

Chapter 1

Maritime Archaeology in Australasia: Reviews and Overviews

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1.1. INTRODUCTION

In the late 1970s the noted British underwater archaeologist Keith Muckelroy, stated that maritime archaeology was the “scientific study” of the material remains of humans and their activities in, on and around the sea (1978:4). In essence, maritime archaeology can be seen as the archaeological investigation of any coastal or shore-based society.

Australia was initially settled via the sea by both Aboriginal and European cultures and the majority of the current population still remain near the coast. Thus the maritime trades became some of the most important early industries. The Indigenous trade in pearl shell, for example, stretched from the Kimberley coast into the deserts and later outwards across the sea, carried by Macassan traders from the Indonesian archipelago. During the colonial period, boat and shipbuilding for the exploitation of whales, seals and sandalwood helped transform Sydney and Hobart from introspective penal colonies into thriving economic centres. As other colonies and immigrant population centres developed on land, water-borne transport by sea and river was initially the glue that held them together, both socially and economically (Broeze, 1998). To fully comprehend the development of these coastal societies over the ages, an understanding of their interaction with the sea became critical. In this way, maritime archaeology, as defined by Muckelroy, has become an essential tool in the examination of the lives of those inhabiting the shores of the Australian island-continent as well as in the Australasia region.

1.2. MARITIME ARCHAEOLOGY IN AUSTRALIA

Maritime archaeology in Australia was initially museum-based, primarily because the mid-1960s discovery of five bullion-carrying East India ships off the Western Australian coast forced authorities to turn to the nearest state museum (the Western Australian Museum) for their protection. At the time only the fabled *General Grant* (1866) in New Zealand, the elusive “Mahogany Ship”—reputedly a manifestation of a Portuguese or Chinese landing—and the mythical pirate treasures of Victoria, excited the public imagination to the same degree. Recreational diving was in its infancy and the undersea realm was a source of wonder, excitement and interest. Thus, the 1969 amendments to the Western Australian *Museum Act* and the recruitment of staff to act as “site police” heralded the first attempts to protect (and manage) maritime archaeological sites in Australasia. These initiatives were also manifestations of a broad-based public, political and academic desire to preserve and present the wrecks and their relics.

Concerns grew in the late 1960s as the extent of the archaeological deposits at the East India wrecks became better known and Museum staff had difficulty coping with the spate of looting that occurred. Despite attempts to shift site investigations and management to the University of Western Australia (Tyler, 1970), and in the absence of suitably experienced Australian candidates, the Western Australian Museum looked towards Europe. In 1971 the Museum secured the services of Oxford graduate, Jeremy Green. Green who was a protégé of Teddy Hall, the inventor of the magnetometer, and a colleague of Keith Muckelroy. The employment of overseas talent was a common feature in many disciplines in Australia at that time, including archaeology.

Green’s scientific background and his focus on the East India ships was complemented by the interests of staff member Graeme Henderson who enrolled in a Masters course in maritime history at the University of Western Australia and by those of staff member Scott Sledge, another graduate in history. These influences served to broaden the scope of the Department’s work into colonial maritime history, shipping practices, and the transition from sail and wood to iron and steam (Henderson, 1977; Sledge, 1978). All these developments were conducted under the guidance of an Advisory Committee which was comprised of representatives of the academic and diving communities advising the Museum Director on the way forward in the new field.

In 1973, the Western Australian *Maritime Archaeology Act* was passed, allowing for the protection of all wrecks lost before 1900 and encompassing the existing *Australian Netherlands Committee on Old Dutch Shipwrecks Agreement*. This provided a legal and logistical framework for the joint operations of the State of Western Australia, and the Dutch and Australian governments with respect to the Dutch East India Company vessels. Members of ANCODS (Australian Netherlands Committee on Old Dutch Shipwrecks) included overseas archaeologists and Australian university-based historians Geoffrey Bolton and John Bach, both leaders in their field (Green et al., 1998). Australia as a nation had come to have its first institutionalized stake in historic

shipwrecks, albeit by virtue of a State Act. A legal challenge to this same Act saw the Federal government develop the *Historic Shipwrecks Act* in 1976, which became a significant milestone for shipwreck management in Australia.



