The *Utrecht* Shipwreck Research Effort

Preliminary Report and Artifact Catalogue

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Filipe Castro

College Station, March 2012.
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2012
First Published in 2012.

Mutual Heritage Program RCE (Netherlands) and the Nautical Archaeology Program, Texas A&M University (USA).


To cite this publication and the accompanying CD catalogue, please refer to:

TORRES, Rodrigo & CASTRO, Filipe (2012). The *Utrecht Shipwreck Research Effort - Preliminary Report and Catalogue*. Mutual Heritage Program RCE, Netherlands and Nautical Archaeology Program, Texas A&M University, College Station, USA.
“... after the smoke cleared, captain Cort found the Rosário and the Utrecht in ‘one hundred thousand pieces’...”.

It was left for the next generations to piece back together our underwater cultural heritage.
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Acknowledgments:

The authors would like to thank Mr. Martijn Manders from the Dutch Cultural Heritage Agency (Rijksdienst voor het Cultureel Erfgoed) whose financial support and trust have been crucial for the development of this research. We would like also to thank Vice-Admiral Armando de Senna Bittencourt, Director of the Naval Historical Heritage and Documentation (DPHDM), and all his team members, in particular Captain Lieutenant Ricardo dos Santos Guimarães, Head of the Department of Maritime History and the Underwater Archaeology Division of the DPHDM and Captain Lieutenant Adriana de Matos Peixoto Rogerio, Head of the Storage Facilities from the Collections Division of DPHDM. The authors are also in great debit with Mr. André Lima for the photos and support during the dives in Bahia, to Mrs. Samila Ferreira for assisting in the elaboration of the catalogue and to Mrs. Siaska Castro for the valuable translations from Dutch.

Research Team:

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Gilson Rambelli – Professor, Federal University of Sergipe, Brazil.
Rodrigo de Oliveira Torres – PhD Student, Texas A&M University, USA.
Filipe Vieira de Castro – Professor, Texas A&M University, USA.
Wendy van Duivenvoorde – Professor, Flinders University, Australia.
Introduction:

The report aims at presenting the current knowledge regarding the *Utrecht / N. S. do Rosário* shipwreck battle site off Itaparica, Bahia, Brazil. This research effort is part of an ongoing international project which seeks to document and assess the significance of shipwreck sites from the colonial period in Brazil, previously looted by treasure hunters or salvaged during Brazilian Navy operations in the late 1970’s and 1980’s.

This research was carried out as part of the Maritime Program of the Mutual Heritage Program in the Netherlands, and within the framework of the Memorandum of Understanding concerning Mutual Heritage, as signed by Brazil and the Netherlands in 2008 (Cooperação no Campo do Patrimônio Cultural Comum) after an invitation of the Dutch Cultural Heritage Agency (Rijksdienst voor het Cultureel Erfgoed) to the Brazilian National Institute of Historic and Artistic Sites (Instituto do Patrimônio Histórico e Artístico Nacional - IPHAN). The project also includes the support and cooperation between researchers and professors from the the Nautical Archaeology Program at Texas A&M University, USA, and Federal University of Sergipe/UFS, Brazil.

Recent research efforts have been oriented to: 1) study the site formation processes and reconstruct scope and chronology of the interventions there carried out, 2) inventory and collect publications, site plans, photos, videos, excavation logs and remaining artifact collections related to the site, and 3) to review the historical and nautical backgrounds behind the naval engagement between the Portuguese and Dutch fleets off Itaparica in September 28, 1648. The present report and its accompanying catalogue CD were prepared in order to share the project’s preliminary results and setup a baseline for future research.

Brief Historical Background:

The Dutch ship *Utrecht* sunk off Itaparica Island in the waters of the state of Bahia, northeast Brazil, after a sharp engagement with the Portuguese vessels *Nossa Senhora do Rosário*
(32 guns) and São Bartolomeu (32 guns) in the later period of the Dutch West India Company presence in Brazil. Incorporated in 1621, the West India Company (Geoctroyeerde Westindische Compagnie - GWIC, in Dutch) was inspired by the success of the East India Company - VOC (1602-1798), and driven to achieve colonization and commercial monopoly in the Atlantic and Pacific Oceans. In Brazil, the Company’s business developed around the sugar plantations in the northeast and the highly profitable slave trade. The Dutch occupation in the northeast Brazil lasted from 1624 to 1654, comprising a rich period for the investigation of early modern geopolitics in the Atlantic.

On September 28, 1648, a Dutch fleet of seven sails under the command of Admiral Witte Corneliszoon de With was raiding off Bay of All Saints in Salvador, Bahia, when they saw two Portuguese sails coming in from the sea, around noon. They were the Nossa Senhora do Rosário and the São Bartolomeu, sent over to patrol the entrance of the bay. The Dutch flagship Bredorode (49 guns) and four other Dutch vessels engaged the Portuguese ships before they could withdraw. After the evolution of short maneuvers and a fierce attack, the Dutch ships Utrecht (32 guns) and Huys van Nassau (40 guns) flanked Nossa Senhora do Rosário. In danger of being captured, the captain of the Rosário decided to blow up his own vessel in an attempt to damage the two enemy ships before being overpowered.

As a result, both Nossa Senhora do Rosário and Utrecht sunk, and today their remains lie roughly 200 meters apart on the seabed, at a depth of 18 to 20 meters. The Huys van Nassau, severely damaged after the explosion, drifted away and was eventually captured and refitted by the Portuguese admiralty under the name of Fortuna. The second Portuguese ship, São Bartolomeu, was boarded by the Overijssel (28 guns) while trying to sail back to port and, after a bodily combat, both captains were killed and São Bartolomeu taken by the Dutch. The human losses in this battle were severe, totaling circa 400 Portuguese against 150 Dutchmen.\footnote{Guedes, 1993: 87; Hoboken, 1955: 126.} \footnote{Boxer, 1973: 200.}
The Ships

_Nossa Senhora do Rosário_ and _São Bartolomeu_ were originally sent to Brazil in October 18, 1647, as part of the Armada Real do Mar Oceano. This naval fleet was set under the command of António Telles de Menezes, governor-general of Brazil, to attempt to relief Bahia and, according to the British historian Charles R. Boxer, consisted of eight galleons, two frigates, three armed merchant-ships, and two caravels, or fifteen sails total, carrying 462 gentlemen-volunteers, 2350 soldiers and 1000 sailors. These numbers, however, differ from those published by the Brazilian naval historian Max Justo Guedes, who claims this Armada was composed of nineteen ships, being eleven galleons, one urca, two naus, two frigates, two caravels and one patacho.  

