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- ► Archaeological Theory: Paradigm Shift
- ► Capitalism: Historical Archaeology
- ► Classical (Greek) Archaeology
- ► Historical Archaeology

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Archaeology and the Emergence of Fields: Maritime

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Introduction and Definition

Maritime archaeology in its most basic form is the study of material culture related to human interaction with the sea. It involves the study of ships and shipwrecks, maritime infrastructure, maritime exploitation, maritime identities and landscapes, seascapes, and other types of heritage, tangible or intangible, associated with the sea. Related to maritime archaeology is the study of nautical archaeology which primarily focuses on "the ship" and all technical and social aspects of the ship, whether it is on land, underwater, or extant in a museum. Also related to maritime archaeology is underwater archaeology, which is concerned with the archaeology of sites located underwater, regardless of their connection to the sea; it includes not only shipwreck sites but also aircraft wrecks, sunken cities, submerged indigenous habitation sites and refuse sites. Thus, maritime archaeology differs from underwater archaeology in that its focus can be on wet or dry sites including shipwrecks, ship burials, shipwrecks buried in reclaimed land, maritime infrastructure sites (such as jetties and lighthouses), or shipwreck survivor camps. To further complicate matters, there are more related and overlapping study areas including lacustrine archaeology (archaeology in and of lakes), riverine archaeology (archaeology in and of rivers), marine archaeology (archaeology that occurs in the marine environment), and the list goes on. The development of maritime archaeology is intimately connected with each of these associated study areas through overlapping subjects, methodologies, and theoretical developments and can be difficult to separate when reviewing its history. Nevertheless, this entry will only cover the development of maritime archaeology as a subdiscipline, and as such, sites and studies not related to human use of the sea will be omitted.

Historical Background

The emergence of maritime, underwater, or nautical archaeology as a field or subdiscipline within archaeology has been primarily linked to the works of George Bass in the Mediterranean in the late 1960s (Bass 1967). His research project was the first underwater excavation of a shipwreck directed by a diving archaeologist.

Nevertheless, as stated in the above definition, maritime archaeology is not strictly conducted on sites underwater. Lesser known, or less associated, are the earlier works and publications of a number of individuals and projects that set the pace for conducting maritime archaeology, albeit on land. Beginning in the late nineteenth and twentieth centuries, discoveries of watercraft in tombs and on dry land were investigated by antiquarians and archaeologists alike. Examples of such work include Jean-Jacques de Morgan's (1895) discovery and excavation of Egyptian boats in tombs at Dahshur and Basil Brown and Charles Phillips' team excavation of the Anglo-Saxon ship burial at Sutton Hoo in 1938-1939. While these research projects were not conducted underwater, the site types and subject matter can be considered well within the purview of maritime archaeological studies. The individuals who undertook this early work held university degrees and were trained in archaeological excavation techniques. Further, the archaeological questions asked were consistent with contemporary thought and revolved around the assembly of culture types and culture-histories.

Underwater efforts to recover objects and investigate sites by amateur archaeologists and salvors were also attempted through breath-hold diving, surface-supplied air sources, and diving bells. While these projects are interesting from a historical diving perspective, they contributed little to the development of the discipline other than fine-tuning some of the underwater exploration and recovery techniques which eventually would be used by archaeologists. In contrast, a project that is considered to be the earliest and first state-sponsored underwater archaeological survey took place in Greece at the naval warfare site of the Battle of Salamis by the Archaeological Society of Athens in 1885 (Lolos 2003; Catsambis 2006). Although trained archaeologists directed divers from the surface, this project represents perhaps the very first maritime archaeological survey underwater. The field reports of this survey were only recently found and translated, which leads one to believe that there could be several more of these surprising examples waiting to be discovered.

The development in the 1940s of the Aqua-Lung, a self-contained underwater breathing apparatus (SCUBA), allowed humans to reliably explore the underwater environment. SCUBA provided a vehicle for explorers, antiquarians, and, indeed, later archaeologists to begin freely examining material culture located underwater. For example, in the 1950s and 1960s, French and Italian SCUBA divers worked under the direction of archaeologists on wrecks at Grande Congloué, Cape Dramont, Île du Levant, Mahdia, Spargi, and Albenga (Atti del II Congresso 1961; du Plat Taylor 1965; Roghi 1965; Bass 2011). These surveys may not have included full-scale archaeological excavation or even diving archaeologists, but they certainly fulfill the criteria considered appropriate for conducting modern "deepwater archaeology" projects in which archaeologists on the surface direct activities underwater.

