

## A Group for the Study of Iberian Seafaring

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### Abstract

*Continuing an old tradition of the Nautical Archaeology Program, a group of students has started a coordinated study of issues pertaining to the history of Iberian Seafaring during the Age of Sail. The vessels of the Spanish and the Portuguese were perhaps the best of their time in Europe, and it is difficult to imagine the modern world without them. The student's first results were presented at the Society for Historical Archaeology 2006 Annual Meeting. This is a compilation of their papers.*

### Introduction

Texas A&M University and its associated Institute of Nautical Archaeology (INA) have a long tradition in the study of Iberian seafaring. It is almost 30 years ago that Robin Piercy, an INA archaeologist, started the excavation of a Portuguese frigate at Mombasa, Kenya, the *Santo António de Tana*, lost in 1697 (Figure 01-01).



Figure 01-01 – Robin Piercy during the excavation of the frigate *Santo António de Tana* (Photo: INA Archives).

Later, in the early 1980s, a group of students of the Nautical Archaeology Program started a number of projects related to the study of Iberian ships (Figure 01-02). In 1986 they formalized their mission under the name EXPLADISC – an acronym for Exploration and Discovery – and developed a series of projects aimed at the study of the technology of the 15<sup>th</sup> and 16<sup>th</sup> centuries that led the Europeans into the New World. The entire issue of *INA Newsletter* 13.1, from March 1986, was dedicated to this endeavor.

The Exploration and Discovery group carried out a number of extremely interesting projects during the 1980s (Bass 1988). St. Anne's Bay in Jamaica and the mouth of Belen River in Panama were surveyed in search of Columbus ships, unfortunately without positive results. However, these ground breaking experiments, which included the geological study of the evolution of the coastline in the two areas surveyed, set the standards for future work.



Figure 01-02 – The Exploration and Discovery group. From left to right: Donald H. Keith, Denise Lakey, Joe Simmons, Mark Meyers, Bill Lamb, Roni Polk, Harding Polk, Tom Oertling, Roger C. Smith, and KC Smith (Photo: KC Smith).

Two early 16<sup>th</sup> century shipwrecks – the Highborn Cay Shipwreck in the Bahamas, and the Molasses Reef Shipwreck in the Turks and Caicos Islands – were archaeologically excavated, and published under the highest

scientific standards (Keith et al. 1984; Keith and Simmons 1985; Keith 1987 and 1989; Oertling 1989a and 1989b; Smith et al. 1985).

These are still today considered the two earliest European vessels found in the New World. Measuring around 20 m overall, these ships may have been caravels or small naos, and showed scantlings similar to those found in the Playa Damas shipwreck, another early Spanish shipwreck recently visited by the Institute of Nautical Archaeology near Nombre de Dios, in Panama (Castro 2005b and Castro and Fitzgerald 2006).

Some of the students from the Exploration and Discovery group continued their work on Iberian ships through the 1980s and 90s (Keith and Smith 1984; Lamb et al. 1990). Just to give a few examples, Donald Keith founded the Ships of Discovery organization, Roger C. Smith excavated another early Spanish ship, believed to have been lost in 1559, at Emanuel Point, and Thomas Oertling wrote a series of seminal articles on the definition of Iberian ships as a regional subtype (Oertling 1989c, 2001, 2005; Smith 1978, 1993; Smith et al. 1995; Smith et al. 1998).

### **Iberian Ships**

The study of Iberian ships as seafaring technology remains a small field of research in spite of the obvious importance that these vessels had in setting the age of the European expansion overseas. Very few studies about Iberian ships have been carried out, and even less published, in spite of the discovery of more than 70 suspected Iberian shipwrecks worldwide, all built and sailed between 1500 and 1700 (Tables 1 through 5).