Figure 1.1. Geoff Kimpton with astrolabe from the *Vergulde Draek* site in Western Australia (photo courtesy of the Department of Maritime Archaeology, WA Maritime Museum).

In this same formative period, the Maritime Archaeological Association of Western Australia (MAAWA) emerged, as a group of recreational divers with an interest in wrecks and relics. They began to assist the WA Museum in conducting research, searches and site inspections and in developing shipwreck databases. Independent of any parent unit, the Society for Underwater Historical Research (SUHR) in South Australia had also been formed by this time and undertook some important studies of shipwreck sites and port-related structures (Drew, 1983; Marfleet, 1983). Similar volunteer organizations developed in other states and some of these groups conducted excavations and detailed surveys for the state heritage organizations, such as work on the SS *John Penn*, *Day Dawn* (see Figures 1.2 and 1.3) and *Sydney Cove* (McCarthy, 1980; Atherton, 1983; Lorimer, 1988). Many “avocational” archaeologists as they are now referred to, became justifiably recognized for their skill and commitment and many came to make lasting contributions to the field. One example is John Riley’s work on iron and steamship disintegration, based largely on his experiences on deep-water wrecks in New South Wales, that provided the basis for iron and steamship studies in the Australasian region (Riley, 1988a).

Concern over uncontrolled looting of historic shipwrecks was an important impetus for avocational organizations. Empowered as the “voice” of the people, they successfully lobbied various state governments to create their own historic shipwreck legislation and management agencies. By the early 1980s other Australian States and Territories had passed, or were in the process of passing, their own maritime heritage legislation, most of which mirrored the Commonwealth Act. They also developed “shipwreck units” and formed advisory committees to assist in decision-making. In order to provide the necessary staff for these agencies the Western Australian Maritime Museum (WAMM) and the Western Australian Institute of Technology (now Curtin University) developed a postgraduate course in maritime archaeology. This was run on an occasional basis from the early 1980s until the mid-1990s.



Figure 1.2. The shipwreck of the former whaler *Day Dawn* (1888) was lifted and moved using a barge, to protect it from being damaged during a Royal Australian Navy harbour redevelopment (photo courtesy of the Department of Maritime Archaeology, WA Maritime Museum).

In 1978 Keith Muckelroy had observed that the primary object of study for maritime archaeology is people “and not the ships, cargoes, fittings or instruments with which the researcher is immediately confronted” (1978:4). The importance of this definition, however, was not fully appreciated by those enrolled in the early maritime archaeology courses as the majority had no prior archaeological training and had little or no prior exposure to archaeological theory. In this respect, the American publication of *Shipwreck Anthropology* (Gould, 1983) became the catalyst for philosophical change in the Australian

discipline. The papers in *Shipwreck Anthropology* questioned existing research approaches and called for a broader theoretical base to shipwreck studies – arguing for a better use of what was increasingly being perceived as a diminishing archaeological resource. Some of these approaches were quickly taken up in Australia (Effenberger, 1987; Nash, 1987). The latter point, in particular, was echoed by one of the leading Australian practitioners at the time, effectively ending his own “area excavation” style as a *bona fide* site management strategy (Henderson, 1986:171). Armed with these new insights, course graduates from Western Australia came to be employed in either State museums or heritage management agencies dealing with underwater sites. In keeping with the movement towards non-disturbance “cultural resource management” (CRM), limited excavation and the gathering of data by surface recovery, sampling methods and historical research, became the preferred means of dealing with shipwreck sites by the late 1980s and early 1990s.

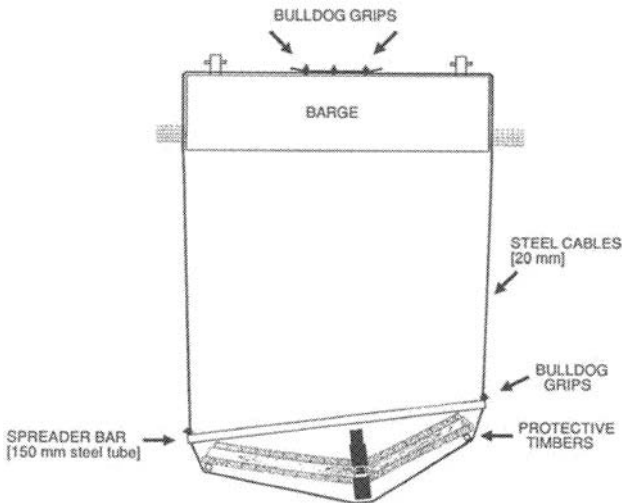


Figure 1.3 Cross-section drawing of the barge and lifting equipment used to lift and move the *Day Dawn* shipwreck. (image courtesy of the Department of Maritime Archaeology, WA Maritime Museum).