Although designations and types of these ships are difficult to assert at this time, the available sources points at _N. S. do Rosário_ as a newly built English frigate captained by Frei Pedro Carneiro, mounting between 28 and 32 guns, and manned with 250 to 300 sailors and soldiers. _São Bartolomeu_ was Dutch built and mounted between 32 and 35 guns, under captain Francisco Pereira Brandão.

The Portuguese maritime historian António Esparteiro has classified _Nossa Senhora do Rosário_ as a nau, not a frigate. As a nau of 32 guns, however, _Rosário_ would have probably been a larger three-masted merchant ship with secondary fighting capabilities, somewhat rounder than the frigate. As a mid-17th century frigate of 32 guns, however, she would have been a three-masted vessel for speed and maneuverability, lower sheer, well-armed and somewhat smaller than the nau, therefore designed for swift missions. _Nossa Senhora do Rosário_ is referred as a frigate by Francisco Varnhagen, Boxer and Justo Guedes. The São Bartolomeu, like the Rosário, is referred in the same documents presented by Justo Guedes and Boxer as a frigate. Varnhagen, however, refer to the São Bartolomeu as a galliot. These are typical research questions in nautical archaeology, to be addressed using archaeological, documentary and iconographic sources.

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5 HOBOKEN, 1954: 127.

Utrecht (32 guns) and Huys van Nassau (40 guns) had been sent to Brazil in 1647 by the admiralty of Amsterdam as part of a rescue fleet of 12 warships under command of the Dutch Admiral Witte Corneliszoom de With. In total, this fleet was composed of twelve warships, of which five were paid by the admiralty of Amsterdam, three by the admiralty of Rotterdam, including the flagship Brederode, and four by the admiralty of Noorderland, as well as eight yachts incorporated by the West India Company. Below is reproduced a drawing of the warship Zutphen (30 guns), sent to Brazil along with Utrecht and Huys van Nassau by the admiralty of Amsterdam (Figure 1 and Table 1).

Figure 1: The Zutphen. Built in 1636 for the Admiralty of Amsterdam. Drawing by Willem van der Velde, the Younger, in the National Maritime Museum of Greenwich, England (after Hoboken, 1954: 32).

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\(^6\) HOBOKEN, 1954: 310.
<table>
<thead>
<tr>
<th>Admiralty</th>
<th>Ship (Guns)</th>
<th>Captain</th>
<th>Entry in Brazil</th>
<th>Left Brazil</th>
<th>Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rotterdam</td>
<td>Brederode (49)</td>
<td>Witte de With</td>
<td>Dec, 26 1647</td>
<td>Nov, 9 1649</td>
<td>Flagship</td>
</tr>
<tr>
<td>Amsterdam</td>
<td>Huys van Nassau (40)</td>
<td>Matthijs Gillissen</td>
<td>Dec, 12 1647</td>
<td>___</td>
<td>Taken by the Portuguese, renamed Fortuna.</td>
</tr>
<tr>
<td></td>
<td>Utrecht (32)</td>
<td>Jacob Cort</td>
<td>Dec, 12 1647</td>
<td>___</td>
<td>Wrecked after the explosion.</td>
</tr>
<tr>
<td></td>
<td>Overijssel (28)</td>
<td>Jan Schut</td>
<td>Dec, 12 1647</td>
<td>Nov, 1 1649</td>
<td>Boarded and took the São Bartolomeu.</td>
</tr>
<tr>
<td>Noorderland</td>
<td>Wapen van Nassau (38)</td>
<td>Lieven de Zeeuw</td>
<td>Feb, 17 1648</td>
<td>Nov, 9 1649</td>
<td>Engaged in maneuvers.</td>
</tr>
</tbody>
</table>

Table 1: Dutch vessels directly engaged in the Itaparica Battle (After Hoboken, 1954: 300).

**Site History Review:**

The *Utrecht* wreck site was first officially explored in the years 1981-1982 under a contract with the Brazilian Navy, which granted salvage rights to a Brazilian company named SALVANAV - *Salvamentos Marítimos S/A*, directed by Mr. Denis Albanese in a joint-venture with a Canadian company named *Phoenician Explorations*, owned by Mr. Robert F. Marx, a well-known American treasure hunter and author. The company started working in the area under the terms of a contract established in December 1979, which authorized the treasure hunters to survey and recovery any objects of historical value in the waters extending up to two nautical miles off the Bay of All Saints (Appendix 1).

Following colonial mining laws, the artifacts resulting from the exploration had to be divided in the ratio of 80% to the salvagers and 20% to the Brazilian Navy, after the later had picked out the artifacts of outstanding historical and nautical value to illustrate the recently created Navy Museums in Rio de Janeiro and Bahia. In January 1980, operating from the cutter *Illusion* belonging to Antony Joseph Kopp, a Swiss citizen naturalized Brazilian, SALVANAV S/A surveyed the site and petitioned for a license to fully explore the *Utrecht* shipwreck site. An
ordinance issued one year later eventually authorized the excavation, agreed under the 80/20% reward rule.

The company operated freely until 1983 salvaging a handful of shipwrecks from the colonial period in the Bay of All Saints area. In May 1983, however, news of an auction of artifacts from shipwrecks held by Christie’s Amsterdam raised the possibility that the above mentioned companies were involved in artifact smuggling. A set of exceedingly rare Dutch golden coins, minted in Brazil in 1645 and 1646, and presumably recovered from Brazilian shipwrecks, had been sold by Christie’s Amsterdam and were suspected of being illegally exported against the rules of the contract established with the Brazilian Navy (Appendix 2).