There is no doubt that the particular way in which the vessels under analysis were built derives from a older Mediterranean shipbuilding tradition, probably brought to the Iberian Peninsula by Italian – perhaps mainly Genoese – shipwrights. What makes it interesting is the fact that it incorporates construction features that have been observed in North Atlantic craft. The process by which the ships of the Portuguese and the Spanish evolved and adopted structural characteristics from both the northern and Mediterranean worlds is unknown to us, and to make things more complicated, a number of shipwrecks – admittedly still small – have been found with similar characteristics, but clearly originating from outside the Iberian Peninsula (Table 6).

**Table 1**  
**New World Routes: 16th Century Shipwrecks**

Shipwreck	Date	Location	Timber remains	Data
Molasses Reef Shipwreck	Early 16th c.	Bahamas	Small portion	Salvaged / Excavated (1)
Highborn Cay Shipwreck	Early 16th c.	Bahamas	Part of the bottom	Salvaged / Excavated (1)
Bahia Mujeres Shipwreck	Early 16th c.	Mexico	None	Surveyed (1)
Playa Damas Shipwreck	Early 16th c.	Panama	Part of the bottom	Surveyed / Salvaged (2)
<i>San Esteban</i>	1554	Texas	Stern heel	Salvaged / Excavated (1)
<i>Espiritu Santo</i>	1554	Texas	Unknown	Salvaged (1)
<i>Santa Maria de Yciar</i>	1554	Texas	Unknown	Destroyed by dredges (1)
<i>La Condesa</i>	1555	Portugal	Unknown	Looted? (3)
Emanuel Point Shipwreck	1559	Florida	Extensive	Partially Excavated (1)
Pensacola Shipwreck	1559?	Florida	Part of the bottom	Currently being excavated (27)
Saint John's Bahamas Shipwreck	Mid. 16th c.	Bahamas	Part of upper works	Excavated (1)
Mystery Wreck of MAREX	Mid. 16th c.	Bahamas	Unknown	Salvaged (1)
Cayo Nuevo Shipwreck	Mid. 16th c.	Mexico	None	Surveyed (1)
<i>Francisco Padre</i>	Mid. 16th c.?	Cuba	Unknown	Salvaged? (4)
La Galera	Mid. 16th c.?	Cuba	Unknown	Surveyed? (5)
<i>San Juan</i> / Red Bay Shipwreck	1565	Canada	Extensive	Excavated (1)
<i>San Pedro</i>	1596	Bermuda	Unknown	Salvaged (1)
Western Ledge Reef Shipwreck	Late 16th c.	Bermuda	Extensive	Excavated (1)
Spanish Wreck	Late 16th c.	Bermuda	Yes	Salvaged (1)
Ines de Soto Shipwreck	Late 16th c.	Cuba	None	Excavated (1)
<i>San Cayetano</i>	Late 16th c.?	Cuba	Unknown	Excavated? (5)
Basque galleon 1	16th c.	Canada	Yes	Surveyed (6)
Basque galleon 2	16th c.	Canada	Yes	Surveyed (6)
Basque galleon 3	16th c.	Canada	Yes	Surveyed (6)
Saona Site 1	16th c.	Dominican Republic	Unknown	Salvaged / Surveyed (7)
Saona Site 2	16th c.	Dominican Republic	Unknown	Salvaged / Surveyed (7)

Saona Site 3	16th c.	Dominican Republic	Unknown	Salvaged / Surveyed (7)
West Turtle Shoal	16th c.?	Florida	Part of the stern	Salvaged / Surveyed (8)
<i>Angra B</i>	16th c. ?	Azores	Part of the bottom	Surveyed (1)
<i>Angra D</i>	16th c.?	Azores	Extensive	Excavated (1)

