

MINUTE ITEM  
This Calendar item No. 11  
was approved as Minute Item  
No. 11 by the State Lands  
Commission by a vote of 5  
to 0 at its 7-16-87  
meeting.

CALENDAR ITEM

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11

07/16/87

W 23816

PRC 7108

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APPROVAL OF SALVAGE PERMIT

APPLICANT: Robert F. Marx  
dba Phoenician South Seas  
Treasures, Ltd.  
205 Orlando Blvd.  
Indiatlantic, Florida 32903

AREA, TYPE LAND AND LOCATION:  
A 20.0-acre parcel of ungranted tide and  
submerged land, located in the Pacific Ocean,  
Drake's Bay, Marin County.

LAND USE: Retrieval and salvage of a sunken vessel and  
the contents thereof.

TERMS OF PROPOSED PERMIT:

Initial period: One year beginning  
September 1, 1987.

Renewal options: One successive period of  
one year.

Public liability insurance: Combined single  
limit coverage of \$500,000.

CONSIDERATION: \$500 land rental; and 25 percent of the net  
salvage value of \$25,000 or less, and  
50 percent of the net salvage value in excess  
of \$25,000; said sum shall be due on the first  
of the month following the sale and bear  
18 percent interest per annum, if not paid  
within 15 days of the due date.

BASIS FOR CONSIDERATION:

Pursuant to 2 Cal. Adm. Code 2003.

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PREREQUISITE CONDITIONS, FEES AND EXPENSES:

Filing fee and environmental costs have been received.

STATUTORY AND OTHER REFERENCES:

- A. P.R.C.: Div. 6, Parts 1 and 2; Div. 13.
- B. Cal. Adm. Code: Title 2, Div. 3; Title 14, Div. 6.

AB 684: 04/28/87.

OTHER PERTINENT INFORMATION:

1. This project involves the potential retrieval and salvage of the remains and contents of the "San Augustin", a Manila Galleon purportedly sunk in Drake's Bay in 1595.

The Applicant is a well known underwater archaeologist who has many scientific underwater explorations and recoveries to his credit. His specialization is Naval and Maritime history with an emphasis on the Spanish Colonial period in the Caribbean and the Spanish Maritime trade between 1500-1800.

Terms of the Permit require the Applicant to provide the Commission with an acceptable archaeological recovery plan prior to recovery of any items. The plan must furnish a detailed description of recovery information and specific methods for conservation.

This permit is also subject to the terms and conditions of a Memorandum of Agreement between State Lands Commission, State Historic Preservation Office, and the Applicant ensuring certain measures are carried out. A copy of this agreement is contained in Exhibit "B".

All items removed from the site will be

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inspected and appraised by competent appraisers with the Commission reserving discretion regarding acceptance of appraised value. Each individual retrieved item shall be appraised individually and as an integral part of the whole collection. Whether the items are sold or retained by the permittee, the State will be compensated according to terms of the Salvage Permit. For any items retained by the State, the Permittee will be credited against percentage rentals otherwise due the State.

2. The salvage area is located within an area over which the National Oceanic Atmospheric Administration has claimed jurisdiction, even though it is within the State's three-mile ownership. The NOAA and the Applicant are currently discussing the necessity of a permit; however, they have advised him to secure a State permit prior to applying for Federal approval. The Applicant has been advised that the Commission's permit is conditioned upon obtaining all other necessary permits.

The Point Reyes National Seashore, over which the Legislature granted jurisdiction over the first quarter mile, is also an area of concern. It is the Applicant's belief that the salvage area is outside of this area.

3. Pursuant to the Commission's delegation of authority and the State CEQA Guidelines (14 Cal. Adm. Code 15025), the staff has prepared a Proposed Negative Declaration identified as EIR ND 411, State Clearinghouse No. 861104410. Such Proposed Negative Declaration was prepared and circulated for public review pursuant to the provisions of CEQA.

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Based upon the Initial Study, the Proposed Negative Declaration, and the comments received in response thereto, there is no substantial evidence that the project will have a significant effect on the environment. (14 Cal. Adm. Code 15074(b))

4. This activity involves lands identified as possessing significant environmental values pursuant to P.R.C. 6370, et seq. The project, as proposed, is consistent with its use classification.

**FURTHER APPROVALS REQUIRED:**

Gulf of the Farallones National Marine Sanctuary of NOAA's Marine and Estuarine Management Division, California Coastal Commission.

**EXHIBITS:**

- A. Site Map.
- B. Memorandum of Agreement.
- C. Negative Declaration.

**IT IS RECOMMENDED THAT THE COMMISSION:**

1. CERTIFY THAT A NEGATIVE DECLARATION, EIR NO 411, STATE CLEARINGHOUSE NO. 861104410, WAS PREPARED FOR THIS PROJECT PURSUANT TO THE PROVISIONS OF THE CEQA AND THAT THE COMMISSION HAS REVIEWED AND CONSIDERED THE INFORMATION CONTAINED THEREIN.
2. DETERMINE THAT THE PROJECT, AS APPROVED, WILL NOT HAVE A SIGNIFICANT EFFECT ON THE ENVIRONMENT.
3. FIND THAT THIS ACTIVITY IS CONSISTENT WITH THE USE CLASSIFICATION DESIGNATED FOR THE LAND PURSUANT TO P.R.C. 6370, ET SEQ.
4. AUTHORIZE ISSUANCE TO ROBERT F. MARX DBA PHOENICIAN SOUTH SEAS TREASURES, LTD OF A ONE-YEAR SALVAGE PERMIT, AS ON FILE IN THE MAIN OFFICE OF THE STATE LANDS COMMISSION, BEGINNING SEPTEMBER 1, 1987; WITH AN OPTION OF ONE ADDITIONAL YEAR EXTENSION AT THE DISCRETION OF THE STATE LANDS COMMISSION AND UPON SUCH REASONABLE TERMS AND CONDITIONS AS MAY BE IMPOSED BY THE COMMISSION, IN