In consequence, in August 1983, the Brazilian admiralty suspended all new contracts and started a criminal investigation to establish the responsibilities. However, based on already issued contracts with the company ENGEMAR Ltda., directed by Mr. Walter Dias de Andrade, the exploration in the Utrecht continued officially until 1988, while SALVANAV S/A moved on to nearby areas, after blaming the Christie’s incident on Mr. Robert F. Marx and Phoenician Explorations. In January 1988, after nearly five years of operations, ENGEMAR Ltda. presented a report mentioning the existence of extensive wooden remains on the Utrecht shipwreck site.

Following the unfortunate SALVANAV S/A & Phoenician Explorations affair, Brazil started working on specific legislation to regulate and protect the country’s underwater cultural heritage. It culminated with the Federal Law n° 7542 of 1986, which regulated the research, exploration, removal and demolition of things or property sunk, stranded and lost in the waters under national jurisdiction. This law stated that artifacts of artistic, historic or archaeological interest were thereon property of the federal State, therefore not subject to appropriation, transfer, or used for the purpose of fixing payment to the explorer (Art. 20). It ended the 80/20% reward rule.

The important achievements of Federal Law n° 7542/86 were nevertheless set back in 2000, with the promulgation of Federal Law n° 10166/00. Yielding to lobbying pressure within the Brazilian congress, the new legislation set back the spirit of the previous law by permitting the commercialization of up to 40% of the artifacts explored from shipwreck sites in Brazil. Although this law still stands, a new legislation formulated in cooperation between the Brazilian Navy, the Ministry of Culture, and the Brazilian Archaeological Society (PL 7566/06) is currently under
appreciation by the Congress. In the meantime, new directives have been discussed between the
Ministry of Culture and the Brazilian Navy, and an agreement between these two institutions have
established shared responsibilities to authorize and supervise interventions in underwater sites,
which in practice has halted the authorization of salvaging permits.  

In 2007, during the International Symposium of Maritime Archaeology in the Americas
organized in Itaparica by Prof. Gilson Rambelli (Federal University of Sergipe), some of the
members of this team had the opportunity to dive in the Utrecht shipwreck site and ascertain the
incredible potential for future research.

The Utrecht /N. S. do Rosário Shipwreck Site:

The archaeological site with the remains of the Itaparica Naval Battle lays at a depth of 18
to 20 meters in a sandy seabed, approximately four nautical miles from Itaparica Island
(13°07'30"S and 38°39'10"W, WGS84) (Figure 2). Despite the salvage works carried out
throughout the 1980’s, no publications, site plans or artifact analysis were produced by the
companies that mined these sites for artifacts. A single sketch, however, produced probably during
interventions undertaken in 1981 and published on Tony Kopp’s website, outlines the extent of
the wood remains in the Utrecht site (Figure 3).

7 To know more, see CEANS (2004) Livro Amarelo: Manifesto Pró-Parimônio Cultural Subaquático Brasileiro.
Campinas: Unicamp.
Figure 2: Location of the “Utrecht” shipwreck site off Itaparica Island, Bahia, northeast Brazil (Rodrigo Torres. Source: Nautical Chart DHN 1110).
Because the site is today open to recreational divers, some site plans have appeared on the internet, which show the current distribution of remaining iron canons, anchors and the ballast pile (Figure 4). In 2008, technical divers who have searched for the *N. S. do Rosário* wreckage laid a cable connecting the two sites and recorded the presence of more canons, anchors and ballast concentrations (Figure 5).

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A video has been produced and made available at: [http://www.youtube.com/watch?v=U64-Ln4znAM](http://www.youtube.com/watch?v=U64-Ln4znAM).

Figure 5: Site Plan produced in 2008 by Lázló Mocsári, showing the Nossa Senhora do Rosário site in relation to the Utrecht (Source: http://www.brasilmergulho.com.br/port/naufragios/artigos/2008/006.shtml. Consulted in March 15, 2012).
During the dives done after the International Symposium of Maritime Archaeology in the Americas in 2007, Martijn Manders (Dutch Cultural Heritage Agency) identified important hull construction features and updated photos of this important site were taken (Figures 6 and 7).

Figure 6: Martijn Manders and Gilson Rambelli noting important hull features in the naturally exposed wooden remains of the Utrecht (Photos: André Lima, 2007).
Figure 7: Above, Martijn Manders and Margaret Leshikar-Denton studying the exposed timbers. Below left, a stretch of the ballast pile, aligned after salvage operations. Below right, anchor and canons possibly in an undisturbed setting (Photos: André Lima, 2007).
The Artifact Collection and Catalogue:

In November 2011, the Naval Historical Heritage and Documentation (DPHDM) kindly authorized the study of the *Utrecht* artifact collection kept at the Navy Documentation Service in Rio de Janeiro. The accompanying CD brings a preliminary version of the catalogue with all objects there documented, as well as more information on the artifact recording project.

The recorded collection comprises over 200 artifacts attributed to be from the *Utrecht* shipwreck site, now deposited in the storage facilities of Ilha Fiscal in the Navy’s Cultural Complex in Rio de Janeiro, Brazil. The material is being kept in fair condition by the curatorship of a competent museologist and a small team of dedicated Navy officers. The artifacts were photographed and their conservation status, diagnostic features, as well as other general information were recorded into an Excel spreadsheet for future reference (Appendix 4). Future recording sessions are being planned for 2013, in order to complement the study.