Archaeological units across Australia also came to espouse the notion of the “underwater display case”. Public access to sites, data and collections was seen as an adjunct to exhibitions (see Figure 1.2), in-house archaeological reports and peer-reviewed articles. All had tangible educational, academic, recreational and tourism-based outcomes and generated considerable public support. Since 1976, the Commonwealth Government has supported these works through the Historic Shipwrecks Program, annually distributing project funding

to the States and Territories (see Chapter 10). For their part, the States and Territories provide the bulk of actual costs including infrastructure, buildings, facilities, salaries, etc. Outside this framework, maritime archaeologists are employed by the Australian National Maritime Museum (ANMM), often conducting work in conjunction with colleagues elsewhere in Australasia and overseas. This direct State and Federal Government involvement in the protection of Australia's shipwrecks has resulted in the profession being relatively well-funded compared to other archaeological disciplines.

REVIEWS AND OVERVIEWS

In 1988 Graham Connah was calling on his terrestrial colleagues throughout Australia to join him in the scientific investigation of what he termed the "material remains of the recent past" (1988:4). Despite the obvious parallels between historical and maritime archaeology the links between the disciplines were few at the time. In 1990 Jeremy Green still felt the need to explain the reasons why maritime archaeology was slow to become accepted amongst terrestrial archaeologists when he published *Maritime Archaeology: A Technical Handbook*. He believed that there remained a need to "build up a clear understanding of the material before constructing the deeper hypotheses" and before proceeding further (Green, 1990:235). This plea for a better understanding of the material culture before launching into "shipwreck anthropology" was a view shared by Green's colleague George Bass, who worked in the Mediterranean, and probably by Keith Muckelroy himself (Bass, 1983). However, shipwreck anthropology did come to provide an alternative philosophical base for those wanting to build upon the traditional foundations of Australasian maritime archaeology.

Green highlighted the cause of the problem when he stated that the field in Australasia "suffers from a lack of respectability", due he believed, due to "a lack of a proper qualification and accreditation system in the field" (1990:263). These sentiments were also reflected in a paper published by maritime archaeologist Kieran Hosty and his terrestrial archaeology colleague Ian Stuart in *Australian Archaeology* in 1994 (Hosty and Stuart, 1994). There, references were made about isolation, inadequate university representation, weak research and management strategies, and the lack of interdisciplinary exchange within the field. These were certainly justified, though at the time there were both specific examples to the contrary and a general undercurrent of change was evident as the discipline matured during the mid to late 1990s (McCarthy, 1998a).

One significant change in that period was the advent of a more theoretically aware intake of students into the 1996 Curtin University course, many of whom were graduates of terrestrial archaeology courses. The same year also saw the growth of full-time university-based maritime archaeology. This initiative was partly driven by a perceived need for a larger critical mass of

practitioners performing diverse tasks, working on a much broader spectrum of research and applying for a much broader range of funds (Staniforth, 2000a). Allied to this was a call for the expansion of public education programs through the AIMA/NAS courses. This is now manifested in a burgeoning AIMA/NAS training program and a diverse set of undergraduate and postgraduate courses in maritime archaeology at Flinders University (South Australia) and James Cook University (Queensland).

These developments have served to extend the theoretical base of Australian maritime archaeology beyond the earlier technically-focussed course in Western Australia. In effect, the three courses complemented each other, providing a much-needed diversity in practical maritime archaeological training and theory in the wake of the leading movements of the 1980s. That these institutions have now conducted field schools in association with site management agencies in most Australian States attests to their relevance and usefulness. More recently the reintroduction of postgraduate courses in Western Australia through the University of Western Australia is another positive step, serving to further strengthen the discipline.

