Museum International

No 192 (Vol XLVIII, n° 4, 1996)

Maritime Museums I

CONTENTS

No. 4, October – December 1996

Front cover
Sailboat at Sea.
© VLOO, Paris

Back cover
Restoring the funnel of Germany's only nuclear vessel, the cargo ship *Otto Hahn*, at the German Museum of Shipping at Bremerhaven.
© Egbert Laska, Deutsches Schiffahrtsmuseum

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STOLEN

Fifteenth/sixteenth century icon (Italy/Crete school), painted in tempera, of the Virgin Mary carrying the Child Jesus on her left arm and supporting him with her right hand; the Virgin is wearing a halo, a dark robe and a dark, gold-trimmed veil which covers her head and shoulders; there is an inscription in Cyrillic characters on the edge of the veil, on the right; Jesus is also wearing a halo, and a light-coloured robe; an angel appears in each of the upper two corners. Dimensions: 67.5 x 47 cm.

Stolen on 2 December 1991 from a museum in Minsk, Belarus. (Reference IP/1120/SA/11/95 Interpol Minsk.)

Photo by courtesy of the ICPO–Interpol General Secretariat, Lyons (France)

Editorial

Some say that planet Earth is badly named, for the oceans cover more than 70 per cent of the globe on which we live. Source of life, cradle of gods and spirits, bridge linking the most far-flung and ancient human settlements, the sea has always played a singular part in human imagination. From the Bible to the Celtic legends, from Greek and Norse mythology to the tales of the Pacific Islands and the Far East, from the Eskimo peoples in the far north to the Haitians of the Caribbean, the marine world and the mariners who roam it have been the subject of countless chronicles, epics, sagas and songs.

The world beneath the sea is our nearest frontier, but in many ways the most distant, and its mastery may prove more significant for humanity in terms of food and raw materials than the conquest of space. Thus, in recent years, the oceans have come under increasing scientific scrutiny as their decisive role in shaping the life of our planet has become ever more apparent. The proper care and handling of this sensitive environment implies substantial efforts towards public education and a better understanding of the complex interaction between the oceans and humanity on the part of laypersons and specialists alike. The recent spate of international instruments promulgated by the United Nations – the Rio Declaration on Environment and Development, Agenda 21: the Programme of Action for Sustainable Development, and the Law of the Sea – bear witness to the urgency of action and reflection if this precious birthright is to be transmitted intact to future generations. That this is one of the most crucial issues facing us today is underscored by the United Nations decision to proclaim 1998 the International Year of the Ocean.

But there is more to the sea than the life beneath its surface. The history of navigation is linked to the history of civilization itself. The remains of a sailing ship found in a 4000 BC Sumerian tomb, the records of trade between Crete and Egypt as far back as 2500 BC and of the Phoenicians, who were importing tin from Cornwall in 600 BC, the traces of the fifth-century Polynesians who crossed nearly 4,000 kilometres of ocean to reach Hawaii with only the stars to guide them, the exploits of the Arab traders who ventured as far as China in the ninth century, while the Chinese were heading for Zanzibar, of the Vikings who roamed the north Atlantic from the eighth to the tenth centuries, not to mention the great voyages of the fifteenth-century Portuguese and Spanish navigators who changed for ever our vision of the world – all are part of the maritime experience.

And there is still more. The story of the sea is also the story of invention and creation – of ships and boats of rare beauty, of sail and steam and nuclear power, of maps and instruments, almanacs and tables, of radio and radar, of lighthouses and countless works of unknown artisans. It is moreover a tale of heros and villains, of men spurred by the lure of adventure, the love of risk, the search for profit, the will for political expansion and the simple geographical imperative that drives coastal peoples into the sea.

The very scope of the subject has given birth to a great diversity of maritime museums. No single issue of *Museum International* could hope to explore them in their infinite variety and for this reason we are devoting two issues to this theme. Although even such an exceptional measure is insufficient to the task, by so doing we hope to emphasize the importance of the subject and to provide inspiration for new ways of making it relevant and vital for the public at large. The present issue is concerned with the more scientific and museological aspects of the topic, while No. 193 will look at maritime museums and their visitors. Taken together, they will, we hope, demonstrate that, once again, museums continue to move into the forefront of contemporary life by addressing questions and problems that affect us all.

M.L.

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Maritime museums: custodians of an international heritage

Olivier Genin

Our warmest thanks go to Olivier Genin, whose enthusiasm and expertise made this Dossier possible. Having begun his career in the French Navy and then the merchant marine, he has always kept in close touch with the maritime world to which he is passionately devoted. Member of the French Institute of the Sea, he undertook in 1990–92, on behalf of the Ministry of Culture, a study of the principal maritime museums in Europe. Based on his considerable research and on his personal contacts with European and American institutions, he has just completed a compilation of the various experiences underway on behalf of the maritime heritage, which is being translated into English. In this article he provides an overview of the topics covered in this issue.

Since the Second World War, the world has witnessed a birth of interest in safeguarding the maritime heritage. The 'élites' are no longer solely interested in the future but also in what the past brings to the present, as was expressed by Jean Favier, the President of the French National Library, who stated: 'We must not feel we are being backward by looking back to the past; we must learn not to forget our history, because we need foundations for whatever plans we may have.'

For some years now, public and private bodies, and even individuals, have been taking an interest in their maritime history and undertaking research into their heritage in order to make it known to a hitherto largely lay public. Much too often, this newly awakened interest and the resulting enthusiasm and goodwill come up against a lack of experience, which leads to disappointments, discouragement and, at times, the loss of financial investments.

Museum International is hereby making its own contribution as an organ of UNESCO in this transmission of the experience of well-established maritime museums. It has already devoted one issue (No. 166, 1990), to 'Port Museums Around the World'. In his editorial, the then Editor clearly demonstrated the importance of the sea in the creation of the world and its evolution to the present. He also announced that that number would be followed by others. This issue and the next are a fulfilment of that promise.

Contrary to what too many people believe, the maritime heritage is not restricted to models, charts, and sundry objects to be found in showcases. It comprises a great number of elements ranging from the smallest objects to the boats themselves and to large historic buildings. It can be found at the bottom of the sea in valuable wreckage – on sandbanks – and in out-of-the-way docks of ports where abandoned boats are kept. It can be found along the coast in the form of historic buildings, fortifications, semaphores and lighthouses. The maritime heritage can also be discovered in shipyards and workshops, in the houses and even attics of families descended from sailors in the form of souvenirs brought back from voyages, and sundry documents, including letters which sometimes provide valuable testimonies. Of course, it is also to be found in antique dealers' shops as well as in the possession of competent collectors who are not necessarily opposed to museums.

Wherever it may be and whatever the country safeguarding it, the maritime heritage is undeniably international in character. It bears witness to the history of ships and the sailors who through their world voyages forged, and still forge, links between nations, regions and ports. It is thus desirable that one day a world inventory of the significant and characteristic elements of the maritime heritage be created and kept by an international body. It could involve the transnational compilation of inventories. Researchers of all types would find in it a precious tool afforded them by the magic of computer science. Another, and no less significant, advantage would be that this world inventory would facilitate and even lead to transnational collaboration, not only for joint studies but also for exchanges and the lending of objects belonging to the maritime heritage. This would make it easier to prepare and organize joint exhibitions which could be staged from country to country. Why should this type of co-operation, which has existed for decades in the domain of the fine arts, not also exist in that of the maritime heritage? Its international character would amply justify this. Such an inventory is possible and, indeed, in 1993 the World Ship Trust

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published the second edition of the *International Register of Historic Ships* which describes over 1,200 visible vessels in 53 countries.

The World Ship Trust is the only international organization that specializes in educating the public about the importance of both the national and world maritime heritage, represented by historic vessels and presented by museums. It was founded in 1979, and is administered by an international governing body. In addition to the *International Register of Historic Ships*, it also publishes the *World Ships Review*.

Contacts, at all levels, between the maritime museums of the world are organized by the International Congress of Maritime Museums (ICMM). This is an international association which also has numerous associate members among whom are historians, researchers and collectors. It organizes a large gathering every three years for the purpose of exchanging information and experience and conducting joint studies.

European citizens can make inquiries at the European Union which, for many years now, has been conducting a policy of support for projects aimed at safeguarding the European cultural heritage. Starting from 1996, the activities of the European Union in this sphere are to be reorganized and broadened with a view to the adoption of the community programme of action, RAPHAEL (1996–2000). The projects receiving assistance within the framework of this programme will concern the immovable as well as the movable heritage. They should be characterized by their European dimension, involving genuine transnational co-operation and a multidisiciplinary and integrated approach. It would be very interesting to observe the actual application of this procedure to agreements between European maritime museums concerning actions in Europe to present the maritime heritage and joint studies on this form of heritage which, as we have seen, is essentially international in character.

At the national level, a large number of countries have official bodies, often called 'academies', which are responsible for conserving maritime history and disseminating knowledge about it. One example is the Académie Royale de la Marine de Belgique (the Royal Marine Society of Belgium), which is also concerned with technical and scientific studies of Belgium's maritime heritage. Another example is the Académie de Marine (the Marine Society) in France, which conducts scientific, cultural and administrative activities concerning all maritime questions, including heritage.

Many other associations exist which are aimed at a national public. They include the Marine Society in London, the National Maritime Historical Society and the North American Society for Oceanic History (NAHSO) in the United States, and, in France, the Institut Français de la Mer (IFM – the French Marine Institute), a commission of which is responsible for providing the public with information on all maritime questions and initiating it in the history and conservation of its maritime heritage.

Heritage and history are bound up with each other: heritage bears witness to the history which constructs the culture of each people during the course of time. The state of Israel, for example, believes that archaeology constitutes the basis for studying its history, and should therefore provide the thematic link in the presentation of its heritage. Accordingly, its museums are called 'multidisciplinary', and the maritime heritage on show is associated with other specialities (with but three exceptions). The heritage is shown as close as possible to the research and discovery site.

Nadav Kashtan, a researcher specialized in maritime heritage, demonstrates what is sometimes forgotten, namely how archaeology is part and parcel of the study of maritime heritage.

The primary focus of the traditional maritime museum is the history of events on the surface of the sea and in the open, whereas underwater research centres show events taking place beneath the surface. The two thus complement each other to provide the public with information and broadly based instruction concerning the sea, ships and the lives of sailors. The research centres, with their aquaria, marine mammals and laboratories, are not museums, properly speaking, though this name is sometimes extended to include them. They use fossils to present the past, study the present in order to assist seafarers and, more especially, fishermen, and try to establish forecasts about the future by analysing changes in fauna, maritime currents and climates. Océanopolis in Brest clearly demonstrates the usefulness and original features of such a centre, and makes its contributions to the town plainly obvious. Museums in general, and maritime museums in particular, in the same way as underwater research centres, are participants in regional economic life. Local authorities and, sometimes, inhabitants do not fully realize this; not so in Brest.

Courage, tenacity and imagination, ingredients of the all-embracing quality that is faith, are fully illustrated by the history of Lithuania's Maritime Cultural Centre. Any comment would be superfluous; just read it and you will understand the lesson expounded by Aloyzas Kazdailis.

The museum considered as a temple reserved primarily for the scholarly is no more. Changing modern technologies now make it more and more attractive to all sections of the visiting public. It is universally acknowledged that the cathode-ray screen is now the principal vector of information. Pierangelo Campodonico, the curator, describes the collaboration that exists between the Museo Navale of Genoa and the town's university, telling us about the result of the interactive system they have established. He also expresses his point of view concerning the vitality to be given to an exhibition through the 'dramatization' of its presentation with scenes that are as close as possible to the period being depicted.

When a decision is made to create a maritime museum, the first question to be addressed, after that of financing, is the place where the collection is to be conserved. Very often, the authorities propose locations that were never designed to become museums. Rooms cannot be used because of their size, position, types of access and lighting. The administrators of the National Scheepvaartmuseum (National Maritime Museum of Antwerp), who found themselves in this situation in 1952, did not lose heart but with faith and imagination were able to come up with solutions that have made the museum what it is today, complete with its reputation! Wim Johnson, its deputy director, explains the principles underlying its presentation.

It has become increasingly evident that much of the underwater marine heritage is under serious threat by pillage and carelessness. UNESCO's efforts to develop an international legal instrument to protect this priceless patrimony are described by Étienne Clément and Lyndel V. Prott.

The next edition of *Museum International* will be devoted to maritime museums and their visitors, to the extremely rare specialization that is the history of the merchant marine, and to collectors who, when competent and passionately enthusiastic, can be partners of maritime museums. We hope that both these editions will be read not only by professionals in charge of safeguarding and conserving the maritime heritage, but also by organizations and individuals who are looking for ideas, information and addresses in order to make their dreams a reality: saving the maritime heritage. ■

Note

A list of names and addresses of organizations mentioned in this article may be of use to readers:

The World Ship Trust
202 Lambeth Road
London SE1 7JW
(United Kingdom).

The International Congress of Maritime Museums
Altonaer Museum in Hamburg
Museum Strasse 23
2000 Hamburg
(Germany).

L'Académie Royale de la Marine de Belgique
Nationaal Scheepvaartmuseum
Steinplein 1
2000 Antwerp
(Belgium).

L'Académie de la Marine
21, place Joffre
75007 Paris
(France).

The Marine Society
202 Lambeth Road
London SE1 7JW
(United Kingdom).

The National Maritime Historical Society
Peekshill, NY 10566
(United States of America).

The North American Society for Oceanic History
University of North Carolina
Greenville, N.C.
(United States of America).

L'Institut Français de la Mer
9, rue du Docteur Grey
75020 Paris
(France).

Call for contributions

Museum International welcomes suggestions and articles on all subjects of interest to the worldwide museum community. Proposals for individual articles or themes for special dossiers should be addressed to the Editor, *Museum International*, UNESCO, 7 place de Fontenoy, 75352 Paris 07 SP (France). We promise a prompt reply!

Maritime treasures of Israel: from excavations to collections

Nadav Kashtan

The variety and scope of maritime collections in Israel bear witness to the region's long seafaring history. Born in Haifa, Dr Nadav Kashtan wrote his Ph.D thesis in France on 'The Northern Coast of Palestine in Hellenistic and Roman Times'. He was director of the National Maritime Museum from 1990 to 1995 and is a graduate of the Museological Studies Programme at Tel Aviv University. He teaches in the Department of Maritime Civilizations at Haifa University, specializing in sea and navigation in the Ancient Mediterranean. He is now conducting a research project at the Centre of Maritime Studies on 'The Jewish Contribution to the History of Shipowning and Navigation'.

The museums of Israel reflect certain characteristics of the nation and the country. Their number is revealing in itself, surprising only to those unaware of the 'Israeli experience'. The revised 1995 Hebrew edition of *Museums in Israel* (Ariel Publishing House, Jerusalem), lists more than 200 museums for a country with 5.8 million inhabitants. This means density, split collections, variety, competition, repetition and other phenomena, which we shall see specifically in maritime collections. A dominant characteristic of Israeli museums is their diversity. Apart from the distinction between art and archaeology, a great many are devoted to Judaica, the history of Zionism, army and security, and agriculture.

Maritime museums in Israel do not really constitute a thematic section in themselves but belong to the larger category of archaeology, which evidently influences the definition and location of these collections. Geographical and institutional disposition of maritime collections is, of course, an outcome of such factors as size and importance, personal initiative, resources, and source of public assistance (municipality or government). Three types of collections are presented here:

1. Maritime museums founded and organized as such. In Israel, 'maritime' includes history and underwater archaeology, while marine and naval museums are practically nonexistent. The three museums are: the National Maritime Museum, the Clandestine Immigration and Navy Museum (both in Haifa), and the Centre of Nautical Archaeology at Dor.

2. Maritime collections within local archaeological museums, mostly in kibbutzim along the coast.

3. Isolated exhibits, parts of larger archaeological collections. The examples chosen are of private collections recently transformed into important museums in Jerusalem and Haifa.

Due to the obvious necessity for registration and protection of artefacts by a responsible body, a great number of maritime objects from excavations are to be found in the storerooms of the Israel Antiquities Authority (IAA) in Jerusalem. In fact, many of them remain stored for years, awaiting research or simply not in demand. The initiative and work of the Marine Branch has altered that, as we shall see.

The story of collections and buildings forms a background to the main question: whether and how maritime collections and museums are related to the sites which are the source of most of their artefacts, and the consequences of this relationship on the contents and organization of museum exhibits. Although we shall deal principally with permanent collections, temporary exhibits on maritime themes reflect the same problems and possibilities.

Collections, museums and sites

A glance at the map of Israel shows that the sea is a dominant factor in the country's history and life. The Mediterranean coastline, almost 200 km long, is a natural frontier conditioning survival and development. The importance of the sea is conveyed by its biblical name *Hayam Hagadol*, the Great Sea (Numbers 34:6), which, for the inhabitants, expressed its immensity and not merely its position between continents – Mediterranean. The coast of Palestine was the battlefield and melting-pot of the great civilizations and

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maritime empires of the ancient Mediterranean. Egypt, Phoenicia, Greece and Rome determined the political, economic and cultural fate of the coastal zone. The major maritime cities were Acre (Akko-Ptolemais), Dor, Caesarea Maritima, Jaffa and Ascalon, each ruling a section of the coast. Other sites dependent on parent states included prosperous ports like: Achziv, Sycaminum (Shikmona), Athlit, Tel Nami, Apollonia, Iamnia (Javne) and Azotos (Ashdod). We have selected seven museums and collections which reflect the diverse and rich treasures of Israel and their relation to coastal and underwater excavations.

Athlit/Neve Yam: Marine Branch of the Antiquities Authority

On a small peninsula about 10 km south of Haifa, stand the ruins of the Crusader Castle of Athlit (Castellum Peregrinorum), attesting to the glories of the Crusader Kingdom in Palestine (A.D. 1099-1291). Athlit Bay is also one of the sites with the richest underwater remains, including a Neolithic village with a cemetery, the unique Hellenistic battering ram (see below) and hoards of coins, jars, Bronze Age stone anchors and copper ingots, recalling the fleets that struggled for hegemony in Palestine. It is both practical and symbolic that Kibbutz Neve Yam (literally 'oasis of sea'), near Athlit, was chosen as the headquarters of the Marine Branch of the State Antiquities Authority responsible for underwater antiquities along the entire coast. Its mission includes enforcement of the 1978 and 1989 Antiquities Law (prevention of robbery), underwater surveys and rescue excavations, and inspections, registration, research and publications. While this article was in preparation, the staff showed me a group of anchors to be delivered to the Palmachim Museum after their research had been completed. The finds concentrated in the Marine Branch are therefore a principal source of relatively recently discovered artefacts.

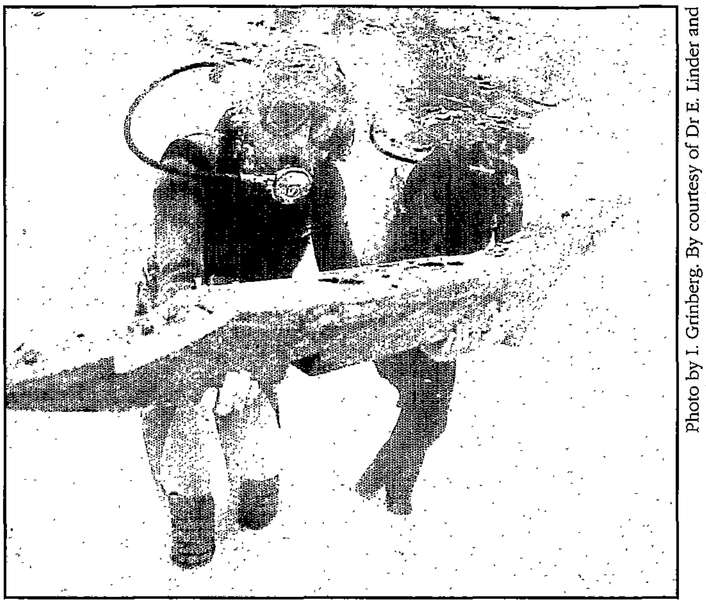


Photo by I. Grinberg. By courtesy of Dr E. Linder and Y. Kahanov, *Maagan Michael* Project

Divers retrieving a frame from the wreck of the fourth century B.C. vessel, the Maagan Michael.

The National Maritime Museum, Haifa

The institution was founded in 1953 by the late A. Ben-Eli, an officer in the Israeli navy, who placed his private collection in two rooms of the Sailor's Home in central Haifa. The museum moved to its present building in 1972 and is part of the municipal Haifa Museum, which incorporates several art and archaeology museums. The unofficial title 'national' reflects the will and interest of its founders to create a comprehensive exhibition on the history of navigation from its beginnings in Egypt to shipping in modern Israel. The two dominant themes of the collections are underwater discoveries (mainly Bronze Age stone anchors and storage jars) and an outstanding cartographic section of 3,500 old maps and engravings. Smaller sections are devoted to marine motifs on Greek and Roman coins and on oil lamps, scientific instruments, statuettes of marine divinities, and model ships. The items are organized in a permanent exhibition, but few new finds have been added because of the increasing number of local museums and the delay of research work.

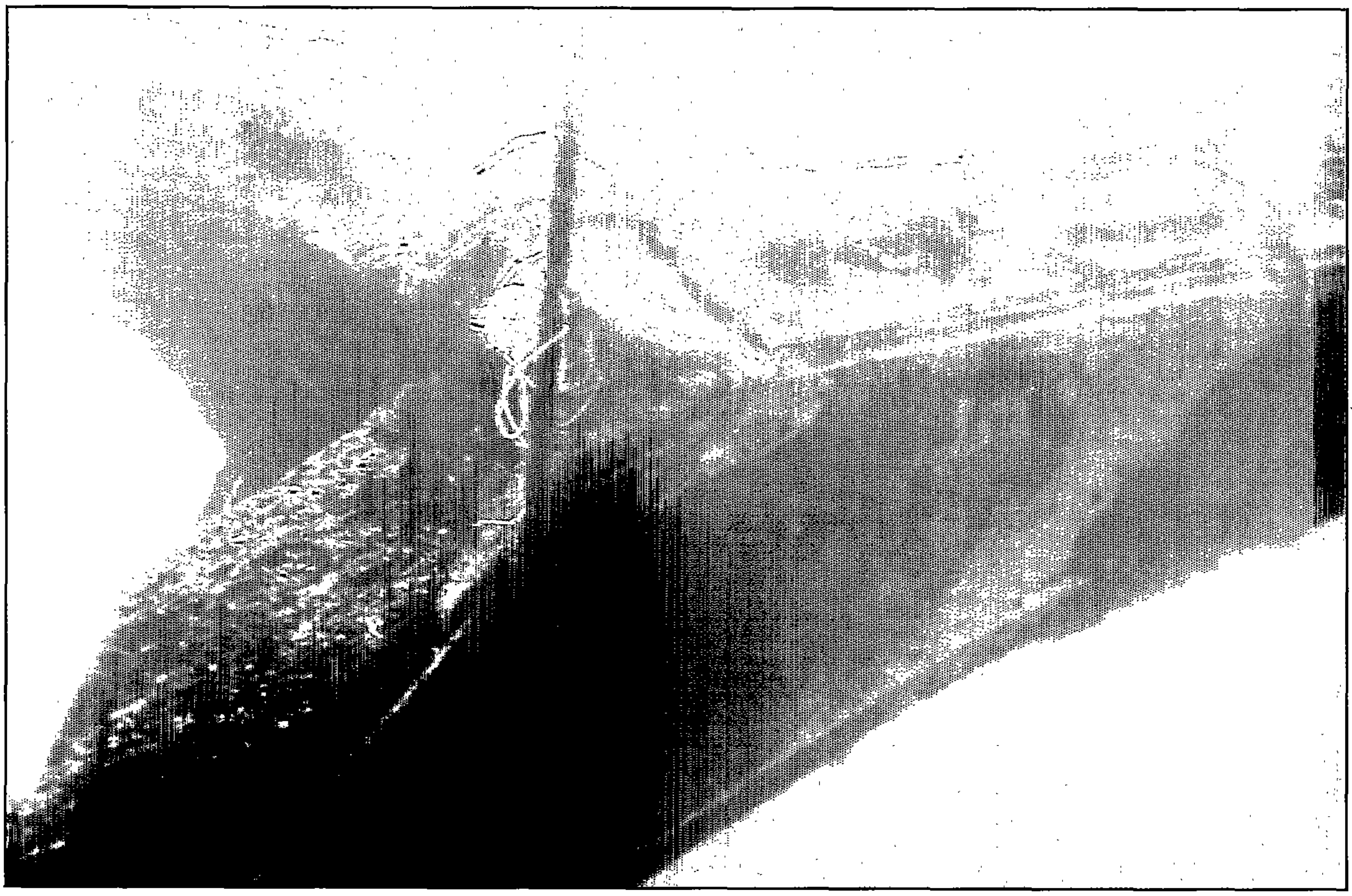


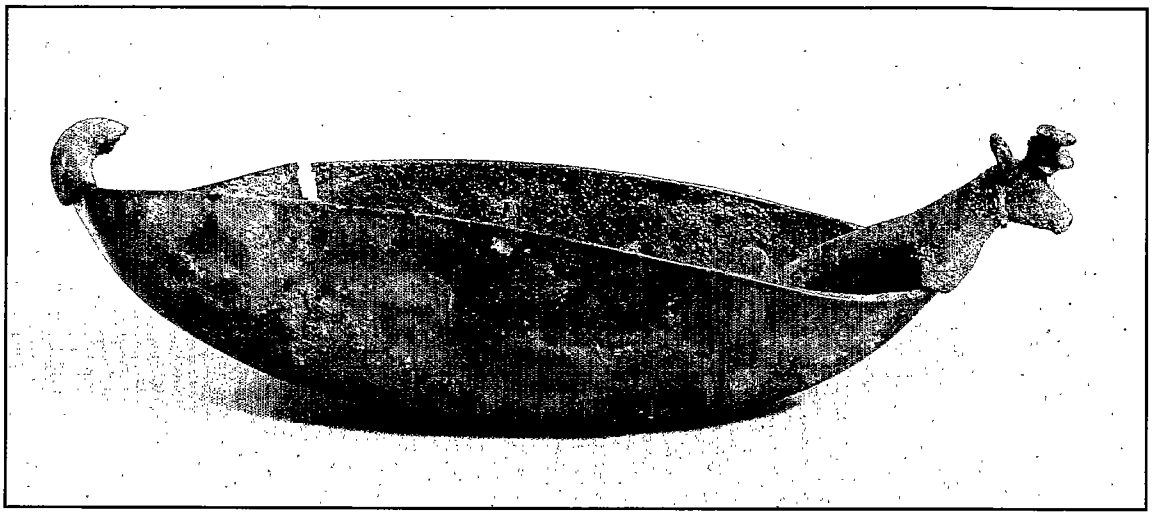
Photo by courtesy of the Israel Antiquities Authority

The bronze Athlit ram, from the Hellenistic period.