Due to the troublesome history behind their recovery, few conservation cards and support documentation could be found associated with the studied assembly at this stage. A few misplacements were readily identified, either by artifacts which were clearly not contemporaneous with the ship or by classification mistakes carried on after they were salvaged. Moreover, as the salvage operations in the 1980’s were done over many shipwreck sites at the same time, not all of them officially authorized or not judiciously supervised, is likely that some artifacts now figuring in the *Utrecht* collection are intrusions from these other shipwreck sites.
Final Considerations:

From the information presented above, we note that the site is highly disturbed after nearly 30 years of official and unofficial interventions. It is important to note, however, if properly excavated, even these salvaged and heavily looted shipwrecks can still yield enormous amounts of information.

The layout of the ballast pile shows clearly the most affected areas and its study should help us understand the extension and chronology of the interventions. An estimation of its weight, type, and provenience will furnish an important insight to the tonnage, stability, and hopefully will help identify at least some of the ports of call and routes of the ship. A substantial portion of the ship’s hull remains on the site, preserved under the wreckage pile, including fragments of the keelson, frames and a double-planked section of the hull planking, which offers a rare window into early to mid-17th century Dutch shipbuilding practices. The study of timber provenience and scantlings, fastenings, scarves, tool marks, sheathing, and hopefully curvature measured on the preserved section of the hull will undoubtedly yield important insights in regard to the vessel’s size, shape, proportions, stability and sailing abilities, as well as to support the ship’s virtual model reconstructions (Appendix 3).

Furthermore, a number of artifacts and fittings remain on the site. If the six anchors shown in the site plans represent the ship’s complete set, their study is perhaps a unique opportunity to compare the archaeological data with documental evidence pertaining to the outfitting of these ships, notably the relations between anchor weights and tonnage. Nineteen cast iron guns remains on the Utrecht site, more than half of the 32 referred in the documents, constituting a fair sample of the ship’s original armament. A number of bronze guns have been removed from the site and at least two of them are still available for study, notably at Rio de Janeiro Naval and Oceanographic Museum.

All things considered, it places the Utrecht as a highly significant shipwreck site for the history of shipbuilding technology, comparable to the Dutch East-Indiaman Nassau (1606, Malaysia), Mauritius (1609, Gabon) Batavia (1629, Western Australia). Moreover, no vessel from

For a review on V.O.C. shipwreck excavations around the world and a thorough discussion on Dutch oceangoing ships, see VAN DUIVENVOORDE, W. (2008) The Batavia Shipwreck: an Archaeological Study of an Early
the Dutch West India Company has yet been archaeologically studied, which makes the *Utrecht* a unique setting for specialized nautical archaeology studies.

In addition, in archaeological terms, we could benefit from re-considering the remains of the *Utrecht* and the *Nossa Senhora do Rosário* to comprise a single analytical unit, testimony of the outcomes of the naval engagement between Dutch and Portuguese fleets off Itaparica in 1648. So the authors suggest a more comprehensive term, “Itaparica Naval Battle Shipwreck Site” or “Sítio de Naufrágios da Batalha Naval de Itaparica” for future references in English and in Portuguese, respectively.

The archaeological importance of this site justifies a long term intervention, aiming at the study and model reconstruction of the two shipwrecks. An interpretative study of the archaeological remains in dialogue with the vast array of documental evidence pertaining to this exciting period can provide a fine perspective on the history of shipbuilding in Europe and across the Atlantic, in the wider context of the history of technology in the high Baroque Era.

Based on the Mutual Heritage Program and a bilateral cooperation agreement between the Dutch Cultural Heritage Agency (*Rijksdienst voor het Cultureel Erfgoed*) and the Brazilian National Institute of Historic and Artistic Sites (*Instituto do Patrimônio Histórico e Artístico Nacional – IPHAN*), the project also includes the support and cooperation between researchers and professors from the Nautical Archaeology Program at Texas A&M University and the Laboratory for Archaeology of Aquatic Environments of the Federal University of Sergipe/UFS. This research effort is progressing in tune with the new perspectives embraced by the Brazilian Ministry of Culture and the Brazilian Navy (*Naval Historical Heritage and Documentation Directorate – DPHDM*).

The near to mid-term aims of this project are: 1) continue adding to the current knowledge of the site, 2) in-field significance assessment of the *Utrecht* shipwreck, and 3) experience exchange and capacity building.

Finally, in addition to the richness for technical studies, the site also offers ideal conditions for planning an underwater trail or *in situ* exhibition in the lines of the UNESCO Diving Trail

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**Seventeenth-Century Dutch East Indiaman**, PhD Dissertation. Nautical Archaeology Program. Texas A&M University, USA.
Program\textsuperscript{10}, and for creating awareness among recreational divers and opinion formers in regard to the importance of rigorous archaeological research and the protection of our common underwater cultural heritage. By means of international cooperation and expertise exchange, the development of this project will represent a benchmark for capacity building and human resources in underwater archaeology and conservation of shipwreck artifacts in Brazil.

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WELLS, Audrey E.

APPENDIX 1: Chronology for Official Interventions in the *Utrecht* site.\(^{11}\)

- **Ordinance 0037 of 28/DEZ/1979:** Authorize SALVANAV S/A to survey UW archaeological sites and recovery objects of historical value in the area extending from the mouth of the Rio Vermelho to Mont Serrat, up to 2 NM of the coast.

**OBS:** SALVANAV S/A (Denis Albanese) is thereon (MAY/1979 to MAY/1981) working in a joint-venture with PHOENICIAN EXPLORATIONS (Robert Marx). They hired the cutter *Illusion* from the Swiss citizen naturalized Brazilian Antony Joseph Kopp.

- **7 and 8/DEZ/1980:** Cutter *Illusion* (SALVANAV S/A), first dives in the *Utrecht*. They affirm the hull was sheathed with lead w/ wooden treenails.

- **13/JAN/1980:** SALVANAV S/A requires the license to explore the *Utrecht*.

- **30/JAN/1980:** Cutter *Illusion* (SALVANAV S/A) survey in the *Utrecht*. They claim had seen 14 iron cannons and two anchors. Apart from pictures, they claim none was recovered.

**OBS:** Bronze cannons had already being recovered by Brazilian Navy Divers (Submariners Rescue Ship *Gastão Moutinho*) and others.