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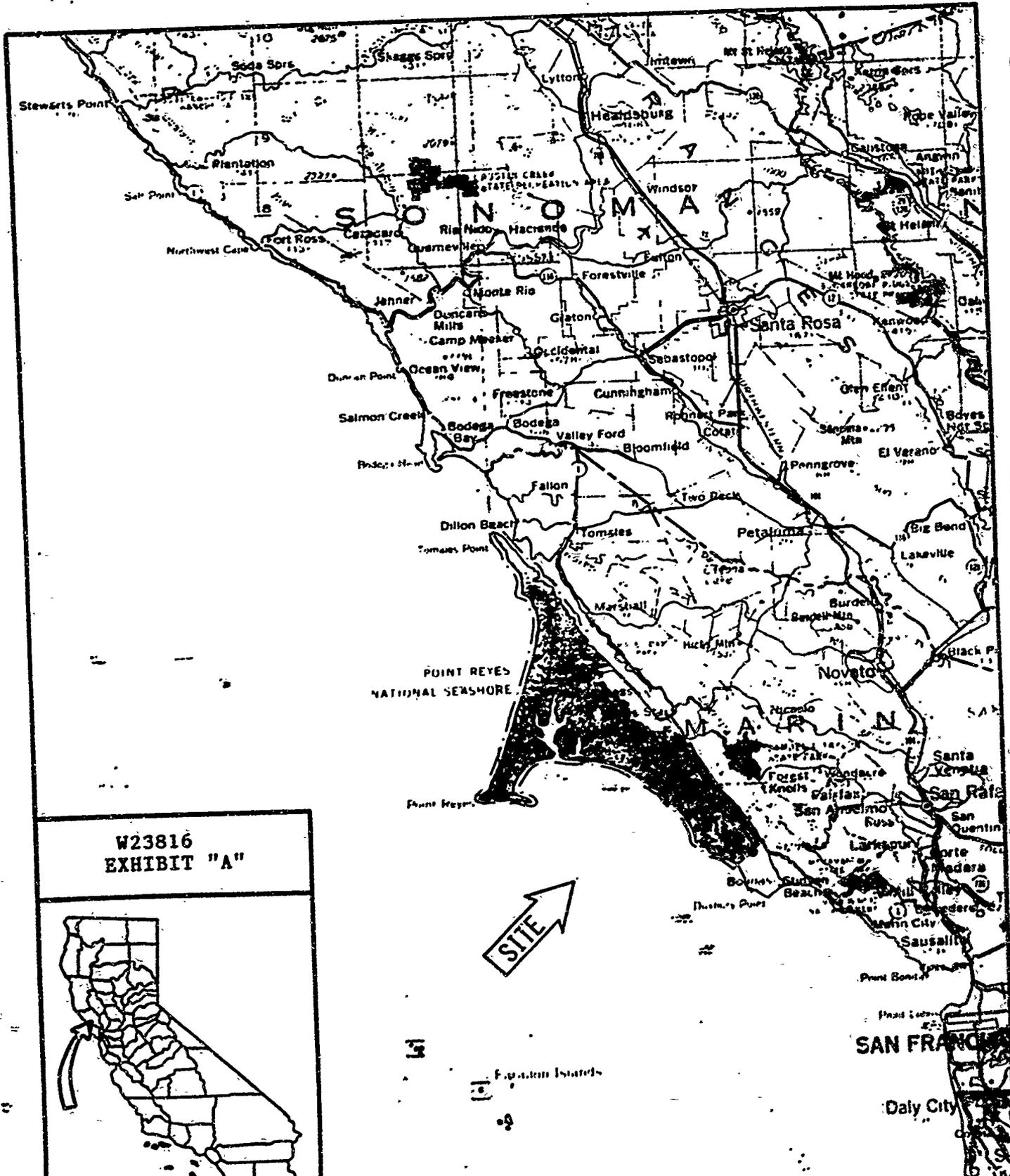
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CONSIDERATION OF \$500 LAND RENTAL AND 25 PERCENT OF THE NET SALVAGE VALUE OF \$25,000 OR LESS, AND 50 PERCENT OF THE NET SALVAGE VALUE IN EXCESS OF \$25,000; SAID SUM TO BE DUE ON THE FIRST OF THE MONTH FOLLOWING THE SALE AND BEAR 18 PERCENT INTEREST PER ANNUM IF NOT PAID WITHIN 15 DAYS OF THE DUE DATE; PROVISION OF PUBLIC LIABILITY INSURANCE FOR COMBINED SINGLE LIMIT COVERAGE OF \$ 500,000 FOR RETRIEVAL OF AN ABANDONED VESSEL AND THE CONTENTS THEREOF ON LAND AS DESCRIBED AND ON FILE IN THE OFFICES OF THE COMMISSION.

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SITE

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EXHIBIT "B"

W 23816

MEMORANDUM OF AGREEMENT

WHEREAS, the State Lands Commission (the Commission) proposes to issue a salvage permit for the archeological investigation and recovery of possible cargo from the wreck of the vessel San Agustin, located in the Pacific Ocean at Drake's Bay, Marin County.

WHEREAS, the State Lands Commission, in consultation with the California State Historic Preservation Officer (SHPO), has determined that the proposed salvage may result in adverse effects to a significant archeological resource which is potentially eligible for inclusion in the National Register of Historic Places;

NOW, THEREFORE, the State Lands Commission, the SHPO, and Robert Marx (Applicant), agree that the proposed salvage will be conducted according to the following stipulations:

STIPULATIONS

The Commission shall condition the salvage permit to ensure that the following measures are carried out by the Applicant:

I. Archeological Data Recovery

A. Within thirty (30) days after the date accompanying the last signature on this agreement, an initial archeological data recovery plan for investigating the San Agustin shipwreck site, as depicted in accordance with Parts I and III of the Advisory Council on Historic Preservation's handbook, Treatment of Archaeological Properties (Attachment II) will be submitted by the applicant to the Commission and SHPO. The plan will provide for a phased program of archeological investigation which will include a detailed discussion of:

1. Investigations to ascertain the precise boundaries, composition, and state of preservation of the remains of the San Agustin and its other characteristics;
2. Detailed procedures for archeological data recovery addressing particularly significant subareas, features, cargo, or wreckage;

3. Methods to be used in the implementation of such a plan; and
4. Conservation, analysis, reporting, and public display of recovered materials and data.

B. The initial data recovery plan and each subsequent plan shall be prepared by the Applicant in consultation with the Commission and the SHPO. If, upon reviewing the plan, no party objects within a fifteen (15) day period, it will be implemented. If any party objects, the Commission, the SHPO, and other concerned public agencies will convene with the Applicant to resolve any objections.

## II. Performance Standards

A. The Applicant will provide to the SHPO and the Commission documentary proof of financial responsibility, capability, and solvency, including adequate funding to cover insurance and/or bonding. As part of this Memorandum of Agreement the Applicant shall furnish a corporate surety bond to the benefit of a surety acceptable to the Commission and SHPO to guarantee the faithful performance of all covenants and stipulations of this agreement. This bond shall be in a sum negotiated between the Applicant and the Commission.

B. The Applicant will provide to the SHPO and the Commission evidence of having the appropriate resources (funding, staff, equipment) to accomplish documentary research, diving—operation, archeological work, conservation, artifact and other data analysis, public display and reporting consistent with the data recovery plan.

C. All archeological work will be conducted in a manner consistent with the standards and principles contained in the Advisory Council on Historic Preservation's handbook, Treatment of Archeological Properties.

D. All archeological work, including marine survey and underwater data recovery, will be conducted under the direct field supervision of a person or persons meeting, at a minimum, the following qualifications:

1. Equivalent to certification by the Society of Professional Archaeologists (SOPA); and,
2. A demonstrated familiarity with: techniques of underwater archeological survey, including the operation of electronic remote sensing devices, standard diving operation practices relevant to marine archeological data recovery and recording, certification by NAUI, PADI, or other accredited

certifying institution, and interim techniques for conserving artifacts and other recovered materials from a marine environment. In addition, the principal investigator shall have at least the minimum acceptable professional qualifications contained in 36 CFR, Part 61.3(b) (Attachment III).

E. All recovered archeological materials having the potential to yield significant scientific information will be conserved in accordance with the archeological recovery plan, will be stabilized and preserved against damage and deterioration, will be fully described and analyzed, and will be retained by the Applicant for the Commission for a sufficient length of time to permit scientific study before being sold or transferred to other parties. The period allowed for such study shall not exceed one (1) year.

F. A plan for public display and interpretation of the results of archeological investigations, in the form of exhibits and publications for the general public, or other means agreed upon by all responsible parties will be submitted by the Applicant to SHPO and the Commission staff and other agencies as required.

G. A copy of all final archeological reports, including technical papers, will be submitted to the Commission, the SHPO, and the University of California. A copy of all field notes, maps, drawings, photographs, photographic negatives, and other photographic records, along with all historical documentation will be placed in a research archive approved by the SHPO.

### III. Monitoring and Coordination

A. The Applicant will provide the Commission and the SHPO progress reports every 60 days for all project operations, including surface operations, diving, and laboratory activities.

B. The Applicant will permit regular on-site inspections and unannounced visits during the course of all field work, analysis, and conservation phases of the plan to monitor the Applicant's performance under the permit. Such visits will be made only by staff of the Commission or SHPO, or such persons authorized in writing to perform inspections for the staff.

C. The Applicant will submit proposals for changes in supervisory personnel, deviations in the agreed-upon plan(s), or alternative equipment or procedures to the Commission at least 30 days before implementing such changes, deviations, or alternatives. The Applicant agrees to not implement any such changes without the consent of the Commission and the SHPO. In

the event that the above stipulation cannot be met, owing to the disability or death of a principal, summary resignation, or emergency changes in operations to ensure the safety of the investigators or the public, the Applicant, the Commission, and the SHPO will convene as soon as practicable to confirm that such changes are acceptable to all parties.

D. Should the Commission, the Applicant, and the SHPO be unable to resolve any disputes arising from actions taken under this agreement, the permit will be held in suspension by the Commission until all parties agree that the dispute has been resolved to their mutual satisfaction.

E. All historical and archeological investigation, survey, data recovery, materials analysis, and conservation shall be reported in a final report. The final report shall be submitted to all parties by the Applicant for review and acceptance. An acceptable final report should be certified not more than one (1) year after completion of archeological field and laboratory work. Up to 50 percent of the Applicant's share of recovered material will be held in trust for the Commission until the final report is accepted.