The pride of the collection is certainly the Athlit ram. During a routine dive in autumn 1980, a student of maritime civilizations encountered in the shallow water of the Athlit Bay a metal object whose edge had been uncovered by a storm. It was the bronze ram of a Hellenistic warship (third to second century B.C.) cast in one piece, with wooden parts of the prow still attached. When the intact bronze was cleaned it revealed four decorations related to Greek divinities and marine cults: a caduceus, a helmet with star (representing the Dioscuri), an eagle and what is possibly a trident. Studies of the wood, which underwent a long conservation process of immersion in resin and acetone, proved that it had been ingeniously designed to prevent the shock of ramming to the attacking vessel itself. The ram is indeed a masterpiece of its kind and has enriched our knowledge of ship con-struction and the arts of ancient naval warfare. But how did a Hellenistic warship lose its heavy ram so close to the coast and completely disappear? The mystery remains.

A replica of the ram was included in the *Maritime Holy Land* exhibition in 1992, which represented Israel at Genoa, in the international celebrations of the 500th anniversary of Columbus's voyage. The display (curated by the author) was entitled *Mediterranean Civilizations in Ancient Israel from the Bronze Age to the Crusades*, and summed up thirty years of underwater excavations in the major sites of Israel. Contacts with Haifa University are important for the activity and development of the museum. A marine workshop operating in the basement provides facilities for diving and excavations, and assists researchers of the Recanati Centre for Maritime Studies, who carry out projects on subjects including maritime history, lobsters and jellyfish, artificial reefs, and the geomorphology of the coast.

Photo by courtesy of the Bible Lands Museum



Bronze boat decorated with a stag at the bow and a duck at the stern, from Phoenicia, c. 700-500 B.C.

The Centre of Nautical and Regional Archaeology at Dor

Ancient Dor is known to have been an active port during the Late Bronze Age, and particularly the landing place for the Sea Peoples towards the end of the twelfth century B.C. Lying between Acre, Caesarea and Jaffa, three major ports of Palestine, it was a prosperous city in biblical times and up to Persian and Hellenistic periods. Tel Dor, systematically excavated since 1980, has become one of the main archaeological sites in Israel, and a local museum was required to house the numerous finds. The bay, the beautiful rocky shore, and the excavations make Dor an impressive maritime site. An old stone building at Kibbutz Nachsholim, located close to the lagoon and to Tel Dor was acquired. The edifice was built by Baron de Rothschild in 1891 – at the beginning of immigration to Palestine – to produce wine bottles for Zichron Yaacov on Mount Carmel. The factory fell into disuse in 1896 and its lower floor was transformed into a nautical centre and museum, though the upper floor still awaits restoration. The general collections consist of artefacts from the Tel and from underwater excavations, and include figurines, oil lamps, jewellery and coins, while the maritime collection comprises some dozens of stone, wooden and metal anchors, reflecting their technological development. Storage jars and cargoes found in wrecks nearby attest to the thriving commerce between Dor and the eastern Mediterranean.

Another specifically maritime collection belongs to a much later period. In spring 1799, when Napoleon had ended the siege of Acre and was retreating to Egypt, his exhausted troops arrived at Dor. Seeing his army stricken by battle and epidemic, Napoleon gave orders to sink all the heavy armaments and cannon that would hinder the hasty retreat. Some of the sunken arms were retrieved in the 1960s and others since 1976, when divers and underwater archaeologists began surveys on behalf of the Association for Underwater Research and the State Department of Antiquities. Among the artefacts recovered are rifles, swords, lead bullets, and several bronze cannon dating from the end of the eighteenth century. The highlight was an Ottoman cannon, captured earlier by the French and sunk with the rest of the arms.

The Sdot-Yam Museum of Antiquities

Sdot-Yam Museum is a typical example of the archaeological collections in many kibbutzim, generally devoted to local discoveries, including maritime objects. The museum is run by two members of the kibbutz, which was founded on the coast near Caesarea in 1940, eight years before the establishment of the state of Israel. The first twenty pioneers were interested in agriculture and also wanted to develop marine and fishing activities, in which they were helped by local Arab fishermen. The first artefacts retrieved from the sea were put in

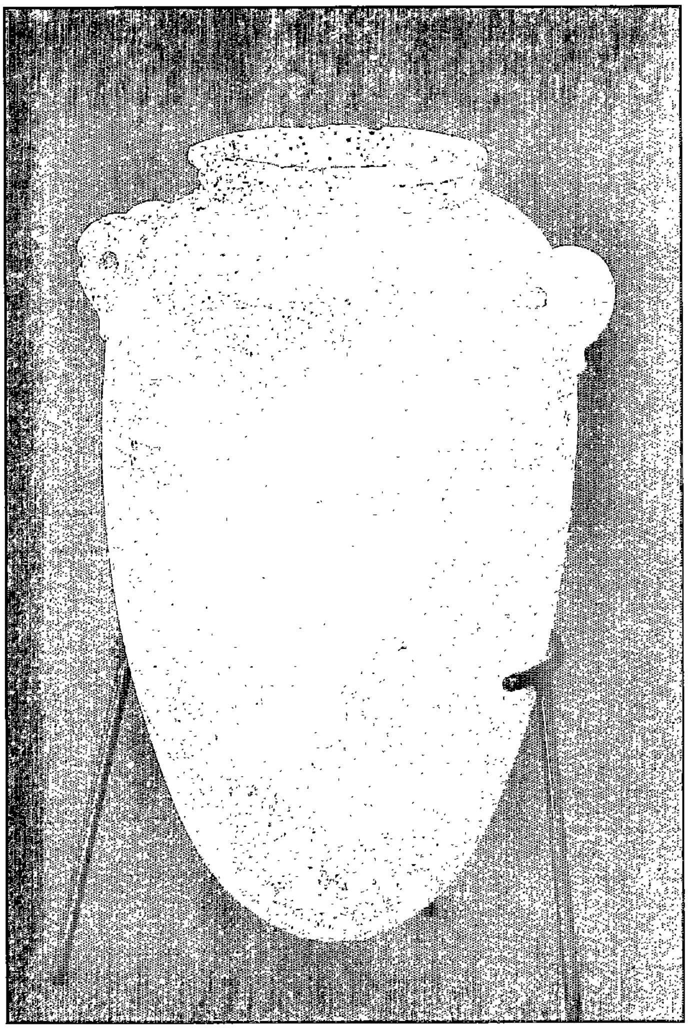


Photo by courtesy of the Israel Antiquities Authority

Iron Age alabaster jar recovered from the sea south of Palmachim by fishermen and now on display in the Palmachim Museum.

fish boxes and the coins in cigarette boxes, according to the recollections of the founder. The museum was opened in 1951 and the exhibits consist of objects retrieved from the fishermen's nets, and other finds from the fields and dunes surrounding the kibbutz. Neighbouring Caesarea Maritima has become a leading excavation site and the symbol of Israeli underwater archaeology.

Of the marble statues and remnants found in the area the best known is the headless Tyche of Caesarea, her foot resting on the prow of a ship. Most of the statues are located in the neo-classical courtyard. Coins and gems with marine motifs and bronze statuettes of Isis and the Dioscures, divinities connected with marine mythology and navigation, are in the permanent exhibit. A large collection of amphorae occupies one of the three small halls of the museum.

The Museum of Antiquities, Kibbutz Palmachim

Beit Miriam Museum of Archaeology, part of the kibbutz cultural complex, is another local museum whose collection is partially related to the sea. Kibbutz Palmachim was founded in 1949, to the north of ancient Javne-Yam (Iamnia Maritima), and its founders chose fishing as one of their occupations. Amphorae and pottery pulled out of the sea by fishermen were included in the permanent exhibit. Other artefacts were discovered while digging foundations for housing. Typically, the first collections were kept in the members' private rooms, then in a hut, and later transferred to the museum, built in 1969 on a small hill overlooking the beautiful sandy shore of Palmachim. The museum contains a 'regional collection' of artefacts from excavations in southern Israel. The chronological spectrum ranges from chalcolithic sarcophagi and merchant vessels from Cyprus, Egyptian alabaster jars, and an Iron Age ostracon with a Jewish inscription. Exhibits also include figurines and vessels of the Persian, Hellenistic and Byzantine periods, and an ornamented mosaic floor, discovered at Jamnia Maritima (Javne), the nearby ancient port.

The Bible Lands Museum, Jerusalem

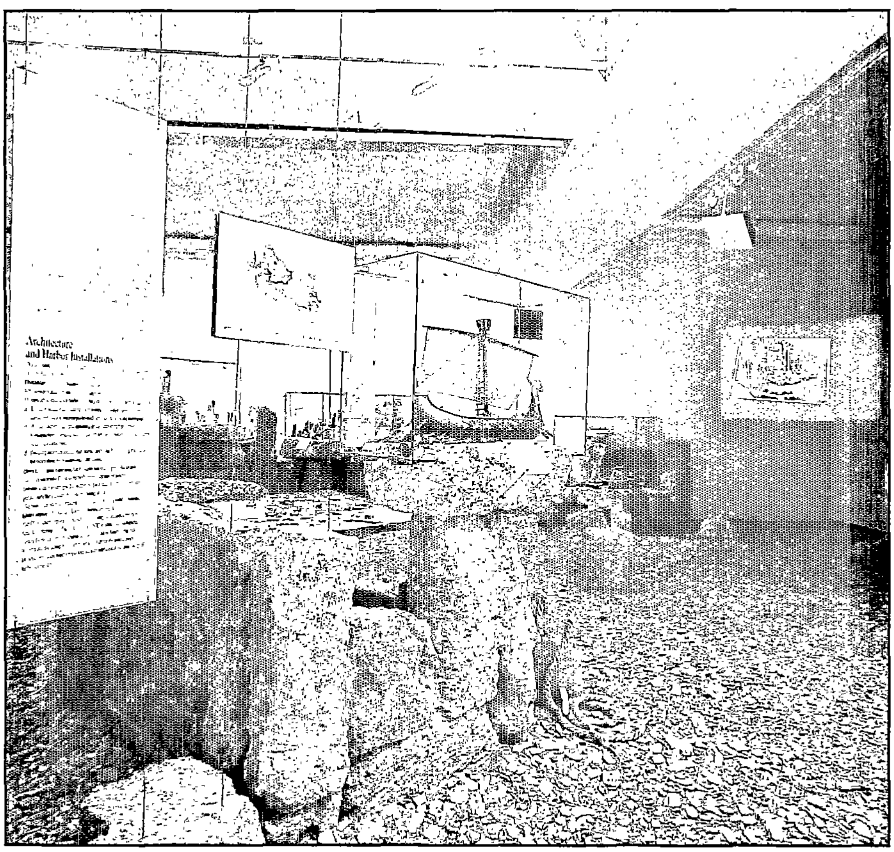
The Bible Lands Museum was created in 1992 from the Elie Borowski collection, with the intention of building 'a collection of ancient objects which would entice people to study the Bible and the world from which it sprang', as the *Guide to the Collection* (Jerusalem, 1992) notes. Teaching the ethics of the Bible in their universal context, through the material cultures of Egypt, Babylonia, Phoenicia, Persia, Greece and Canaan, was indeed a challenge. The modern display is organized chronologically, intersected by thematic sections devoted to the different cultures. Among Sumerian seals, terracotta figurines, sarcophagi and mosaics, are found several bronze models of Phoenician and Sardinian boats, often decorated with heads of animals, including a unique 'monkey boat' (eighth century B.C.), a votive piece with three seated monkeys. A Phoenician boat is decorated with lotus flowers and may have been used as a drinking vessel. The inclusion of maritime themes in the exhibition was evidently conditioned by the personal interest of the collector; however, it does reflect the important role of isolated maritime artefacts in a large historical or archaeological display.

The Reuben and Edith Hecht Museum, Haifa University

This museum is based on the private collection of the late Dr Reuben Hecht, donated to the University of Haifa. It was inaugurated in 1984 and is the only university museum in Israel, the nearest parallel being the Genia Schreiber Art Gallery in Tel Aviv University. The permanent exhibit ranges from Chalcolithic to Byzantine periods, with impressive collections of coins, weights and jewellery. There are also artefacts on loan from the Israel Antiquities Authority.

The Hecht Museum co-operates with the Marine Branch in Athlit, and regularly displays excavations from coastal sites such as Akko, Tel Nami or Caesarea. It organizes

© A. Baltinester



General view of the exhibition Phoenicians on the Northern Coast of Israel *at the Hecht Museum in Haifa.*

temporary exhibitions and symposia on maritime themes, serving the scholars and students of the Department of Maritime Civilizations and the Centre for Maritime Studies in the University.

A recent exhibition, *Phoenicians on the Northern Coast of Israel* (1993), is a typical example. The curators (two professors) and designers have attempted to present comprehensively the main aspects of Phoenician civilization in a limited space (100 m^2). Themes include marine commerce, harbour installations, burial customs and religion. Objects were placed on a pebbled floor, to create an impression of coast and sea and, by a rare decision, this successful exhibit has now become a permanent display.

The maritime collections and museums presented can be divided into two main groups according to their relation to the maritime sites of Israel. The relation is either geographical (proximity to excavations and coastal sites) or thematic (exhibitions in larger archaeological contexts). The various collections demonstrate the relative place of maritime themes in Israeli archaeology and museology, yet in spite of its importance, the maritime field has not received sufficient attention in a country often defined as 'one big archaeological dig'. This has been rectified in the last ten to twenty years by the contribution of the Antiquities Authority and by the results of underwater excavations. The density of sites and diversity of exhibits should encourage the creation of more local museums, but financial difficulties, lack of appropriate facilities and other problems have still to be overcome.

Reference has not been made to special discoveries like the Roman fishing boat from the Sea of Galilee ('Jesus Boat'), and the fourth century B.C. *Maagan Michael* wreck excavated since 1989. Both, particularly the wreck, have contributed to our understanding of ancient seafaring, commerce and ship construction, and will become the first 'boat museums' in Israel. ■

Note

The author would like to thank the following persons and institutions for their kind collaboration: Batya and Elie Borowski, Bible Lands Museum, Jerusalem; Rina and Arnon Engert, Sdot-Yam Museum, Rena Minkoff, Haifa; Ofra Rimon, Hecht Museum, Haifa; Ora Zehavi, Media Department, Haifa University Library; Zvi Zehavi, Palmachim Museum; Bracha Zilberstein, Nachsholim Museum, Dor; Marine Branch staff, Neve-Yam.

Océanopolis: a showcase for research

François de Beaulieu and Hervé Quéméner

Today, fully 50 per cent of French oceanographic research is carried out in Brest and its environs, and Océanopolis is both the public showcase of this research and a fully fledged participant in all spheres relating to marine mammals. But although all the partners involved in the project cherished great hopes, none would have dared to predict such outstanding success. The authors, a writer and a journalist, describe this phenomenon.

Océanopolis is frequently likened to a giant white crab deposited on the esplanade of the sailing harbour of Brest. However, such a comparison has its limits. This crab walks undeniably straight, carrying out its numerous occupations in a consistent manner. In concrete terms, it is, at one and the same time, a tourist attraction, a teaching centre and a research laboratory. Numerous complementary activities are carried out in relation to these three principal sectors: the production of audio-visual documents, breeding, the staging of exhibitions, promotion, equipment maintenance and forward planning.

Unlike those aquaria that exhibit fish brought haphazardly from seas throughout the world merely for the pleasure of seeing them, Océanopolis offers visitors a very logical circuit. After an initial general view of oceans, it gives them an inside vision of Brittany's coastal waters, showing their most characteristic milieux. Each aquarium is an open window on an ecosystem: a vast mudflat and a continental shelf, a forest of Laminaria, a herbarium of Zostera, a beach, a submerged section of cliff, a pool. The tank in which two common seals (born in captivity in Denmark) are active plays a central role in an exhibition on whales, dolphins and, of course, seals. For many visitors, it is also an opportunity to learn that a colony of grey seals and two groups of large dolphins are to be found just a few kilometres away in the Sea of Iroise. Greater proof could hardly be given of the exceptional wealth of Brittany's coasts! Life-size models give a concrete idea of the main cetacean species that frequent our shores: a black pilot whale, a common dolphin, a porpoise, a little rorqual and a Risso's dolphin.

Mesmerized by the bars and congers, the anemones and algae, oyster-catchers and blennies, sea-urchins and ascidia, one might tend to forget that the natural processes on display have extraordinary technical underpinnings, and that there is the same gulf between our goldfish bowls and Océanopolis as there is between a 14th-of-July fire-cracker and the Ariane space rocket.

Merely collecting water far out at sea and using it to form pools is not enough to maintain species with very different requirements. Temperatures, flow rates, possible pollution, waste disposal, the production of food for certain species, and even swells have all to be managed. First and foremost, however, it is the natural light and the sea-water, renewed every night, that are responsible for the spontaneous colonization of the large aquaria by the algae and invertebrates. It is, indeed, the first time in the world that the large Laminaria have been made to reproduce!

Emotion and curiosity

Jean-Paul Alayse, the overall designer and director of the aquarium, has become an authority on aquariology. He is one of the generation of scientists who have drawn lessons from the large-scale installations first created in the United States in the 1970s: 'Americans promptly understood the need to fire the imagination with spectacular displays and set up pools akin to the scale of their continent. The enormous investments required led them to achieve a great many technological feats. In addition to the Epcott aquarium (designed by Disney), which only puts on shows and proposes no messages, the aquaria of Baltimore, Boston and, above all, Monterey, California (which has set a world standard) have succeeded in combining emotional appeal with an educational message. These examples from America inspired us to take a similar course while at the same time preserving our

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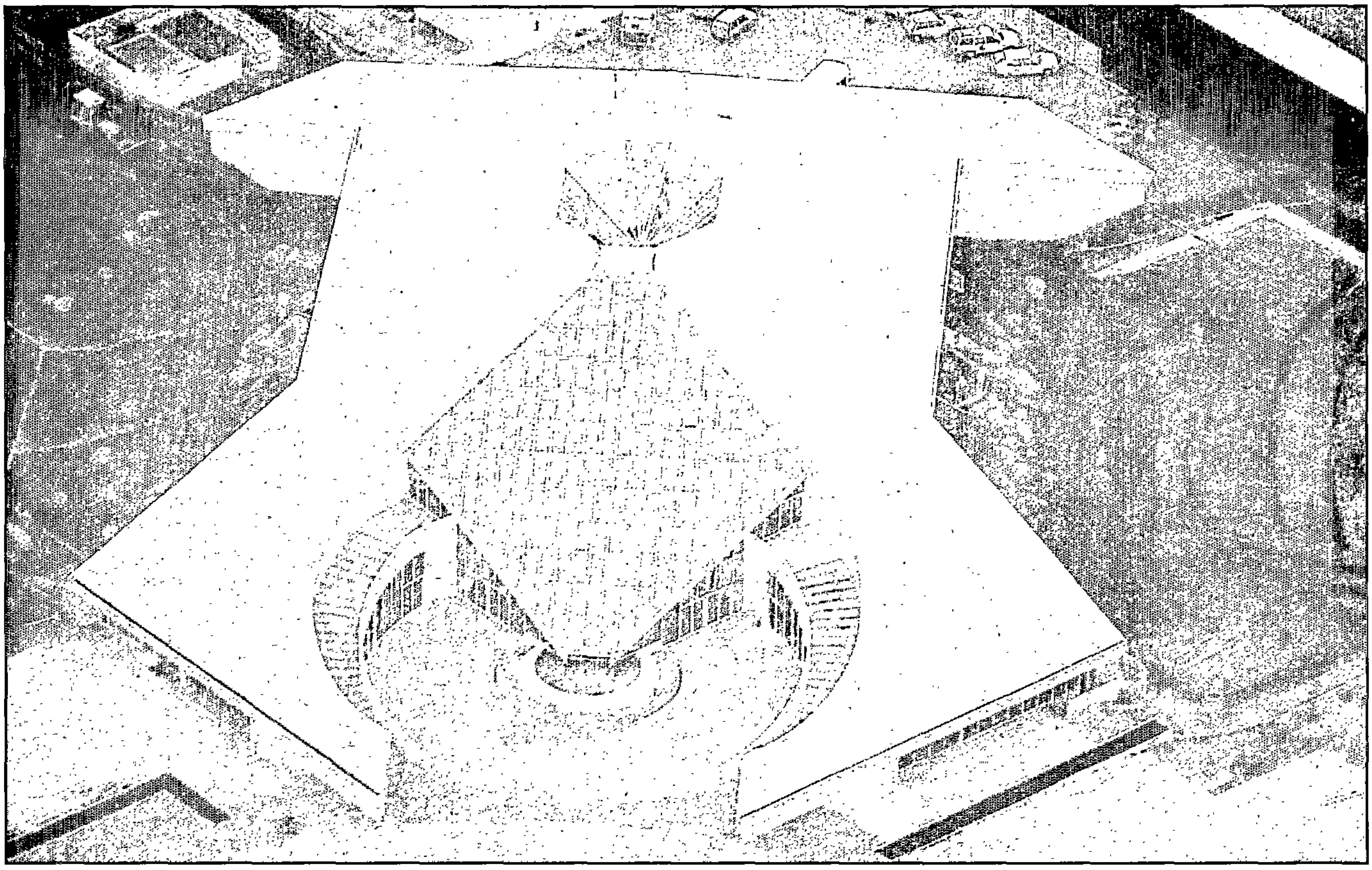


Aerial view of Océanopolis, a 'giant white crab' perched on the esplanade of the Brest harbour.

specific national characteristics, especially in the field of scientific and technical culture.'