**Table 2**  
**New World Routes: 17th Century Shipwrecks**

Shipwreck	Date	Location	Timber remains	Data
Fuxa Shipwreck	Early 17th c.	Cuba	Extensive	Excavated (1)
Green Cabin Shipwreck / <i>San Martin</i>	1618 ?	Florida	Part of the bottom	Surveyed (1)
<i>San Antonio</i>	1621	Bermuda	Unknown	Salvaged (1)
<i>Nuestra Señora de Atocba</i>	1622	Florida	Part of the bottom	Salvaged / Partially recorded (1)
Shot Wreck	1622	Florida	Unknown	Salvaged (1)
<i>Santa Margarita</i>	1622	Florida	Part of upper works	Salvaged / Partially recorded (1)
Dry Tortugas Shipwreck	1622 ?	Florida	Extensive	Salvaged (1)
<i>Nuestra Señora del Rosario</i>	1622	Florida	None	Surveyed (1)
Urca La Viga	1639	Bermuda	Unknown	Salvaged (1)
<i>Nuestra Señora de la Concepción</i>	1641	Dominican Republic	Unknown	Salvaged (1)
Stonewall Shipwreck	Mid. 17th c.	Bermuda	Part of the bottom	Salvaged / Surveyed (1)
<i>Nuestra Señora de las Maravillas</i>	1656	Bahamas	Unknown	Salvaged (1)
<i>Jesús M.<sup>a</sup> de la Limpia Concepción</i>	1654	Ecuador	Unknown	Salvaged (1)
<i>Santísimo Sacramento B</i>	1668	Brazil	Extensive	Excavated (1)
San Francisco Wreck	1650-1660	Cape Verde	Unknown	Salvaged (9)
Los Lingotes	Late 17th c.?	Cuba	Unknown	Surveyed? (5)

**Table 3**  
**Manila Galleons: 16th and 17th Century Shipwrecks**

Shipwreck	Date	Location	Timber remains	Data
<i>San Felipe</i>	1575	Baja California	None	Surveyed (10)
<i>San Diego</i>	1600	Philippines	Extensive	Salvaged / Partially recorded (1)
<i>Nuestra Señora de la Concepción</i>	1638	Guam	Unknown	Salvaged (1)
<i>Santa Margarita</i>	17th c.?	Guam	Unknown	Salvaged (1)
<i>Nuestra Señora del Pilar</i>	1690	Guam	Unknown	Salvaged? (11)

**Table 4**  
**Europe: 16th and 17th Century Shipwrecks**

Shipwreck	Date	Location	Timber remains	Data
Corpo Santo	Late 14th c.	Portugal	Stern heel	Excavated (1)
Ria de Aveiro A	Mid. 15th c.	Portugal	Part of the Stern	Excavated (1)
Cais do Sodré	Late 15th c.?	Portugal	Extensive	Excavated (1)
<i>Santo António</i>	1527	England	Unknown	? (26)
Studland Bay	Early 16th c.	England	Extensive	Excavated (1)
Baleal 1	16th c.	Portugal	Unknown	Looted (12)
Arade 1	Late 16th c.	Portugal	Extensive	Excavated (13)
<i>Santa Maria de la Rosa</i>	1588	Ireland	Part of the bottom	Excavated (1)
Capitana de Ivella	1596	Spain	None	Surveyed (1)
Ponta do Altar B	Early 17th c.	Portugal	None	Surveyed (1)

**Table 5**  
**Portuguese India Route: 16th and 17th Century Shipwrecks**

Shipwreck	Date	Location	Timber remains	Data
Portuguese Shipwreck	Early 16 <sup>th</sup> c.	Mayotte	Unknown	Salvaged (14)