- **Ordinance 0011 of 30/ABR/1981:** Authorize SALVANAV S/A to explore the *Utrecht* site for 1 year. Contract establishes that the Navy would pick objects of outstanding historical and nautical values, and the remaining declared objects to be shared 80% to the explorer / 20% to the Navy.

- **02 to 09/MAY/1981:** SALVANAV S/A recover objects from the *Utrecht* site.

- **13/MAY/1981:** SALVANAV S/A presents a list of the artifacts recovered in *Utrecht* site, including the Navy’s share.

- **15/OCT/1981:** SALVANAV S/A reports to the Navy (DPC) that Tony Kopp had used the *Illusion* illegally for three weeks, after their excavation season, to excavate an area of 9 x 10

\(^{11}\) Filipe Castro personal archive.
meters and recover c. 98 silver coins and 40 golden coins (ANNEX 2). After the fact, Kopp takes the Illusion to the Bahamas to work with Robert Marx.

- **5 JAN to 8 FEV/1982**: SALVANAV S/A work season in the Utrecht site. SALVANAV S/A presents a list of the artifacts recovered in Utrecht site, including the Navy’s share. 

  **OBS**: The company had then sub-contracted PRESMAR Ltda for the 1982 season, using the boat Presmar of Rio de Janeiro.

- **Ordinance 0031 of 25/OUT/1982**: Renew authorization for SALVANAV S/A to survey UW archaeological sites and recovery objects of historical value in the area extending from the mouth of the Rio Vermelho to Mont Serrat, now up to 3 NM of the coast. Valid for 1 year. Contract establishes that the Navy would pick objects of outstanding historical and nautical values, and the remaining declared objects to be shared 80% to the explorer / 20% to the Navy.

- **Ordinance 002 of 12/JAN/1983**: Authorize for 1 year ENGEMAR Ltda (Walter Dias de Andrade) to explore the Utrecht. Contract establishes that the Navy would pick objects of outstanding historical and nautical values, and the remaining declared objects to be shared 80% to the explorer / 20% to the Navy.

- **??/??/1983**: ENGEMAR Ltda presents the first survey report.

- **16/MAR/1983**: Christie’s Auction in Amsterdam reveals that valuable silver and golden coins and artifacts from the Utrecht, Hollandia and Santa Escolástica had been smuggled out of the country.

- **Ordinance 0027 of 07/JUL/1983**: Suspends all research authorizations from Robert Marx in Brazil, after contend regarding the amphorae in the Guanabara Bay, Rio de Janeiro.


- **11/AGO/1983**: Start the trial regarding the traffic of historical artifacts from shipwrecks in Bahia, after the Christie’s auction.

- **30/NOV/1983**: Navy Ministry suspends any further authorizations (Aviso MM 0428).
- **06/NOV/1985**: D. Albanese accuses R. Marx of having smuggled the silver and golden coins recovered from the *Utrecht* during the 1981 and 1982 seasons, and auctioned in the Christie’s house in March, 1983 (Appendix 2). They were:

<table>
<thead>
<tr>
<th>Christie’s auction cat. #</th>
<th>Quantity</th>
<th>Type/Nominal value</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>517</td>
<td>1</td>
<td>Gold/3 florins</td>
<td>1645</td>
</tr>
<tr>
<td>518</td>
<td>1</td>
<td>Gold/6 florins</td>
<td>1646</td>
</tr>
<tr>
<td>519/520</td>
<td>2</td>
<td>Gold/6 florins</td>
<td>1645</td>
</tr>
<tr>
<td>521/522</td>
<td>2</td>
<td>Gold/12 florins</td>
<td>1645</td>
</tr>
<tr>
<td>523</td>
<td>1</td>
<td>Gold/12 florins</td>
<td>1646</td>
</tr>
<tr>
<td>524</td>
<td>1</td>
<td>Silver/ Spanish Dukaton</td>
<td>N/A</td>
</tr>
<tr>
<td>525</td>
<td>1</td>
<td>Silver/ Spanish Dukaton</td>
<td>1636</td>
</tr>
</tbody>
</table>

OBS: # 519, 520, 521, 522 and 523 were never declared to the Navy. Either falsified, or recovered during Tony Kopp illegal interventions in the *Utrecht* between May and June, 1981, or misplaced from Marx/Kopp exploration of the Dutch wreck *Saint Tomas* (sic.) in Little Bahamas Bank.

- **21/NOV/1985**: ENGEMAR Ltda requires new license for 1 year.

- **Ordinance 0032 of 25/SEPT/1986**: Authorizes SALVANAV S/A to resume the survey for 1 year in the potential site of the Portuguese nau *Santa Clara*.

- **29/SEPT/1986**: Federal Law n° 7542/86 is issued, regulating the research, exploration, removal and demolition of things or property sunk, stranded and lost in the waters under the national marine jurisdiction. It states that artifacts of artistic, historic or archaeological
interest were now property of the Federation, therefore not subject to appropriation, transfer, or used for the purpose of fixing payment to the explorer (Art. 20). It ended the 80/20% reward rule.

- **24/MAR/1987**: Brazilian Navy enforces rigorous supervision of the shipwrecks explorations and suggests SALVANAV S/A is using the boat *Presmar* to explore other shipwrecks for which there was not an issued license.

- **22/MAY/1987**: Renew authorization for ENGEMAR Ltda to explore the *Utrecht* for 1 year.

  **OBS**: apparently there was a license issued early in 1986.

- **14/JUL/1987**: Navy rejects SALVANAV S/A claims to renew Ordinance 0032/86.

