern or volunteer without some risk. At the same time, UAB staff members undertake outreach initiatives as a collateral duty, precluding consistent social media monitoring. Therefore, while the UAB has a Facebook page, for instance, it serves a similar function to the Blog or Wikipedia page in directing visitors to the UAB Web site (Facebook 2012). Posts, much like condensed blogs, are periodically made and solicit feedback, but the open forum feature is disabled. While the UAB recognizes that it is not taking full advantage of what social media have to offer, it is engaged in the venue in a more reserved manner that ensures clarity in its public message. Interestingly, while a Web site presence is ranked very high in effectives by participants of the abovementioned maritime heritage steward survey, social media are ranked among the lowest in outreach effectiveness by respondents, suggesting that the UAB is not alone in its prioritization of resources (Catsambis 2012b: 381).

Many of the same themes present in UAB print or digital publications are also promoted via mass media to a broader public, though often in such cases the ultimate message delivered is not always the one originally intended. Control over the message, and the ability to customize it, is compromised in favor of the far-reaching potential of this most indirect form of outreach. Therefore, in order to touch the widest possible audience, UAB staff members have participated in a number of television interviews, radio/online discussions, documentaries, and newspaper publications, among other forums (Burgess 2009; McCluney 2009; Vogel 2009; Discovery Channel 2012; Maryland Public Television 2012). The benefits of such initiatives may be obscured by the indirect nature of the media and often are not realized immediately. At the same time, they may foster unforeseen support or additional outreach opportunities. A newspaper article on a recent field project read by an educator, for example, eventually led to an invitation for two UAB staff members to present to 70 students at a local middle school on their annual career day (Vogel 2009). In this manner, an initial generic outreach initiative led to a very direct outreach engagement that resulted in student letters suggesting they wished to become underwater archaeologists.

Conclusions

All of the aforementioned outreach initiatives that span the spectrum from direct contact to mass media impressions have two objectives at heart: either to reinforce the value an audience member places on the preservation message or to present the preservation message in such a way as to fit within a frame of reference already

valued by that individual. The "theory of change," as presented by Fox (2006: 53), is the idea that the lives of individual visitors will be positively impacted through an educational experience that incorporates some level of intellectual or emotional engagement and that this positive impact on the individual will contribute to the collective well-being of the broader community. The UAB views each member of the public exposed to its mission as a potential ambassador who will, in turn, spread aspects of the preservation message they feel the strongest about to the people around them. As such, the most direct forms of outreach are often the most fulfilling. This direct connection, however, cannot always be maintained as outreach efforts are scaled up and out to a greater number of prospective audience members. In these broader initiatives, the UAB attempts to present a consistent and more generally applicable message, depending on the medium and the intended audience. While less transformative, such impressions often eventually lead to more direct means of outreach with those members of the public that are the most interested. As expressed earlier, this account may not present the reader with entirely original outreach methods. The hope, however, is to convey the importance of a conceptual framework that places each outreach effort in its respective place within a sliding scale from the personal to the general public and that recognizes the importance of crafting an organization's message according to the medium, the audience, and their frame of reference.

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Chapter 3
Out of Sight, Out of Mind and at Risk: The United Kingdom Public's Engagement with Heritage

Christopher J. Underwood

Abstract Educating the public is widely acknowledged as a crucial component in generating public support for the protection and preservation of underwater cultural heritage. The United Kingdom (UK) public's engagement with heritage has never been greater. The trends continue to show steady increases in the numbers of the public visiting heritage sites and of those who are directly involved as volunteers. However, despite these positives, concern remains among the archaeological community about the state of preservation of some of the UK's protected wreck sites. This chapter examines the UK government's policy that has proven successful at raising public interest and involvement and to what extent this success has extended to underwater cultural heritage.

Introduction

Over the past 25 years, an array of initiatives has emerged that focus on raising awareness of the importance of Underwater Cultural Heritage (UCH), as well as the threats to it, whether human or natural. In parallel, innovative ways of involving the public, scuba divers and non-divers alike, have been developed, which are now established components of the heritage landscape in the United Kingdom (UK) and of course elsewhere, such as in North America. Public archaeology has emerged as a stand-alone aspect of the discipline. It encompasses the many facets of archaeology's relationship with the public and is recognised as being one of the fastest growing sectors of the field (Department for Culture Media and Sport [DCMS] 2007), while the UNESCO Convention on the Protection of Underwater Cultural Heritage

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2001 (2001 Convention) also advocates for public access and enjoyment of UCH. There are now public archaeologists and organisations devoted to engaging with the public, such as the US's Florida Public Archaeology Network (FPAN) and, to a large extent, the initiatives of the UK's Hampshire and Wight Trust for Maritime Archaeology (HWTMA) and Nautical Archaeology Society (NAS), with Save Ontario Shipwrecks (SOS) and the Underwater Archaeological Society of British Columbia (UASBC) being among the avocational organisations with a very strong and long-standing protection and preservation ethic.

In the UK, initiatives to engage and include the public have largely overlapped with a government strategy to regenerate the historic environment, which began in earnest in the latter part of the twentieth century. However, in 2013, opinions among the UK's archaeological and heritage communities remain divided as to whether the public's awareness of underwater cultural heritage has improved greatly over the same period. This is despite the statistics, discussed below, showing that public interest and engagement with heritage has never been greater. But, has this interest spread to include UCH? From the perspective of at least part of the archaeological community, there is a need to more effectively raise awareness and understanding of the current state of some sites if their long-term protection and preservation is to be successful. The current policy is to legally protect and manage sites and to limit intrusive activity to that which is essential, sufficiently well-resourced, and justifiable. This policy also includes providing access to recreational groups to enjoy the sites, but UK heritage bodies have limited funds to provide for the long-term preservation of sites, while acknowledging that research and trials have been undertaken to better understand the processes involved. However, the situation remains that sites continue to be at risk with those who are closely involved with them concerned by the lack of progress.

Out of Sight and Often Out of Mind

The question, "How often are we going to see a shipwreck site?" (BDRC Continental 2009) illuminates one of the key issues that face public archaeologists. Many sites are quite literally out of sight and often out of mind (Fig. 3.1), with very few of the UK's protected maritime sites appearing in the news media. The quotation is taken from a report that formed part of the background research into public opinion in advance of proposed new heritage protection legislation. It perhaps sums up the difficulties in presenting and interpreting underwater sites for the general public, other than for the relatively small number of recreational divers who can physically enjoy them. The issue of out of sight, out of mind extends beyond the public's ability to enjoy underwater heritage, to also include public and government attitudes towards how cultural heritage is valued, protected, and preserved. To what extent is this issue having an impact on the government's willingness to invest in protecting and preserving UCH? A review of the UK's broader heritage policy that extends beyond UCH is useful as it clearly shows the value that the country and the government places in it.

Fig. 3.1 The view from Henry VIII's coastal fort towards the Isle of Wight (background), showing the circular Spitbank Fort, part of a nineteenth-century protective ring of defences around Portsmouth, which is clearly visible, but the site of the *Mary Rose* and other historic shipwreck sites that are within the scope of the image are invisible. Even the decaying interpretive sign about the *Mary Rose* has been removed (Photo by author 2010)

UK Government's Vision for the Regeneration of the Historic Environment

In *Power of Place* (DCMS & Department of Environment, Transport and Regions [DETR] 2000) and *Force for our Future* (DCMS & Department for Transport, Local Government and the Regions [DTLR] 2001), the reasoning and motives behind the government's policy to regenerate historic environment sites were outlined. Brief references are made to improving the management of underwater heritage assets, noting that it was not until 2002 that English Heritage (EH) became legally responsible for the management of UCH in the coastal waters of England. Government focus was, and remains, on the benefits of heritage contributing to the well-being and education of the population, as well as the potential of heritage to significantly contribute to the UK's economic growth, largely through increasing the numbers of domestic and international visitors,[1] with heritage remaining "the most cited reason for people to visit Britain from abroad" (EH 2011). The intended policy spans the renovation of the country's historic environment (EH 2005), coastal town seafronts (EH & The Commission for Architecture and the Built Environment [CABE] 2003), museums and historic ships, although ships and

[1] Tourism is one of the six largest industries, with an estimated £90bn (USD$140bn) contribution, 200,000 businesses, and 4.4 % of UK jobs.

collections considered archaeological such as the *Mary Rose* have also been beneficiaries. This policy continues, perhaps gaining even more importance in the first decades of the twenty first century due to the current international economic imperative to increase or generate new sources of fiscal growth.

Although the majority of funding has come from the private sector (business or individuals), significant funding for the regeneration policy has come from the UK's Heritage Lottery Fund (HLF) which has, since the establishment of heritage as a "good cause" in 1994, provided almost US$7 billion to over 30,000 projects. In many instances HLF grants and other sources of public funding have been supplemented by equal or greater investment from private business sources, either directly or in related developments. Private investments in heritage organisations amounted to US$364 million in 2008–2009, accounting for more than 50 % of individual giving in the UK's cultural sector (HM Government 2011). A further US$50 million for historic environment projects with a very strong community involvement component and archaeological research projects has come from the Aggregates Levy Sustainability Fund[2] (ALSF), a proportion of which has been applied to the maritime sector.

> A key aspect of the ALSF in the context of the historic environment has been its ability to reach out to large numbers of people through a wide variety of approaches. These can include the restoration of accessible monuments, events, exhibitions, signage, lectures, hands-on sessions, broadcast media (television and radio), and a wide range of web-based and hard copy publications. The impact of these various activities has been considerable and has helped to introduce archaeology, historic structures and our maritime heritage to an enthusiastic public (Richards 2008).

There are many examples of smaller HLF grants for coastal heritage, similarly for heritage associated with rivers, lakes and waterways. Large capital grants from the UK's HLF have also contributed to the renovation of historic vessels such as the clipper *Cutty Sark*.[3] The vessel was reopened to the public in April 2012 following its 6-year restoration, during which the hull had suffered a serious fire in 2007. US$37million of the total cost of US$81 million came from the HLF. A further, US$34 million of the US$58 million to construct a new museum to house Henry VIII's warship *Mary Rose*, raised from the Solent in 1982, came from the same source. The new museum opened in May 2013. Both have significant associated tourism, economic and social benefits for London and Portsmouth, respectively. Portsmouth has undergone a transformation over the past two decades that reaches beyond the historic dockyard within which the *Mary Rose* and other maritime attractions are housed. Substantial funding through the Welsh government and the HLF has also been instrumental in the conservation of the fifteenth century vessel[4] discovered in 2002 during the building of Newport's new Riverfront Theatre and Arts Centre (http://www.thenewportship.com).

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[2] English Heritage received funds from the Aggregate Levy Sustainability Fund in 2002–2011.

[3] *Cutty Sark*, launched in 1869, is the oldest surviving tea clipper and forms part of Maritime Greenwich World Heritage Site.

[4] Research has revealed that the Newport Ship is a fifteenth-century medieval merchant ship.

With respect to the latter example, the public played a pivotal role in the rescue of the hull and its associated contents. When the hull was first revealed during the construction, it had already suffered damage from a number of concrete foundation piles that had punctured the hull. Time was granted for the recording of the hull, but no funds were originally available for the recovery, nor for subsequent storage and conservation. An extract from a recent interview provides an insight into the public feeling at the time: "we've lost a lot of our history over the years by buildings being demolished, but it was as if the people of Newport said that we want to preserve this; this is our history" (British Broadcasting Corporation [BBC] 2012a). Consequential of a vociferous and highly visible public "Save Our Ship" campaign supported by archaeologists and heritage bodies, funds were found to remove the hull and the artefacts contained within and around it before the construction continued. It would have been ironic if in order to create a new cultural centre, older cultural heritage were lost. Although at present there are public open-days to view the progress of the conservation and associated research, the longer-term intention is for a new museum in the city to house the conserved hull and artefacts, which is consistent with the policy of utilising heritage to boost tourism. This example also shows what becomes possible once the public "connects" with their heritage, which is obviously much easier when they can see and touch it, unlike with most UCH where they cannot. Guidance and support from archaeologists and heritage organisations are essential components to confirm the significance of the discovery and to ensure that the enthusiasm is channelled in the right direction.

Statistics Extracted from Progress Reports of the Policy

The progress of the regeneration of the historic environment reflected by the associated increase in public visitation from all social sectors of society and geographic regions is monitored in the Department for Culture, Media and Sport's *Taking Part* quarterly survey statistics (DCMS 2012). The report reveals that more than 70 % of adults made at least one visit to a historic place during the past year, the highest proportion since 2005–2006, with more than 30 % of adults visiting a heritage site at least three or four times a year, an increase of 3.6 % from 2005 to 2006. Visits to a museum or gallery during 2011/2012 also increased to 48.2 % of the adult population. Digital engagement with heritage is also reported, with over 28 % of adults visiting a heritage-related Web site during the year, compared with a little over 18 % in 2005–2006, with more than half of the visitors using the website for educational purposes, rather than solely for arranging a visit or buying tickets. Around one in five visits to heritage Web sites included a virtual tour of the heritage site.

England's most popular cultural events (when the figures are aggregated), are the Heritage Open Days that attract one million visitors each year and National Archaeology Week has grown to become 2 weeks, which features over 700 events

Table 3.1 Numbers and profiles of visits to historic properties and 2009/2010 trend changes

Category	Sample	% of visits	Av. no of visits	Total visits	% Change 2009–2010
Castle/forts	92	10	53,000	4,895,000	−4
Gardens	109	17	79,000	8,586,000	−6
Historic houses	251	34	69,000	17,277,000	+2
Historic monuments	51	6	58,000	2,942,000	+2
Visitor/heritage centres	83	6	39,000	3,240,000	−3
Places of worship	121	20	83,000	9,989,000	+4
Other historic properties	80	7	44,000	3,498,000	+30
Total	787	100	64,000	50,435,000	+2

Source: BDRC Continental 2011

with 160,000 participants (EH 2011). English Heritage and the National Trust[5] had more than 760,000 and 3,700,000 members, respectively, in 2010/2011, with more than 450,000 volunteers contributing over 58 million hours annually (HMG 2010). These figures represent rises in the membership of English Heritage by 70 % and the National Trust by 31 % since 2001 (EH 2011).

The growth in public interest is also evident in an annual survey aimed at identifying the trends in visitor attractions. For the purposes of the survey, the definition of a visitor attraction is:

> …an attraction where it is feasible to charge admission for the sole purpose of sightseeing. The attraction must be a permanently established excursion destination, a primary purpose of which is to allow access for entertainment, interest, or education and can include places of worship (but excludes small parish churches); rather than being primarily a retail outlet or a venue for sporting, theatrical, or film performances. It must be open to the public, without prior booking, for published periods each year, and should be capable of attracting day visitors or tourists as well as local residents. In addition, the attraction must be a single business, under a single management, so that it is capable of answering the economic questions on revenue, employment etcetera (BDRC Continental 2011).

Although the data contained within the report do not enable the separation of individual heritage attractions, the figures do include historic ships and coastal attractions. Almost 800 historic visitor properties provided information for 2010, sub-divided into castles/forts; gardens; historic houses; historic monuments (includes archaeological sites); visitor/heritage centres (includes cultural interpretation centres); places of worship and other historic properties which include historic ships and coastal features.

Table 3.1 shows numbers and profiles of visits to historic properties, as well as the trend of changes between 2009 and 2010 (BDRC Continental 2011). The survey also includes trends since the surveys began in 1989, showing by 2010 an increase in visits to all but one heritage category, places of worship which saw a decline of

[5] The National Trust is a not-for-profit organisation established in 1895. It protects and opens to the public some 350 historic houses, gardens, and ancient monuments, as well as open spaces.

more than 20 %, with two categories, historic monuments and other historic properties, growing by 36 % and 58 % respectively, which overall shows an increase of 19 % in numbers between 1989 and 2010 (BDRC Continental 2011).

Popularity of Maritime Heritage

Other sources provide figures relating to maritime-related attractions. Visitors to the *Cutty Sark* for the 5 months following its reopening in April 2012 exceeded 100,000 (*Cutty Sark* Press Office 2012), with the Portsmouth Historic Dockyard, which comprises *Mary Rose*, HMS *Warrior*, HMS *Victory*, National Museum of the Royal Navy and other smaller historic vessels, attracting approximately half a million visitors annually (Portsmouth Historic Dockyard 2012) and SS *Gt. Britain* receiving almost 170,000 day visitors in 2010 (SS *Gt. Britain* Trust 2011). As the figures above illustrate, there is also no lack of interest in maritime heritage. It seems clear that where projects can demonstrate their potential for social or economic value and are therefore in-line with current government policy, funding can be made available, but not in all cases.

City of Adelaide

An example is that of the *City of Adelaide*, a clipper of similar vintage to London's *Cutty Sark*, which, during its varied working life, made numerous voyages transporting British, Irish and European migrants to South Australia in the nineteenth century. The hulk has languished on a slipway in Scotland for years and now requires substantial restoration. Local enthusiasts using the title *Sunderland City of Adelaide Recovery Fund* (http://www.cityofadelaide1864.co.uk/) want to return the vessel to the River Wear in Sunderland, England, where the ship was built, to become the centrepiece of a floating maritime museum. The group's attempts to raise funds for the transfer from Scotland to the River Weir and for the ship's restoration have not been helped by a feasibility study commissioned by the Sunderland City authorities which concluded that the new museum "could never service the cost of its restoration" (BBC News 2002b).

An alternative ambitious plan has been proposed that would involve the transportation of the hull thousands of miles back to Adelaide, South Australia. A tug of war developed between the UK-based group wanting to keep the vessel and the reciprocal organisation under the banner *Save the Clipper* (http://www.cityofadelaide.org.au/) who are campaigning to take the ship to its South Australia "home." The campaign's Web site homepage states that:

> As the only surviving sailing ship built to give regular passenger and cargo service between Europe and Australia, she represents a whole foundation era of Australian social and economic history. It is difficult to imagine a more vital icon of the making of modern Australia and of the relationship between Britain and the Australian colonies (Save the Clipper 2012).

This is a very similar message to that used to demonstrate the significance and to justify the repatriation of the SS *Gt. Britain* from the Falklands in 1970. The final berth for the *City of Adelaide* may well be determined by the community that shows, through the raising of funds, that the vessel is more significant to them than to their "competitor" campaign.

Stirling Castle, 1703

The UK's (underwater) archaeological community is concerned that some, if not all, of the country's most important protected wrecks are under-resourced and at a significant risk of deterioration. An outstanding example is that of the *Stirling Castle*[6] (1703), whose long-term licensee,[7] having witnessed the deterioration of the site since its legal protection in 1980, has questioned the government's commitment to the site's preservation:

> Over the last 25 years we have moved from an era of discovery through the sensible investigation of sites to a position where we largely do nothing but employ electronic gadgets and very little else. We learn little from this and we certainly do not engage the public (Peacock 2009).

The comments raise two important issues, preservation and engagement with the public. While the site remains on English Heritage's Heritage at Risk register and the management plan for the site includes monitoring by the site licensee and independently by the government's contracted archaeological team,[8] recovery of vulnerable finds, limited remedial physical protection and the development of interpretive material for local museums (Dunkley 2008), there has been no major initiative aimed at the site's long-term stabilisation and preservation. As a protected and therefore important site, why have greater efforts not been made to preserve the wreck? Although scuba divers visit the shipwreck under licence, the site is in an exposed offshore location, making the prevailing diving conditions difficult. It is therefore unlikely that the numbers of visitors will ever total more than a few 100 divers per year. These levels will not make a meaningful impression on the local region's visitor figures, acknowledging that the *Stirling Castle*'s story is also told in

[6] *Stirling Caste* is a 70-gun warship built in 1678 at Deptford, one of 20 third-rate vessels ordered by Samuel Pepys to regenerate the English Navy, found in 1979 by sport divers in the Goodwin Sands off Kent, UK.

[7] Heritage authorities in England, Scotland, Wales, and Northern Island provide licenced access to designated sites covered by the Protection of Wrecks Act 1973. There are four types of licence: excavation, surface finds recovery, survey, and visitor. A nominated archaeologist, who often acts in a voluntary capacity, is a prerequisite for an excavation licence and for surface recovery of finds, but not necessarily for a survey or visitor licence. The role of the nominated archaeologist is to work closely with the site licensee to develop the archaeological strategy.

[8] The contractor relating to wrecks designated under the Protection of Wrecks Act 1973 is, at this writing, Wessex Archaeology.

Ramsgate Maritime Museum, which is itself suffering from financial problems and is not open to the public throughout the year.

The story of the *Stirling Castle* has failed to motivate the public into more proactive action, whereas the Newport Ship certainly did. The difference must partly be due to the fact that large numbers of the public could see the Newport Ship first-hand and therefore be connected with the local significance and obvious threat, whereas the possibility of equivalent numbers having direct contact with the environmental threat to the *Stirling Castle* is, by comparison, very low, even using internet or museum-based information to help raise awareness. The example of the *Stirling Castle* has also done little to protect the integrity of the 2001 Convention's principle of preservation in situ, which, although stating that this is the first and not the only option for action, has in some public quarters come to mean do nothing. The lack of more positive action appears to be gambling with the future of important UCH and seems to challenge the statement that "our existing heritage assets are also simply irreplaceable" (HMG 2010).

The Economics of Recreational Diving

If government is driven by the social and economic value of the historic environment, a calculation of the value of UK recreational diving, which is focused on the thousands of wrecks around the coast, predominantly from the two world wars, would be helpful. According to information published in *Charting Progress 2*[9] (Department for Environment, Food and Rural Affairs [DEFRA] 2010), an estimated 270,000 recreational divers are in the UK, with 70 % of their activity focused on the coast. The Scottish Government has also published information about diver visits on protected sites, including the protected[10] remains of the German High Seas Fleet scuttled in Scapa Flow, Orkneys, after the end of World War I in June 1919. Over 15,000 dives were carried out on the fleet in 2006, with 1,640 scuba divers visiting three of Scotland's eight designated wrecks under "visitor licence" from Historic Scotland between 1994 and 2009 (Scottish Government 2011). In England, increasing numbers of visitor licences are being issued for its protected sites, with possibly the most popular being the *Coronation*,[11] which attracted approximately 1,000 licensced visitors in its first year of operation.

Although precise figures are not available, even an estimate of the expenditure to make these dives possible would translate into a considerable contribution to both

[9] *Productive Seas* is chapter five of *Charting Progress 2*, a wide-scope document that identifies the economic potential of the marine environment including marine leisure.

[10] The seven remaining vessels of the German High Seas Fleet are scheduled under the Ancient Monuments and Archaeological Areas Act 1979, which allows free access on a strictly "look but don't disturb" basis.

[11] *Coronation* is a 90-gun second-rate ship, built in 1685 at Portsmouth (DCMS 2009).

local economies and those where visiting divers begin their journeys. One problem is that, unlike the annually calculated economic value of visits to heritage sites above high water, a combination of a lack of data, partly due to the fragmented nature of the sector, and the reality that visits to offshore wreck sites are often free, makes it difficult to calculate the overall direct economic benefit of public visits to wreck sites. Scotland acknowledges that, despite this lack of data, underwater sites "do contribute to less tangible social benefits such as education, health and well-being" (The Scottish Government 2011).

Diver Tourism, Scylla

A UK example where the financial contribution of diver tourism is measurable and has raised government awareness of the social and economic potential of shipwrecks is the case of the *Scylla.* The ex-Royal Navy Leander Class frigate became, in 2004, Europe's first "artificial" wreck site with the primary aim of creating a new attraction for scuba divers utilising an ex-Royal Naval vessel. It is used as a case study in *Charting Progress 2*. Following an initial investment of US$2 million in the first operational year, it showed an overall return of US$2.25 million[12]:

> … with an estimate of 35.46 full-time equivalent (FTE) jobs made up of supporting clubs, centres and charter boat operators as well as tourism related businesses … with 27.8 jobs (FTE) being created in the South-west region within which the *Scylla* is located with a net income of US$1.85 million (DEFRA: 2010).

Although the example shows the calculable potential of dive tourism, the economic visibility of the diving carried out on most sites, including those undertaken as part of visitor schemes to the UK's protected sites, is limited. The challenge remains to demonstrate in more locations in the UK that the many thousands of diver visits to wreck sites, including those to legally protected sites, make a considerable and calculable contribution to local economies, therefore warranting greater consideration of the impact that losing these sites will have on local economies at some point in the future. Historic Scotland commissioned a geophysical study in 2012 to help inform their case for a Historic Marine Protected Areas, using the resulting images and interpretation to inform all visitors to the Orkney Islands:

> We hope the results will be of interest to the thousands of recreational divers who visit Scapa Flow every year, and that those who don't dive will also enjoy this insight into the heritage that survives beneath the waves… [and that] this survey of 18 sites has helped bring new information to light, and that it will provide a useful basis for efforts to monitor the condition of the wrecks in Scapa Flow, and conserve them for future generations to enjoy (BBC 2012c).

[12] The net additional impact for the South West Region is lower than the overall impact, due to some expenditure outside of the region (*Charting Progress 2*).

Popularity of Heritage Television

Force for the Future recognised that the policy statement was published "at a time when the public's enthusiasm for the past is increasingly evident, not least in the strong media focus on archaeology and history" (DCMS & DETR 2001). While it is accepted that public archaeology initiatives promote understanding and responsible involvement, the public are also exposed to other influences that include fictional films, non-fictional documentaries, or fictional writing that features archaeology, heritage, or underwater adventure, as well as the news media within which underwater discoveries or projects seem to appear on an almost daily basis. It is impossible to discount the very real impact of these factors, which do not always convey the protection and preservation message that many archaeologists and cultural heritage managers would wish to see. Without the input of archaeologists and heritage professionals, it is entirely possible that the public are not able to distinguish between projects that aim to preserve and protect, or at least have science as a primary objective, and those that aim to exploit for commercial benefit. In other words, does the public, as at least part of the archaeological community suspects, remain unaware of UCH in the context of understanding the very real challenges that face its protection and, ultimately, its preservation? Enjoying UCH by visiting or by being a volunteer in a heritage project or activity does not necessarily mean that the underlying issues that concern archaeologists and heritage professionals are understood. If understanding remains low, despite public interest, visits, and even involvement, public support may not be as strong as it should be.

"Television programmes can help people gain more understanding of heritage" (EH 2006). Using figures extracted from the Broadcasters' Audience Research Board (BARB), Piccini and Henson (2006) analysed public viewing over a 12-months period spanning 2005–2006. The analysis revealed that over 160 individual programme titles, on 25 separate TV channels, when aggregated together, represented nearly 9,000 h of heritage television, or the equivalent of two billion viewing hours. Television programmes regarded as "heritage" include a surprisingly wide range of titles, with those dedicated to factual documentaries being only a part. The five most popular programmes were*: Flog It*, *Cash in the Attic*, *Bargain Hunt*, *Antiques Road Show* and *Car Booty*, their titling suggesting that the programme's emphasis is on economic value. Those programmes rated six to ten of the most popular, *Coast'*,[13] *Rome*,[14] *Time Team*,[15] *A Picture of Britain*[16] and *Egypt*,[17]

[13] *Coast* (BBC & Open University) features the natural and social history of the British coastline, which has expanded to include Republic of Ireland, France, Low Countries, and Scandinavia.

[14] *Rome* (BBC) is a fictional drama following the lives of two ordinary Roman soldiers.

[15] *Time Team* (Channel Four) has run since 1994 and follows archaeological investigations, including several underwater, by a team of experts, presented by Tony Robinson (Monty Python).

[16] *A Picture of Britain* (BBC) features artist's views of Britain.

[17] *Egypt* (BBC) is a drama that features some of the past's great archaeologists and their discoveries.

place greater emphasis on natural or cultural value rather than on the economic, albeit through a mix of fiction and non-fiction.

One of the objectives of the research was "to improve understanding of how engagement through television fits into the overall pattern of people's engagement with heritage" (Piccini and Henson 2006): 98 % of UK adults viewed a minimum of one heritage programme per annum, with 20 % viewing more than 99 programmes each year. Some of the conclusions of the report are significant. Historic dramatisations were shown to be more popular than "voice over" documentaries, with a comment from the authors stating that,

> …for all the criticism that archaeologists and historians may level at dramatizations like *Rome*, they are undeniably more popular than conventional voice-over documentaries. These factors suggest that not only do viewers want the people putting back into the past, and a human story to bring the past to life, but also the immediacy of spectacle that makes heritage something to welcome into their living rooms (Piccini and Henson 2006).

The relationship between archaeologists and filmmakers and the media is therefore important, but one that has perhaps deteriorated. Research that includes how nautical archaeology has been portrayed by television concluded that "the relationship between documentary-film makers and nautical archaeologists in the 1980s was a "symbiotic" one which gave archaeologists some influence over the content of programmes" (Sperry 2008). This symbiosis was evident during the making of the *Chronicle* series of programmes that featured the excavation, research and recovery of the *Mary Rose* in the late 1970s and early 1980s. The programme's producers and crews worked in harmony with the project's team, who even assisted in the underwater filming, and were sympathetic to the project's work schedules. Sperry, based on interviews with archaeologists, goes on to say that this relationship has been eroded, to a point where archaeologists do not consider that they have much input. He points out that the implications for the discipline (and by inference the protection and preservation of UCH) are serious in so far as programmes help to define the discipline, recruit new audiences who may see archaeology as entertainment rather than as a science and attract students who will become the new generation of archaeologists. What are the implications?

Programmes focused on heritage, including UCH, are going to raise public interest and awareness. The visitor statistics as shown above, even if not directly linked to viewing figures, support this assumption. A concern remains, however, that programme makers will find achieving a balance between education and entertainment difficult, with the emphasis slipping toward entertainment, which seems to be supported by the popularity of the dramas *Rome* and *Egypt*. If this is the case, is it also likely that projects that feature the discovery and recovery of cultural heritage, rather than non-intrusive projects that have become the archaeological norm over recent years, will become increasingly more attractive to programme makers? This emphasis may well distort the public's understanding of the on-going concerns of the profession, and leave the public unaware of the problems.

Table 3.2 Prioritised rank of historic environment themes

% Matter not at all	Category	% Matter a lot	% Matter a little	Total % positive
11	Places of worship	47	13	60
8	Conflict and defence	49	10	59
12	Cemeteries and Burial grounds	45	13	58
11	Urban archaeology	44	12	56
10	Seaside	41	14	55
13	Industry	41	13	54
12	Rural	40	13	53
12	Civic heritage	36	15	51
19	Shipwreck sites	24	20	44
21	Schools	25	17	42
17	Modern transport	27	15	42
22	Modern buildings	22	28	40
20	Diverse and multicultural history	28	11	39
24	Recreation in the modern world	18	18	36
	None	5	14	19

Source: BDRC Continental 2009

Public Attitudes on Heritage Protection

A survey (BDRC 2009) aimed at assessing the public's attitude to heritage protection, including statistics and comment relating to shipwrecks, provides further evidence of the value that the public places on cultural heritage. The public response to the question, "It is important that we value and appreciate the historic buildings, places and archaeological remains that we have in this country?" was that 71 % agreed strongly, 19 % agreed slightly, 7 % neither agreed nor disagreed, 1 % disagreed slightly and 1 % disagreed strongly, a clear result showing that the public valued and appreciated these places. The following question asked, "It is important to identify which historic buildings, places and archaeological remains are of national significance, so that they can be protected?" This question had a slightly less-strong response but nonetheless strongly in favour: 65 % agreed strongly, 23 % agreed slightly, 9 % neither agreed nor disagreed, 1 % disagreed slightly and 1 % disagreed strongly.

When ranked by public prioritisation (Table 3.2), shipwreck sites appear 10th out of the 15 categories, with 19 % of respondents who consider shipwreck sites important "not at all", with a total of 44 % considering them either important "a lot" or "a little". There were no identifiable positive comments relating to shipwrecks, but one comment should probably be considered negative: "How often are we going to see a shipwreck site?" which points to the difficulties that the majority of the public have in physically connecting to underwater cultural heritage (BDRC 2009).

Although for the archaeologist or heritage professional it is disappointing to see the relatively low ranking of shipwreck sites, the positives are that nearly half of the respondents considered them to matter (a lot or a little). Considering that less than

0.5 % of the population can directly visit an in situ shipwreck, this figure may be surprisingly high, accepting that the public can visit many of the historic ships displayed around the country. Rather than treating shipwreck sites as an isolated category, military wrecks, which are well represented in the UK's list of protected sites including the *Stirling Castle* and the remains of the German High Seas Fleet, could be moved (or at least referenced) to the category of *Conflict and Defence*, with which they are clearly relevant. Those military wrecks that represent a particular industrial technology could be moved or referenced to the more popular category of *Industry*. This would help improve the social relevance of some, if not all, the shipwreck sites, rather than considering them as an abstract group of characterless sites, with the real significance known only to those few involved directly through investigation or management, or to the recreational divers who visit them.

Summary

The UK government's policy to regenerate the UK historic environment has resulted in a steady growth in public visits and volunteering in the heritage sector. The public's level of interest is also shown remotely through high viewing levels of heritage television and virtual visits through heritage Internet sites. Although public awareness of heritage in general should be considered high, public understanding of the specific issues remains low. This lack of understanding is not helped by the unambiguous financial messages transmitted through the popular "heritage" programmes such as *Cash in the Attic* or *Flog It*, and, as has been suggested, archaeologists do not have much control over the content of factual documentaries which are not as popular as dramas such as *Rome* and *Egypt*.

However, the level of public interest in heritage provides a tremendous platform for public archaeologists to improve the public understanding of the need to not only legally protect but also to preserve the most important UCH sites. Public support is only part of the solution. Government, fixated on economic issues, also needs to be made more aware of the many thousands of recreational sport diving visits to wreck sites, including protected sites, that together contribute to the country's economy. Mechanisms should also be developed that enable sites to be assessed for their value, not just their economic value, but their social value expressed as the "feel-good" factor for having dived a historic shipwreck.

An important consideration is the current UK government's ideological concept of the "Big Society", which, simply translated, means the transference of power and decision-making to communities. Despite the development of the archaeological profession, the UK retains a strong tradition of amateur involvement, as exemplified by the largely voluntary nature of the licensees and their nominated archaeologists who investigate the UK's protected sites. This system embraces the concept of community involvement, which of course should be supported by the heritage bodies tasked with the management of the UK's UCH.

With greater awareness the situation can change, as exemplified by the preservation and restoration of increasing numbers of historic ships, despite the on-going

difficulties associated with the *City of Adelaide*. Forty years ago, the public, although accustomed to the protection and restoration of historic buildings, viewed the restoration of historic vessels as something of a novelty. An extract from an interview in 2002 illustrates the evolution of public attitudes toward preserving historic vessels:

> People had got it into their heads that we are looking after historic buildings, but it was a completely new concept that we should look after historic ships [in 1970]. The National Trust was there for old buildings, but there was no one there for old ships… (BBC 2010d).

Today the preservation and restoration of historic vessels is quite commonplace, such as those that form part of the heritage attractions of Portsmouth's Historic Dockyard. The disparity in public and perhaps even government attitudes has now shifted to one which sees the public accepting as normal the preservation of buildings and historic ships while remaining largely unaware of the fate of the UK's underwater heritage. Therefore the aims must be to raise the UK government's awareness of the touristic (current or at some point in the future) and social benefits of UCH and to increase the public's understanding of the reasons why those underwater sites at risk should be preserved, with the result that the true concept of preservation can be applied more frequently to UCH.

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Chapter 4
Connecting People to the Past: An Ethnographic Approach to Maritime Heritage Interpretation and Recreation

Irina T. Sorset

Abstract This chapter describes the development of an ethnographic methodology for creating maritime heritage trails. Researching historical context, identifying available heritage resources, and visually assessing potential trail sites provided the foundation for establishing the interpretation potential of the Apalachicola River in the Florida panhandle. Information from community observations, community participation, free listing, group interviews, and cultural informants illuminated public opinions and attitudes. By allowing ethnographic data to steer and guide each stage of the trail model, this research was able to identify, adapt to, and address public wants and needs during the developmental stages.

Introduction

People in the field of public archaeology always seek to improve techniques for instilling among individuals a sense of ownership and stewardship for nonrenewable heritage resources. This study includes a methodology that uses ethnographic and social research to develop a public interpretation strategy for connecting people to the past. By involving communities in the developmental stages of local public outreach projects, archaeologists will better understand their potential audience's wants and needs and can develop a more effective interpretation. This chapter contains sections from the author's master's thesis highlighting the ethnographic framework for developing heritage tourism products (Sorset 2013).

As a case study, this research shows how to portray the archaeological heritage of the Apalachicola River in Florida through a model maritime heritage trail. Thematically linked interpreted sites such as maritime heritage trails capture the

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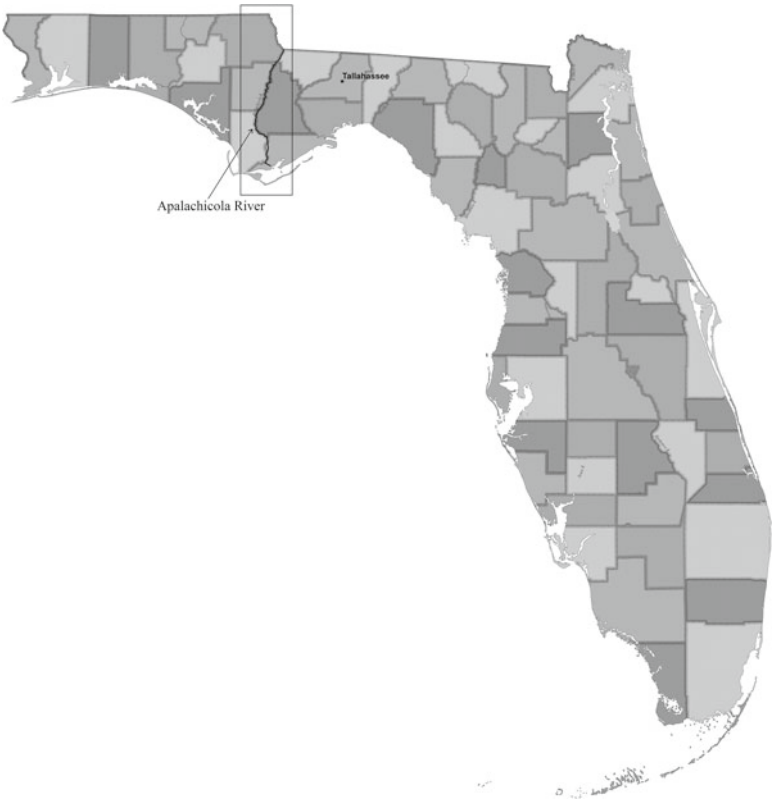

Fig. 4.1 Location of Apalachicola River in Florida (Illustration by author, 2012)

cultural, historical, and environmental contexts of archaeological resources. Surveys, questionnaires, and interviews examine contemporary issues, current uses, and communal needs surrounding the Apalachicola River.

Located in the panhandle of Florida, the Apalachicola River has a rich cultural history hidden within a vast riverine landscape (Fig. 4.1). The Apalachicola River is the largest river by volume in the state (Gibson 1979: 13). The waters of the river "flow in a southerly, sometimes corkscrew manner before emptying into the Gulf of Mexico" (Turner 2003: 1). The river is 105 miles in length, has 17,200 square miles of drainage area; and is of alluvial nature, transporting "sediment, usually from upstream erosion of silt and clay," thus giving the river a "muddy brown color" (Marth and Marth 1990: 19). The Apalachicola River is part of a larger river system that incorporates the Flint and Chattahoochee Rivers (Owens 1975: 1). The Apalachicola–Chattahoochee–Flint river system drains a large portion of the southeast United States including parts of Alabama, Georgia, and Florida. The river's access to the interior southeast as well as to the Gulf of Mexico is a significant geographical characteristic.

Infusing social research and public opinion into the developmental stages of the trail can help make maritime trails and their cultural resources applicable to modern societies. The Apalachicola River Maritime Heritage Trail (ARMHT) model uses ethnographic research not to engage public memory as a source of stories and photos but rather as a source to understand the local cultural basis for an effective heritage trail. A trail developed through this type of ethnographic research should, as a result, have local relevance which is essential for local buy-in, local preservation efforts, and local promotion of the trail itself. Using the model ARMHT, this research can be adapted and utilized to develop interpretive trails and other public archaeology ventures in other locations.

Research Problem

The field of archaeology is both glorified and demonized by the general public. On one end of the paradigm, people view archaeologists as adventure seekers holding the key to the secrets of the past. Mythicized by the character of Indiana Jones, many see archaeologists as individuals who dig for lost treasures and riches while wearing leather jackets and fedoras and bearing whips. On the other end of the spectrum, people view archaeologists as hypocritical academic snobs who rob communities of their artifacts. Some argue that although archaeologists insist others do not dig or collect any artifacts on or below the surface, archaeologists themselves indulge in these very acts privately away from the public view. Between these two extreme perspectives of the field of archaeology and its professionals, the reality of what exactly archaeologists study, how it relates to people today, and why it is important often is unclear to the general public.