Failure by the Applicant to produce an acceptable and certifiable final report within the one-year period forfeits the Applicant's right to the recovered materials held in trust. Forfeited materials held in trust by the Commission will be examined by the SHPO for suitability for public display.

F. This document may be amended during the life of the salvage permit it is appended to with the consent of the applicant, the Commission, and SHPO. Other responsible agencies may be consulted in regard to proposed changes.

Execution of this Memorandum of Agreement evidences that the SHPO and Commission have taken into account the effects of the permit to salvage materials from the San Agustin shipwreck site, and concur that the adverse effects can be mitigated by performance of the Memorandum of Agreement.

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FOR STATE LANDS COMMISSION

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STATE HISTORIC PRESERVATION OFFICER

*Robert D. Man*  
PERMIT APPLICANT

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GENERAL ACKNOWLEDGMENT

State of FLORIDA }  
County of BREVARD } ss.

On this the 1st day of June, 1987, before me,

the undersigned Notary Public, personally appeared

Robert F. Marx

personally known to me  
 proved to me on the basis of satisfactory evidence  
to be the person(s) whose name(s) IS subscribed to the  
within instrument, and acknowledged that he executed it.  
WITNESS my hand and official seal.

Gene F. Wells  
Notary's Signature

NOTARY PUBLIC STATE OF FLORIDA  
EXPIRES JULY 31, 1990  
LICENSE NO. 145 140

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EXHIBIT "C"

STATE OF CALIFORNIA—STATE LANDS COMMISSION

GEORGE DEUKMEJIAN, Governor

STATE LANDS COMMISSION  
1807 13TH STREET  
SACRAMENTO, CALIFORNIA 95814



PROPOSED NEGATIVE DECLARATION

EIR NO. 411

File Ref.: 23816

SCH#: 861104410

**Project Title:** Salvage Permits for Remains of the "San Agustin"  
**Project Proponent:** Mr. Robert Marx and Phoenician Explorations, Inc.  
**Project Location:** In Drakes Bay, off the coast of Marin County

**Project Description:** Mr. Marx will attempt to determine the precise location and condition of the remains of the galleon "San Agustin," and will attempt a salvage of the vessel and her contents if feasible.

**Contact Person:** Goodyear K. Walker

**Telephone:** (916) 322-0530

This document is prepared pursuant to the requirements of the California Environmental Quality Act (Section 21000 et seq., Public Resources Code), the State CEQA Guidelines (Section 15000 et seq., Title 14, California Administrative Code), and the State Lands Commission regulations (Section 2901 et seq., Title 2, California Administrative Code).

Based upon the attached Initial Study, it has been found that:

the project will not have a significant effect on the environment.

mitigation measures included in the project will avoid potentially significant effects.

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Form 13-17 (10/78)	

## INTRODUCTION

Over 70 percent of the earth's surface is covered by water. Only recently has man begun to plumb the depths of his watery planet, and countless traces of the past await the underwater archaeologist. Like the artifacts painstakingly unearthed from land sites, shipwrecks furnish clues to help archaeologists and historians reconstruct our past.

Underwater archaeology is a relatively new discipline, but one of the fastest growing around the world. Underwater sites are generally far less disturbed than those on land. With the exceptions of a few sites such as Pompeii, Herculaneum and Thera, entombed in a fiery flood of lava, land sites typically present stratum after stratum of occupation. One site often spans thousands of years and frequently artifacts from one period become mixed in with those of another period when the site is disturbed, making it difficult for the archaeologist to assign precise dates to the findings.

A sunken ship, however, is often an encapsulated unit. At the moment when disaster struck, time stood still: The vessel sank to the bottom and lies there, representing a single unpolluted moment of a bygone era. There are exceptions: Ships which sunk in port areas where other vessels sank on top of them, wrecks littered by trash from ships anchored above them, and shipwrecks on which salvors have left traces of a later time.

— From a shipwreck the underwater archaeologist can recover virtually every artifact that might be found on a land site of the same era. And sometimes he finds objects never seen before. Everything from the smallest coin to marble columns weighing several tons have been found, even such seemingly perishable items as foodstuffs, cloth and paper. A shipwreck can be a time capsule from which the archaeologist gains important information about construction, rigging and armament.

A shipwreck can sometimes be the only source for revealing historical data on a particular type of ship and period of navigation. Such is the case with the famed Manila Galleons. In 1945, the United States was forced to bomb a section of Manila where the Japanese were entrenched and in so doing, totally obliterated the National Archives of the Philippines. Unfortunately, this archives<sup>m</sup> contained three centuries of documents relevant to just about every aspect of the Manila Galleons from the manner in which they were constructed to the actual logbooks compiled during the

voyages. The documentation concerning Manila Galleons which can be found today in the Spanish and Mexican archives is just a drop in the bucket of what was lost in the Manila archives. Thus, in order to learn more about the history of these fabulous ships we must resort to underwater archaeology!

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## THE MANILA GALLEONS

The first of the fabled Manila Galleons crossed the Pacific in 1565. The last one put into port in 1815. When the line began, Philip the Second was king of all the Spains and his enemy, Elizabeth Tudor, was queen of England. Hernan Cortes, conqueror of Mexico, had been dead but eighteen years. The same year Pedro Menendez de Aviles laid the foundations of St. Augustine in Florida. When the last Manila galleon sailed it was already five years since Miguel Hidalgo had begun the revolt against Spain which was to create the Republic of Mexico. The United States had been a nation for forty years and Andrew Jackson had just won the battle of New Orleans.

Yearly, for the two and a half centuries that lay between, the galleons made the long and lonely voyage between Manila in the Philippines and Acapulco in Mexico. No other line of ships has ever endured so long. No other regular navigation has been so trying and dangerous as this, for in its two hundred and fifty years the sea claimed dozens of ships, thousands of men and many millions in treasure. As the richest ships in all the oceans, they were the most coveted prize of pirate and privateer. The English took four of them, - the "Santa Ana" in 1587, the "Encarnacion" in 1709, the "Covadonga" in 1743, and the "Santisima Trinidad," largest ship of her time, in 1762.

To the peoples of Spanish America, they were the China Ships or Manila Galleons that brought them cargoes of silks and spices and other precious merchandise of the East. To those of the Orient, they were silver argosies, laden with the Mexican and Peruvian pesos that were to become the standard of value along its coasts. To California, they furnished the first occasion and motive for the exploration of its coast. To Spain, they were the link that bound the Philippines - and, for a time, the Moluccas - to her, and it was the comings and goings that gave some substance of reality to the Spanish dream of empire over the Pacific.

The Manila Galleons were the largest ships the Spanish used. In the sixteenth century they averaged about 700 tons; in the seventeenth century the average was 1,500 tons; and in the eighteenth century they were between 1,700 and 2,000 tons. Three or four of these ships sailed annually in each direction until 1593, when a law was passed keeping the number of sailings of down to two a year in each direction.

The voyage from Acapulco to Manila was usually pleasant enough, with only an occasional stop unsettling the routine sailing from eight to ten weeks. On the other hand, the voyage from Manila to Acapulco was known as the most treacherous navigation in the world. Because the winds in the Philippine latitudes are from the east, the Manila Galleons had to beat their way as far north as Japan before reaching the belt of westerly winds which would carry them across the Pacific until they made landfall on the coast of California and then worked their way down to Acapulco.

This voyage took from four to eight months, depending on luck. Counting the crews, from 300 to 600 persons sailed on each galleon with an average of from 100 to 150 of them perishing enroute from epidemics, scurvy, thirst, starvation, or the cold. On one of two Manila Galleons sailing jointly in 1657, all 450 persons aboard succumbed to a smallpox epidemic. About half the 400 aboard the other galleon also died.