As far as emotional appeal is concerned, one would have to be a diver who is particularly jaded not to be overwhelmed by the large aquaria. Indeed, such widely diverse concentrations of fish cannot be found in the sea itself, where they are all distrustful of each other. Here, feeding at fixed times has the advantage of pacifying the most aggressive ones. This slight bending of the harsh rules of wildlife enables a densely populated ecosystem to be observed.

As to educational content, there is hardly any type of curiosity that remains unsatisfied. Those for whom explanatory signs are inadequate can always use a fully fledged documentation centre at the heart of the building. School groups have an educational service at their disposal which organizes discovery days that include laboratory experiments.

However, the comparison with the giant American installations does not stop at interior design. Eric Hussenot, Océanopolis's scientific and cultural director, observes that 'they have all been designed in order to help breathe new life into old cities undergoing change, and seeking to reposition themselves. By their success they set an example which others could not but follow, albeit keeping to the European scale of things. And, the very scope of oceanographic research in Brest warranted the creation of a project which went far beyond facilities designed exclusively for leisure.'

To understand Océanopolis's success, it would help if we start by casting our minds back to the context in which the centre was opened in 1990. Brest was then what could be called a 'non-destination' for tourists. A traveller who was attracted by the competitive prices in the hotel trade soon discovered that no operator wanted to market a tour passing through the largest town in Finistère. As for thinking that tourists could be attracted by scientific exhibits . . .

The promoters of the project themselves were cautious, and did not wish to be carried away by imaginary figures. So, they carried out a massive publicity campaign in order to be sure that they would reach a public which was still ill-defined.

The long gestation period and various delays, which meant that Océanopolis was only opened in 1990, had their positive sides. Not only were the people of Brest in a state of expectancy which made them rush to the Port du Moulin-Blanc, their minds had also had time to mature and take to the novel forms of scientific culture being presented. Lastly, 1990 marked the zenith in the steep upward curve of tourism in Brittany.

Indeed, the first year's 530,000 visitors have to be measured against the 50,000 who would have kept Georges Kerbrat, the mayor who participated in the launching of the project, 'happy', or even against the 200,000 projected on the basis of expert calculations worked out by feasibility studies.

Océanopolis was on the verge of implosion, and had to innovate to keep pace with expectations and ensure that its success was not ephemeral. Brest has found its icon of change, and no elected representative, no candidate, can now fail to give full support to the winning team.

A constant renewal

Océanopolis's team recovered from the giddy feeling produced by the initial figures, settled down to work again and are still at it. They do not rest on their laurels, but work hard at constantly renewing the museography and at developing significant extension projects.

A large exhibition is mounted every two years, and habitual visitors have thus been able to discover oceanography, algae and fishing. The exhibits in certain thematic spaces are also renewed on a regular basis, and this turn-over has enabled the display of, for example, anemones, molluscs, dogfish, echinoderms, chitin,

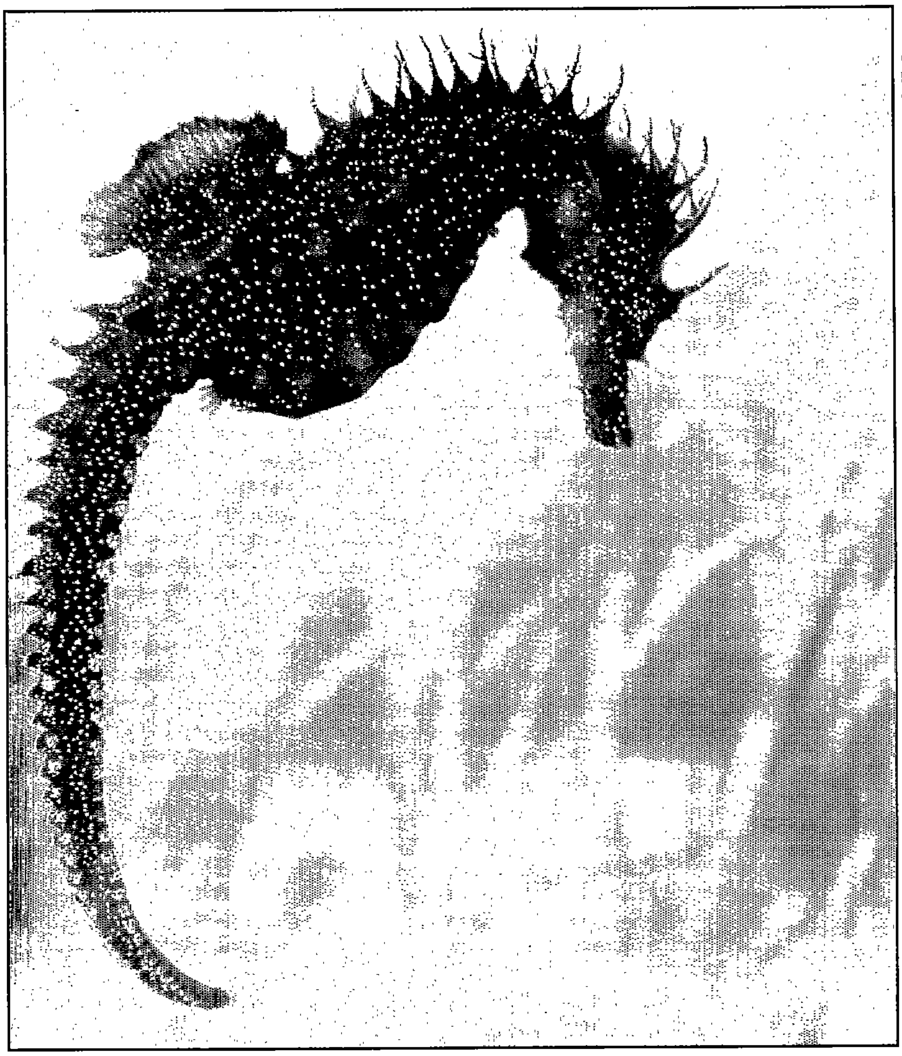
Groundbreaking scientific work

Océanopolis's treatment centre for seals has been given wide publicity by numerous articles and radio and television programmes, and is now well known. Any young seal stranded on a beach in Brittany will most probably be taken there in the shortest possible time. It will receive treatment, be well fed and fattened up for two to three months, before being released in the Sea of Iroise. Océanopolis also takes part in the inventorying of all marine mammals that have run aground on the coasts of Brittany. What is less well known is that behind the large aquaria, a fully fledged laboratory participates in the study of the seals and dolphins living offshore and has even recently been given the role of natural heritage observatory for grey seals and turtles by the Ministry of the Environment. In addition to the team of permanent staff headed by Vincent Ridoux, the laboratory welcomes researchers, and is thus associated with the most significant research work on large sedentary dolphins now taking place in France. In this way, Océanopolis is pursuing the old dream of the founders of museums who could not conceive of research being divorced from its dissemination to the general public.

aquaculture and clown fish. At the same time, interactive activities increased from three to twenty, and several aspects of the permanent exhibition were redesigned. A new and strangely beautiful aquarium was installed in 1993 between models of Cetacea: it is an enormous cylinder of methacrylate with a shimmering shoal of horse mackerel.

Dismantled exhibitions are not put away; they are given new life in other places. The Palais de la Découverte in Paris was thus able to put on the display, *Un océan, ça bouge enormément* (*The Constantly Moving Ocean*), a restructuring of the entire oceanographic exhibition.

In the space of five years, the centre has produced over fifty films, ranging from the brief three-minute documentary on anemones to the full-scale report shot in Argentina, *Ballenas (Whales)*, and, in Franz Josef Land, *l'Eté, dans les glaces de Tikaïa (A Summer in the Tikaïa Ice-Fields)*. The films are designed to be shown in the different projection rooms of the centre and on



© T. Joyeux

A seahorse finds shelter and food in an Océanopolis aquarium.

© T Joyeux

television. They bring together scientists and the audio-visual department of Océanopolis which is headed by Philippe Coyault. The latter is also in charge of a veritable film library, having at his disposal a neatly arranged stock of 20,000 slides. Océanopolis's management staff also participates in numerous symposia, congresses, events and salons, that is, when they themselves are not busy organizing them.

In July 1995, Océanopolis even started to extend beyond its confines. A vast area devoted to marine pollution was fitted up outside. It is a welcome and refreshing addition to a visit to which it brings a change in rhythm, and one that foreshadows other extensions in order to satisfy not the bulimic design for 'more and more', but the motivating wish for 'better and better'. For months now, some of the team have

Until the creation of this enormous 'water column', the sight of a shoal of horse mackerel swimming against the current would have been viewed only by their predators.


© T. Joyeux

The reconstitution of the cliffs of the Brittany coast is so perfect that certain marine organisms (barnacles, anemones, algae, etc.) have spontaneously colonized the polyester resin walls.

been thinking about the next exhibition which will lead to the discovery of the poles, and the research work being carried out on them. This should give as good a foretaste as any other of the achievements that can be discerned on the horizon of the third millennium. No final decision has been reached because of the lack (for the time being) of guaranteed financing, and the imagination can be allowed free play: polar ice-banks and tropical mangrove swamps could be installed at the Moulin-Blanc to enrich visitors with the experience of extremes.

These installations are unique in Europe and could be beneficial to the entire region. 'All organizations concerned with the sea react very favourably to their existence, and as they are certain not to function at a loss, elected representatives are all ready to participate,' Eric Hussenot and Jean-Paul Alayse emphasize together, before regaining their twinned glass-partitioned offices, which resemble somewhat chaotic aquaria unaccountably perched on top of the building. This is also a key to Océanopolis's success and, probably, the strangest specimen in its collections of marine animals: a hydra with two heads which are perfectly well-suited and complementary to each other. ■

Note

This article first appeared in a longer version in the October 1995 issue of the review *Ar Men*. – Ed.


© T. Joyeux

The observation pool is an important step in the circuit that leads children from the laboratory to the aquaria, allowing them to see and touch such unfamiliar creatures as sea-urchins, starfish, hermit crabs and sea-anemones.

Modern technology recaptures the maritime past

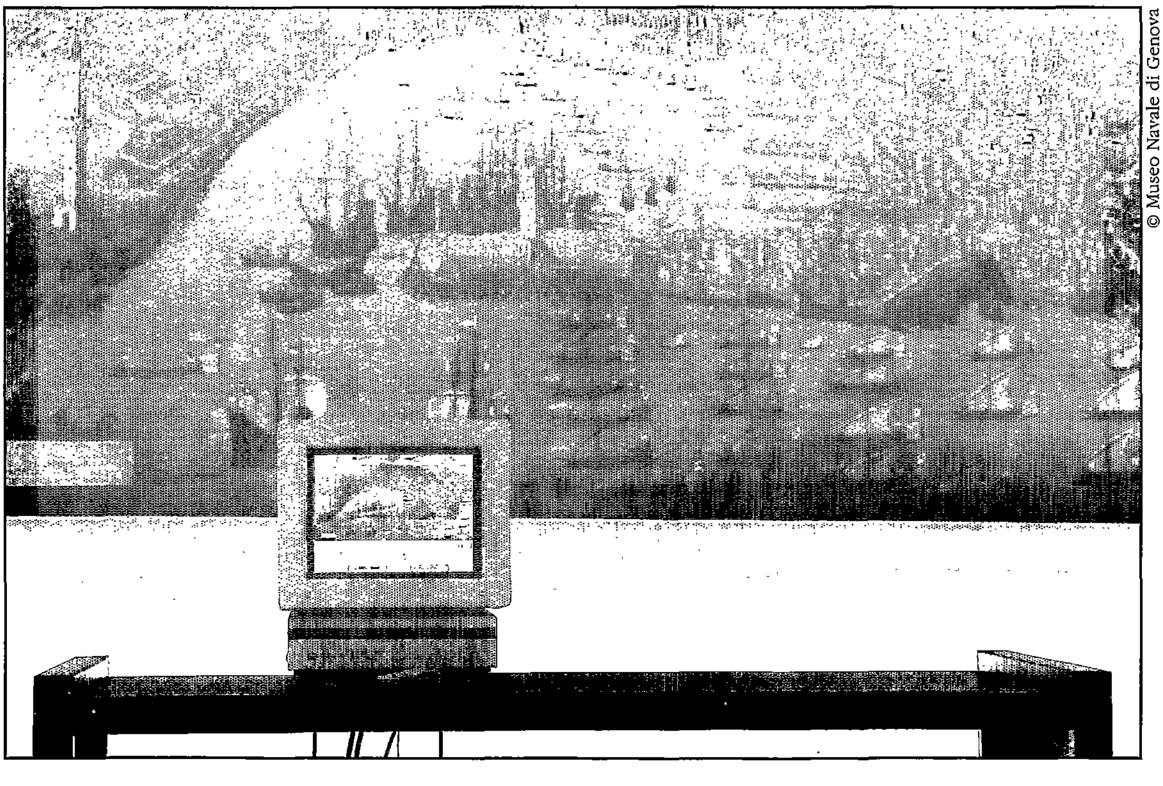
Pierangelo Campodonico

Interactive media and environmental reconstruction are providing new tools to make the ancient maritime past come alive for today's public, a challenge being taken up by Italian museums. Pierangelo Campodonico completed his studies as a sea captain before graduating in modern history at the University of Genoa. Since 1988 he has been curator of the Naval Museum, Genoa, and was responsible for its refitting, completed in 1993. The organizer of numerous exhibitions on seamanship both medieval and modern, he is also the author of monographs on the history of navigation, especially Ligurian navigation – Storia della marineria genovese *(Milan, 1989) and* Navi e marinai genovesi nell'età di Cristoforo Colombo *(Milan, 1991).*

In a country so fortunate as to have Italy's remarkable artistic and cultural heritage, the maritime world represents but a tiny area when seen against a luxuriance of the figurative arts in Italy's museums and galleries.

Maritime and naval museums from the outset followed the tradition of Italian historical museums where objects were, and are, bearers of meanings, bridges leading to the past. On the basis of such relics, objects treasured on account of their age and their connection with a precise historical period, visitors were asked to reconstruct a world and a period, just as a skeleton is reconstructed from a mere bone. For many years now, however, this approach has been questioned. Such museums are at a disadvantage when compared with art museums, whose objects not only bear a message transcending the historical period concerned, but assume universal significance. They are at an even greater disadantage when set against a society used to images, to the reconstruction of wholes, in a period of virtual reality. Thus, techniques such as multimedia computing technologies and environmental reconstructions (reconstitutions), which are new in maritime museology but well tried and widely resorted to in other branches of museography, are more than justified here.

The object has lost its intrinsic significance, and hence its capacity to communicate with the public which must confront two barriers: first, the period difference, the temporal distance from the object, and, second, in the case of maritime museums, the distance of the seafarer's culture. At times it has to be admitted that these barriers prove insurmountable. This ▶



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The interactive computer program guides visitors around the sights of fifteenth-century Genoa, as depicted in Cristoforo Grassi's painting.

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The room of the Argonauts, with a display showing the structure of their 'ship'.

happens when a visit to a maritime museum leaves the impression of an incomprehensible world speaking a language understood only by initiates. And yet the 'language barrier' is not felt to be an insuperable obstacle. On the contrary, the very features that distinguish this world from our own, all that it unconsciously evokes – adventure, exoticism, encounters with the conflicting forces of nature and with widely differing cultures – give 'sea museums' endless opportunities of appealing to the imagination of visitors and playing on their emotions while conveying information.

The objects have to be made to 'speak', and labelling, however extensive, proves inadequate. How can one convey the contents of a work that is interesting once studied, but otherwise enigmatic? Take, for instance, Cristoforo Grassi's large painting representing Genoa in 1481. This painting was famous in the sixteenth century, but little is to be got from a cursory glance at it. On the basis of an image of this canvas, the Dipartimento Informatica Sistemistica Telematica (DIST) of the Genoese athenaeum, in collaboration with the Genoa Naval Museum, developed an interactive computer program which enables visitors, with the help of a mouse, to find their way around fifteenth-century Genoa, passing through streets and piazzas still recognizable today and surprising everyday conversations, which appear in balloons as required.

Whereas this is an itinerary that starts almost in traditional fashion with the object, 'reconstructions' are an approach derived from modelling. With reconstructions, whether Egyptian funeral models or *ex votos* from the Renaissance to modern times, whether models of nineteenth-century seamen or of those of the dockyards of this century, there has always been a capacity to represent and suggest, which even today immediately attracts visitors to maritime museums.

In the beginning, the ship . . .

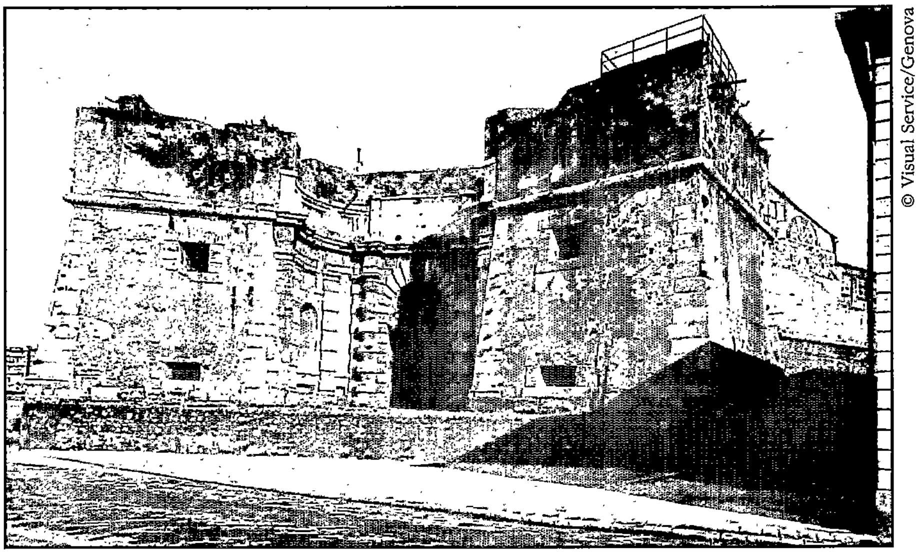
The ship is a significant element in the culture of the sea. If visitors did not bear in mind the ship's movements many particularities would not be understood: the adaptation of everyday objects, as, for instance, the raised edges on tables to prevent dishes from sliding on to the deck when the ship rolls, or objects such as cardan suspension lamps. And an object such as the captain's repeater (an independently illuminated compass suspended face downwards over the head of the captain's bunk) would seem absurd to anyone who had not seen a captain's cabin. The significance of the objects used in seafaring is from many standpoints only brought home to the visitor in the actual context of the ship. They are simple objects, artistically naïve for the most part, yet ingeniously functional. That is their strong point.

So when the Genoa Naval Museum was refitted before being reopened to the public in 1993 the concept of the display case underwent a change, for there is no longer any point in separating the work from the form/function of its setting. The main structure of a Renaissance ship (keel and planking) is the context in which every object designed to equip, rig or decorate it assumes significance, from the cannon to the seamen's cuirasses, from the dead-eyes to the carved panels in the aft.

The ship, regarded as a display case, serves the same purpose as the diorama in natural history museums. It was this brainwave which led to the construction of the environmental case called the brig, a wooden container made for the *Capitani Coraggiosi* exhibition at the Genoa Aquarium in the second half of 1994. With this device, visitors reached a dark room representing the deck of a brig sailing at night, and their attention was suddenly drawn to the portholes through which light filtered. To go in, they climbed up on a wooden deck and, looking curiously around them, they discovered scenes of life on board: the room in which the sails were stored, the round-house with the seamen's bunks and clothes, the contrasting bourgeois style of the captain's cabin, and the cramped chart room full of instruments. Continuing the visit, their eyes accustomed to the low lighting of their surroundings (10–15 lux), they were able to see the image of the bridge with the side lanterns and the navigation instruments lit up.

The reconstruction of part of a ship (only 15 metres overall) was undertaken without any intention of historical veracity, but with the idea of attaining the chief two aims of the exhibition: to get visitors to understand that in the world of the sea the form of objects is inseparable from their function, and to give them the unique sensation of a night watch at the helm of a sailing ship under the starry vault. To heighten the effect, devices such as movement simulators were of course combined with the image and sound to suggest the real thing. The main advantage was that visitors could fully experience the complex feelings of someone on shipboard in a storm. Introduced on an experimental basis at the Genoa Exhibition in 1992 and programmed for the Naval Museum's projected modern section, the simulator conveys an experience that could be described as 'total immersion': the visitor is absorbed by the screen, transported by the soundtrack and the movement to a reality reconstructed artificially but controlled down to the smallest detail.

On the other hand, environmental reconstruction is sometimes used to enhance the value of an existing structure. Such is the case with another project under way in the Ligurian capital, a project due to the collaboration of the Genoa Aquarium and the Naval Museum, at the Porta del



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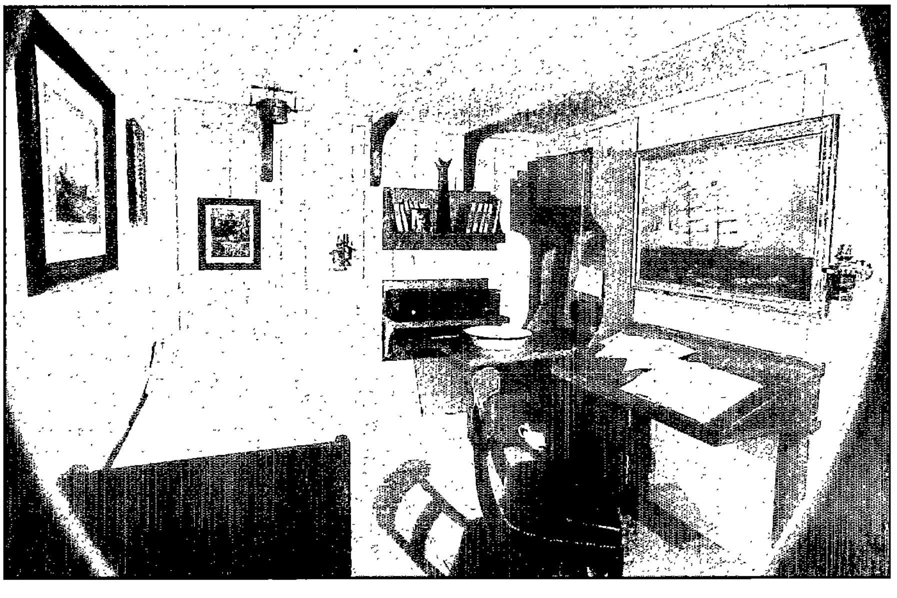
The sixteenth-century Porta del Molo before restoration.

Molo (the Mole Gate). This building, designed by the architect Galeazzo Alessi of Perugia in the mid sixteenth century, was intended to fortify the port of Genoa at a time when it was constantly threatened by the Barbary pirates. The Gate was for a period a fortress at which cannon were stationed, a customs barrier between the port and the city, the vital centre of overseas and local trade, the rallying-point of a port people by Spaniards, Germans, English and French, Jews and Muslims, slaves, merchants and soldiers, who lived together in this city which had become the destination of the silver imported from the Americas through Spain to finance civil administrations and private businesses all over the world.

Today the Porta del Molo is an imposing edifice of about 3,000 m^2. At some distance from the business centre of the port, it could easily deteriorate. The idea under consideration at present is to restore it, that is, to reconstruct inside it the intermediate wooden floors of the garrison walks and, in the passage area, arrange scenes of everyday life, showing excise men and galley-slaves, Spanish soldiers and Genoese merchants, gunners and ships' outfits, representing the Gate as it appeared in its heyday, that is, in the period around 1620.