Over the last decade the boundaries that once defined the “underwater” or “terrestrial” spheres within Australian archaeology have become increasingly blurred. Although this has occurred to a limited degree in prehistory with the study of inundated Indigenous sites still in its infancy (see Dortch, 1991, 1997a, 2002a), it is most readily apparent in the sub-disciplines of historical and industrial archaeology. These cover the period of maritime exploration and the European settlement of the continent. It has also become increasingly apparent that terrestrial and underwater sites from this period have “more similarities than differences” (Nash, 2004:7). These include common temporal settings, corresponding cultures and material remains. Both also use documentary evidence as a complementary and potentially conflicting research tool. What really separates the two are a different set of site formation processes, the technical elements of the work, an emphasis on the boat or ship as a carrier and the short site deposition period of most maritime archaeological sites. This is the oft-quoted “time capsule” analogy.

The interlinking of historical, industrial and maritime archaeology in Australasia is manifest in a number of recent developments. Firstly, since 1995 there has been a trend towards joint conferences. The combined 1995 Australian Institute for Maritime Archaeology and Australian Society for Historical Archaeology conference in Hobart, for example, had the publicly-stated aim “to cross the boundaries of the two disciplines”. Secondly, there has been a marked tendency to publish outside each specific sub-discipline in a much wider group of journals. This has resulted in a much broader readership and a far wider appreciation of the potentially complementary nature of terrestrial and maritime archaeology. In *Archaeology of Whaling in Southern Australia and New Zealand*, for example, the authors effectively redefined the essential and mutually-beneficial nature of cooperative research (Lawrence and Staniforth, 1998). An example of the manner in which this lead was followed is evident in a

number of subsequent benchmark studies on shore-based whaling (Gibbs, 1996, Lawrence, 1998, 2001a; Nash, 2003b).

The facilitation of broader interdisciplinary links has been a feature of shipwreck programs in Australia for many years. Over the life of long and complex projects such as *Batavia*, *Pandora*, *SS City of Launceston* and *Sydney Cove*, archaeological techniques and philosophies have changed considerably (see Figure 1.3). All of these projects utilized a wide variety of archaeological, scientific and technological expertise and have seen the gradual acceptance of maritime archaeology within terrestrial archaeological circles. Nevertheless it was the *SS Xantho* project that crossed one of the last bridges between traditional maritime archaeology and the mainstream when it addressed anthropological questions about the behavior of the vessel's owners and operators (Veth and McCarthy, 1999). A number of similar studies have now been completed, including Nathan Richards' comprehensive analysis of use, reuse and discard practices as evidenced by the many ship graveyards across the region (Richards, 2002).

Further, the strong links established in the 1980s between object conservators and the nation's maritime archaeologists set the scene for routine pre-disturbance monitoring regimes and corrosion studies on shipwrecks, both nationally and internationally (see MacLeod, 1989, 1993, 1998). The essential nature of their work also featured in the first book published on the subject of iron and steamship archaeology (McCarthy, 2000). Sub-titled *Success and Failure on the SS Xantho* it was *inter alia* a cautionary "wait-and-see" for others considering raising marine engines from a saline environment in the wake of the apparently successful *Xantho* example. This has proved to be an essential warning for in 2004, just as the engine recovered some twenty years earlier was being re-assembled for display, massive sulphuric acid deposits necessitated a revision of conservation treatments for all the major wooden ship hulls recovered to date (*Vasa*, *Batavia* and *Mary Rose*). These alarming developments attest to the continuing importance of the links between maritime archaeology and conservation specialists, and the wisdom of the current focus on *in situ* preservation as the preferred site-management option.