In order to bridge these diametric public viewpoints of the field, archaeologists have made significant efforts to educate the public. As expressed by McGimsey (1972: 4), “Archeologists, amateur and professional, cannot expect others to preserve the nation’s heritage if we, who by interest or training are best qualified in the field, do not assume a role of positive leadership and public education.” The focus on educating others about the relevance and significance of historical, cultural, and archaeological resources has become an important subfield of archaeology, termed public archaeology.

Developing and creating outreach tools is fundamental to public archaeology. The goal of many of these tools is to effectively communicate the importance of preservation and conservation of archaeological resources. Public outreach tools “need to relate interpretation of the past to contemporary social and political issues in ways that are flexible enough to permit varied public responses” (Shackel and Chambers 2004: 119). As archaeologists, how can we adequately create a product for the public without asking the public what it wants? If we fail to elicit public response then archaeologists become the stereotype of the academic snob. As cited in McManamon (2002: 37), “The most significant and meaningful messages are not ‘one size fits all.’ Instead, they are local. Different communities have different pasts

and need to know specific things about those pasts." Ethnographic and social research can provide this insight into the interests of a potential audience and help unite the archaeologist with the public.

Many outreach tools are devoid of public involvement other than in the implementation and assessment stages. Instead of waiting until the end to ask the opinions of the public, we must *begin* the process with the public. One way to get the public involved in the early stages of public archaeology is through ethnographic research. Establishing an ethnographic model for the development of public interpretation tools assists with relating the past to present populations. With the inclusion of public input during the developmental stages, archaeologists will have greater success making cultural resources applicable and meaningful to modern societies.

Methodology Overview

The purpose of this research is to propose a methodological framework for including the public in the development of heritage interpretation products, such as a maritime heritage trail. Archaeologists, historians, and other social scientists routinely rely on oral histories, interviews, and other similar ethnographic methods to investigate social memories associated with their research. Anthropologists use local memories of community life, historical happenings, and social interactions to help understand how people construct meaning from the past. Although the process of exploring social memories to help reconstruct the past while understanding cultural and personal biases plays an important role in some research, this research does not use public input in this way. Instead, this project employs ethnographic methods to understand the wants and needs of potential audiences for consideration and use in the developmental stages of public outreach tools.

In the USA, the past couple of decades have witnessed an increase in interpretive heritage materials, such as outdoor signage, as well as a growth of engaging in-person historical experiences, including interpretive trails. At first, professional emphasis focused on practical specifics for interpretive materials such as production, cost, maintainability, and sustainability. Now that best practices and parameters for successful interpretation designs are widely agreed upon, the heritage industry seeks to answer questions of assessment for interpretive products including heritage trails, routes, and corridors. Questions that need addressing now include those surrounding the visitors' usability and experiences, the ability of material to relate to audiences, and the success of instilling stewardship messages. Assessment of interpreted heritage materials allows professionals to adapt and learn from successes and failures of established products. Currently, many assessments are conducted once the interpretive product is in place, after all the research, design, and implementation has taken place. Audience surveys about what visitors liked and disliked, what they would like to see, and whether they would return ask valid questions that help to improve visitor experiences and to make interpreted resources into effective teaching tools.

By using an ethnographic approach for the ARMHT, this researcher sought to answer similar questions usually reserved for the assessment of existing interpretive products. Instead of waiting until the end, after the majority of funding sources, time, and resources have already been used, to start asking pertinent questions of visitors, this model explores these questions first. By assessing the potential needs and wants for a heritage trail in the initial stages of development, the interests of visitors can be used to develop the trail. Through community immersion, participant observation, focus group interviews, and a formal questionnaire, valuable information was gathered on potential users of a maritime heritage trail along the Apalachicola River. Data from this research provide directions for the design and layout of a trail, content and format of interpretive materials, and insight into community concerns and issues regarding the river.

Interpretive materials must relate to their audiences; otherwise their stewardship messages are lost. No matter how well a project is funded, staffed, or researched, without consideration of the potential audiences, the likelihood of successful visitation and consumption is low. The National Trust for Historic Preservation encourages professionals who are developing heritage trails to include public input during the developmental stages through a variety of techniques and methods (Cultural Heritage Tourism 2011). The ethnographic model used in this research not only conforms to this direction of public input but also builds upon this literature by specifically addressing ways to achieve user input in a cost-efficient manner. Although this research applied the ethnographic model to a riverine maritime heritage trail, this framework can easily be adapted for the development of a variety of other interpretive heritage materials.

Ethnographic Research

The term *ethnography*, when used as a verb, simply "means the collection of data that describe a culture" (Bernard 1998: 16). Although traditional thoughts regarding the use of ethnography among anthropologists may invoke images of researchers immersing themselves into an indigenous culture within the depths of a jungle, the use of ethnographic research in everyday society is vast. From large-scale international companies maneuvering cultural differences among business partners to college campuses understanding student alcohol use, collecting information pertaining to a specific group within a society can help solve modern problems.

In order for a method or model to be used, it must be applicable to potential users. If the theoretical framework behind an ethnographic design is one that does not take reproduction into consideration, then no matter how perfect the design is, it will not be put into use. LeCompte and Schensul (1999: 88) explain, "there are many occasions when resources of time, money, and staff do not permit conduct of a full-fledged ethnography … methodologists have designed modifications of traditional ethnography that accommodate to shortened time line and/or multiple sites." A compressed ethnographic approach was chosen for the model ARMHT over other

forms of ethnography because of its likelihood of reproduction by future trail implementers.

Developing the model for an ARMHT uses several levels of participation observation. Since ethnographies "require that researchers develop considerable rapport with and trust among the people under study," a substantial amount of time is dedicated to participatory observation (LeCompte and Schensul 1999: 85). First, passive participation, or "hanging out" as Bernard (1995: 151) describes it, creates a sense of place while observing local river communities. Next, moderate participation gains social acceptance by balancing "being an insider and an outsider" through observation and limited participation (Spradley 1980: 60). Finally, active participation enables full participation in local activities associated with the Apalachicola River.

One of the goals of public archaeology is to partner with existing groups in an effort to help foster better relationships between professional archaeologists and local citizens. In alignment with public archaeology goals, "ethnographic field research depends on developing close personal relationships with community members over time" (Trotter and Schensul 1998: 718). Since the ARMHT utilizes a compressed ethnographic research design, making connections and including local expertise in the initial stages of development is crucial. The model for the ARMHT relies heavily on working with existing institutions and local community members to assist in its development. Established organizations tied to the Apalachicola River provide past and current information regarding river usage trends, local politics, sensitive community topics, and prudent public concerns. In addition to providing local insight, these partners brought a population data set of current members and volunteers who participated in surveys associated with the development of a maritime heritage trail.

In order to obtain public input for the ARMHT in a compressed ethnographic research design, several different techniques for data collection are encouraged by professionals in the field of ethnography. LeCompte and Schensul (1999: 89) favor "cognitive elicitation techniques, such as listing and pilesorts, group interviews with representative samples of individuals, in-depth interviews with cultural experts or key informants, and brief surveys administered to small representative samples" because of their suitability for short collection timeframe requirements as well as for cross referencing data sets. A variety of data collection techniques are used to understand local wants and needs regarding the development of a new interpretive trail.

Cognitive elicitation techniques "explore how people think about and locate meaning" in their surrounding environments (Trotter and Schensul 1998: 708). Free listing helps identify elements about the data domain as a whole, in this case the Apalachicola River, instead of individual responders within the domain (Schensul et al. 1999: 121). Free listing is a cognitive technique that "can be used to find out where to concentrate effort in applied research, and especially in rapid assessment" (Bernard 2011: 288). The free listing technique was used to narrow concerns, attitudes, and river usage pertaining to the Apalachicola River with short general questions. The frequency and consistency of responses help to categorize common answers as well as to label groups using culturally specific vernacular language (Trotter and Schensul 1998: 709).

Fig. 4.2 Recreational kayakers interviewed on the Apalachicola River (Photo by author, 2009)

Informal group interviews with samples of potential users of the ARMHT included boaters and kayakers recreationally using the river, tourists enjoying riverfront communities, and heritage professionals interpreting the river's resources (Fig. 4.2). Characteristics of informal interviews include spontaneous questions during the course of conversation with "self-selected" individuals in their natural settings (Schensul et al. 1999: 56). In the field, informal group interviews produce a substantial amount of information within a short timeframe from a larger population sample than do interviews with individuals.

Interviews with cultural experts representing different types of potential maritime heritage trail users illuminated various public opinions in regard to the Apalachicola River and the development of a trail. By utilizing key informants' local expertise, this data collection technique established "ethnographical insight otherwise obtained through more time-intensive participant observation and in-depth interviewing" (Trotter and Schensul 1998: 717). Although interviewing experts is widely accepted as an established method, Aunger (2004: 112) challenges that key informants "who by definition are not representative of the group from which they come" should not be "assumed to be sufficient" in accomplishing the goal of characterizing a cultural group. In addition to free listing, informal group interviews, and cultural expert interviews, the researcher employed a formal questionnaire among a small sample of individuals who might potentially use a maritime heritage trail. The use of the questionnaire as a data collection technique strengthened the validity of results by collecting opinions and feedback regarding the proposed trail from individuals outside of the key informants, thus creating a larger representative sample.

Designing, testing, and distributing the Apalachicola River Questionnaire (ARQ) was one of the last stages in developing the ARMHT model. After researching the historical context of the area, assessing the heritage resources, engaging in community immersion, and conducting ethnographic observations and interviews, a wealth of information guided the questions and content of the ARQ. Questions highlighted recurring themes in the wants, needs, and concerns of potential ARMHT users.

For the ARMHT model, several different questionnaire data collection methods were considered including door-to-door, telephone, mail, online, and drop-and-collect. Although each method had its own advantages and disadvantages, many were not feasible avenues for potential trail implementers to reproduce because of the money, time, and personnel needed in association with survey delivery, collection, and analysis (Bernard 1995: 258). To this effect, the use of SurveyMonkey provided a cost-effective platform for creating, distributing, and interpreting an unsupervised, self-administered, Web-based questionnaire for the ARMHT. SurveyMonkey is a popular online company that creates, manages, and analyzes digital surveys. Advantages of using a self-administered survey include limiting unintentional survey bias that could occur during face-to-face interviews or supervised questionnaires, standardizing all questions, and delivering a greater number of questions within a short timeframe (Bernard 1995: 260; Bourque and Fielder 2003: 20).

Information from the questionnaire can serve as the basis for data collection for eventual implementers of the ARMHT. With the data gathered from this survey, potential trail developers can tailor interpretation to their local audiences. The purpose of this survey was to obtain information on:

- Who is using the Apalachicola River?
- What are current views and attitudes of the river?
- When, how, and why are people interacting with the river?
- What concerns do people have about the current conditions of the river?
- Do people currently use any educational programs associated with the river?
- Is there an interest for a maritime heritage trail?
- What historical time periods interest people the most?
- What format and length of maritime heritage trail is wanted?

The survey uses a combination of questions including multiple choice, dichotomous, ranking, contingency, and open ended. Although experts advise the majority of questions in a self-administered questionnaire consist of closed-ended questions, the ARQ contained a few open-ended questions relating to abstract topics such as ownership of natural and cultural resources (Bourque and Fielder 2003: 20).

Ethnographic Insight

Throughout every stage of this research, information gained from ethnographic methods influenced decisions about the development of an ARMHT. Results of the ethnographic research indicated that initial thoughts for a model maritime heritage

trail along the Apalachicola River did not address the public's wants and needs and were disconnected from current issues. Apart from the assumptions that an ARMHT must incorporate recreational aspects of the river and the environmental stewardship of the river, all of the researcher's other assumptions concerning the best interpretive themes and trail designs were incorrect. For example, because of the rural nature of many riverfront communities, the overall length of the river, and the logistical challenges associated with visitation, it was initially thought that most people would be interested in a trail that was solely Web based. Data from the ARQ showed the complete opposite that a virtual trail was the least popular interpretive option. Further, it was assumed that the majority of potential trail users would not have access to watercraft and would therefore prefer a land-based trail. Although the majority of participants currently use or visit the river by car, most preferred a water-based maritime heritage trail.

Initially it was presumed the best length of the trail would correspond to a full-day outing, rationalizing that if someone were going to take the time to travel to and use the ARMHT, then he or she would prefer a trail that took 8 h to complete rather than a shorter timeframe. Once again, the ethnographic data disproved the researcher's preconceived notions. Many participants preferred a shorter trail or segment of trail that would take between one and 5 h to complete.

Another assumption was that participants would want a trail focused on a specific historical period, and the researcher anticipated data to prove a significant interest in one or two time periods with other time periods garnering little to no interest. Although some periods did receive more interest than others, interest in all periods was well represented. Qualitative data regarding which significant historical events the trail should highlight were broad and overreaching. Instead of responses identifying interests in specific events throughout history, data showed that participants were interested in learning more about overarching themes throughout time such as transportation and industry. Ethnographic research indicated that an ARMHT should include a variety of sites not restricted by temporal boundaries, rather than highlight sites related to the early European contact periods, as initially imagined.

Concerning important modern-day aspects of the river, water rights and economic impact were not on the original list of potential options for the ARQ. The importance of these aspects of the river was brought to light during community engagement and group interviews. The researcher was unaware of the majority of public concerns about the Apalachicola River and a proposed ARMHT. Unlike initial conclusions that the public would mainly be concerned with the cost of production and maintenance of the trail, ethnographic data revealed other hesitations about a maritime heritage trail. Many concerns about the ARMHT revolved around preserving the environmental viewshed of the river. Participants questioned the impact of increased river traffic, establishment of trail signage, and development of tourist infrastructure on the remote wilderness environment and ambiance of the river. Participants also wanted to make sure that interpretation efforts for sites along the trail did not infringe upon private property rights. Questionnaire responses also identified people's worry over the trail creating new preservation regulations that might limit recreational usage of the river.

A common theme throughout this ethnographic research illuminated an internal conflict of many local residents. Those living along the river identified the desperate need for local economic stimulus that specifically included industries committed to training and hiring residents. Participants acknowledged the wonderful potential for heritage tourism in the area and its positive economic impacts; however, many struggled with the idea of sharing the river with tourists, whom they perceived as outsiders, and of wanting to keep the river hidden for their own personal enjoyment.

Even with the concerns about an ARMHT, the majority of feedback from potential trail users was positive. Respondents indicated support for a new educational program that was recreational in nature and highlighted the history and archaeology of the river. Many participants felt a maritime heritage trail would fill a void in current educational programming endeavors while supplementing ongoing environmental stewardship efforts. This research indicates that potential trail implementers have an established base for a community-backed educational product. Although the flexible nature of a maritime heritage trail is advantageous to heritage professionals, the endless possibilities for trail format, design, and content can create a recipe for an outreach product that is disconnected from current society's wants and needs. Ethnographic research is the best way to overcome this shortcoming.

Conclusions

With the infusion of ethnographic research into the development of the ARMHT, this research provides an effective methodology for making the past relevant through public interpretation and heritage tourism. Maritime heritage trails allow for the interpretation of multiple archeological, historical, and natural resources, while social research into the study area and potential trail users addresses the needs of contemporary communities. Researching the historical context, identifying available heritage resources, and visually assessing potential trail sites provided the foundation for establishing the Apalachicola River's interpretation potential. Information from community observations, community participation, free listing, group interviews, and cultural informants illuminated public opinions and attitudes. Data from the focus group, pilot study, and ARQ established parameters for trail design, layout, interpretive content, and interpretive materials. By allowing ethnographic data to steer and guide each stage of the ARMHT model, this research was able to identify, adapt to, and address public wants and needs during the developmental stages. As demonstrated throughout this research, public interpretation of heritage resources that begins with community assessment creates the foundation for a successful and community-relevant heritage tourism product.

In order for the ARMHT to be successful, it must attract and educate not only visiting tourists but also the residents living around the maritime cultural resources. Implementers of the ARMHT need to continue to engage with local river communities and include citizens in the implementation stages of the trail. Ultimately, the citizens living closest to the Apalachicola River can become the most effective

advocates for preserving and conserving the archaeological and historical resources that are in their backyards. If their input and concerns are not considered, however, they also can be the most vocal and determined of opponents.

The design of the ethnographic model developed for the ARMHT is adaptable in many ways. Most obvious are its uses for creating a maritime heritage trail specific to the Apalachicola River. An organization can create a heritage trail that stands alone as its own entity, or it can incorporate heritage interpretation elements into existing programs. The methods used in the ARMHT model are easily transferable to maritime heritage trail developments along other rivers worldwide. Lessons learned from this research also have relevance to other types of heritage trails and to archaeological heritage interpretation in general.

In addition to the model's usability for developing heritage trails, its adaptability has a much greater reach. Ideally, the establishment of any interpreted heritage product should begin with the mentality that the purpose of the product is for the people, not the resources (although the resources ultimately will benefit as well). Public interests, wants, needs, and concerns should be at the forefront of any interpretation development.

Whether heritage resources are underwater or on land, visible or hidden, or historic or prehistoric, community input for the development of public outreach tools is not only necessary but also critical to the long-term success of public site interpretation. Using ethnographic research, researchers can identify, assess, and address a community's wants, needs, concerns, and issues before production of heritage interpretation. Visitor, citizen, and stakeholder opinions must steer all stages of development, design, and implementation.

By understanding how the past relates to the present, the public will begin to recognize the importance of preservation and conservation. This education, in turn, should create a communal effort for the protection of local maritime resources along the Apalachicola River. Research has shown that "quality public interpretation and outreach can assist in managing and protecting archaeological sites in remote locations" (Jameson and Scott-Ireton 2007: 3). In the end, the purpose of the ARMHT is to educate river communities and instill in the members of those communities a sense of ownership and stewardship for their cultural and historical resources.

Overall, public archaeologists are moving in a new direction by assessing the materials and products used for general consumption. I encourage future researchers to begin the assessment process during the developmental stage rather than during the implementation stage. Ethnographic methods are a cost-effective and efficient means for public archaeologists and heritage tourism professionals to gather community-specific data during the developmental stages of any interpretive product. In the future, when more interpretive materials are guided by public opinion, research should compare the success of products developed with community influence to those created without local input. I am positive that heritage tourism products that use ethnographic data to steer interpretive content and design while addressing local concerns will have greater community acceptance, increased visitation over time, and better results for stewardship and conservation of resources than heritage tourism products that do not use ethnographic data.

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Chapter 5
Management of Submerged Cultural Heritage: Public Outreach Examples as a Result of the Section 106 Process

Christopher Horrell

Abstract Archaeologists who are charged with protecting and managing submerged cultural heritage are beginning to utilize public outreach as a component of the overall Section 106 process of the National Historic Preservation Act. What traditionally was viewed as compliance archaeology that generally resulted in the publication of technical reports, the curation and storage of artifacts, and papers presented at professional meetings is now including public outreach as one of the deliverables of a federally permitted or funded project. Two examples are provided to illustrate how public outreach efforts associated with the management of submerged cultural heritage are presented in an effort to inform the public about these unique examples of our collective past.

I once was asked, during an interview for a documentary, what was the most difficult aspect of conducting archaeological research in extreme depths of water. My reply was simple and to the point: "It is tough when you have to force all the egos on a project 4,000 ft down through a fiber optics cable to command a Remotely Operated Vehicle (ROV) to collect archaeological data." That quip caused a great deal of laughter and, to some extent, a great deal of consternation. What was interesting to me is that, while I was being honest about the nature of archaeological field work at extreme depths, I was also thinking about how this work is interpreted by the public at large. More importantly, what was the message that we wanted to convey about a project that started off as compliance archaeology? One of the most important things to emerge out of a project such as this is the message and the mechanisms by which we share information with the public. These two elements are as important as

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the commands we give an ROV, the provenience data for the material culture, the creation of a site map or photo mosaic, or any number of data sets collected. This chapter demonstrates how compliance-related archaeological projects can illustrate to the public the importance of the work done and the need for protecting submerged cultural heritage.

While submerged archaeological research can be accomplished as a science, it may also serve as an applied science, namely through the management of submerged cultural heritage as it relates to potential impacts by offshore development. In fact, the management of submerged cultural heritage accounts for most of the archaeological research conducted offshore of the USA. The management of submerged cultural heritage or, as it is often referred to, cultural resource management archaeology, has been a growing field since the passage of the U.S. National Historic Preservation Act (NHPA) of 1966. This act has aided in the preservation of US history and prehistory that would otherwise have been lost as a result of development. Along with other federal and state statutes, the NHPA mandates that projects on federal land or involving federal funds or permits consider the effects of the project on potently significant archaeological sites and historic properties. In some instances, however, these projects evolve as part of the need to address impacts that have already occurred. One way or another, public outreach has become an extension of the management of submerged cultural heritage. In fact, public outreach plays a pivotal role in providing a clearer understanding of why the federal government works so hard to ensure that these nonrenewable resources are considered as part of any project offshore (Ball et al. 2007). The following two examples and their public outreach components illustrate the importance of compliance-related management of submerged cultural heritage and efforts to inform the public.

The Deep Wrecks Project

The deepwater portion of the Gulf of Mexico has shown a substantial increase in oil and gas exploration, development, and production since the late 1990s. In part, this is due to the development of new technologies, the reduction of operational costs and risks, and the discovery of high-production oil and gas reservoirs in depths exceeding 9,000 ft. With expanding development in deep water comes increasing challenges in managing submerged cultural heritage on the Outer Continental Shelf and Slope. Critical information is required for making informed management decisions concerning impacts to submerged cultural heritage. As a result, the federal government is required by the NHPA to take into account the effect of any federal, federally assisted, or federally licensed undertaking on any historic property that is included in, or eligible for inclusion in, the National Register of Historic Places (NRHP) (16 U. S. C. 470 *et seq*., 470[f]). For the development of oil and gas infrastructure and activities on the Outer Continental Shelf and Slope, the former

Fig. 5.1 Example of remote sensing data captured for industry using a 410-kHz side scan sonar image acquired with C&C Technologies, Inc.'s CS III AUV in 2009 (Image courtesy C&C Technologies 2009)

Minerals Management Service[1] (MMS), now the Bureau of Ocean Energy Management (BOEM) and Bureau of Safety and Environmental Enforcement (BSEE), fulfill their requisite obligations under Section 106 of the NHPA by conducting compliance reviews initiated as part of the Section 106 process. Specifically, under 36 CFR 800.4, Bureau officials make a reasonable and good faith effort to carry out appropriate identification efforts through compliance reviews to identify historic properties that may be affected by an undertaking. Bureau officials also gather sufficient information to protect these properties as well as to evaluate their eligibility or potential eligibility for inclusion on the NRHP. To make these determinations, the Bureaus require sufficient documentation from oil and gas companies in order to apply the NRHP criteria for evaluation (36 CFR 60.4) to each site located on the Outer Continental Shelf and Slope. As a result of the requirements of federal bureaus and agencies to complete the Section 106 process, both BOEM and BSEE require that the oil and gas industry conduct remote sensing surveys in areas where they plan to conduct bottom-disturbing activities. The result has been the discovery of numerous shipwrecks in all water depths, many of which are eligible for listing on the NRHP (Fig. 5.1).

The Section 106 process, which both Bureaus utilize to conduct their work, has also served as a catalyst to generate new questions related to submerged cultural heritage and the formation of the archaeological record. In particular, three questions were addressed in a larger study of the artificial reef effect of shipwreck sites at extreme depths including: (1) what size of debris field should be expected around deepwater wrecks; (2) what are the effects of these sites as an artificial reef in

[1] The Minerals Management Service (MMS) was reorganized after the 2010 BP oil spill in the Gulf of Mexico. Two bureaus emerged out of the former MMS: the Bureau of Ocean Energy Management (BOEM) and the Bureau of Safety and Environmental Enforcement (BSEE). BOEM handles all scientific analysis related to pre-lease and permitting activities, while BSEE handles enforcement of safety and environmental regulations utilizing science to ensure compliance with mitigations and regulations. For consistency throughout the article, the terms "BOEM" and "BSEE" or "the Bureaus" are used to refer to the former MMS.

extreme depths; and (3) how will the continuous changes to the site affect the local environment? For this particular series of questions, deepwater shipwrecks discovered as a result of the required oil and gas industry surveys provided the perfect laboratory to carry out this experiment. To address these questions, six World War II casualties, all the results of Hitler's U-boat campaign during 1942 including a German U-boat, were selected. All six sites lie in water depths from 76 to 1,981 m (250–6,500 ft) and provide scientists and biologists with a variety of environmental settings as well as known starting dates to measure biological growth and the formation of the archaeological record. These sites included the following vessels: the cargo freighter *Alcoa Puritan* sunk by *U-506* on 6 May 1942; the tanker *Virginia* sunk by *U-507* on 12 May 1942; the tanker *Gulfpenn* sunk by *U-506* on 13 May 1942; the steam tanker *Halo* sunk by *U-506* on 20 May 1942; the passenger freighter *Robert E. Lee* sunk by *U-166* on 30 July 1942; and the German submarine *U-166* sunk by *PC 566* on 30 July 1942 (Ball et al. 2007: 174–175; Church et al. 2007).

The study was designed to address two major components: archaeology and biology. The archaeological objective was to ground-truth, document, positively identify, and assess the National Register eligibility of six shipwrecks sunk during World War II. This objective required historical research in addition to field investigations conducted at each site. Each of the shipwreck sites selected for the study was discovered because of mandated remote sensing surveys to identify potentially significant archaeological sites per the Section 106 process. In addition, the biological component addressed the artificial reef effect of shipwreck sites at extreme depths. Specifically, the study intended to address one basic question: do man-made artificial structures or objects such as shipwrecks function as artificial reefs in deep water? At that time, marine biologists did not have a complete understanding of how artificial reefs function on the Continental Shelf, particularly in the photic zone above 100 m (330 ft). Artificial reefs were generally understood to serve a positive function by the creation of new hard-bottom habitats in areas where hard bottom is not naturally available. However, little data was known about how these sites might function in the deeper waters of the Gulf of Mexico. The biological portion of the study also focused on how these man-made structures supported biofouling communities since 1942 and served as fish habitats. In addition, microbial analysis of the local environment provided information on the degradation of these sites by measuring the amount of hydrocarbons and other chemicals released by these shipwrecks in the surrounding water column (Church et al. 2007: 205–209).

With the data provided by oil and gas industry surveys and with funding through the MMS (now BOEM) Environmental Studies Program, the project took shape. This multidisciplinary research was sponsored by the National Oceanographic Partnership Program and included partners such as the National Oceanic and Atmospheric Administration's Office of Ocean Exploration, MMS (now BOEM and BSEE), University of Alabama, Montana State University, University of Alaska at Fairbanks, the University of West Florida, and Droycon Bioconcepts, all under the direction of C&C Technologies (Ball et al. 2007: 175; Church et al. 2007). While the study was underway, a critical element related to public outreach was carried out by the PAST Foundation.

The PAST Foundation provided the platform to illustrate the work of the scientists in the field and the work carried out during the project (Church et al. 2007: 5).

Daily reports from the field were posted on the project Web site by various scientists who discussed the project, the methodologies employed, and their thoughts about the study's progress, providing a human element to the participants and their fields of expertise. In addition, a narrative of each of the sites was also presented, providing a history of the vessel including the events that lead to its sinking, its discovery as part of industry surveys, and the work that had been conducted to date. This information was broadcast via the worldwide web at http://www.pastfoundation.org/DeepWrecks/. The field reports presented the audience with an unprecedented view of how a multidisciplinary project is conducted. It also illustrated that information of interest to the public could be shared while the project was underway. In addition, several podcasts were created through Montana State University's Media and Theatre Arts Program to document the progress of the project. Additional updates have followed since the project, providing the public an opportunity to stay informed of the project's findings. The final report for the project was also made available along with photos and mosaics of the various archaeological sites and biological discoveries made (Church et al. 2007).

What makes this project stand out is that its genesis began with an agency's responsibility for compliance with the Section 106 process and the NHPA. Out of these requirements grew a meaningful scientific endeavor that provided useful data and fulfilled information needs to help the Bureaus better protect these nonrenewable heritage resources. The oil and gas surveys that ultimately tied into the larger study were used as a platform to educate the public about submerged cultural heritage in the Gulf of Mexico.

Archaeological Analysis of Submerged Sites on the Gulf of Mexico Outer Continental Shelf

Another project resulting from the Section 106 compliance review is the study entitled Archaeological Analysis of Submerged Sites on the Gulf of Mexico Outer Continental Shelf. Like the Deep Wrecks Study, the Bureaus utilized information gathered from oil and gas industry remote sensing surveys to craft a series of questions about submerged cultural heritage in order to address the effectiveness of avoidance mitigations, understand site formation processes, and develop best management strategies for cultural heritage sites. In 2009, Tesla Offshore LLC was contracted by the MMS (now BOEM) to investigate six shipwreck sites on the Outer Continental Shelf of the Gulf of Mexico. The sites were investigated using a variety of tools including geophysical survey, diver visual investigation, and the collection and analysis of core data.

The study had two primary objectives. The first objective required that an attempt be made to provide, if possible, a positive identification of the shipwreck. In addition, the study also required a determination of eligibility for the NRHP. These goals were accomplished by archaeologically documenting each shipwreck site through

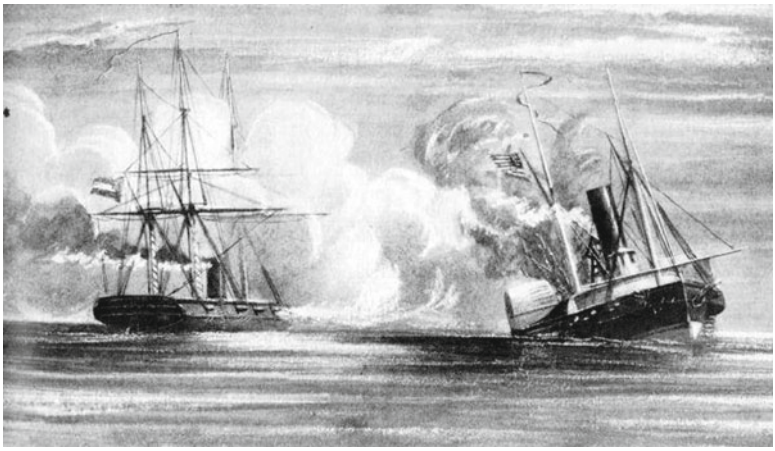

Fig. 5.2 Destruction of the Gunboat *Hatteras* by a Rebel Cruiser off Galveston, Texas (Schell 1863, courtesy the Naval Historical Center 2012)

drawing sketch maps, collecting video and photographic data, and identifying key elements of each site for further research (Evans et al. 2013: 1–2). The second objective was to provide an assessment of site formation processes and how they impact each wreck site. This was achieved through diver collection of sediment core data at each site which were assessed through analytical techniques including radioisotope analysis. The purpose of this analysis was to provide approximate dates for sediment disturbances and to estimate sediment deposition rates at each of the sites. In addition to this analysis, oceanographic modeling was performed to provide baseline information on regional processes that affect sediment and water current movement in and around the study sites. Because of the complexity and cost associated with modeling, a larger regional approach was used to model these processes (Evans et al. 2013: 1–2).

Initially, the study called for the investigation of six shipwreck sites in water depths ranging from 11 to 36.5 m (36–120 ft) located across the north-central and northwestern Gulf of Mexico. Because of the outstanding organizational skills of the contractor, the incredible efficiency of the partners involved in the study, and ideal weather conditions during fieldwork, a total of 11 shipwrecks were investigated. These sites included an unidentified wooden shipwreck; the probable remains of the oil screw tanker *R. W. Gallagher* sunk by *U-67* on 13 July 1942; the likely remains of the oil screw passenger freighter *Heredia* sunk by *U-506* on 19 May 1942; the probable remains of the oil screw tanker *Cities Service Toledo* sunk by *U-67* on 12 June 1942; five unidentified modern wreck sites, including the remains of a barge and some disarticulated debris likely associated with the oil and gas industry; the steam tugboat *J. A. Bisso*; and the screw steamer USS *Hatteras* lost in an engagement with CSS *Alabama* in January 1863 (Fig. 5.2) (Rohwer 1983; Wiggins 1995; Evans et al. 2013).

Analysis of the data provided an incredible amount of information regarding site formation processes and the archaeological record. More importantly, this information will be used in making best management decisions regarding submerged cultural heritage as oil and gas operations continue to develop and the USA expands its energy portfolio with renewable energy. While the technical report is available to the public, one of the project's major contributions is the public outreach component developed by the Florida Public Archaeology Network on-line at http://www.flpublicarchaeology.org/blog/teslaproject/. Currently, the Web site illustrates the project goals, team members, shipwreck sites investigated, and reference materials. In addition, a series of papers and other informational products highlighting project results and ongoing outreach efforts will be added to the Web site after report completion. This component of the project provides an outlet for the public to explore sites that are, for the most part, inaccessible or have conditions that are not ideal for recreational diving activities.

While the outreach components are, at this writing, in the final stages of completion, the information stream provided to the public is facilitating a greater understanding of the dynamic and important work being conducted on submerged cultural heritage in the Gulf of Mexico. This timely and important work illustrates the federal government's commitment to transparency regarding how federal dollars are spent as well how information gleaned through the Section 106 process of the NHPA is utilized. Because of the excellent work accomplished during this project, Secretary Ken Salazar, Department of the Interior, awarded the study and its partners the prestigious Partners in Conservation Award in 2011, noting in the citation the important contributions of the public outreach component in making this study a success.

Conclusion

While the "meat and potatoes" of compliance archaeology are the final technical report, curation and storage of artifacts for future research, and the papers presented at professional meetings, efforts to inform the public about submerged cultural heritage identified, investigated, or studied as a result of the Section 106 process are also important. The two examples discussed above illustrate how public outreach efforts associated with submerged cultural heritage identified through compliance archaeology as a result of the Section 106 process provide information to the public about these incredibly important sites. More importantly, while the Section 106 process of the NHPA facilitates the consideration of historic properties during a federally funded or permitted project or as a means to consult with concerned parties when a site is impacted during a project, the singular result is not always buried in gray literature or compliance reports. Rather, managers are realizing the importance of public outreach and are paying close attention to the public's interest in the past, seizing opportunities to make the public aware of submerged cultural heritage, and the role it plays in our lives.

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Chapter 6
Shifting Sand: A Model for Facilitating Public Assistance in Coastal Archaeology

Justin J. Bensley and Victor T. Mastone

Abstract Coastal areas are rich archaeological landscapes imbued with material records that reflect high concentrations of diverse human activity over a wide swath of time. In the field of maritime cultural resource management, outreach and educational efforts traditionally concentrate on reaching the recreational diving community, missing the wider public audience. The Shoreline Heritage Identification Partnerships Strategy program, SHIPS, was developed by the Massachusetts Board of Underwater Archaeological Resources to capitalize on the need to respond to casual reporting of coincidental shoreline discoveries and the ongoing need to inventory shoreline cultural resources. The SHIPS program is geared toward people who essentially "walk the beaches" and who may have an interest in local maritime history. This approach provides an opportunity and training for public involvement at the discovery level in the archaeological process, through a local organization in partnership with the state cultural resource management agency. This approach has broader application outside Massachusetts.

Introduction

Coastal archaeology has enormous potential to help us understand a range of cultural, economic, and technological strategies incorporated by societies throughout the breadth of human history. The archaeological research value of these zones has been promoted by many authors (Rowley-Conwy 1983; Bailey and Parkington

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1988; Larsson 1995; Bonsall 1996; Erlandson 2001; Bailey 2004; Erlandson and Fitzpatrick 2006; Benjamin 2010) for the important functional role they held for accessing transportation systems and acquiring marine resources. This suggests coastal areas are rich archaeological landscapes imbued with material records that reflect high concentrations of diverse human activity over a wide swath of time. However, while a strong tradition of investigations in coastal areas exists, the majority of this work has been fine-grained individual site analysis (Bensley 2010).

Despite intriguing research potentials of coastal zones, difficulties restrict practice and funding to a niche branch of archaeology. The unique challenges of shoreline cultural preservation appear at every phase of the archaeological process, from discovery to artifact processing and beyond to contingency plans for future site management. Issues often arise from complex taphonomic processes in these areas, the result of dramatic fluctuations in environmental, hydrological, geological, and climactic conditions. At the discovery level, this dynamic interplay of forces often creates ephemeral context situations for cultural material in which a single tide cycle can reveal, obscure, and completely shift an object's position (Mastone and Trubey 2007). Traditional coastal research projects have often sidestepped this problem by concentrating efforts either on well-documented sites or on those located in more stable geomorphic situations. However, a fine-grained and selective method often is not viable for federal and state archaeological entities which must broaden their efforts to include extensive shoreline systems. These agencies function in the public interest, although their ability to succeed often is undercut by funding and personnel limitations that engender a Sisyphean nature to their labors.

The responsibilities of coastal cultural heritage management fall heaviest on the shoulders of the 30 states situated along the shores of the US' oceans and Great Lakes. Their histories are penned in part by a rich maritime tradition that continues to influence everything from culture to commerce. Remnants of this past and the importance waterways held for both America's economic rise and the earlier indigenous societies can be found scattered along the shores of these states today. The states are all held to a minimum standard of cultural heritage management by federal laws; however, the difficulties of coastal archaeology and perceived expenses have led only a handful to adopt the laws, establish the governance, and provide the basic funding for archaeological efforts to honor their maritime heritage.

Recognizing the high archaeological potential of coastal zones and the challenges of this work across protracted areas, this chapter takes the stance that any method which better facilitates these efforts will benefit the states, organizations, and discipline as a whole. Considering the already limited funding available, public volunteers can alleviate some of the pressures associated with both classification and field work. Several authors have promoted the value of inexperienced participants in the discovery phase of the archaeological process (Fagan 2002; Berggren and Hodder 2003). Essential to this notion, however, is the fact that proper developmental programs are in place to both train and facilitate the work conducted by the weekend hobbyist to assist those with advanced degrees. A case study of one such program designed as a partnership between Massachusetts Board of Underwater

Archaeological Resources (MBUAR) and the Newburyport Maritime Society (NMS), a community non-profit, serves as a means of confronting the challenges and identifying the rewards of including the public in the archaeological process.

Background

MBUAR and NMS have vastly different legal status, funding, member size, and level of archaeological experience. However, the successful partnership, explored in this chapter, was able to overcome these challenges and find common ground in a shared reverence for history and a common mission to preserve cultural heritage. These bonds are expressed in the individual responsibilities these organizations hold.

Established in 1973, the MBUAR is the public trustee of the Commonwealth of Massachusetts' underwater heritage, promoting and protecting the public's interest in these resources for recreational, economic, environmental, and historical purposes. As a state agency, the MBUAR is charged with the responsibility of encouraging the discovery and reporting, as well as the preservation and protection, of underwater archaeological resources. Among its specific statutory responsibilities is the compilation and maintenance of an inventory of these resources. The Board is further instructed to cooperate with and seek assistance from a wide variety of public entities, "private organizations and individuals" (Mastone 2002; Mastone and Trubey 2007: 145).

The NMS is a nonprofit organization dedicated to preserving and interpreting the maritime heritage of the lower Merrimack Valley. The NMS owns and operates the Custom House Maritime Museum in Newburyport and Lowell's Boat Shop Museum in Amesbury, proudly showcasing over four centuries of maritime history in the region (Mastone and Trubey 2007: 145).

The Problem

In the summer of 2005, staff members of the NMS contacted the MBUAR to report finding parts of a shipwreck while casually walking along the beach on nearby Plum Island. Unfortunately, by the time MBUAR staff could arrange a site visit, the vessel remains had been completely re-covered with sand and had become invisible once again. At various times, the museum had also received calls from people reporting similar finds elsewhere with the hope of being able to identify their discoveries as soon as possible. At the same time, the museum also received general inquiries about the possibility of visiting and viewing shipwreck sites accessible to the non-diver. These events inspired the museum to approach MBUAR with a specific problem and to ask if it was possible to develop a cooperative program to address that need (Mastone and Trubey 2007: 146).

The Solution

The Shoreline Heritage Identification Partnerships Strategy (SHIPS) is a program created by MBUAR to foster public involvement in preserving the maritime cultural heritage of their communities, while also strengthening the Board's capacity to document and preserve cultural resources throughout the Commonwealth's coast. The program's model serves as a multilevel approach for educating and involving the public in the discovery phase of the archaeological process. Local historical societies throughout Massachusetts' coastal villages provide excellent candidates for the foundational partnerships of the SHIPS model. Their ability to engage, facilitate, and organize interested members of the community can easily become a catalyst for involvement in future discoveries.

Cooperation

In the spirit of partnership, a program was designed around specifications each party brought to the table. NMS, in consideration of their members, had two prerequisites for a partnership program. First, it needed to provide volunteer service opportunities that encouraged non-diver participation, and, second, to include provisions that ensured sustainable access to these nonrenewable resources. You must walk before you run, and these requests are one leg of a partnership set in motion by synchronization with MBUAR's aims.