Environmental reconstruction has already gone a long way, especially in the English-speaking countries, whereas it is just taking its first steps in Italian museography. However, if maritime museum curators were to confine themselves solely to the conservation of works and relics as the surviving evidence of an old tradition, they would debar themselves from any opportunity of rivalling with the major museums and would have to accept their inevitable marginalization. This would in turn affect the economic and financial resources available for their real task: not to preserve the mortal remains of a vanished culture – that of the world of the sea and of seamen – but to rescue and restore the complex of works that go to make up the maritime heritage, from the moles and harbour works along the city shores to individual objects. ■



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The captain's cabin as seen through the porthole of the container designed for the Capitani Coraggiosi *exhibition.*

The National Maritime Museum of Antwerp: a maritime collection in a historical setting

Wim Johnson

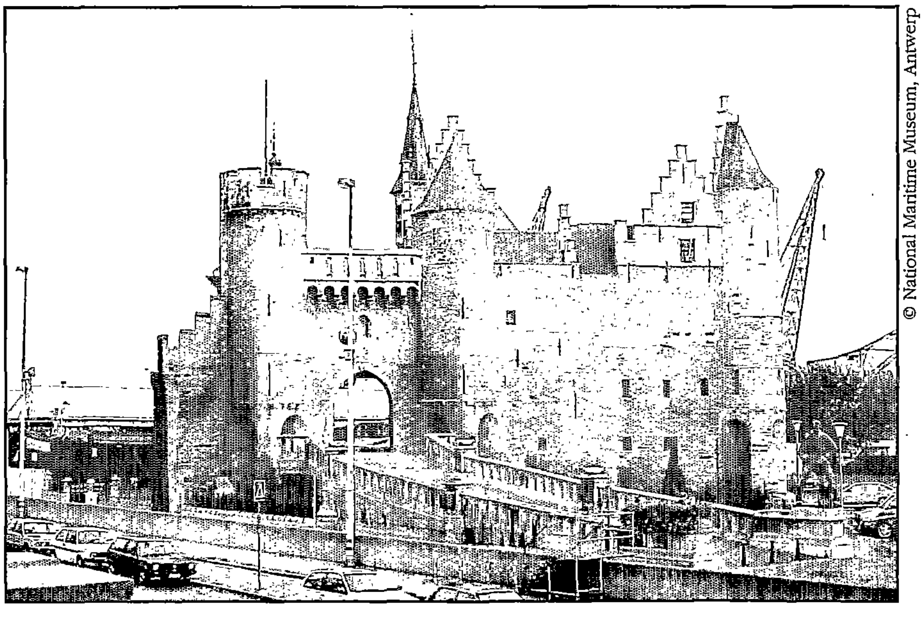
A sixteenth-century prison may seem an unlikely site to house a modern museum but, as Wim Johnson demonstrates, clever planning transformed what might have been a designer's nightmare into one of the foremost maritime institutions in the world. The author is assistant director of the museum.

In many countries, maritime museums are amongst the most recent arrivals on the museum scene. One or two were founded in the nineteenth century, but for the most part they are a feature of our own epoch. The earliest maritime collection open to the public was the Musée Dauphin in Paris. It is in no way a coincidence that this museum was inaugurated on 28 December 1827, the very day after the French fleet's victory at the Battle of Navarino.

It took some time in most European countries before interesting local collections were gathered on a national basis with the aim of showing all the aspects of the country's maritime heritage in a single context. As in France, the primary motivation for the official foundation of maritime museums was based upon a more or less romantic and nationalistic desire to show off the country's glorious maritime history.

A further stimulus was provided by the gradual replacement of sailing ships by steam-powered vessels, which made it quite clear that an important era in the history of shipping was coming to an end. Maritime museums were believed to have the duty of preserving this heritage so as to provide future generations with an insight into the heroic age of sail – a time of iron men and wooden ships. By the time the steamship itself was replaced a few decades later, most maritime museums had already developed into scientifically based institutions, with a growing interest in industrial archaeology. The collections of present-day maritime museums provide us with a unique cross-section of social, technical and purely aesthetic elements, which is the main reason for their wide-spread popularity.

Like most other museums, many maritime museums were housed in existing historical



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The old Steen prison near the River Scheldt.

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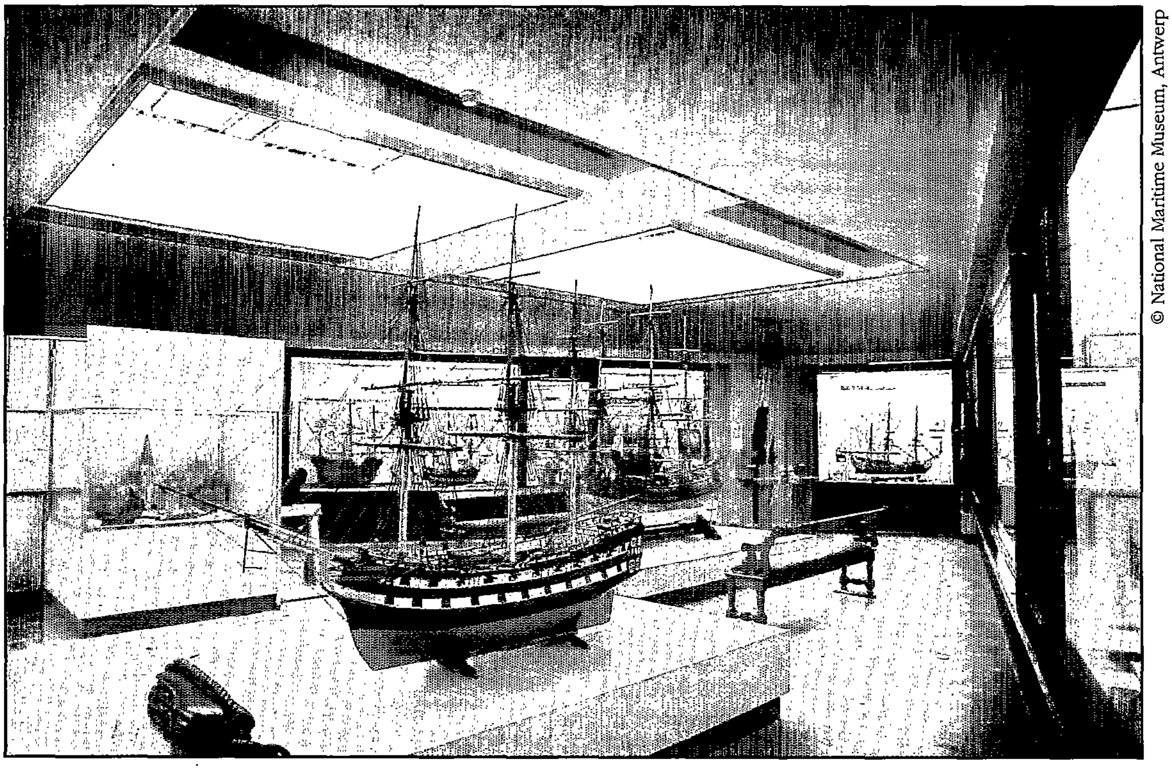

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One of the museum's more 'modern' rooms, showing the history of shipping.

buildings, which gave a certain prestige to the newly founded institutions. The fact that these buildings were never conceived as museums was not considered a disadvantage, but rather, on the contrary, it gave them an aura of timelessness. Even today this aspect is still very appealing to the visitor, who is often attracted in the first place by the charms of the old building without even being aware of the collections hidden within its walls. As a curator of such a museum one cannot ignore this fact, but the manifold disadvantages will most certainly give one sleepless nights from time to time.

The National Maritime Museum in Antwerp offers a good example of such a magnificent historical building: the old fortress of the Steen (literally, stone building), erected in 1520 on the behest of Emperor Charles V as a municipal prison, right in the historic centre of the city. Due to the nineteenth-century needs for new quays, the main part of the old city was destroyed to straighten the river Scheldt. As a consequence, the old prison found itself somewhat isolated near the river. It was decided in 1952 that the site itself and its proximity to the city centre would be a very suitable place for a national maritime museum. The impressive architectural volume of the old prison, with its outer walls containing remains of the twelfth-century city walls, acts as a real magnet to attract the tourists strolling alongside the river. No doubt this creates an important tourist trump-card which greatly explains the high number of visitors.

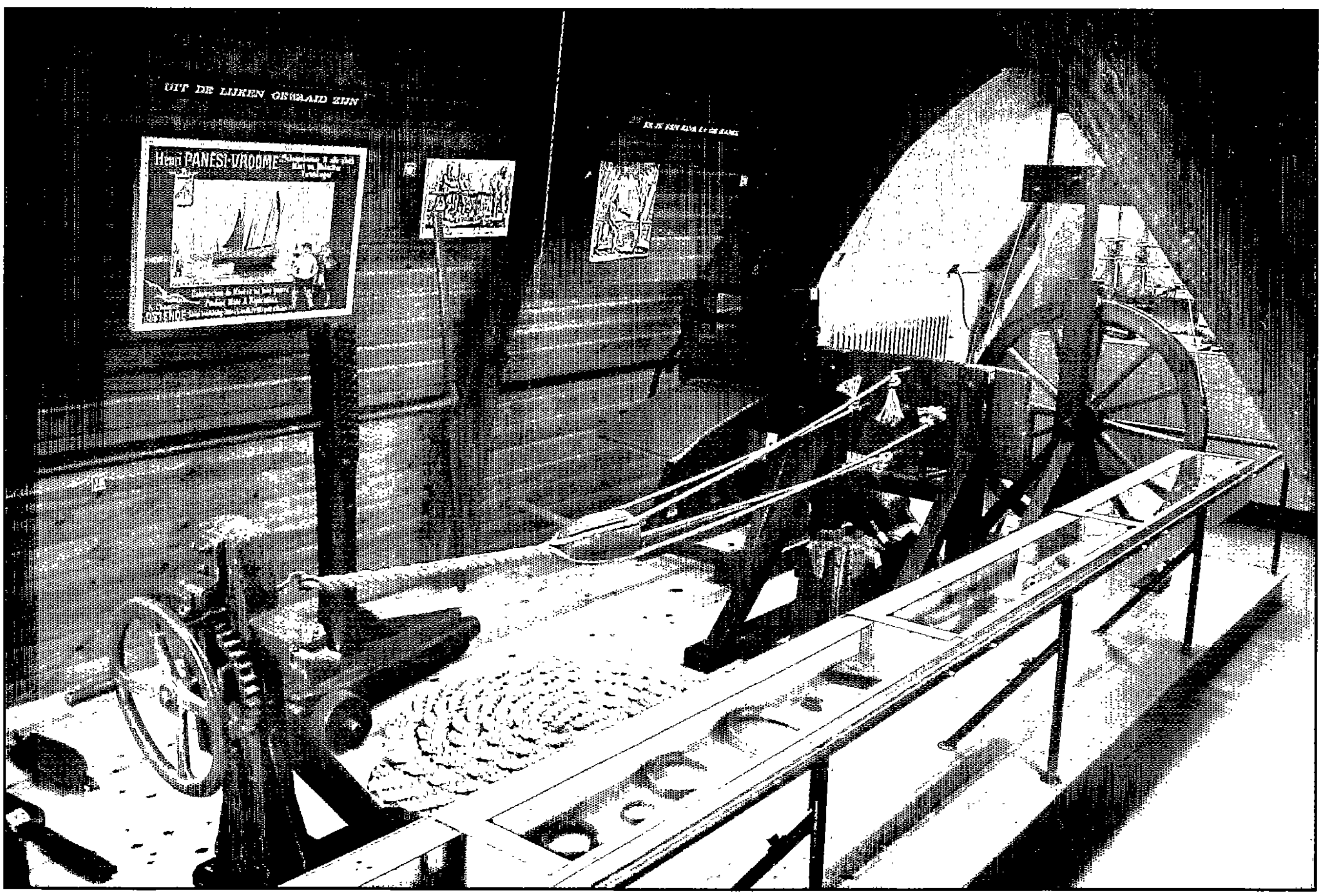
Yet the obvious disadvantages are only known to those working inside such a building. Once past the entrance gate, situated directly underneath a Renaissance loggia, one finds oneself in a tiny courtyard, perhaps once very suitable to accommodate the warder's horse but today hardly appropriate to receive over 100,000 visitors a year! Through a small entrance door one then reaches the museum's lounge, situated in one of the former prison cells, a room with only one small window. Immediately after this one has to climb a spiral stone staircase to the first floor. Passing countless stairs and steps through a series of small rooms, one finally reaches the exit, glad to see daylight again. Only at the end of the tour do visitors find themselves in two more spacious rooms, situated in the 'modern' part of the museum, built in the early 1950s as an extension to the original building.

Making the most of charm and diversity

Compared with newly built maritime museums – for example, the splendid Rotterdam museum – or even museums likewise housed in historical yet much larger buildings – such as the Palais de Chaillot in Paris – it seems most unlikely that such a building as the Steen could be satisfactorily adapted to show off a major European maritime collection. To achieve this, a lot of imagination and creativity were needed. First of all, a logical tour had to be traced to link up the various small rooms, situated on three different levels. For this purpose, a spiral path was traced, twisting like a snake round the central staircases. The visitor thus follows systematically three different circular tours, each one situated on a different and higher level. Once the uppermost circle is reached, two straight staircases lead downwards through the modern wing towards the exit. In this extension a spacious elevator was installed, thus creating the opportunity for both the disabled and the elderly to reach the upper levels and improving the transport of larger items from the museum's storerooms, situated on the ground level.

A second problem to solve was how to decorate the different exhibition rooms. Some years ago most maritime museums

The uppermost room in the museum displays a variety of shipbuilding techniques.



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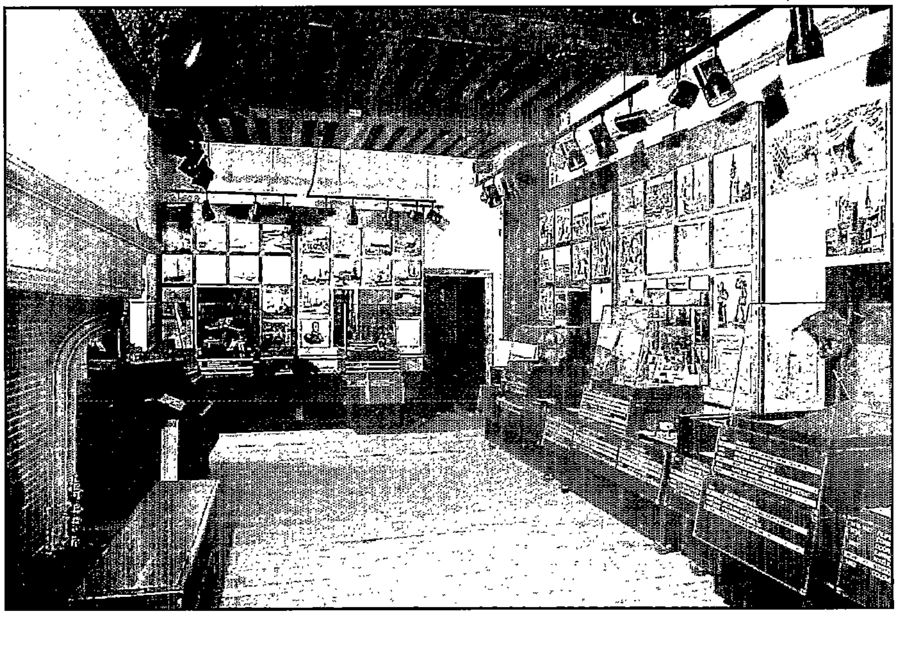
tended to fill up their exhibition space with as many top-quality models as they could provide, dispersed in a quite haphazard way. There was very little system behind this, but at least it gave the public an attractive – and most of all a prestigious – image of the existing collections of the museum. Mainly due to the architectural limitations imposed by the Steen building, the original option was to divide the collection into a number of thematic groups. The smallest exhibition rooms near the start of the museum tour were used to give the visitor a general idea of the kind of items a maritime museum collects, ranging from different types of model-making to artistic impressions of life at sea. The following, somewhat larger rooms were each dedicated to one specific aspect of national maritime history, for instance, inland navigation, fisheries, yachting or shipbuilding. If the opportunity was there to do so, the themes were linked to the existing architecture, which resulted in some interesting juxtapositions. For example, for the theme 'religions and superstition among sailors', the old prisoners' chapel was used, whereas the exhibition on shipbuilding techniques was mounted under the wooden cross-beams of the upper floor rooms, indeed a marvellous piece of timberwork in itself, which suggested the atmosphere of the numerous little ship wharves that existed near the river. At this stage, the 'disadvantages' of the historical building suddenly turned into a splendid opportunity for the keen designer, rather than a living nightmare. In this way the charm and the diversity of the original architectural setting were used very purposefully as a meaningful element in the ultimate design.

The small museum room, dedicated to the history of the River Scheldt and Antwerp harbour.



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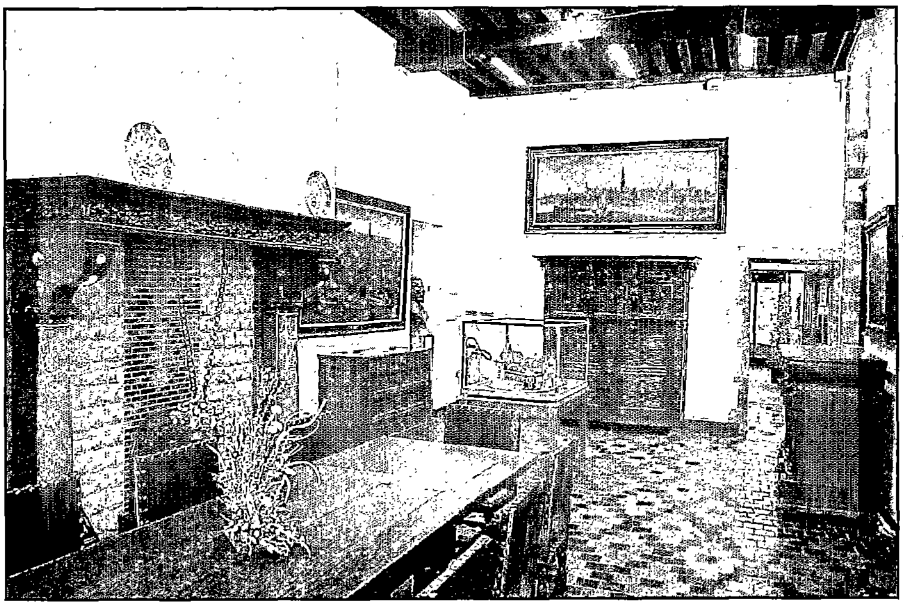
Another operational principle was the genre-like design of the individual showcases, showing not just a model ship but each time a different elaborate combination of related elements. Thus the model of a wooden inland barge was combined with old photographs of the same ship in action and various pieces of equipment used on board. Elsewhere can be found an East-Indiaman together with a Chinese statue of the captain, a tin tea-box and a complete set of fine chinaware. With a bit of imagination each showcase can tell a different story, rather than just showing some marvellous pieces of maritime art or craftsmanship. This didactic approach gives additional value to individual objects, which results in a surplus value for the whole.

It should be mentioned here that a great deal of attention was given to the educational background of the exhibition. This finds expression, for example, in the text panels that accompany the objects, which are always in four languages. This of course makes a visit to the museum much more attractive for the foreign tourist. Scattered around the museum are a great many maritime expressions and aphorisms, testimony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The prestigious Raadzaal at the end of the museum tour.

to how deeply our common language was affected by the seaman's vernacular. A special tour for children was created, drawing their attention to such matters as the different parts of the ship, an elementary knowledge of nautical instruments and the relation between ship type and history.

At the end of the museum tour are a small video room and a constantly changing exhibition of the museum's recent acquisitions. The very last room of the museum is the so-called Raadzaal, splendidly decorated with some fine paintings showing Antwerp in the sixteenth and seventeenth centuries, at the height of the city's glory. This room also serves as a meeting place for the Royal Marine Academy and of the Friends of the National Maritime Museum association.

Using the methodology described above, any comparatively 'difficult' historical building can be converted into a site suitable to house a museum. The original architectural limitations, rather than being an insurmountable nuisance, can be used as opportunities to create a very distinguished profile for the museum. ■

Winds of change in Lithuania

Aloyzas Kazdailis

A marine centre that was constructed almost clandestinely, drawing its support from the local community and building collections without cost through clever feats of imagination and bureaucratic skill – this is the background of the complex of maritime museum, aquarium and dolphinarium that has today become the Maritime Lithuania Maritime Culture Centre. The story is told by the centre's director, who has worked at the museum since 1970. He designed the museum's exhibition on the history of navigation and is the author of several children's books on the maritime heritage and on sea life in the Baltic and the Caribbean.

The Klaipeda Maritime Museum and Aquarium (since 1994 the Maritime Lithuania Maritime Culture Centre) is just sixteen years old. Although for a museum this still counts as infancy, it has been fated to live through some epoch-making social changes and with one stride to cross a dividing line which until only recently had seemed more like an unbridgeable abyss. In my opinion, its story deserves to be more generally known. Colleagues from museums in the former socialist bloc may recognize in it their own recent past, which in time will help us to determine what governs the workings of the winds of change. And that will promote better mutual understanding among museums in different countries.

Western visitors ask me why such an extensive museum complex as the Maritime Lithuania Maritime Culture Centre (an exhibition of the history of navigation, ethnographic fishing and marine fauna, together with an aquarium and a dolphinarium) was built at Klaipeda and not at one of the larger better-known Baltic ports such as Riga or Tallinn. They think of the former USSR as a monolithic, strictly planned state where everything was done on orders from Moscow. We 'Easterners' do not ask ourselves such questions. We know that the plan was only a mask behind which lurked so much subjectivism that the right hand often did not know what the left hand was doing. It was these subjective factors, and there were many, that came to our assistance.

Firstly, there was a big fishing fleet based at Klaipeda. This meant that the livelihood of one-third of the citizens depended on the sea. Then, in the 1970s the influx of nomads from the East came to a halt, and the city underwent a cultural revival. In addition, at the northernmost extremity of the Courland Spit, a narrow, sandy and picturesque peninsula separating the Baltic from the freshwater Courland Lagoon, there stood an abandoned semi-ruined nineteenth-century fortress built to defend the sea approaches to the port of Klaipeda. And most importantly, in Klaipeda there were people, led by the mayor, who knew how to rise above the intractable problems of 'developed socialism', such as the housing and food problems, and saw that the reviving culture of the port city needed to be given a maritime slant. They also recognized that the fortress, now known to all Lithuanians as the Kopgalis fortress (from the Lithuanian for 'end of the dunes'), which is surrounded by water on three sides, was an excellent site for an aquarium and maritime museum.

The restoration of the Kopgalis fortress and the installation of an exhibition within its walls lasted from 1973 to 1979. The work was financed by the city and local fishing organizations, which had managed to prosper behind the backs of their bosses at the Ministry of Fisheries of the USSR. The city's enterprises assisted by supplying goods and materials, while the townspeople and even town councillors lent a hand when it came to working with picks and shovels.