Notwithstanding the great risks to life, ships, and property involved in this navigation, the financial gain accruing to those involved in the Manila galleon trade and to the Royal Crown seemed well worth the hardships. The cargoes carried from Acapulco to Manila were basically the same as those carried on the flotas between Spain and the Indies ports, except that silver specie and bullion were also carried on these galleons, coming from the mines of Peru and Mexico to pay for the cargoes sent to Manila. The Crown restricted the amount to be sent to Manila at 500,000 pesos a year, but like many other laws, this was almost always disregarded so that an average of 3 to 5 million pesos were sent to Manila annually. In 1597, the fantastic amount of 12 million pesos reached the Asian port.

The cargoes plying the route from Manila to Acapulco were of a more exotic and diversified nature. The main item was silk from China and Japan of varied types. There were crepes, velvets, gauzes, taffetas, damasks, and grosgrains. Packed in chests were silks in every stage of manufacture from lengths of raw silk to finished apparel - robes, kimonos, skirts and stockings. Finely embroidered Chinese religious vestments, silken tapestries and bedcoverings were also shipped. Fine cottons from the Mogul Empire of India comprised a good part of the cargoes during the latter part of the trade as were Persian carpets, imported into the Philippines via India.

In addition, the Manila Galleons carried exquisite jewelry including pendants, earrings, bracelets and rings. There were gem studded sword hilts, rugs, fans, combs and a

wide range of precious spices and drugs (including rhubarb which was much sought after in Europe). The ships carried a great deal of beautiful Chinese porcelainware, objects carved of ivory and sandalwood, gold bells, copper cuspidors and exquisite and unusual devotional pieces such as crucifixes, reliquaries, rosaries and religious sculptures in wood, ivory and gold, crafted in the Orient for Roman Catholics.

Considerable gold in the form of bullion or manufactured articles was exported to Mexico. Though there was legal ban on the importation of jewelry from the Orient, in a large consignment confiscated at Acapulco in 1767 there are enumerated hundreds of rings, many of which were set with diamonds and rubies, bracelets, pendants, earrings and necklaces and a number of gold religious articles including a cross set with eight diamonds. On the same occasion officials also seized "a golden bird from China," some jewel-studded sword hilts, and several alligator teeth capped with gold. Many unset or uncut gems were also carried to Mexico by the Manila galleon. Henry Hawks, an English merchant who spent five years in Mexico in the sixteenth century wrote: "There was a mariner that brought a pearl as big as a doves eggs from thence, and a stone for which the Viceroy would have given 3000 duckets."

When the richly laden Manila Galleons reached Acapulco, merchants arrived from as far away as Peru and a fair was held at which the bulk of the goods were sold. Peruvian merchants would carry their newly acquired merchandise down to Panama City and sail home later in the year on the ships of the Armada of the South Seas. Mexican merchants had their goods carried over the mountains by mules. The agents who represented the merchants in far off Seville also used mules and travelled all the way to Veracruz to board the New Spain Flota back to Spain.

More than 90 percent of all the Manila Galleons lost over the centuries went down in Philippine waters. Ships sailing for Mexico foundered on treacherous reefs or fell victim to typhoons before they were far from Manila and even though the Acapulco-Manila route was less hazardous overall than the route east to the New World, once the heavily laden galleons entered the waters around the Philippines they were in dangerous territory.

Dozens of Manila Galleons lie beneath the seas around the Philippines. Unlike so many of the treasure galleons lost in the New World, none has ever been found or salvaged. They sunk in deep water, beyond the reach of Spanish Colonial salvors but well within the reach of modern salvage efforts.

### DRAKE'S BAY MANILA GALLEON

Drake's Bay, located approximately 24 nautical miles west-northwest of the entrance to San Francisco Bay, is so named because it is believed that Sir Francis Drake stopped there to careen his ships during his renowned circumnavigation of the world in 1578. He dubbed the surrounding coastline Nova Albion and took possession for England - a move that infuriated the Spanish who resented intrusion into their territory.

On July 5, 1595, four Manila Galleons were dispatched from Manila enroute to Acapulco, their crowded holds crammed with treasures. The smallest ship of the fleet was the San Agustin, commanded by Captain Sebastian Rodriguez Cermeno. And, although she was only 200 tons, she carried 130 tons in valuable oriental cargo - silks, spices, porcelain and some chests of gold, silver, ivory, jade and ebony objects, in addition to an undetermined amount of precious stones.

Unlike the three larger ships which were to proceed directly to Acapulco, the San Agustin had orders to stop along the coast of California for purposes of exploration. The main objective was to locate one or more safe havens where Manila Galleons could stop to make necessary repairs and take on fresh water and firewood before continuing on to Acapulco.

On November 6, 1595, after a difficult crossing, the ship anchored in Drake's Bay. While most of the crew and passengers were ashore, a sudden storm struck causing the ship to sink. Very little of her cargo was saved. However, the ship's launch was spared and the majority of people managed to reach the port of Chacala, Mexico after a hazardous voyage of more than two months.

Most of the information concerning the loss of the San Agustin comes from Cermeno's own account, which was translated by Henry Wagner in 1924 and published in the California Historical Quarterly.

The following is from the original account of Sebastian Rodriguez Cermeno and is signed by him.

... As the weather was severe we kept getting near the land, and, having reached it, a morro was discovered, which makes a high land and seemed like the Punta del Brazil of Tercera. Running along a musket-shot from the land, we saw a point which bore northwest, and entering by this we say that there was a large bay. Here I went on casting the lead.

with the bow headed north a quarter northeast, with the bottom of the sea of sand, and went on to seven fathoms, where I anchored. The point on the west side bore southwest quarter west, and the one on the east, south-southeast. The bay is very large and shaped like a horseshoe, and a river runs into it, and on the bar at high tide there are three fathoms of water, and from the bar outside to the entrance of the anchorage there is a distance of two shots of an arquebus. Having anchored in this bay, we saw in the middle of it three small islands which bore south-south-west, and to the south a small island of half a league in size. The islands trended northwest-southeast. The land is bare. The river above referred to enters into the land three leagues and has a narrow mouth, while above in some parts it is a league in width, and in others a half a league. On the west side it has two branches of half a league each, and on the east side one, the entrance of which is a matter of a quarter of a league from the bar ... (Wagner 1924)

... The land seems fertile as far as three leagues inland, according to what I saw and what the other Spaniards saw whom I took with me to seek food, of which there was need on account of the loss of the ship ... (Ibid)

... On Friday morning the 8th of December, we left the bay and port of San Francisco--or as its other name is, Bahia Grande--where we were shipwrecked. This bay is in the  $38 \frac{2}{3}^{\circ}$  and the islands which are in the mouth (of the bay) are in  $38 \frac{1}{2}^{\circ}$ , and from one point of the bay to the other there may be a distance of twenty-five leagues ... (Ibid)

The following is from a Declaration made by Cermeno on November 30, after he and the expedition survivors arrived in Chacala.

In the port and bay of the new discovery of Cape Mendocino in the camp of Santa Fe, the 30th of November, 1595, before me, Pedro de Lugo, escribano of the King our master, Captain Sebastian Rodriguez Sermeno, chief pilot of the said discovery, said that the reason of having lost, while at anchor in the port, the ship San Agustin which he brought and which Captain Pedro Sarmiento had offered to the King in Manila, without being able to save any of the supplies and other property which was on board,

...

Lastly, the Balanos-Ascension Derrotero, which was translated by Wagner (1926), but which we have taken from Aker (1965), states:

... It is called "La Punta de los Reyes" and is a steep morro. On its northeast side this furnishes a very good shelter, making it a good port for all ships. It is in the latitude of 38 1/2°. Note that in anchoring in this port, called "San Francisco," for shelter from the south and southeast winds, you have to do so at the end of the beach in the corner on the west-southwest side ...

... Here it was that the ship San Agustin was lost in 1595, coming on a voyage of exploration. The loss was caused more by the man commanding her than by the force of the wind ...

The only additional piece of information that is available in a primary source is a comment in the Declaracion of Cermeno before Pedro de Lugo, Scrivener of the King. Although most of the relevant text is repetition of his "account" quoted above, one significant comment is added: "The ship anchored in the bay and port about a quarter of a league from shore" (Aker 1695 as taken from Wagner 1926).

As can be seen, these accounts give only a brief mention of the actual sinking. This may be due to a separate declaration having been taken to cover the loss of the ship. Such a document has never shown up, but it is likely to have been considered a "State secret," both because of the value of the ship and the comment above that the loss was "...caused more by the man commanding her..." and it will most likely never be found.

