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Underwater Archaeology at the Dawn of the 21st Century

The end of the 20th century, and the advent of not just a new century, but a new millennium is upon us. These times, and these events, offer us an opportunity to assess what has come to pass, and perhaps, take a wishful peek at the future.

The 20th century was, in many ways, the century of underwater exploration. Brief forays into the deep in the 19th century were the harbinger of greater, farther, deeper reaching excursions to the bottom of the sea in the 20th century. The 20th century's reach into the depths was inspired by the simple human desire to explore–to see, to touch what hitherto had been denied or not yet achieved by other people. It was also, in time, also driven by the exigencies of war and the quest for riches. It was also spurred by the desire to discover and recover the submerged remains of our past or heritage, as represented by drowned campfires, cities swallowed by the sea, and the sunken remains of once proud ships.

The 20th century, appropriately enough for archaeologists who work under the water, began with an encounter with an ancient shipwreck. The 100th anniversary of the discovery of the *Antikythera* wreck–a 1st century BC Greek site famed for its bronze statues and the fabulous "computer," or intricate clockwork mechanism, will soon be upon us. When that wreck was discovered, in 1900, by sponge divers between Crete and the Greek mainland, and just off the shores of the island that gives the wreck its name, it inaugurated a new discipline, for the *Antikythera* wreck was the first shipwreck to be scientifically studied. What followed, slowly at first, and then with increasing frequency, was the discovery of other wrecks, other sites, and the gradual evolution of a discipline.

As the century progressed and the discipline evolved, so too did the technology. The first great leap forward came in the aftermath of the Second World War and the invention and global adaptation of self contained breathing apparatus–SCUBA-technology. The next great leap forward came when an archaeologist–George Bass–took the radical step of actually putting the gear on himself and taking the literal plunge into the depths. What Dr. Bass ultimately showed was that for all intents and purposes, archaeology, regardless of where you practice it, is still archaeology. Some of the tools, and some of the methods may change because you are now under water, but the principles and practice remain the same.

The late 1950s and the early 1960s were an important time for archaeology practised under the water–a number of significant discoveries were made, generating public interest and support, and, for the first time, a Conference on Underwater Archaeology was organised. The first meeting, the *Premier Congres Internationale d'Archaeologie Sous-Marine* was held at Cannes, France in 1955; it was followed by *Il Congreso Internazionale di Archeologia Sotto-Marine* at Albenga, Italy in 1958. The Third International Congress of Underwater Archaeology was held at Barcelona, Spain in 1961, and was organised in part by a new organisation–the Council of Underwater Archaeology, founded in 1959. The next meeting was the first in North America. Between April 26 and 27th, 1963, the Minnesota Historical Society, in St. Paul, hosted "Diving into the Past: Theories, Techniques, and Applications of Underwater Archaeology." It was the premiere of what since then became a regular meeting that we now, once again congregate to hold, this year in Salt Lake City. This would be the 30th Conference on Underwater Archaeology. Starting in 1971, the conference on underwater archaeology has been held in conjunction with The Society for Historical Archaeology, and in 1987, the two concurrent meetings were integrated to become the SHA Conference on Historical and Underwater Archaeology.

The years and the 30 meetings since 1963 have seen great growth in the discipline. Those first meetings in St. Paul discussed a number of topics, that while they remain very relevant nonetheless over time have evolved, diversified, and matured–in step with new technology, new approaches, and new members of the profession. These are some of those early paper topics:

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"Applications of Underwater Archaeology to Classical Studies,"

"Methods of Wreck Excavation in Clear Water,"

"Underwater Photography and Archaeology,"

"Some Legal Problems in the Field of Underwater Archaeology,"

"Treating Wood with Polyethylene Glycol,"

"Excavating a Byzantine Shipwreck,"

"The Viking Ships in Roskilde Fiord, Denmark,"

"The Ghost Ship *Vasa*,"

"Underwater Archaeology and the *Cairo*."

Since then, we have expanded on these topics. The Ninth Conference, for example, was organised into specific categories–the field was gradually organising itself into sub-disciplines and themes: to wit "Shipwreck Archaeology," "Ship Reconstruction and Antiquities Conservation," "Inundated Terrestrial Sites," and "Underwater Cultural Resource Management, Theory, and Application, and Other Topics."