Etoile Shipwreck	1530 c.	Madagascar	Unknown	Salvaged (24)
<i>S. João</i>	1552	South Africa	Unknown	Surveyed (1)
<i>S. Bento</i>	1554	South Africa	Unknown	Surveyed (1)
Fort San Sebastian Shipwreck	Mid 16 <sup>th</sup> c.?	Mozambique	Extensive	Salvaged (15)
<i>Santiago</i>	1585	Bassas da India Atoll	Unknown	Salvaged (1)
<i>Srº António</i>	1589	Seychelles	Small portion	Looted / Surveyed (1)
<i>Sto. Alberto</i>	1593	South Africa	Unknown	Surveyed (1)
Cochin Shipwreck	Late 16 <sup>th</sup> c.	India	Unknown	Looted? (14)
Wan-Li Shipwreck	Early 17 <sup>th</sup> c.	Malaysia	Unknown	Salvaged (15)
IDM-003 Shipwreck	Early 17 <sup>th</sup> c.	Mozambique	Extensive	Salvaged (15)
<i>Nossa Senhora dos Mártires / Pepper Wreck</i>	1606	Portugal	Small portion of the bottom	Looted / Excavated (1)
<i>São Salvador</i>	1606	Malaysia	Unknown	Looted?
Galleon of Duarte Guerra	1606	Malaysia	Unknown	Looted?
<i>Espiritu Santo</i>	1608	South Africa	Unknown	Surveyed (1)
<i>Madre de Deus</i>	1610	Japan	Unknwon	Destroyed by dredge works (16)
<i>Nossa Senhora da Luz</i>	1615	Azores	None	Surveyed (1)
<i>S. João Baptista</i>	1622	South Africa	Unknown	Surveyed (1)
<i>Sao Joseph</i>	1622	Mozambique	Unknown	Salvaged? (17)
<i>S.ta Catarina</i>	1622	Mozambique	Unknown	Salvaged? (17)
<i>S. Bartolomeu (?)</i>	1626	France	Unknown	Looted? (18)
<i>S. Gonçalo</i>	1630	South Africa	Unknown	Survivor's camp excavated (1)
<i>Santa Catarina de Ribamar</i>	1636	Portugal	Unknown	Surveyed (1)
<i>Santa Maria Madre de Deus</i>	1643	South Africa	Unknown	Surveyed (1)
<i>Santíssimo Sacramento</i>	1647	South Africa	None	Salvaged (1)
<i>N.ª S.ª da Atalaia do Pinheiro</i>	1647	South Africa	Unknown	Survivor's camp excavated (1)
Sunchi Shipwreck	Mid 17 <sup>th</sup> c.	India	None	Excavated (17)
<i>Sto. António de Tana</i>	1697	South Africa	Extensive	Excavated (19)

**Table 6**  
**Europe: 16th and 17th Century Shipwrecks**

Shipwreck	Date	Location	Timber remains	Data
Cattewater Shipwreck	Early 16th c.	England	Extensive	Excavated (20)
<i>Lomelina</i>	1512	France	Extensive	Excavated (21)
Rye A Shipwreck	16th c.	England	Part of a mast step	Surveyed (22)
Calvi 1 Shipwreck	Late 16th c.	France	Extensive	Excavated (23)
B&W 7 Shipwreck	Late 16th c.	Denmark	Small portion of the bottom	Excavated (24)
<i>Saint Honorat I</i>	17th c.	France	Unknown	Surveyed (1)

(1) Castro 2005a: 193-202. (2) Castro 2006. (3) Toja 1990. (4) Mr. Alejandro Mirabal: vita posted at [http://arq.de/downloads/curriculos/eng\\_alejandro\\_mirabal.pdf](http://arq.de/downloads/curriculos/eng_alejandro_mirabal.pdf) on October 20 2005. (5) López Pérez and Díaz Pelegrín 2005. (6) Pers comm. Robert Grenier. (7) Turner 1994. (8) Pers comm. Roger Smith. (9) From <http://www.arq.de/english/sanfrancisco.htm> on October 20 2005. (10) Pers. comm. Edward van der Porten. (11) <http://www.maritimeinvestment.com.au/pilar.html> on October 20 2005. (12) Castro 2004. (13) Castro 2005b and Castro and Fitzgerald 2006. (14) Pers comm. Patrick Lizé. (15) From <http://www.mingwrecks.com/wanli.html> on October 20 2005. (16) Reis 2002: 81. (17) Tripathi 2004. (18) Pers comm. F. Alves. (19) Piercy 1977, 1978, 1979, 1980. (20) Redknap 1984. (21) Guérout et al. 1989. (22) Lovegrove 1964. (23) Villié 1989, 1990, 1991. (24) Lemée 2006. (25) Pers. comm.. Alexis Rosenfeld 2007. (26) Craddock and Hook 1987. (27) pers. comm. John Bratten 2007.