The approximate location of the San Agustin, within several hundred yards, has been known by scholars for years. Since 1940, more than 800 artifacts, primarily porcelain sherds, have washed ashore on the beach adjacent to the wreck site. Among the artifacts are other ceramic objects, iron nails and spikes, pieces of ships rigging and a brass mortar. An amateur diver reportedly recovered a small bronze cannon, several harquebuses and a few pieces of intact porcelainware.

Due to the fact that the San Agustin is not only the oldest, but possibly the richest shipwreck lost on the west coast of North America, it has been the subject of a great number of scholarly reports and popular articles.

### PRIOR ATTEMPTS TO LOCATE THE SAN AGUSTIN

The area of Point Reyes and Drake's Bay are strategically located and offer safe haven from northerly storms and has been used by mariners for many centuries. The San Agustin is believed to be the first ship to have been lost in this area, but at least 72 others over the centuries have met a like fate.

Raymond Aker, a maritime historian associated with the Drake Navigator's Guild, has produced a comprehensive analysis of the portions of the Wagner translation that relate directly to the location of the wreck, and has settled on a probable site just seaward of the present mouth of Drake's Estero. He was assuming that, in 1595, the actual cut through Limantour Spit was located east of its present location.

The step-by-step rationale that Aker develops to justify his conclusion is well-thought-out and unfortunately may be proven correct. It would be unfortunate because it would place the vessel within or very near the existing breaker zone at the mouth of the estero. This area would be extremely difficult to survey adequately, and next to impossible to excavate for the purpose of ground-truthing any remote sensing anomalies. Analysis of this data by the National Park Service, however, put the wreck as much as 1.5 miles west of Aker's projections, and out of the present breaker zone. The logic for this conclusion is based on some very slight differences of interpretation of the documentary evidence. Other analysis have produced still other locations, but these two appear to be the best grounded in the few murky facts available.

In December 1963, discussions were held between John Huston of San Francisco (one of the founders of the Council of Underwater Archaeology), Adan Treganza of San Francisco State University, and Paul Schumacher who was then the National Park Service Regional Archaeologist, about the need for an underwater archaeological survey of Drake's Bay. Two years later in March 1965, a survey was undertaken using a rubidium magnetometer owned by Varian Associates of Palo Alto and supervised by John Huston. Their main objective was to locate the remains of the San Agustin. Huston reported obtaining a number of "strong anomalies" in the area where the San Agustin was presumed lost but no excavations were ever undertaken to identify the targets. Huston was known to have carried on a great deal of historical research on the San Agustin but failed to write a report on his work before his death in 1938.

In 1982, between August 23 and September 5, and October 4 to 14, the National Park Service conducted a survey of Drake's Bay using remote sensing instruments. A magnetometer was used to cover an area of 2.5 square miles and they obtained 686 anomalies. These anomalies were analyzed, and 49 clusters of anomalies were indicated for priority test excavation. The majority of these no doubt were from modern-day wreckage and debris. Side scan sonar was also used covering an area of 10 square miles in Drake's Bay to locate any targets which were protruding above the sea floor. A sub-bottom profiler sonar unit was also used covering 30 linear miles to obtain an accurate picture of the bay geology. It was learned that the depth of sediment in the bay ranged from a few inches to seven meters in some areas. The NPS produced an excellent report on their work in this bay but unfortunately were unable to follow up with excavations. Some of their magnetometer anomalies were in the area where the San Agustin was presumed lost and they may have located some sections of this shipwreck.

There have been numerous reports of sports divers and treasure hunters conducting unauthorized searches in Drake's Bay and there are unconfirmed reports that both airlifts and blasters have been used in some cases. There are also reports of divers finding two bronze cannons, numerous intact pieces of porcelain, several muskets and a brass mortar - similar to the one located on land by archaeologists.

### ANALYSIS

Over the years a great deal has been written about the loss of the San Agustin in Drake's Bay and the explorations in this area undertaken by Cermeno and his men. Some accounts state that the ship was anchored in five fathoms and others state the depth as seven fathoms. All agree that the location was a quarter league offshore but few authors agree on the exact measurements of a league. My own research indicates that a league was three and a half nautical miles during this period. This would put the anchorage at .875 nautical miles offshore. However, there is geological evidence pointing to the fact that the shoreline has receded over the years and this would put the anchorage even further offshore today.

We know that a storm arose while most of the crew of the ship was ashore and "the ship was lost." Some authors assert that the ship was driven ashore and went to pieces but historical information does not confirm this fact. No doubt her masts and rigging, as well as a part of her superstructure, went ashore, but the main section of her hull and all of her armament, ballast, cargo probably remains further offshore. The fact that the survivors were not able to recover any of her cargo and very little of her stores substantiates this fact.

One of the main differences in analysis of the wreck's location is to what degree the ship was blown from her mooring location before sinking. The Park Service analysis combines an ocean swell from west-northwest and a southeast wind to push the San Agustin directly onshore from her anchorage. Aker argues against the southeast wind, believing that under such conditions the crew could have tacked out to safety. But with the captain and the bulk of the crew ashore, and an incompetent (?) in charge, the logic of very little eastward drift could be valid. Information from the Spanish Archives, however, would indicate that the ship actually sunk at her moorings, and didn't drift at all.

The Drake Navigators Guild published a report entitled, The Cermeno Expedition at Drake's Bay by Raymond Aker in 1965 and he has the following to say on page 12: "Cermeno's own account, of which there are two original copies not in his handwriting but signed by him, also omits a deposition on the loss of the ship. The reason for not including information concerning the loss of the San Agustin can only be conjecture, but the most compelling apparent reason was that the wreck represented salvage potential. The possibility that this was the case is suggested in Father de la Ascension's account of

24. Exploration around the Turks and Caicos Islands at the invitation of the Turks and Caicos Historical Society, to determine if one of these islands was the original landing place of Columbus on his first voyage. Eleven shipwrecks were also discovered, dating from the early 17th to the middle of the 19th century. November 1971, March 1973 and March 1977.
25. Exploration of waters surrounding Ascension Island in the South Atlantic at the invitation of the British Government in which four shipwrecks dating from the middle of the 16th century to the beginning of the 18th century were discovered and investigated. March 1973.
26. Magnetometer and visual search covering a 20 square mile area in the Florida Keys in which nine shipwrecks were discovered, explored and identified. May - October 1973.
27. Exploration of waters surrounding Grand Cayman Island at the invitation of the local government in which a number of shipwrecks were discovered. November 1973 and February 1978.
28. Exploration of a sunken city which was submerged in 1687 off Orangstaad, St. Eustatius Island in the Caribbean under the auspices of the Dutch Government. In addition to locating and mapping the visual submerged structures of the site, a number of old shipwrecks were also discovered and investigated. December 1973.
29. Participation in underwater archaeological surveys and excavations made along the northern coast of Israel under the direction of Dr. Elisha Linder of the University of Haifa. Most of the excavations were concentrated in the area of Acre on harbour works and a Crusader shipwreck. In this area and also at Athlit and Shavei Zion four Phoenician and several Hellenistic and Roman shipwrecks were located by a team lead by myself. September - October 1975 and May 1976.
30. Exploration of both the Atlantic and Pacific coasts of Panama under the auspices of the Panama Government. Very extensive visual and magnetometer searches were made around the Peral Islands on the Pacific side of the Isthmus and on the Atlantic side around the mouth of the Chagres River, Porto Bello, Nombre de Dios and in the San Blas Islands. A total of 44 old shipwrecks pre dating 1800 were discovered. Test hole excavations were made on a number of the sites. June - November 1976 and February - July 1977.
31. Underwater exploration made in the waters off the Central American country of Belize. Seven virgin wreck sites were discovered and two proved to be 17th century Spanish Merchantmen. April 1976.