As a government body, MBUAR was obligated to take a relatively more objective and calculative approach to the relationship. Unlike NMS, whose involvement would be a voluntary option for its members, MBUAR's commitments were ultimately tethered to the collective public of Massachusetts. Therefore, any partnership needed to fit within their mission and further these goals. Involving amateurs in these operations did raise some concern. MBUAR's mandate to preserve meant any artifacts damaged or lost through public involvement was their responsibility. However, allowing for public participation also had great advantages. MBUAR's responsibilities to the State are overseen by six statutory appointees who meet on a bimonthly basis. The time to complete operations, however, is on the shoulders of only one full time employee. Volunteer efforts from members of a few historical societies would greatly expand their on-the-ground effectiveness. In addition, a volunteer-oriented partnership required minimal financial investment.

SHIPS Design

The individual needs of partnership members formed the blocks of an arch that needed a keystone in place to provide balanced support. The SHIPS formed this stabilizer. The counter forces of each organization's concerns and needs were

absorbed in the program's three-part design: (1) education, (2) documenting and reporting, and (3) responding. Each component of this model helped mitigate the risks of this unique partnership through mechanisms that enabled amateurs to contribute to the archaeological process while ensuring professional standards remained intact.

Step 1, Education

The initial, and arguably most significant, phase for the success of SHIPS was the education program developed to equip volunteers with fundamental archaeological knowledge and skills to conduct preliminary site survey and documentation. Ultimately, a three-part course was developed to provide attendants with essential knowledge and skills for performing these tasks. Total class time was set at 6 h, a length manageable as a 1 or 2-day program at the sponsoring organization's discretion.

The training course leads off with a 15-min introduction of SHIPS, the critical role volunteers play assisting coastal cultural resource management, and the responsibilities that come with their inclusion. This background dovetails nicely into the first section, an overview of maritime history and archaeology conducted by a MBUAR representative over 1.25 h. Given the time allotted, this presentation concentrates on only the most critical and relevant facets of these enormous subjects. Prime importance is placed on defining archaeological standards and the consequences if they are not maintained. Following that is a short review of the methodological practices used in coastal archaeology.

Section two gives the floor to a spokesperson from the sponsoring institution for a lecture extending 1.5 h which covers the community's maritime history. Several pertinent reasons exist for the design of this seminar. To begin with, direction from a local historical society member is essential in keeping with the partnership strategy of SHIPS. Furthermore, it has been noted that locals tend to have far greater knowledge of their surrounding area than even the most versed researcher (Benjamin 2010). Their insight also holds great value in the field by highlighting some of the most likely cultural remains participants will come across on their shores.

The final 3-h section is a field-based practicum that introduces students to preliminary site survey procedures. It is intended to provide them with hands-on experience using tools, methods, and practices to build an initial site report of accurate and meaningful information. Critical to this lesson are the noninvasive techniques students use to build these descriptions. The specific activities of this revolve around the fields of information delineated on the official submission form.

Identifying the essential information to elicit on the SHIPS Reporting Form required delicately balancing the needs of professional reviewers and the training allotted in a 3-h course. Other organizations have walked this line before, such as the Maritime Archaeological and Historical Society (2005), Nautical Archaeology Society (Dean et al. 1992; NAS 2011), and Rhode Island Marine Archaeology

Project (2009). Because the main audience for these organizations is the sport diving community, they tend to tailor their training to submerged sites. Therefore, a new model was crafted specifically for public involvement in coastal zones.

Categorically speaking, the information prompts on the SHIPS reporting form deviate little from established archaeological documentation practices used to create site context. Following this tradition, the SHIPS form inquires submitters for basic details on the find's structural condition and material, location, and environmental surrounding. However, several coastal-specific elements of this data become critical for MBUAR's remote evaluation and response. Chief among these are the feature's level of exposure and tidal patterns of submersion, as these conditions have strong implications for the urgency behind MBUAR's on-site analysis. Also crucial to evaluating submissions are the inclusion of the cultural remains' geographical coordinates and an archaeological photograph that includes a reference for scale. These inclusions require access and proficiency with a handheld GPS unit and digital camera.

Considering participants' diverse backgrounds, it is essential to spend time in the field teaching, practicing, and evaluating their individual proficiencies accomplishing these tasks. Once the instructor feels a level of competency has been reached in the group, the final step is to ensure a network exists among the participants to facilitate access to necessary tools and support from local personnel. Typically, the sponsoring institution provides this function, however, more often than not, a number of individuals own items in the technical toolkit. Upon completion of the course, participants are given the SHIPS Coast Watchers Handbook that includes an overview of fundamental shoreline archaeology concepts as a reference. This 15-page booklet contains everything from applicable laws to archaeological terms and procedures.

Step 2, Reporting

Foundational to the facilitation of amateurs scattered across the expansive coastline of Massachusetts was the ability to create a method by which discoveries could be reported and documented by MBUAR. Creating an online database provided a means for organizing and prioritizing discoveries across the State. This helped overcome the logistical pitfalls of time and distance that can render coastal finds obscured before a professional representative from MBUAR can make it to the scene. Several issues with this system needed to be addressed before it was implemented.

Before an online database could be created, identifying and standardizing the information elicited in the submission form was critical. Considering the audience is amateur archaeologists, the entry fields need to acquire robust data that is scientifically meaningful through nontechnical terms. The techniques for gathering this information (Fig. 6.1) are covered in the training course, require only readily available tools, and are basic enough to ensure amateurs have little room for error. After a finished report form is submitted, it becomes the responsibility of MBUAR to determine the next course of action.

The COMMONWEALTH OF MASSACHUSETTS
BOARD OF UNDERWATER ARCHAEOLOGICAL RESOURCES
251 Causeway Street, Suite 800, Boston, MA 02114-2136

SHIPS REPORTING FORM

SHIPS, **S**horeline **H**eritage **I**dentification **P**artnerships **S**trategy, is a collaborative effort of the Board of Underwater Archaeological Resources with local historical societies, local museums, and the public to document historical and archaeological properties along our shoreline. Please complete this form and return it to e contact listed below. You may also attach any additional information, photographs, or maps. Thank you for your assistance.

PLEASE TYPE OR PRINT LEGIBLY

REPORTER'S CONTACT INFORMATION	
NAME _____ MAILING ADDRESS _____ _____ TELEPHONE NUMBER: (Day) _____ (Evening) _____ EMAIL ADDRESS: _____	COASTWATCH VOLUNTEER Yes ☐ No ☐ Want to become one? ☐

Date: _____
Location: _____
Town: _____
Beach: _____
Coordinates: _____
_____

Environment:
Sandy ☐ Rocky ☐
Muddy ☐ Bog ☐

Is the find:
Concentrated ☐
Scattered ☐
Broken ☐

Level of Exposure:
Fully exposed ☐
Partially exposed ☐
Mostly buried ☐

Tide Exposed at:
Only Low ☐
Middle Ebb or Flow ☐
All of the time ☐

Main material of construction:
Wood ☐
Steel ☐
Iron ☐
Fiberglass ☐

What do you think it is?
Boat ☐
Ship ☐
Wharf ☐
Other ☐

Specify: _____
_____
_____

What are the approximate dimensions of the site?
Length: _____
Width: _____
Height: _____

If the find is wood, does it appear to be:

Hand hewn ☐	Strong ☐
Machine cut ☐	Partially deteriorated ☐
Both ☐	Heavily deteriorated ☐

If there are fastenings, are they:
Wood (pegs, dowels, treenails, etc.) ☐
Metal (nails, rivets, bolts, etc.) ☐
Other: _____

Comments: _____
_____

Rough Sketch:

*You may submit this competed form and any attachments in digital format via email to the email address below.

CONTACT
Victor Mastone, Director, Board of Underwater Archaeological Resources
Suite 800, 251 Causeway Street, Boston, MA 02114-2136
Telephone: 617-626-1141 • Fax: 617-626-1240 • E-mail: Victor.Mastone@State.MA.US

Printed on Recycled Paper

Fig. 6.1 Reporting form for the Shoreline Heritage Identification Partnership Strategy (Courtesy Massachusetts Board of Underwater Archaeological Resources, 2012)

Step 3, Responding

The final phase of the SHIPS program includes the organization of submitted site report forms, evaluation of the find's potential cultural value, the urgency of response needed based on current environmental conditions, plans for future site investigations, and, ultimately, strategies for preservation. These tasks are the sole responsibility of MBUAR's professional archaeologists and their judgment in these matters reflects the State's prerogatives. While limited resources prevent the excavation and eventual recovery of every discovery made, MBUAR does maintain an online database of site report forms and provides feedback on each submission. This open exchange of information fits with the partnership goals and encourages continued public participation. Furthermore, a comprehensive log of known coastal sites in Massachusetts promotes a dialog between amateur and professional archaeologists that can help draw further research attention to these cultural remains.

Summary

The shoreline presents a difficult scenario for preservationists as cultural remains are subjected to dynamic environmental forces and dramatic seasonal variations. This suite of stressors can negatively influence integrity of artifacts exposed to conditions that can uncover and cover with the turn of a tide. Therefore, time is of the essence for the identification and documentation of discoveries in these areas. Considering the ephemeral nature of shore finds, the development of methods and practices that better support their preservation is essential.

SHIPS is a successful model for vastly improving detection of cultural resources in coastal areas and significantly shortening the response time of their professional investigation. These accomplishments are the result of a cooperative enterprise between two distinct organizations with a common mission to preserve history. Acute institutional differences brought both parties to the table with their own unique goals and services to offer. SHIPS design was therefore predicated on assuaging concerns over tethering efforts and meeting separate objectives.

As a non-profit, NMS sought better services and privileges for its members from this union. Public participation is the inexorable function of SHIPS and the inclusion of training courses expanded the member activities offered by NMS (Fig. 6.2). Their second prerequisite required assurances in the SHIPS design that results garnered through volunteer efforts would remain accessible and the community would not be kept in the dark on the status of preservation efforts after the forms were submitted. These conditions became the cornerstone of SHIPS's response phase, including implementation of an online database to house discovery reports and requiring MBUAR staff to provide feedback and status updates on all discoveries.

MBUAR's partnership conditions revolved around their directive to document and preserve the Commonwealth's coastal cultural resources. SHIPS shares this

Fig. 6.2 Recording vessel remains in Manchester, MA (Photo courtesy Victor Mastone, Massachusetts Board of Underwater Archaeological Resources)

prime objective and nearly every component of the model expanded the capability for success. MBUAR's responsibilities to the people of Massachusetts also stipulated minimal financial involvement costs and undiminished quality of work. Monetarily, SHIPS provided a method to facilitate public volunteers and to drastically expand their workforce. The initial education phase of SHIPS provided volunteers with the necessary skills and knowledge to maintain MBUAR's high preservation standards.

Conclusion

SHIPS is a program model for generating more comprehensive management of shoreline cultural resources. Created to overcome specific challenges confronted by the MBUAR in this effort, the design outlines methods that have broader implications for facilitating public involvement in coastal archaeology. Other programs have successfully trained volunteers and organized amateur archaeological projects, although they have focused on terrestrial or marine environments. SHIPS represents a unique platform for developing cooperative relationships between professional archaeologists and public historical preservationist organizations. These partnerships greatly increase the number of people involved in the discovery phase of coastal zone archaeology and improve the professional's response time critical to documenting and preserving finds in these areas.

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Chapter 7
"Public" and "the Public" in Italian Underwater Archaeology: A Sardinian Perspective

Massimiliano Secci

Abstract Sardinia stands as a "footprint" at the center of the Mediterranean Sea and has developed, across centuries and millennia, a distinctive maritime vocation illustrated by a number of maritime cultures and traditions that still survive to the present. While most Sardinians draw pride and strengthen their sense of identity and belonging on the basis of the "idealized" antiquity and importance of past civilizations, very few have a clearly defined picture of such a past. Sardinia (as Italy) lacks, among other things, a "public" programmatic/holistic approach to the development of an interpretive and educational program which could provide "the public" with means for an informed evaluation of authenticity, value, and significance. This chapter presents a study targeted to design such a programmatic approach in Sardinia, highlighting issues and criticalities encountered, and is intended, in a broader spectrum, as a contribution to the debate in Italian underwater cultural heritage management.

> Where then? Spain or Sardinia. Spain or Sardinia. Sardinia, which is like nowhere. Sardinia, which has no history, no date, no race, no offering. Let it be Sardinia. They say neither Romans nor Phoenicians, Greeks nor Arabs ever subdued Sardinia. It lies outside; outside the circuit of civilisation. Like the Basque lands. Sure enough, it is Italian now, with its railways and its motor-omnibuses. But there is an uncaptured Sardinia still. It lies within the net of this European civilisation, but it isn't landed yet. And the net is getting old and tattered. A good many fish are slipping through the net of the old European civilisation. Like that great whale of Russia. And probably even Sardinia. Sardinia then. Let it be Sardinia.
>
> D. H. Lawrence, *Sea and Sardinia*

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Introduction

Paraphrasing Christopher Tilley (1989: 105), public outreach activities concerning cultural heritage should and could develop as a "sociopolitical action in the present." While archaeological research can produce effective results and knowledge regarding wider cultural contexts, "as with politics, all archaeology is local" and archaeologists can highlight how this concept is even more valuable concerning the public implication of archaeological research through public outreach (Smith and Ehrenhard 2002: 123). With this said, stressing the role of activities in producing a positive influence on the local sociocultural fabric is important. While the considerations proposed here are concerned with the situation in Sardinia, such remarks have a more general value. Therefore, the outreach activities discussed here, and as they are generally conceived toward raising understanding, awareness, and education on the value of cultural heritage protection within the local community, account for a series of themes and issues that are not only touched by but also hopefully and positively affected by such outreach.

Advancing on the basis of such assumptions, as suggested by the title of this contribution, which draws from Merriman's (2004) conceptualization of "public," main themes can be situated within two distinct areas that affect one another. The first is "public," intended as the area of government intervention through the enactment of cultural heritage protection legislation and the administrative facilities that put in practice such policy platforms. The second is "the public," understood as the community of citizens who should be involved in cultural heritage management activities, both in a captive way as straightforward users and/or in an operative way, as participants to the proactive development of outreach activities and cultural heritage protection. Merriman (2004: 2) further highlights how a constant tension exists between these two notions of "public" related to:

> …a distant, largely unaccountable state apparatus for archaeology that does not reflect the diversity of views and interests held by the public. This tension is also related to a public disenchanted with the archaeology provided by the state, feeling that it does not reflect their interests and preferring to explore other ways of understanding the past…

Within this general picture, two main topics deserve specific regard. On one hand, the development of outreach activities within the current legislative–administrative situation that, in Italy, is particularly subtle and often lumbering, needs to be taken into account. On the other hand, cultural and identity issues exist that, particularly in Sardinia, hold a strong impact (both positive and negative) on the island's sociocultural fabric. To ease an understanding of the influence of such issues on the development of public outreach activities within the Sardinian panorama, this discussion provides a brief historical introduction that facilitates the understanding of archaeological and public outreach potentiality, while also suggesting the weight of cultural identity issues within the island's cultural panorama. Some of the remarks that follow derive from research produced in an attempt to design an holistic and comprehensive public outreach program addressed to promote community awareness on maritime cultural heritage values. This research also aimed to participate in

the general community's cultural growth, a growth imagined to be traveling two distinct but mutually influential paths: the first toward the protection and preservation of a resource useful on cultural and social grounds and the second toward the sustainable use of maritime cultural heritage in terms of its enhancement and public interpretation, also potentially benefitting the local economy.

Historical Background

The island of Sardinia, often depicted as "A Footprint in the Sea," has a long and diverse history of human settlement (Tykot and Tamsey 1992). Archaeological and historical studies have delineated the history of settlement on the island, a history far too long to be analyzed in depth here (Brigaglia et al. 2006; Dyson and Rowland 2007). Nonetheless, Sardinian history can be defined in terms of its long colonial history. A unique and autochthon civilization characterized the island between the seventeenth and the tenth centuries BC (precise chronology is still debated) known as *Civiltà Nuragica* (the Nuragic Civilization) (Tykot and Tamsey 1992; Moravetti 2006; Dyson and Rowland 2007). The island was, since the ninth century BC, folded within the Phoenician expansionist stream over the Western Mediterranean basin and then conquered and colonized by the Punic of Carthage from at least the sixth century BC. With Roman victory over the Carthaginians in the third century BC (237 BC), the island fell under the dominion of what was to become the Roman Empire. The Roman interest in Sardinia was generally as a source of wheat for the ever-expanding city and as a strategic post within the trade routes of the Western Mediterranean. Rome thus exploited Sardinia as a base for expansion within the *Mare Nostrum*.

When the political power of the *Caput Mundi* was already declining, Vandal hordes took over the island around the second half of the fifth century (Spanu 2005: 499). One hundred years later, Sardinia passed over to the Byzantine Empire, but a lax administration combined with a natural and nondramatic fall of Byzantine dominion allowed for the advent of one of the rare moments of self-government in the island's history: the *Età dei Giudicati* (Judgeship Era) (Ortu 2006a: 94). This period held, and still does, a very strong impression within the island's cultural and identity formation processes, granting a significant basis to independence movements playing on Sardinian cultural singularity and uniqueness. At the opening of the eighteenth century, Sardinia passed quickly from the Savoy Ducal family to Austria, from Austria to France, and, finally, from France back to the Savoy family (Carta 2006; Ortu 2006b, c). The end of the eighteenth century witnessed a brutal external conflict against French invasion, an internal riot over feudalism, and the Piedmont region's misgovernment and overwhelming greed (Carta 2006: 35). The last two decades of the first half of the nineteenth century were a "founding" moment in Sardinian history; as Brigaglia (2006b: 84) suggests, this period witnessed a new representation of the island among foreigners and a new perception of the island's own singularity by its citizens. The custom of traveling to Sardinia continued in the

first quarter of the twentieth century when many writers and poets visited the island, reporting astonishment for its peculiarity (Brigaglia 2006a: 98–109). During the Fascist period (1925–1945), the dictatorial regime undertook a series of reclamation projects in many coastal areas characterized by noxious wetlands, swamps, and marshes in hopes of acquiring productive soils for farming purposes (Marrocu 2006: 125–127). This reclamation activity profoundly affected the Sardinian landscape and, with it, the archaeological understanding of these areas. The landscape was then modified, on the island as elsewhere in the world, by a post-World War II economic boom which deeply modified Sardinian cultural and social portraiture, once characterized by an agricultural and sheep-farming marketplace, and gradually (but feebly) collocated in a modern industrial consumer society. This brief and synthetic historical overview clearly highlights the great—and obvious—importance played by the interactions of man, the sea, and inland waterways that represent, following Muckelroy's (1978: 4) definition, the study subject of maritime archaeology.

Cultural Heritage Management in Italy

Overall, Europe, and Italy in particular, has a long tradition of cultural heritage protection policy that goes back to at least the sixteenth century, long before the Italian State was formed at the end of the nineteenth century. This tradition is based on the belief that efforts toward heritage protection could have an outstanding value in preserving ancient glory as well as ancestors' values and virtues through an effort targeted toward the *utilitas publica* (public benefit) in promoting citizens' cultural growth and State grandeur (Settis 2010). The outstanding historical background concerning cultural heritage protection, in Italy and Europe, allowed the newborn Italian State (1861) to benefit from a puissant conceptual basis. As has been stated elsewhere, many of the key concepts of this debate have now become part of the notion of cultural heritage typical of contemporary society and have played a significant role in building the Italian perspective in respect to the protection and management of cultural heritage (Volpe 2007; Ainis and Fiorillo 2008; Settis 2010).

Maritime cultural heritage is dealt with today under a generic legislation that covers and protects cultural heritage as a whole. No distinction, except for a reference to UNESCO's 2001 Convention on the Protection of the Underwater cultural heritage, is made between archaeological sites and artifacts found on land or with submerged subsoil, both of which are stated to be public property of the Italian State (Frigerio 2010; Secci 2011). An analysis of the legislative framework within which the protection of underwater cultural heritage takes place in Italy—and most importantly for this discussion, the relationship between public and private interests over such heritage—has been considered elsewhere (Secci 2011: 116–120). This discussion instead aims to deepen analysis of a series of legislative and administrative circumstances that clarify the "public" conceptual and functional structure characterizing the Italian cultural heritage legislative and managerial framework.

The *Legge costituzionale 18 ottobre 2001, n. 3* "*Modifiche del titolo V della parte seconda della Cost*" (Constitutional Law, 18 October 2001, n. 3 "Modification of the Title V of the second part of the Constitution"), placed within a wider political–administrative decentralizing reform, modified the assignment of central and local government's duties and capabilities. In this system, two main "topics-activities" that compose cultural heritage management are split between two institutions: the State government and the Regional government. In fact, in article 3 (modification of art. 117 Cost.), the abovementioned law states that legislative (thus operational) power on the subject of protection is the exclusive privilege of State government jurisdiction (Cost. art. 117, comma 2, lettera s), while the public outreach and heritage enhancement "topic-activity" is held under a competitive legislative jurisdiction between State and Regional governments (Cost. art. 117, comma 3). Such allocations have generally been pointed out as disregarding the internationally recognized cultural heritage management praxis and good practice. This legislative–administrative split-up has been harshly criticized, with critics maintaining that:

> …the rigid distinction between "protection" and "enhancement" … is technically flimsy, absent from the legislation of any other Country and from internationally accepted good practices, opposite to the principles of a good administration as it produces a dissociation of administrative action and responsibility dispersion… (author's translation) (Serra et al. 2006; Clemente di San Luca 2007: Part III; Volpe 2007: 295, 381, note 66; Settis 2010: 215)

Concerning the management framework, the Italian political–administrative system is characterized by an "equal institutional pluralism, that is, by the equal dignity of each and any government grade" (author's translation) (Serra et al. 2006). Within this system, cultural heritage management is a particularly articulated and subtly balanced activity represented by a pyramid-shaped structure. The central level corresponds to the Ministry of Cultural Heritage and Activities (MiBAC) operating locally through a series of territorial Superintendencies which, in their turn, act in the assigned territory on the basis of the precepts planned by national legislation and MiBAC's internal regulations. On the top level of the pyramid, the Minister acts as MiBAC's political–administrative guidance, assisted by a State Undersecretary who links the Minister and the General Directions on the basis of the abilities directly imbued by the Minister with a ministerial decree (Barbati 2006: 126). The General Directions, divided by cultural heritage sectors, have the duty—in the case of the General Direction for Antiquities, for example—"to perform functions and assignments not conferred, under legislative arrangement, to regional directions or sector superintendents, concerning the protection of archaeological sites and artifacts, even found underwater" (author's translation). Among the many tasks assigned by ministerial decrees, the General Direction offers opinion and judgments on the annual and multiyear programs proposed by regional directors, declares the cultural interest of cultural heritage owned by private hands, develops cataloging projects under the suggestion of regional directors, and arranges disciplinary measures according to the *Codice dei Beni Culturali e del Paesaggio*, the Italian legislation for cultural heritage (Barbati 2006: 136). The General Direction can also rely on a series of Advisory Bodies which offer advice on international matters, technical and

scientific concerns, and the elaboration of strategic plans in the field of cultural development and public interpretation (Barbati 2006: 137–141). The central structure of MiBAC is then supported by a peripheral administrative structure composed of two levels: Regional Directions and territorial Superintendencies (Barbati 2006: 143–151). The Regional Directions are directly dependent on the General Directions and have the duty to coordinate the activities of the territorial Superintendencies.

Following the Constitutional Law 18 October 2001, many occasions of friction arose between MiBAC and Regional governments, often requiring *Corte Costituzionale* (Constitutional Court) intervention to settle controversies (Clemente di San Luca 2007). In this regard, Clemente di San Luca (2007) highlights how the Court has often preserved, in the past, a centralistic vision of public institutions in the cultural heritage sector moving lately toward a more effective role in defining relative competences (State–Local Autonomies) and demonstrating a greater sensibility for the reasons for local governments.

Sardinian Cultural Identity and the Issue of Authenticity

In an attempt to insert cultural heritage public interpretive activities within an active sociocultural process, public resource managers must recognize the social and cultural disputes which characterize the current international—but more specifically local—debate and which more or less incidentally influence the development of a sound public outreach program (Shanks and Tilley 1987; Tilley 1989: 105; McGuire 2008: xi).

In the European panorama, the definition and understanding of local cultural identities has received an ever-growing interest inserted within a wider search for European identity needed to confront a fast-moving, globalized world (Thiesse 2001; Angioni et al. 2007). The debate over cultural identity has always left a strong impression within the Sardinian cultural and social fabric. Sardinian people have strongly relied upon the island's peculiar history in developing a steadfast self-consciousness in order to affirm a characteristic and unique individuality. Nevertheless, many of these new identities stand on misinterpreted, often sensationalized, and, at times, inaccurate reconstructions of the past.

Undoubtedly, public outreach activities have a relevant value in promoting cultural heritage protection and conservation, but they also have a strong influence—which deserves a serious evaluation—in influencing cultural development and, as a basic component of the "culture of memory," in defining and strengthening cultural identities of involved communities (Assmann 1997: 7 ss). Nonetheless, the innate value of cultural heritage, recognized elsewhere for providing a natural basis for the processes of cultural identity formulation within any level of the community, proposes some issues in need of a cautious and critical approach (Settis 2005: 298).

As mentioned, the issue of cultural identity has always represented an existential topic in Sardinia. The island's history, with numerous instances of conquest and colonization that suggest a "passive" protagonist, have stimulated the birth of

culturally self-driven affirmative thrusts toward a differentiation from others in order to develop the island's own distinct identity. Of course, the reworking of Assmann's "culture of memory" within the process of cultural identity formulation is often subject to ideological manipulation. Sardinia is no exception to this process. Without entering into the debate too deeply, many examples to support this notion exist. Sardinians have produced various myth-makings in order to grant a solid basis to the cultural identity formulation process. Most notable are the identification of the island of Sardinia with the Platonic Atlantis, the identification of the Shardana (People of the Sea) with ancient Sardinians, the suggestion of a centrality of the Nuragic culture within the Mediterranean basin, and so on (Frau 2002; Melis 2002). All are processes brilliantly analyzed by Cossu (2007) and Madau (2002, 2007).

The academic community has often characterized these reconstructions as mere fantasies, as reconstructions useful solely for easy publishing successes. Many defenses of these positions often rely on the crucifixion of scholars (archaeologists) as effacers of a glorious past and as operators of a power system that tends to hide past grandeurs. Defenders of these reconstructions even decry a lack (and here the discipline should consider self-criticism) of openness of the academic circle to the public and to the community (Cossu 2007: 123). Within this picture rests the importance of education and awareness to avoid or mitigate these misunderstandings. As Cossu (2007: 121), like Clifford, correctly pointed out, the work of reconstructing the past "is historically and culturally determined" and "intentionally or unintentionally, may trigger processes of falsification and myth-makings contributing to its elaboration and re-elaboration within collective imagination" (author's translation). As for the Sardinians of the nineteenth century, the Judgeship Era represented the Golden Age from which Sardinians identified with the age of heroes, political and military power, and, definitively, the strong yearning for autonomy.

As a result of the fervent archaeological research of Sardinian archaeologist Giovanni Lilliu since the last half of the twentieth century, a clearer understanding of the Nuragic past produced a reworking of the identity process in which the native island civilization took the forefront in providing a historical basis that represents a unique moment of strong and real Sardinian autonomy. This identity thus depicts an historical example of what would ultimately be the true character and the real distinctiveness of being Sardinian. Myth-making is particularly active in Sardinia, partly in response to alleged failures of institutions and scholars in directing a public interpretation of history that could provide information and a conceptual basis for the processes of recognition, acceptance, and identification typical of cultural identity formulation (Remotti 1996). The absence or lack of such processes allows for what can be defined as the "process of individuation," a concept very similar to what Merriman (2004: 2) suggested in relation to the tension between "public" and "the public."

In the processes of identity elaboration, construction, and reformulation, two fundamental concepts play a key role: Yates's "the art of memory" (1993) and Assmann's (1997) "culture of memory." Represented by the "*lieux de mémoire*," "the art of memory" links cultural identity shaping to specific physical places

(through the power of *codification*) in a relationship between ideas/memories and *loci* (Yates 1993; Nora 1997). Therefore, both the "art of memory" and the "culture of memory" jointly and actively participate to eliminate, or at least slow down, the process of oblivion that, as Connerton (2010) affirms, is closely related "to the processes that deprive the social life of a local and human dimension" (author's translation). In this process, the ability of the individual, and, as a result, of the community to refine ties with *loci* and configure historical memories first and cultural identities later loses its functional milestones. In this framework, again according to Assmann (1997: 7), "the art of memory" is strongly related to space and has as a basic concept the notion of learning, while the "culture of memory" is projected over time in a constructive and prospective manner. Therefore, according to Connerton (2010) and Smith and Ehrenhard (2002), analysis of the contingent historical moment with its social characterizations requires any public outreach program that wishes to enter and influence the sociocultural panorama to carefully analyze such social and cultural identity issues. Such issues appear to be more active in times of instability, affecting a sound development of identity-shaping activities (Secci 2013).

Colombo (2005–2006: 17) states that "to lose one's identity or not to have it collectively recognized means losing reference points, the ability to place oneself in the social map and move toward a definite goal, with an original design" (author's translation). This loss is a result of either an established process of disregard or a deficiency on behalf of those who are involved in the reconstruction of the "cultural memory" (Assmann and Czaplicka 1995: 126; Assmann 1997: 5 ss). Such disregard, according to Taylor (1998: 10) "is not just a lack of anything due, such as respect; it can also be a painful wound, which places upon his victims the weight of a crippling self-hatred" (author's translation). Without going to such extremes, a lack of recognition undeniably develops mechanisms for the reconstruction of the historical memory that do not stand on solid data (Merriman 2004; Cossu 2007: 124–125; Madau 2007: 134). Consider, in this regard, the myth-making interpretations mentioned above which have also had much success among the scientific community. The widespread success of these interpretive trends, which are more or less authentically scientific, are symptomatic of a genuine need of "the public" to acquire "an adequate recognition," which "is not just a courtesy we owe to our fellow human beings: it is a vital human need" (Taylor 1998: 10). Not only is it essential to note the importance of the recognition/acceptance/identification processes in cultural identity formulation in addition to how they acquire value "in contemporary society, how they are able to move passions, emotions, and interests far from being justified by a surface attachment to something that is perceived with detachment and irony as ephemeral and passenger," but so is understanding the process as one that has fundamental value for the individual and for the community as a whole (author's translation) (Colombo 2005–2006: 18; Bauman 2001, 2011). Recognizing this importance for the community also allows public outreach managers to deal with situations in which the public feels underrepresented and disenchanted with "public" archeology, something against which Merriman (2004: 2) wisely warned.

Applying Public Outreach and Education Efforts to the Sardinian Panorama: Purposes and Impasses

The role of public outreach in easing the process of community members' inclusion has been elsewhere analyzed (Faulkner 2000, 2009; Marshall 2002; Moser et al. 2002; Tully 2007; Moshenska 2008; Simpson 2008). The approach to public outreach hinted at here, however, gives rise to a conceptual opposition between two notions: "conversation" and "discourse." Rather than favoring simplistic and sometimes sterile processes of communication and education that often result in authoritarian speech, McDavid (2004: 161, 167) discusses, welcoming Rorty's (1989) approach, the need to establish between the archaeologist and "the public" a "conversation." Difficulties in communication can be overcome through the development of activities promoting and ensuring a product that, together with scientific assumptions and interpretations, takes into account the input from those who are, or should be, the true custodians and intellectual owners of the past: community members. An inclusive approach of this kind, however, requires a post-disciplinary and post-institutional character to mitigate issues related to bureaucracy and the allocation of power, and, finally, to particularisms that unfortunately and too often undermine a fluid development of the management of cultural heritage in Italy.

Underwater archeology and archaeologists, heritage management and managers, in short, archaeology *tout court*, should "arm itself" in order to deal not with a world in crisis, but with a world in evolution, bringing an active contribution to a local sociocultural development *in primis* and to a broader level as a consequence. For the purposes of this process of militancy (Lilliu 2006: 7–9; Secci 2013), the discipline should return to talk with the community, to engage with it, to understand its needs, and to provide it with means to prompt answers. Especially in a country like Italy where cultural assets are, perhaps more than elsewhere, under the gaze of each one of us, the community should become able to read cultural heritage and to evaluate it in all its many attributes—protection, cultural identity, cultural development, local economic development, etc.—thus making its own the needs for cultural heritage protection, preservation, and management. In short, quoting an insight of Francovich (2004: 201), involving private-sector community members is useful:

> …particularly in the management aspects …, conscious that, in no other areas as in the conservation and enhancement of cultural heritage is performed a "public use of history," which cannot be granted success if not with an inclusive and participated politic… (author's translation)

What Can Be Done in the Future?

For a fluid and meaningful development of public outreach in Sardinia, a collaborative approach is desperately needed. Such collaborative efforts should coordinate "public" efforts and stakeholders' involvement to arrive at "an inclusive and

participated politic," as suggested above (Francovich 2004: 201). The involvement of the greater representativeness of institutions and interested groups will have an impact in moderating issues previously addressed. Establishing a major connection between "public" archaeology and "the public" is also needed to mitigate certain misunderstandings, incomprehension, and fallacies that often occur in the relationship between the two. Sardinians' "need for history," as is suggested by the growing number of archaeological and historical myth-makings, should convince archaeologists, heritage managers, and other groups and individuals professionally involved in the field of cultural heritage of the need for a bigger and more systematic inclusive approach toward the "out there" of archaeology (Edwards-Ingram 1997).

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Chapter 8
The Success of the South Carolina Sport Diver Archaeology Management Program

Ashley M. Deming

Abstract In 1991, the Maritime Research Division of the South Carolina Institute of Archaeology and Anthropology, College of Arts and Sciences, at the University of South Carolina, initiated the Sport Diver Archaeology Management Program. The program combines management of divers' recovery of submerged archaeological and paleontological material through licensing with a robust public education and outreach component. This chapter addresses the outcome of these initiatives: what has succeeded, what has fallen short, and what future directions must be taken to encourage responsible and sustainable public involvement in the interpretation and protection of these finite and fragile resources.

In 1991, the Maritime Research Division of the South Carolina Institute of Archaeology and Anthropology, College of Arts and Sciences, at the University of South Carolina, initiated the Sport Diver Archaeology Management Program (SDAMP). The program combines management of divers' recovery of submerged archaeological and paleontological material through licensing with a robust public education and outreach component. The SDAMP serves to protect underwater sites by encouraging responsible access to those sites and instilling a sense of stewardship toward the cultural heritage of South Carolina. Since its inception, a number of initiatives and strategies have been implemented which include the development of interpretive heritage trails, field training programs and workshops, public presentations, and volunteering opportunities. This chapter addresses the outcome of these initiatives: what has succeeded, what has fallen short, and what future directions

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must be taken to encourage responsible and sustainable public involvement in the interpretation and protection of these finite and fragile resources.

In 1968, the first law pertaining to the protection of submerged cultural heritage in South Carolina was passed. This law was created mainly to protect discovery and salvage rights to historical shipwrecks (in this case, a Civil War blockade runner), but it was really the beginning of a 40+ year dynamic management program for submerged cultural resources in the state. The increasing popularity of scuba diving in this period brought many divers to the region. South Carolina has a rich archaeological and paleontological history that attracts divers like few other states. With no foreseeable way to cease all collecting/salvage activities, state archaeologists decided the best course of action was to work with divers to get as much information as possible about what the divers were finding.

In 1976, the Hobby Diver Program was initiated that allowed for a diver to apply for a license from the state of South Carolina to collect artifacts and fossils from state waters on a "temporary, intermittent, noncommercial" basis using only surface collecting and no other means than their personal floatation device (no lift bags, dredges, winches, etc.). The law also required licensees to file reports with the state about their diving/collecting activities. Diving was already a large sport in South Carolina and collecting was the significant reason. The dark, tannin-stained waters combined with high concentrations of particulate matter create low to zero visibility conditions. These conditions deter many, but those who persist do so with a very singular purpose (Albright 1989: 258). That purpose is to collect archaeological and paleontological material. Already a wide-spread activity and growing ever popular, the Hobby Diver Program was an attempt to regulate the activity by reducing uncontrolled collecting, but more importantly, to strengthen the communication between divers and state archaeologists about what they were finding and where.

As with many unprecedented programs in their infancy, the Hobby Diver Program faced some early obstacles. The largest obstacle was the attitude of the divers. Most were exceedingly displeased with the state taking over control of their activity and regulating it. Many divers distrusted state officials. Divers felt that it was a "finders-keepers" type of situation and were often fiercely independent and territorial of their finds and sites, even from other divers. A prevailing "treasure hunter" mentality fostered indiscriminate and uncontrolled collecting. The dream that fortunes could be made from these underwater "treasures" was appealing to many. This was compounded by the fact that, in the early days of licensing, hobby licenses were run concurrently with shipwreck salvage licenses.

Many misconceptions developed about what the license meant and what the state could do with the information provided by the diver. Could the state take their finds whenever it wanted? Would the state share the information about their site with other divers? These questions are still some common misconceptions today, but are much rarer than in the earlier periods of the law. Archaeologists worked with divers to revise the law in 1982 and again in 1991, known now as the South Carolina Underwater Antiquities Act of 1991, to clarify some of these questions. As currently written, the law provides for the state to retain ownership of all collected material while the licensee retains custody until 60 days after the licensee files his/

her report. If state archaeologists are interested in the artifact(s), they may contact the diver to record the artifact or to request more information. Once the 60 days have passed, ownership of the material is automatically transferred from the state to the licensee. Additionally, all files pertaining to the Hobby Diver Program are exempt from the Freedom of Information Act and are therefore not available for public consumption. For divers, this means that if they discover a "sweet spot," the state cannot share that information with other interested divers. The state does retain the right to share any information for research and educational purposes. These stipulations seemed to satisfy most of the diving community, thus strengthening the relationship between sport divers and state archaeologists.

What remained even after the law was enacted and clarified was much of the old "finders-keepers" mentality. Divers had always exhibited an interest, appreciation, and profound knowledge for South Carolina history, but, to archaeologists, those interests were misplaced through their collecting practices. State archaeologists thought an education component would aid in redirecting collecting into preserving. Thus, the SDAMP was born. Initiated in 1991, SDAMP was to be the missing education and outreach component to the licensing program. The importance of relying on sport diver information had been realized since the early years of the license, but this was the first truly concerted effort by the state to legally mandate an education component to the license for the purpose of involving hobby divers in learning maritime history and archaeological research methods.

SDAMP's responsibilities consist of managing the licensing program for hobby licenses, acting as first responders to sites reported to the state by divers and the public, providing education and outreach to predominately sport divers but also the general public, and managing two maritime heritage trails. Two staff members facilitate this program, a maritime archaeologist and an archaeological technician, through a field office in Charleston, SC.

The licensing process consists of processing applications and renewals for 6-months and 2-years licenses as well as maintaining a database of reporting histories and hobby diver information and reviewing recovery reports. It also entails responding to questions and concerns from divers regarding the license and reporting process, identification of artifacts, and any follow-up information required concerning finds made by divers. At this writing, between 400 and 500 licensees are active each year.

Occasionally, a diver will come across a site either underwater or on the beach and report it to SDAMP through their quarterly report or by contacting the office directly. SDAMP tries to keep that diver/finder a part of all future investigations of that site. Should SDAMP deem the site worthy of a site assessment visit, the finder is contacted and invited along to show staff the site and to relay their experience with it. Keeping people involved in the process illustrates to them that someone really does care about what they report and is interested that they reported it. Time and time again, this approach has yielded subsequent reports and further participation with the program.

SDAMP provides education and outreach with the public and its sport divers through a variety of strategies. These range from Field Training Courses (FTC) to

public lectures. Education and outreach is, by far, the most important aspect of the program. SDAMP tries to seize every opportunity to connect with people who are interacting with maritime heritage. This is to foster a sense of stewardship for the cultural resources in South Carolina and to instill an appreciation for the importance of preservation of these finite resources. It is the belief of program managers that education and outreach is the only way to truly preserve and protect cultural resources for generations. This belief is the driving force behind all education and outreach initiatives. Sport divers need to understand not only what the state requires of them, but how and why. If people understand what they are meant to do and why they are doing it, they are much more likely to participate. This has certainly been the case with SDAMP.

SDAMP manages two maritime heritage trails. These trails provide a unique opportunity for education and outreach as each site can function as a microcosm of all similar sites in South Carolina waters. The Cooper River Heritage Trail is an underwater diving trail consisting of six sites that range from a Revolutionary War British gunboat to a nineteenth-century barge. The Ashley River Heritage Trail is a paddling trail on which eight sites are exposed at low tide. This trail offers more accessibility to non-divers who may otherwise not have an opportunity to experience shipwreck sites. The Cooper River sites were chosen as each was already well known by divers and the local community and would not suffer as much from human interaction. Each site was marked by a buoy and trail guides were made available with information on each site and local history pertaining to the sites. Divers/paddlers are encouraged to take a self-guided tour of the trails and to learn about the local maritime history at their own pace with the information provided. Several of these sites have been used for training courses provided through the SDAMP program and other organizations to teach archaeological recording techniques. Both trails are now designated Marine Protected Areas through NOAA's National Marine Protected Areas Center.