The Lithuanian authorities turned a blind eye to what the people of Klaipeda were doing. Officially, they 'knew nothing', and their reports to Moscow made no mention of the construction of a maritime museum and aquarium. We, however, the future curators of the museum, were given strict instructions to avoid journalists so as to prevent this 'secret', known to everyone in Klaipeda, from being disclosed in the press. If it had been, the numerous organizations (financial, 'people's', party, etc.) responsible for exercising control, which at the time were under orders to nip such freedoms in the bud, would have been forced to intervene. Fortunately, the 'secret' never got out, and when two weeks before the exhibition was due to open a high-ranking

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Photo by courtesy of the author

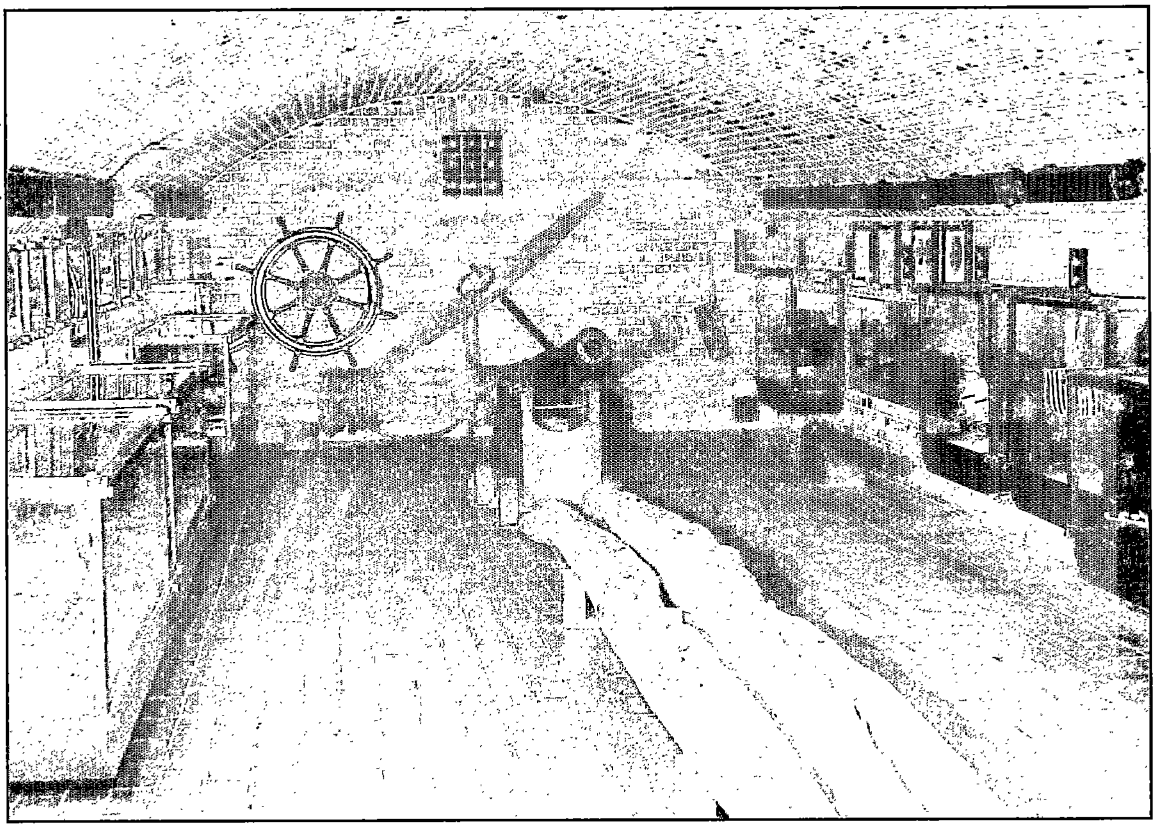
A bird's-eye view of the Maritime Lithuania Maritime Culture Complex. The maritime museum and aquarium are located in the restored fortress, with the dolphinarium on the right.

official from Moscow, the second or third most important person in the USSR, visited the museum and approved our work, the veil of silence could be lifted. That was the way we lived then. I might say that we were pretty good conspirators. Indeed, so cleverly was the financing of the work concealed that not even we ourselves can say how much our museum cost. As the saying goes, no one will be the wiser.

Looking back, we can affirm, with a clear conscience, that we, the museum workers, made full use of the possibilities offered by a socialist economy. Every year, starting in 1975, colleagues went off on fishing boats and cargo ships into the Atlantic, the Caribbean and the Gulf of Mexico to collect specimens of marine fauna. We even tagged along with the Soviet oceanographic research fleet. Survey vessels equipped with apparatus for underwater exploration provided our biologists with excellent opportunities for gathering precious collections of mussels, corals, crustacea and other animals from the Sea of Japan, the South China Sea and the Pacific Ocean. These collections now contain more than 20,000 exhibits, with the mussels alone represented by 15,000 rare and valuable specimens. And all this was free! Following the events of 1990, we immediately felt the loss of these facilities. And it was only in 1993, by sheer luck, that we were able to establish contact with the University of Noumea in New Caledonia and then, on two occasions, send one of our experts out to that conchologist's paradise. Admittedly, no longer free of charge.

We used the same means to obtain live exhibits: sturgeons from the Volga delta, Steller's sea lions (*Eumetopias jubatus*) and walruses (*Odobenus rosmarus*) from the shores of the Chukotsk Sea, and grey seals (*Halichoerus grypus*) from the Gulf of Fin-

Photo by courtesy of the author



The exhibition of the history of Lithuanian navigation in the fortress's powder magazine. The museum is also famous for its open-air collection of ancient anchors.

land. But now, as we plan to renew the sturgeon exhibition for the summer of 1996, we are having to ask ourselves whether we can afford these valuable fish.

Setting new standards

Every museum wants to be different from the rest. At the Maritime Lithuania Maritime Culture Centre the main attraction are the large marine mammals. However, there is always a risk of producing a result opposite to that intended. Heaven forbid that visitors should find the water in the tanks dirty or smelly. They would turn their backs on us there and then. And the technology used for cleaning the water in the tanks is not, alas, beyond reproach, being a legacy of the times when our technical resources were extremely modest. The aquarium workers themselves had to cobble together even such complicated equipment as biological filters and protein defoamers. Figuratively speaking, the biologists were building wooden bicycles. Ever since they have done their utmost to keep the water in the tanks clear and the animals healthy.

Our main task is to re-equip the aquarium and bring the conditions under which the animals are kept up to world standards. Our determination in this respect is, I believe, well illustrated by the following. The plans for the dolphinarium, drawn up in 1986, called for a 4-metre-deep performance tank. This was in conformity with the international standards in force at the time.

In 1990, by which time the tank had already been built, we were suddenly informed by our colleagues at the Duisburg (Germany) dolphinarium that the European Union's environmental protection agencies had decided that the mandatory depth for dolphin tanks should be increased to 5 metres. Soviet tradition offered us an easy way out – not to bother about what they were doing in the West. Instead we decided to break up the 50-cm-thick concrete base and make the tank 1 metre deeper. This decision meant accepting a financial loss and a whole year's delay in opening the dolphinarium, but it was the lesser of two evils.

Journalists still ask me how in such hard times as the early 1990s, when most building projects in Lithuania had ground to a halt, we humble museum workers were able to go ahead and complete the construction of the dolphinarium. I candidly confess that I would rather not think about it. Although our efforts could scarcely be called heroic, we were nevertheless very cunning. At that time the whole of Lithuania was blundering through the huge graveyard of the socialist economy. However, our worst economic problems arose from the sharp decline of public interest in culture. Older people threw themselves into politics, the young into commerce. Even in Soviet times cultural workers did not delude themselves into thinking that their work was fulfilling a vital social need. They understood that culture's role was to serve as an attractive façade for the socialist barracks and that many cultural measures were carried out on orders 'from the top'. All the same it was painful to observe the triumph of the mercantile spirit amidst the flowering of our national revival. The only thing we had going for us then was the good reputation of the Maritime Museum and Aquarium. It is not for nothing that in Soviet times, when national feelings and national self-expression were immediately labelled 'nationalism' and persecuted at every turn, the two main achievements which Lithuanians felt able to boast about to visitors were the Zalgiris basketball team and our museum.

The dolphinarium rose on a wave of patriotism amid the froth of legal confusion created by the transition from a planned to a market economy. Like the Maritime Museum and Aquarium, it was financed by the city's biggest enterprises, which drew on the reserves of raw materials from Soviet times. Nowadays no enterprise would dare to assume such a burden.

In autumn and winter, when the flow of visitors, and with it our income, is sharply curtailed, while the cost of running the huge complex increases even more sharply, doubts creep into the mind: can our country really afford the Maritime Lithuania Maritime Culture Centre? In similar situations, our grandfathers used to say: 'The cap's too good for Jurgis (George).' The George of the saying was a village idiot who wore an inappropriately splendid cap.

Combining scientific study, ecological purpose and public attraction

However, let's not throw away George's fine cap, especially as there are signs that things may be improving. For example, the opening of the dolphinarium in April 1994 led to a partial recovery in the number of visitors which, during the difficult period of political and social change, had fallen from 600,000 in 1989 to 117,000 in 1993. Visitors are being attracted by the entertaining and educational programme for the dolphins and sea lions which, sparing no effort or expense, we are improving every year. At the same time, it is comforting to observe a certain revival of interest in culture. The influx of tourists from the West, though still modest, is another source of satisfaction. Those who have visited us have gone away well pleased. We ourselves have good reason to believe that our maritime exhibition is more versatile than any that our Baltic neighbours can offer and, moreover, is particularly successful in combining scientific study and ecological purpose with a public attraction. This is well illustrated by the following brief description of how we breed penguins and grey seals.

Rockhopper penguins (*Eudyptes crestatus*) made their appearance in the Kopgalis fortress even before the exhibition opened, at the beginning of 1978. Initially, our biologists' chief task was to acclimatize these exotic birds from the Southern Hemisphere. This process was not without its mishaps. Matilda, a young female, trying to escape the attentions of an importunate admirer, broke a leg. Matilda was operated on by the best surgeon in the city, began walking again and became the visitors' favourite. Our rockhopper penguins lived to an advanced age, but all our biologists' efforts to get them to breed were in vain. They finally succeeded with Magellanic penguins (*Spheniscus Magellanicus*). The birth of each little penguin was a source of joy not only to the keepers but to every child in Lithuania. The children heard about the happy event through the press, television and radio and the museum's postbox was crammed with letters suggesting names for the newborn chicks. In May, on International Museum Day, when the Kopgalis fortress throws open its gates and admission is free, there are colourful festivities in honour of the little penguins and rewards for their young 'godparents'.

Usually, on this occasion, the heroes are the year's brood of seals. Grey seals have been living and breeding in the channel around the Kopgalis fortress since 1980. This, too, is the result of a great deal of effort. Now, every spring, the herd increases in size, and we are no longer able to support this voracious family. Accordingly, a pair of our nurselings is living in the zoo at Chomutov in the Czech Republic, and other two-year-olds have been sent to reinforce the depleted herd in the sea. The return of the seals to their native element forms the second part of the festivities.

The programme in the dolphinarium is also more than just entertainment. Visitors get to know the amazing abilities of the dolphins and the problems of preserving their habitat. Children learn that dolphins are intelligent and gentle creatures and that a human being can win the confidence of even such a predator as a Steller's sea lion. And it is a great thrill for a child to be photographed with one of these animals.

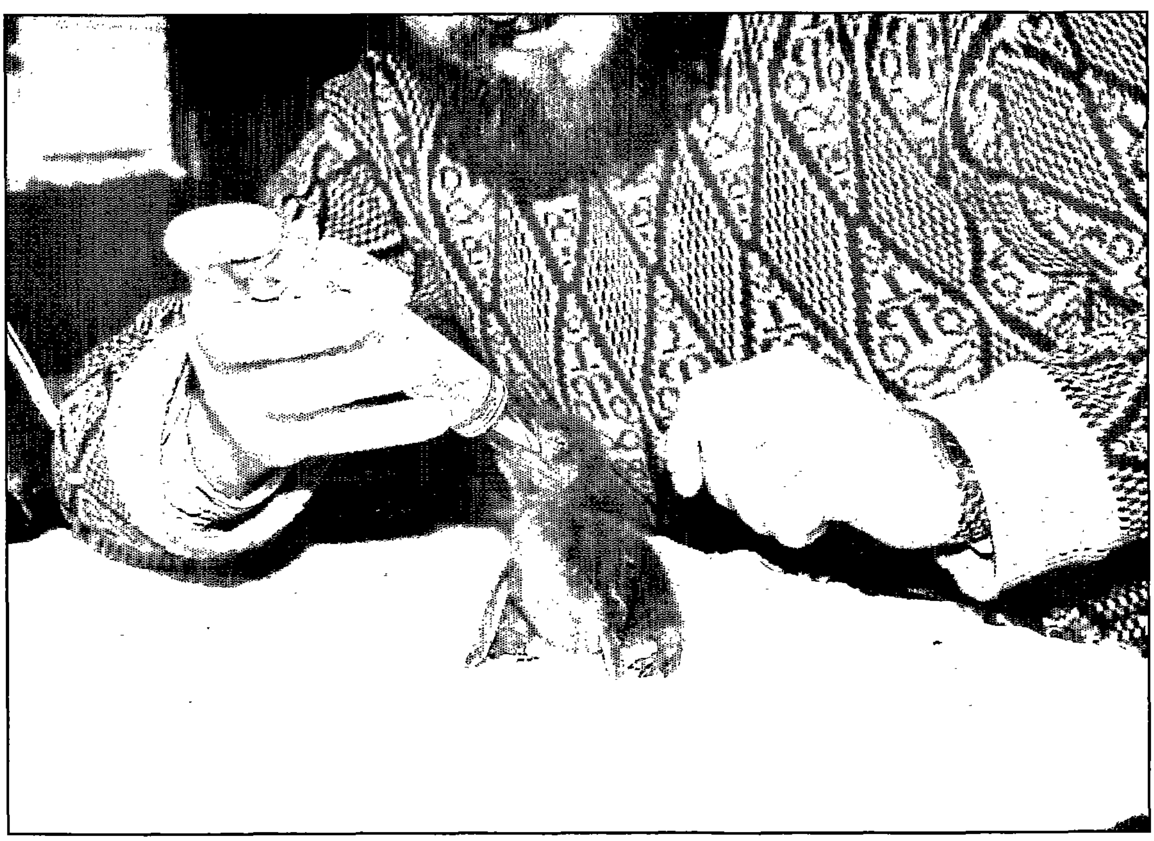
Behind the scenes at the dolphinarium the quiet painstaking work of ensuring the survival of the dolphins goes on. It ranges from strict monitoring of the state of the water in the tanks and rigorous observance of sanitary standards, prophylactic measures and diet to echoscopy to detect the embryo in the womb.

Today, the winds of change are obliging us to undertake work of a commercial nature which might be considered 'unbefitting' for a museum but without which we could not continue to survive. In Soviet times, culture and commerce did not mix. The cultural workers accused commerce of all the deadly sins and the commercial organizations turned their back on the theatres and museums, claiming that they were unprofitable and not worth the trouble. It was the same with us at the Maritime Museum and Aquarium. Thus, for more than ten years we had only one thirteen-seat refreshment room. In summer, the exhibition was visited by 4,000 or 5,000 people every day. That meant long queues for a bottle of lemonade. Even the dolphinarium project, with stands for 1,000 spectators, made no provision for a café. Admittedly, there were plans to put up a special building to house a café, but they never got off the drawing board. Fortunately, the lobby of the dolphinarium was spacious enough to accommodate a bar. Previously, Western tourists had been surprised to find that there were no booklets, postcards or souvenirs in Soviet museums. We have now got rid of that deplorable tradition and offer visitors publications in four languages.

Today in Lithuania, every conversation turns eventually to the subject of money. This is not surprising since people are worried about what tomorrow will bring. In this respect my article can be no exception, since without a reference to the question of finance, this picture of the changes in the life of the Maritime Lithuania Maritime Culture Centre would be incomplete. As it is, we get no help from the state. Just as before, during the Soviet period, the Klaipeda authorities have been left to take care of the centre. But local government is chronically short of funds. By Western standards admission is cheap: adults pay $0.75 to visit the aquarium and $2.50 to visit the dolphinarium. However, we are still living in another world, and there can be no question of increasing ticket prices.

There remains, of course, the magic formula of sponsorship. Unfortunately, in recent times its magical powers have faded. We have tried to revive them by demonstrating to all and sundry that our exhibition is the maritime face of Lithuania. In order that no one should be left in any doubt on this score, before opening the dolphinarium we renamed the Maritime Museum and Aquarium the 'Maritime Lithuania' Maritime Culture Centre. The government gave us the status of a public-interest organization, and the maritime organizations of Lithuania became official sponsors. It seems we calculated correctly.

The winds of change, which brought us the free market, have taught us to pay more attention to publicity and the desire



Feeding a tiny incubator penguin requires great care and much patience.

Photo by courtesy of the author

Traditional farmstead of a Lithuanian fisherman. Folk concerts are often held here in the spring.

of well-off holidaymakers to be entertained. On summer evenings we therefore offer them a special programme. However, I consider our most successful commercial operation to be one invented by our marine mammal keepers: in summer, on the bridge over the channel in which the grey seals live and around the tanks in the courtyard of the fortress, the children of our employees take up their positions with buckets of fish. The visitors cannot deny their own offspring the pleasure, costing only a few cents, of joining in and throwing a fish to a cute seal or a bellowing sea lion. This is the best business I know: all three of the parties concerned go away content, not to mention the moral and ecological lessons learned by the children. ■

Note

Museum International is proud to announce the birth of two penguins at Maritime Lithuania on 15 and 21 February 1996. (In accordance with the museum's tradition, Lithuanian children are submitting suggestions for names and the final choice will be made on national museum day.) Three newborn Baltic seals joined them on 3, 4 and 5 March. – Ed.

UNESCO and the protection of the underwater cultural heritage

Étienne Clément and Lyndel V. Prott

There is at present no international legal instrument of general application which regulates the matter of the underwater cultural heritage, an increasingly threatened part of humanity's common patrimony. Lyndel V. Prott, chief of the International Standards Section of UNESCO's Division of Cultural Heritage, and Étienne Clément, programme specialist in the Section, have had long experience in dealing with the thorny questions posed by the lack of clear rules for salvors, archaeologists and all those wishing to exploit the underwater heritage. In the following article they describe the urgency of the situation and the steps being taken to solve this problem.

For many years archaeologists have expressed great concern at the loss of scientific information caused by the unprofessional excavation of the underwater cultural heritage and the destruction of artefacts not considered commercially valuable by teams of unqualified persons, most often from the salvage community. Large-scale damage and destruction is also being wreaked by sports divers and tourists who often consider relics as nothing more than souvenirs and who disturb sites before they have been professionally recorded.

The recent accessibility of underwater wrecks, due to the widespread use of self-contained underwater breathing apparatus (scubas), has been followed by severe looting. As early as 1974 a study made for the Turkish authorities stated that there was no Classical Age wreck examined off the coasts of that country which had not been interfered with. In other countries divers had used explosives to break up wrecks and make bullion readily accessible. In yet other cases, holes had been blasted in the wreck area by using 'prop-wash' without regard for proper survey and mapping, thus destroying information that could have been retrieved by scientific excavation and also destroying many artefacts, such as old ships' timbers, of great importance to the archaeological record. In many cases the desire to control severe damage of this kind has been the reason for a state extending its jurisdiction beyond its territorial waters.

Furthermore, much of the underwater cultural heritage which remains unexplored is on the outer reaches of the continental shelf or deep seabed and therefore currently escapes national control. This is illustrated by the controversial lifting of objects from the wreck of the *Titanic* in 1985. Wrecks on the deep seabed are of particular importance, since for various chemical and biological reasons including the virtual absence of oxygen, many wrecks there are likely to be in an exceptional state of preservation, although iron ships may not survive so well.

A UNESCO Regional Seminar on the Protection of Movable Cultural Property held in Brisbane, Australia, in 1986, issued a Statement of Principle concerning the Underwater Cultural Heritage which concluded, 'If positive steps are not taken immediately it is anticipated that the recent advances that have been made by treasure hunters internationally but particularly in South-East Asia will result in a tragic loss of essential and important heritage.'

What should be protected

The main body of material constituting the underwater cultural heritage consists of historic shipwrecks. Many of these are of primary importance because they reveal knowledge not available, or no longer available, from land sites. For example, much can be deduced from careful scientific examination of these wrecks about ancient boat construction, life on board and trading routes. Study of ships' timbers also enables information to be revealed about the origins. A shipwreck is a time capsule – everything on board can be dated as no later than the date of the wreck, often ascertainable with accuracy from coins on board. Such excavations can, therefore, supplement and correct datings from land excavations. They can also provide statistical information which, for historians of medieval and classical periods, is very rare.

Isolated artefacts connected with shipwrecks are also important. The discovery of a stone anchor, used by pre-Iron-Age vessels, gives information about trading routes used by prehistoric peoples. Some

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artefacts may not immediately be seen to be part of a historic shipwreck: a sinking ship often loses its momentum gradually between the surface and the seabed, leaving a lengthy trail of deposits as the objects become detached during this course.

Until the invention of scuba-diving equipment and its popularization in the years immediately after the Second World War, the underwater cultural heritage was relatively safe. Early salvage attempts, especially in deeper water, were rarely successful, although some classical-age wrecks around the Mediterranean had been discovered and sometimes objects were taken by sponge-divers in shallower waters.

At the present time there is literally no object that cannot be located and explored on the seabed. Sophisticated equipment can pinpoint any anomaly on the seabed, and advanced technology enables the lifting of objects. This technology, pioneered for the exploration of natural resources, is now in use by salvors. The cost of this technology is dropping rapidly and can be used by 'treasure hunters' whose interest is solely in the recovery of commercially valuable material, without regard to the proper methodology of archaeological excavation. A recent excavation for commercial gain was the historic ship the *Central America*, which was found 2,500 metres deep 258 km off the coast of the state of South Carolina in the United States.

The search for standards

UNESCO has been concerned with this problem since its early days and its 1956 Recommendation on International Principles Applicable to Archaeological Excavations applies to underwater sites. It has also published a technical handbook on underwater archaeology (1981). In 1978 the Council of Europe began to develop a draft European convention for the protection of the underwater cultural heritage which reached an advanced stage but was not adopted by the Council of Ministers. The issue was raised again during the negotiations for the United Nations Convention on the Law of the Sea (UNCLOS), adopted in 1982, and resulted, in the closing dates of these negotiations, in the inclusion of two relevant articles (149 and 303). However, these articles are widely felt by cultural experts to be unsatisfactory and incomplete: they are ineffective to protect the underwater cultural heritage beyond the contiguous zone, they do not resolve the conflict between ownership claims, salvage claims and cultural heritage interests, and they do not give any guidance on how the underwater cultural heritage should be treated. They are also sufficiently ambiguous to give rise to alternative interpretations.

The Cultural Heritage Committee of the International Law Association (ILA, a non-governmental organization with which UNESCO maintains information and consultative relations), studied the legal protection of the underwater cultural heritage from 1990 to 1994 and produced a draft Convention which was adopted by its sixty-fifth conference (Buenos Aires, 1994). It was transmitted to UNESCO for further action, since it was thought that UNESCO was the appropriate body to take action in this matter. UNESCO has studied the draft text and believes that it would provide a useful basis for consideration as a possible new international instrument.

To prepare the feasibility study on this issue that was requested by the UNESCO Executive Board, the UNESCO Secretariat considered all existing international legal provisions, essentially the relevant articles of the United Nations

Convention on the Law of the Sea as well as the draft convention prepared by the International Law Association. In his conclusion to the study, the Director-General proposed to place this matter on the agenda of the twenty-eighth session of the General Conference of UNESCO in October 1995 and to recommend to the General Conference the preparation of a draft Convention.

It was evident from the discussions at the General Conference that certain major issues would have to be resolved if international regulation were to be achieved. These include agreement on standards for the excavation of the underwater cultural heritage, the place of salvage law and, first and foremost, the issue of jurisdiction, which must initially be addressed by appropriate experts before it can be considered at the level of states. The General Conference thus unanimously adopted a resolution by which it invited the Director-General, essentially:

> to pursue further discussions with the United Nations in respect of the United Nations Convention on the Law of the Sea, and with the International Maritime Organization (IMO);
>
> to organize, in consultation with the UN and the IMO, a meeting of experts in the fields of archaeology, salvage and jurisdictional regimes;
>
> to make the views of the experts known to all UNESCO Member States and States with observer status and invite their comments;
>
> to report back to the twenty-ninth session of the General Conference (1997) in order to enable it to determine if and how the matter should be dealt with on an international basis.

The expert meeting will be organized by UNESCO in May 1996. It will consider the relevant articles of the UNCLOS, the UNESCO feasibility study, the observations made by states and by the United Nations as well as the work already done in other forums, such as the ILA draft Convention and the report of the first and the second National Maritime Museum (NMM) Conferences, held in the United Kingdom in 1995 and 1996. It is possible that meetings similar to the NMM Conferences will also be organized in other parts of the world, such as the Asia-Pacific region.

It will be in the mandate of the expert meeting to consider where consensus is evident and where negotiations between states will be needed. The states will then consider and comment on this report and their comments will be presented to the General Conference of UNESCO in October 1997, which may then decide whether the question should be regulated and, if so, whether the instrument to be adopted should be an international convention (which must be adopted by a two-thirds majority of the General Conference and is subject to ratification, acceptance or accession by states), or a recommendation (norms adopted by a simple majority of the General Conference and which are not subject to ratification but which Member States are invited to apply). At a subsequent session (i.e. in 1999), the General Conference may then be in a position to take a decision on a draft text, which will have previously been circulated to national governments. ■

Note

This article was written in March 1996. The results of the expert meeting will be made known to readers of *Museum International*. – Ed.

Disaster planning and preparation: some basic concepts

Graeme Gardiner

Foresight and teamwork are perhaps the two most important elements in coping with damage once disaster strikes. Graeme Gardiner trained as a paper conservator in London, where he now runs his own studio. Alongside his conservation work, he specializes in designing and implementing preservation programmes for private and public collections. In 1989 he set up the European Art Conservation Trust, which is currently involved with various conservation projects in Europe.