The fact that maritime archeology in Australia did not begin with the study of the Aborigines, of their inundated or inter-tidal material culture might appear strange. Furthermore it did not start with Aboriginal interactions and possible intermingling with those "strangers on the shore", the Europeans and Macassans, who came either with all the trappings of power, or as defenceless, semi-naked shipwrecked sailors – such studies came later (Silvester, 1998). Maritime archaeology in Australia did not commence with the British and the French explorers who actually claimed the land, with their deposition and signal sites, their camps and observatories. Nor did it start with the American, British and French whalers and sealers who followed, and sometimes even led, the explorers. All had far more of a lasting impact on the place and its peoples than the Dutch and this might, to a reader unaware of the events of the past forty years, seem strangely anomalous. That the oral traditions and material record left by these diverse explorers and fishers, were all initially passed over for the

excavation of transient East India Company ships that struck the coast in passing, with, is trebly of interest. When examined more closely, however, it was the 1960s and 1970s public fixation on shipwrecks and treasure and the perceived paucity of the material remains left by these survivors and the Indigenous people that was a major cause. Unlike its university-based or CRM counterpart, museum-based archaeology of all forms needed fascinating and alluring objects for its collection, exhibition and education programs. These were often the catalyst for renewed public and academic enthusiasm, and these often led in turn to enhanced funding.

In the context of enhanced funding sources for the future, the notion of “Australian maritime heritage abroad” has appeared in recent years. In this view, the ships of explorers having great historical or social impact on Australasian shores are as much a part of our cultural heritage as they are of the parent nation and the occupants of the shores on which they came to grief. Recent work on HM ship *Roebuck* (1701) of William Dampier fame and the French vessel *L’Uranie* (1820) of Rose and Louis de Freycinet fame are two examples of this approach. Unable to be linked to existing funding mechanisms, privately-funded, Foundation-based expeditions to Ascension and the Falklands islands went in search of the wrecks in 2001. These proved successful, providing a focus for a number of historical, technical and social studies on the ships and those on board (McCarthy, 2004a). In a similar philosophical vein, staff of the Australian National Maritime Museum have been involved in the search for the remains of Lt. James Cook’s *Endeavour* which after a long post-exploration career was scuttled in American waters during the Revolutionary War (Hosty and Hundley, 2001).

1.4. THE SOUTH-WEST PACIFIC REGION

Up until the mid-1980s, maritime archaeology in New Zealand was largely based around the work of Kelly Tarlton, a private museum operator. Influenced by the Western Australian work on the Dutch and colonial wrecks, Tarlton undertook site studies, research and exhibitions at his own expense. His “underwater” museum in Auckland became increasingly well-known and highly influential in the early 1980s, and though he was looking towards further collaborative work and exchanges within Australasia, he died in late 1985 aged just 57. For a while the discipline in New Zealand stalled, but now has strong underwater heritage legislation centering on the *Historic Places Act 1993*, and an active avocational body (Churchill, 1991, 1993).

New Zealand has considerable potential for underwater work with its extensive Indigenous Maori culture including sites such as war canoes and inundated fortified settlements (Kenderdine, 1991a, 1991b). There are also an estimated 1,125 shipwreck sites now protected under legislation in New Zealand but only three have been the subject of professional archaeological attention – *L’Alceme* (1851), *Endeavour* (1795) and HMS *Buffalo* (1840) (Kenderdine, 1991a; Jeffery, 1988). The discipline of maritime archaeology in New Zealand

currently suffers as a result of dedicated staff and a responsible institution, and active site protection remains largely an issue for the future.

Nevertheless, an interesting and very creative pointer to the nascent strength of New Zealand's programs is the *Inconstant* project. A vessel hauled ashore for use as a warehouse in Wellington in 1850, subsequently built over and upon, emerged during redevelopment work for the Bank of New Zealand complex. Some of the timbers were raised in 1997 under the supervision of archaeologists and immersed in polyethylene glycol (PEG) to be presented elsewhere in the "Inconstant Gallery". All artefacts recovered were conserved, including those related to the wreck's role as a warehouse. The bow remains on public display as it undergoes *in situ* conservation treatment under a glass slab floor. Funded by the City Council and Lotteries, it is "enjoying a new function as a tourist attraction and tourist icon" in accordance with the ICOMOS Cultural Tourism Charter. The project is also operating a volunteer conservation unit out of a refurbished heritage ship (O'Keefe, 1999, 2001).