- **20/JAN/1988**: ENGEMAR Ltda present the report of excavations in the *Utrecht*. Videos (VHS) and pictures are mentioned. Extensive wood.
APPENDIX 2: Extract from the Christie’s Auction Catalogue of May 1983, with the artifacts smuggled from the wrecks in Brazil.
SALE OF IMPORTANT
Gold, Silver, Jewellery and Artifacts
RECOVERED FROM THE WRECKS OF THE FOLLOWING
DUTCH, SPANISH AND ENGLISH 17TH, 18TH AND 19TH CENTURY
SHIPS:
“Hollandia” - “Utrecht” - “Slot ter Hooge”
“Nuestra Señora de Esperanza”
“The Standing Cannon wreck”
“H.M.S. Athenienne”

Dutch and Foreign Coins

CHRISTIE'S AMSTERDAM B.V.
H. Maricq
Cornelis Schuytstraat 57, 1071 KG Amsterdam
Telephone: (020) 64.30.11
Postal: PO Box 1087 B.A. Amsterdam
Telex: 1779
Cable: Christie Amsterdam

Sale:
WEDNESDAY, 15th MARCH 1983 at 2.00 p.m. and 7.00 p.m. precisely

Notary: Mr. J. W. Groen
(Lebbers and Dijk, notaries, Amsterdam)

On view:
7th March up till and including 15th March 1983 from 10.00 a.m. till 4.00 p.m.

Price: £ 20—

In sending commissions or asking queries this sale should be referred to as
“HOLLANDIA”
CARGES

Spanish galleon coming from the Isthmus,
Dipping through the tropics by the palm-green shores,
With a cargo of diamonds, emeralds, pearls and
Topazes and cinnamon and gold mosaics

John Masefield

Wrecks of ancient ships are time capsules, they are moments of history frozen in time by the accident of the archaeologist and they transmit to us complete microcosms that tell us about the state of the techniques, of the arts, of commerce and politics and about everyday life including hygiene, habits, fashion, human values...

The purpose of underwater archaeologists is to recover such "deep frozen" microcosms and to make them deliver their message, information that will help evaluate, confirm or correct whatever documentation already exists.

Huygen was renowned for his capture of the Spanish silver fleet in 1628 in the Bay of Matanzas, however his attack in Brazil against Saints in All Saints Bay is an example of magnificent inventiveness and courage. The Admiral Huygen led the campaign from his flagship the HOLLANDIA, moving her to within 200 yards of the main fort from whence he proceeded to launch broadsides against it very effectively.

He was fully aware that the Portuguese would concentrate their firepower against his ship which would enable the other Dutch ships to slip away out of range of the Portuguese artillery. By sundown the HOLLANDIA was locked with hulk and Huygen's plan to sail away under cover of darkness was thwarted by a full moon and cloudless night. By midnight the ship was aground and a rescue attempt by the fast sloops to reach the HOLLANDIA was abortive so it exploded from a and sending the magazine. Prior to boarding the second rescue sloop, Huygen, bleeding profusely from two wounds, set fire to his ship to prevent it from falling into enemy hands and it was here, in All Saints Bay, that the HOLLANDIA, the Admiral's flagship, went down.

Admiral dead, characteristic battle, on 18th June, 1628.
e Utrecht was a warship in the fleet of Admiral van de wei, which set sail, accompanied by seven pinnaces. From Amstel, Gravel on 22nd September 1663, her captain was Jacob Pouwell Curi from the Willem. In Amsterdam, they encountered two Portuguese galleons off the mouth of the Bay of Almeida. A short but exceedingly sharp action ensued during the course of which the captain of the Utrecht, who was at the helm, was killed. His body was immortalized in the painting of the battle, which was also painted by Rembrandt. The Portuguese galleons were also destroyed.

The Portuguese fleet, with about 400 men and the Dutch fleet, was sighted by the Portuguese fleet, which was a severe victory for the Dutch. The Utrecht, the flagship of the Dutch fleet, was severely damaged by the explosion that killed her crew. The Portuguese fleet was defeated and the Utrecht, now commanded by a new captain, was able to escape and return to Amsterdam.

STANDING CANYON WRECK was a large Portuguese galleon, which was not identified. The remains of the wreck were discovered in 1950 during which more than 6000 artifacts were recovered. A large number of artifacts were displayed in a new Maritime Museum, opening shortly in San Diego.

The Nuestra Senora de Esperanza, a Spanish galleon of 650 tons, commanded by Pedro de Vera and owned by the Viceroy of the Indies, was discovered in 1955. In 1663, she formed part of a Portuguese fleet sailing to the West Indies. In 1665, she formed part of a Portuguese fleet sailing to the West Indies. In 1666, she formed part of a Portuguese fleet sailing to the West Indies. In 1667, she formed part of a Portuguese fleet sailing to the West Indies. In 1668, she formed part of a Portuguese fleet sailing to the West Indies. In 1669, she formed part of a Portuguese fleet sailing to the West Indies. In 1670, she formed part of a Portuguese fleet sailing to the West Indies. In 1671, she formed part of a Portuguese fleet sailing to the West Indies.

The fleet was defeated and the Nuestra Senora de Esperanza was captured. She was towed to the port of Santa Cruz de Tenerife, where she was held for ransom. After several months of negotiations, a ransom of 100,000 gold pesos was paid. The treasure was eventually recovered by the Dutch fleet, which was commanded by Captain van der Hooge.

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Giraffe be delivered in Melle. This, the only safe way to have many animals abroad was understood by the Navy to be a public service, the percentage taken officially by the captain and crew a welcome and legitimate supplement to their wages pay.

See additional notes at the end of the catalogue on the archaeologists responsible for the recovery of the articles in this sale.