Arguably, one of the largest recovery projects to take place in the history of maritime archaeology was the raising of the Swedish warship Vasa in 1959 (Cederlund & Hocker 2006). This project set the pace for large-scale excavation and recovery projects, and for the next few decades, a number of large shipwrecks were recovered such as the warship *Mary Rose* in England and Dutch East India Company vessel Batavia in Australia. Alongside these projects being conducted underwater, equally significant maritime archaeological work was being undertaken in Scandinavia. By employing a cofferdam to allow submerged shipwrecks to be excavated as terrestrial sites, the Skudelev project involved the excavation of six Viking ships by Ole Crumlin-Pedersen and Olaf Olsen in 1962 (Crumlin-Pedersen & Olsen 1978).

What began with the untethered exploration of the underwater environment using SCUBA quickly developed into full-scale treasure hunting. Sites around the world were being destroyed in search of elusive treasure contained within shipwrecks. By the 1960s, legislation to protect underwater cultural heritage was being developed to prevent looters from destroying early shipwrecks. In fact, the Western Australian Government passed one of the earliest pieces of

heritage legislation in the world in 1964 (Nash 2007: 3), which would ultimately become the model for Australia's Historic Shipwrecks Act 1976. By the late 1960s and early 1970s, several large-scale maritime archaeological projects were under way including excavations of the seventeenth- and eighteenth-century Dutch East Indiamen wrecked off of Western Australia, the fourth-century BCE Kyrenia ship in the Mediterranean, sixteenth-century Basque whaleships in Red Bay (Canada), and Spanish Armada wrecks in the USA and Caribbean. However, by this time, fewer were being directed from the surface as more archaeologists were conducting their own research on the seabed. John Goggin (1959–1960: 350), considered a pioneer in underwater archaeology for his work in freshwater springs in Florida (USA), was never more true when he stated, "it is far easier to teach diving to an archaeologist than archaeology to a diver!"

Another major step forward was the 1972 introduction of the *Journal of Nautical Archaeology and Underwater Exploration*, the first journal specifically devoted to the subdiscipline. Soon after, academic departments at universities in various parts of the world established programs dedicated to maritime archaeology; some of the early examples include those at Texas A&M University, University of Haifa, St. Andrews University, and East Carolina University. This was the beginning of what would become a proliferation of specialty degrees and would produce most of the first round of heritage managers and academics focusing on the subject.

Once maritime archaeology was a named degree or specialization within university archaeology and anthropology departments, it earned the status of a subdiscipline. While some speculate that this was a potential negative impact in the development of the discipline as a whole and that maritime archaeology should be taught alongside and in conjunction with the broader field of archaeology (Flatman 2008), others reveled in its acceptance and even benefitted from the newly developed specialty programs. As of 2011, there are no fewer than 15 academic departments around the world that teach maritime archaeology, and in nearly every country

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that borders on water, there is a maritime archaeologist working. Indicators of the success of the subdiscipline include the 2006 introduction of a second journal dedicated to the field of maritime archaeology (*Journal of Maritime Archaeology*) and a steady increase in the number of jobs in maritime archaeology.

Today, the field is so broadly focused and diverse, if it were not for the definition of "human and sea," it would be difficult to describe it adequately. No longer is it necessary to be a diver to specialize in maritime archaeology because there are an equal amount of maritime-related sites being investigated on land as there are underwater. From lighthouses to shipwreck survivor camps, maritime archaeology is just as at home on the dry edges of the sea as it once was underwater.

Key Issues/Current Debates

Perhaps one of the most pervasive issues within the field of maritime archaeology is the need to protect underwater cultural heritage from those who wish to profit by selling, bartering, or trading associated material culture. Treasure hunting and looting of all forms is an offense maritime archaeology has battled from its inception. Even with the 2009 ratification of the UNESCO Convention on the Protection of the Underwater Cultural Heritage, the security of underwater heritage remains unstable in many countries around the world, and permits are issued regularly for treasure hunting endeavors. Public education and pressure to change laws at the State party and international levels are two areas where maritime archaeologists may contribute to correcting this problem. As Bass has so rightly pointed out, "[t]he distinction between archaeology and treasure hunting is misunderstood by far too large a part of the population" (Bass 2011: 14). Thus, education and engagement of the general public in maritime archaeology is critical. The media, from magazines to newspapers and television, is a powerful tool that has yet to be capitalized fully by maritime archaeologists and is a substantial key to educating the public about the difference.