Overall, a very positive response to SDAMP and the education and outreach initiatives has been received. Divers feel much more connected with the program and the archaeologists. Sport divers have more of a sense of teamwork to record and preserve South Carolina history. This is, however, a slow process that takes time and effort to develop on both sides. Currently, SDAMP is taking the focus away from having a license as a legal issue to fostering the idea that the license is like having a membership to a club. Divers appear to have an increasing perspective change, from looking at artifacts as just interesting items on the bottom to "what story can this object tell?" Sharing the information with a larger audience and connecting divers to one another through the "membership" ideology is one of the ways this program fosters a sense of stewardship for submerged cultural resources in the diving community.

Approaching licensees as club members, SDAMP offers divers the opportunity to get involved and stay connected. If that connection is lost, it takes a very long time to regenerate. This has often been the case with the program. A lack of consistency of management over the years has taken its toll on the relationship with sport divers. Some of this has been a result of personnel changes (the program is on its seventh manager since its inception) and of continual changes in policy. Often, the

licensing component was treated separately from the education and outreach component. Licensees were targeted for education and outreach efforts, but the initial licensing and contact was not integrated. Currently, the program uses the license process as a first point of contact and as a way to bring divers further into the program. No longer are these viewed as mutually exclusive components, but rather are part of the same system to encourage cooperation and stewardship.

Consistent interaction with the licensees is the key to a strong relationship. The program keeps up a constant dialogue with licensees through a number of mediums to answer questions, ask questions, give quick responses, and to take whatever time necessary to ensure the licensees feel informed, appreciated, and important, because they are. Divers would be out there happily collecting regardless of a license law. The license, reports, and participation is something that is much more important to the archaeologists. The divers are a necessity as they are the eyes and ears in the field. Without them, South Carolina state archaeologists would have significantly less information on underwater sites. Of course, the overall goal is that every diver will understand the importance of preservation over collection, but the reality is that many will never fully grasp the concept despite the best efforts at education. In lieu of complete understanding is the hope that, at the very least, collectors will comply with the license program. People have a tendency to participate when they feel appreciated and that their efforts matter personally to someone. When people get a license, they assume that it comes from a cold, bureaucratic state office like the stereotypical Department of Motor Vehicles. SDAMP personnel conduct themselves with the highest professionalism, but also put a personal touch on everything. A personal touch often leads to trust, maybe not of the state or program, but at least of that individual with whom the diver has connected. Trust is a necessity of this program. Christopher Amer and Carl Steen (1988) make note of this importance in their article about the program stressing trust by the state on the part of the diver to follow the rules and regulations, and trust by the diver of those managing the program. Incorporating a personal aspect gives divers not only the sense of being appreciated but also that an actual person is responding to their needs. The response and subsequent participation and compliance with this approach have been very evident over the years despite inconsistencies in other aspects. The majority of the initiatives through the program have this foundation when they are developed, in order to maximize this potential and build on that trust.

SDAMP is currently building trust through a variety of ways. The program strives for consistency in management, but also for better communication with licensees and for new ways to interact with divers and keep them involved. Making sure that licensees are “in the loop” is one of the best ways to keep them involved. Since 2010, information has been disseminated to licensees and divers through instrumental methods. The first way to ensure divers are informed is the information packet sent out with the license. In addition to their license, this packet includes a welcome to the program letter, instructions for filing reports, report forms, contact information, and several useful web links. Once their license is processed, a licensee’s email address (if they have one) is added to our emailing list. This list includes current and past licensees as well as anyone who has expressed an interest in

receiving updates regarding the program. Their email is also entered into a database so they may be contacted this way regarding their license and reports.

Contacting licensees as well as conducting the majority of correspondence for the program via email is the preferred method of interaction. The efficiency of it, as well as the low cost, makes this method the most attractive. This is a "virtual age" and SDAMP is trying to make the most of it. Licensees are now able to submit their reports online using a secure database: forms are also available online as PDFs for download and may be submitted via email. The SDAMP Web site provides news and information about the program as well as useful links to artifact identification and organizational affiliations. As part of our outreach efforts, each individual on our emailing list also receives a copy of the newsletter, the *Quarterly Reporter*, via email. The newsletter includes information about reporting, articles by South Carolina Institute of Archaeology and Anthropology staff, articles submitted by divers, and professional contributions from authors such as *H. L. Hunley* conservator Johanna Rivera, Divers Alert Network president Daniel Orr, and Curator of Natural History at the South Carolina Museum David Cicimurri. SDAMP also has a Facebook page that features news and upcoming events as well as many photos from projects and public outreach events. Communication and a more streamlined process with licensees have had an extremely positive impact on reporting and other participation. Reports jumped from a 20 % submission rate in 2009 to 65–70 % in 2011.

Simply connecting with the divers in a virtual way is not enough. Trust is truly developed by face-to-face interaction. These interactions allow staff and divers to meet, put faces to names, and build relationships. SDAMP gives a number of public presentations each year to dive clubs, schools, and various organizations around the state. This is an excellent way for the public to interact with staff and to get an idea of what maritime archaeologists do in the state, as well as ask their questions directly to the people managing the program. Many misconceptions have been corrected and bridges built through these interactions. In 2011 and 2012, SDAMP partnered with the Charleston County Public Library to provide public lecture series. These lectures allowed divers and the general public to hear about the maritime archaeology research going on in the state and to connect with professionals about how they might be able to get more involved with that research.

Since the 1960s, divers have wanted to participate in projects with the state on underwater sites, and many were encouraged to do so. As maritime archaeology became more and more standardized, it became very clear that sport divers were going to need a lot more training if they were going to be asked to survey, record, and, in some cases, excavate sites. This was especially evident when funding became an issue and the state wanted to rely more and more on divers to record sites that archaeologists may not have time or money to get to. Dr. Lynn Harris was instrumental in creating some of the first FTC through the program. Divers paid to attend a course over a couple of weekends to learn about maritime archaeology and survey and recording techniques. The plan was that divers completed the course with the basic knowledge of how to record sites, with or without an archaeologist present, and how to submit state site file forms. The certification received upon completion of the course meant they were qualified to participate on projects with the Maritime

Fig. 8.1 2012 field training course part II students Bruce Orr (*left*) and Brianna Blacklock (*right*) recording the remains of a beached vessel on Hilton Head Island, SC (Photo by author, 2012)

Research Division. The reality of this is that it ended up being slightly overwhelming for many of the divers and not what they really wanted. Few ever continued on to participate at the level the state hoped. In addition, lack of time and funding prevented opportunities to provide sufficient projects through the program for participants to continue their education and involvement. FTC continued in an attempt to build a sustainable volunteer base, but never reached the level hoped.

In 2010, the FTC was reimagined into a two-part course where Part I is a weekend course that covers types of sites divers may encounter in South Carolina waters, basic measuring techniques for underwater sites, and both a dry land and underwater mock site to practice the techniques learned in the lectures. If students are just looking for an introduction into underwater archaeology for a better understanding, they can stop with Part I. Should they wish to continue, they have the opportunity to participate in Part II. Part II is designed to allow participants to take part in research on an actual site (underwater or beached) over a 3- to 4-days period and record that site either to create a new state site file or to update an existing file. From 2010 to 2012, three successful Part I courses were held, and 2012 launched the first Part II with three students excavating and recording a beached wreck on Hilton Head Island (Fig. 8.1). Students' responses to the course have all been positive, and the 2012 Part II students want to return to the site in future seasons to continue what they started. It is obvious that participants have a new and excited understanding and appreciation for not just cultural resources but for the science of archaeology.

Although volunteers, trained or not, are invited to participate on some projects, not many projects are underway on which a large number of volunteers can participate. The main project involving volunteers each year is the Allendale Project where

8–10 volunteers can participate over a 2-weeks period for dredging operations near the Topper Site. This project is facilitated through the South Carolina Institute of Archaeology and Anthropology and the Southeastern Paleoamerican Survey. Divers camp out at the on-site facility and spend 8 h of the day dredging in zero visibility conditions, moving material to land volunteers, and learning about the early peopling of the Americas. This is the sought-after project of the year, and SDAMP has had to turn excess volunteers away. SDAMP hopes to emulate the success of this project with others it provides in the future.

Many licensees, however, are not interested in much more than a little history and the artifacts and fossils they collect. Submitted reports made apparent that many divers did not even know what they were collecting, let alone how to report it. In 2010, SDAMP decided to hold Artifact Identification Workshops in the hope of teaching licensees about what they were finding and how to report it. How could they accurately report their finds, if they did not know what the artifacts were? If the state wanted a better quality of reports, they had to provide the information necessary. Concern was voiced that the workshops might encourage more collecting, but SDAMP managers decided that people accurately reporting finds was better than no report at all. Additionally, this provided another teaching opportunity to explain why archaeologists do what they do and why it is important. A possible outcome was that it could reduce indiscriminate collecting of everything if licensees understood what they were finding and that, while those finds were special, they were not as unique as perhaps they thought. The workshops also provided an opportunity to reinforce the idea that everything collected should be reported. The motto is, "if it is important enough to collect, it is important enough to report." The idea that a portion of an artifact might tell archaeologists as much as the whole thing is a revelation to some collectors. Just between 2010 and 2012, eight successful workshops with nearly 100 participants were held.

One of the most successful initiatives SDAMP started is Wing Nights. Inspired by a hobby diver and dive club meetings, in 2011, SDAMP decided to hold an informal gathering once a month at a local restaurant for divers to get together with staff and share dive stories, bring artifacts, and just enjoy some chicken wings and beer. The main reasons for this event were (1) to give divers an informal way to meet staff face-to-face, (2) to get divers away from their cliques and interacting more to create a diving "community," (3) to give divers another outlet to display and talk about their finds (fossil or artifact), and (4) to give staff yet another opportunity to educate people on the importance of preserving cultural heritage. Wing Nights are a very positive success in the Charleston area with attendance between 5 and 20 people each month. Divers outside the Charleston area expressed such an interest that, in 2012, SDAMP teamed up with Wateree Dive Center to host a Wing Night in Columbia, SC, once each quarter. At this writing, three Wing Nights have been held in Columbia with attendance between 50 and 60 people each time.

The SDAMP has made huge strides in developing a strong and trusting relationship between archaeologists and licensees. However, some obstacles must still be overcome. Old biases still exist, as do some of the same misconceptions of years past. Time and patience is needed on both sides, but the divide between the parties

is getting smaller. Much of this has to do with consistency. The program will not succeed without it. Changes in management personnel are inevitable for a long-term program, but the policies and procedures should remain the same. This has not always been the case, largely due to the fact that the program is truly unprecedented. Without set guidelines, divers and archaeologists sometimes worked at odds where law and practice often left both groups feeling unsatisfied. The reality is that the relationship between divers and archaeologists is ever changing as new divers join the program and others retire from it. In many ways, it is like starting all over again. SDAMP must provide a certain level of consistency, communication, and follow-through on behalf of the state in order to provide divers with a stable platform with which to work. This practice will also ensure sustainability of the program itself.

To provide this sustainability, SDAMP must communicate with its partners, specifically, the South Carolina State Museum staff, who process the fossil reports, and the South Carolina Department of Natural Resources' Law Enforcement Division officers, who handle enforcement of the Underwater Antiquities Act (the law incorporating hobby diver licensing). For too long these organizations have not communicated on a level that works to support the program, sometimes resulting in situations of misinformation, confusion, and bitter feelings. To make huge leaps, all partners need to come together to make each aspect of the program as successful. Toward this end, the State Museum is currently working with SDAMP to develop education opportunities for divers interested in South Carolina's paleontological history and is opening a positive dialogue with divers. Divers increasingly inform SDAMP staff of law enforcement efforts to check licenses on the water and at landings, and SDAMP has provided many law enforcement officers with copies of the law and forms and information.

One of the largest hurdles the program is trying to overcome is the confusion divers, licensees, and the public have about the program. This ranges from the licensing process to organizational affiliations. Divers are often confused about the stipulations of the license and their responsibilities when they are issued one. Licensees commonly state that they were not aware they were required to file reports. Information is provided in many places and repeatedly, but this confusion still seems to be an issue. Clarifying this information for divers is a primary goal of the program. Licensees also seem to be confused about the reporting process. They do not understand why they must file two separate reports (artifact and fossil) or why they are required to file reports if they have not been collecting. Rather than blame the licensee for not following the rules, program staff has asked themselves how the process can be made more streamlined and easier for the licensee to understand and to use. This is why online reporting was created and information made widely available on the program Web site. There is still a long road ahead to streamline the process and information, but because communication lines are open, more people are having their questions answered and are understanding the process.

SDAMP's organizational affiliations can be confusing to the public and especially to licensees since they are filing reports with two separate state agencies. SDAMP administers a state law, but is not technically a state agency. The program is a part of the Maritime Research Division at the South Carolina Institute of

Archaeology and Anthropology, part of the College of Arts and Sciences at the University of South Carolina. Each program component wants recognition for the affiliations, and the result often seems completely overwhelming to the public. While each program is equally important, the public, especially licensees, have a hard time relating to all at once.

Funding is also an obstacle. As with all growing programs, enough funds are often not available to support the growth. Although administrative costs (salaries, vehicle, facility, etc.) are covered through the University of South Carolina, SDAMP runs on a $0 operating budget. Monies from the license fees (ranging from $5 to $36) are what the program and the Maritime Research Division rely on to support ever-increasing program costs. Of course, grants play a role in funding projects, but day-to-day operations, equipment costs, and maintenance fall directly on the shoulders of the program. While this limitation complicates operating the program, support received from the sport diving community has been overwhelming. They often provide labor, services, and equipment. Beyond being just eyes and ears in the field, sport divers are truly an asset to keep the program afloat. Divers have also been a part of our courses and workshops, which generate a small amount of income, as well as participate in fundraisers. The Annual SDAMP Oyster Roasts are very well received and raised funds to put toward future education and outreach needs.

The program always strives to better support both archaeological needs and needs of the divers. SDAMP is increasing the interaction and participation with divers through offering more volunteering opportunities as well as through going diving with them to better understand the "hobby diving perspective." Program staff hope to offer more project opportunities to divers that incorporate all levels of site recoding knowledge. Being able to give FTC graduates another level beyond what they learned in the course is not only good for them but works toward building a trained and effective volunteer force. Many projects are being developed for the riverine environments as this is where the divers spend their time, and it allows for the chance to expand upon stewardship in their own "backyard." These projects are intended to be multifaceted to combine volunteers, partners, and the media, as well as subsequent education and outreach after the projects are completed.

Partner relationships must be built upon and new ones created for the sustainability of the program. This will strengthen a cohesive foundation for support. Internal as well as external partnerships should be expanded upon. Relationships between SDAMP and the University of South Carolina, the College of Charleston, and Coastal Carolina University have already been made, but can be further solidified. The program's partnership with the South Carolina Department of Natural Resources and the South Carolina State Museum will be further encouraged. Additionally, SDAMP will continue to reach out to dive shops and charter operators to provide updated information about licensing and the program, as these organizations are the first point of contact for divers.

Communication will always be a strong component of SDAMP to connect divers to the program and to relay information. This approach has already yielded great results and will continue to grow. The program hopes to increase reporting quality

and quantity through providing clear and concise instructions, disseminating information through workshops and courses, streamlining the licensing and reporting process, and instilling appreciation for the role the public play in preserving submerged cultural heritage.

Overall, the program will strive for continuity and sustainability. This entails keeping opportunities available to divers for interaction and involvement, as well as always providing fresh perspectives and opportunities. It also means that, given some of the current obstacles such as short staffing and lack of funds, the program does not overreach its abilities and not be able to keep up with that growth. For any public programming, stagnation can be the largest threat to survival.

The success of the SDAMP largely depends on the criteria with which it is judged. Unfortunately, illegal collecting is still taking place in South Carolina and artifacts are disappearing into private collections, some of which are out of state. It is fundamental to understand that SDAMP was never created as a solution to collecting, but rather a way to mitigate it, to educate divers, and to record as much information as possible. The laws set in place are a direct response to an already well-established collecting practice by divers in the state of South Carolina. Should other states be interested in a similar program, they should understand the importance of a solid infrastructure and support system before considering a program of this nature to avoid many of the pitfalls this program has faced throughout its existence.

This program has made massive strides in connecting divers with archaeologists over the course of its development. An incredible amount of knowledge about the underwater sites in the state has come directly from that connection. The program continues to expand and grow, and most importantly, adapt to the situations that befall it. It strives for sustainability and continuity in all things. In all of these aspects, it must be considered a success. There are always ways in which a program can improve and this program is certainly no different. Efforts are being made by the program, divers, and partners to make positive changes in that growth and development. The licensing program and subsequent development of education and outreach initiatives surrounding it was unprecedented at its inception, but now may be considered a positive example of what all archaeologists and sport divers can accomplish when they work together toward the common goal of preserving a shared heritage.

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Chapter 9
Maritime Heritage Outreach and Education: East Carolina University's Engagement with International Public Communities in Africa and the Caribbean

Lynn Harris

Abstract How will academic institutions prepare new generations of maritime archaeology students for the unique challenges of a profession that frequently operates collaboratively in foreign arenas? International study programs and maritime archaeology field schools, above or below the water, offer unique but often complex teachable moments in cultural resource management. A central focus is consideration of tapping into other sustainable popular tourism packages to include maritime heritage education and outreach initiatives. Collaborations in Namibia, South Africa, and Dominican Republic are examined as case studies associated with different problems, perceptions, and challenges.

Introduction

Countries without many, or any, formally trained maritime archaeologists often depend on partnerships with overseas institutions, visiting researchers, and dedicated public stewardship groups to document shipwrecks, to make management assessments, or simply to boost the economy by visiting maritime heritage sites as part of broader tourism initiatives. These groups might include sport divers, scientific and historical society members, museum curators, tourism operators, and other interdisciplinary specialists. While officials may welcome contributions of expertise and funding from educational institutions in the USA, like the Program in Maritime Studies at East Carolina University (ECU), meeting the needs and perceptions of both the public and the governments regarding their heritage can be challenging. As an educational institution ECU strives to expose students to complex

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management issues and problems that reflect the role and value maritime heritage plays within that particular society.

Educational initiatives require working closely with local stakeholders in the selection of appropriate sites for partnership projects, making viable recommendations about sustainable heritage tourism, considering options for in situ site interpretation and stabilization operations, and dealing equitably with issues of academic partnership and publication. Collaborations in Namibia, South Africa, and Dominican Republic are examined as case studies, each associated with different management issues. A central focus is consideration of tapping into existing popular tourism packages to include maritime heritage education and outreach.

South Africa

East Carolina University history department currently offers a combination of undergraduate and graduate student summer abroad program focusing on cultural urban and maritime heritage in South Africa (East Carolina History Department 2012a). Faculty seek advice and partnerships from a variety of stakeholders and resource specialists including museum curators, archaeologists, and, especially, qualified and experienced tourism operators who understand the heritage market niche (Cape Town Tour Guide Company 2012).

The objective, from our viewpoint as history educators, is for the students not to focus exclusively or narrowly on maritime heritage, but rather to make connections between dominant historical events of South Africa and the USA. For example, this includes analyzing the legacies of apartheid and segregation in the U.S. South. Students are directed towards developing an understanding of contemporary South African society and how cultural resource managers view their history and maritime history within this socio-cultural context. In preparation for working and studying abroad, students are exposed to the management experiences of the South African Heritage Resource agency and to a changing emphasis from prioritizing European shipwrecks as national monuments, towards examples of indigenous maritime culture like fish traps of artisanal fisher communities, whaling and sealing labor histories, and the search for the slave ship *Meermin* (Gribble 1998, 2005; Alexander 2007; Public Broadcasting Service 2009). A quotation from the National Heritage Resources Act (NHRA) encapsulates the spirit of the South African Heritage Resources Agency (SAHRA), which has replaced the National Monuments Council (NMC). It succinctly states:

> One of the most important elements of the legislation is the opportunity it provides for communities to participate in the identification, conservation and management of our cultural resources. Our heritage celebrates our achievements and contributes to redressing past inequities. It educates, it deepens our understanding of society and encourages us to empathise with the experience of others. It facilitates healing and material and symbolic restitution and it promotes new and previously neglected research into our rich oral traditions and customs (South African Heritage Resources Agency 2012).

The focus on shipwrecks has left a gap in the protection of sections of South Africa's heritage and this has meant that underwater heritage resources have been viewed as separate from the country's rich terrestrial heritage sector. In order to align underwater heritage with South Africa's broader heritage themes, the Maritime and Underwater Cultural Heritage Unit of SAHRA has begun to spotlight its awareness raising and training programs, and to work towards the development and ratification of national and international policies related to maritime and underwater cultural heritage and the development of cooperative, intra-governmental management structures. The Unit has developed its regional and international profile through workshops, cooperative projects, and exchange of ideas (Sharfman et al. 2012: 87–109). SAHRA maritime archaeologists met with ECU students in a video conferencing session in our global classroom to outline management challenges in their country. During ECU's visit to South Africa, cultural resource managers took students on tours of the maritime archaeology facility in downtown Cape Town and accompanied us on a beach trip to assist in documenting a shipwreck site.

To shape the students' more holistic understanding of the context of this neglected historical legacy, the student group visited apartheid museums and Robben Island prison where Nelson Mandela was incarcerated, participated actively in school feeding programs, and visited informal settlements or townships like Langa, a visible manifestation of apartheid and the reality of current high unemployment levels and poverty in South Africa. These community spaces and projects are projected to visiting tourists as paying tribute to the spirit of human triumph and allowing an insight into South African culture and the concept of *Ubuntu* (a Xhosa and Zulu ideology that focuses on humanity and a universal bond). ECU students also engage with public high school students in history classes discussing segregation and apartheid eras, how they might impact the historical narrative, and what aspects of heritage we choose to preserve and study as a global society (Footsteps to Freedom 2012).

Another aspect of the summer abroad program is to introduce students to the tourism ventures that create high interest and revenues that potentially help to improve the economy of *new* South Africa, especially in marine settings or coastal areas. These nature tourist ventures include "extreme adventures" shark cage diving and visitation to assorted animal rehabilitation centers. Currently, the older model of game reserve drives is being replaced with more interactive engagement, awareness, and information packaged outreach for the local and international visitors with funds channeled towards research and management programs (Elephant Sanctuary 2005; Garden Route Adventure Center 2009; Tenikwa 2012).

Heritage visitation combined with nature tourism is a key component in South African economic growth today. The South African National Register lists 2,700 shipwrecks affiliated with 38 nations. Shipwrecks, like U.S. Liberty ship *Thomas Tucker* (1942) and British supply ship *Kakapo* (1900), situated, respectively, at Cape Point Nature Reserve and Noordhoek, a popular surfing beach, are part of self-guided and organized walking tours (WorldCruisinguide.net 2008; African Travel Guide 2011; Grains of Sand 2011; South Africa Explored 2012).

Fig. 9.1 *Kakapo* Shipwreck on Noordhoek Beach, South Africa (Photo by author, 2012)

These two shipwrecks on land provide ideal educational centerpieces for students to conduct basic pre-disturbance archaeological recording, geo-referencing, and digital mapping, discussions about management and the concept of in situ preservation issues, and how these shipwreck sites, situated on South Africa's shoreline, are representative of a global heritage (Figs. 9.1 and 9.2). The *Thomas Tucker*, operated by the Merchants and Miners Company on behalf of the U.S. Maritime Commission, was part of the 42-ship convoy carrying material to the African Front during World War II. The ship was reported lost in action, torpedoed at Cape Point. The cargo included 25 Sherman tanks, 16 tank cars, 200 motor vehicles, and barbed wire, much of which was later salvaged (*Cape Times* 1943; *Cape Argus* 1959). The first man on board was Vincent Hare, a scuba diver, who wrote about the shipwreck, relating that, "although abandoned she was a ghost town, with virtually everything intact, including the refrigerators which contained turkeys, hams, and plum puddings for thanksgiving dinners of the American troops. Eventually, all this spoilt because some clot (idiot) left the fridge open" (Lloyds Shipping Register 1944–1945; Marsh 1968).

SS *Kakapo* was a composite wood and iron British steamship of 1,093 tons built by Grange Mouth Dockyard Company in 1898 and commanded by Captain Nicolayson. It was on a maiden voyage from Swansea to Sidney, Australia, in ballast when it wrecked in a northwest gale, eventually washing ashore on the beach. The captain was so embarrassed by the incident that he lived on board for 3 years with little public contact (*Cape Times* 1900; Lloyds Shipping Register 1900–1901; Kennedy 1955). The shipwreck, situated on one of the most scenic beaches of South

Fig. 9.2 *Thomas Tucker* Shipwreck at Cape Point Nature Reserve, South Africa (Photo by author, 2012)

Africa with a backdrop of mountain ranges, was used for the filming site of *Ryan's Daughter* and as a photographic posing area for South African fashion models, and thus it has status as a tourism venue (Elliot Collection 2012).

Namibia

In 2010 graduate students and faculty from the Program of Maritime Studies at East Carolina University partnered with the Windhoek Underwater Club to visit, investigate, and document maritime heritage sites in the Namib Naukluft Park, part of a larger park system that covers an area of 114,000 square km, or 13.8 % of the country. The parks are a significant cornerstone of Namibia's tourism industry and the backbone of the national economy. It is believed that these protected areas have untapped potential to alleviate poverty considerably and to encourage environmentally sensitive community development or projects in rural areas (Von Schumann 2006). The sites the student group visited were selected for the project due to their significance to the local public community as centerpiece tourist attractions and, more recently, as the focus of stabilization efforts by the Marine Archaeology Division of the Windhoek diving club (Von Schumann 2006; Von Schumann and Schenk 2007). The study abroad program served as an opportunity to introduce students to the concepts of historic preservation, maritime landscape, and the

particular challenges of cultural resource management in Namibia. Because no Namibians have been formally trained in maritime archaeology and no Namibian government agency has a funded mandate to either actively manage these sites or promote public outreach and education in maritime heritage, partnerships projects such as this might prove to be productive initiatives (Harris 1996, 2002: 59–73; Werz 2007: 103–121). The purpose for our visit was listed as "maritime archaeology education." Included in the group was a representative of the Windhoek museum, Walter Haungwa, both to participate and to monitor the impact of our activities on cultural resources (Windhoek Underwater Club 2010; East Carolina University Program in Maritime Studies 2012b).

The study area was also situated within the historic "Sperregebiet" (forbidden diamond mining area) on the Skeleton Coast between the coastal towns of Walvis Bay and Luderitz. Since the early 1900s, German prospectors, and later other international consortiums, mined these mineral-rich deposits. During the 1920s and 1930s, this northern mining area was managed by the Namaqua Diamond Mining Company (Cooper 1983). Prior to mining operations, American whalers established encampments and interacted with the indigenous population along this remote stretch of desert coastline (Tower 1907; Townsend 1935). The dense fogs, rough Atlantic surf, and dynamic movements of sandbars contributed further cultural features to the desert landscape. Scattered shipwrecks and timbers of various nationalities and vintages along the beaches and among the dune fields contribute to a complex set of site formation processes. Today this is a popular area for safari tourism with access restricted to small groups with special permits (Far and Beyond 2010; Omalweendo Safaris 2011).

The expedition's primary objectives were to record a wooden surfboat at Meob Bay, which was an unloading venue for steamers known to the mining prospectors in the early 1900s as Mutzelbucht. The surfboat is one of a pair fondly named "The Ladies of Meob" by club members who conducted stabilization operations on the boat over the last few years. Whale bones surround the boats and are scattered densely along the beach. The surfboat, or "Brandungsboot," may have been used in earlier years as a whaling boat and in later years to land diamond mining supplies. It is believed that the boat may be the one of the vessels handled by Liberians C. Lewis, David Freeman, and Bolah Wreh (Harris et al. 2010; Schneider 2009: 93–94, 209).

Eduard Bohlen is a German steamboat that belonged to the West African Woermann line. The vessel wrecked near Conception Bay in September 1909 while carrying passengers and mining supplies, such as cocopans and rails, from Swakopmund to Table Bay in South Africa (*Deutsch Sudwestafrikanishe Zeitung* 1909). Brief histories and tour guides primarily discuss the working life of *Eduard Bohlen* and its service in the Woermann line delivering passengers, mail, and cargo from Germany to Namibia at the turn of the century. What is sometimes left unstated in these histories is that the beginning of the twentieth century was a bleak time in Namibian history. The German Colonial Wars and the genocide of the Herero and Nama people lasted from 1904 to 1907. *Eduard Bohlen* played a role during these tragic events as a prison ship for thousands of black Africans. Though this is not a promotional or nationalistic aspect of Namibia's heritage, it is an important one

nonetheless. In one sense, the shipwreck is a symbol of colonialism and oppression, but in another sense it is symbolic of historic atrocities and the reasons they should be neither forgotten nor repeated. The wreck of *Eduard Bohlen* is therefore a unique monument of remembrance for those who served in labor camps or perished in the war (Harris et al. 2012).

The challenge of interpreting and analyzing the historical messages of archaeological sites like mining encampments and German steamboats, perceived primarily as traditional symbols of colonial oppression, is a challenge for promoting sustainable tourism in the Namib Naukluft park. Therefore, these sites are not attractive assets for government management funding. What authentic, non-commoditized meaning can these sites convey about the active role of non-colonials in shaping the economic and industrial history of Namibia? The majority of the mining laborers were Owambo contract men (Schneider 2009: 192–195). The mariners of the open surf boats, for mining and possibly whaling, were Liberian kru men. The role of these indigenous cultural groups as a labor force was essential to the success of this local and global enterprise and represents a crucial aspect of the interpretation of the layout of diamond mining villages and the surf rescue attempts on shipwrecks such as *Eduard Bohlen*. Like slave ships, South African apartheid museums and plantation sites in the American south are marketable opportunities to put these sites sensitively on the international tourism heritage map with the active participation and representation of indigenous and international stakeholders in the planning process.

Dominican Republic

In 2011, the Program in Maritime Studies at East Carolina University was invited to partner with Indiana University (IU) and assist with further archaeological fieldwork and historical investigations on the shipwreck site believed to be *Quedagh Merchant* wrecked at Catalina Island in the Dominican Republic (Beeker and Hanselmann 2009). The illustrious privateer, and accused pirate, Captain Kidd captured the Indian Surat-built vessel on the east coast of Africa. Mapping the site supplemented earlier mapping operations and exposed an additional area of ship structural remains. The two main archaeological data components on the site were the cannon and timbers, both of which can be viewed in the broader context of archaeological literature and findings on shipboard ordnance, vessel construction, and site formation processes. The 2011 archaeological team reinvestigated the ship timbers including a keel or keelson and small section of planking exposed by IU during previous field seasons, in addition to a newly excavated section of the hull planking that continued underneath cannon 7 southwards. This albeit small 2×1.20 m section of wreckage offered some crucial information about ship construction, in particular edge-to-edge plank joinery or rabbetting (Harris et al. 2011).

The *Quedagh Merchant* site, on the windward side of the island, is located in 3 m of water and is subject to high-energy wave action (Beeker and Hanselmann 2009: 223). Debris from the mainland washes up along the shoreline, and it is not

uncommon to see floating rafts of tree limbs and trash washing over the site. As is typical in tropical waters, exposed artifacts on the surface of the seabed in shallow water are heavily covered in concretion, coralline algae, corals, sponges, and sand. The reef system immediately surrounding the site is described as a "dense and healthy coral conglomerate" (Beeker 2010a: 47).

Project participants not only conducted traditional underwater archaeology exercises but also engaged in a number of worthwhile community events such as trash clean-up ventures around the island with Peace Corps volunteers and DR Navy (Project Aware 2011). Other activities included weekly trips to the conservation laboratory in Santo Domingo to document collections and to engage in discussion with local curators and heritage specialists.

Indiana University's work on shipwrecks is supported by the U.S. Agency for International Development (USAID) and other assorted grants applicable to the concept of establishing "living" underwater maritime history museums. The Captain Kidd shipwreck site and two others nearby are promoted as part of underwater marine protected areas (MPAs) with a view to supporting a model of sustainable eco and heritage tourism (Past Horizons 2012). As ongoing multidisciplinary research continues, interest in the project has grown and new partnerships are developing, including the Peace Corps assigning more volunteers to the project and the Consorcio Dominicano de Competitividad Turistica actively promoting the project as a sustainable tourism destination. The Underwater Science Program at Indiana University also offers underwater archaeology technical workshops to heritage professionals in the Dominican Republic (Beeker 2010b). Shipwreck habitats, two assembled from materials recovered by private sector projects, provide ideal growth platforms for precious corals and other threatened biodiversity in the surrounding reef systems, deliberately placed in proximity to tourism resorts with the view to enhancing accessible SCUBA diving tourism. "Guadalupe Living Museum under the Sea," dating to 1724, is situated in front of Viva Wyndham Dominicus Beach. The artificial reef of St. George and the canon reef of Guaraguao from the eighteenth century are both located in front of the hotel zone's coast (PR Newswire 2012).

East Carolina University students engaged in classroom discussions about the challenges of achieving balance between showcasing authentic underwater heritage and assembled sites created for convenient visitation. What are our professional obligations and public expectations in this respect? On the positive side, does visitation to these sites take the pressure off authentic sites and increase public interest in maritime heritage while showcasing individual, non-contextual artifacts otherwise stored, unseen, in curation facilities with little funding? On the negative side, does it unintentionally endorse collecting of artifacts for new tourism ventures or provide easy solutions to salvage project divisions with permitting agencies? As professionals, how do we objectively and empirically measure the social and economic pros and the cons of these management decisions for maritime sites, and should it be incumbent of our diplomatic role as visiting researchers in other countries? Another consideration is the balancing act of in situ preservation and public access endorsed by the 2001 UNESCO Convention on the Protection of the Underwater Cultural Heritage. What site stabilization and monitoring options are available and might be

most effectively applied to these living museums comprised mainly of cannon and anchors? Who will sustain monitoring operations and fund in situ management of high profile, popular sites that are accessible to the public? While biological growth is monitored, baseline research and systematic measuring of corrosion rates on remaining cannons and anchors, similar to that conducted on *Queen Anne's Revenge* site in North Carolina, might be an additional option for the living museums of Dominican Republic (Welsh 2010).

Conclusions

New generations of underwater archaeology scholars and students will invariably enter a global professional job market or, at some point in their careers, be part of a collaborative international project. Trends in selections of thesis topics in the past 10 years display considerable engagement of students in international initiatives around the world in museums, national park service ventures, or MPAs. How will we prepare students, beyond the classroom, for the unique challenges of the profession in these foreign arenas? International outreach study programs and maritime archaeology field schools, above or below the water, offer unique, but often complex, teachable moments in cultural resource management.

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Chapter 10
The Florida Panhandle Shipwreck Trail: Promoting Heritage Tourism in the Digital Age

Lindsay S. Smith

Abstract Florida tourism is a $60 billion dollar industry, and heritage tourism, in particular, has become an important source of revenue for the state (Visit Florida® Research, Historic economic impact. Research, VisitFlorida.com. http://media.visitflorida.org/research.php, 2012). In an effort to revitalize Panhandle coastal tourism following the 2010 Deepwater Horizon oil spill, the Florida Department of State's Bureau of Archaeological Research (BAR) created the Florida Panhandle Shipwreck Trail. This initiative addresses the current national focus of improving communities' ability to recover from coastal disasters and of promoting responsible visitation to and management of their valuable historical resources. Visitors and residents alike may participate on the Trail through the interactive Trail Web site and social networking platform, and by obtaining the official Trail Passport. Each publication offers the public different ways to experience the Florida Panhandle Shipwreck Trail when next they visit northwest Florida.

Introduction

With nicknames like "Western Gate to the Sunshine State" and "The Emerald Coast" and claiming miles of some of the world's whitest beaches, it is no surprise that Florida's Panhandle draws, on average, more than eight million visitors each year (Visit Florida® Research 2012). Tourism fuels a large part of the Panhandle's economy, employing people in dozens of sectors from hotels and resorts to restaurants, recreational activities, and local retail shops.

Following the 2010 Deepwater Horizon oil spill in the Gulf of Mexico, Florida's Panhandle experienced a dramatic drop in tourism fueled in large part

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because of the perceived impending oil disaster. While the environmental impact failed to materialize, the negative economic impact was felt throughout the region. To combat this economic downturn, Florida's Bureau of Archaeological Research's (BAR) underwater archaeology team initiated the Florida Panhandle Shipwreck Trail to renew interest in ecological, recreational, and heritage tourism throughout the Panhandle. To this end, BAR staff applied for and received a federal Coastal Management Program Grant with the idea to model a Panhandle diving trail after a similar program established in the Florida Keys by the Tourism Development Council.

Grant Preparation

The Florida Panhandle Shipwreck Trail was a labor-intensive and creativity-stimulating endeavor from beginning to end. As the economic outfall from the Deepwater oil spill was first affecting Panhandle businesses, members of the BAR underwater archaeology team began planning the project that would become the Florida Panhandle Shipwreck Trail. Within weeks of the Florida Coastal Management Program (FCMP) grant announcement (Florida Department of State 2010: 3979), the underwater team had researched, designed, and prepared a grant proposal.

The Coastal Zone Management Act (CZMA) was passed by Congress in 1972 in response to the persistent growth in the coastal zone and the foreseen importance in managing these resources (United States Congress 1972). Funded under sections 306 and 306A of the CZMA, the Florida Coastal Management Program was approved and incorporated into Florida law in 1981 (Florida Department of Environmental Protection 2012). When new legislature or policies are enacted, they are usually done so with high hopes and an assumption of success; however, how they will ultimately benefit the group or idea from which they were inspired or created often is unclear. The interpretation and application of these laws or rules determine their ultimate success or, in some instances, prove their ineffectuality. The Coastal Management Program grant provided the opportunity for the BAR underwater staff to apply the principles of a long-standing Congressional Act to help alleviate a modern situation, thereby legitimizing and realizing the Act's original purpose.

Goals

For the 2011–2012 grant year, grant administrators at the National Oceanic and Atmospheric Administration (NOAA) were encouraged to fund projects that both met the established coastal management topics and included topics of national focus, such as coastal communities' reaction to and recovery from "climate change (and) coastal hazards" (Florida Department of State 2010: 3979). In consideration of the outlined management priorities, BAR staff designed the Panhandle Shipwreck

Trail with two main goals in mind to meet both the standard and additional topics. First and foremost, the Florida Panhandle Shipwreck Trail aimed to address the current national focus of improving coastal communities' ability to recover from coastal disasters. In this instance, the focus was on revitalizing local economies through heritage, recreational, and ecological tourism.

The second major goal was to promote responsible visitation to and management of these coastal historical resources through creative heritage tourism. BAR staff recognized that promoting visitation to these resources would also increase the potential for destruction of the resources through human interaction. It was, therefore, equally important that consideration be given to promoting responsible visitation behaviors in addition to increasing tourism. Further, this second goal met one of the U.S. Commission on Ocean Policy's main tenets, which is also echoed by Florida's own Oceans Initiative, that "the principle of stewardship applies both to the government and to every citizen" and that enhancing stewardship is best achieved through formal and informal education efforts (U.S. Commission on Ocean Policy 2004: 6).

Deliverables

An important consideration of a heritage tourism project is to identify the intended audience early in the project's development. Advancements in smart device technology and the increasing accessibility of the Internet continually shape the way people access information. As that technology has evolved over the years, BAR's underwater unit has endeavored to stay abreast of the different ways people access information and has applied them to ongoing projects to reach the broadest audience possible.

The alternative publication methods chosen for the Florida Panhandle Shipwreck Trail are not new to this project, but are practices that have been successfully applied to a variety of programs and projects over the past decade. To accomplish the Panhandle Shipwreck Trail's two main goals, BAR staff created two key products: the official Web site and Trail Passport (Fig. 10.1). Additional products include Trail logos that are available to partners for promotion of the Trail and a Facebook fan page that provides a secondary platform for Trail participants to interact with one another.

The Trail incorporates an interactive Web-based platform for historical interpretation, education, and publicity, as well as for promotion of water-oriented recreational, heritage, and ecological tourism along the Panhandle. The Web site hosts the 13 videos created by the underwater team, offering an introductory underwater tour of each shipwreck for visitors who will actively dive on the Trail and also a measure of participation for those unable to dive or to visit the Panhandle.

Official Trail Passports provide visitors with historical facts about each shipwreck, personal log pages to document each dive along the Shipwreck Trail, and a personalized keepsake from their visits to Florida. Passport holders are encouraged to have their Passports validated with an official Trail sticker and signature following the completion of each of the 12 dives.