ARTIFACTS
(RECOVERED FROM THE HOLLANDIA
(361-417)

381 Three brass tapers used to light the cannons - 21 cm and 34 cm long; a collection of miscellaneous lead shot balls (a lot)
$400 - $500

382 A small cannon ball - diameter 5 cm; another, smaller - diameter 3 cm and eleven lead pellets.
6 lot

383 Five stone cannon balls (pedestals) - diameter 4 cm and 5 cm. Eleven lead platt and six musket balls
$50 - $50

384 A brass and silver-threaded brass sword handle consisting of two parts, each cast with Neptune, allegorical figures, mermaids, dolphins, puffs and swags - 12 cm long
See page 31

385 A brass pistol butt, the sides decorated with portrait busts - 10 cm long; a brass sword - 24 in; a brass trigger guard - 14 cm long

386 A blue-green glass bulbous hand grenade - 8.5 cm high
See page (pp. 33) $900 - $1,000
367 A green glass bulbous hand grenade - 10 cm high... See plate (33)
368 Another similar - 12 cm high... See plate (33)
369 A bronze candlestick with circular lip, baluster stem, on milled circular base - 22 cm high (coral encrustations)
370 A small baluster shaped pewter bowl with lid and spiral handle - 10 cm high (coral encrustations) on oval pewter spoon - 15 cm long... See plate (3, 7)
371 A two-handled pewter porringer - 17 cm long and 6.5 cm high... See plate (3, 7)
372 A copper ladle with handle (diameter - 1.7 cm) plus a bronze aepheleceres' paste - 19 cm long... See plate (3, 7)
373 A long brass settle with swing carrying handle (diameter - approximately 2 cm in lg)
374 A fragment of a bronze cooking pot - 25 x 11 cm; a small circular bronze object - diameter 7 cm and the copper handle of a cooking pot - 17 cm long... See plate (3, 7)
375 A small matte green chalice - 4.5 cm high (not cleaned) and five pewter bullet tips... See plate (3, 7)
376 A round pewter spoon - 17.5 cm long; a fragment of a smaller pewter spoon - 7.6 cm long... See plate (3, 7)
377 A small collection of lead screw-on bottle tops, square and round flat striking stones and slip pipe fragments - 27, 39 (a lot)
378 Twenty-one miscellaneous pewter screw-on bottle tops, some with glass fragments (2, 3)
379 A roman stone ware salting 'dambammar', the neck moulded with squared mask, the body with three moulded nasses - 16 cm, 17.5 cm high... See plate (3, 7)
400 A pottery bowl - diameter 18 cm (corners encrusted) part of a clay pipe - 6 cm long and a dark brown pottery plate - diameter 34 cm (marked)
401 A bell shaped ceramic pitcher with scroll handle - 8.5 cm high (corners punctured) on a Cuban porcelain plate - 17.5 cm long... See plate (2, 3)
402 A small Roman salting stone ware jug - diameter 16 cm, 12 cm high... See plate (2, 3)
403 A Rhenish salting stone ware salting 'dambammar', the neck moulded with beaded mask above a moulded nasse - 16 cm, 24 cm high (the glass to be cleaned)
404 A Turkish salting stone ware salting 'dambammar', the neck moulded with beaded mask, the body with three moulded coats of arms - 14 cm, 19 cm high (needs cleaning)
405 A set of brass navigational dividers - 12 cm long (cleaned) and two lead plumb bolts from a gunner's quadrant - 6 cm and 4.5 cm long... See plate (3, 7)
406 A pair of brass navigational dividers, marked with a 16 cm long... See plate (3, 7)
407 A pair of brass navigational dividers - 33 cm, 33.5 cm and 40 cm long... See plate (3, 7)
408 A pair of brass and bronze dividers, marked with a 16 cm long... See plate (3, 7)
409 A small collection of lead screw-on bottle tops, square and round flat striking stones and slip pipe fragments... See plate (3, 7)
410 A pair of small bronze hooks of a chisel - 22 cm long; a lead lock plate - 7 x 5 cm... See plate (3, 7)
411 Various metal objects (2 lots)
412 An incorporate brass nasse of weapons (crossbow - 3.5 cm; 6 cm - 4 cm) and a bronze bowl and a scroll-shaped ornament - 15 cm long... See plate (3, 7)
413 A pair of pewter nasse-shaped spoons, both marked with a Tanur rose... See plate (2, 3)
414 A pair of pewter nasse-shaped spoons... See plate (2, 3)
415 A pair of brass nasse-shaped spoons... See plate (2, 3)
416 A pair of brass nasse-shaped spoons... See plate (2, 3)
417 A pair of brass nasse-shaped spoons (crossed) - 10 cm long... See plate (2, 3)
418 A brass nasse with an engraved pommel... See plate (2, 3)
419 A piece of circular lead marked 17.5 cm long... See plate (2, 3)
420 A circular and an octagonal pierced bronze object... See plate (2, 3)
421 A four clay pipes... See plate (2, 3)
422 A small collection of fishing hooks and hand-made pipe - two copper uniform buttions... See plate (2, 3)
423 Three buccles... See plate (2, 3)
62 Madrid, Charles III, 6-isses, 1802 PA 1° and C. 10094 — slightly corroded, fine/very fine $3.00 – 5.00

63 Seville, Charles III, 6-isses, 1798 CN 1° and C. 9791 — nearly very fine $3.00 – 5.00

64 Seville, Charles III, 6-isses, 1803 CN 1° and C. 10016 — nearly very fine $3.00 – 5.00

65 A large piece of excavated rock with six 6-isses showing, one dated 1802 and one showing the Mexico Mintmark, also several rare, 10, grn, an interesting artifact showing how the site has become lost with the raised and grinding objects after 170 years. 2060 – 1900 $15.00 – 16.00

66 A large piece of excavated rock with ten 6-isses showing, one Lima, all circa 1800, together with a large well preserved nail — an interesting artifact $5.00 – 7.50

67 A small piece of excavated rock with two 6-isses showing the dated 1802, together with another nail — an interesting artifact $5.00 – 7.50

RECOVERED FROM THE "STANDING CANYON" (1468-1484)

485 Portugal, Lisbon, John IV, Cruzado (500-800), no date, crowned arms, rev. cross of Christ (Val. 17) — nearly very fine and R $2.50 – 3.50

495 Portugal, Lisbon, John IV, Cruzado (500-800), no date, crowned arms, rev. cross of Christ (Val. 17) — nearly very fine and R $2.50 – 3.50

496 Portugal, Lisbon, John IV, Cruzado (500-800), no date, crowned arms, rev. cross of Christ (Val. 17) — nearly very fine and R $2.50 – 3.50