It is not my intention to write a definitive guide to disaster planning for museums and libraries. Firstly, because I do not regard myself as having the relevant experience and, secondly, because it would require much more space than we have here. There are already numerous books and articles written on the subject, which more than adequately detail concise disaster plans. Perhaps their only drawback is that they are, on the whole, written by specialists from European and American institutions for a similar type of audience. They often assume a level of staff and capital support beyond the means of smaller museums and libraries, and they also – by necessity – talk in terms of the ideal, rather than the practicable. Therefore, many of the smaller and poorer institutions know what they should be doing, but cannot hope to match or attain the requirements described. Curators, librarians and archivists are often well aware of the shortcomings of their own disaster preparedness, but convincing the decision-makers further up the management ladder of the urgency for adequate provision is a much harder task. When budgets are tight, the extra time, space and expense for something that may never happen is difficult to justify. In my experience, having a disaster plan is much like having private health insurance – one is usually convinced of its need after the event.

For example, between 1983 and 1985 museums, libraries and archives in the United Kingdom were surveyed as to their disaster preparedness. The results caused concern, as less than 10 per cent of institutions surveyed had disaster-control plans, and even fewer had plans in preparation. Too few staff were trained in the proper procedures of fire control; in many cases the local fire officers were not informed of the special needs of the buildings; half the institutions surveyed had no access to emergency equipment.

Part of the problem is the confusion as to what constitutes a disaster. It is obvious where a disaster stops, but where does it begin? Hilda Bohem of the University of California Library System wrote: 'A disaster is what happens only if you are not prepared for it.' This is very neat, and is difficult to contradict. L. J. Fennelly attempted a longer definition: 'An emergency event that occurs with little or no warning and that causes more destruction or disruption of operations than the museum can correct by application of its own resources.'[1] They both imply that a 'disaster' is an event that requires the help of outside agencies – for example the local fire department – and that anything that is contained and coped with in-house is not a disaster.

The very word 'disaster' suggests something catastrophic, but according to our definitions the term is relative to the amount of preparedness. Take, for example, a small fire in a storage stack. If the museum has a proper disaster plan, then the fire is quickly dealt with by trained staff, using proper equipment. Although items may have been lost, this is kept to a minimum and thus the situation cannot be classified as a catastrophe; after all, it could have been much worse. With an adequate disaster plan any damaged items can be salvaged as the required conservation expertise is quickly introduced. At its simplest, a good disaster plan should do these two things. First, it will secure the collections against the threat of disaster and, secondly, it provides adequate support facilities should disaster strike. Experience has taught us that, in most cases, the items that are damaged outnumber those that have been destroyed, for which we can do nothing. Therefore our first concern is with those collections that have been damaged. If they can be stabilized then the disaster team would have done its job. Without this essential backup after the fire has been

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extinguished, a situation that was so quickly controlled could be lost again.

In an institution with no provision for such a fire, the situation could obviously be much worse. The fire may be allowed to spread, not only becoming increasingly destructive but also requiring a greater effort to extinguish, thereby threatening still more of the collections. To make matters worse, the after-care for the damaged articles would be slower to activate, putting them at greater risk. If the collection is a small one, a larger percentage of the holdings may be destroyed, thereby increasing the potential for catastrophe. Indeed, it tends to be the smaller, private collections, which have less provision for disasters, that suffer more. Such collections can be very specialized, so the whole is often of a greater scholarly value than the constituent parts, making any losses harder to replace.

Coping with the unforeseen

I mentioned earlier that disaster plans have two functions: (a) to reduce the risk of disaster, and (b) to control and minimize damage should a disaster strike. It is relatively simple to prevent certain situations from arising, for example, theft, casual vandalism, burst piping, structural decay, etc. These are all man-made events which while not possible to predict, can be averted by judicious management and staff vigilance. It is these relatively straightforward problems which face most of us in Western Europe. The rest of the world must cope with far less controllable and potentially catastrophic events, such as earthquakes and extremes of weather. In many of these cases it is the ability of the museum or library to look after itself that determines the damage suffered, as one is less able to count on staff support.

For example, in the event of an earthquake it is not just museums that suffer, whole areas of the surrounding city may also be laid waste, and local staff will probably have disasters of their own to deal with. The salvaging of museum collections will be of no priority at all in such situations, and it could be days or even weeks before the damage and loss is adequately dealt with. In these cases, the security of the collections depends upon the building being able to withstand both the initial structural assault, and subsequent threats of looting. Modern designs for museums are beginning to take this into account. For example, new institutions are moving away from modern, Western-style architecture, with its over-reliance on air-conditioning as the only way of controlling environments. By using traditional methods of building construction one is, almost by accident, housing collections in structures that are better able to withstand the extreme conditions found locally.

The amount of capital required to undertake a full disaster plan can be reduced if the problems are tackled individually and over a period of time. For example, in small, localized disasters it is usually water that is the principal enemy, and any precautions taken to restrict its access will substantially reduce its risks and effects. Many of these restrictive measures can be carried out by local experts, which further reduces costs. Pipes, central heating and cooling systems are major hazards, and should be avoided in storage areas. But as this is often not possible, then lagging the pipes with foil and cloth and enclosing them in a wooden housing will reduce the risks of spray in the event of fracture. It will also cut down the heat emitted from hot pipes, which will help stabilize temperature and humidity. Moving free-standing shelves away from the pipes, and lining the backs with polythene sheeting will further reduce the risks of water contamination.

If there is a fire it is usually not the flames that cause the most damage, but the water used to extinguish them. The fire may only be small, but water will be sprayed over a much wider area to stop it from spreading. It will also seep into walls and through floors, affecting a much larger area than the flames. Smoke damage can be a problem too, although carbon deposits usually only settle on top of museum objects – that is, until water is introduced and the smoke particulate is washed into them, causing a much more serious conservation problem.

The most cost-effective way to reduce such damage is to place stored objects into archival quality boxes. This will considerably reduce smoke damage and prevent all but the worst soiling from sprayed or dropping water. It also gives a measure of protection against falling plaster and masonry, both common hazards where large quantities of water are involved. Another advantage of boxing otherwise loose material is the ease with which it can be evacuated by non-trained personnel. The damage caused to collections while being moved away from the site of a disaster should not be overlooked or underestimated. Evacuation is often carried out in poor conditions by members of the emergency teams, and items unharmed by the event may be irreparably damaged during the move.

The question of where collections can be safely stored when there is a disaster is not one to be worked out afterwards, otherwise the temporary storage might be totally unsuitable. It should also be remembered that temporary reserve storage is often just that, and collections may be forced to move to a third, or even a fourth, site before returning to the institution. Moving collections quickly and safely to predetermined locations, where they can be efficiently checked and catalogued, is essential to the post-disaster treatment process. Having them already stored in standard size boxes will greatly ease such problems and aid any stock checks.

Disaster management can be slowed down by inadequate cataloguing and labelling, especially where emergency work is carried out by members of staff who have little or no knowledge of the collections. The removal of holdings in an emergency is likely to be haphazard, and the management and recovery of the collections will only be as good as the surviving catalogues. The loss of such catalogues and index file systems, while not as serious as the loss of museum objects, will slow this down and have serious long-term effects on the use and availability of the remaining collections. Keeping copies of all catalogues off-site is therefore an essential part of any disaster plan, and the trend towards computerization means that this is within reach of most museum budgets.

The storage of emergency equipment is another problem that can be easily overlooked. The long lists of what is required in the event of a disaster represent a substantial investment in both money and storage space, and it ought to be remembered that the emergency equipment is as vulnerable to disasters as the collections. Therefore, it is not recommended to store all the materials in one place, despite the obvious advantages of access. However, spreading them over a wider area creates the opposite problem, especially in the confusion of an emergency. Storing equipment off-site is the best answer, as is sharing the expense of creating a disaster-response team with other local institutions. It is to be hoped that, apart from the most catastrophic events where disaster equipment would be of little immediate use, only one museum will face an emergency at any one time. Given this assumption, the equipment and materials maintained by a consortium of four or five institutions, along with the accumulated expertise that would be on hand in the event of a disaster, would create the conditions for an excellent and very effective response team.

Another advantage of such a plan would be to encourage local museums, libraries and archives to interact more regularly. There is a noticeable lack of communication within the heritage industry, to the detriment of all involved. No one would argue that the Florence flood of 1966 was not one of the great modern cultural disasters, but the accumulated energy and international expertise that resulted from it changed the face of conservation and restoration for ever. Taking the idea of co-operation one step further, the establishment of regional or national disaster-management centres by local or regional governments could only have positive benefits. At the very least, nationally funded museums ought to have access to a central stock of emergency equipment. Expert knowledge is usually given quickly and generously in the event of a disaster. But finding, for example, large quantities of polythene sheeting, blotting paper, water pumps or portable lighting systems in the middle of – for argument's sake – a national holiday may be difficult. Given the assumption that 72 hours is all it takes before irreversible damage has occurred to most water-damaged organic objects, the supply of resources quickly and efficiently to a disaster site is of the utmost importance.

Human beings: the greatest threat

I cannot write this without mentioning war and terrorism, and the effect that these can have on museum collections. Let us not fool ourselves: human beings, if brutalized, are much more dangerous than any other forms of disaster. No amount of planning can begin to cope with man-made destruction through war or riot. Few natural disasters can have the same instant and catastrophic effects as an armour-piercing anti-tank shell exploding in a historical library, such as happened at Dubrovnik on the Croatian coast.

The war in the former Yugoslavia has reminded us that is has now become the norm for all sides in a conflict to regard the culture of their opponents, in all its forms, as a 'legitimate' target. Dubrovnik was shelled simply because of its cultural significance: it was of no military value. And yet, like almost all great culture and art, this old city is more than simply a Croatian monument – it has a historical significance that transcends international boundaries. Various treaties and agreements were drawn up in the post-Second World War period, which attempted to guarantee the safety of internationally significant monuments and collections in the event of conflict. But it would take a particularly far-sighted commander to place the survival of his men below that of his enemy's culture, and some countries – including the United Kingdom – did not sign them.

In the forced movements of populations during a conflict, the damage and destruction to local centres of culture is sometimes far greater than to the larger national collections, which are usually moved prior to the conflict. Private collections and regional museums can be dispersed beyond recall by the effects of war. Such damage may not be felt internationally, but locally it is a tragedy, as collections that represent the accumulated regional knowledge and experience of past generations are denied to those of the future. It is these which, in their small way, contribute more to the concept of local identity than any of the famed and internationally renowned collections. Political and religious upheavals mean that holdings with a particular cultural bias are earmarked as targets by rioters and terrorists. On many occasions this sort of threat is as dangerous as any, as there is often no warning. The poorly briefed security forces can only stand by and watch such vandalism, more concerned to restrict the action geographically than to prevent the destruction of specific buildings. It is a paradox that to preserve collections *en masse* requires us to restrict access to them; in which case why bother holding possessions at all if nobody outside a select elite is allowed to view them. It is a complex problem, because the information contained in our cultural institutions should be used to educate and enlighten, thereby helping to remove the ignorance which desires to destroy knowledge that contradicts particular doctrines.

The effects of conflict will inevitably make it even more difficult successfully to apply a disaster plan. Museum personnel and emergency services cannot be relied on to respond as they would in peacetime, and many of the normal avenues of approach are not available. A good example of this was the tragic destruction of the University Library in Bucharest, during the Romanian Revolution of December 1989 and January 1990. The library was set ablaze during the ferocious street fighting and the emergency services who rushed to help were fired upon while attempting to evacuate the books. No amount of foresight and disaster planning could realistically hep in a situation like that, and volunteers could only look on as one of Romania's finest libraries was almost totally destroyed.

Fortunately, most disasters are not of this magnitude, and it is to be seen time and again that the potential for damage in such events can be considerably reduced with even a basic disaster plan. A lack of resources can be offset by careful management of human as well as material assets. Attention to basic housekeeping – such as regularly checking the building for signs of leakages – should be part of the everyday work of museum staff. Teaming up with local institutions to form regional disaster response teams is perhaps the most effective, but least-used method of maximizing limited resources. It would also be more likely to attract attention and gain a higher profile if a consortium of museums or libraries acted together. Even the simple expedient of inviting the local fire services to carry out a building survey, and showing them the rare and fragile collections held therein, could make the difference between potential and actual catastrophe. There is often the smallest detail separating the two, yet the consequences of both could not be further apart. ■

Note

1. L. J. Fennelly, *Museum, Library and Archive Security*, Boston/London, Butterworth, 1983.

Namibia's Mobile Museum Service

Christine and Peter Nias

A large country with a small population, mainly based in remote rural communities, Namibia has opted for an innovative method of linking schools and museums in a symbiotic educational environment. The authors, a professional teacher and a researcher, were recruited by a British aid agency at the request of the Namibian Government to help the programme get off the ground.

Namibia has a surprisingly large number of small museums, currently around twenty, with most being privately owned and another five in various stages of creation. This is in a country of only 1.5 million people, thinly spread over an area almost three times the size of the United Kingdom. Namibia is also a country emerging from decades of apartheid during which its few resources were siphoned off elsewhere. Now independent from South Africa since 1990, it has had to make the most of what it has in order to face its many challenges. One of its innovations was the creation of a Mobile Museum Service, but one with a difference, for it was conceived as essentially an educational and developmental tool.

Two issues were of particular concern. First, the concept of using museums as educational resources in Namibia is relatively new, with only the National Museum in the capital of Windhoek having approached the question. Second, the long years of apartheid (during which some museums were used to promote cultural differences between peoples) meant that non-White education in general had very few resources in every respect.

This was the background for the idea of a Mobile Museum Service which aimed at tackling both issues simultaneously, but from opposite directions. Thus, museums would be helped to gear themselves up to formal educational use and, conversely, schools would be encouraged to use the museums as a teaching resource. In the many areas of the country where there were no museums, any initiative to start one was to be encouraged, whether in the schools or the community.

To this end the Namibian Ministry of Education and Culture and the Museums Association, a non-governmental organization, asked the British aid agency Volunteer Service Overseas (VSO) for two project workers to help begin the planning and implementation of the museum service, and to train Namibian personnel to

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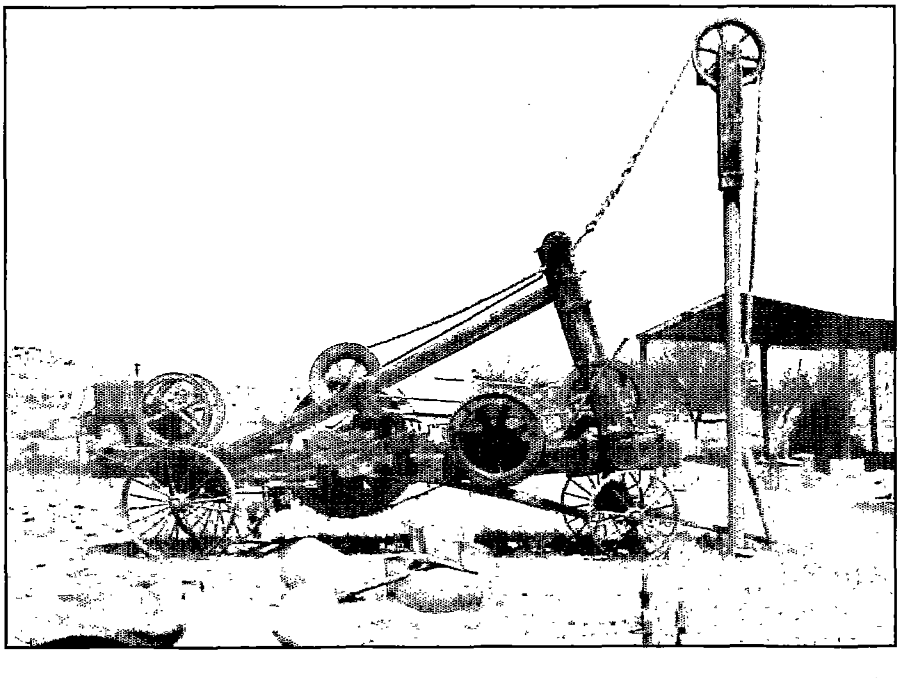

Helmeringhausen Museum, on the mobile museum circuit.

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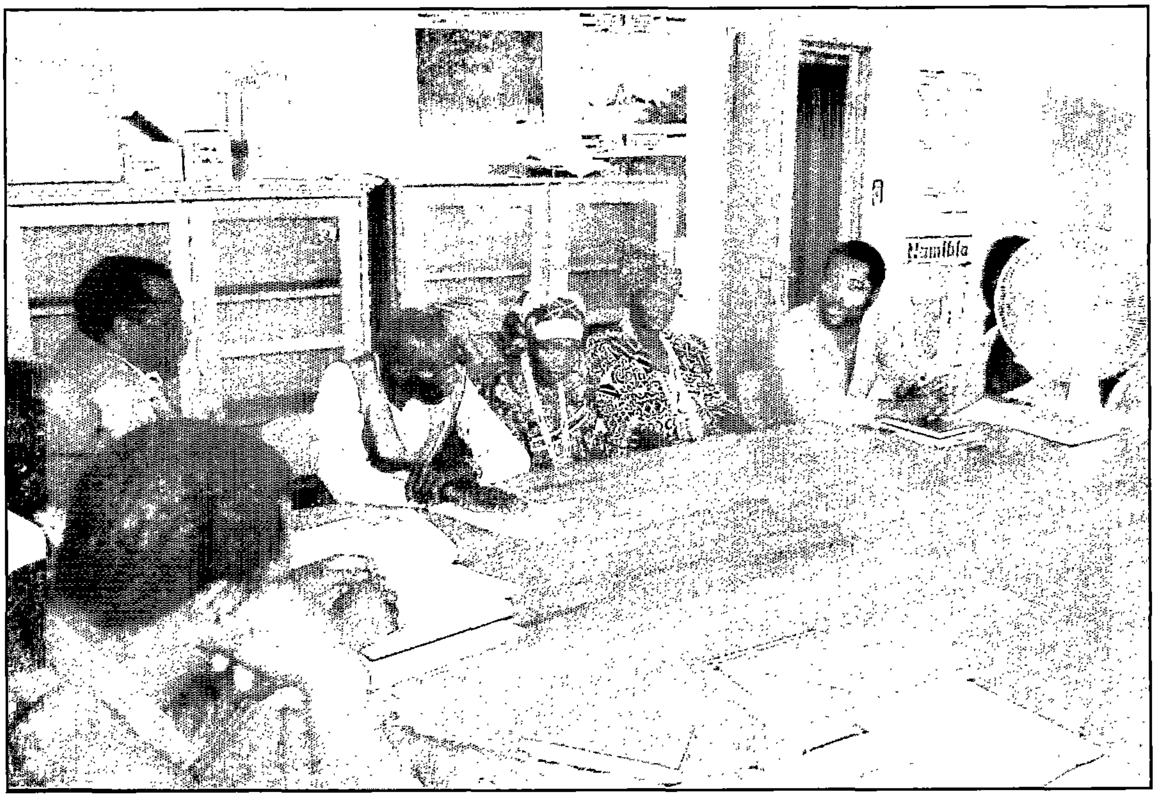

A committee meets to plan the new Ondangwa Museum.

continue it thereafter. (The VSO recruits professionals to meet requests from developing countries to fill posts that would otherwise be vacant.)

The two volunteers started in October 1992. At that stage no one was sure how many museums there were in the country. The first task therefore was to find out where they were, what condition they were in and what kind of support was needed. Schools were also visited around the country and a review of the disparate information sources in Windhoek was carried out. A visit to the Botswana Mobile Museum and Education Service showed how that model worked. All this, and with major limitations in obtaining funding and transport (which persist to this day), took almost a year to complete.

It was found that most museums were staffed by enthusiastic but untrained volunteers, usually Namibians of German ancestry, and reflected largely only the Germanic history of the country, with no mention of the seventy-five years of South African occupation. (Only now, in the National Museum, is the visitor told about this.) Also, Namibia's relative isolation over many years limited the introduction of new ideas, with displays being very basic.

During the first year, the specific aims of the Mobile Museum Service, which is based at the National Museum, were developed, as were the methods of implementation. One aim was to give support to existing museums, especially in matters of organization and management, display, staff training and use by schools. A series of seven short 'Museum Advice Notes' were written and distributed on such topics as museum planning, education, cataloguing, display methods and ideas.

The second aim was to assist, on request, community initiatives to create new museums. To date, five such requests have been received. There is particularly great enthusiasm in the north of Namibia where half the population lives but where there is only one (new) museum. The support offered thus far entails advising on the formation of a museum committee, on how to apply for financing and on other organizational, information collecting and planning needs, plus some advice on display.

The third aim was the promotion of the educational link between museums and schools (and then with the wider community). The method chosen was not a travelling show or loans arrangement since the initial planning visits showed that little would be learned if the service appeared in a school with a display for one day and then disappeared for a year. Longer-term developmental value would only be achieved if teachers were trained to use museums. Then they and their students could benefit on a regular basis and not only when the Mobile Museum Service happened along. Another factor in the decision was that, at Namibian independence in 1990, a UNESCO study found that 90 per cent of all teachers needed retraining. Such was one of the devastating legacies of apartheid. So a substantial training programme in basic methods was created.

Emphasizing the practical

To this end, the Mobile Museum Service designed seven different workshops for teachers and adult literacy trainers on aspects of history, geography and environmental studies. These were all practical sessions during which teachers were given hands-on experience in doing a particular project, using resources that they could obtain in their school.

The topics covered a broad range and included 'working with objects', where observation, recording and explanation is practised; 'how to use your local museum', 'making use of your local environment', which includes drawing a map of the school or village and learning its history; 'how to do oral history' (with and without tape recorders); 'using drama in history and social studies'; 'how to present information in project work', and 'creation of alphabet lettering'.

These were all curriculum related and were concerned with teaching method rather than content. Some of the workshops took place at the local museum, using objects in its collection and ensuring that teachers and museum staff were introduced to each other. Schools were invited to do projects that could later be displayed in the museum, thus encouraging visits by parents and other students. This was intended to help overcome the obstacle which was aptly described by one teacher: 'I was scared to come into the museum before, but I can now see how I can use it for my class.' She was 'scared' because the museum had always been seen as both a White establishment and one not intended for the likes of everyday folk. In areas where there was no local museum, schools were encouraged to start collections in the classroom and to display associated work.

As a next step, teachers were sought to act as 'link persons' between schools and museums. The Mobile Museum Service provides initial training and a pack of materials to assist them in the task of showing and encouraging other teachers to use the museum and to help with visiting arrangements. The idea is to build this network around the country so as to make the regions as self-sufficient as possible, thus allowing the service to spend more time in helping the more remote areas.

New approaches to teaching history and science

The service also assists museums in making themselves more attractive to schools and the general population, not only by providing the usual worksheet but more importantly by developing

Photo by courtesy of the authors

A teacher demonstrates the use of the blacksmith's tools at Grootfontein Museum.

displays that more properly reflect Black as well as White history. The use of oral history plays a significant role in this process.

There are also opportunities for using some museums to help teach science and technology as well as social and natural history. This is particularly important in Namibia where science teaching is very limited. Displays of water-wheels and pumps as well as small steam engines can have wonderful inspirational value to teachers and students alike. Unfortunately, there is only one museum that has a few working displays with movable parts. This aspect, which is taken for granted elsewhere, has yet to be developed in Namibia, where almost all displays consist of static objects, without context or interpretation. To solve these problems, people, training, money and ideas will be at a premium.

Promoting links between the National Museum and the non-governmental Museums Association has been another task of the service. Prior to the creation of the service they were far apart in many ways but have since negotiated together on the ways to go forward.

In part due to a government freeze on posts, no Namibian personnel have yet been appointed to continue the service and the National Museum budget is on the decline, though some short term financing has been obtained from the Africa Archives and Museum Project. Continuing exernal support in terms of staff and money will doubtless be needed for some time if the service is to be maintained, as the government wishes. An evaluation of the success of the programme was drawn up in 1995 and distributed to other countries in southern Africa so that it may serve as a role model.