It is therefore difficult to precisely define what constructional features characterize an Iberian ship from the 16<sup>th</sup> and early 17<sup>th</sup> centuries. These ships were the end result of a long process that entailed many decisions regarding the financing, conceptualization, construction and outfitting. They were all different and the standards within which they were built changed constantly in time. State built ships were among the most expensive and sophisticated artifacts constructed during the 15<sup>th</sup>, 16<sup>th</sup>, and 17<sup>th</sup> centuries, and a drive for improvement seems to have been a constant incentive for change.

The history of the three centuries of European expansion is hard to imagine without these complex machines, which carried – as J. Richard Steffy put it – people, merchandises and ideas across the globe, and made possible the contact between populations of all continents, even if often times that contact had dreadful consequences for some of the less technologically



developed players. Unfortunately, ships also carried diseases, wars, and oppression.

What is worth stressing here is that given the importance of the technical characteristics of the vessels of this period, it is almost incomprehensible how little we know about them.

The excavation of one of four 16<sup>th</sup>-century Basque galleons found in Red Bay, Canada, greatly advanced our understanding of this type of ship. Paradoxically, this excavation brought more questions than answers to the discussion: Can we define a regional type for the entire Iberian Peninsula in the 16<sup>th</sup> or 17<sup>th</sup> centuries? How different were these ships from the English, Danish, or French ocean-going ships of their time? How much did Portuguese and Spanish shipwrights change the original Mediterranean model through time? How different were the Spanish and the Portuguese ships?

During my first semester at Texas A&M University's Nautical Archaeology Program, in the fall of 1998, I had to interrupt my studies to attend a meeting in Lisbon which gathered some of the best scholars on Iberian seafaring (Alves 2001). On the way back I missed an airplane connection, and spent a delightful afternoon with J. Richard Steffy, in an airport somewhere, discussing how little was (and still is) known about this subject.

Victims of the international market of antiquities, most Iberian shipwrecks have been destroyed by treasure hunters who abandoned the remains of the hulls after stripping the wreck of all artifacts with market value. Both the artifacts without high monetary value (but with significant academic value) and the hull remains are destroyed in this process. Sometimes treasure hunters are looking for sunken treasures for their own amusement, sometimes working for savvy anonymous investors, and other times they just use shipwrecks as a pretext to raise money from credulous folks. No matter their rationale, however, treasure hunters have forever destroyed many untouched shipwrecks, and important artifacts are scattered in private collections where they remain off limits to the scholarly world.

These shipwrecks are remembered only through an occasional auction catalog, a story in a glossy paper magazine, or a coffee table book, all of which are generally full of unreferenced pictures and anecdotal stories that cannot be verified. Publications originating in treasure hunting ventures

seldom add any information to our knowledge about the ships, their crews, their voyages, or the period to which they belong. Moreover, we only know of the shipwrecks whose artifacts are actually sold at advertised auctions. How many ships have simply been erased from the archaeological record without publicity?

Because they are believed to house artifacts with market value, Iberian vessels seem to have suffered the largest share of treasure hunters' destructions, perhaps only matched by the Dutch Indiamen of the 17<sup>th</sup> and 18<sup>th</sup> centuries.