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32. At the invitation of the Australian Government, I explored four 17th and 18th century Dutch shipwrecks, plus others of other date periods and nationalities off the west coast of Australia. August-September 1977.
33. Underwater archaeological survey made at the invitation of the Dutch Antilles Government around the islands of St. Martin's, Saba and St. Eustatius. Wreck sites were discovered off each island and recommendations for their eventual excavation were made to the government. October - November 1977.
34. Search and excavation of numerous wrecks located in the Florida Keys between Marathon and Key Largo. Among the most important sites worked were three of the 1733 galleons, a 1622 merchantman and a French merchantman 1750. March - July 1978.
35. Extensive magnetometer and visual survey made off Cape Canaveral and surrounding waters. A number of shipwrecks were discovered but poor working conditions prevented them from being excavated. July - September 1978.
36. Aerial, visual and magnetometer of the Little Bahama Bank, covering some 40 square miles in which a total of 28 shipwrecks were located dating from the mid sixteenth to late 19th century. October 1978 and July - September 1979.
37. Working under the auspices of UNESCO and the Dept. of Education of the Mauritius Government, I conducted an extensive aerial and visual survey of the reefs surrounding this island, locating a total of 18 old shipwrecks which predate 1800; including four Portuguese East Indiamen of the 16th century and seven other East Indiamen (French, Dutch and English) of the 17th and 18th centuries. During this same expedition, I was a consultant to the team excavating the French merchant vessel St. Geran which was lost in 1744. A vast number of artifacts were recovered and after preservation, were placed on display in the island's Maritime Museum. February-April 1979.
38. Under the direction of the Naval Museum of Rio de Janeiro, I conducted an underwater visual survey in the waters surrounding Salvador (Bahia) and located 13 shipwrecks from the 17th, 18th and 19th centuries, including the flagship of the Dutch privateer, Piet Heyn, lost during his attack on that place in 1627. May 1979.
39. One Greek and two Roman amphorae-carrying galleys were discovered in waters surrounding the port of Palma de Mallorca, Spain. In other areas, five large lead Roman anchors were discovered, which were not associated with a shipwreck. June 1979.
40. Underwater archaeological survey along the southern coast of Portugal in search of Classical period shipwrecks. In the harbour of Portimao, a Punic and a Roman shipwreck were discovered. October - November 1979.

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41. Underwater archaeological survey made in the Azores around the Islands of Sao Miguel and Santa Maria. Twelve different 16th to 18th century shipwrecks were surveyed. December 1979.
42. Extensive magnetometer and visual survey made along a thirty mile area of the southern and eastern shores of Cape Breton Island (Nova Scotia, Canada). More than 40 shipwrecks dating from the 17th to 20th century were discovered; amongst the most important were the British HMS Tilbury (1749) and an unknown section of the French warship Chameau (1725). Test excavations were made on the above two and several other 18th century shipwrecks. June - October 1980.
43. Under the direction of the Naval Museum of Rio de Janeiro, Brazil, two 17th century Dutch warships were partly excavated; the flagship of Piet Heyn (Hollandia) lost during his attack on the place in 1627 and the Utrecht lost in 1648. Both sites were located near the harbour of Salvador in the Bay of All Saints. The Portuguese East Indiaman, Santa Clara, lost in 1573 was also discovered 30 miles north of this Bay. November 1980 - March 1981.
44. Underwater archaeological survey made along the eastern and southern coast of Santiago Island in the Cape Verde Islands and seven 15th to 18th century shipwrecks were discovered; the two most important being two Portuguese merchantmen dating from the mid-16th century off the fishing village of Cidade Velha. On a beach on the Island of Sal remains of a Phoenician shipwreck dating from the 5th century B.C. was also discovered. May 1981.
45. Extensive magnetometer and visual survey made, covering an area of 150 square miles on the Great Bahama Bank, Bahamas with more than 50 shipwrecks dating from the 16th to 19th centuries being located. June - November 1981 April - October 1983, August - October 1984.
46. Aerial, sonar, magnetometer and visual search conducted along the coast, harbours and river mouths of the State of Pernambuco, Brazil, under the auspices of the Naval Museum of Rio de Janeiro, Brazil. Eighteen 16th to 19th century shipwrecks were discovered (Portuguese, Spanish, Dutch and French); the majority of which were 17th century ships lost during the Dutch occupation of this area. Two Dutch East Indiamen were also located. February - April 1982.
47. Under the auspices of the Musee de Marine (Paris) a sonar and magnetometer survey was conducted off the coast of Brittany, France, and nine 16th to 18th century shipwrecks were discovered, including three French warships from the famous Battle of Quiberon Bay (1759). Also participated in the excavation of the French warship Soleil Royal (1759) off Le Croisic. June - July 1982.

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48. Underwater archaeological survey conducted in Baía de Guanabara (Rio de Janeiro), Brazil under the auspices of the Naval Museum of Rio de Janeiro, on what is believed to be a possible Roman amphora carrier from the 2nd century B.C. Three other shipwrecks were found and surveyed on this site (16th, 17th and 20th centuries). September 1982 - February 1983.
49. Magnetometer and side-scan sonar survey and visual search conducted along the East Coast of Florida between Vero Beach and Cape Canaveral during which a number of shipwrecks from the 17th and 19th centuries were located. Several new sections of the flagship of the 1715 fleet, known as the "CABIN SITE" were located and excavated during the summer of 1985.

#### HISTORICAL RESEARCH

History of Spanish flotas and galleons, 1504-1776; European rivalry in the Caribbean, 1550-1825; Naval warfare, 1500-1825; shipwrecks from Cape Hatteras to Rio de la Plata, 1492-1825; pre-Columbian voyages to America; early history of diving and salvage.

- a. September 1959 - February 1960: Library of Congress, Academy of Franciscan History, Washington, D.C.; Hispanic Foundation, N.Y.
- b. February 1961 - July 1962: Archivo de la Indias, Seville; Archivo de los Duques de Medina-Sidonia, Sanlúcar de Barrameda; Museo Naval, Real Academia de la Historia, and Biblioteca Nacional, Madrid; Archivo Historico de la Marina, Viso del Marques; Museo Naval, Barcelona; Vatican Archives, Vatican Library and Jesuit Historical Institute, Rome.
- c. September 1963 - March 1964: Museo Naval, Madrid; Archivo de Simancas, Simancas; Arquivo Historico de Ultramar; Arquivo Nacional da Torre do Tombo, Lisbon; Museu da Marinha, Belem; Library of the University of Coimbra, Coimbra; Osterreichische Nationalbibliothek, Vienna; Bibliotheque Nationale and Musee de la Marine, Paris.
- d. May 1964 - April 1965, June 1981 and March 1982: British Museum, Lloyd's of London, Public Record Office, London; National Maritime Museum, Greenwich; Nederlandisch Historisch Scheepvaart Museum, Amsterdam; Netherlands Royal Archives, The Hague.
- e. August - September 1968: British Museum; National Maritime Museum; Museo Naval, Madrid.
- f. July 1969: Archivo de Simancas, Simancas, Spain.

- g. August - October 1971: British Museum, Lloyd's of London, London; Museo Naval Biblioteca Nacional, Madrid; Archivo de las Indias, Seville.
- h. May - June 1975, April 1981 and December 1981: Archivo de las Indias, Seville; British Museum, London; Public Records Office, London.
- i. September - October 1977, November 1978 and January 1979: Archivo de las Indias, Seville.
- j. November - December 1978 and August 1982: Biblioteque Nationale, Paris.
- k. March - April 1983: Netherlands Royal Archives, The Hague; Public Records Office and the British Library, London.
- l. November - December 1983, February - March 1984, November - December 1984 and February - March 1985: Archivo de las Indias, Seville; Museo Naval, Madrid; Musee de la Marine, Paris.

VOYAGES

Co-organizer and navigator, voyage of Nina II, replica of Columbus' caravel, from Palos, Spain to San Salvador, August - December 1962. Was made a Knight Commander in the Order of Isabel the Catholic by the Spanish Government as a result of making this voyage.

Organizer and captain, voyage of replica of 10th century Gokstad Viking ship (projected voyage from Gibraltar to Yucatan to demonstrate possibility of pre-Columbian voyages in open-decked, square-rigged vessels; shakedown cruise, Rijeka, Yugoslavia to Bizerta, Tunisia, where shipwrecked in a storm. March - April 1964.