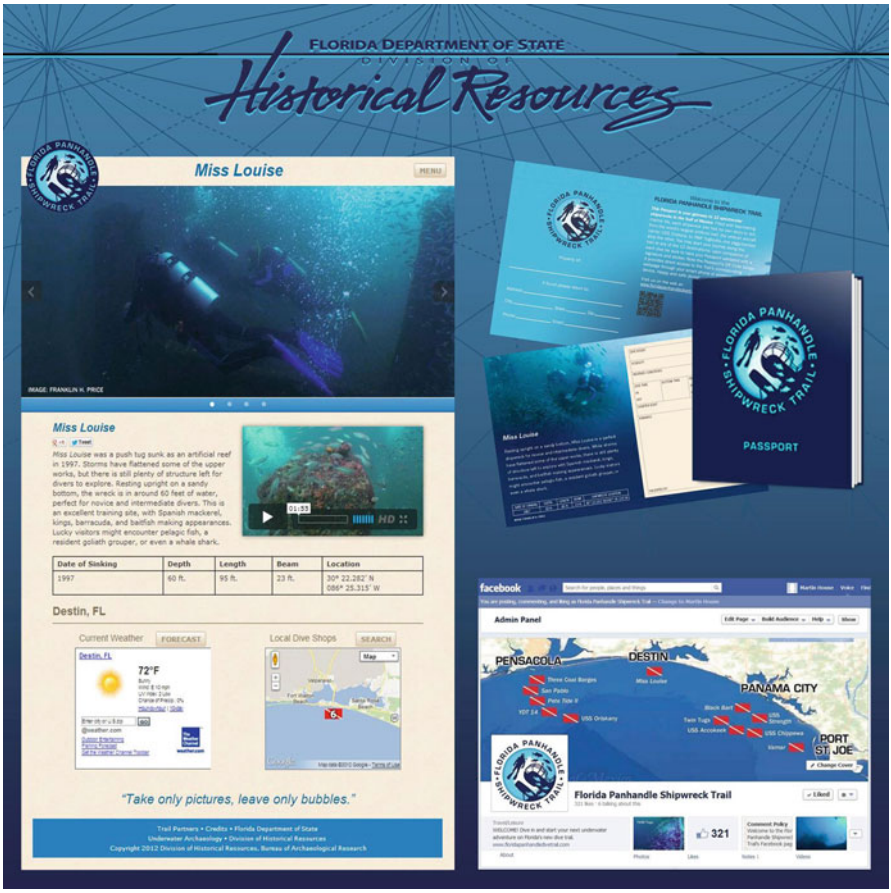

Fig. 10.1 Clockwise from the *left*, the Florida Panhandle Shipwreck Trail *Miss Louise* Web page includes photo gallery, underwater video, brief biography, and trip planning widgets; the official Trail Passport includes a personal dive log and ship biographies; and the Trail's Facebook page platform offers additional networking opportunities for participants (Smith 2010)

These alternative publication methods are essential for the mass dissemination of Florida's maritime heritage information in this fast-paced digital age, especially when the general public is the targeted audience and economic stimulation and increased and repeat tourism are the main goals.

Methodology and Discovery

Creating the Florida Panhandle Shipwreck Trail involved a multi-pronged approach consisting of conducting historical research, gathering videographic and photographic data, soliciting local community participation, and collaborating on graphic

design for the various publications. In keeping with the nontraditional aspects of this project, thorough historical research was not the first step, but rather the follow-up to the waterfront communities' suggestions.

Community Participation

Community participation was essential for the success of the Florida Panhandle Shipwreck Trail. BAR team members reached out to each of the Panhandle's waterfront communities, dive shop owners, and charter boat captains to gauge their interest in the project idea and to obtain their active participation in determining which of the many shipwrecks throughout the Panhandle should be featured on the Trail. The Pensacola, Destin, Panama City, and Port St. Joe waterfront communities responded with enthusiasm and extensive input, helping to narrow the field down to 12 of the best dive locations throughout the Panhandle.

The Port St. Joe/Mexico Beach area and Destin are each represented by one wreck and Pensacola and Panama City are each represented by five candidates. The final 12 shipwrecks chosen represent the various dive experiences available in each of the four locations. From inshore, shallow, novice-friendly dive sites to offshore, deep-water diving experiences better suited to those divers with more advanced skills, there is something for every diver on the Trail.

In addition to the shipwreck nominations, we approached the dive communities with the opportunity to have their underwater photography or videography featured in the project's various publications. Divers, shop owners, and shipwreck enthusiasts responded with exemplary images and video footage that were incorporated into the various deliverables and that made the Trail's products truly outstanding.

Historical Research and Data Collection

Once the 12 shipwrecks were selected, historical research was conducted to provide visitors with an interpretation of each site along the Trail. Historical information related to a ship's career, date of sinking, dimensions, location and depth of water, and structural features was used to create biographies for each wreck. These biographies, which offer a concentrated glimpse into each ship's distinctive history, are featured in both the Passport and on the shipwrecks' individual Web pages.

The BAR underwater team captured video and still images during many dives throughout the Panhandle. In addition, video and photo submissions from the local dive communities were solicited to encourage active partnerships for creating Trail products. These images and video footage were then edited into 13 short videos to be featured on the Web site: one video to introduce the Shipwreck Trail and one video each for the 12 ships featured on the Trail. Still photographs gathered from

historical resources, the underwater team's fieldwork, and local divers' submissions fill the Passport's pages with colorful underwater scenes and are featured gallery style on each of the respective shipwreck's Web pages.

Design and Production

Designing the Shipwreck Trail's Web site posed a new challenge. While previous Web sites created by the underwater unit were geared towards education and are heavy on archaeological interpretation, the Panhandle Shipwreck Trail Web site needed to be more entertaining and attention-grabbing to effectively reach the largest audience possible. Additionally, the team was tasked with striking a balance between promoting dive-centered tourism and minimizing site impact to fulfill the grant's second goal of promoting responsible visitation to and management of these coastal historical resources through creative heritage tourism (Smith 2010: 2).

With those ideals in mind, the underwater team partnered with Florida State University's Center for Interactive Media (FCIM) to design the official Web site, the Trail logos, and the official Trail Passport. Participation in the design process allowed the team members to express their vision for the project's products, and then to work with graphic designers to translate that vision into the final products. Web site and Passport layouts were created, modified, reviewed, and edited repeatedly to arrive at the best possible product for visitors to enjoy while navigating the Shipwreck Trail. This drastic departure from previous Web sites' content and design blueprint resulted in the creation of a visually stunning and attention-grabbing interactive Web site.

Web site

Web site features include access to the Trail's Facebook fan page, an introductory video about the Trail, information on how to obtain the official Passport, and a Google Maps™ interactive map of all 12 shipwrecks, from which the reader can navigate to each ship's individual page. The narrated introductory video provides a comprehensive overview of the Panhandle Shipwreck Trail, its goals, and how visitors can participate on the Trail, all while highlighting some of the underwater sites on the Trail. The Passport information corner guides viewers to the most convenient location where they may purchase their copy from a participating Trail partner. The interactive map displays all 12 shipwrecks and offers visitors an overall geographical view of the Panhandle and a small thumbnail image of each shipwreck, and provides access to each of the wrecks' pages with a single click of the mouse.

Each shipwreck's dedicated Web page features a variety of ship-specific information. A rotating gallery of historical and modern photographs dominates the upper portion of each ship's page. A brief historical narrative of the ships' career

and sinking, along with pertinent dive information and statistics, are located just below the gallery. Alongside the historical information, each ship is featured in a short video montage that invites the viewer underwater to discover the dive site for themselves. Each video is accompanied by an up-beat music clip, highlighting the wonder of underwater adventures for the non-diver and providing an exciting glimpse of the different shipwrecks for the divers who may join the Trail and visit the sites in the future.

During the design process, one prevailing objective was to simplify visitors' access to the Panhandle Shipwreck Trail in all its forms. In addition to designing an intuitive Web site platform, a number of trip planning tools were added to each shipwreck's page. A live-feed weather widget for the city nearest each shipwreck, provided by The Weather Channel, LLC weather.com®, offers would-be visitors the current marine forecast and a direct link to an hourly or 10-day forecast for that area, a tool most useful when planning your next dive trip. Just to the right of the weather widget, a Google Maps™ widget provides a preprogramed search for the dive shops closest to that particular shipwreck's location. The thought among the BAR staff and FCIM design team was to cut out some steps in the trip-planning process by providing those tools directly in association with the shipwreck one wishes to visit.

The final consideration when designing the Web site was mobile accessibility. Working with FCIM's programmers, the Web site's structural design was created allowing for a simplified and streamlined view when accessing the site from mobile devices; the Web site automatically rearranges its content into a mobile-compatible format while offering the same information, videos, and photos available on desktops. Taking mobile accessibility one step further, the official Passports were printed with a QR code that navigates directly to the official Web site, offering on-the-go access to anyone with a smart device.

Passport

Initially influenced by a similar program in the Florida Keys, the Panhandle Shipwreck Trail's Passport design and layout was inspired by the "Wreck Trek" dive passport. BAR team members again partnered with the FCIM design team to integrate Panhandle-specific content into a unique publication that would become both a memorable keepsake and an accurate dive log for visitors to take home.

The Passport features colorful photographs of divers exploring each wreck, chosen from the photo submissions received from divers as well as from photos the underwater team gathered in the field. For every shipwreck there is a brief historical narrative and an area with the site's statistics such as sinking date and location, length, beam, and maximum site depth. Divers can record particulars about each dive on the dive log pages that accompany each wreck site, and have the dive validated at the bottom with either the captain's or dive master's signature and an official Panhandle Shipwreck Trail sticker.

Working with the local dive communities brought to light an important aspect of the Panhandle Shipwreck Trail that had not been completely addressed in the grant proposal, the funding to sustain printing of the Passports. More importantly, the underwater team wanted to avoid imposing additional financial pressure on the small business owners already struggling in the depressed economic environment that followed the oil spill. While funding for the first Passport printing was ultimately covered by the grant, the continued success of the project was not guaranteed financially. Through input from the Trail partners and drawing on one of the BAR's regular partners, the Florida Public Archaeology Network (FPAN), a sustainable plan was created for the future reprinting of Trail materials. BAR printed the first run of Trail materials which included the Passports, official Trail stickers, and promotional decals and banners for advertising at local dive shops. Trail partners were then able to purchase the Passport-sticker sets from FPAN at cost and sell them at a small profit. FPAN agreed to manage the Passport and Trail materials funds for future reprinting which will ensure the Trail's self-sustainability.

Promotion and Education

In association with the Panhandle communities, FPAN, and the Florida Department of State, BAR launched the Florida Panhandle Shipwreck Trail in June 2012. The Secretary of State's office generated a press release to announce the inauguration of the Trail and to alert the media to the new program. Subsequent newspaper articles, television interviews and reports, and community meetings and lectures continued to promote Florida's newest diving trail. Visitors and residents alike are also encouraged to join the Shipwreck Trail Facebook fan page where they can network with other interested divers, look for dive partners, share photographs or videos of the ships featured on the Trail, and learn about any upcoming dive trips or promotions offered by Trail Partners.

To fulfill the project goal of "promoting responsible visitation to and management of these coastal historical resources through creative heritage tourism," BAR is dedicated to striking a balance between promoting the dive sites and encouraging responsible visitation through education. Throughout the time spent in each dive shop and charter boat over the past year, the underwater team endorsed the importance of responsible diving, reinforcing the minimal-impact diving messages that were already being addressed by almost every dive master and captain encountered. In turn, these dive shop owners, dive masters, and charter boat captains pass this information on to their diving clients in a more informal setting, reaching a vast audience, hopefully long into the future. This approach, educating from the top down, supplements the basic responsible diving information provided on the official Trail Web site.

In addition to the education initiated by BAR, a strong informal network exists within the Panhandle dive community which acts as stewards for these and all the

other wreck sites that support their livelihood. Creating relationships with the various dive shops throughout the fieldwork revealed just how closely these resources are policed by the local diving population, with outsiders and violators being ostracized and "blacklisted" from the dive community. While the responsible diving information being shared may not be quite as thorough as archaeologists would like it to be, the overall message being shared through the various avenues is a positive step towards better-educated divers.

Conclusion

The Florida Panhandle Shipwreck Trail experienced a compelling start with the project products being well-received in Pensacola, Destin, Panama City, and Port St. Joe. For the continued success of the Shipwreck Trail, the underwater team and community partners continue to increase participation and cross-promotion with local Chambers of Commerce, Tourism Development offices, and the waterfront communities and businesses. Additional promotional products, such as flyers and leaflets that can be more widely disseminated, are under consideration with the thought that distribution into a broader geographic area will further encourage visitors to come to the Panhandle. Ultimately, the Florida Panhandle Shipwreck Trail was created for the various waterfront communities throughout the Panhandle. The Trail partners in Destin, Panama City, Pensacola, and Port St. Joe/Mexico Beach will, ideally, continue to promote the Trail on a local level and in accordance with their different businesses and clientele, ensuring the Panhandle Shipwreck Trail continues to be visited long into the future.

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Chapter 11
Sailing the SSEAS: A New Program for Public Engagement in Underwater Archaeology

Della A. Scott-Ireton

Abstract Programs to enable sport divers to participate in archaeological projects are widespread, effective, and popular. Once trained, however, divers may have difficulty finding a project that can take volunteers. The Florida Public Archaeology Network (FPAN) is embarking on a new program in public engagement in underwater archaeology to address this issue. The Submerged Sites Education and Archaeological Stewardship program (SSEAS) is intended to train sport divers in methods of non-disturbance archaeological recording and then give these trained divers a mission.

Sport divers generally are very interested in shipwrecks and in the work of underwater archaeologists, and often want to get involved in research and investigation. Programs that train divers to effectively volunteer on archaeological projects have been around for years and have proven successful in promoting the goals and value of scientific inquiry while empowering the diving public to participate. The problem is that, once trained, divers want to help and often no projects are in progress for them to work on, or projects may be unable to take volunteers due to liability or contractual reasons. Divers may lose interest, become disillusioned with archaeology, or, worse, seek out commercial salvage projects to use their new skills. The Florida Public Archaeology Network (FPAN) is embarking on a new program in public engagement in underwater archaeology to address this need. The Submerged Sites Education and Archaeological Stewardship program, or SSEAS, is intended to train sport divers in methods of non-disturbance archaeological recording and then give these trained divers a mission (Fig. 11.1). By working on real-world, needed inspection, investigation, and reporting, the divers can use their skills, contribute to

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Fig. 11.1 The SSEAS program logo (Courtesy Florida Public Archaeology Network, 2011)

scientific research, and, perhaps most importantly, engage in the production of knowledge related to their own interests, their community, and their heritage.

The State of Florida has long been a leader in public outreach and engagement in underwater archaeology (Miller 1989; Scott 1994; Scott-Ireton 2003a, 2008). With over 17 million residents and millions of visitors each year, the state's economy is tied to tourism at its beaches, rivers and springs, wilderness areas, theme parks, and historical attractions. Heritage tourism is a large part of this industry, generating over four billion US dollars annually, primarily into local economies (McLendon et al. 2010). Scuba diving visitation to historic shipwrecks in Florida waters is part of the state's heritage tourism, although exact numbers are not as well understood as are visitation statistics to museums and historic structures or even to terrestrial archaeological sites interpreted for the public. Nevertheless, Florida consistently is listed among the top diving locations in the world (see, e.g., Tsavo Media Canada Inc. 2012), drawing around a million diving and snorkeling visitors each year to see the state's clear waters, springs, reefs, manatees, colorful fish, and shipwrecks (Kildow 2006: 16, 17). The archaeologists of the Florida Division of Historical Resources' Bureau of Archaeological Research (BAR) and the Florida Public Archaeology Network take advantage of this opportunity to educate citizens and visitors about the state's underwater cultural heritage with the ultimate goal of preservation and protection of these resources.

Florida boasts an astounding temporal, cultural, and environmental variety of maritime heritage sites. The elegant stone tools and other evidence of early Paleoindian peoples and the bones and tusks of prehistoric megafauna, including mastodon, giant ground sloth, and saber-toothed cat, have been recovered from springs, rivers, and submerged cave systems (Webb 1974, 2006). Mortuary ponds like the Windover site (Doran 2002) and spring basins such as Little Salt Spring (Wentz and Gifford 2007) provide clues to later prehistoric peoples. Remains of the first Floridians' watercraft often are discovered in rivers and lakes, such as the Newnan's Lake canoes (Wheeler et al. 2003). European vessels began to visit Florida's waters in the sixteenth century (Milanich and Milbrath 1989), and sunken

evidence of early colonization missions has been discovered and archaeologically investigated (Smith et al. 1995, 1998; Cook 2009). The state's long coastline and extensive waterways were conducive to water transport and remains of watercraft of all kinds litter Florida's shores and bottomlands (Smith et al. 1997). Many of these are popular diving and snorkeling locations in clear, calm, shallow water. Although in some cases generations of visitors have taken their toll in looted artifacts and structural damage, the majority of Florida's shipwrecks still offer exciting dive adventures and tangible links to the state's past.

Unfortunately, some of Florida's shipwrecks have been subjected to the ravages of commercial salvage. The loss of several Spanish plate fleets off the state's coasts resulted in the growth of modern treasure hunting, beginning as early as the 1920s (Smith 1988: 95–103). Early treasure hunters kept few records and, in the days before the development of underwater archaeology as a science, destroyed many sites in the pursuit of personal profit (Marx 1985). Even today, the commercial salvage of some of Florida's historic shipwrecks is allowed by state law (see Florida Statutes Chapter 267, Rule 1A-31). Although the salvage program is carefully and rigorously managed by the Bureau of Archaeological Research, artifacts recovered from state lands under salvage permits are provided to investors or are sold legally for profit and disappear into personal collections. In order to lure investors into treasure hunting schemes, tales of Spanish gold and pirate booty are used as propaganda by commercial salvage firms (Crystals, Inc. 2012; Kramer 2012). The result is that media coverage and popular publications often focus on shipwrecks as repositories of "treasure" rather than on shipwrecks as meaningful sites of our common past.

In order to counteract this misinformation, archaeologists and cultural resource managers in Florida strive to educate the public—divers and non-divers alike—about the importance of historic shipwrecks as bridges to the past and as heritage tourism sites for local economic benefit. The value of archaeological research as a means to learn about our past and to inform interpretive efforts that will draw even more visitors is stressed as well. Management strategies focus on conservation rather than consumption, and "conservation through use" as a philosophical approach to management is the foundation of public programs. Managers must address issues that affect submerged sites in particular, such as a "finders-keepers" attitude toward artifacts found underwater, the impossibility of monitoring visitor behavior to underwater sites, and the fact that the majority of the resource base is hidden under water and therefore is "out of sight-out of mind" for most law enforcement and legislative protection efforts.

Florida does have laws to protect historical and archaeological sites on state-owned or controlled lands, including submerged bottomlands (three miles in the Atlantic and ten miles in the Gulf of Mexico). Chapter 267 of the Florida Statutes, the Florida Historical Resources Act, provides for protection of cultural sites and prohibits the unauthorized excavation, disturbance, or removal of artifacts from state lands. Few law enforcement officials, however, are trained to recognize or respond to cultural resources violations, and the general public is, in general, unaware of these laws. In the face of this inadequacy, archaeologists and resource managers view education programs as the best way to protect sites for future

research, visitation, and enjoyment, with the belief that education leads to appreciation, which leads to preservation. One of the most successful strategies for educating the public is to offer them the training and opportunity to engage firsthand in research and preservation efforts.

The "conservation through use" strategy recognizes that divers like to visit shipwrecks and, rather than try to limit use or restrict visitation, encourages visitors to explore and enjoy submerged sites in a responsible and sustainable manner. Toward this end, Florida archaeologists created a number of public outreach programs to provide divers and snorkelers with information to enhance enjoyment and to promote respectful use. The Bureau of Archaeological Research's Underwater Archaeological Preserve system is composed of historic shipwrecks around the state that are interpreted for divers and snorkelers (Smith 1991; Scott-Ireton 2003b). Considered "museums in the sea," these sites feature brochures, a poster, and a website (http://www.museumsinthesea.com) that present the history and biology of the sites, as well as instructions for safe visitation. All Preserve shipwrecks are listed on the National Register of Historic Places and are marked with a bronze plaque in a cement monument that designates the site as a Florida Heritage Site and Underwater Preserve.

The 1733 Spanish Galleon Trail was established through a partnership among the BAR, the Florida Keys National Marine Sanctuary, and the National Park Service (McKinnon 2007). The Trail features a booklet and website (http://www.flheritage.com/archaeology/underwater/galleontrail/index.cfm) with the history and archaeology of the Spanish plate fleet ships sunk by a hurricane in the Florida Keys in 1733. These wrecks are some of the oldest and most picturesque artificial reefs in the Keys and, although ravaged by treasure hunters in the 1950s and 1960s, large mounds of ballast and ship structure remain to lure fish, corals and sponges, mollusks and crustaceans, and divers.

The Florida Maritime Heritage Trail was developed as primarily an information trail, although featuring sites open for visitation (Smith 2007). Six themes highlight shipwrecks, lighthouses, maritime communities, coastal forts, ports, and coastal environments around the state. The themes are interpreted with a website (http://www.flheritage.com/archaeology/underwater/maritime) and a series of poster/brochures suitable for posting in classrooms, libraries, and public venues.

The Heritage Awareness Diving Seminar (HADS) was created through a partnership between BAR and FPAN and is intended to give scuba diving Instructors and Instructor Trainers information to teach the Heritage Awareness Diving Specialty through scuba training agencies including the National Association of Underwater Instructors (NAUI), the Professional Association of Diving Instructors (PADI), and Scuba Schools International (SSI) (Scott-Ireton 2011). HADS focuses on making divers aware of the fragile and nonrenewable nature of shipwrecks and other submerged heritage sites and on encouraging them to appreciate cultural sites as part of the marine environment. Rather than teaching methods and techniques of recording and investigation like underwater archaeology diving specialty courses, HADS is instead a course in underwater historic preservation.

The popularity of courses such as HADS; underwater archaeology specialty courses taught by NAUI, PADI, SSI, and other training agencies; the multilevel

training program presented by the Nautical Archaeology Society in the United Kingdom and the Australasian Institute for Maritime Archaeology in Australia (Bowens 2009); and in-depth field experiences such as that developed by the PAST Foundation (Corscadden Knox and Smith 2012) indicate the demand for information and the desire to participate shown by the sport diving public. Divers interested in learning about underwater archaeology but not wishing to pursue a career or study at the academic level can take instruction at dive shops and through various organizations, including some museums, not-for-profit research institutions, and state agencies. The training they receive generally consists of maritime historical information (often tailored to the local area), ethics and issues, and practice in recording methods and investigation techniques. The result is a group of divers who have the training to participate effectively in underwater archaeological projects and who are eager to put their new skills to work. Many times, however, no projects are under way for these newly trained avocational archaeologists to join. Funding limitations, weather windows, research priorities, and equipment availability, among other considerations, often affect when and how long archaeological projects are in progress. Further, some projects, such as those run as part of university field schools, may have such large numbers of students needing experience to pursue a career in archaeology that volunteers are not needed or would detract from the learning experience for which the students have paid. In addition, contract firms rarely can take volunteers due to tight schedules, liability concerns, training and certification requirements, Occupational Health and Safety Administration (OSHA) restrictions, and contractual limitations. The consequence is divers who are excited and eager to get involved but frustrated at the lack of opportunity. They can lose their excitement, become disillusioned with archaeology, and feel disappointed and even bitter at refusals of their offers to help. Perhaps worst of all, they may turn to treasure hunting ventures, which are always looking for divers to work for free and to invest in the scheme.

In response to this dilemma, FPAN developed a program to train divers in underwater archaeology and then, most importantly, to give those divers a mission. The Submerged Sites Education and Archaeological Stewardship program, or SSEAS, is composed of two parts—the training course and the mission. Objectives for SSEAS graduates are threefold:

1. To understand the goals and value of underwater archaeology.
2. To learn the skills to participate in archaeological projects.
3. To undertake a mission in site identification and recording.

The first part of SSEAS is classroom instruction based on the Orientation to Underwater Archaeology for Sport Divers course, developed by the author for the BAR in the early 1990s (Scott 1994). In the past, the Orientation usually was taught in conjunction with the development of a new Underwater Archaeological Preserve to train divers to assist in recording and researching the proposed Preserve site. As part of SSEAS, the Orientation covers topics including archaeology, shipwrecks, ship construction, and site dating; federal and state laws concerning shipwrecks; ethics and conservation; methods of recording; and archaeological investigation. In particular, the Florida Master Site File form for historic shipwrecks is described and discussed as a recording and investigative tool. Part of the classroom portion also

Fig. 11.2 SSEAS participants practice recording skills at the site of SS *Copenhagen* off Pompano Beach, FL (Courtesy Florida Public Archaeology Network, 2011)

includes setting up a mock shipwreck site on the floor to teach non-disturbance recording methods. Typically focusing on simple baseline offsets and triangulation, students get a chance to practice hand signals, mapping and measuring, and artifact sketching and to develop underwater communication strategies with their dive buddy.

A confined water session is held in a local pool to allow the students to practice their recording skills while submerged. The same mock shipwreck site is set up on the pool bottom and the students are tasked with recording it. Buddy teams are assigned a section of the "wreck" and are responsible for producing a scale drawing of their section. Inevitably, the difficulties of communicating underwater, managing equipment, maintaining buoyancy, and not getting tangled in the measuring tape are encountered, illustrating the challenges of working in a submerged environment.

A local shipwreck is chosen for the open water portion of the class, usually a Preserve site if convenient. The advantages of using a Preserve include an existing thorough understanding of the site, a complete site plan that illustrates the level of detail attainable, and safe diving conditions. Student buddy teams are asked to accomplish two tasks: filling out a Florida Master Site File form for the site on the first dive, and recording a section of the wreck on the second dive. The objective is not to create a complete site plan, but rather to give students an opportunity to practice skills in an open water environment (Fig. 11.2).

Upon completion of the Orientation course, participants receive a certificate and are ready to engage in the mission part of SSEAS. The mission centers on investigating targets identified on navigational charts as part of the National Oceanic and Atmospheric Association's (NOAA) Automated Wreck and Obstruction Information System (AWOIS). Primarily housed online (http://www.nauticalcharts.noaa.gov/hsd/awois.html), AWOIS is intended to assist NOAA's Office of Coast Survey in planning hydrographic survey operations, as well as to provide a public service for divers, fishermen, archaeologists, and others interested in the wrecks and obstructions off the nation's coasts. Over 10,000 wrecks and obstructions are listed with latitude and longitude, as well as brief descriptions and historical information, if known (NOAA Office of Coast Survey 2012). Many of the wrecks and obstructions, however, have never been identified and could be anything from a modern barge to a pile of concrete to a piece of fishing gear, or it could be an historic shipwreck or other cultural site. SSEAS divers are asked to explore these targets with the goal of identification and, if the site proves to be historic (in Florida, over 50 years old), to fill out a Site File form for it and make a basic site plan. A general inspection form also is used to keep track of which targets have been inspected, to help prevent multiple SSEAS teams from performing redundant work. The Site File forms are submitted to FPAN for review and then sent to the Florida Master Site File in Tallahassee, while the general inspection forms are maintained at the FPAN Coordinating Center in Pensacola.

SSEAS divers also can assist with other tasks, such as monitoring the Preserve sites. Because BAR personnel are limited in number and availability, local help is needed to monitor the Preserves for damage and vandalism, and to help police the sites of debris and keep the plaques clean of marine growth. SSEAS teams are encouraged to "adopt" a Preserve site and to inspect it regularly and report any changes. The teams also can practice their skills at the Preserve, using their findings to update the existing site plan. Other projects for participation are presented as well, such as the Big Anchor Project (http://www.biganchorproject.com) coordinated by the Nautical Archaeology Society, an effort to record isolated anchors all over the world, on land and under water. Florida abounds in random anchors rusting in front of bait-and-tackle stores and dive shops, lying in flower beds, decorating the parking lots of seafood restaurants, and gracing the porticos of hotels. The vast majority of anchors recovered from offshore locations have never been conserved and eventually will corrode and rust away, so recording them through the Big Anchor Project may be the only way to document their existence.

Upon completion of the SSEAS course, participants are trained to accomplish several goals. Primarily, they can participate in the SSEAS program of inspecting, recording, and monitoring maritime cultural heritage sites. They also can participate in underwater archaeological projects where available and open for volunteer assistance. Further, SSEAS divers can be asked to investigate and report newly exposed sites prior to archaeological documentation. Finally, and perhaps most importantly, SSEAS graduates can spread the message of underwater historic preservation in the diving community.

All of these outcomes are needed, real-world products. Inspecting obstructions will determine whether they are historic or not, and if they require simple recording or more rigorous documentation. Recording historic sites in the Florida Master Site

File enables state authorities to help protect them from adverse impacts of construction and dredging and assists managers in their responsibilities by contributing to the state's inventory of historic sites (you cannot properly manage what you do not know about!). With 11 Underwater Archaeological Preserves all around the state and more being added to the Preserve system, BAR archaeologists need local help in monitoring Preserve sites. Increased interpretation and promotion lead to increased visitation, which is the point of the Preserves, but resulting increased use-wear needs to be determined and recorded. Recording isolated artifacts, such as anchors and cannons, documents evidence of these "lost" objects and provides a way to engage non-divers and youth as well.

The skills and information also enable SSEAS graduates to participate effectively in underwater archaeology projects that may need volunteer assistance. Although excavation and bottom-disturbing activities are not taught as part of the class, participants are trained in essential recording methods. They also have a solid grounding in the goals and ethics of underwater archaeology. SSEAS graduates can be assigned to investigate newly exposed sites, as often occurs after storms and drought. When reports of new sites are received by state managers, local SSEAS teams can be asked to respond and, using their skills, to produce a brief field report with observations and a basic site plan and photographs. This information will facilitate plans for further investigation and preservation.

The SSEAS Orientation course stresses that the 4-day class will not make participants into underwater archaeologists. It will, however, provide them with the skills and knowledge to inspect and record sites, to volunteer effectively on projects, and to promote the goals of archaeological investigation and site preservation. As voices for conservation within the sport diving community, this is an extremely valuable effect. Throughout the course, participants are reminded of the ethics and goals of archaeology, and of their key role in fostering not only research but community benefit through heritage preservation. The information they gather will be used for education, interpretation, and management, likely leading to increased diving tourism at historic sites which benefits local economies and local heritage. By providing a way to use their new proficiency in the investigation and recording of sites, SSEAS empowers divers to produce information, rather than just consume information. Non-disturbance observation, recording, and monitoring techniques do not result in damage to sites, but rather are ways sport divers can participate in the understanding and preservation of their own maritime heritage.

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Part II
Interpreting Challenging Sites

Chapter 12
No Visibility, No Artifacts, No Problem? Challenges Associated with Presenting Buried Sites and Inaccessible Shipwrecks to the Public

Amanda M. Evans

Abstract Archaeologists have made great strides in educating and engaging the public about submerged cultural resources. Common tools for public outreach now include heritage trails, site maps, and interpretive signage to aid in site visitation. Many of these tools, however, were developed and have been applied in areas where scuba diving is an entrenched industry facilitated by good visibility. What happens to sites that are not easily accessible, or are buried and not readily apparent at the seafloor? In federal waters of the northwestern Gulf of Mexico, many archaeological sites, including shipwrecks and prehistoric sites, are buried below the seabed. Where shipwrecks are above the seafloor many are located in low- to zero-visibility areas, and/or contain dangerous entanglement hazards. Archaeologists and resource managers working in this area, and similar environments, must overcome many challenges in order to present these submerged cultural resources to the general public. Alternate methods for public outreach, such as websites and geophysical interpretation, exist but carry their own unique challenges.

Introduction

Public outreach and education have reached a high level of awareness within the professional archaeological community. Many professional organizations, including but certainly not limited to the Society for Historical Archaeology, Society for American Archaeology, and Archaeological Institute of America, consider it part of their mandate and recognize its importance through the maintenance of special

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website pages, publications, and standing committees. While archaeologists are interested in answering questions about past human behavior, it has become an accepted strategy to promote sites and their additions to the story of human history to the public as an effective site preservation tool. Methods now commonly used in outreach and education efforts focus on site visitation and site promotion, with many strategies catering to those who cannot physically access the site. Interpretive measures may include the creation of underwater parks or preserves, interpretive signage, websites, or popular publications, but are best suited for sites that have something to see. As illustrated by examples in the northwestern Gulf of Mexico's (GOM) federal waters, archaeologists still face challenges in public outreach when attempting to promote shipwrecks and submerged prehistoric sites that cannot be visited or are not readily apparent to the naked eye.

Archaeology in the Northwestern Gulf of Mexico

The northwestern Gulf of Mexico includes the areas offshore of Louisiana and Texas where submerged archaeological resources range from prehistoric landscapes last exposed as dry land during the last glacial maximum to shipwrecks associated with the events of World War II (Pearson et al. 1986; Stright 1986; Enright et al. 2006; Gearhart et al. 2011; Evans et al. 2013). Although active archaeological research has been ongoing in the federal waters of the northwestern Gulf of Mexico for over 35 years, these resources are not as widely known when compared with their counterparts in state waters (such as Texas's *La Belle*). While management strategies and responsibilities may account for some of the differences in the treatment of submerged archaeological resources under different jurisdictions, the physical settings of the resources themselves significantly impact outreach strategies.

The northern Gulf of Mexico basin extends approximately 825 nautical miles from the eastern coast of Texas to the western coast of Florida. Despite the openness of the basin, the region is divided geologically into two distinct zones: the eastern karst platform and the western alluvial plain (Curray 1960). The difference in regional geology effectively splits the northern Gulf of Mexico into two separate areas. The northeastern Gulf, including the areas offshore of Mississippi, Alabama, and Florida, is characterized by white sandy beaches and blue water. The northwestern Gulf, including the areas offshore of Louisiana and Texas, is known more for its offshore oil and gas industries and fishing than for beach tourism. It is the offshore industry, however, that drives the majority of seafloor survey in federal waters, and therefore contributes the most to the discovery of submerged archaeological resources. Hundreds of historic and modern wrecks are verified, and thousands more "reported" in the northwestern Gulf, but archaeologists have a difficult time promoting these resources to the public.

Targeting Sites for Public Outreach

When used effectively, site visitation is a powerful tool in public outreach, allowing the visitor to connect with the site in a very visceral manner. It is recognized, however, that not everyone can physically visit archaeological sites, nor are all archaeological sites good candidates for public outreach (Advisory Council on Historic Preservation [ACHP] 2008). Before developing sites for public visitation, archaeologists must carefully evaluate them for their contribution to the public interest as well as for their long-term sustainability. Principles and guidelines for the selection of sites for public interpretation have been developed by different organizations and serve as examples of criteria to be considered. For the purposes of developing underwater sites for public visitation, examples of criteria were reviewed from the Florida Bureau of Archaeological Research and the Cayman Islands National Museum, and supplemented with recommendations from the Advisory Council on Historic Preservation. In order for a site to be considered appropriate for visitation it must be evaluated for the following: identity, safety and accessibility, sustainability, and legal status.

Identity

A site that is promoted to the public should have a reasonably identifiable history. Public outreach should attempt to convey the context of the site, what it is, where it came from, and how it came to be wrecked. By telling a comprehensive narrative, the public learns not only what the site is, but what it means to the history of the area. This is no different than any terrestrial site that is interpreted for the public, and in fact is similar to eligibility criteria for listing to the National Register of Historic Places, which requires a comprehensive understanding of the site's identity and context (National Park Service [NPS] 1992, 1997).

Safety and Accessibility

When the public is actively encouraged to visit a site there must be consideration for the safety of all visitors. Safety is therefore paramount when considering whether or not to develop interpretative materials for a site, particularly the inclusion of detailed information regarding a site's location. Safety concerns include the environment in which the site is located, and specific to underwater sites includes variables such as depth, the presence of strong currents, entanglement hazards, or hazardous sea life. In terrestrial settings, signage and visual markings can clearly delineate zones that are unsafe for access; offshore, these boundaries are less obvious but no less important. The presence of shipping fairways and anchorages provides clearly defined

routes for vessels, which have priority of use in these zones; unauthorized vessels anchored in fairways may pose a hazard to themselves or to other vessels. Site accessibility refers to the ability to safely and legally visit an area. For example, accessibility requires evaluating whether a site is located on private property or is in an area open to the public.

Sustainability

Sites selected for visitation should be those that are stable enough to be subjected to long-term use. For underwater archaeological sites this means that any visible structure should be able to withstand accidental impacts, such as divers holding onto or crawling over the site. Consideration also must include the presence of any visible artifacts, especially small, portable objects that could be easily removed or damaged. Sustainability refers not just to the site, but also to the surrounding environment, particularly organisms living on or within the site, which must be healthy enough to sustain visitation.

Legal Status

Any site developed for public visitation should have clear legal protection in place against artifact collection, unauthorized excavation, or other damage.

When Visitation Is Not an Option

Numerous shipwrecks have been developed for public visitation, and often serve as economic benefits for local dive operators and tourism professionals. Why, then, have shipwrecks in federal waters of the northwestern Gulf of Mexico not been developed into underwater preserves? The answer is because wrecks in this area do not meet the necessary criteria for public visitation.

The Issue of Identity

With the exception of a handful of sites investigated as part of larger research studies (Enright et al. 2006; Ford et al. 2008; Evans et al. 2013), the majority of archaeological resources identified in federal waters of the northwestern Gulf of Mexico are located during Section 106-mandated surveys conducted on behalf of the oil and gas industry. In the United States, offshore oil and gas industry activities are regulated by the U.S. Department of the Interior's Bureau of Ocean Energy Management

Fig. 12.1 Shipwreck site components are covered by surficial sediment and intrusive netting (Photo by Greg Cook, 2010)

(BOEM) and Bureau of Safety and Environmental Enforcement (BSEE). Passage of the National Historic Preservation Act (NHPA) in 1966 introduced requirements for federal undertakings (defined as projects located on federal land, using federal funding, or requiring a permit from a federal agency) to consider their impacts on known and undiscovered cultural resources within the area of potential effect (NPS 2006a). In the GOM, the outer continental shelf (OCS) is federal land, and oil and gas operations require permits from the managing agency for drilling and pipeline installation. As a response to their NHPA 1966 responsibilities, BOEM/BSEE and their preceding agencies have issued archaeological lease stipulations since 1973. Survey guidelines and reporting requirements dictate the manner in which surveys are conducted. When potential shipwrecks are identified during a survey, the targets are reported to the agency and are avoided by an agreed-upon distance; the operator is not required to conduct further investigation unless avoidance is not an option or the site is impacted (Evans et al. 2013: 198–202). This means that although wrecks have been located, the vast majority remain unidentified.

Safety and Accessibility Concerns

Photography and videography are used with great success on many archaeological sites but cannot be used with regularity in the northwestern Gulf of Mexico, due to frequent low- to zero-visibility conditions. Seafloor sediments consist primarily of silts and clays, with a lower percentage of sand than is found in the northeastern Gulf. Sediment accretion is highest in the central Gulf, closest to the Mississippi River delta and, to a lesser degree, to the outfalls of the Atchafalaya and Vermilion Rivers. Silty sediment can cover exposed portions of wreck sites, but also stirs up easily, decreasing visibility (Fig. 12.1). Figure 12.1 also illustrates a common hazard found on wreck sites throughout the northwestern Gulf, the presence of intrusive netting and fishing line. The northwestern Gulf is home to intensively trawled

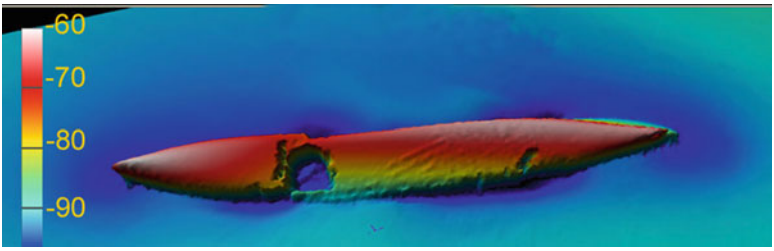

Fig. 12.2 Multibeam image of the steamship *RW Gallagher*, an inverted tanker with multiple hull breaches; *color scale at left* indicates depth in feet below sea level (Evans et al. 2013: 38)

shrimping grounds (Evans et al. 2009). Despite attempts to record the locations of known hangs and obstructions, shrimp trawlers and other commercial fishing vessels often catch their nets on unidentified shipwrecks. Combined with low- to zero-visibility conditions, these nets create entanglement hazards for divers.

Some of the larger wrecks within the northwestern GOM are tankers and commercial vessels targeted by German U-boats during an active campaign to disrupt shipping between 1942 and 1943 (Rohwer 1983; Wiggins 1995). Many of these vessels have been identified and clearly have a strong narrative, but present significant safety concerns that would prohibit their development for heritage tourism. In some cases, large torpedo holes allow direct access to the interior of inverted hulls, which in low-visibility environments could be extremely dangerous to sport divers (Fig. 12.2).