Treasure hunting is not profitable based on its "finds"; rather, it profits from selling a dream to unsuspecting investors. If there are no investors, there is no treasure hunting. Further, pressure to enact or change laws from individual and collective groups of maritime archaeologists, such as the Advisory Council on Underwater Archaeology and the Australasian Institute for Maritime Archaeology, can also provide protection to underwater cultural heritage. Through writing letters, lobbying governments, and providing technical assistance to developing countries that are often preyed upon by treasure hunting ventures, such groups are winning small battles. The enforcement of the UNESCO Convention on the Protection of the Underwater Cultural Heritage will be a huge leap forward in terms of managing and protecting underwater cultural heritage, but there is still much work to do on the local front.

Another related and key issue within the field is that of managing underwater cultural heritage. As more threats arise and budgets are restricted, maritime heritage managers are forced to find new ways of managing and protecting sites through survey (to locate sites), investigation (to identify sites and threats to them), and long-term monitoring (to ensure they are protected and to record changes over time). Over the last 10 years, large-scale excavation and recovery projects have waned. These projects are being replaced by in situ surveys, investigations, and monitoring, which involve leaving sites as they are rather than disturbing or recovering material culture. The current buzz word in the field is in situ preservation and conservation, and while most authors have pointed out that UNESCO defines in situ as a "preferred" method of management rather than the "only" method, it still weighs heavy on the minds of maritime archaeologists. Part of the issue with the concept in situ revolves around a lack of definition and principles for conducting in situ conservation and preservation. Because the field of in situ research is largely driven by conservation scientists and the results disseminated in conservation journals and conferences, there appears to be a lack of communication between the researchers (conservation scientists) and end users (maritime archaeologists and managers). A study conducted in 2009 of practitioners revealed that many were unaware of what constitutes in situ preservation and conservation techniques and were therefore unwilling to consider in situ as part of their management practices (Ortmann et al. 2010). Thus, an area of research and discussion for the future of maritime archaeology will undoubtedly be focused in the coming years on in situ methods and their use. Closer collaboration, scientific investigation, and onsite application, as well as wider dissemination of results, may contribute to a better understanding of in situ practices.

The management and investigation of archaeological sites beyond the reach of divers, such as deepwater or remote shipwrecks, is an area of growing interest. Advances in technology are facilitating access for not only the archaeologist but also the novice and in some cases the treasure hunter. Deepwater sites often fall under the jurisdiction of State bodies, and practitioners are charged with managing sites that they cannot in fact view or visit. Additionally, deepwater wrecks require sophisticated and expensive equipment, large platforms for operating that equipment, and in some cases lengthy cruises to access the sites. Finally, because these sites are further out to sea, they are not protected under State legislation. Thus, they are unprotected from disturbance and treasure hunting. So how are these issues negotiated? The answers to accessing and investigating these sites may lie in the cooperation with large organizations, such as marine institutes that conduct geophysical, biological, or oceanographic research. However, partnering with groups who possess the technology and ability to access such sites will only allow the archaeologist to arrive at the site; the next issue is how to conduct archaeological investigations on deepwater sites. The same concern that others raised about archaeologists conducting archaeology from the surface in the 1960s, again, rears its head. Can proper archaeological work be conducted on sites that can only be accessed remotely? And perhaps more importantly, what types of research questions can be adequately addressed? Can questions that count be asked of sites where little ability exists

other than to collect samples for identification of site type, function, and possibly cultural affiliation? Are basic archaeological site plans reconstructed though remote photography and video contributing to our knowledge about the people and culture behind the sites? Answers to these questions are currently being debated among academics and practitioners (Adams 2007). There are no easy answers to these questions; however, the issue exists and is not one that will disappear or even decrease in complexity.