Nine years after my delightful afternoon with J. Richard Steffy I am now part of the Nautical Archaeology Program faculty, and I am still studying the ships of the Iberian Peninsula. There is so much to learn about these fascinating vessels. They were almost without decorations or any other particular aesthetic arrangements, but were nevertheless symbols of power that commanded respect around the world. They carried a multitude of sailors, soldiers, merchants, priests, and adventurers around the seven seas; all during an age without sufficient communication systems so that each one of these ships had to be an autonomous floating city for up to eight months at a time. We don't know much about the way they were conceived, designed, built, sailed, or inhabited. We don't know much about their performance under sail, as war vessels, living spaces, or conveyors of peoples' ambitions, dreams, and ideas.

During the 20<sup>th</sup> century historians have found, studied, and published most of the important documents pertaining to these ships in Portugal and Spain (Domingues 2000, 13-58 and 2004, 21-33; Fernández Duro 1973, 1996; Artiñano y Galdácano 1920; Vicente Maroto 1998; Rahn-Phillips 1987, 1993, 2000). In the 21<sup>st</sup> century we hope that the advancements in archaeology will allow us to reinterpret the documentary evidence – written and iconographic – and reconstruct not only the ship's hulls, but also their intact stability, and sailing abilities. Perhaps more importantly, we hope to recreate the life-aboard conditions, the spaces within which such large and diverse crowds interacted, worked, and went about their days for months in a row, away even from the sight of land.

One word of caution must be cast regarding the role of nautical archaeologists in the studies of Iberian craft, mostly in southern European countries. Personal hatreds and power wars have delayed the publication

of many shipwreck excavations. Secrecy is the rule in many countries, and a tribal attitude towards foreign scholars has prevented a healthy circulation of information and barred the creation of conditions for an open and scholarly debate of these issues.

### **The Society for Historical Archaeology 2006 Annual Meeting**

The task of understanding such a diverse number of ships and boats, all solutions for particular problems at particular times, is daunting. Each one of the ship types considered evolved through time, within very loose standards of shape, rigging configuration, and size. To understand such a diverse number of ships and boats is not a task that can be tackled by any one scholar alone, nor in any one lifetime. That is why I decided to organize an informal group dedicated to the study of Iberian seafaring during the 16<sup>th</sup> and 17<sup>th</sup> centuries. The student response was great, their enthusiasm contagious, their competence outstanding, and their focus reassuring for any coordinator of such a group.

Two years ago I thought that it was time to make sense of all this work and organize a symposium at the 2006 Society for Historical Archaeology Annual Meeting – which was held in Sacramento, California, between the 11<sup>th</sup> and the 15<sup>th</sup> of January – where all these students could present and discuss their research with their peers.

We set up weekly meetings to define strategies and list needs in terms of research (bibliographical reviews of each subject, etc.), and in terms of resources (how much research we must do, where, for how long, and at what cost). My second ongoing effort was to identify professional niches for these students, keeping in mind that they are going to graduate, get jobs, and hopefully continue their research in this and related subjects.

The symposium was approved and, even better, the idea of publishing the proceedings was applauded by the participating students. Generous grants from the The Luso-American Foundation and Texas A&M University alum Dr. Peter Amaral made the event possible.

The Society for Historical Archaeology meeting' theme for 2006 was "Life on the Edge", and Dr. Jerome Hall, former INA president and Underwater Program Chair of this SHA's annual meeting, suggested that our symposium be called "The Edge of Empire: Iberian Ships" (Figure 3).



Figure 01-03 - The Team at SHA (From left to right: Carlos Monroy, Pearce Creasman, Blanca Rodriguez, Alex Hazlett, George Schwarz, Tiago Fraga, Filipe Castro, James “Brad” Coombes, Katie Custer, Erika Laanela. Missing from photo: Gustavo Garcia)

The papers presented in this volume are a snapshot of a work in progress. Some need to be polished, others need to be developed further, and some open new avenues for research. My hope is that this volume inspires all the students that participated in the SHA 2006 meeting to continue their research with the same enthusiasm and aim at publishing their final academic works, which will undoubtedly be relevant contributions to the knowledge of Iberian seafaring in the age of sail.

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