The continental shelf in this region is wide and shallow, measuring approximately 130 miles wide at the Texas–Louisiana border with an average seafloor gradient of approximately 1.3 m (4.3 ft) per statute mile (Curray 1960: 223; Bernard and LeBlanc 1965: 137). Although a large number of wrecks on the OCS are within sport diving depth limits, prevailing conditions on many sites are insufficient to safely encourage public visitation.

Lack of Legal Protection

In the northwestern Gulf of Mexico, the biggest hurdle to public outreach is the lack of legal protection for archaeological resources. Sites located in state waters are afforded legal protection through state laws such as Florida Statutes Chapter 267, as well as the Abandoned Shipwreck Act (1987). Conversely, shipwrecks located in federal waters on the outer continental shelf are explicitly excluded from most legal protection. As used in the Archaeological Resources Protection Act (ARPA) of 1979, Section 3(3)(B), the term "public lands" does not apply to the outer continental shelf, thereby excluding resources on the OCS from ARPA protection (NPS 2006b). Tenuous protection is provided to some shipwrecks through application of the NHPA which prevents unnecessary site impacts during federally permitted

activities, such as oil and gas drilling. This protection is described as tenuous because once the permitted action (including any ancillary activities) is concluded, the site is no longer protected. The only clear protection for sites on the OCS is afforded to military vessels through application of the Sunken Military Craft Act (2005), which does not exclude sites based on their location (NPS 2006c). The Native American Graves Protection and Repatriation Act (NAGPRA) of 1990 does not exclude the OCS from the defined "federal lands," but to date no sites have been identified that would instigate this type of protection; therefore the validity of its application is untested (NPS 2006d).

A Note Concerning Submerged Prehistoric Sites

Submerged prehistoric archaeological sites are closely associated with those portions of continental shelves that were exposed as dry land during the last glacial maximum (Masters and Flemming 1983; Benjamin et al. 2011; Evans et al. 2014). In the northwestern GOM this coincides with occupation by Paleoindian and Early Archaic populations, groups that did not have an extensive material culture (Ricklis 2004; Rees 2010). Sites that could exist include hearths, lithic scatters, kill sites, and other similar features which are not always obvious within an overall landscape. In the northwestern GOM these types of sites are invisible to divers, being buried below the modern seafloor (Pearson et al. 1986; Stright 1986; Evans and Keith 2011). Discussions of the preservation and identification of submerged prehistoric archaeological resources require a significant discussion of local geology and sea-level change.

Beyond Visitation

The intent behind outreach and interpretation is to instill awareness and appreciation for archaeological resources within the general public. Visitation is a direct way to connect people to sites, but is not the most effective method of outreach since not everyone can visit sites, and not all sites should be visited. Archaeologists have increasingly turned to the Internet to connect with the public, developing site-specific or project-based websites. Websites have the benefit of being cost-effective and available to anyone with internet access. The limitation of websites, however, is that they depend upon an already interested audience to seek them out.

Buried and inaccessible sites present challenges to outreach because limited visibility conditions on-site preclude the acquisition of high-quality photographs. In some cases text-based description may provide sufficient information but, increasingly, images created from geophysical data are used in place of photos (Fig. 12.2). Geophysical images may require additional, or at least initial, explanation but are a viable alternative for illustrating sites for which photography is ineffective. Unlike

artistic renderings, images based on geophysical data have an added advantage of being accurate representations of a site's characteristics, since they are based on measurements and data.

A significant mechanism for solving problems related to public outreach and education is to revise the definition of "public." Groups such as the Nautical Archaeology Society and Florida Public Archaeology Network routinely offer heritage awareness courses for recreational divers and dive professionals, but increasingly these types of workshops are targeted to more diverse audiences. Since 2010, the Advisory Council on Underwater Archaeology has offered a Submerged Cultural Resources Awareness workshop for terrestrial archaeologists and land managers. Proactive archaeologists are developing other courses targeting tangential professionals, such as remotely operated vehicle pilots and commercial divers (Eslinger and Landry 2009). By rethinking the definition of "public," archaeologists can convey their message in a proactive manner to those most likely to encounter the resource, and before adverse impacts occur.

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Chapter 13
A Monumental Distance: Education and Outreach from the Most Remote Archipelago on Earth

Kelly Gleason

> *"The [Papahānaumokuākea Marine National Monument] creates a new opportunity for ocean education and research for decades to come. Successful ocean stewardship depends on informed policy makers and an informed public."*
>
> President George W. Bush

Abstract Beyond the main eight populated islands of Hawai'i lies Papahānaumokuākea Marine National Monument (PMNM). On 15 June 2006, President George W. Bush established PMNM, and on 30 July 2010, the World Heritage Committee of UNESCO unanimously inscribed Papahānaumokuākea as a mixed World Heritage Site. Management of the resources of the Monument includes the natural, cultural, and maritime heritage resources of this remote and dramatic place. The low-lying atolls of the Northwestern Hawaiian Islands (NWHI) contain years of seafaring history and the stories of over 120 shipwrecked vessels and sunken aircraft. Efforts to interpret and share these remote time capsules with the public are ongoing as PMNM's maritime heritage program aims to bring the "place to the people, rather than the people to the place." This significant, yet generally inaccessible, place provides both challenges and opportunities for creative outreach and public education related to the rich maritime heritage of the Northwestern Hawaiian Islands.

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Introduction

Created by Presidential Proclamation 8031 on 15 June 2006, Papahānaumokuākea Marine National Monument (PMNM, Monument) established the Northwestern Hawaiian Islands as one of the world's largest protected marine areas (Alexander et al. 2004). Ecosystem protections for the natural resources in this area date back to 1909, when President Theodore Roosevelt established what is now known as the Hawaiian Islands National Wildlife Refuge. On 30 June 2010, the World Heritage Committee of the United National Educational, Scientific and Cultural Organization (UNESCO) unanimously inscribed Papahānaumokuākea as a mixed (cultural and natural) site—the first such site in the United States and one of only 27 mixed sites in the world. The Monument was the first nomination of a World Heritage Site in the United States in 15 years.

The NWHI are a chain of islands, atolls, and shoals extending approximately 1,240 mi. (2,000 km) northwest from the main Hawaiian Islands (Fig. 13.1). The NWHI and the main Hawaiian Islands together form the Hawaiian Archipelago in the central North Pacific Ocean. A vast, remote, and largely uninhabited marine region, the Monument encompasses an area of approximately 142,948 square mi. (370,234 square km) of ocean dotted with small islands, islets, and atolls. The complex array of shallow coral reefs, deepwater slopes, banks, seamounts, and abyssal and pelagic oceanic ecosystems that populate this area support a stunning diversity of marine life. The small islands, reefs, and shoals of Papahānaumokuākea are the longest, oldest, and most illuminating example of island formation and atoll evolution in the world, spanning 28 million years (Grigg et al. 2008). The near-pristine reefs, islands, and waters of Papahānaumokuākea provide refuge and habitat for a wide array of threatened and endangered species, and the Monument is one of the last predator-dominated coral reef ecosystems on the planet. The region provides critical nesting and foraging grounds for 14 million seabirds, making it the largest tropical seabird rookery in the world. The region's natural resources, Native Hawaiian cultural resources, and maritime heritage resources make PMNM one of the most significant protected marine areas in the world.

Papahānaumokuākea boasts a rich maritime heritage encompassing hundreds of years of continuous seafaring, reaching back long before the advent of written records. Consequently, maritime heritage can be viewed as a continuum, beginning with Polynesian explorers, moving through the age of sail, passing through the turmoil of World War II, and continuing with present-day researchers who make discoveries with each new expedition to the NWHI. Native Hawaiian chants and oral histories tell of exploration and settlement in this area over millennia, while shipwreck sites scattered throughout Papahānaumokuākea help tell the story of a more recent maritime past (Apple 1973). The extensive maritime heritage of PMNM serves as a tool to captivate a broad constituency in the efforts to manage and protect the diverse resources of the Northwestern Hawaiian Islands.

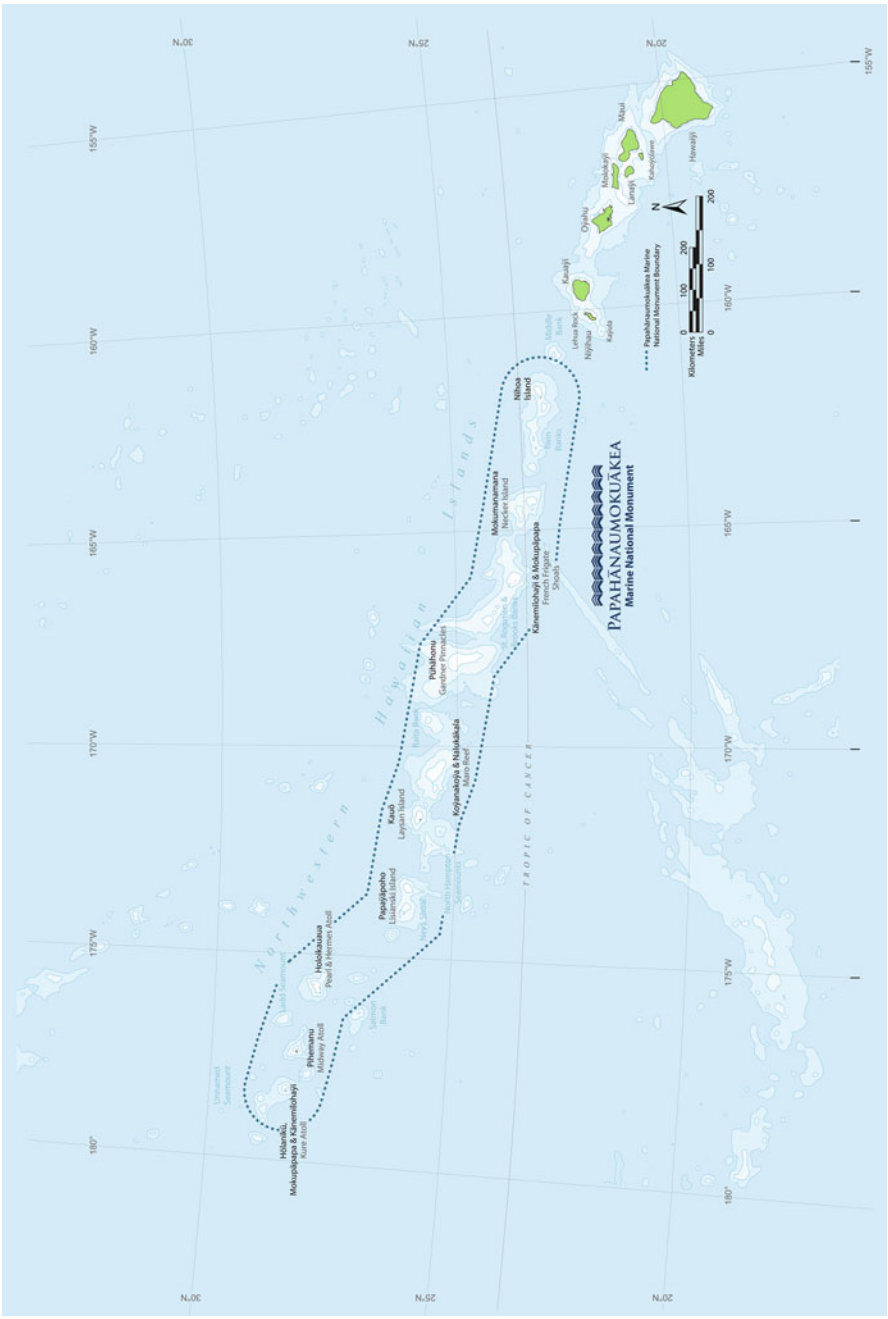

Fig. 13.1 Map of the Northwestern Hawaiian Islands showing the PMNM boundary (PMNM/NOAA, 2012)

Maritime Heritage in Papahānaumokuākea

Maritime heritage in PMNM reaches far beyond the material remains of shipwreck sites on the seafloor. The vision for PMNM's Maritime Heritage Program is to facilitate a broad interdisciplinary understanding of the historical use of this remarkable site, establishing a foundation upon which to develop a meaningful management direction through integrating, supporting, and complementing the Monument's rich cultural and natural science programs. Archaeology, always a multidisciplinary science, incorporates history, biology, ethnography, anthropology, materials conservation, photography, survey, drafting, and geology (Australian Institute for Maritime Archaeology 2011), and this is not a complete list. Until recently, efforts to manage archaeological sites have not fully exploited these sites' relevance to fields of study beyond the scope of their traditional audience. Maritime heritage sites are not only part of an underwater environment but are intimately connected with broader maritime landscapes—heritage sites on land, in ports, and in cities that developed because of maritime trade, as well as communities that were shaped by a history of colonization. Consequently, management of heritage sites should be considered not only a technical issue, but also a social one, necessitating engagement with the public and the cultural sensitivity that such engagement warrants. Because of these myriad connections with both the cultural landscape and the natural environment, successful management of maritime heritage sites in the Monument requires an interdisciplinary approach.

Archival research indicates that as many as 60 shipwreck sites, the earliest dating to 1818, and at least 61 aircraft sites may be in Monument waters (Van Tilburg 2002a, b). These sites represent the material legacy of our nation's maritime heritage in this region, providing a window through which we can better understand our seafaring past. Considering these sites in the context of living culture and traditional knowledge helps us to more holistically perceive their significance to the Hawaiian Islands. But how do we convey this significance at a site that allows for such limited public interaction?

Although developing an outreach program emphasizing compatible activities and the ethics of responsible diving at shipwreck sites is important for those few individuals who might have the opportunity to visit the NWHI, such individuals constitute a tiny percentage of the overall public. Accordingly, the preponderance of the education and outreach program is devoted to the broader general public. The development of cross-cutting themes to bridge Euroamerican and Native Hawaiian ideas of culture and history—for example, exploration, navigation, historical ecology, and contrasting viewpoints on the ocean—helps to inspire innovative partnerships and creative approaches to outreach and education. Collaborative outreach efforts utilizing venues such as the Waikiki Aquarium, the Bishop Museum, the Pacific Aviation Museum, Lahaina Courthouse, the Nantucket Whaling Museum, the USS *Arizona* Memorial, cruise ships, airlines, hotels, and airports are vital in order to promote not just maritime heritage but also an array of broader Monument messages and themes.

Education and Outreach at Papahānaumokuākea

As part of NOAA's Office of National Marine Sanctuaries, PMNM prioritizes education and outreach for all site resources. Maritime heritage is in a unique position to engage a broad range of stakeholders. The NWHI have no shortage of compelling shipwreck stories, as well an engaging broader message about seafaring and exploration in Papahānaumokuākea. With a wealth of content for outreach, the challenge lies in the best delivery methods to a diversity of audiences for these stories that have the potential to engage the public in ocean stewardship. Maritime heritage managers have the opportunity to connect with the public on an emotional level, even at great distances.

Exhibits

To date, PMNM's maritime heritage outreach efforts have focused on bringing the public an experience through outreach materials (websites, posters, brochures, exhibits, and films). The Mokupāpapa Discovery Center for Hawaii's Remote Coral Reefs, which opened on the bay front in Hilo, Hawai'i, in May 2003, is a valuable Monument asset for public outreach. This 4,000 square ft. facility, free to the public, was built to interpret the natural science, culture, and history of the Northwestern Hawaiian Islands. Interactive displays, three-dimensional models, a wet lab, and an immersive theater allow the visitor to experience this special and remote area. A 2,500 gallon saltwater aquarium displays fishes from the NWHI reef and a mock-up of Hawai'i Undersea Research Laboratory's Pisces V submersible lies nearby.

The Discovery Center has demonstrated its value to the community and visitors alike, with annual visitorship of 60,000. Although its exhibits cover many aspects of the Monument, until recently none of them addressed maritime heritage. In February 2010, a new maritime heritage-themed exhibit, "Lost on a Reef," opened for the public to view.

The recovery, conservation, and display of artifacts from three shipwreck sites in 2005 (*Pearl*, *Hermes*, and *Parker*) and additional artifacts recovered from sites in 2008 (USS *Saginaw* and *Parker*) add a new maritime heritage component to the Center's current displays (Fig. 13.2). The artifacts are displayed in locked, climate-controlled glass display cases. Interpretive panels present information about the rich maritime heritage of the NWHI and describe important aspects of shipwreck management, including the ownership and recovery of artifacts, an area of knowledge unfamiliar to the general public.

"Lost on a Reef" also displays three items from partnering institutions. The Mystic Seaport Museum of America and the Sea generously donated two artifacts, a whaling harpoon and a sextant. The sextant was invented independently in both England and America in 1731. This sextant was made in London, England, around 1830 by Heath & Co. Most sailing vessels traveling through the NWHI in the nineteenth century would have carried a sextant on board.

Fig. 13.2 A videographer documents the British whaleship *Pearl* at Pearl and Hermes Atoll (NOAA/Greg McFall, 2011)

The History of Diving Museum in Islamorada, Florida, generously donated a Morse diving helmet and wing nut wrench from its extensive collection. The diving helmet helps tell the story of the USS *Saginaw* shipwreck. This helmet approximates the type that the ship's divers used while blasting the channel at Midway. The diving helmet is circa 1870s, made by A. J. Morse and Sons in Boston. The material culture from shipwreck sites, along with other objects PMNM is working to acquire, such as another dive helmet, a ship model, and additional artifacts, will help tell the stories of the early seafarers who passed through the Monument hundreds of years ago.

The rear wall space in the program room was dedicated to the "Lost on a Reef" exhibit. As in the rest of the Discovery Center, all main exhibit labels are printed in both Hawaiian and English. This exhibit exemplifies the principle of "bringing the place to the people, not the people to the place." Future efforts to keep the maritime heritage exhibit at Mokupāpapa dynamic and up to date will include rotating components of the display.

Two Brothers Shipwreck Project

Though maritime heritage in the NWHI as a whole maintains significant outreach potential, certain projects exemplify the compelling maritime heritage stories. One particular PMNM shipwreck project has produced several outreach products and its potential continues to yield significant partnership efforts. Many are familiar with the fate of the Nantucket whaleship *Essex*, stove by a whale in the Pacific Ocean and

cited as the inspiration for Herman Melville's *Moby Dick*. However, this dramatic experience was not the final chapter in *Essex*'s Captain Pollard's career as a whaling captain. After his return to Nantucket, he was given command of the whaleship *Two Brothers*. Unfortunately, following stormy weather, the ship stuck the reef in the Northwestern Hawaiian Islands and found herself surrounded by breakers. Captain Pollard's career as a whaling captain was over, but the story of the *Two Brothers* still remains on the seafloor at French Frigate Shoals within Papahānaumokuākea Marine National Monument. The story of this shipwreck, and the mystery of her possible discovery, connects the small island of Nantucket with one of the largest marine protected areas in the world (Gleason 2008, 2009, 2010; Raupp and Gleason 2010; Delgado and Gleason 2011).

In 2008, a team of NOAA maritime archaeologists made an exciting discovery at French Frigate Shoals: an early nineteenth-century whaling shipwreck site. At that time, the identity of this unexpected find was a mystery. Not until May of 2010, when a small team was able to return to the site, did maritime archaeologists began to believe they were indeed looking at the scattered remains of the Nantucket whaleship *Two Brothers*. The *Two Brothers* is an exciting find and an important maritime heritage site in the Northwestern Hawaiian Islands. This and other American whaling ships lost in Papahānaumokuākea are the material remains of a time when America possessed over 700 whaling vessels and over one-fifth of the United States' whaling fleet may have been composed of Pacific Islanders. Dozens of vessels called upon Honolulu, and these ships, for better or worse, transformed the islands. Many of these vessels traveled up to 2 years and around the world to reach whaling grounds in distant places. The whaling shipwreck sites in the Northwestern Hawaiian Islands help us to tell this part of Hawaiian and Pacific history, and remind us about the way this remote part of the United States is connected with small communities in New England halfway around the world.

The *Two Brothers* shipwreck story reached audiences around the globe, and helped to demonstrate the potential of a remote site's ability to touch a broad audience. The project is ongoing, and continues at this writing with survey for the remaining parts of the shipwreck site. In addition, efforts to develop compelling outreach products relative to the shipwreck story continue with the recent opening of a *Two Brothers*-themed exhibit at the Nantucket Whaling Museum. Modeled after the "Lost on a Reef" exhibit in Hilo, the traveling exhibit at the Nantucket Whaling Museum includes unique artifacts recovered from the *Two Brothers* shipwreck and conserved at the Heritage Resources Conservation Laboratory in Chico, California (Fox 2012). This exhibit shares the story of the loss, discovery, and archaeological investigation of the *Two Brothers* shipwreck, as well as the broader story of Papahānaumokuākea and its resources, and is an opportunity for material culture from the ill-fated *Two Brothers* shipwreck to return home to Nantucket, where visitors can experience them firsthand. The project has also been a fruitful opportunity for partnership between the Nantucket Historical Association and PMNM, helping to make connections between two remote island communities with a common maritime heritage.

Film Projects

Films can be an effective way to reach out to the public and to convey a message of stewardship and conservation. In March 2006, John Brooks of NOAA's Ocean Media Center produced a maritime heritage film, *Exploring a Sunken Past*, for the ONMS Pacific Islands Region Maritime Heritage Program using footage collected during the 2005 survey. The Pacific Islands Region of ONMS funded the project, and the film focused on the history and management of maritime heritage resources in the Pacific Islands Region.

Following production of the film, the Monument was established and several new shipwreck sites were discovered and documented by NOAA maritime archaeologists, creating a need for more current video documentation and interpretation. In 2008, Open Boat Films (formerly Flyingfish Science and Film) was contracted to develop and assist in producing a maritime heritage film for public outreach. This film was also intended to complement the "Lost on a Reef" exhibit at the Mokupäpapa Discovery Center. Over the course of a 30-day research expedition on the NOAA vessel *Hi'ialakai* in August 2008, filmmaker Stephani Gordon collected video footage throughout the NWHI, including Kure Atoll. She shot high-definition video footage of terrestrial and underwater maritime heritage sites, and interviewed the maritime archaeology team members about various aspects of their work including preservation, artifact recovery, site history, and interpretation efforts.

The *Lost on a Reef* film, completed in January 2010, is shown on a large screen throughout the day in the Mokupāpapa Discovery Center exhibit room to convey a sense of place and to introduce the people who conduct the research and develop the interpretation that made the exhibit possible. The film highlights the recovery of some of the artifacts on display in the "Lost on a Reef" exhibit, such as the ship's bell and sounding lead from USS *Saginaw* and another ship's bell from the whaling ship *Parker* site. In addition to its regular showing at the Mokupāpapa Discovery Center, the *Lost on a Reef* film was entered by the filmmaker in more than 15 film festivals internationally. It has proven an effective way to reach a broad audience with messages about the history and protection of maritime heritage resources in PMNM. The film is available to the public on request, and can be viewed on PMNM's website at: http://www.papahanaumokuakea.gov/maritime/film_clips.html.

Publications and Outreach Materials

Research in the NWHI is often conducted over several years. During any given research expedition, time to conduct fieldwork may be severely limited by cruise schedule, weather, and conditions. Consequently, work beginning in one field season may take several years to complete. Over the course of such drawn-out research, staff members have developed publications in the form of a book, short articles, and web-based pieces to describe the story and research carried out to date. (PMNM maritime heritage publications and references, as well as links to expedition blogs,

can be found at the Monument's Maritime Heritage website: http://papahanaumokuakea.gov/maritime/welcome.html.)

Information Sharing and Collaborative Database Development

The sharing of information with other institutions and scholars, as well as with the general public, is a valuable outreach tool in itself. Moreover, such data sharing can facilitate the multidisciplinary emphasis inherent in the directives of the Monument's broader Management Plan (State of Hawai'i et al. 2008).

The Monument's spatial bibliography (available at http://www.pmnmims.org) is an invaluable tool for students, scholars, and research managers alike. Using state-of-the-art GIS technology, the bibliography allows the user to search for bibliographic information tied to specific locations, species, and topics in the NWHI.

Greater collaboration between PMNM Maritime Heritage GIS database projects and the Office of Hawaiian Affairs' (OHA) GIS database will assist both programs in their efforts to inventory and understand the archaeological resource base. OHA's GIS database falls under the Research: Land, Culture and History division, and holds the potential for collaborative efforts and information sharing. Student projects may also be developed to contribute data to both of these ongoing GIS database projects. OHA's GIS database may also be an important tool for collaborating on the development of the Monument's Maritime Cultural Landscape study.

In 2009, NOAA and the US Fish and Wildlife Service (FWS) initiated a collaborative project to build a database integrating terrestrial and marine sites associated with the Battle of Midway. The completion of an interactive Battle of Midway map based on a GIS environment will have utility not only for resource managers but also as a tool for public interpretation. This map will be modeled on extant interactive shipwreck maps.

Navigating Change

"Navigating Change" is PMNM's educational and environmental stewardship program that integrates traditional knowledge with Western science to inspire the next generation of conservation leaders. The curriculum currently developed focuses on grades 4 and 5, and meets State of Hawaii Department of Education standards for those grade levels. However, the program holds tremendous potential for expansion to a broader age range and a wider scope. Plans for future collaboration between the Navigating Change and maritime heritage programs will broaden the scope of both, adding to the connection between natural and cultural history.

As PMNM's Navigating Change Program works to broaden its target audience to include middle school, high school, and professional development programs, collaborations have begun between the Monument's Navigating Change Coordinator and the Monument's Maritime Heritage Coordinator. Initiated with a pilot project in

early 2012, PMNM's Maritime Heritage Coordinator developed a 3-day career development workshop for 11 high school students. Starting with a target demographic of young women, the workshop aims to connect dynamic professional women working in the Hawaiian Islands community in the fields of conservation and science with young women. Through hands-on, experiential learning led by local experts in their respective fields, the young women have the opportunity to develop personal and professional relationships with women working in conservation and science, and become linked to a network of women working in both marine and terrestrial conservation in Hawai'i. Utilizing place-based learning, the workshop facilitates the opportunity for career inspiration; network development; and assistance with future volunteer, internship, and job opportunities in the local community. The workshop includes hands-on activities relative to maritime heritage, Polynesian voyaging and wayfinding, native plant restoration, and albatross and monk seal observation. The 2012 experience served as a pilot project for similar future workshops aimed at career development for middle school and high school students.

The Role of Native Hawaiian History and Culture in Maritime Heritage Education and Outreach at Papahānaumokuākea

Native Hawaiian history and culture are the foundation for maritime heritage in PMNM (Kikiloi and Graves 2005, 2010). More modern maritime heritage in the NWHI opens the door to broader discussion about human activities in this region over the millennia. The earliest Polynesian seafarers set the stage for a continued exploration that continues to the present day. Archaeological and natural resource findings continue to make PMNM a remarkable place for discovery and exploration.

Challenges to the development of the continuum between early Polynesian voyaging and more recent maritime heritage activities include the lack of material culture relative to Polynesian seafaring in PMNM. Despite few submerged maritime cultural resources discovered in the Monument relative to Native Hawaiian activities, oral histories and chants telling the stories of a seafaring past still exist. Western seafaring activities such as whaling had major implications for the Hawaiian people, with up to 1,000 Native Hawaiian sailors shipping out annually by the mid-nineteenth century. Weaving together multiple elements of seafaring heritage in the Monument helps us to recognize that more modern maritime heritage is part of a much longer story of navigation and seafaring. Through a constant effort to integrate a maritime heritage approach that views the NWHI through a cultural lens, the MHP can help focus attention to key PMNM management strategies.

Additional efforts to expand collaboration between Native Hawaiian and maritime heritage researchers will be developed through future cooperative multidisciplinary field projects during maritime heritage research expeditions to Papahānaumokuākea. These expeditions offer an invaluable opportunity for knowledge sharing and may provide further insight into opportunities to initiate projects that focus on the continuity of seafaring and exploration in the NWHI.

Partnership Efforts to Interpret Maritime Heritage in the NWHI

Maritime heritage is an inclusive topic, one that is both multicultural and multidisciplinary. With limited staff available for research, it is important that the Monument develop partnerships with universities, agencies, and other organizations to address the vast potential for maritime heritage research in the NWHI. PMNM has already established a history of pursuing and fostering productive collaborative efforts.

The Monument has also collaborated with partners such as the National Park Service (NPS), FWS, and the State of Hawai'i in maritime heritage efforts. National Marine Fisheries Service (NMFS) has long been a partner in efforts to locate maritime heritage resources; NOAA Pacific Islands Fisheries Science Center's Coral Reef Ecosystem Division (CRED) divers and scientists involved in ecological monitoring projects and removal of marine debris have abundant opportunity to spot maritime heritage sites in areas that archaeologists might not have the chance to visit. Indeed, following outreach efforts to educate the marine debris team about potential sites and how to spot them, divers have reported several such sites to maritime heritage staff. Similarly, NOAA research vessel *Hi'ialakai* crew members log many hours at sea in the NWHI, not always in the company of maritime archaeologists. In 2006, PMNM maritime heritage staff conducted a 2-day Nautical Archaeology Society course to educate the ship's crew about maritime archaeology and what to do if they encounter a site with no maritime archaeologist present (Bowens 2009).

Collaborations with local partners are essential in building close ties with the local community. The Monument has established and will continue to strengthen relationships with the Polynesian Voyaging Society, the Waikiki Aquarium, The Nature Conservancy, the University of Hawai'i at Hilo, and others. At the same time, more far-reaching partnerships bear valuable fruit; for example, communities around the country, such as New Bedford and Nantucket, Massachusetts, and Saginaw, Michigan, have strong historical ties to the maritime heritage of the Monument. Additionally, because of PMNM's importance as a World Heritage Site, broad connections will remain invaluable in promoting the global significance of the Monument's maritime heritage resources. Nurturing these existing relationships and developing new ones will remain critical to building the Maritime Heritage Program on a sustainable basis.

Conclusion

The Monument's ongoing efforts to inventory, document, and protect its maritime heritage sites have been instrumental in opening a window into the NWHI's seafaring past, and they have contributed materially to a growing body of knowledge about humans' historical interaction with the sea. Using the cultural landscape (or seascape) approach to examine the broad themes of human presence in the

NWHI—exploration, whaling, the age of sail, and military history—as well as investigating the young science of historical ecology, maritime heritage outreach efforts continue to add to this precious store of knowledge. Moreover, through the many and varied collaborations that have already been created and the many more that await fruition, Monument staff are able to find new and captivating techniques for bringing stories of the past to the attention of present, and future, enthusiasts. By embracing a holistic, multidisciplinary approach to research, management, and outreach, Monument maritime heritage staff aim to create bridges between fields of endeavor—maritime heritage, terrestrial archaeology, natural resources, and Native Hawaiian culture—that have traditionally been treated separately.

Education and outreach at any marine protected area is a critical component of its long-term success. Often, connection to a place follows the opportunity to visit and experience a particular location. Papahānaumokuākea Marine National Monument is internationally renowned for its spectacular and diverse natural, cultural, and maritime heritage resources. Furthermore, PMNM possesses a rich maritime heritage stretching back long before written records. Native Hawaiian chants and oral histories tell of exploration and settlement in the area, while more recent shipwreck sites scattered throughout the Monument help to tell the story of a post-contact maritime past. PMNM's Maritime Heritage Program aims to build towards a future of research and management that will encompass all facets of this remarkable site's heritage.

The wealth of knowledge, both developed and untapped, that the Monument represents is only as valuable as it is accessible to the people who can be enriched by it. This becomes an important challenge at a site like Papahānaumokuākea, which is, for the most part, inaccessible to the general public. How do you create an outreach program for a site that can only be shared remotely? Can you engage the public in something that they cannot touch and feel firsthand? Developing an education and outreach strategy for PMNM's Maritime Heritage Program is predicated on imbuing the public with a sensitivity for the value of maritime heritage resources. Because the general public will never have the opportunity to visit most of the Monument's sites, education and outreach efforts assume a different significance than they do where visitation is encouraged and facilitated. The priority becomes bringing the place to the people in a creative and engaging way.

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Chapter 14
Interpretation of Maritime Heritage at National Marine Sanctuaries: Using a Maritime Cultural Landscape Approach

Bruce G. Terrell

Abstract Since the designation of the USS *Monitor* as NOAA's first National Marine Sanctuary in 1975, the National Marine Sanctuary System has grown to manage 15 marine protected areas. The management of the sanctuaries has always complied with laws, regulations, and guidelines as coordinated by the National Park Service's Federal Archaeological Program. This discussion describes NOAA's Office of National Marine Sanctuaries' programmatic implementation of a "Maritime Cultural Landscape" approach to interpreting and understanding the maritime heritage of the regions associated with the national marine sanctuaries.

Introduction

Until recently, NOAA's Office of National Marine Sanctuaries interpreted submerged cultural resources under its management specifically in alignment with its legislative mandates. The National Historic Preservation Act directs federal agencies to inventory historical and archaeological properties, to assess them for eligibility for the National Register of Historic Places, and to nominate them to the Register. While this policy has been responsible for the preservation of significant historical and archaeological properties, the Office of National Marine Sanctuaries tended to interpret it somewhat narrowly.

For NOAA's part, only two of our national marine sanctuaries, Thunder Bay and the USS *Monitor*, have been recognized for "maritime heritage" values, while most of the others have been recognized as having mixed natural and cultural resources (Fig. 14.1). The program identified three sanctuaries, California's Cordell Bank, the

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Fig. 14.1 NOAA's National Marine Sanctuary System (Courtesy NOAA, 2012)

Gulf of Mexico's Flower Garden Banks, and Georgia's Gray's Reef, as having little potential for cultural or historic resources. What was not fully considered, however, were these sites' intangible cultural resources which might include past uses, regional culture, and a sense of human "place."

The ocean-places associated with the sanctuaries are home to numerous cultures both ancient and relatively modern. They include native Polynesian, Native Hawaiian, and American Indian. They encompass the traditional practices of people of native and Euro-American descent. All of these users have had, and many still have, their own concepts and beliefs of what the ocean means and how they interact with it.

Upon the arrival of James P. Delgado as Director of NOAA's Maritime Heritage Program (MHP) in 2011, a long-range tactical plan was drafted. The plan included a goal to consider the integration of resources, both tangible and intangible, as well as cultural processes, both past and present, into a unified cultural landscape approach.

The concept of cultural landscapes is not new. Landscapes have long been recognized as useful tools in describing distinct geographical areas of associated cultural and natural features. Christer Westerdahl (1992) first introduced the term "maritime

cultural landscape" (hereafter referred to as MCL) as an archaeological concept spanning both sea and land, and other scholars have since further refined the archaeology of maritime landscapes. As we know, there is much more to culture than definition by archaeology. Within the National Marine Sanctuary System, community stakeholders seek recognition of cultural resources beyond historic shipwrecks. Resource managers must make decisions balancing numerous cultural inputs. Until now, though, cultural resource issues have not been understood in a comprehensive manner (Van Tilburg and Terrell 2011).

In October of 2011, NOAA's MHP convened a workshop to design and test a process for building an integrated maritime cultural landscape approach as both an assessment and management tool. Participants included sanctuary program heritage resource coordinators as well as invited experts presently working on the landscape-approach concept including John Jensen and Rod Mather of the University of Rhode Island, Ben Ford of Indiana University, and Dennis Stanford of The Smithsonian Institution's Museum of Natural History. The team considered how the sanctuary system might integrate maritime cultural landscapes into the sanctuary system's management regime and assessed the recommendations of NOAA's Marine Protected Area (MPA) Center's "Recommendations for Integrated Management Using a Cultural Landscape Approach in the National MPA System" (2011).

The "Cultural Heritage Vision Statement" of the MPA Federal Advisory Committee's Recommendations for Integrated Management Using a Cultural Landscape Approach (2011) stated:

> Achieving and maintaining healthy coastal and marine ecosystems requires a fundamental understanding of the relationships between people and the environment. Cultural heritage, which belongs to all people, emphasizes these connections, whether that heritage takes the material form of, for example, maritime resources (such as shipwrecks), natural resources (such as marine species and habitats), or sacred places. Through the national MPA system, cultural relationships among people and historic, natural, and place-based heritage resources are preserved and perpetuated in ways that recognize and share multiple cultural voices and knowledge systems for the benefit of all.

The MHP elected to use the MPA center's recommendations as a guide for establishing its own MCL approach. The outcome of the workshop was the development of a design that included cultural landscape studies within three of the system's national marine sanctuaries. Products developed in the course of these studies will be presented to each site's Sanctuary Advisory Council for proof of concept. The councils are composed of community members within each sanctuary's region from a wide range of experience including fishermen, divers, teachers, boaters, business people, activists, protected area managers, scientists, and elected officials. The council's input will, ideally, guide the refinement of the process as well as the development of tools that can be utilized by the other sanctuaries to develop their own landscape assessments.

The overall goal of the maritime cultural landscape initiative is to integrate the management of the natural and cultural resources of the sanctuaries. MHP will contribute to answering pressing questions regarding management issues that have been with coastal communities, in some form, since the beginning of human presence on

the coasts and in the oceans. Looking at present issues of sustainability in coastal communities, it is apparent that some of the same issues have confronted coastal populations throughout history. Some of these issues include:

- Living Marine Resources—Population levels of sea mammals, fish, and other food resources within the ocean and the estuarine environments have been a concern of humans, past and present, primarily as a sustainable food source. MHP is actively involved in international initiatives to document past fish and mammal populations using historical documents.
- Water Quality—Water quality affects the health of marine resources. Runoff and sedimentation resulting from human use affect food resource health.
- Global Environmental Warming—Global cooling and warming have always affected sea levels and, hence, human habitation. MHP efforts to profile past sea levels may assist the understanding of future sea-level change.
- Cultural Heritage—Coastal populations and maritime cultures past and present have unique traditions and material culture that have been directed by their relation to the sea.

Other issues that have affected past and present human populations include coastal development, coastal access, transportation by sea, and response to environmental hazards.

Test Case

The first sanctuary selected to develop the model is the Gulf of the Farallones and Cordell Bank National Marine Sanctuaries, which are adjacent to each other along the Central California Coast, off Marin County. The landscape approach allows the interpretation of not just archaeological resources within sanctuary boundaries, but the history, archaeology, and culture associated with the entire region including the San Francisco Bay area. This enables assessment of cultures that inhabited the coastline, as well as those who traded and transited the waters of the sanctuaries.

MHP is developing a GIS-based viewer to assist with the storing and viewing of the various data sets accumulated. These data sets include:

- Paleo shorelines—Previous studies from colleagues working with data from prehistoric sites as well as NOAA's detailed bathymetric studies of the region and flooding models can more precisely delineate the paleo shoreline and its various transitions from 23,000 to 2,000 years before present.
- Site location—Presently known terrestrial archaeological site distribution within the coastal region of the study area informs models of habitation and resource use that may yet be found in the inundated bottomlands of earlier ages.
- Languages—Historically known ranges of Native American language groups and tribal affinity distributions help to delineate use areas.

- Place names—"Formal," as in charted or listed, as well as informal and vernacular in addition to non-Euro-American ethnic groups place names provide information on significance and use of certain areas.
- Nonindigenous use—Places and ranges of Colonial Spanish, Russian, and Mexican-era maritime activities and shoreline interactions including trade, resource extraction, and defense.
- American use—Places and ranges of American activities, including navigable inland waters and communities.
- Specific regional activities—Including economic centers; fisheries including various ethnic groups; maritime safety including navigation aids, lighthouses, and lifesaving stations; and modern activities including sport fishing, scuba diving, and surfing.

Assessment

While a series of GIS databases and ultimately reports and studies arising from this initiative are anticipated, the key "product" is the process—a new way of integrating and assessing maritime heritage resources as part of an overall management strategy in the National Marine Sanctuary System. This is a process in which a hierarchy is not necessarily imposed with the values of one culture over another. We hope to demonstrate that the power of this approach will be to combine and understand a number of interrelated resources and to connect to, and involve, a variety of communities while also meeting our responsibilities and mandates under the law.

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Chapter 15
Managing Historic Shipwrecks in Argentina: Challenges to Reach the Public

Dolores Elkin

Abstract This chapter deals with the main shipwreck sites that have been studied to date by the underwater archaeology team of Argentina's National Institute of Anthropology. The ships range from the seventeenth to the twentieth century and all are located along the Atlantic coast of Patagonia. The possibilities for presenting these sites to the public is discussed based on their general characteristics, particularly the remote geographical context in which they are located and the legal status of those areas, such as being current or future nature preserves.

Introduction

The oceanic and fluvial coastlines of Argentina extend several thousands of kilometers which, combined with a great number of lakes and other inland waters, provides a great potential for the existence of submerged archaeological sites, both from prehistoric and historic periods. In fact, records of ship losses and other useful sources related to the subject indeed suggest that the potential is quite remarkable (Programa de Arqueología Subacuática 2012). However, actual knowledge about those sites, including the simple confirmation of their presence, is still extremely limited. This is because the approach to underwater cultural heritage in the country began by conducting archaeological research on one particular wrecksite, followed by a few others, before addressing any specific management issues.