497 Portugal, Lisbon, John IV, Cruzado (500-800), no date, crowned arms, rev. cross of Christ (Val. 17) — nearly very fine and R $2.50 – 3.50

498 Portugal, Lisbon, John IV, Cruzado (500-800), no date, crowned arms, rev. cross of Christ (Val. 17) — nearly very fine and R $2.50 – 3.50

499 Portugal, Lisbon, John IV, Cruzado (500-800), no date, crowned arms, rev. cross of Christ (Val. 17) — nearly very fine and R $2.50 – 3.50

500 Portugal, Lisbon, John IV, Cruzado (500-800), no date, crowned arms, rev. cross of Christ (Val. 17) — nearly very fine and R $2.50 – 3.50

501 Portugal, Lisbon, John IV, Cruzado (500-800), no date, crowned arms, rev. cross of Christ (Val. 17) — nearly very fine and R $2.50 – 3.50

502 Mexico (2), Philip IV, Cob 6-isses, 1682 and 1683, P, nearly fine for issue but corroded $6.00 – 6.50

503 Mexico (2), Philip IV, Cob 6-isses, 1684, P, nearly fine for issue but corroded $6.00 – 6.50

504 Mexico (2), Philip IV, Cob 6-isses, 1685, P, nearly fine for issue but corroded $6.00 – 6.50

505 Bolivia, Philip IV (1622-1646), 8-isses, no date (1651), mint Poza, counterstamped with a "20" — very fine $5.00 – 5.50

506 Bolivia, Philip IV, 8-isses, 1652, mint Poza (Cch. 1674) — very fine $5.00 – 5.50

507 Bolivia, Philip IV, 8-isses, 1653, mint Poza — very fine $5.00 – 5.50

508 Bolivia, Philip IV, 8-isses, 1654, mint Poza — very fine $5.00 – 5.50

509 Bolivia, Philip IV, 8-isses, 1654, mint Poza — very fine $5.00 – 5.50
Mr. Robert F. Marx, the renowned Marine Archaeologist, has been responsible for the location and recovery of numerous ships and their contents since 1953. His work, which has taken him all over the world, has been executed on a scale, in association with various governments and institutions.

He was the co-organizer and navigator for the voyage of Nina II, which was the replica of Columbus' sail from Spain to San Salvador in 1962 and consequently was decorated by the Spanish Government.

Robert Marx and his partners in the Phoenician Exploration of Canada were responsible for the articles in this sale which were recovered from the watre of the United States, the 'Standing Canoe', Nusara Senate de Esperanza and most exciting, in his eyes, the Hollandia. The location of the Hollandia was particular exciting as he is a self-confessed, enthusiastic 'fan' of Admiral Piet Heyn. He has been involved in the filming of over 30 documentary films, has been interviewed extensively in the U.S.A. and other countries and is a respected author of over 30 books and more than 400 scientific reports and articles.

Two of the wrecks which yielded the treasures to be auctioned in today's sale, the Dutch Batavia and 'Bell of Arizona' and H.M.S. Athenienne, were excavated by Dr. Robert Stibbitt, the celebrated Belgian deep-sea diver and underwater archaeologist. Dr. Stibbitt is a prolific writer being the author of 13 books, numerous articles and half a dozen television programmes, many of which were screened in the Netherlands. He has spent a lifetime researching the history of ancient ships in the winter and exploring the wrecks in the summer. Since 1967, when he founded the Group for Post-Medieval Underwater Archaeological Research (or GRAM) and with the enthusiastic sponsoring of Mr. Henri Delacroix, the President of COMEX of Marseille, he has led expeditions which have succeeded in locating, surveying, mapping, excavating, salvaging, studying and publishing the wrecks of five Batavias and five warships.
APPENDIX 3: Proposed Research Methodology for Ship Reconstruction and Virtual Model.

Filipe Castro has proposed a comprehensive flow chart for shipwreck research and reconstruction, successfully applied in the study of the Portuguese Indiaman *Nossa Senhora dos Mártires* (1606). The model development and simulation was done in cooperation with the world renowned Department of Computer Science and Visualization at Texas A&M University and the Unit of Marine Technology and Engineering at Technical University of Lisbon, Portugal. The virtual model is an affordable and archaeologically-grounded result, compatible with scientific knowledge, public outreach and preservation of underwater shipwreck sites (Figures 8 and 9).

Archaeological research:
- Hull recording
- Scantlings
- Dimensions and curvatures
- Timbers identification
- Artifacts

Historical research:
- No. of Decks
- Basic dimensions
- Tonnage
- Armament
- Rigging

Historical research:
- Ship types
  - Dutch Construction
  - Portuguese Construction
  - English Construction

Iconographical research:
- Ship types
  - Dutch Construction
  - Portuguese Construction
  - English Construction

Reconstruction:
- Virtual Hypothesis
- Plausible hull configurations
- Plausible rigging arrangements
- Plausible hull structures
Design of the lines drawing, rigging, and sail plans

Design of the ships’ structures

Stability analysis

Hydrodynamic tests

Aerodynamic tests

Calculation of polar diagrams

Tentative Reconstruction of the Battle

Creation of virtual models

Simulations

Assessment

NEXT

PREVIOUS
Comparative studies:

*Pepper Wreck*, 1606
*Wasa*, 1628
*Batavia*, 1629
*others.*

Hull coefficients;

Tonnage vs.
Capacity;
Crew vs. Capacity;
Timber Weight;
Intact Stability;
Polar Diagram.

Interior space arrangement
Rigging
Masts and spars
Sails
Standing Rigging
Running rigging and belaying points

Virtual Simulations,
Museum Exhibitions,
Games, Interactivity,
and more.

Figure 8: Interactive model made available in virtual realm, based on excavations of the Portuguese Indiaman *Nossa Senhora dos Mártires* (1606), the ’Pepper Wreck’ (Castro, 2005. For the virtual model research, see: Wells, 2008).
Figure 9: Hull virtual reconstruction (Modified from Wells, 2008).