The Mobile Museum Service currently visits each region of the country for about two weeks at a time, organizing workshops for in-service and trainee teachers and adult literacy workers as well as providing support to both old and new museums. Thus far more than 1,000 teachers have attended the workshops, demonstrating that involving teachers was the right choice and one that allows a broad range of people, schools, areas and topics to be covered. In a country where almost all legislation has had to be rewritten, all services reoriented and training provided rapidly and on a large scale, any unit which travels the country absorbs much useful knowledge and experience. To that end, the Mobile Museum Service continues to be in demand not only for reviewing national museum legislation but also for the planning of more general regional development initiatives. ■

Dutch National Museums go 'private'

Steven Engelsman

The recent 'privatization' of museums in the Netherlands was a newsworthy event in the museum world, representing a radically new approach to the planning and management of state museums. The following article is taken from the speech delivered by Steven Engelsman, director of the National Museum of Ethnology in Leiden, at the ICOM General Conference in July 1995. It provides thought-provoking insights into the whys and hows of the complex processes involved in shifting a broad range of responsibilities from the government to the museums themselves.

When I entered the museum world some fifteen years ago, coming from a research job at a university, my family and my colleagues told me I was mad to make the transfer from the brilliant world of learning to the dusty world of museums. They had no idea about the interesting work that was really done in a museum.

Today, it is very different. The public, and hence also my family, knows much more about museums. Newspapers, radio and television pay great attention to what is going on in museums. In short, museums are now prestigious places, museums are news, museum directors, curators and conservators all appear on television, and the family proudly videotapes them.

A very instrumental factor in this change of attitude was, in my view, the privatization of the National Museums. And so, my message is simple: privatization is a good thing. I am all for it. It has immensely clarified the relationship between the Ministry of Culture – our financier – and the museums. And it has provided museums with a great deal of flexibility and energy which was lacking. In this article I shall try to illustrate exactly these points.

Firstly, I will expand on the reasons that triggered the privatization process: what made the Minister decide to get rid of his national museums, and why he thought that this was an act of good policy. Secondly, I will outline the model of privatization that has been adopted. Finally, I will touch upon the effects of this change on the individual museum.

The trigger

The whole development was sparked off by a National Audit Office report on the situation of the State Museums, delivered in September 1988. The results were devastating and highlighted two main points of concern.

First: many museums presented very serious problems in the storage of collections, with backlogs in conservation and registration. It was often impossible to identify collections properly, or to find pieces that were known to belong to them. Most dramatic of all was the situation at the National Museum of Ethnology in Leiden, where I now work. Its famous nineteenth-century Indonesian ethnology collections were rotting away in cold damp cellars and dry hot attics. These types of problem were later dealt with by the famous Deltaplan for the Preservation of Cultural Heritage and I shall not dwell on them here but concentrate on the second issue – management.

Management of the National Museums was problematic. Museum directors were certainly not trained administrators. Rather, they were (and still are, with a few exceptions like myself) eminent scholars, who had reached their positions because they were the best in their field. Actually, there was no need for directors to be administrators, since most of the administration and most of the decision-making was outside their area of competence. For example, the hiring and firing of personnel was the responsibility of the Ministry of Culture. Housing and maintenance, the installation of security systems or the fitting of a new electric plug socket, were the province of the Ministry of Housing. And entrepreneurship was virtually impossible, because of the strict separation between expenditure – on the basis of an approved government budget – and admission receipts. Every guilder earned by a museum went straight into the central treasury.

So museum directors had two options: either to spend their time on making the

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acquaintance of the decision-makers in the different ministries and somehow manipulate them into a friendly attitude, or to leave things as they were and concentrate on what they were good at – scholarly research. Most were quite happy to do that and let time take care of the rest.

In short, the responsibilities for running a museum were scattered all over the government, and so were the budgets that went along with them. Only at the level of the Cabinet of Ministers was one able to find out the grand total spent on the National Museums.

This same point had already been made clear a few years earlier, when the deputy to the Director General of Culture (the highest responsible civil servant) spoke to all museum directors in order to determine how to tackle the notorious problem of museum administration. One question was posed to all of them: 'Who do you think is your boss?' The answers were flabbergasting: there were seventeen different replies, varying from 'I have no boss, I'm my own boss' though 'the Queen', 'the Minister of Culture himself and nobody else', to 'Parliament' and 'I have as many bosses as I have issues to deal with'. Only a few thought the Director General was their boss.

So, the National Audit Office report came to conclusions that were neither surprising nor new. What it did do, however, was to add a sense of urgency. The lingering problems were brought out into the light of day, to be turned into an issue on the political agenda. They now called for a radical solution.

Privatization – how it was done

The answer was given on 15 December 1988, at a meeting between the Minister of Culture, Eelco Brinkman, and the museum directors, along with their respective senior staff. I was present as a staff-member of the National Museum of the History of Science. It turned out to be a historic event, that to me personally provided the scope, the drive, and the enthusiasm for years to come.

The message was clear and simple. Just a few days earlier, a spectacular robbery of three Van Gogh paintings had taken place at a national museum. Questions in Parliament were expected, and the Minister was going to be held responsible. This forcefully drove home the point that responsibilities should be reviewed. Who should be responsible for what in the museum world, that was the question.

The Minister was very clear on this point: *he* should be held responsible for a clear and relevant national cultural policy, and *he* should make money available to museums to carry out their tasks accordingly. Museums should be private organizations and the directors of museums should carry the full responsibility and the full management power for their institutions. A certain degree of competitiveness between museums would be fine.

In the case of the National Museums, three basic principles were stated at the outset: the collections which had always been state property would remain state property; the historic buildings would also remain state property; finally, the idea was not to cut government expenses nor withdraw state funding, but to provide at least the same amount as hitherto, however, under a different title – not a budget, but a contract-price for the required output and services rendered by the museums. The basic reason for privatization thus was to make a clear distinction between the responsibilities and competence of the Minister of Culture and those of a Director of a National Museum. It was not, it should be emphasized, that the government was turning its back on museums nor was it a question of cutting government spending on museums.

The operation started on 1 January 1989, and it was not until 1 July 1994 that the first six museums actually became private institutions. On 1 July 1995, the last three museums – among them the Rijksmuseum in Amsterdam – adopted private status. The entire exercise thus took six and a half years.

There were three main arenas where steps had to be taken: (a) the Minister and Parliament, to pave the way legally; (b) the Ministry of Culture and the National Museums, to develop the model of privatization, the architecture of the new relationship; and (c) each individual museum itself, to prepare the internal organization in such a way that the museum could act as an independent enterprise.

With regard to the legal issues, the Minister and Parliament were the decision-makers. Parliament was unanimously in favour; however it stipulated that the Minister would not be allowed to privatize crippled or handicapped museums but only those that were strong, healthy and well-equipped; housing, the state of the collections, and the internal organization should be in good order. These conditions were instrumental in enabling the museums to get things done well. Parliament was definately a marvellous ally and, in 1993, passed a privatization law authorizing the Minister to go ahead. It was passed unanimously, this being a sign of the consensus with which the whole process had taken place.

The second arena was perhaps more complex: it involved exploring, inventing and implementing the new structure, designing the new museum organizations, and defining the form in which they would deal with government. Here, the groundwork was laid by a task-force of four museums and a project office run by a handful of competent and devoted civil servants. It started with an experiment in which a privatized situation was simulated. The system of delivering products for an integral costing price was introduced. Many calculations had to be made: personnel expenses, writing off for depreciation, cost of housing, overheads. It made both the museums and government aware of the real costs of running a museum.

Many other issues had to be addressed and the following were most significant:

Legal form. In the end, the exact legal form designed for the new museum-enterprises was that of a foundation, with the director as the governor, responsible to a board of supervisors. Museums did their best to find good supervisors, and they succeeded. Now, international bankers, former ministers, Members of Parliament, national trade-union leaders, eminent scholars, museum professionals and presidents of multinational companies have taken up positions as supervisors of the national museums, thus providing them with access to and links with very diverse sectors of Dutch society. As one may well imagine, accountability has become very different, and much more interesting.

Collections. Collections remain state property and are placed under the care of the museum for a thirty-year period. An independent inspectorate was created to check regularly whether the collections are kept in good order. New acquisitions are authorized by the director, who has full power to act on behalf of the Minister of Culture. They become state property.

Housing. The museums rent their buildings from the state. The basic notion was that a fair rent should be paid. However, as this had never been done before, there was no budget provision for such an item. The problem was solved ingeniously: the Minister of Finance now makes money available to the Minister of Culture who transfers the money to the museums who pay the rent to the Minister of Housing who returns the money to the Minister of Finance. It may sound slightly odd, pumping money around this way, but it is actually quite a good system. The idea is that museums now have a powerful means to force the owner to do what owners should do: take good care of maintenance. We can go to court if necessary, and withhold the payment of rent. So it introduces some sort of equal footing between contractual partners.

Personnel. More than 1,000 civil servants have now left the government to become employees of the private museum enterprises. The Minister had set the rules, which were approved by Parliament in the act of privatization: net wages were guaranteed, and a comparable set of labour conditions was offered. A few colleagues did the rest. They discussed with trade unions for more than two years. A new system for setting the salary levels was developed, and the transfer of millions of guilders from the state pension fund to a private pension fund was prepared.

These then were the main issues that had to be dealt with on a collective level. The solutions adopted apply to all museums. The actual work was done by four museum directors and their staff, acting on behalf of all museums. This left others with sufficient time to re-think and re-organize their own business. On an individual basis, each museum had its own, very specific tasks to perform before it would be ready to privatize. This leads us to the third arena, which may be illustrated by the National Museum of Ethnology (NME) in Leiden.

The case of the National Museum of Ethnology

The NME is one of the oldest museums in the Netherlands. It was founded in 1837, when the King bought the beautiful Japanese collection formed by von Siebold on Deshima island in Nagasaki Bay. Over the last 150 years the museum has acquired some fame, being one of the oldest ethnological museums in the world.

When I entered the NME in 1992, the notion of privatization was still very abstract and far away. What the museum was really concerned with was a major reorganization, replacing an age-old obsolete management structure in which all curators were chiefs in their own right and all other personnel merely employees, by a new form in which the museum was to be organized into four divisions, with heads of divisions forming the management team under the leadership of the general director. The museum was also deeply involved in a massive enterprise to restore and clean its famous collections and document them by computer. A group of more than thirty new staff had been brought in to do the job. In addition, in 1988 the museum had lost its director, an eminent scholar of Japanese art, and had seen an interim director arrive to do the reorganization.

In short, the museum was in turmoil, trying to adapt its organization to future tasks that had yet to be clearly defined. This process of setting out a new future, or in down-to-earth terms, of formulating a business plan for the next five years, took a long time. When the first group of six museums actually went private in June 1994, the NME had just finished this task. It was privatized six months later.

The business plan required quite a number of significant actions such as, for example, complete renovation of the old buildings, the creation of new stores outside Leiden, extension of staff, and so on. This involved a $30 million investment as well as a considerable increase in the annual budget. Then the unbelievable happened: these requirements were met by the Minister. As Parliament had demanded, the museum was privatized with housing, collections and finances in good order.

What conclusions can now be drawn? It may be recalled that on 15 December 1988 the Minister set out to achieve two objectives: to review thoroughly the way the national museums were managed and to redefine responsibilities, and, secondly, to formulate a clear general cultural policy which could be effectively implemented by independent museum organizations. How have these aims worked out in practice?

With respect to the first objective, it should be pointed out that privatization of museums was a top-down affair. It took nearly seven years until the last ones were privatized in June 1995. We have now indeed reached the situation where museum directors bear full responsibility for the management of their institutions. This goes along with a new and much more clear-cut system of accountability – to the minister, the board of supervisors, the inspectorate, etc. Museums are becoming more and more transparent and this is a welcome change.

Transfer of responsibility, authority and accountability does not, however, stop at the front door. It continues inside the museum, reaching down to the workfloor, and it takes some time and a lot of effort to pass the new style of management down the management levels. Of course there is resistance – to the fact that responsibilities are transferred to other people and to the fact that accountability to people like myself is not easy for a specialist accustomed to talking to fellow specialists. The message seems clear: you cannot make a supertanker change its course as quickly as a rowboat. And while it may be tempting to address the other side of the success story and dwell on the aspects that did not work out well or that remain to be solved, I will not do so since I am convinced that the drawbacks of privatization in no way outweigh the advantages.

The second point is my last one. Given that museums have become independent, the question remains as to what this clear cultural policy consists of. We do not yet know. The Ministry will have to change its working methods, and turn its attention away from hobbies and details to focus on broader issues. That also takes time, and begs for some clemency from the museums, which are very well aware of their two basic tasks: (a) professional care of collections, ranging from scholarly documentation to preservation and ready accessibility; and (b) the provision of public services. It is obvious that museums must take their public seriously, and formulate ambitious programmes to increase public participation. So what we now find in many institutions is a much stronger emphasis on professional communication and public service. Exhibitions are no longer the exclusive domain of scholarly curators, but are prepared in conjunction with an exhibitions curator specialized in identifying and reaching out to the museum's target groups. Moreover, all sorts of events are being introduced to increase the attractiveness and relevance of museums for their actual and potential publics.

All of which leads me back to the beginning of this article. I said that the public has increasingly come to like museums. The reverse is also true: museums have increasingly come to like the public. So in the end, museums and the public have come to like each other, and that is a good thing. ■

Counting on volunteers: Arizona's Titan Missile Museum

John C. Stickler

It is a frightening relic of the Cold War, an underground monument to mass annihilation, and a popular Arizona tourist attraction. It is the Titan Missile Museum, the unlikely result of co-operation between the United States Air Force, an aircraft museum in Tucson, and the Government of the former Soviet Union. And it is operated almost entirely by a staff of volunteers. John C. Stickler is a freelance writer based in Arizona.

From 1962 to 1982 the primary American weapon in the Cold War was the Titan II intercontinental ballistic missile (ICBM). There were eighteen manned launch sites arrayed in wide circles around Wichita, Kansas, Little Rock, Arkansas, and Tucson, Arizona. Each missile carried a nuclear warhead many times more powerful than the atomic bomb that destroyed Hiroshima, Japan, in 1945. They were kept fuelled, ready to fire within one minute, if the Third World War broke out.

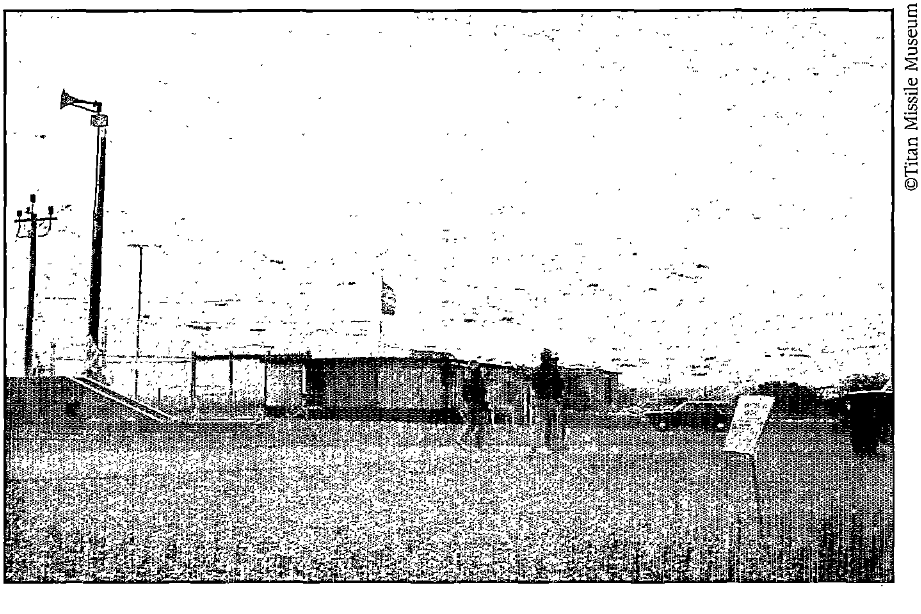
After American President Ronald Reagan signed a decree in 1981 to deactivate this massive arsenal, each giant rocket had its liquid fuel drained and its nuclear warhead removed. Over the next six years, the huge, steel cylinders were pulled from their silos and the concrete underground installations were destroyed and filled with rubble – all but one.

In Tucson, Air Force officers agreed with administrators of the non-profit Tucson Air Museum Foundation that one launch complex should be preserved for posterity. However, according to the terms of the SALT II treaty, all missile installations were required to be demolished, under the eye of circling surveillance satellites. Only after protracted negotiations with the Soviet Union was permission obtained to preserve one silo intact for historical purposes.

The Titan Missile Museum opened in May 1986, a subsidiary of the Tucson Air Museum Foundation which leases the site from the United States Air Force. It is located about halfway between Tucson and the Mexican border. Each year 40,000 to 50,000 visitors take the one-hour tour of the only ICBM complex in the world open to the public.

Deputy Director Becky Roberts manages the facility, officially Strategic Air Command Complex 571-7, with one full-time assistant, two half-time custodians, and 120 volunteers. Most of the volunteers are residents of Green Valley, the thriving retirement community across the road.

'They're great,' says Roberts. 'They come from a variety of different backgrounds.



©Titan Missile Museum

Visitors to the remote desert compound return to the small main building after touring the underground museum.

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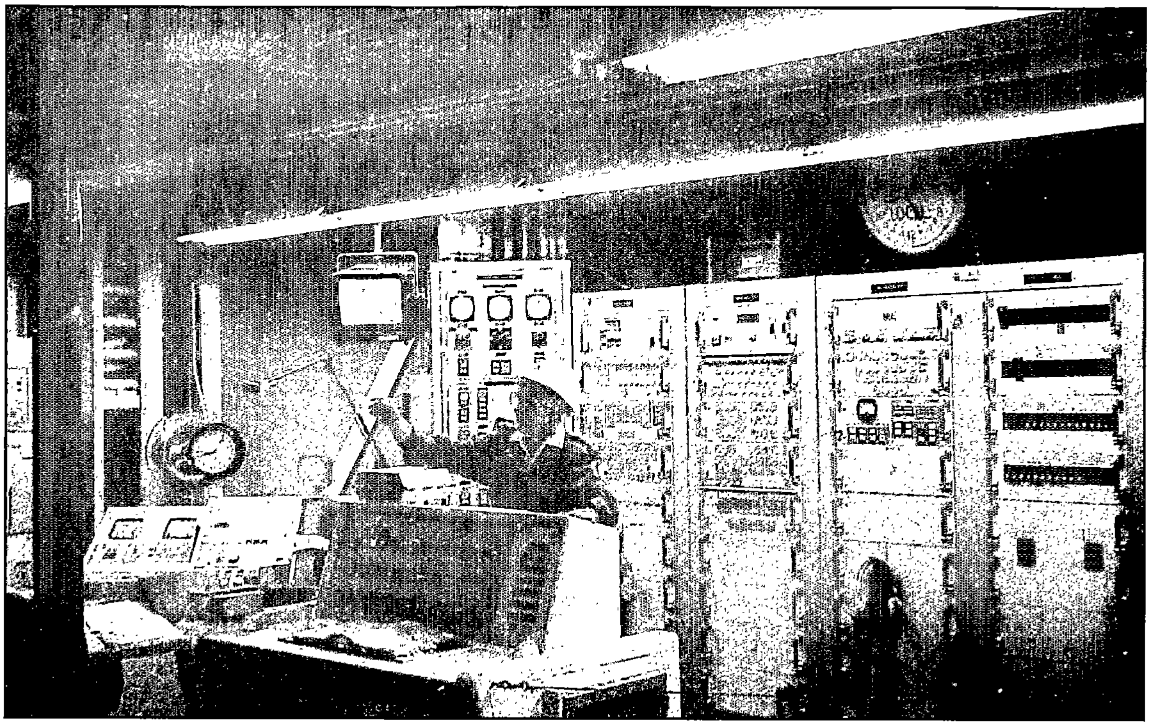


©Titan Missile Museum

A volunteer guide explains the workings of the launch-control centre, 10 metres underground. This command post was actually manned by the United States Strategic Air Command, twenty-four hours a day, for more than twenty years.

'They care, each demonstrates a great feeling of responsibility. I feel spoiled because they do care so much. It's like a family.' Surprisingly, only about 10 per cent are retired military personnel.

Volunteers must complete a series of background classes and narration training before they may begin leading tours. Monthly training courses are held during the winter and the volunteers study at their own pace until they are ready. In addition to acting as tour guides, they may work at the ticket counter or in the gift shop selling Titan missile souvenirs. To maintain the strong camaraderie among the unpaid staff, the museum hosts frequent informal parties, potluck suppers and pancake breakfasts.

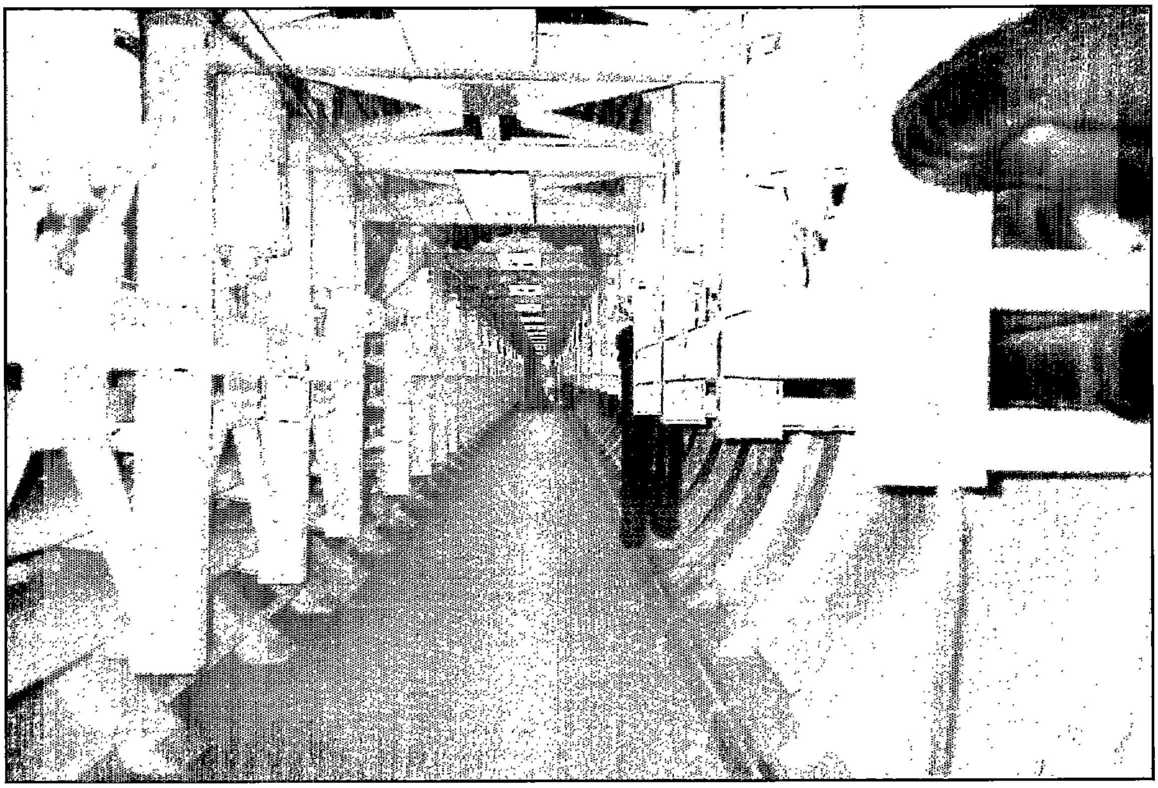
Volunteer Co-ordinator Wendy Nelson prepares the volunteer work schedule at least one month, and sometimes two, in advance, and keeps it posted on a large calendar in the staff office. Hours committed by each person vary from half a day, once a week, to two or three times a week. Some are merely available on an as-needed basis. One dedicated woman has donated more than 4,000 hours since the opening day in 1986.

More than meets the eye

Not much is visible at the entrance: a 2-metre chain-link fence surrounding 1.5 hectares of cleared desert, a gate opening next to a small wooden building, some equipment displayed in the distance. Visitors park outside the fence and walk through the gate to the building. The door opens into the gift shop, stocked with US Air Force and Strategic Air Command mugs, caps, models, etc.