The sunken ship that eventually gave birth to the field of maritime archaeology in the country is an eighteenth-century British sloop of war, the HMS *Swift*. It was discovered in 1982 by local divers from the town of Puerto Deseado, Province of

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Santa Cruz, and since then has been subject to different types of interventions, starting with the mere extraction of artifacts and gradually becoming a systematic research project. The latter, which is discussed below, has been conducted since 1997 by the underwater archaeology team (PROAS) of the Argentinean National Institute of Anthropology (INAPL). This is a federal government institution which is the competent authority for national legislation concerning archaeological heritage in Argentina.

Shortly after the finding of the *Swift*, a small museum was created to host the artifacts recovered, and the site was declared historical heritage. This was the first time an underwater archaeological site was given such status, and set a valuable precedent for subsequent legislation which, since 2003, protects archaeological heritage regardless of whether it is located on land or under water. The *Swift* case may have also played a role in the ratification by Argentina of the UNESCO 2001 Convention for the Protection of Underwater Cultural Heritage, which took place in 2010. Since the origin of the HMS *Swift* archaeological project, a few other sites (all shipwrecks or parts of them) have also been investigated by PROAS-INAPL. Coincidentally, they all happen to be located along the coast of Patagonia and in current or future marine protected areas.

It is worth noting that another team that has been conducting underwater archaeological research in the country for several years is associated with the University of Rosario, and they have mostly worked in fluvial and inland environments (Valentini 2003; Valentini and García Cano 2011).

This chapter presents the main sites undergoing research by the PROAS team, as illustrated in Fig. 15.1. The possibilities for presenting these sites to the public is then discussed based on their general characteristics, particularly the geographical context in which they are located and the legal status of those areas (such as being nature preserves). Some cultural and socioeconomic aspects also are taken into consideration.

Shipwreck Sites in Valdés Peninsula and Puerto Madryn

The Valdés Peninsula is located in the central coast of the province of Chubut, in northern Patagonia, close to the city of Puerto Madryn (Fig. 15.1). Because of its spectacular marine wildlife, the peninsula has been declared a World Heritage Site by UNESCO and every year thousands of tourists are attracted by the presence of whales, penguins, orcas, sea lions, and seals. In addition, the area is attractive to sport divers, and Puerto Madryn is regarded as the “Diving Capital” of the country (Instituto Nacional de Promoción Turística 2012; Semanario Parlamentario 2012). This is because of the favorable underwater environment of the Nuevo gulf, adjacent to the city of Puerto Madryn and the Valdés Peninsula. In comparison to the rest of the country’s oceanic coastline, the water in the gulf is much more benign in terms of temperature, currents, and visibility.

Precisely because of the presence of sport divers and diving operators, the work of PROAS in the Madryn-Valdés area, which began in 2004, is not just aimed at the

Fig. 15.1 Map of Argentina indicating the general location of the main sites under investigation: *Emma*, *Presidente Roca*, and BG2 in Valdés Peninsula; HMS *Swift* and *Hoorn* in Puerto Deseado; and *Duchess of Albany* in the Atlantic coast of Tierra del Fuego (based on map from http://www.ign.gob.ar/node/344, 2012)

archaeological study of underwater cultural heritage but also at involving divers in a public archaeology program. The first step was to assess the potential number of underwater sites which could have historical and/or archaeological significance. As a result, of a total of 30 shipwrecks or nautical remains, a small group was selected for a more detailed survey and for the subsequent proposal of a management plan involving public outreach. The first three sites to become the subject of sufficient historical and archaeological research are the schooner *Emma* (1883–1947), the steamer *Presidente Roca* (1896–1909), and an unidentified wooden-hulled vessel known as Bahía Galenses 2 (BG2).

The *Emma* is located underwater in front of the city of Puerto Madryn, at a depth of around 15 m. It is a popular diving site in the Golfo Nuevo together with other attractions (http://www.aquatours.com.ar/emma.html). Regrettably, very little of the ship is left, partly due to decades of souvenir collecting by divers and partly due to the natural degradation of the site. The main elements that are still visible above the sediment are parts of the keel and keelson, a ballast mound, and parts of the engine (Cristian Murray 2012, pers. comm.).

The steamer *Presidente Roca* is located in the intertidal zone on the Atlantic coast of the Valdés Peninsula. The archaeological site comprises the bottom part of the metal hull and one of the boilers in place, plus various other parts scattered around the main wreckage and up to a considerable distance from the wrecksite itself (Gutierrez and Elkin 2010). Despite not being underwater, access to the *Presidente Roca* is limited by several factors. First, its location coincides with that of an elephant seal colony and the public are not allowed in the place. Second, the shipwreck cannot be seen from the main (dirt) road that connects different points around the peninsula and, since there are no signs indicating its presence, there is no reason for people to take a short detour to the top of a cliff which could make a good viewing point. Finally, due to safety reasons it is generally not advisable to approach the edge of the peninsula cliffs unless a specially built catwalk or similar structure for visitors is present.

The so-called Bahía Galenses 2 (or BG2 for short) consists of part of the wooden hull of a sailing vessel, probably a nineteenth-century merchant ship (Murray et al. 2008a). It is located in the intertidal zone adjacent to the city of Puerto Madryn, and is on a beach visited by a considerable number of tourists and locals, especially in the summer. With low water, a series of wooden frames and other parts of the structure slightly protruding from the sand level can be seen; there is evidence that some parts have been removed, probably as souvenirs (Fernando Coronato 2010, pers. comm.). With high tide, the ship remains can be a hazard for people entering the water. For those reasons the site has been temporarily covered with sandbags until a long-term protection mechanism (both for people and the wreck) can be implemented.

Puerto Deseado: The *Swift* and the *Hoorn*

More than 15 years of research conducted by the PROAS team on the HMS *Swift* site, including several excavation seasons, have provided a great deal of information related to various research questions. Besides the very well-preserved wooden hull

structure, hundreds of artifacts of ceramic, glass, metal, wood, leather, and bone, plus significant biological remains including food items and a complete human skeleton, have been recovered from this site. As a consequence, cultural aspects related to an eighteenth-century warship, such as technology, social hierarchies, sanitary conditions, food and drink, and many others, are now better understood both from an archaeological and an interdisciplinary approach (Elkin et al. 2007, 2011). Site formation processes are also addressed from a biological and sedimentological perspective (Bastida et al. 2004, 2011).

The *Hoorn* was one of the two Dutch vessels of the early seventeenth-century expedition led by Jacob Le Maire and Willem C. Schouten in search of a new passage to the Spice Islands. The ship was lost in 1615 due to accidentally catching fire while being careened on the shore in the Deseado estuary. A bilateral research project conducted by archaeologists from Argentina and the Netherlands began in 2003 with the goal of locating and studying the remains of the *Hoorn*. Some remains of the site were eventually found on the intertidal beach, mostly consisting of rocks interpreted as ballast materials, various ceramic sherds, and melted metallic fragments attributed to the fire. Subsequent remote sensing surveys combined with selected diving operations conducted on the adjacent seabed resulted in the location of ferrous concretions which revealed the impressions of corroded iron artifacts such as nails, fittings, and bolts. No hull remains were found underwater or on land (Murray et al. 2007, 2008b).

Shipwreck Sites on the Atlantic Coast of Tierra del Fuego

In 2008, the *Museo del Fin del Mundo* (Museum of the End of the Earth), of the city of Ushuaia in Tierra del Fuego, undertook an archaeological baseline project consisting of surveying 200 km along the Atlantic coastline of the island in search of prehistoric and historic cultural evidence. The study area, called Peninsula Mitre and located in the southwestern portion of Tierra del Fuego, is extremely remote and inaccessible, without any roads or railways on land, and is too dangerous for most vessels to approach from the water. In prehistoric times it was mostly occupied by nomadic hunter-gatherers, and in the nineteenth century a few sheep-breeding *estancias* (ranches) were established in the area. Today there is virtually no human occupation. Partly because of the considerably pristine nature of Peninsula Mitre, a group of stakeholders from Tierra del Fuego are developing a proposal to declare it a protected area (Martín Vazquez 2010, pers. comm.).

Archaeological surveys related to historic shipwrecks, led by the PROAS team, were conducted throughout three short seasons with the purpose of acquiring baseline data on the subject while trying to cover as much area as possible within the available time. Historical records indicate that numerous vessels were lost in the area, particularly European and North American ships either en route to the Pacific Ocean or engaged in whaling activities in the region. In this early stage of the project, the search for shipwreck remains started by surveying the intertidal and

Fig. 15.2 (**a**, **b**) The remains of the *Duchess of Albany* in Tierra del Fuego seen from the bow, and details of the windlass and capstan in place (Photos by Chris Underwood 2012 and PROAS 2012, respectively)

supratidal zone. As a result, a number of metal and wooden shipwreck sites, as well as hundreds of scattered remains, have been preliminarily recorded. One of the most conspicuous wrecksites located in the study area is the *Duchess of Albany*, a British merchant vessel lost in 1893 and currently lying in the intertidal zone (Fig. 15.2a, b). This ship is quite iconic for the *Museo del Fin del Mundo* in Ushuaia since its main

exhibition room displays the figurehead, removed from the site in the late 1970s, as well as old photographs of the ship.

Although many people visit the *Museo del Fin del Mundo* every year, very few have the chance to see the actual remains of the *Duchess of Albany* due to the above-mentioned remoteness of the area where the site is located. Today, the place is only accessible by horse, quadbikes, or foot, and there is no available shelter other than a handful of small constructions located some kilometers away which are part of estancias no longer in use, and which lack the minimum facilities that the average visitor would expect, such as running water, electricity, and some form of heating other than firewood.

Discussion

With a couple of exceptions, the shipwreck sites described above are located in places of difficult access, whether they are underwater (such as the *Swift*, due to adverse diving conditions) or on land (especially on the Atlantic coast of Tierra del Fuego, due to the geographical remoteness of the place and the lack of access infrastructure). In other cases, mainly in the Puerto Madryn-Valdés Peninsula area, sites can be more accessible both for divers as well as non-divers.

Despite the challenges for connecting some of these sites with the public, actions in that sense could—and should—be taken with all of them. The main current proposals are summarized in Table 15.1. One of the cases, which is quite favorable for public outreach, is the *Emma*, which basically needs some interpretive material in order to enhance the diving experience at the site. PROAS has already prepared a one-sheet brochure containing a drawing and interpretation of the visible remains on one side and a brief text on the other regarding the main aspects of the *Emma* in the context of the underwater cultural heritage of Argentina and the area. This sheet can be laminated so that divers can take it underwater to use as a site guide. The material was sent to the Association of Diving Operators of Puerto Madryn and hopefully will be well received, especially if they become aware that, aside from current legal obligations, the greater the preservation of the sites, the better for their business.

As for the *Presidente Roca*, it will be necessary to discuss alternatives of public outreach with the culture, wildlife, and tourism authorities, as well as with other possible stakeholders such as travel operators. Access to the site will probably continue to be denied or severely restricted in order to protect the elephant seal colony, but it might be possible to install a safe lookout point on the top of the cliff close to the site for displaying interpretive illustrations of at least the most conspicuous visible parts, as well as for providing information on the history of the ship. Additionally, some simple brochures can be made available for tourists both in the city of Puerto Madryn and in some key locations within the peninsula, such as the lighthouse of Punta Delgada, now a tourist lodge. In future stages of a management plan for this site, the possibility of displaying a scale model of the ship or replicas of some of its

Table 15.1 Sites currently under study and proposed measures for public outreach

	Emma	*Presidente Roca*	"BG 2"	*Swift*	*Hoorn*	*Duchess of Albany*
	1883–1947, wooden hull	1896–1909, iron hull	Nineteenth century wooden hull	1762–1770, wooden hull	Ca. 1610–1615 wooden hull	1884–1893 iron hull
Location/environment	Underwater	Intertidal and supratidal	Intertidal	underwater	Intertidal	Intertidal
Difficulty of access	Low	Moderate	Low	High	Low	High
Risk of cultural impact	Moderate	Low	Moderate	Low	Low	Low
Risk of natural impact	Low	High	Moderate	Low	Moderate	High
Main current proposed outreach measures	One-sheet brochures that can be laminated to take underwater by divers	View point on the top of the cliff nearby the site. Brochures in key locations close to the site	Exhibits at the Museo del Desembarco in Puerto Madryn	Permanent exhibits at the Museo Brozoski in Puerto Deseado; temporary exhibits in other venues	Permanent exhibits at the Museo Brozoski in Puerto Deseado; temporary exhibits in other venues	Brochures that can be taken to the site for interpretation + exhibits at the Museo del Fin del Mundo in Ushuaia

main components might also be considered. There have been some successful experiences along this line in other parts of the world, such as with the scale model of the stern of the SS *Xantho* which is displayed at the Western Australia Maritime Museum in Fremantle (Gilman 2009).

The BG2 is really "invisible" to the public given the sandbags that cover it. However, those same bags indicate that something important is underneath, which may well encourage an interest in the site. It is worth noting also that various members of the community of Puerto Madryn have collaborated in the sandbag-covering process, thereby displaying local stewardship and care of the site. In terms of public outreach, the nearby visitor center focused on the Welsh colony in Puerto Madryn, to which the vessel might be related, has recently prepared a special exhibition about the BG2 including the display of a few elements (Puerto Madryn Website 1996–2007).

The town of Puerto Deseado is directly associated with the two main archaeological projects conducted by PROAS so far, investigation of the wrecks of the *Swift* and the *Hoorn*. Especially in the case of the *Swift*, given the fact that it is a very significant archaeological wrecksite (probably the most significant in the country), it would unquestionably be attractive to divers despite the predominant poor visibility and other unfavorable conditions underwater. During the early stages of work on the site, the possibility of allowing the public to see it was considered (Elkin and Cafferata 2001). However, the experience acquired during subsequent years suggests that this initiative might be quite risky in terms of diver safety, not just due to the underwater conditions but also because the site is located within the local harbor, which presents additional hazards from marine traffic.

With the exception of the harbor, the Deseado estuary is a provincial marine protected area and a forthcoming management plan soon will be implemented, taking into account both the natural and the cultural heritage related to it (Chantal Torlaschi 2012, pers. comm.). In this context, perhaps the possibility of controlled access by divers to the *Swift* site may be discussed, bearing in mind that challenging diving conditions can be appealing for certain people. Even if the number of divers is extremely limited, the greater the number of people who are aware of the heritage and its importance, the greater are chances for that heritage to be preserved for future generations.

For the moment then, the Brozoski Museum of Puerto Deseado, which hosts the entire archaeological collection of the site, will continue to be the main way in which the public is connected to the *Swift*. As regard the *Hoorn* wreck, of which a few remains are still scattered on the beach some 12 km from Puerto Deseado, at present there is no intention to promote the presence of visitors in the area due to limitations for exerting any form of control and for preventing people from collecting things like ceramic fragments and other archaeological remains (Cristian Murray 2012, pers. comm.). Again, the Brozoski Museum can become the main connection between this site and the public, ideally in the form of permanent exhibitions but at least through periodic displays. Some of the latter have already been successfully implemented. The management plan for the Deseado estuary mentioned above will also consider the situation of the remains of the *Hoorn* which are still in situ.

The Atlantic coast of Tierra del Fuego is a more challenging case in terms of making the maritime cultural heritage accessible to the public, even for those sites located in the intertidal zone. As long as there are no roads and only minimal infrastructure facilities to encourage the presence of people in the area, the number of visitors will continue to be extremely limited and will consist mostly of individuals who own quadbikes and are prepared to make long, adventurous drives, literally "in the middle of nowhere." Besides, the main attraction will probably continue to be fishing and camping rather than visiting cultural heritage sites.

However, at least the shipwreck of the *Duchess of Albany* seems to be worth attempting to present to the public in some form, ideally complementing what the *Museo del Fin del Mundo* already displays about this wrecksite. Some options might be implemented, such as encouraging a local horseback riding club from Ushuaia, which already organizes expeditions to the area, to include a special visit to the *Duchess of Albany* conducted by people who can operate as guides. Basic interpretive brochures can be given to the visitors as well. Another option, compatible with the one just mentioned, would be to take a significant element from the site to a place where more people can enjoy it and, at the same time, the item could be preserved from the natural degradation that increasingly affects the site. This type of action has been conducted with the USS *Monitor* rotating gun turret in the USA (Broadwater 2009) and with the *Xantho* engine in Australia (García 2009), and may well be applicable in this case. Pieces like the windlass or the pumps from the *Duchess of Albany* might be good candidates if such a decision is made (Murray et al. 2012). On the other hand, removing any item from the wreck implies taking it out of context and preventing people from seeing it in situ, so the advantages and disadvantages of either option should be carefully assessed. The possibility of making replicas of special components of the ship could be considered as well.

Final Comments

The public enjoyment of underwater cultural heritage should be encouraged, ideally in situ (UNESCO 2001), although this is not always a feasible option. In the case of sites that present difficult access (either because of geographical location or adverse diving conditions), there are still various actions that can be taken in order to "show" them to the people in one way or another. The costs of implementing some of these initiatives, both for land and underwater visitors, do not need to be expensive. For divers, the one-sheet brochure with an interpreted sketch, which can be laminated to take underwater, is a very low-cost option and does not require any installation at the site for its interpretation, which also needs periodic maintenance.

Non-divers can be presented with various ways to "see" submerged sites in the form of images, texts, sounds, scale models, or other ways of representing them which do not have to be very costly. Even replicas of selected portions of sites, displayed in places that are accessible to the general public, can be made with a relatively low budget (Gilman 2009). Monetary issues are of course quite relevant in

any decision-making process related to public archaeology, and it becomes particularly critical in developing countries such as Argentina which usually cannot afford sophisticated or high-technology means. Whatever decisions are taken, it is essential to involve as many stakeholders as possible (Scott-Ireton 2003) so that the interpretive strategies are the product of a community consensus rather than a heritage agency imposition.

Beyond each specific case, a global approach to raising awareness about underwater cultural heritage should be constantly reinforced by actions such as talks, lectures, mass media, and web dissemination, and other public archaeology and education initiatives. This is something that the PROAS team has been conducting since its creation, actually prior to focusing on management plans for the different sites under study. In addition, the team has been periodically running the Nautical Archaeology Society introductory courses aimed at sport divers. The latter has led some of the participants to engage with the underwater cultural heritage in a more active, committed, and respectful manner, and they have even begun working as volunteers on some of the research projects conducted by PROAS.

The sites under study by the team from the National Institute of Anthropology provide insight into the history of seafaring in Patagonia and may constitute a significant complement to the wildlife and other natural attractions that the area already offers. In that sense, the fact that most of these sites are located in current or foreseen marine protected areas (despite the remote and cold environment) should be regarded as an opportunity rather than a limitation.

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Chapter 16
Difficult Heritage: Interpreting Underwater Battlefield Sites

Jennifer F. McKinnon

Abstract This chapter provides an in-depth discussion on the process of developing a WWII maritime heritage trail in Saipan, Commonwealth of the Northern Mariana Islands. It explores the theory and practice and problems and solutions of interpreting and managing difficult heritage such as a battlefield. A range of topics is discussed, including local engagement and consultation, memories and heritage, political and social contexts, and interpretation.

Developing public interpretation for confronting, painful and tragic events is a difficult task for an archaeologist. An awareness and acknowledgement of the social and political context in which one is working is fundamental to understanding how practitioners negotiate the process of interpretation. "Heritage conservation is a form of cultural politics; it is about the links between ideology, public policy, national and community identity formation, and celebration, just as much as it is about technical issues relating to restoration and adaptive re-use techniques" (Logan and Reeves 2009: 13). As archaeologists, we are engaged in the business of protecting heritage; however, we must also be aware that our actions and interventions are both political and social and therefore need to be cognizant of how our research is perceived by the local communities in which we are working.

A balanced approach toward interpreting archaeological sites can only be achieved through the identification and inclusion of the various stakeholders and an awareness of what is being included, ignored, or inadequately represented in the interpretation. Listening to the multiple stakeholders' views about the significance of such events and their associated sites, and incorporating them into interpretive and management practices, is key to an inclusive and shared interpretation of

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heritage. If we are to be effective in our approaches to caring for heritage, as archaeologists and cultural heritage managers, we must also care about those who are connected to that heritage and past.

Heritage sites associated with "death, tragedy, and macabre" have over the years become significant tourist attractions—so much so that a new concept in academia called "dark tourism" emerged in an effort to understand the draw to such sites (Lennon and Foley 2000; Stone 2005). Cemeteries, historic ghost tours, death camps, killing fields, internment camps, and even more recent sites such as the 9/11 Ground Zero site in New York City host hundreds of thousands of tourists each year. While some might visit these sites for the purposes of remembrance and reflection, others might visit out of pure curiosity. Without knowing and understanding all the reasons behind why people want to visit such sites, it is a fact that people "regularly consume death and suffering in touristic form, seemingly in the guise of education and/or entertainment" (Stone 2005: 111).

Battlefields have been for many years the object of fascination for millions of tourists and the subjects of elaborate interpretation projects, including full-scale reenactments. According to Smith (1998: 248), sites associated with warfare "probably constitute the largest category of tourist attractions in the world." Further, shipwrecks have been the subject of numerous tourism and interpretive schemes, which encourage visitation and promote the (re)telling of these tragic events. Multiple shipwreck heritage trails dot the coastlines of the United States (U.S.), Australia, Canada, the UK, and many other countries.

So why does the interpretation of another battlefield or shipwreck event warrant further discussion about why and how it was developed? The answer lies in the temporal proximity of the battle—World War II, the subject of this project, is within living memory. Individuals who survived the war or who lost loved ones, family members, or friends are still living. Some may have been tortured, imprisoned, starved, killed others, or suffered many other atrocities. So while it seems there is a public willing and interested in learning about the events of WWII, we as archaeologists and heritage managers must recognize the impacts our work may have on the immediate generations connected to the war. This chapter provides an overview of the development of a WWII battlefield maritime heritage trail, and explores the theory and practice, as well as the problems and solutions, of such an effort. While it draws on some works from other academic research areas including heritage tourism, dark tourism, conflict or battlefield archaeology, and public interpretation, it is in no way comprehensive of the current trends in these research areas and serves more as a practical review of a project influenced by these complementary areas of study.

Project Background

The remains of the WWII Battle of Saipan, fought between Japanese and U.S. forces in June and July of 1944 on the island of Saipan, were recently the focus of a large-scale archaeological project. This project was directed by the nonprofit

organization Ships of Exploration and Discovery Research, Inc., of Corpus Christi, Texas (Ships of Discovery), and Flinders University of Adelaide, South Australia. Funded through a National Park Service (NPS) American Battlefield Protection Program (ABPP)[1] grant, the project goals were threefold: to refine current knowledge of the Battle of Saipan through the documentation and study of the associated submerged heritage sites, to increase public awareness of their historical significance, and to stimulate the local economy through the development of a maritime heritage trail.

In 2007, the Commonwealth of the Northern Mariana Islands Historic Preservation Office (CNMI HPO), located on Saipan, voiced concerns about their ability to manage underwater cultural heritage (due to a lack of training in underwater archaeological techniques), and the pressing need for protection and management due to the amount of tourist divers visiting the WWII sites (Ronnie Rogers 2007, personal communication). The HPO was also interested in developing a maritime heritage trail which would provide two favorable outcomes: developing a presence on the water as the agency charged with managing the resources, and developing a heritage tourism product that could promote sustainable use of the already heavily visited sites. Thus, the idea was formulated to develop a plan to accomplish a number of objectives that would assist HPO in better managing their submerged heritage. These objectives included:

- Training staff in underwater archaeological methods in order to create a team of diving archaeologists.
- Conducting more intensive archaeological research and recording known and heavily visited sites.
- Developing a maritime heritage trail for the purposes of creating sustainable heritage tourism.

The third objective, developing a maritime heritage trail, is the focus of this chapter.

Maritime heritage trails or shipwreck trails are common throughout the world as heritage tourism products. They typically promote the history of shipwrecks or underwater sites to visitors who may already dive the sites or are aware of their existence, and they encourage those who have no previous knowledge of the sites to visit. While not typically themed, with exceptions such as the 1733 Spanish Galleon Shipwreck Trail in Florida, maritime heritage trails are usually based on geography (i.e., Florida's Underwater Archaeological Preserves, Australia's Wardang Island Shipwreck Trail) and are nonspecific to the types of vessels or time period covered. WWII wrecks in the Pacific provide a unique opportunity for a themed approach, as battles occurred in many locations leaving a landscape and seascape full of shipwrecks, aircraft wrecks, and assault vehicles. Further, an existing tourism base of

[1] This material is based upon work assisted by a grant from the Department of the Interior, National Park Service. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the Department of the Interior.

wreck and adventure divers visit these sites, sometimes on an annual basis. The tropical waters and abundant marine life found in the Pacific create a diver's paradise, and when the element of a wreck associated with a world war is added to the mix, the result is an undeniable attraction to the region. In Pacific destinations like Chuuk and Palau, the majority of dive tourism is focused on WWII wrecks and this business drives the local economies.

The Mariana Islands have a vibrant and growing heritage tourism economy largely focused on terrestrial sites associated with WWII. On the island of Saipan, this cottage industry is led by Pacific Development, Inc. (PDI), an ethical tourism company that offers not only many different tour options for the general public but also caters to veterans and fans of military history. PDI leads visitors to remote jungle sites and provides accurate histories of the activities that took place on the island. They utilize trained tour operators including current and former staff of the CNMI HPO. PDI is but one example of dozens of tour operators which range from ethical to disreputable. Unfortunately, no regulatory body on the island monitors or provides training or information for tour companies. Further, the fact that the local economy is volatile and dependent on the tourism market means tour companies come and go on a regular basis. From the outset, the maritime trail was intended to supplement this existing cottage industry and to target a portion of the market that had not been the focus of tours by providing additional information about the battle from the perspective of activities that took place on the water. The trail also was meant to provide accurate historical information which could be freely used by tour operators.

Location

The Mariana archipelago is located east of the Philippines, north of New Guinea, and south-southeast of Japan. The archipelago is composed of Guam, a U.S. Territory, and the CNMI, which is a commonwealth of the U.S. Saipan is the capital of the CNMI and the largest and most populated island. It is 19 km long by 9 km wide and is fringed by a barrier reef on its western side which creates a large lagoon. The lagoon is separated into three smaller ones, Garapan, Tanapag, and Chalan Kanoa Lagoons, which range in width from 375 m to 3.5 km and in depth up to 14 m (Amesbury et al. 1996). The clarity and consistently warm temperatures of the water enable year-round scuba diving and snorkeling in the lagoons.

The Battle

The Battle of Saipan was fought between Japanese and U.S. troops from 13 June to 9 July of 1944. Prior to the invasion of U.S. troops, several reconnaissance and bombing missions took place in February, April, and May 1944 in preparation for

the battle (Goldberg 2007: 23; Farrell 2009: 277). These preinvasion attacks caused a considerable amount of damage to property and life. In response, the Japanese prepared "Operation *A-Go*," which relied upon the support of the Imperial Japanese Navy and Air Forces to support troops on the ground in the Marianas. On 13 June battleships began bombarding the island from approximately 10,000 yards offshore, and on 15 June hundreds of LVTs and tanks landed on the southwest beaches of Saipan (Farrell 2009: 297). Awaiting the arrival of the invading Marines were over 32,000 Japanese troops, double what the U.S. had anticipated (Spector 1984: 302). Japanese forces were skilled at using the local terrain to their advantage and the use of caves and high ground gave them a considerable advantage in spotting and attacking U.S. invading forces.

The battle raged for many days and included engagements in both dense jungle settings and metropolitan areas. By 7 July, the U.S. secured most of the island, and the remaining Japanese troops were holdouts in the hills. As morning broke, the Japanese troops and civilians, armed with little more than sharpened sticks, stones, and farm implements, launched a surprise suicide attack on the U.S. Army and Marine units (Russell 1994: 24). This attack was ordered by General Saito, who at the same time committed ritual suicide in the cave where he was positioned (Thompson 2002: 30). Over 4,300 Japanese were killed in this attack while the U.S. lost approximately 650 (Goldberg 2007). On 9 July, U.S. Admiral Turner announced that Saipan was officially secured (Hoyt 2000: 404).

The loss of life during the Battle of Saipan was tremendous. Approximately, 3,426 of the 67,451 U.S. troops who participated in the battle were killed or reported missing in action and four times this number were wounded (McKinnon and Carrell 2011: 32). Japanese losses were far greater. Of the approximately 31,629 Japanese troops who participated in the battle, 29,500 were lost (Rottman 2004). Japanese sources estimate the total number killed on Saipan to be well over 40,000 (Bulgrin 2005). Additionally, 14,560 civilians were placed in internment camps (including 1,173 Koreans) and an estimated 22,000 civilians committed suicide (including Japanese, Koreans, and Indigenous islanders) (Willmott 1999: 147). Civilians on Saipan were afraid of being imprisoned and tortured by the U.S., or felt suicide was the honorable alternative to capture, thus a vast number committed suicide, some with children in hand. Many Japanese civilians who committed suicide in the final days of the battle did so by jumping from "Suicide Cliff" and "Banzai Cliff."

The battle was a significant win for the U.S. as it placed them within reach of the Japanese homeland. The capture of Saipan and the Mariana Islands paved the road for more decisive battles at Okinawa and Iwo Jima. This position also allowed U.S. forces to launch B-29 bombers that could reach Tokyo. Eventually, the B-29 *Enola Gay* launched from the island of Tinian, just north of Saipan, to drop the atomic bomb on Hiroshima on 6 August 1945, hastening the end of the Pacific War.

Today the Battle of Saipan is commemorated on the island through the NPS American Memorial Park which interprets the battle through film, exhibits, and monuments. A National Historic Landmark designation covers the entire area of the landing beaches in southwest Saipan and Marpi Point, and NPS signs have been erected all over the island describing key events, locations, and people. Hundreds of

personal, family, and group memorials memorialize Japanese, Korean, U.S., and Indigenous peoples. A large group of formal memorials are located on Suicide and Banzai Cliffs (mostly Japanese), while others are scattered throughout the jungle, on the roadside, and, in some instances, underwater.

Although a considerable amount of memorialization is on the island, no heritage trail existed prior to the development of the maritime heritage trail. The trail was specifically designed to highlight the underwater heritage remains of both Japanese and U.S. origin, and it consists of a total of 12 archaeological sites within 9 trail locations. The trail consists of two U.S. aircraft, two Japanese aircraft, three U.S. tanks, two Japanese landing craft, one U.S. landing vehicle, and two Japanese ships. The sites provide an equal representation of both sides and the types of vehicles used in the battle. Ranging in depth from 11 m of water to awash, snorkelers and divers alike can visit the sites and some are accessible from shore. Interpretive materials, described in greater detail below, include posters, underwater guides, and a Web site.

Local Engagement and Consultation

Local engagement in the project was the first priority of planning. As has been suggested by Moshenska (2010: 46), seeking community participation in fieldwork and acknowledging that it can be a commemorative practice on sites of contested memory is a proactive approach to "arenas of memory articulation." Thus, this project developed a strong working relationship with the HPO, whose staff participated in all stages of the planning and fieldwork, as well as review of the trail materials and dissemination of those products. The initial stage of the project was the provision of a training program for HPO and other relevant agency staff in the basic methods of underwater archaeology. While many of the HPO archaeologists and archaeological technicians are incredibly skilled in survey and excavation, they simply had not conducted archaeology underwater. The training was several days long and included both classroom and practical exercises. This had the effect of convincing HPO that they possessed enough training to manage sites underwater and thus the only obstacles for doing so was available funding and equipment which can be overcome.

Consultation and collaboration with local agencies charged with managing historical and biological resources were conducted from the beginning of the project. Particularly beneficial were relationships developed with the Coastal Resources Management Office (CRM) and the Department of Environmental Quality (DEQ), who focus primarily on the environment. These agencies provided permits and logistical support, and worked to develop a program for placing moorings on the sites for use by boaters and tour operators—a necessity for reducing anchor impacts to sites and their environment.

Planning the trail included a great deal of local and international consultation. Several leading experts in the field of heritage trail development in Australia and the U.S. were sought to provide input into the planning process and throughout trail

development. This input was invaluable as it allowed the trail to build upon the successes and failures of previous designs. Further, collaborating with professionals also allowed for a greater understanding of the local issues and needs of the island as compared with communities in other locations.

Discussions with local divers, dive shops, dive boat operators, and tourism operators were held to address their needs and wants in terms of access, the types of sites they wanted to see on the trail, and what products would best suit their purposes. These conversations were most useful in gauging diver and snorkeler interest and behavior on heritage sites. Demographic information pertaining to diving tourists was also sought from the Marianas Visitor Authority (MVA), which suggested that the trail products should be printed in Korean and Russian, in addition to the planned printing in English, Japanese, Chamorro, and Carolinian.

Memories and Heritage

Discussing war can be controversial not only because it involves death, violence, destruction, and suffering, but also because memories of war often form part of a culture's or nation's identity. It was impossible to justify the efforts to record, protect, and interpret the heritage without first considering the thoughts and needs of those made victims of the war (Perring and van der Linde 2009: 198). Throughout the project informal conversations were held with local Chamorro, Carolinian, and Japanese islanders about their memories of the battle and how they viewed the heritage. Some interesting observations were made as a result of these sometimes candid conversations and, while anecdotal, they provide a glimpse into the complexity of the heritage and its meaning. For example, it was noted that some individuals or groups were uncomfortable with visiting sites because of the loss of life and, more importantly, the exact nature in which that life was lost. A few Japanese divers noted that they were reluctant to visit some of the dive sites because the spirits of the dead were still present and not at rest due to having committed suicide (Masahiro Nomura 2010, personal communication). Other Japanese informants felt that some Pacific battles were more acceptable to tour than others, such as Pearl Harbor. The loss of life and shame that occurred at Saipan was considered by some unbearable, whereas the victory and successes at Pearl Harbor were perfectly fine to commemorate. This example demonstrates the complexity of how individual battles and even sites are viewed as acceptable for touristic consumption as opposed to those that are not. Thus, upon immediate view, an archaeologist might accept all sites and battles in the Pacific as equally open to heritage tourism, when clearly this is not the case.

With the exception of those who participated in military activities, such as acting as translators, soldiers, or spies, for many Chamorro and Carolinians the battle was something that *happened to them*—they did not ask for it and were not involved in the conflict other than as bystanders. Thus, the heritage scattered around their island represents a painful and tragic period of their cultural history during which they lost relatives, were injured, and suffered. In efforts to retrieve memories from those who

were alive at the time, the majority of the conversations revolved around the rebuilding period after the battle, and the opportunity which came with the end of it. In nearly all conversations (with the exception of those Indigenous people who were involved in some way in heritage preservation) the overwhelming sense was that the remnants of WWII were not "their heritage."

So how can the local Indigenous population, Chamorro and Carolinians, accept this history as their past or how can they incorporate the WWII heritage remains of other nations as their own? The answers to these questions are not simple, but they do beg some consideration. One way that the Indigenous culture has already incorporated the event of WWII into their lives is through the continued ability to adapt and survive. As noted above, those who speak of the battle discuss the rebuilding efforts and the opportunity to make their lives better. One elder described her experiences in filling a niche created by the war. She and her husband built a snack/food truck business that traveled from school to school feeding the children at lunchtime. She also built a successful salon business catering to the military officers' wives who moved to the island and were in need of beauty treatments (Escolastica Tudela Cabrera 2010, personal communication). Stories like these are a large part of the heritage of WWII for Chamorro and Carolinian peoples and there is a strong need to record them now, as many elders are reaching the end of their time.

Perhaps a stronger connection with WWII and its heritage is the history of Indigenous cave or rock shelter use on the island. Long before non-Indigenous people arrived to the islands, Chamorro were utilizing caves for various purposes including communication (i.e., rock art) and burying or worshiping their ancestors (Cabrera and Tudela 2006). This use continued over time, and even during the lead-up to WWII. Indigenous people used caves as storage for food and supplies or as hideouts. Caves were identified or associated with specific families and many left their houses in town to hide their families in caves on their farms during the invasion (Genevieve Cabrera 2010, personal communication). At this writing, a project is under way to research the use of caves before, during, and after the battle to better understand indigenous connections to these sites. Again, it is this intersection between indigenous use, survival, and heritage that can be highlighted and that allows for drawing out the memories and meaning of such heritage.

Political and Social Contexts

The development of the WWII maritime heritage trail was a complex and lengthy process. Many concerns needed to be addressed from the very beginning stages of planning, including international and local politics. "Heritage resonates for us because it not only relates to our past but is an important part of our present and future" (Uzzell and Ballantyne 2008: 503). This statement by Uzzell and Ballantyne rings no more clearly than in the Pacific and the Mariana Islands. Based on the history of colonial invasions and power struggles in the Marianas, a consideration of postcolonial narratives was of necessity during this project. It was recognized early

on that this project could be seen as yet another "colonial" entity with "grand ideas" arriving on the doorstep of an archipelago plagued with past colonial occupation. Thus, self-awareness that the project was funded by the U.S. to interpret a battle between and amongst people who were, in fact, victims of the U.S.'s own actions was critical. Relationships and trust in postcolonial regions are not built overnight and this project and its outcomes took a considerable amount of confidence building through transparency about the nature of the work and its progress with all stakeholders including the funding agency, local government agencies, and the local community. Several public lectures, as well as TV, radio, and print interviews, were held over the project to keep the public informed about project activities. Additionally, by involving agencies and individuals from the outset, their views were able to be considered and included.

Further, archaeologists are often, with or without being aware, drawn into political situations as a result of working in postcolonial areas. Many political considerations were made while working on this project, one of which included maintaining an understanding of the current administrative and governmental powers. Without degrading or deriding the local community in any way, it is pertinent to point out that the current U.S. form of government in effect on the island is largely influenced by local customs and culture including kinship and feasting practices. This complex political situation made negotiating a community-involved project difficult at times; however, it was crucial to be aware that "our actions and our arguments are both contingent and partisan, and it is delusional to pretend political neutrality" (Perring and van der Linde 2009: 204).

From a social context there was an awareness that survivors of the battle and families who lost members in the war are still alive both on and off the island. These people were affected greatly by this tragic event and likely will view the materials produced for the trail. Thus, in writing the interpretive literature, one was faced with the dilemma of whether to convey accurate technical and logistical details about the battle or to relay what the battle meant on a more human level including death, injury, and loss of family members and livelihood. Ultimately, a middle ground was sought which chose to highlight some of the more interesting human aspects such as how people altered their vehicles of war to prolong their lives, rather than focusing entirely on suffering and destruction. Additionally, quotes were used to convey some of the more emotional, personal aspects so that first-hand accounts from those who experienced the battle could be communicated.

It was also clear that for the trail to be successful in terms of protecting the heritage rather than harming it, both a comprehensive plan for local education was needed and a strategy for monitoring the heritage over the long term had to be in place. As a result, training opportunities for the local dive industry were developed and run free of charge. These training sessions were sanctioned by three of the major dive training organizations and were aimed at educating dive shop owners, dive instructors, charter operators, and dive masters about the importance of heritage and how to appropriately visit the sites without causing damage. This "train the trainers" approach achieved a trickle-down effect by which visiting divers and student divers could be provided with the same protection and conservation message.

Another issue to consider was the fact that multiple stakeholders used these sites regularly. For example, at a public consultation and presentation, fishers on the island expressed concerns that their rights to fish sites would be limited as a result of the trail. In this case the answer was "no it would not," but had it been "yes," a great deal more consultation with stakeholders would have been necessary. Fishing and spearfishing is important to islanders and facilitates feeding families, therefore restrictions to this activity raise many concerns within the community.

Another example of consideration for the multiple stakeholders comes with the ways in which different cultures memorialize their history and visits to a site. Research clearly demonstrates that, as with individuals, cultures have their own ways of commemorating and remembering their heritage. This is no more obvious than in the waters and on the shoreline of Saipan. For example, Japanese survivors and visitors to the island tend to erect individual or small group memorials on the island. A visit to Bonzai Cliff or Suicide Cliff, where a large number of Japanese civilians took their lives after the battle, demonstrates this pattern; dozens of memorials—some constructed of large and costly pieces of granite—are emplaced on the cliffs by individuals, families, and organizations. To complicate matters, although these areas are within the National Historical Landmark, the NPS has no real ability to regulate or make decisions about who can erect a monument and who cannot, so the monuments continue to grow in number. More individualized memorials come in the form of names carved in vegetation (i.e., cacti pads) around these areas, and the placement of saki bottles or teapots on sites. These memorialization behaviors do not stop at the water's edge either. On underwater sites, particularly the Kawanishi H8K and the Japanese freighter, memorials have been established. One of the memorials on the H8K consists of a small granite stupa inscribed with Japanese writing which is adorned with piles of oxygen bottles and other easily moveable items collected from the wreck. A teapot and saki bottle were also found on the site. This is a prime example of the tendency for Japanese divers to "make things," whereas U.S. divers "take things." It is an observed fact that Japanese divers on these sites pile objects such as loose ammunition rounds or oxygen tanks in specific areas, as opposed to U.S. divers who anecdotally are more likely to remove such things for souvenir purposes. While Japanese divers have not been surveyed to explore this behavior, it is suspected this act is a personal memorialization.