Of the other larger nations in the region, Papua New Guinea (PNG) currently has no maritime archaeology program, but recently the PNG Government provided official sanction for a remote sensing search for the missing Royal Australian Navy submarine *AEI* (1914) near Rabaul. The latest phases of this search were effected using remote sensing equipment and expertise developed and operated under the Australian National Centre for Excellence for Maritime Archaeology out of the Western Australian Maritime Museum. The *AEI* wreck, the Indigenous maritime heritage resource and the hundreds of wrecks and maritime sites, including those of WWII at Rabaul, are but a small indication of the maritime archaeological heritage there.

In the Solomon Islands a multi-national team including Australian practitioners and their French colleagues have investigated the remains of the ill-fated La Perouse expedition lost in 1788 at Vanikoro and the associated wrecks of the *Astrolabe* and *Boussole*. As part of the permit conditions the post-excavation development of a museum and interpretive exhibition was costed to the archaeological proponents. The Queensland Museum became involved with the conservation and registration of the material from the two shipwreck sites, and the report of the 1986 and 1990 expeditions has recently been published by the Australian Institute for Maritime Archaeology (Stanbury and Green, 2004).

1.5. THE FUTURE

Although the discipline of maritime archaeology in Australia has been advanced through strong legislation, dedicated heritage agencies, training programs and extensive field programs there remains much to do. There are excavation reports to publish, thousands of objects still to be conserved, exhibitions to present, maritime heritage trails to be finished, more public and volunteer researchers to involve, more private enterprises to engage as sponsors, more "not-for-profit" groups (e.g., the HMAS *Sydney* II Search Company) to be established. Assistance will also need be provided for programs to commence

and flourish in less well-developed parts of the region.

The theme that is absolutely central to the continued progress of the discipline is the unequivocal support of the general public, business and government(s) with a clear view that more resources are required. Where this support exists, maritime archaeology can swim against a modern tide where staff and programs are continually being “downsized” or where their focus is being diffused. Where it does not, or where there are moves to subsume it within broader maritime heritage studies, the discipline will be diminished. This subject has been aired recently in the context of the drive towards an “holistic” approach to maritime heritage and archaeology (Duncan, 2000, 2004; McCarthy, 2003).

Ironically, one way of keeping the discipline in the public and political eye might be the film and television industry and the growing and seemingly insatiable desire for documentaries and comment by expert practitioners on a wide variety of heritage sites. In 2003, for example, an unprecedented audience of over a million viewers per program watched Prospero Productions’ three-part *Shipwreck Detectives* series. Public, administrators and politicians alike enjoyed and wondered at the *Batavia* skeleton mystery on land, with its multi-disciplinary forensics-based approach; the Broome Flying Boat story concentrating on the raid, the search, the survivors, oral histories; and the underwater archaeology and the search and examination of the World War II wrecks at Truk Lagoon.

Although the films presaged the various published reports (e.g., Jeffery, 2004; Jung, 2004), as requested by WA Maritime Museum staff and others, the film on the Broome aircraft was not released by Prospero until the entire suite of sites were protected. This was finally effected, after a decade of applying a creative “mix” of legislation and regulations, by the late 2003 declaration of the aircraft wrecks under the terms of the *Heritage of Western Australia Act 1990*. Administered by the Heritage Council, a body that had previously concentrated on land-based structures, their embracing of submerged aircraft sites brought an entirely new and potent force to the protection of the maritime heritage in Australasia.

For maritime archaeology in Australasia, the successes of the submerged aviation archaeology program at Broome and the widening of the stakeholding group to include new heritage agencies were also to become a new direction after 2000. As more managers from government agencies come to recognize the importance of the submerged heritage in all its facets, other legislation will be used to protect non-shipwreck sites. In late 2004 a PBY Catalina (*JX 435*) lost at Cocos Island during World War II was nominated to the Commonwealth Heritage List under the terms of the 1999 *Environment Protection and Biodiversity Conservation Act*. If successful, this nomination will bring yet another powerful force to the protection of the submerged cultural heritage, namely the national park authorities with their management expertise and their legal strictures. Like the terrestrial heritage legislation used in the *Inconstant* case in New Zealand, this broadening of legislative and management horizons bodes well for the discipline as we enter a more technologically-oriented age, and as we go ever deeper in order to protect the underwater cultural heritage of the region.