By then, too, some specifics–key sites, technologies, and methodologies were emerging: the Serce Limani wreck, USS *Monitor*, the 1554 Flota wrecks, the Brown's Ferry Vessel, Warm Mineral Springs, and the privateer *Defence* were the subject of papers at the 9th conference, as was Richard Steffy's pioneering paper, "Maximum Results from Minimum Remains," Sonny Cockrell and Larry Murphy's pioneering work on assessing site formation processes, "8 SL 17: Methodological Approaches to a Dual Component Marine Site on the Florida Atlantic Coast," as well as papers on remote sensing and site testing by Richard Anuskiewicz and J. Barto Arnold.

Over time, these and other topics have been finely forged and hammered into shape through decades of field work, scholarly analysis and interpretation, and the informed peer review and professional discourse that comes with each of these annual meetings as we gather to share and learn from one another. Reading through the proceedings of the various conferences, it is amazing to look back as underwater archaeology develops into a complex discipline, utilising new practices and technologies, and with an increasing number of both professional and avocational people involved.

In the last thirty years, we have embraced new technology–early papers introduce us to side scan sonar, the magnetometer, satellite imaging, surveying using GPS, computer imaging, SHARPS, and remotely operated vehicles.

In the last thirty years, we have seen underwater work integrated into various branches of archaeology. In many ways, this perhaps has been one of the greatest leaps forward–underwater sites and data have significantly contributed, at times uniquely, to our understanding of the past. An excellent example of the contributions of archaeology underwater–in this case as practised by the Institute of Nautical Archaeology–were recently summed up by George Bass (1998:49) in the December issue of Archaeology magazine:

> Few if any Bronze Age excavations in the past 50 years have been more important than that of the Uluburun shipwreck that lay 145 to 200 feet deep just off the Turkish coast, with its 18,000 artifacts from nearly a dozen different cultures, precisely dated to within a few years of 1300 B.C. The wreck has provided a wealth of information on the histories of literacy, trade, ideas, metallurgy, metrology, art, music, religion, and international relations, as well as for fields as diverse as Homeric studies and Egyptology.

I cannot think of a better way to show just how much underwater archaeology has matured as a discipline.

We have also seen underwater archaeology branch out into three distinct areas: prehistoric work on inundated sites, nautical archaeology, and maritime archaeology. In particular, and almost entirely due to nautical archaeology, we now have a more sophisticated model for the development of watercraft and ships from prehistory up to the present day. A few gaps remain, among them European ships of the 15th and 16th centuries, most Asian craft, and regional variations and types of small craft, although in the latter case the gap is closing thanks to the work of several dedicated scholars like Mark Wilde Ramsing, Bruce Terrell, Michael Alford, Carl Olof Cederlund, and others. The simple fact remains, however, with more than a thousand ancient wrecks alone catalogued in the Mediterranean by A. J. Parker, for example, that we have made considerable inroads thanks to decades of systematic work in the world's oceans, seas, lakes, and rivers.

We have integrated anthropological theory and method to assess human behaviour inherent in the sites we work–general models as well as a more sophisticated understanding of the "maritime subculture." We have developed projects that work not just on individual sites, but groups

of wrecks, studied because they fit within a chronology of development, like INA's work in the Mediterranean, because they fit within a region, like the U.S. National Park Service's work at Fort Jefferson National Monument, or Donald Shomette's work on Chesapeake Bay, or because they fit within a wider historical or cultural theme, like Mark Wilde Ramsing's work on the Cape Fear Civil War Shipwreck District, or Gordon Watts' work on Civil War wrecks in the U.S. and Bermuda. We have also assessed the context of individual wrecks in new ways, analysing them as vessels, as cultural indicators, as dynamic entities that evidence the physical and cultural processes that transformed them from ships to shipwrecks.