A final key issue that has rippled beneath the surface and is occasionally communicated relates to interaction of indigenous peoples with the sea and the investigation of archaeological sites closely associated with these activities. Until relatively recent times, maritime archaeology has primarily focused on classical and historic period sites. Ships, lighthouses, boatyards, jetties, and harbors were typically constructed by historic culture groups. Thus, maritime archaeologists have given relatively little attention to sites and regions of the world where an indigenous population had/has an intimate connection with and use of the sea. These sites are overlooked primarily because they fall within the realm of terrestrial archaeologists who focus on indigenous sites. However, maritime archaeologists can contribute greatly to this area; the key lies in collaboration. Maritime archaeologists are trained to look at the specific "maritimity" of a site or object (Tuddenham 2010). When viewing coastal and inland sites, our first questions involve the location of the nearest port or how far inland a river is navigable. Answers to questions about access to goods and trade networks often involve waterborne travel rather than overland travel. Maritime archaeologists understand seasonality, maritime subsistence, and boat-building technologies. Some researchers have begun to collaborate on projects related to indigenous knowledge and use of the marine environment and the importance of watercraft in migration, but the work is slow to develop. This area of research could contribute not only information about past and present use of the sea but also indigenous claims

9

of tenure and sea rights. Maritime archaeologists and their research have the potential to contribute to relevant modern social issues in the areas of indigenous maritime tenure in the coming years.

Future Directions

From its inception, an overwhelming obsession with shipwrecks, method, and technology has left the subdiscipline of maritime archaeology unbalanced. Just as developing methods for finding and recording shipwreck sites underwater were a necessity for the field to grow, so was the need to align research with current intellectual and theoretical discourse within the broader field of archaeology and anthropology. Unfortunately, the field's practitioners failed to accomplish this second phase, and a period dominated by historical particularism characterizes most of the early work. However, all is not lost; in recent years, the battle to overcome the historical-particularist approach is well under way. A perusal through journal articles, books, and websites demonstrates that maritime archaeologists are actively engaging in greater intellectual and theoretical debates with the disciplines of archaeology and anthropology. The investigation of more terrestrial maritime sites including landscape and seascape studies and shipboard material culture are areas in which theoretical discussions are occurring.

Another future direction that is vital to the field of maritime archaeology is that of public engagement. This has never been more important than now when the world's economy is flailing and budget cuts are severely impacting State bodies, granting organizations, and education funding. The public write letters to those who make the laws, vote for the laws, and, ultimately, are for whom maritime archaeology is practiced. Engaging people in all levels through consultation, volunteerism, and eventually to the final product of publication and dissemination of results is an area in which maritime archaeology can expand. And it appears to be making progress; with successful

organizations and programs such as the Nautical Archaeology Society in the UK, the Florida Public Archaeology Network in the USA, and the Museum of Underwater Archaeology online, the public is being brought into the fold. There remains, however, room improvement such as involving interpreting sites for the non-diver and producing stimulating media products to rival exploration and treasure hunting ventures. In an age of video games, simulation technology, and mobile applications, maritime archaeology offers a veritable and endless source of public entertainment and education.

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Archaeology as Anthropology

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Introduction and Definition

Archaeology, it has been said, is one of the four subdisciplines of a larger discipline – anthropology – the other three being bioanthropology (formerly known as physical anthropology),

linguistics, and social/cultural anthropology (a double adjective that honors both the British and American traditions). This account, however, largely only reflects the American context. In most other parts of the world – notably in Europe, where the "disciplines (or subdisciplines)" were born the two have been separated thematically, pedagogically, and administratively. But even in the Americas, where the linking of archaeology to anthropology is rarely disputed, their explicit relationship is strained, and it could be argued that the stated relationship does not really exist; further, it has been utterly distant for the most part, so much so that in spite of an avowed nearness and their contributions to the same thematic field, they successfully ignore each other. Their closeness or distance is a direct function of their relationships, separated or in tandem, with colonialism, nationbuilding, and, nowadays, with post-national multiculturalism. Yet, what anthropology means to archaeology and vice versa is important to their destinies in postmodern times.

In considering the relationship between archaeology and anthropology, however, more commentary is required to clarify the discussion that follows. Archaeological interpretations have always used cultural data - especially as professionally produced by anthropologists – in order to give meaning (functional and symbolical, for the most part) to "things" and "sites" through crosscultural analogies; although the latter were used intuitively and in a very relaxed way for decades, archaeologists have spent much effort to refine and control their use. In this regard, the intimate, unidirectional relationship of archaeology with anthropology is quite evident and needs no further development. Other stories can be told in terms of their mutual or separate articulation to wider agendas and purposes, political and otherwise; the following is the story I chose to tell.

Historical Background

The origin of anthropology is tied to the European colonial expansion of the nineteenth century. Baffled by the weird behavior of the very peoples they sought to colonize and exploit,