Organizer and captain, voyage of a replica of 10th century Gokstad Viking ship for the same purpose as previous voyage in 1964. Voyage started in Limerick, Ireland, and ended 4,400 miles later at Gibraltar. April - June 1969.

OTHER EMPLOYMENT

International Minerals and chemicals Corporation (Skokie, Illinois),  
Oceanographic Consultant, December 1959 - December 1960.  
Saturday Evening Post, Adventure Editor, January - September 1963.  
Argosy Magazine, Archaeology Editor, December 1967 - December 1978.  
Dive magazine, Contributing Editor, January 1965 - August 1974.  
Real Eight Company Inc., Director of research and salvage, June 1968 -  
January 1971.  
Seafinders, Inc., Vice President, May 1971 - May 1974.  
Ocean Industry Insurers Ltd. (London), Consultant on deep diving  
systems and submersibles, October 1971.  
Scripps Institution of Oceanography, visiting Lecturer in underwater  
archaeology, January - February 1974.  
Sea World Enterprises, Inc., President, August 1974 - June 1976.  
Planet Ocean (International Oceanographic Foundation), Consultant,  
October 1974.  
Aquarius Magazine, Contributing Editor, 1972 - 1976.  
University of California at San Diego, visiting Lecturer in underwater  
archaeology, January - March 1974 and February 1975.  
L.O.S.T. Inc., Expedition Leader, February - October 1978.  
Phoenician Explorations, Director of Operations, January 1979 to  
present.

PUBLICATIONS

Over 400 scientific reports, popular articles and reports.

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ORGANIZATIONS

- Escuela de Estudios Hispano-Americano, Seville, 1962.
- Council of Underwater Archaeology, San Francisco, 1963.
- Academia Real de la Historia, Madrid, 1953.
- Club de Exploraciones Deportivas Acuaticas de Mexico (CEDAM), Mexico City, 1959.
- CEDAM International, Washington, D.C. 1963.
- Caribbean Research Institute, St. Thomas, Virgin Islands, 1967.
- Instituto del Caribe, University of Puerto Rico, 1964.
- The International Oceanographic Foundation, Miami, 1964.
- American Institute of Nautical Archaeology, Cyprus, 1973.
- American Littoral Society, Sandy Hook, New Jersey, 1974.
- National Maritime Historical Society, New York, 1971.
- Jamaican Historical Society, Kingston, 1965.
- Society for Nautical Research, Greenwich, England, 1958.
- Explorer's Club, New York, 1959.
- Adventurer's Club, Los Angeles, 1972.
- American Scandinavian Foundation, New York, 1963.
- Underwater Society of America, Philadelphia, 1960.
- Society for Historical Archaeology, Washington, D.C. 1971.
- Sea Research Society, Mount Pleasant, South Carolina, 1972.
- Underwater Exploration Society of Israel, 1975.
- Save the Dolphin Foundation, San Francisco, 1975.
- The Epigraphic Society (elected as a Fellow in 1982), San Diego.
- Groupe Pour Le Recherche et L'Inventaire des Epaves, Paris, 1978.

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BOOKS

- Historia de la Isla de Cozumel, Merida, Yucatan, 1959.  
Voyage of the Niña II, World Publications Co. Cleveland-New York 1963.  
Following Columbus, World, 1964 (Juvenile).  
The Battle of the Armada, 1588, World 1965 (juvenile).  
The Battle of Lepanto, 1571, World, 1965 (juvenile).  
They Dared the Deep: A History of Diving. World, 1967.  
History of the Sunken City of Port Royal, World, 1967.  
Always Another Adventure, World, 1967.  
Treasure Fleets of the Spanish Main, World, 1968.  
Shipwrecks in Florida Waters, Real Eight Co. Inc., 1969.  
Shipwrecks in Mexican Waters, CEDAM, Mexico City, 1971.  
Shipwrecks of the Western Hemisphere, World, 1971.  
Sea Fever: Famous Underwater Explorers, Doubleday, 1972.  
Port Royal Rediscovered, Doubleday, 1973.  
The Lure of Sunken Treasure, David McKay, 1973.  
Underwater Dig: Manual of Underwater Archaeology. David McKay, 1975.  
Shipwrecks of the Western Hemisphere (New Revised Edition), David McKay, 1975.  
Secrets Beneath the Sea, Belmont-Tower, 1975.  
— Capture of the Spanish Plate Fleet: 1628, David McKay, 1976.  
Diving for Adventure, David McKay, 1979.  
Spanish Treasures in Florida Waters, Mariner Press, Boston, 1978.  
Still More Adventures, Mason Charter, 1976.  
Buried Treasures of the United States, David McKay, 1978.  
Into the Deep: A History of Man's Underwater Explorations, Van Nostrand Reinhold, 1978.  
Quest for Treasure (Discovery of the galleon Maravillas). Ram Publishing Co., Dallas, Texas, 1982.

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BOOKS TO BE PUBLISHED

Gold: From the Dawn of Time to the Fall of Rome, with Jenifer Marx.  
Gold: From the Fall of the Roman Empire to the Present, with  
Jenifer Marx.  
Buried Treasures of the Spanish Main. David McKay.  
Pre-Columbian Voyages to America.  
Pirates, Privateers & Buccaneers of the Spanish Main, with Jenifer Marx.

MOVIES

Over a period of some twenty odd years I have been involved in the filming or production end of over 30 documentary films, the majority of which were shown on nationwide television. Among the most important films was "The Adventurous Voyage of the Nina" which was a two hour film on CBS-TV shown in February 1963, "Viking Voyage" shown on NBC-TV as a one hour special in August 1964, and "Treasure Galleon" narrated by Rod Sterling and shown on nationwide television as a two hour movie during 1975 and 1976. Most recent films made were "Indian Ocean Treasure" in 1981 and "The Battle of Quiberon Bay" made for both French and American television in 1982.

LECTURES

I have lectured professionally for more than ten years throughout the United States and in more than ten foreign countries on the subjects of underwater archaeology, maritime history, treasure hunting and travel.

LANGUAGES

Speaking: English and Spanish.  
Reading: Spanish (including old Spanish), Italian, Portuguese and French.

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DR. JEAN - YVES BLOT

Age: 34  
Citizenship: French

Dr. Jean-Yves Blot is a recognized underwater archaeologist and has his doctorate degree in underwater archaeology from the Sorbonne in Paris and also has a masters degree in anthropology. Mr. Blot has been diving on shipwrecks as his main employment since 1970 and has participated in or led underwater archaeological expeditions off Iceland, France, Portugal, Kenya, Madeira, Mauritania, Mauritius Island, the Bahamas and Florida. Among his notable finds are the French East Indiaman Saint Geran, lost in 1744 off Mauritius Island in the Indian Ocean; the Meduse, lost in 1807 off Mauritania; and the Soleil Royal, lost in 1759 off the coast of Quiberon, France. Mr. Blot is the author of two books dealing with his work on shipwrecks, has four major documentary films and has lectured extensively throughout Europe and the United States. Currently he is employed as an underwater archaeologist for the Museum of Archaeology in Belem, Portugal.

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DR. MARIA-LUISA DE BRITO PINHEIRO BLOT

Age: 38  
Citizenship: Portuguese

Dr. Maria-Luisa De Brito Pinheiro Blot has her doctorate degree in history from the University of Coimbra in Portugal. She has spent a number of years doing archival research relevant to shipwrecks in all of the major depositories of Europe, the United States, India and Indonesia. In addition to being a historian, she is a diver and underwater archaeologist and has participated in all of the expeditions of her husband, Jean-Yves Blot. She has written many articles and is an expert still photographer. Both she and her husband have worked in numerous countries with Mr. Robert Marx during the past 10 years. Currently she is employed as an underwater archaeologist for the Museum of Archaeology in Belem, Portugal.

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CURRICULUM VITAE

Nicholas P. Cushner

Date and Place of Birth: December 6, 1932 New York City

Academic Achievement: Ph.D. University of London, University College,  
1968, Latin American History

Teaching Specialization: Social History of Colonial Latin America

Courses taught:

Colonial Latin America  
Modern Latin America  
Modern Mexico  
Literature and Society in Latin America  
Western Civilization  
Social Effects of Colonization:: Latin America and the  
Philippines Compared  
Land and Society in Colonial Peru (Grad.)  
Spanish American Paleography (Grad.)