We have also increasingly advocated, fought for, and developed better mechanisms for the assessment, protection, and management of underwater sites. From fine tooling the National Register of Historic Places, to lobbying for the Abandoned Shipwreck Act, we have been a force. We have also watched, aided and at times abetted, as a profession, the development of state programs for submerged cultural resources, and one of the hallmarks of these conferences are now the state underwater program manager's meetings. We have also witnessed the growth of significant contributions from the federal government, be they the major work done by the U.S. National Park Service's Submerged Cultural Resources Unit, under the direction of Daniel Lenihan, the significant research and excavations of Parks Canada's Underwater Unit, under the direction of Robert Grenier, the contributions made by the National Oceanic and Atmospheric Administration, at first with the wreck of USS *Monitor*, now managed by John Broadwater, but also in the various national marine sanctuaries, and co-ordinated by Bruce Terrell, the many contributions of the Smithsonian Institution, now under the direction of Paul Johnston, or the increased and significant program of the U.S. Naval Historical Center, directed by William S. Dudley and co-ordinated and achieved by a number of professionals, including over the years David Cooper and Bob Neyland.

We have also increasingly seen, in yet another leap forward, the greater involvement of the public, a greater emphasis on education, and on all forms of outreach. From the pioneering Anthropology 500 course offered by John Mann Goggin at the University of Florida–the first university course on underwater archaeology offered and taught in the United States–we have seen the development not just of courses but of undergraduate and graduate level programs at Texas A&M, East Carolina University, the University of Hawaii at Manoa, Florida State University, and Indiana State University, to name a few, in the United States, as well as major programs abroad like that of St. Andrews University. The measure of the success of these initiatives is the incremental increase in the number of new professionals they produce each year, whose ranks are well represented in the conference proceedings, and who today comprise the heart, soul, and backbone of this profession.

We have done more, however, than just train underwater, maritime, and nautical archaeologists. We have offered these courses to other archaeologists, who even though they do not pursue a solely underwater career, understand the discipline and integrate the findings of their "wet" colleagues into their work–for indeed they have learned, as have we, that regardless of the environment you work in, archaeology is archaeology, and underwater sites have a unique potential to offer significant information.

We have also done more than just educate ourselves as archaeologists. One of the greatest signs of our maturity as a discipline is the growing number of avocational members who work with us, make significant contributions, and attend these meetings. Some of the finest work in the field–in the world–today is being done by the avocational, be they the Nautical Archaeology Society, the Underwater Archaeological Society of British Columbia, MAHS, SOS, POW, MAHRI, the sport divers trained at Indiana State, or the countless other groups. In particular, I would be remiss if I did not highlight the work of three members whose contributions are many, and whose dedication and results impress us all–Art Cohn, Donald Shomette, and Joe Zarzynski. It may amaze some of you who just joined these meetings over the past few years that none of these gentlemen received an advanced degree in archaeology. With all due respect to my academically trained colleagues, these three men–Cohn, Shomette, and Zarzynski–show the rest of us how to do it. Their work in Lake Champlain, Chesapeake Bay, and Lake George offers a model for public participation, regional approach, cultural

resources management, education and outreach, and publication.

Some of us have made great strides in outreach and education; Monica Reed in video, KC Smith in the classroom, for example. There is also, of course, David Clark's work on the public sessions of this conference.

We have also done more in publishing–the underwater proceedings of these conferences alone take up half a bookshelf–with hundreds of other titles now available. We have not done enough, however, to reach the general public. The number of books that speak to a general audience about what we do, what we find, why it is relevant, and why the public needs to support us–not looters–remains low. The most recently released titles for the most part, as always, focus on treasure, not necessarily knowledge.

We, as underwater archaeologists, as historical archaeologists, as maritime or nautical archaeologists, have made tremendous strides. This has been our pioneering century, and our proceedings are full of the themes, issues, and controversies that have marked these "frontier times." The arguments over legal protection, over treasure hunting, over what would be presented at these conferences, and by whom, over what role professionals should take in working with–or against treasure hunters–over the role of government–both big and small–and over appropriate uses of new technology have been with us over the past thirty years and will likely continue into the new century and the new millennium. The debate over the UNESCO Charter on underwater resources is just one example.