A slightly more sensitive issue to the consideration of multiple stakeholders is the presence of Korean monuments on these underwater sites, particularly the wrecks of a Japanese freighter and the Kawanishi H8K. A monument emplaced on the wreck of a freighter thought to be the Japanese ship *Shoan Maru* seems appropriate given that Korean conscripts were on board this ship when it was first hit in a 1944 air raid. However, there is some confusion about the presence of a Korean monument located on a Japanese H8K aircraft wreck as it does not provide an obvious link with past events. In fact, two Japanese individuals were queried about this; neither could understand why the monument was on site and both had strong reactions against its presence. Without reading too much into these reactions, it is

important to point out that different groups and cultures clearly reserve strong feelings about memorializing sites, ways of remembering victims, and who should have the ability to commemorate their heritage.

Interpretation

The trail was conceptualized as part of a plan to aid in the preservation and protection of submerged heritage sites, which were already being impacted through tourist visitation. By providing interpretive literature that outlined each site's history and importance, legal protection, and the proper etiquette for visiting such heritage sites, it was hoped that divers, snorkelers, and swimmers would be better educated and develop a greater appreciation for the heritage, thus avoiding impacting or harming the sites further. Interestingly, it has been recently confirmed that information from the trail guides and posters is now being used by tour operators on the island to provide more accurate facts and details, and now locals are calling sites by their correct names. For example, the H8K Kawanishi "Emily" bomber was once called a B-29 (U.S. bomber); however, now it is referred to by most as "Emily."

Tilden (1957: 8) defines interpretation as "an educational activity which aims to reveal meanings and relationship through the use of original objects, by firsthand experience, and by illustrative media, rather than simply to communicate factual information." This is the definition that this trail attempted to emulate; the products were meant to be educative but to also be used in conjunction with a visit *to the site*. Latitude and longitude numbers were printed on both the guides and posters so that people could access the sites freely on their own or with tour groups. In fact, many local people seemed astounded that the locational numbers were printed because they had never been entrusted with site locations in the past. This simply demonstrates that people do not just want to read about shipwrecks and aircraft wrecks from the comfort of their couch, but instead are eager to see these sites for themselves.

In total, nine underwater guides were produced on 100 % waterproof, 100 % recyclable, 100 % tree-free paper (Fig. 16.1). Each includes site plans, site descriptions, access information, and a conservation message, and has a small hole punched in the corner so a lanyard can be attached to ensure divers do not lose them.

Four themed posters also were produced including: *U.S. Aircraft*, *Japanese Aircraft*, *Shipwrecks*, and *Assault Vehicles*. The posters are 18×24 in. and double-sided; the front of each includes a glossy photograph of a site and the back is populated with photographs as well as with historical and archaeological information about both the battle and the wrecks (Fig. 16.2). An attempt was made to create posters that were inclusive of multiple viewpoints; as such, each includes quotes from several culture groups involved in the battle (Chamorro, Carolinian, Japanese, etc.). The quotes used were specifically chosen for their emotive and affective appeal. One of the most difficult tasks in interpreting objects that can be seen simply as rusting pieces of metal is to bring the human aspect to the foreground and to

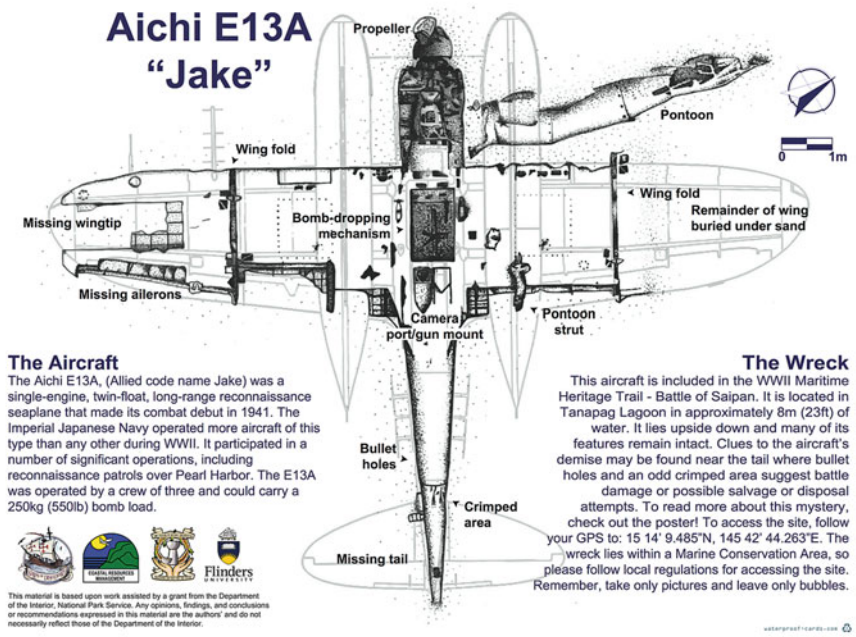

Fig. 16.1 An example of a Battle of Saipan WWII maritime heritage trail dive guide—Aichi E13A (Ships of Discovery, 2011)

communicate that people lost their lives or suffered greatly as a result of the activities that took place on these sites.

Attempts were made to avoid taking sides or glorifying any particular culture group. This was difficult as often the reminder of U.S. funding sources lingered in the background. Efforts were made to balance the educational message about the sites with the commercialization effort to increase their appeal to tourists. Each of the products also includes a message pertaining to the importance of protecting sites, examples of how divers impact them through intentional and non-intentional behavior, and specific information about the legislation that protects submerged sites.

The text was peer-reviewed as well as examined by key groups including Japanese, Chamorro, and Americans. All products were printed in both English and Japanese, which was critical for remaining neutral and providing the widest access to tourists and local people. Funding was sought to have them printed in Chamorro, Carolinian, and Korean, as these are three groups that were affected greatly by the battle; at this writing those funds have not been secured. The final artwork was delivered to multiple agencies on the islands and a Web site is available whereby materials can be printed on demand.

Fig. 16.2 An example of a Battle of Saipan WWII maritime heritage trail poster—Assault Vehicles (Ships of Discovery, 2011)

Conclusion

Complications, issues, and further tasks will no doubt follow, such as finding funding for reprinting guides and posters once they are consumed. Long-term monitoring and stabilization of the sites on the trail are also of concern. However, a project is underway which consists of conducting conservation surveys and producing a management plan for long-term monitoring and protection (American Battlefield Protection Program 2011).

It is hoped that through the efforts of the local community, agencies, nonprofit organizations, and universities involved, the work conducted to record and interpret these sites will provide protection for them into the future. Finally, as Perring and van der Linde (2009: 208) have stated, "archaeological practice can be curative, helping people come to terms with contested pasts and landscapes. Our professional concerns with managing and protecting cultural resources can blind us to the fact that the practice of archaeology has enormous potential in processes of conflict

resolution and postcolonial renewal." Thus, it is hoped that through the act of archaeological research and practice, the local community can come to terms with and understand the shared heritage of the Battle of Saipan.

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Chapter 17
Challenges as Stepping Stones: Mexico's Experience in Maritime Heritage Interpretation

Pilar Luna Erreguerena

Abstract One of the challenges for Mexican underwater archaeology and its role in the research and preservation of the underwater cultural heritage is that not very many people know about its existence. Making information accessible to the public becomes an effective tool for educating people about the value of this legacy and the need to protect sites, both in marine and continental waters. In Mexico, a country with more than a 100 million inhabitants and a vast cultural patrimony, the task of doing so is enormous.

Another challenge has to do with divers. Cave diving has become a very popular activity in the Yucatan Peninsula, where thousands of cenotes and inundated caves contain significant cultural material. Among the strategies developed by the underwater archaeology division of INAH are working closely with fishermen and cave divers and dissemination through assorted means: official warning signs, itinerant exhibits, documentaries for the general public, and books directed to the youth.

Introduction

Since February 1980 when the Instituto Nacional de Antropología e Historia (INAH, National Institute of Anthropology and History) created an underwater archaeology division, a permanent campaign to raise consciousness about the existence and value of Mexican underwater cultural heritage has taken place. In a country with more than 100 million inhabitants, more than 11,000 km of coastline, up to 200

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nautical miles of different jurisdiction regimes, and vast continental waters, this has been an enormous and challenging task.

Regarding the underwater cultural heritage, in many countries, Mexico included, the challenge of raising awareness begins with official authorities, or even within archaeologists' own institutions and colleagues. Unfortunately, signing international treaties and important conventions like the UNESCO 2001 Convention on the Protection of the Underwater Cultural Heritage is not a guarantee that a country will follow its articles and rules, or, most importantly, that a government will not negotiate with treasure hunters.

When the struggle happens in the underwater archaeologist's own homeland, this becomes a double battle: against treasure hunters and against national politicians who, ignorant of their own laws and official commitments, form relationships in order to obtain personal benefits. Due to the fact that political authorities in Mexico generally change with each new President, the struggle to preserve the underwater cultural heritage becomes eternal.

In Mexico, this struggle had to start from minus zero. Most people did not even know that underwater cultural heritage existed, and those who knew that there was something on the bottom of the sea just related it to pirates, to chests full of jewels and gold, and to movie adventures. However, the work done by INAH over 32 years has rendered multiple fruits.

The Case of Campeche

In Campeche, underwater archaeological work has been more systematic and intense than in any other Mexican state. Since 1997, 11 field seasons have taken place in the Sound of Campeche, as well as in coastal waters.

Working closely with local authorities, fishermen, and other members of the community has been a key factor in the location of shipwrecks and isolated materials (Fig. 17.1), in the recovery of artifacts extracted in the past, and in raising consciousness regarding the value and importance of this legacy which, as local people have become aware, belongs to Mexico and to Campeche itself, but also to humanity as a whole. Due to this work with the coastal communities, not only in Campeche but also in Yucatan and Quintana Roo, archaeologists have been able to locate and record 227 artillery pieces and 31 anchors dating from the sixteenth century to the present (Barba 2010). Some fishermen have been so involved that they offered their services to support archaeologists in the protection of some sites.

Lectures and exhibits which include the projection of videos shot by INAH's underwater archaeology division have been presented in several public forums in Campeche City, Champotón, and Ciudad del Carmen. Also, during field seasons, on Saturdays and Sundays underwater archaeologists usually share, through photos and videos, with the general public the work taking place in that community.

Campeche was selected by INAH to be the first state in which an archaeological trail was established. Opened to the public in 2013, the trail includes artifacts related

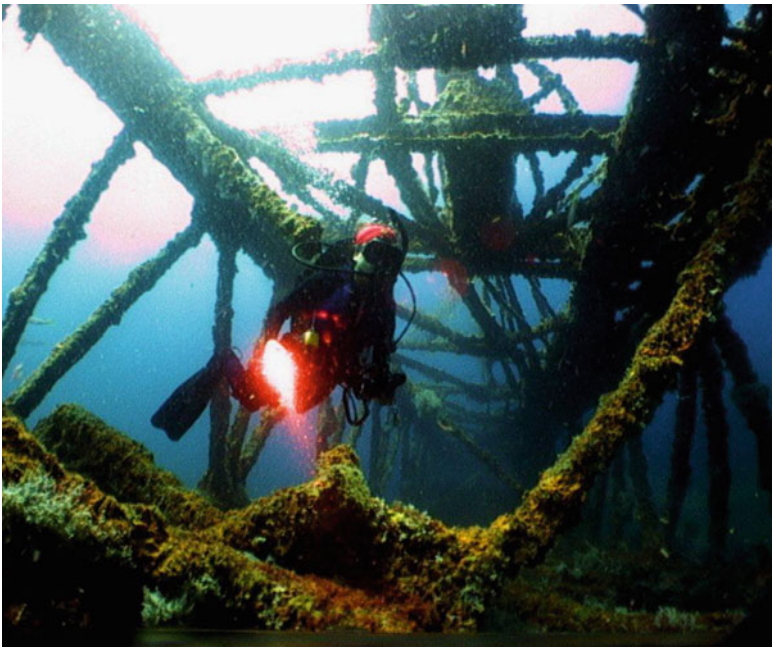

Fig. 17.1 Fishermen from Campeche guided archaeologists to this site known as La Barcaza (Photo by Jerónimo Avilés, 2004. Courtesy of INAH/SAS)

to the city's maritime past such as a sixteenth-century anchor recovered from the Cayo Nuevo Reef and an eighteenth-century bronze cannon recovered from coastal waters, both placed outdoors next to historical monuments, and the nineteenth-century French steamboat *Lolá*, run aground a few meters off the city's seafront. More objects and sites will be integrated in future.

Cenotes and Inundated Caves

Challenges are different in each region. The Yucatan Peninsula is one of the world's richest areas for cenotes (sinkholes) and inundated caves that were dry thousands of years ago and which served as shelter for Pleistocenic fauna and for the first people who reached this part of the world. Cave diving groups have reported the existence of thousands of these bodies of water.

In 1999, INAH's Subdirección de Arqueología Subacuática (SAS, Vice Directorate of Underwater Archaeology) received the first reports from cave divers regarding the existence of cultural material in some of these places. One year later, an INAH-led project began the process of inventorying and recording this cultural material with the support of several cave divers. Findings have been amazing and include remains of extinct animals, human skeletons, and ashes from bonfires

dating more than 10,000 years ago. Other findings include hundreds of pre-Hispanic Maya skulls, some with intentional deformation, ceramics from the same period, and other elements from colonial times.

Many of the speleo-divers continue to be of valuable help; they have taken Nautical Archaeology Society (NAS) courses, as well as attended lectures and classes on how to preserve a site after its discovery and how to support archaeologists when recording it. However, the main challenges in this region have been the growth of extreme diving in Yucatan and Quintana Roo and the fact that some of these cenotes and inundated caves, which contain fragile pre-historic and pre-Columbian material, are in communal or cooperative lands whose owners are not always interested in their protection and prefer to charge money to allow the entrance of divers who want to explore them.

Some divers do not obey the warning signs posted by INAH and alter these unique archaeological contexts. Two recent cases occurred in a well named Hoyo Negro, where important pre-historic findings have been made, including a human skeleton. The skull of a Paleoindian young woman was moved at least two times from its original site, and someone placed a bone belonging to a rodent, found a few meters from the entrance of the cave, on an INAH warning sign as a clear refusal to follow INAH's instructions (Roberto Chávez 2011, personal communication). Efforts to raise awareness among the property owners and national and foreign divers are being increased.

Around a Volcano in Toluca

In the crater of the Nevado de Toluca volcano, located 1 h from Mexico City in the Valley of Toluca, are two lagoons: The Lagoon of the Sun and the Lagoon of the Moon. This was an important pre-Columbian pilgrimage and offering site and still is a place of worship for many ethnic groups who live in the towns around the volcano. One of the biggest challenges here was dealing with representatives of a group which calls itself "New Fire of the Sixth Sun in defense of the Mother Earth." They accused INAH's underwater archaeologists of affecting the balance of the cosmos when, in 2007, they retrieved some diagnostic elements from the Lagoon of the Moon, consisting of cones of copal (a pre-Hispanic incense), serpent-shaped wood objects, and cactus points used for self-penitence. The chief of the group demanded that these artifacts be placed back where they were found. After several meetings with INAH's authorities and archaeologists, and very long explanations, they calmed down.

However, in the 2010 field season, INAH's team, headed by archaeologists Roberto Junco and Silvina Vigliani, contacted the shamans of each ethnic group and asked them to celebrate the appropriate rituals to ask their deities for a special permit to perform the archaeological work; another ritual took place at the end to thank the deities (Junco and Vigliani 2010).

Veracruz

The main colonial port system in America was, without a doubt, San Juan de Ulúa, Veracruz, through which the commercial and cultural exchange between Europe, America, and Asia took place over the sixteenth, seventeenth, and eighteenth centuries between the New Spain fleets in the Atlantic and the Manila galleons in the Pacific. Many of these ships were the target of pirate attacks and many more wrecked as a result of strong prevailing winds from the north. As a protective measure, the Fortress of San Juan de Ulúa, the main entrance to the new continent, began to be built in the sixteenth century and continued to be reinforced until the end of the nineteenth century, when a dike was built and the open port was transformed into a closed port (Carrillo et al. 2007). Remains of colonial shipwrecks and isolated maritime artifacts likely remain to be found within the historic fortress and harbor.

In recent years, new works have taken place in San Juan de Ulúa and its surroundings. Due to INAH's underwater archaeology division campaigns to raise consciousness in 2008, port authorities recognized the importance of these remains and asked archaeologists to survey two areas: Carrillo Márquez (2009), where port facilities might be extended, and Carrillo Márquez (2010), where a marina with a wharf for 180 boats was going to be built by a private company.

This was the first time in which underwater archaeologists from INAH/SAS, with the support of INAH's Regional Center in Veracruz, worked together with port authorities on behalf of the national underwater cultural heritage. Archaeologists Christopher F. Amer and James D. Spirek, from the Maritime Research Division of the South Carolina Institute of Archaeology and Anthropology of the University of South Carolina, came to support the geophysical survey and to train young archaeologists. Some anomalies were detected and verified in 2010, but nothing relevant was found (Luna Erreguerena and Carrillo Márquez 2009).

Regarding Veramar, in 1983, INAH's underwater archaeologists surveyed with scuba a reef known as Bajo de Hornos. Among the findings were fragments of ceramics and glass of diverse temporality, animal bones, and some iron objects. Twenty-seven years later, in 2010, members of the local community contacted INAH/SAS to report findings of cultural material in this same area, where the Veramar marina was being planned. Several meetings took place with port authorities as well as with the building company. During a first visit in June 2010, fragments of olive jars, pots, plates, glass bottles, and coal were found, apparently from colonial times. A second inspection took place in August, with the support of two fishermen who were familiar with the area. Five sites containing remains of wooden hulls from different ships were detected and recorded. Some of them are buried 50 cm below the sea bottom and some could be dated to the eighteenth century (Junco 2010). All sites were recorded and the building company agreed to detour the channel that would affect the fragments of the old hulls.

Reaching Out for the Public

Education must begin in childhood, when mind and heart are more open to receive and to understand facts and concepts that often will accompany people for the rest of their lives. In that sense, part of INAH's dissemination efforts is focused on young people. One of INAH/SAS's goals is to reach out not only to the general public but especially to the youth.

One valuable tool that has had very positive results are itinerant exhibits shown in towns surrounding the sites where underwater archaeology projects are taking place, like Campeche, Veracruz, and the Nevado de Toluca volcano. In Campeche, an exhibit entitled "A World under the Waves" was shown in the capital city. Due to its success, the exhibit was taken not only to near-by locations but also to villages located far from the coast, where many inhabitants, above all children, have never seen the ocean. Usually, local authorities participated with archaeologists, historians, and other members of INAH/SAS team. At the same time, land archaeologists from INAH mounted an exhibition on the Maya culture in a bus and used this vehicle to transport villagers to the underwater archaeology exhibit. In 2008, a set of enlarged photos together with posters containing information on several sites located in coastal waters were posted in the main plaza of Campeche City near the seafront. Archaeologists often were on-hand to answer visitors' questions.

In the port of Veracruz, the development of Mexican underwater archaeology was told through images in an exhibit entitled "Underwater Archaeology: 30 years of Researching, Protecting, Preserving and Divulging Mexico's Underwater Cultural Heritage" mounted in the engine room of a gunship which is now a museum. At the same time, a series of lectures on underwater cultural heritage was presented in the Fortress of San Juan de Ulúa.

Around the Nevado de Toluca volcano are several towns located in what is known as the Valley of Toluca. Since 2010, an exhibit entitled "Deciphering the Mysteries of the Sacred Mountain" has been traveling through this region. Special visits are organized for elementary and high schools, and to each school INAH/SAS donated copies of the books *Las Aguas Celestiales. Nevado de Toluca* (Celestial Waters. Nevado de Toluca) and *En el fondo del mar no sólo hay peces…* (In the bottom of the sea there are not only fishes…), this latter aimed at children and adolescents and published in 2010 as part of the celebrations for the 30 years of underwater archaeology in Mexico. It is illustrated with photos from archaeological projects and the UNESCO 2001 Convention's definition of underwater cultural heritage appears on the back cover. This year, the comic *La arqueología Subacuática y los misterios del volcán* (Underwater Archaeology and the Mysteries of the Volcano) was given to each elementary and high school student. A second exhibit, "The Time Keeper. Chronicles of the Xinantécatl" (another name for the volcano), was presented at the archaeological site of Malinalco together with the Universidad Autónoma del Estado de México (UAEM, Autonomous University of the State of Mexico).

Fig. 17.2 A replica of a sixteenth-century cannon was placed off Contoy Island, in the Mexican Caribbean, as part of an underwater museum (Photo by Flor de María Curiel, 2011. Courtesy of INAH/SAS)

Besides these exhibits, on Contoy Island in the Mexican Caribbean near Cancún, INAH/SAS placed replicas of ancient anchors and cannons aimed to create an underwater museum as another means to raise consciousness among islanders and visitors about the importance of preserving the rich and vast natural and cultural patrimony existing in that area (Fig. 17.2). Another intention is that these replicas create an artificial reef that could help to reduce the impact caused by divers and snorkelers on natural reefs.

This cybernetic age offers quite a variety of possibilities that can be used for dissemination, education, and recreation. INAH's media division created a 360° virtual visit to a modern shipwreck located at 12 m deep near the Island of Cozumel, Quintana Roo. This is the first one of its type in Latin America and can be visited as part of INAH's Web page (http://www.inah.gob.mx/paseosvirtuales). Another 360° virtual visit to Chinchorro Bank, also in Quintana Roo, is about to be finished at this writing.

In Mexico City, a cycle of nine documentaries shot between 1981 and 2010, entitled "30 Years of Underwater Archaeology in Mexico," was successfully presented in July 2010 at the National Museum of Anthropology—the most important museum in Mexico, visited each year by more than two million people from all around the world—and was repeated in September–October during a book fair which takes place every year. These videos are usually shown as part of the exhibits INAH/SAS regularly presents in several cities across Mexico.

Final Comments

These are only a few examples of INAH/SAS's permanent efforts to raise awareness and to share the knowledge derived from national research projects through all possible means, reaching the largest number of people belonging to all walks of life.

INAH's Vice Directorate of Underwater Archaeology is the only agency in the country in charge of all aspects regarding the underwater cultural heritage, which includes, among other tasks, design and fulfillment of projects in maritime and continental waters, training of specialists, fund raising, administrative aspects, and the eternal fight against treasure hunters. However, INAH'S underwater archaeology division tries to always remain focused on the huge social responsibility it takes, and even if objectives in this regard are still far away, life keeps bringing surprises. Recently, researchers and friends traveling by bus through Mexico watched one of the INAH/SAS documentaries shown on TVs in the vehicle, and others witnessed a video clip about Mexican underwater archaeology on national and international flights on Aeroméxico, the national airline.

Within the Mexican experience are certain key elements that have been crucial in the task of bringing scientific information to people through an accessible language. Creativity plays an important role. Team work is essential. Involvement of authorities and local communities has proved to be quite positive. National and international cooperation is also a vital element. Last but not least is flexibility to recognize the opportunities that come in the most unexpected waves.

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Chapter 18
Making Shipwrecks Celebrities: Using the National Register, Shipwreck Preserves, Documentary Filmmaking, and Interdisciplinary Projects for Shipwreck Preservation

Joseph W. Zarzynski, Samuel S. Bowser, John Farrell, and Peter Pepe

Abstract Historic shipwrecks are fragile resources that sometimes are vulnerable to looting and other damage from various intrusive human actions. Rather than practice a strategy of hiding these shipwrecks from the scuba diving public, cultural resource managers might better explore innovative strategies that enhance shipwrecks to celebrity status as a tool for historic preservation. Such a blueprint has proven rather effective for the past two-and-a-half decades at Lake George, New York, as a coalition of archaeologists, historians, cultural resource managers, biological scientists, documentary filmmakers, and artists have interpreted the waterway's shipwrecks for public consumption and heritage awareness.

Introduction

Historic shipwrecks are cultural resources that sometimes are mistreated by invasive human activities such as scuba diver vandalism, errant anchor damage, and even well-intended but poor scuba diving techniques during visitation. Rather than

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practicing policies designed to hide or limit public access to sunken vessels to protect and preserve these finite resources, cultural resource managers and other stakeholders at Lake George, New York, have developed multidiscipline strategies that enhance shipwrecks to prominence as a strategy for protecting their structural integrity. These programs have included using the National Register of Historic Places, developing controlled public access through shipwreck preserves, installing informational signage, delivering public lectures, writing articles and books, producing documentaries that promote shipwreck protection, and organizing interdisciplinary programs incorporating shipwrecks, underwater archaeology, and the natural sciences. This blueprint has proven effective over the past two-and-a-half decades as a diversified coalition of people and groups have interpreted the waterway's shipwrecks to foster stewardship of these submerged cultural resources.

Brief History of Lake George Shipwrecks and Underwater Archaeology

Lake George is a 32 mile long waterway in upstate New York that is part of the Hudson River/Lake George/Lake Champlain corridor from New York City into Canada. The lake was the scene of hostilities during the French and Indian War (1755–1763) and American Revolution (1775–1783). More recently Lake George's natural beauty and its rich history have made the waterway a major attraction for recreational and heritage tourism. Therefore, it is not surprising that for the past five decades, the "Queen of American Lakes" has also been a popular destination for scuba enthusiasts (Zarzynski 2002: 75).

In the autumn of 1758, the British military deliberately sank 2 radeaux (floating gun batteries), a sloop, 260 bateaux, and other warships to protect them over the winter of 1758–1759 from their enemy, the French and their Native American allies. Known as "The Sunken Fleet of 1758," many of the submerged vessels were raised by the British and provincials in the summer of 1759 and reused, but several dozen sunken vessels were not retrieved (Zarzynski and Benway 2011: 35).

In 1903, a sunken British sloop was salvaged from the lake and the 44 ft long hulk was cut up for souvenirs, the so-called historic preservation of the times (Bellico 2001: 77). Over half a century later in 1960, two teenage scuba divers located a dozen or more bateau-class vessels, sunk in shallow water at the south end of the lake. The bateau was the utilitarian watercraft of its era. The flat-bottomed wooden watercraft was pointed at bow and stern. Bateaux generally were 25–40 ft long and were used by the Dutch, English (later known as the British), French, and later, the Americans. These vessels could be rowed, poled in shallow water, and a crude mast and square sail could even be rigged for sailing (Zarzynski and Benway 2011: 22–25).

In 1960, with State of New York permission, three bateaux were raised during an Adirondack Museum operation permitted by the State of New York. The boats were conserved using polyethylene glycol (PEG) and one bateau was displayed for years

at the Adirondack Museum in Blue Mountain Lake, New York. Unfortunately, today the three recovered bateaux are stored at a State Museum facility outside Albany, New York, as the initial conservation treatment, completed over half a century ago, was not entirely successful. Furthermore, since 1960, at least four sunken bateaux in the lake have disappeared, three bateau shipwrecks have been seriously vandalized by souvenir-seeking scuba divers, and another bateau, visible on the lake bottom in the 1960s, is now buried by stream delta overburden (Zarzynski and Benway 2011: 22–25).

In 1963–1964, the Adirondack Museum conducted a study of the lake's sunken bateaux. Dubbed "Operation Bateaux," the scuba investigation was executed by archaeological diver Terry Crandall under a permit issued by the State Education Department. Nearly a quarter of a century later, a not-for-profit corporation, Bateaux Below, Inc., began a long-term study of the lake's shipwrecks, especially "The Sunken Fleet of 1758." Bateaux Below also undertook a comprehensive public outreach program designed to protect the lake's collection of well-preserved shipwrecks by promoting these resources as "celebrities" as a means to combat vandalism (Zarzynski and Benway 2011: 19–21).

National Register of Historic Places

Nearly 25 years ago, in 1987 when Bateaux Below first began its study of sunken French and Indian War bateaux in the lake, one of the initial goals was to complete a site plan of seven bateau shipwrecks, called the "Wiawaka Bateaux," as part of a National Register of Historic Places nomination. James P. Delgado, then with the National Park Service, and Mark Peckham, with the New York State Office of Parks, Recreation and Historic Preservation, were key supporters of this effort. Following the 1987–1991 fieldwork, Bateaux Below members and state cultural resource managers succeeded in getting the "Wiawaka Bateaux" listed on the National Register of Historic Places in 1992 (Zarzynski 1997: 463). These were the first Lake George shipwrecks designated to this registry and this began a "branding" process to promote cultural awareness and historic preservation of "The Sunken Fleet of 1758."

Over the years, Bateaux Below has worked to get other Lake George shipwrecks listed on the National Register. In 1995, the 1758 *Land Tortoise* radeau shipwreck, a one-of-a-kind British warship discovered by Bateaux Below in 1990 using a Klein side scan sonar and studied by an all-volunteer team directed by nautical archaeologist, D. K. Abbass, was listed on the National Register (Zarzynski 2007: 117). In 2002, the *Cadet*, ex *Olive* steam launch shipwreck was listed on the National Register. The 48 ft long *Cadet*, ex *Olive* is possibly the best surviving example of its class in US waters. The steamboat wreck was discovered by Bateaux Below in 1997 during a Klein side scan sonar survey and then archaeologically studied over 1998–1999 (Zarzynski 2007: 120–121). In 2008, the 45 ft long *Forward* shipwreck, a 1906-built, gasoline-powered launch, was listed on the National Register (Zarzynski

and Benway 2011: 85). Furthermore, in 1998, the 1758 *Land Tortoise* radeau was designated a National Historic Landmark, only the sixth shipwreck in American waters with that prestigious heritage recognition (Zarzynski and Benway 2011: 40).

Shipwreck Preserves

In 1993, the State of New York's Department of Environmental Conservation, in cooperation with other government organizations, Bateaux Below, and other not-for-profit corporations, opened the Empire State's first shipwreck preserves, an underwater park for scuba divers. Called "Submerged Heritage Preserves," this state park is an underwater "museum" of shipwrecks for scuba divers. The state park has three shipwreck sites. "The Sunken Fleet of 1758" preserve is a cluster of seven bateau wrecks and one submerged replica bateau, all lying in 20–40 ft of water. "The *Forward* Underwater Classroom" preserve includes the 1906-constructed *Forward* shipwreck and a 500 ft underwater trail with informational stations lying in 20–45 ft of water. And, finally, the "*Land Tortoise* Radeau—A 1758 Floating Gun Battery" is in 107 ft of water. These shipwreck preserves promote recreational and heritage tourism and foster historic preservation within the scuba diving community (Zarzynski 2002: 81–84). Information about each shipwreck preserve, including a history of the sunken vessels, diver visitation guidelines, diver safety issues, archaeological drawings of the shipwreck preserves, and even a suggested reading list for each site, were provided in a state-produced shipwreck preserve brochure. More recently with the digital revolution, the brochure is published on the state's Department of Environmental Conservation web site (http://www.dec.ny.gov/lands/315.html).

From 1993 to 2011, Bateaux Below provided the volunteer scuba support to set up, monitor, and close down the shipwreck preserves. In 2011, the New York State Divers Association, a dive club, Rich Morin's Professional Scuba Centers, a local dive store, and Halfmoon Marine Services, an area dive charter, took over the volunteer monitoring of the shipwreck preserves for the State of New York's Department of Environmental Conservation, the shipwreck park's administrator.

Shoreline Signage

A traditional, yet very effective, strategy to promote stewardship of the lake's historic shipwrecks employed by Bateaux Below and its historic preservation partners has been installing shoreside signage to inform visitors about the waterway's maritime history. In 1926, the New York State Historic Marker Program began when the state funded and erected blue-and-yellow metal markers. State funding for the program ended in 1939 but, in 1966, a new historic signage program was initiated using the same style of markers, but with historical societies and other groups funding this popular signage (New York State Museum 2011).

In 1992, Bateaux Below and its supporters erected the first of six historic markers along the shoreline of Lake George. Each marker includes a title, five lines of text, and generally a credit line. Each historic marker cost several 100 dollars and was forged in a foundry located in the Empire State. The respective title and the year of installation for each of the blue-and-yellow historic markers are: MILITARY DOCK (1992), SUNKEN FLEET (1993), RADEAU WARSHIP (1995), WIAWAKA BATEAUX (1996), SUBMERGED TRACK (2002), and CADET SHIPWRECK (2005). This prominent signage has been instrumental in informing the nondiving and diving public about Lake George's submerged cultural resources.

Public Presentations

From 1987 into 2012, Bateaux Below members, principally Russell P. Bellico and Joseph W. Zarzynski, presented over 400 public outreach programs (lectures, professional papers, school instructional lessons, workshops, walking and boat tours, and radio and television shows). These presentations, given to a wide variety of groups, were all on topics related to the history, underwater archaeological study, and preservation and protection of Lake George's shipwrecks and other submerged cultural resources. These public outreach programs reached over 12,000 people and provided them with accurate information about the waterway's shipwrecks, the results of Bateaux Below's maritime archaeology studies of these shipwrecks, and passionate pleas from the presenters for the public to practice preservation of the lake's underwater heritage resources.

Articles and Books

Furthermore, another conventional way employed to promote interest in Lake George shipwrecks and to foster their historic preservation was through print media. Bateaux Below members wrote articles published in newspapers, newsletters, popular magazines, professional journals, and its members published several books. From 1992 to 1996, Bateaux Below published an 8-page newsletter, 15 issues total, entitled *The Lake George Nautical Newsletter*. Besides this newsletter and the occasional magazine articles published about the lake's shipwrecks, from 2004 to 2010, Bateaux Below's Joseph W. Zarzynski and Bob Benway wrote 64 columns about the waterway's submerged cultural resources that appeared in the popular *Lake George Mirror* newspaper.

Several books on Lake George vessels and shipwrecks have helped inform the public about the waterway's submerged cultural resources and in so doing have promoted historic preservation. Lake historian Betty Ahearn Buckell wrote a book entitled *Lake George Boats* (1990). Another local historian, and also one of the excursion boat pilots on the lake, William Preston Gates, authored the tome, *Lake*

George Boats and Steamboats (2003). Bateaux Below's historian Russell P. Bellico wrote two comprehensive and highly acclaimed books on Lake George's maritime and military history including information about the lake's numerous shipwrecks: *Sails and Steam in the Mountains*: *A Maritime and Military History of Lake George and Lake Champlain* (originally published in 1992) and *Chronicles of Lake George*: *Journeys in War and Peace* (1995). D. K. Abbass and Joseph W. Zarzynski co-wrote a young adult book, *The Radeau Land Tortoise*: *North America's Oldest Intact Warship* (1993), that reached the younger generation. Zarzynski and Bob Benway wrote the most recent book on the waterway's underwater cultural heritage, *Lake George Shipwrecks and Sunken History* (2011). All of these publications have gone a long way toward encouraging historic preservation of Lake George's inanimate celebrities, its shipwrecks.

Ship and Shipwreck Models for Public Interpretation

Crafting ship models is as old as boatbuilding itself, dating back to ancient times. John Farrell, Bateaux Below's ship modeler, has completed 18 boat models constructed from a variety of materials including wood, plastic, metal, foam board, and paper. These have been used as teaching tools during archaeological fieldwork and replica vessel construction and for exhibit in museums, visitor centers, libraries, and art galleries. The subjects of Farrell's scale models and dioramas have been the 1758 *Land Tortoise* radeau, British colonial bateaux, a 1960-built research submarine constructed to photograph bateau-class wrecks of "The Sunken Fleet of 1758," and shipwreck site dioramas. Animator John Whitesel used Farrell's scale models to create visually stunning animation and computer-generated still imagery used in DVD documentaries, in public lectures by the Bateaux Below team, and in museum and visitor center video programs.

Shipwreck DVD Documentaries

In 2005, Pepe Productions, a Glens Falls, New York, documentary production company, released the first of two award-winning documentaries on Lake George shipwrecks and their underwater archaeological investigations. The first documentary, "The Lost Radeau: North America's Oldest Intact Warship," was produced for home video distribution and was later shown on Public Broadcasting Service television stations in New York state. The 57-min long production explores the 1758 *Land Tortoise* radeau and its archaeological study.

In 2010, the documentary filmmakers released the 58-min long DVD documentary, "Wooden Bones: The Sunken Fleet of 1758," produced for home video consumption. It tells the story of the archaeological study of the bateau shipwrecks in Lake George, the strange saga of a 1960 research submarine that was stolen and

Fig. 18.1 In 2008, this 31 ft replica 1758 bateau "wreck" was built by Saratoga Springs City School District middle school students and is based upon the archaeological record. The replica was then sunk off a popular walkway in shallow water at Lake George for pedestrian viewing (Photo by Joseph W. Zarzynski, 2008)

mysteriously sunk in Lake George, and an archaeology project that mapped a submerged 1758-built military wharf. "Wooden Bones" was co-winner of the "Maritime Heritage" award at NOAA's 2010 Gray's Reef Ocean Film Festival in Savannah, Georgia.

Americans enjoy watching movies, television, and documentary programs. Thus, these Pepe Productions documentaries have helped instill an aura of superstar stature for Lake George shipwrecks, thereby supporting their historic preservation.

2007–2008 Bateau "Wreck" Model

In June 2008, local archaeologists and historians, with state and local government permission, sank a replica "shipwreck" at the "Queen of American Lakes." The full-size, 31 ft long replica 1758 bateau "wreck" was constructed over a 6-month period by middle school students and Technology class teachers from Saratoga Springs, New York, with advisory support from underwater archaeologists. The replica was placed into the lake's shallows, adjacent to a walkway for pedestrian viewing (Fig. 18.1). It shows what a 250-year-old bateau shipwreck would look like with the vessel's upper strakes and some frames deteriorated and fallen off. Rocks, like those used by British and provincial soldiers in 1758 to help sink these bateaux, were

Fig. 18.2 This painting was one of several art/science pieces exhibited at the Lake George Arts Project gallery in 2009. The painting shows two microscopic testate amoeba tests (shells) found at a bateau shipwreck site and then examined by cell biologists using a scanning electron microscope. The art/science illustrator shrank a 30 ft long bateau to the size of a microscopic amoeba shell and placed them into one landscape. Such interdisciplinary artwork attracted a diversified public to view this exhibit and promoted interest in Lake George's cultural and natural resources (Painting by Elinor Mossop, 2009, from Joseph W. Zarzynski Collection)

placed inside the warship's skeletal remains. Such innovative programs not only help to educate school children about American history and underwater archaeology; these efforts likewise inform the older nondiving populace (Zarzynski and Benway 2011: 111–113).

2009 "Raising the Fleet: An Art/Science Initiative" Tri-Exhibit

A 2009 tri-exhibition, "Raising the Fleet: An Art/Science Initiative," conceived by Samuel S. Bowser, an Albany, New York, cell biologist, in conjunction with not-for-profit entities, helped local residents commemorate the 250th anniversary (1759–2009) of the British military recovering some of the shipwrecks of "The Sunken Fleet of 1758." Many of those salvaged vessels were repaired and used by General Amherst's army in the 1759 campaign that pacified the French fortresses in the Champlain Valley, propelling the British to victory in the French and Indian War. The 2009 program was an art/science interpretation of the study of testate amoebae found in the lake bottom adjacent to eighteenth-century shipwrecks. The tri-exhibit included a display of over three dozen art and science pieces at the Lake George Arts Project gallery (Fig. 18.2), an underwater art/science exposition for scuba divers with easels erected around a replica bateau wreck at "The Sunken Fleet of 1758" shipwreck preserve, and an Internet exhibition (http://www.themua.org/

raisingthefleet/) hosted by the Museum of Underwater Archaeology. These three exhibits featured the creations of science artist Elinor Mossop and ship modeler John Farrell. The gallery program also included a mini-documentary created by Pepe Productions. Such multidiscipline approaches broadened the scope of interest among the diving and nondiving communities toward the lake's diversified cultural and natural resources (Zarzynski and Benway 2011: 113–117).

"Snails and Trails," a 2012 Lake George Arts Project Exhibit

In a continuation of art/science collaboration as a tool to inform people about Lake George's abundant natural and cultural resources, including its historic shipwrecks, an exhibit entitled "Snails and Trails" was held in the summer 2012 at the Lake George Arts Project gallery. Directed by cell biologist Samuel S. Bowser and gallery director Laura Von Rosk, with assistance from regional artists and Bateaux Below members, the exhibition traced the trails of life, from microbial to animal and human, to examine how art and science can work together to create more sustainable living and foster protection of the waterway's natural and cultural resources.

Conclusion

Archaeology is a study of material culture from the past to discover and interpret new information about how people of yesteryear lived. Today, Americans have developed significant affinities with our society's prominent people, even though in most cases they have never met these figures. At Lake George, archaeologists, historians, artists, documentarians, and other resource managers have created traditional and unique public outreach programs that shed light upon the cultural significance of the waterway's shipwrecks by giving these inanimate resources celebrity status. In doing so, divers and nondivers have not only gained a greater understanding of local history, they likewise have become more prone to support historic preservation of these perishable cultural resources.

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