Research Specialization: Social effects of land tenure patterns in colonial  
Latin America

Academic Experience:

1968-1970. Asst. Prof. of History, Ateneo de Manila  
University, Manila, Philippines

1970-1974. Asst. Prof. of History, Canisius College,  
Buffalo, N.Y.

1974-1975. Visiting Research Scholar (with teaching) in  
History, State University of New York at Buffalo

1975-1977. Asst. Prof., Empire State College, State  
University of New York

1977-<sup>1986</sup>Present. Assoc. Prof., Empire State College (Buffalo);  
resigned 1980

1979-Present. Adjunct Professor of History, Dept. of  
History, State University of New York at Buffalo

Other Positions: New York State Education Department, Member of Selection  
Committee for New York Regents Fellowships for Doctoral  
Study, 1971-

State University of New York, University Awards Committee,  
Chairperson for Non-Western History, 1978- Awards/Honors:

1979 Empire State College (SUNY) Faculty Lectureship  
Award for significant scholarly achievements

\* 1986 - Full Professor  
SUNY

1981-1982: President of the New York State Latin Americanists

1984-1985. Selected and appointed by Chancellor as SUNY Distinguished Lecturer

Membership in Professional Organizations:

Fellow of the Royal Historical Society, elected May 13, 1968

Conference of Latin American History

Latin American Studies Association

New York State Latin Americanists (President, 1981-1982)

Grants Received after 1976:

1978. SUNY, University Awards Program, \$2800 for research in Quito, Ecuador

1980. Andrew W. Mellon Foundation Fellowship, \$1800 for research in microfilm collection in St. Louis University Vatican Library section

1981. SUNY, University Awards Program, \$3000 for research in Lima, Peru

1983. Fulbright Award for Research in Peru

1983. National Endowment for the Humanities Summer Stipend Award, for research in Peru

Publications

BOOKS

Jesuit Ranches and the Agrarian Development of Colonial Argentina, 1650-1767.  
Albany: SUNY Press, 1983.

Farm and Factory. The Jesuits and the Development of Agrarian Capitalism in Colonial Quito, 1600-1767. Albany: SUNY Press, 1982.

Lords of the Land. Sugar, Wine, and Jesuit Estates of Coastal Peru, 1600-1767.  
Albany: SUNY Press, 1980.

Landed Estates in the Colonial Philippines. New Haven: Yale Univ. Southeast

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Asian Studies, 1976.

Spain in the Philippines. From Conquest to Revolution. Manila: Ateneo de Manila Univ. Press, 1971.

Documents Illustrating the British Conquest of Manila, 1761-1764. London: Royal Historical Society, 1971.

Isles of the West. Early Spanish Voyages to the Philippines. Manila 1972

#### Select Articles

"Slave Mortality and Reproduction on Jesuit Haciendas in Colonial Peru." Hispanic American Historical Review, May, 1976, 177-99.

"Maysapan: The Formation and Society Effects of a Landed Estate in the Colonial Philippines." Journal of Asian History, July, 1973, 30-53.

"Merchants and Missionaries," Hispanic American Historical Review, August, 1967, 360-69.

#### Reviews

Since 1971 I have been a regular reviewer for the Hispanic American Historical Review, the Journal of Asian Studies, and reviews of mine have also appeared in the Times Literary Supplement (London), Bulletin of Hispanic Studies, Indice Historico Espanol, and Philippine Studies.

#### Addresses:

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Buffalo, New York 14202 (716-886-8020)

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JENIFER G. MARX

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Jenifer G. Marx is a historical writer and the wife and associate of Robert Marx in his underwater archaeology projects. A graduate of Mount Holyoke College with a B.A. in 1961, she also studied at the University of Florence in Italy. Mrs. Marx was a member of the first U.S. Peace Corps contingent in the Philippines. She taught in Negros Oriental and also worked at the University of the Philippines in Manila. In 1962, she was appointed volunteer leader and travelled throughout the archipelago as liaison between the Peace Corps and local governments. She was involved in establishing the National Peace Corps Training Center near Zamboanga on Mindanao. Subsequently, Mrs. Marx was associated with the International Labor Organization in Africa, Jamaica and Indonesia. She began diving in the Philippines in 1961 and since 1966 has worked with Mr. Robert Marx as a diver and archival researcher in Jamaica, Mexico, Indonesia, the Bahamas, Florida, Brazil, Panama, France, Portugal, England, Ireland, Canada and the Caribbean. Mrs. Marx is the author of several books and many articles on topics ranging from the history of gold to maritime and colonial history.

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Cornwall, England TR1 1SZ

Citizenship: British

ACADEMIC QUALIFICATIONS

- 1964 - 1966 Diploma in Estate Management and Surveying.  
1968 - 1971 Bachelor's Degree in Architecture.  
1980 - 1981 Post-Graduate Diploma in Maritime Archaeology, with distinction.

QUALIFICATIONS RELEVANT TO MARITIME ARCHAEOLOGY

- 1961 Scuba Diving NQS/CMAS 2 Star.  
Australian Cave Diving Federation Class 2.  
HSE (British Government) Part 4 (Commercial) Diving Management Certificate.  
Re-compression Chamber Operator's Certificate.  
Royal Institute Chartered Survey, Royal Institute of British Architecture, professional exemptions.

COURSES ATTENDED

- 1957 Surrey Archaeological Society.  
Archaeological Appreciation and Field Techniques.  
1963 Cirencester Summer Archaeological School (six weeks excavation of a Saxon site).  
1964 Prehistoric Archaeology Field School, Warminster.  
1966 Voluntary Service Overseas Farnham Castle Management for Overseas Professional Appointees.  
1977 Young Men's Christian Association of New Zealand Management and Financial Courses.  
1978 P.A. New Enterprise Course, OXFAM Resource Management, Personnel Management and Financial Management Courses.

PROFESSIONAL ACTIVITIES IN MARITIME ARCHAEOLOGY

1. Committee member and Projects Officer for Nautical Archaeology Society of Britain.
2. Committee member and representative from Victoria, Australia for Australian Institute of Maritime Archaeology.
3. West of England Maritime Museum.

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PROFESSIONAL PUBLICATIONS IN MARITIME ARCHAEOLOGY

1. "Some Notes on an Old Topic...Boat and Ship Building Methods of the Far East" Indonesia Journal; Spooner, 1975.
2. "A Report of the 1980 Excavation of 'The Hadda' Wrecksite in the Houtman Abrolhos" (Directed by I. Spooner and L. Vickery) Spooner and Vickery; AIMA Bulletin No. 4.
3. "Classical Mediterranean Shipbuilding" Western Australian Museum Publications, 1980.
4. "Field Conservation for Remote Wrecksites" Spooner, AIMA Bulletin No. 5.
5. "The William Salthouse - A Preliminary Report" AIMA Bulletin No. 6.
6. "The William Salthouse" (Directed by I. Spooner, State Maritime Archaeologist, Victoria, Australia) Spooner, Staniforth and Vickery; AIMA Bulletin (in preparation).
7. "The Underwater Cultural Heritage", I. Spooner, 1983.

PAPERS PRESENTED AT MARITIME ARCHAEOLOGICAL CONFERENCES

1. University of Western Australia, 1980: Boatbuilding Technology in the Far East and in the European Bronze Age Period: a comparison.
2. Dartington Conference on Maritime Archaeology 1982: A Maritime Museum for the South-West.
3. British Nautical Archaeology Symposium 1982: Latest Developments in Maritime Archaeology in Australia.
4. The Maritime Heritage: OCEANS 1983, Australia (N.A.S. Conference).
5. Nautical Archaeology Society Conference 1984: Government Participation and Support for Maritime Archaeology.

RESEARCH IN MARITIME ARCHAEOLOGY AND MARITIME HISTORY

1. Survey and recording of Thames Barge building yards and barge hulks, Yantlet Creek, Essex. 1957.
2. Restoration of traditional Thames one-design yacht. 1958.
3. Voyages with Tristan Jones (Royal Geographical Society), assistant with his researches into early Celtic Seafaring. 1962.

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