Cashiers accept $5 for the entrance fee ($4 for seniors and active and retired military personnel, $3 for children from 10 to 17). Tours begin every half hour and start with a briefing in a small auditorium. After learning about the Cold War missile programme, the Titan II ICBM and the launch site they are about to see, guests don plastic hard-hats and follow their guides out into the sunshine.

There is more to see now than there was when the site was active. Stationed along a paved path around the silo are a fuelling truck, a first-stage rocket engine, a re-entry vehicle (the actual warhead, fondly called the 'RV' here), and a helicopter once used to service the eighteen installations. The guide explains in great detail the function of each


©Titan Missile Museum

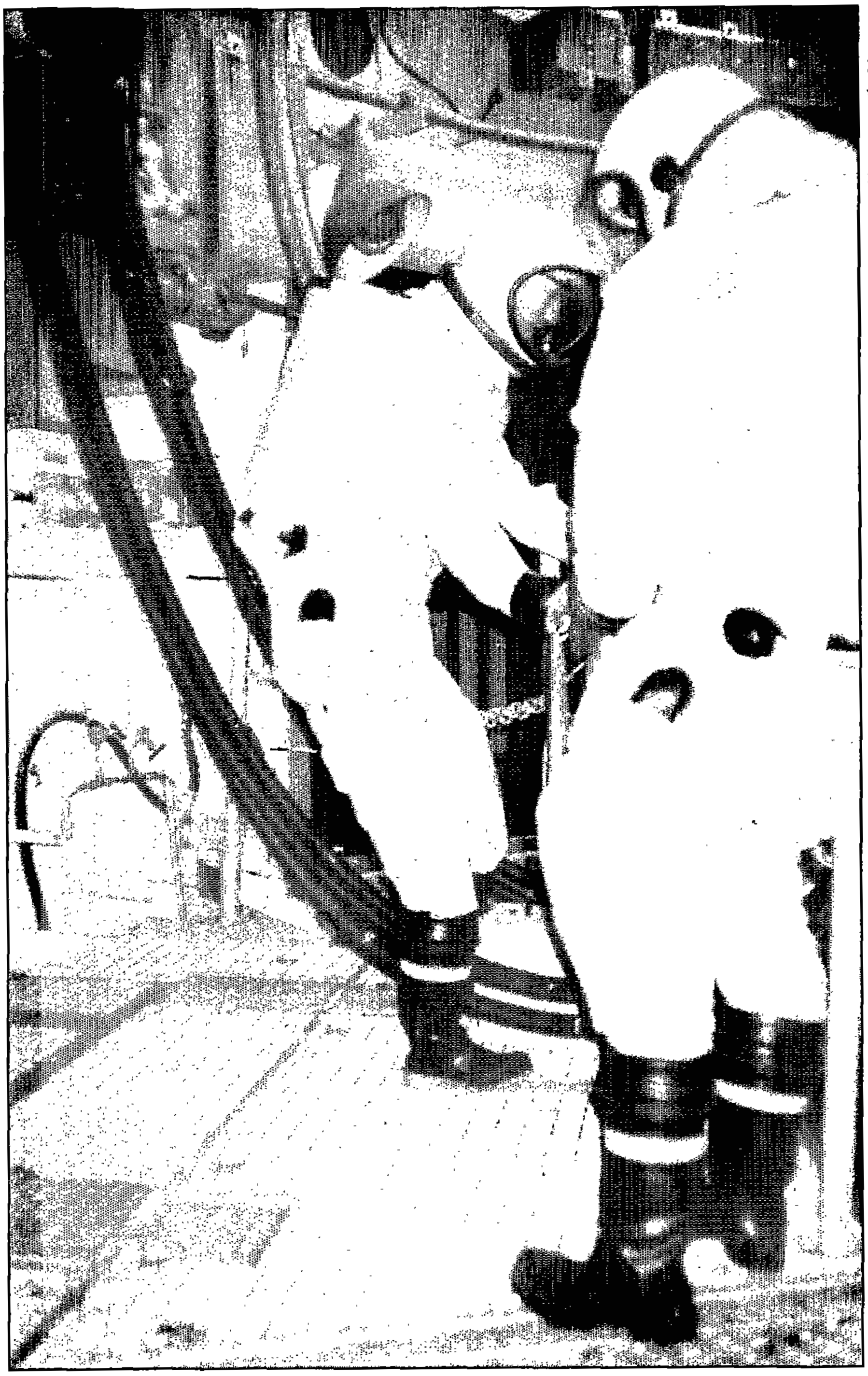
A 60-metre-long 'cableway', 10 metres underground, links the launch control centre with the 44.5-metre-deep missile silo.

piece of equipment and then leads visitors to a raised platform next to the silo. The circular concrete shaft is covered with a pyramid-shaped dome made of 2-cm-thick glass.

Peering down through the clear glass, the nose-cone of the 33-metre rocket is very visible, standing tall in its 44.5-metre silo. Neither the megatonnage of its nuclear payload, nor its secret Soviet target, have ever been revealed. Fully loaded with fuel it weighed 167 tonnes, yet could vault to an altitude of 76.19 km in just 2.5 minutes. (The missle that originally occupied this silo was removed and replaced with a training rocket, which was never actually fuelled or armed.) Each missile originally cost $2.2 million to build.

Visitors are next escorted down fifty-five steel steps, 6 metres below ground, through an elaborate security system of metal cages, video cameras, and a 2,720-kilogram steel and concrete blast door. A sign at the entrance reads 'Watch for Rattlesnakes', a reminder that this is still rather remote desert territory.

The heart of the reinforced-concrete underground complex was the launch-control centre, banked with switches, dials and lights. The guide explains the workings of the electronic systems and the military and political protocol that governed the four-man combat crew stationed here twenty-four hours a day, seven days a week, for more than twenty years. Tight security measures made it impossible for one person to launch the rocket: two separate keys and a variety of codes were required. The controls have been wired so that the tour guide can recreate the launch sequence. When the red lights begin their eerie march across the panel, one instinctively antici-



pates the roar of ignition and the thundering shudder of the rocket blasting skyward. At the other end of a 60-metre-long, steel-reinforced tunnel, windows have been cut into the 17-metre-wide silo. Visitors can observe the missile very closely. Manikins in protective, air-tight suits replicate the fuelling of the rocket.

During the early 1960s, the cost of constructing each underground complex was $8.3 million. Today, the Air Force rents this one to the county for a nominal fee.

Although official recognition as a historic landmark is usually restricted to sites at least fifty years old, exceptions have been made for locations with 'exceptional national significance'. Only about two dozen of the 2,100 Federal historic landmarks in the United States fall into this category and, in October 1994, the Titan Missile Museum joined this élite group when it was designated by the United States National Park Service as a National Historic Landmark. ■

Deep inside the underground silo, manikins dressed in fire-proof suits 're-enact' the fuelling of the giant ICBM.

Forum

Kenneth Hudson, Director of the European Museum of the Year Award and author of fifty-three books on museums, social and industrial history and social linguistics, continues to set out the major issues confronting museums today. We welcome reactions from our readers on the topics presented as well as suggestions for future themes.

Kenneth Hudson's viewpoint on '*museum people*':

Every large country has one or two museums that are really mini-universities, reasearch institutions with a public museum attached to them. The Musée du Louvre and the British Museum are of this type. They employ hundreds of experts, indistinguishable from academics, who spend all their time on some kind of research and who have little or no contact or concern with the general public. These are not the people we are discussing here. We are thinking of those museums that are primarily run for the public benefit, the world's museums of natural history, local history, science and technology, art, ethnology, and so on. Are these employing the right kind of staff at the present time and, if not, what sort of changes should be made?

In general, I believe that museums of all sizes contain too many scholars and too few poets and that the balance needs changing. Scholars, by my definition, are concerned almost exclusively with their own and other people's heads; poets with their hearts, their emotions. Museums, in my experience, are suspicious of moods and feelings and look on themselves as intellectual places. Their architects are allowed, indeed encouraged, to produce buildings which are visually impressive and their designers are expected to create displays which are fashionable and modern, but neither of these approaches amounts to saying that they are deliberately and consciously attempting to stimulate their visitors' emotions. They continue to believe that their main task is to communicate information, not to influence attitudes, beliefs and behaviour, and they choose their staff accordingly. It would be splendid if half the people employed in an art museum were experienced and practising artists and half of those in natural history museums had previously worked on farms, in zoos and botanical gardens, as veterinary surgeons, or in the theatre, cinema and television. Museums are over-intellectualized, partly because of their traditions and partly because of the character and training of the people they employ.

Bill Barkley, Executive Director of the Royal British Columbia Museum in Victoria, Canada, comments:

The state of the economy is forcing museum boards, managers, staff and volunteers to take a close second look at what they do and why. This can either be viewed as a crisis or as an exciting opportunity. The staff of the Royal British Columbia Museum view the future with excitement and anticipation. There is, of course, some apprehension about what is unknown and what we might find out.

The first step was taken by an exhaustive consultation with our public. We discovered many new insights from these consultations. The most remarkable was that people said they like what we do but they do not like how we do it. We were told that the collecting, preserving, researching and teaching were important. However, there was a sense that the public was being kept out of any decision-making around what the museum was doing. It seems

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that in the 1960s and 1970s when money was not an issue, we specialized in museums to the point where we lost contact with our public. This loss of contact was both with the objects the public value and the people they want to know. As the distance grew between the public and the museum, the perceived relevance of what was going on diminished.

The key words in the operation of the Royal British Columbia Museum are access and relevance. Staff are engaged in finding ways of enhancing both. The success has been remarkable. The public is responding in large numbers to our new approaches. The staff continue to develop and refine these approaches based on experience and public input. Most of us engaged in these changes feel privileged to work in a museum during this period. Museums are changing and the people who work in museums are changing how they do what they do so well. ■

Readers are invited to address their comments (which should be no longer than three paragraphs) to: the Editor-in-Chief, Museum International, *UNESCO, 7 place de Fontenoy, 75352 Paris 07 SP (France), Fax (33.1) 42.73.04.01, referring to* Forum on Museum People.

Books

Museums and their Visitors, by Eilean Hooper-Greenhill. London/New York, Routledge, 1994.

Historically, museums and other cultural institutions have had the luxury of existing more or less in a kind of vacuum, remaining timeless in a sea of ever-changing values and priorities. However, in recent years, museums have been weathering some turbulent storms. The past decade has seen a number of dramatic changes take place outside of their column-flanked doors. Culturally, economically, and politically, the world is a very different place than it was just ten years ago, and becoming more so.

Perhaps one of the greatest changes to affect museums directly is the dramatic growth of the leisure industry. Never before have so many different types of recreational activities existed, nor have so many resources been pressed into service for marketing them to the public. Theme parks, shopping malls and video arcades have sprung up alongside zoos, galleries and museums whose number has also increased noticeably. Yet, the leisure audience for these kinds of activities has remained relatively unchanged and the amount of leisure time available is shrinking in many countries. Add to this mixture a less-than-healthy economy and the result is a textbook model for an unpleasant and potentially threatening make-or-break situation for the institutions and industries, including museums, that compete for the time and attention of this leisure public.

Given these circumstances, the recent release of Eilean Hooper-Greenhill's book, *Museums and their Visitors*, could not have come at a more appropriate time. In a firm but objective voice she delivers a wake-up call to museum professionals of all ranks. Simply put: 'Without visitors who are contented, fulfilled, and eager to return, museums and galleries will perish.'

Museums may no longer exist solely as warehouses for artefacts and places of scholarly research. In addition (not instead), if they are to increase or at least maintain their attendance and income, museums must deal with the general public in ways that will make their visits more enjoyable and educationally and personally meaningful. This can help museums compete with the many alternatives becoming available to the public. But, this means that museums must acknowledge the essential role of the learning process so as to communicate effectively with their visitors and attend to their needs.

In the book's introduction and first chapter, 'Forces for Change', Hooper-Greenhill provides a number of well-documented reasons for museums to shift their focus from inward (on their collections) to outward (on their visitors). Although some of these forces result from changes in family structure, school systems and learning theory, others are bringing about the growth of the leisure industries along with their careful and expert attention to market research and audience development. It is suggested that museums must learn to do the same, that is, 'sell' their products and services. Of course, this idea can be controversial, especially for institutions with a strong tradition of functioning without recourse to marketing strategies to gain attendance and, indeed, even oppose their use. The author makes a strong and logical case for the need for museums to adopt some of these practices. While many already carry out public relations programmes, she distinguishes between public relations and marketing, and goes on to describe how the end results of the two differ in important ways.

The second chapter covers basic principles of communication theory and practice, and provides a historical perspective of mass communications systems and some of the models employed by museums around the world. She proposes 'a holistic approach to museum communication' in which the museum experience is divided into off-site and on-site categories, but all transmit a unified image of the museum. Perceptions, attitudes, and visitor reactions are fed back into the mix of everything from displays, publications, and even public facilities, to create a reinforcing loop of communication between the museum and its visitors.

For this model to be implemented effectively, the author advises museum managers that 'a little market research, some preliminary front-end analysis and attention to lessons of earlier summative evaluation is likely to prevent expensive mistakes'. However, she also acknowledges that 'very few museums have coherent and well-managed communications policies', which is all the more reason to work towards them!

The internal communication network of museums is briefly but effectively addressed. Just as the relationship between museum and visitor needs to be two-way, so it must be among museum staff, and the author discusses the importance of seriously addressing this issue. Traditional large institutions tend to fall prey to a strictly hierarchical chain of communication in which information flows only from the top down. With channels so strictly defined, much communication between departments is prevented and what little there is often takes place largely as defensive territorial disputes. This is a very important point that needs careful attention; perhaps the author should develop a companion book, entitled *Museums and their Management*, to address the problem of poor in-house communication that plagues the staff of so many museums and reduces their effectiveness.

The chapter 'Who Goes to Museums?' introduces the concept of accountability. Simply put, museums are places devoted in large part to public service. How well this service is provided and received must be determined in order for it to continue. In the past, the question of the effectiveness of visitor services has been either ignored or has been gauged by rather arbitrary criteria. Hooper-Greenhill argues that all museum workers need to become more aware of their visitorship. Knowledge of actual and potential audiences and usage patterns is very important in gaining public acceptance and frequentation. To quote: 'No business can succeed if its managers do not know who wants its products or services.' In view of the growing competition for leisure audiences, museums can hardly afford not to follow business in this regard. Certainly the leisure industries are doing this.

After establishing the need for developing a visitor-centred communications policy for all museums, the next four chapters describe many practical applications that will help readers in planning and evaluating the success of the museum in communicating with its public. Hooper-Greenhill addresses all areas of the museum experience ranging from making visitors feel welcome to engaging them in the kinds of active learning that can promote repeat visits.

In the chapter devoted to research and evaluation, Hooper-Greenhill provides much-needed definitions of these two often misunderstood terms. She lists their respective values and describes situations appropriate for employing one or the other. She goes on to summarize the processes of front-end, formative, and summative evaluation, using case-studies to illustrate certain techniques. The use of formative evaluation in the development of interactive exhibits is appropriately stressed. 'Those things that are designed for people to use, to handle, to sit on or to manipulate must be tested,' she writes. 'If this is not done, breakages and breakdowns are inevitable.' To that should be added the point that if such pre-testing is not done, valuable staff time and money will be wasted and, most importantly, the visitor will suffer.

For readers who may be less familiar with research and evaluation in terms of visitor studies, the author provides historical references on visitor evaluation, focusing mostly on the United Kingdom. Although much of the early work in evaluation did, in fact, take place at the Natural History Museum in London, many other studies were pioneered in the United States, France, and other countries, which were not included here (readers might also check the issue of *Museum International* devoted to this subject: No. 178, Vol. 45, No. 2, 1993). Nevertheless, the background information presented in the book will be helpful.

Also helpful is the author's objective treatment of the processes of 'hard' and 'soft' methods of evaluation. She contends that, although 'scientific' and 'naturalistic' approaches may have originally stemmed from different worldviews, both types can be useful. The chapter ends with a list of texts and other resources that will prove valuable to any student of museums interested in pursuing various methods used in audience evaluation.

Two chapters address issues of visitor comfort and orientation. Special attention is given to the importance of welcoming the visitor, including the often-overlooked need for providing some form of conceptual orientation to an exhibit.

Hooper-Greenhill urges museum staff to look beyond the psychological and physical delineations of an exhibit that are perceived by staff internally, but which are not apparent to the visitor. As she puts it: 'One minute we might be gazing at a display of high-heeled buttoned leather boots; suddenly, with a moment's loss of concentration, the gaze is fixed on a stuffed fox and a dustbin.' Despite the fact that surveys reveal that orientation shows up consistently as a problem, very few museums adequately provide the cognitive structure that the average visitor needs to make sense of the broad range of experiences usually encountered in a single visit.

Likewise, many museums are often unprepared for the wide variety of visitors they encounter (or should be encountering) on a daily basis. To meet the needs of this ever-changing clientele, the author urges that museums clearly define their important target audiences and strive to make meaningful connections with them. Again, examples are cited of successful collaborations between museums and specific constituencies and many of these are well documented for further exploration by readers. Contrary to the belief of some museum professionals, the practice of targeting audiences is not an exclusive process, but one that, when done correctly, includes diverse groups of visitors who would otherwise be wrongfully neglected.

Concerning the topic of language and text used in labels for exhibits, Hooper-Greenhill warns that 'exhibitions are not books on the wall'. While many museum professionals would agree with this, numerous exhibits apparently continue to strive to be just that. It is important to note that research has shown that visitors come to museums expecting to read labels, and, rumours to the contrary, welcome the opportunity when the label answers a question, clarifies a hunch, confirms a rumour. The key to labels is text that provides the kinds of information that visitors want in terms they understand, instead of overwhelming them with words and terms that often need translation and describe what they do not want to know. The book includes an inspiring account of the power of language in general before going on to address the specific challenges of writing exhibition texts. In just a few short pages, Hooper-Greenhill lists the various purposes that texts can serve in a museum, basic aspects to be considered when preparing them, frequent mistakes to be avoided, and even some methods of evaluating text.

A chapter on museums as learning environments takes on a highly theoretical voice, describing the philosophical issues involved with distance-learning versus face-to-face teaching, active involvement versus passive learning, and various approaches to measuring intelligence. It is true that museums, with their unique collections, subject-matter specialists, multidisciplinary approaches, and multisensory experiences, have great potential to become ideal learning environments, however, as the author points out, it is equally true that, for one reason or another, many do not achieve this potential.

Museums and their Visitors concludes with guidelines that museum professionals can follow should they choose seriously to assess their current situation and develop a management plan for the future. Policies for marketing, exhibition, education, customer care, and volunteers are included. Although many of these are based upon the standards and conditions of British museums, with some modifications they are easily applicable to institutions worldwide. A glossary of terms and an excellent bibliography are included.

In the introduction, Hooper-Greenhill expresses the hope that the book will 'prove useful to students of museums, whether at the beginning of their studies, or at a time when perhaps study no longer seems necessary'. She can rest assured that her hope has been realized. I cannot think of a single 'student of museums' who would not benefit from reading this book.

Book review by C. G. Screven, research associate at the Field Museum of Natural History, Chicago, and former director of the International Laboratory for Visitor Studies at the University of Wisconsin (Milwaukee).

Professional news

Restoration and conservation

'The future of the past' is the theme of *Restoration 96*, the international trade fair to take place in Amsterdam from 10 to 12 October 1996. The restoration and conservation of the cultural heritage will be the subject of several conferences held in conjunction with the fair, which will feature an exhibit of products and services for everything from monuments, sites and landscapes to building exteriors and interiors, fine art, books, works on paper, furniture, historic objects, artefacts and demonstrations on the latest techniques and technologies.

For further information:
Restoration 96
Europaplein, NL–1078 GZ Amsterdam (The Netherlands)
Tel: (31–0–20) 549.12.12
Fax: (31–0–20) 646.44.69

The 1996 ICCROM course on Japanese paper conservation will be held in Tokyo and Kyoto from 20 November to 16 December 1996. Organized by the International Centre for the Study of the Preservation and the Restoration of Cultural Property (ICCROM) in co-operation with the Tokyo National Research Institute of Cultural Properties, the Japanese Agency for Cultural Affairs and the Kyoto National Museum, the course aims to introduce participants to a variety of paper-conservation techniques based on Japanese scroll mounting. Visits to museum collections, restoration laboratories and Japanese paper manufacturers will be an integral part of the course, as well as excursions to major historical centres and sites in Japan. Most theoretical lectures will be held in Tokyo, while the practical sessions will be organized at the Conservation Centre of the Kyoto National Museum. The lecturers will be Japanese specialists in the field of paper conservation and the working language will be English.

For further information:
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Via San Michele, 13
I–00153 Roma RM (Italy)
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Fax: (39–6) 5855–3349
Email: mc5356@mclink.it

Ancient gold returns to Greece

Under the honorary patronage of the President of the United States, William J. Clinton, and the President of Greece, Constantine Stephanopoulos, an exquisite and extremely rare collection of thirty-two Greek gold ornaments (fifteenth century B.C.) was returned to Greece on 30 January 1996 in a public ceremony held at the Russell Senate Office building in Washington, D.C. This marks the first repatriation of Greek art from the United States. The collection was exhibited for sale in a New York art gallery in 1993. Greece claimed that the objects had been obtained through illicit excavation and illegally removed from the country. By the end of the same year an agreement was made by which the collection was donated to the Society for the Preservation of the Greek Heritage which, in turn, exhibited it in the Dallas Museum of Art before returning it to Greece.

Museum management course at the Deutsches Museum

For the seventh year the Deutsches Museum is offering its successful one-week course on the principles and methods of museum management, to be held in Munich in English from 22 to 27 September, and in German from 24 to 29 November. Taught by senior staff of the museum, presentations will cover the main aspects of museum operations including financial affairs, architecture, exhibit design and production, collections management, conservation of technical objects, project management, writing and editing labels, publications and security.

For further information:
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Deutsches Museum
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New Publications

Museum Practice, a new periodical launched by the British Museums Association, provides practical and technical information for museums. Case-studies and information about new practices and equipment will be drawn from all parts of the world with the aim of improving standards in the care, presentation and interpretation of collections.

For further information:
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Introduction to Imaging: Issues in Constructing an Image Database, by Howard Besser and Jennifer Trant. Published by the Getty Art History Information Program and distributed by the Getty Trust Publications Distribution Center, 410 Wilshire Boulevard, Suite 1100, Santa Monica, CA 90401–1455, 1995, 48 pp. (ISBN 0–89236–361–4) Fax: (1.310) 453–7966.

A primer that introduces the technology and vocabulary of digital imaging as applied to the management of digital-image databases, this booklet illustrates in full colour the choices that must be made when images are digitized. Digital imaging is already revolutionizing research and teaching in the arts and humanities but can only be effective if a critical mass of standardized digital information is created. Common approaches must guide the construction of the virtual museum and this publication introduces curators, librarians, collection managers, administrators, scholars and students to the basics of creating databases of digital images: it also identifies such fundamental issues as how to integrate an image database with other information resources, and how to interchange visual information between a variety of computerized systems. Most importantly, it recommends strategies that will not foreclose future technological options and that can make upgrading easier as new equipment becomes available.

ITEM 10, a CD-ROM published by the International Visual Arts Information Network (IVAIN), Suffolk College, Rope Walk, Ipswich, Suffolk IP4 1LT (United Kingdom).

ITEM (*I*mage *TE*chnology in *M*useums and art galleries database) is an extensive current information resource of regularly updated records about interactive multimedia projects, publications and relevant organizations: museums, art galleries, international consortia, commercial production companies and publishers. It provides information to encourage the development and use of interactive multimedia to enhance the value of museum and art gallery collections and exhibitions and to provide better collection management and research resources for museum staff. It has been published twice yearly in hardcopy (text only) since 1991 (*ITEM* 1 to 9). As from issue No. 10, it will be published annually on CD-ROM only, but subscribers will have access to regular updating via the World Wide Web.

Proceedings of the Eighth World Congress of the World Federation of Friends of Museums. A compilation of the principal speeches and reports of the 1993 Treviso Congress, which was devoted to the theme of the participation of society as a whole in the conservation and promotion of cultural works. Obtainable from Mrs Anna Grandi Clerici, Via Goito, 9, 20121 Milano, (Italy) for $10, payable by international money order to Banca Popolare Commercio e Industria, Agenzia N° 1, Via Moscova, 33, I–20121 Milano (Italy).

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