In fact, as the great dividing line comes, we find ourselves engaged in a more complex challenge as we grapple with the Pandora's box that has been opened in the deep ocean thanks to new technology and the increasing sophistication of treasure hunters and salvors who now with greater regularity "talk our talk." The work over the past decade on the wreck of the *Titanic*, the salvage of the SS *Central America* have generally been deplored in the halls of these conferences and widely accepted and approved by the public.

How do we deal with our responsibilities as archaeologists and as people genuinely interested in the past? The major challenge before us, I believe, is to not simply shout "unclean" and oppose treasure hunting and salvage. Do not mistake what I am saying. We must ethically and professional oppose looting, non-scientific recovery of material from archaeological sites, the marketing of antiquities, and not participate in these activities. But we can do this more effectively if we set a new standard for our own behaviour and our own practice in the years to come.

What is this new standard? It is nothing more than an affirmation of what we have already embarked on, and what we have been doing with increasing success. We must build on our strengths, and on our legacy. We must demonstrate, to as wide and public an audience as possible, that the work we do is important, that it contributes something to our society, and that it offers a positive alternative to "pull it up, sell it off." This means great work with avocationals. It means a greater emphasis on publication–to diverse audiences, to the public at large, to children. It means embracing the new technology–like the Internet and CD ROMS, to reach other audiences. One of the best examples of this was the recent work done on the wreck of LaSalle's ship *La Belle*. The web site for that project, constantly updated, and accessible to a global audience, deserves acclaim; and we all need to copy it.

I would also suggest, as a Maritime Museum director, that we work more closely with Museums, to reach their audiences. Nearly all of the world's maritime museums have some form of display or interaction with underwater and maritime archaeology–some of them, like the Viking Ship Museum at Roskilde, the *Mary Rose* Interpretive Centre, the Lake Champlain Maritime Museum, the Western Australia Maritime Museum, the Shipwreck Museum at Bodrum, and the *Vasa* Museum–are practically shrines. Others, like Ships of Discovery, have forged significant partnerships with non-maritime museums, like Ships of Discovery's work with the Corpus Christi Museum. I would respectfully suggest that we can all learn from what these colleagues have been doing and copy it. There are also travelling exhibitions, like the Australian National Maritime Museum's exhibit on the wreck of the ship *Julia Ann*, now showing in Salt Lake City, which while not on the scale of the great *Titanic* travelling road show, exhibition, and souvenir shop, offers a positive, relevant model.

We are moving, in the next year, from one frontier to another. There is no place on this planet we cannot reach, and sites in the deepest parts of

the ocean are becoming increasingly accessible. We need to be there, to forge partnerships with the government agencies, institutes, and technicians who have the tools and resources. It has been argued that this will take great money–and certainly the salvors and treasure hunters have dominated this debate by being the ones who have gone down there to recover monetary riches. But we certainly know that all that glitters is not gold–that knowledge, that pride in our past and our achievements as humanity count for far more than mere dollars. Was raising the *Vasa* a cost efficient move? At first, no. But the pride, the international attention, and the resulting tourism made *Vasa* a Swedish treasure that they share with the rest of the world. The time has come for us, through positive work, to find the *Vasa*'s of the deep and bring them to the surface–and the world's attention. The recovery of *La Belle* last year was an excellent beginning. The raising of CSS *Hunley* in 2001 offers another chance for a well-publicised, positive shipwreck recovery. We need to find other exciting, relevant, and well-funded opportunities. We need to let the screens again be filled with the majesty of a bequest from the past, not just the glimmer of gold coins or bars.

In time, in this new millennium, as we reach to newer frontiers, I have little doubt that the next great leap forward will be a branch of both historical and underwater archaeology. This is the conference where the recent past is assessed archaeologically and where archaeologists who work in hostile, life threatening environments, protected by life supporting suits and vehicles, meet to discuss what they do. I suspect that the best attended paper at the 2099 SHA conference will be a former underwater, now deep space archaeologist, reporting on the first season's field work on the *Apollo* 11 Landing site.

May the new millennium be for all of us an opportunity for a brighter, better, bolder future, firmly rooted in the successes of the past.

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