Underwater News - Winter 2001
Reported by
Toni L. Carrell

Louisiana

Minerals Management Service (MMS): Nearly a mile below the surface of the Gulf of Mexico is a sobering reminder of how close the Second World War came to the shores of Louisiana. A mere 45 miles from the mouth of the Mississippi River, the U-166, the only German submarine sunk in the Gulf of Mexico, rests in the crater it created when it was sent to the bottom by a depth charge in the summer of 1942. Its discovery and confirmation last May came as a result of a required MMS shallow hazard and archaeological survey of the sea floor prior to construction of a proposed gas pipeline by BP and Shell Oil. The joint BP and Shell gas pipeline survey employed a high-tech unmanned submarine developed for C & C Technologies, Inc of Lafayette, Louisiana. The torpedo-shaped mini-sub, called a Hugin 3000 Autonomous Underwater Vehicle (AUV), is being tested by C & C to perform high-resolution surveys in deep water.

Rob Church and Dan Warren, C & C's marine archaeologists, were the first scientists to review the high-resolution sonar data, which covered an area where two wrecks were already known to exist from an earlier 1986 Shell survey. The first of these wrecks was believed to be the passenger ship SS *Robert E. Lee*, which was sunk by the U-166 on July 30, 1942. The second, smaller target remained unidentified until Church and Warren realized that it had roughly the same size and appearance as the only German U-boat known to have been lost in the Gulf. The *U-166*, however, was supposed to lie over a hundred miles to the west where it had supposedly been sunk by a US Coast Guard Amphibian J4f aircraft. It was not until Church and Warren obtained from the National Archives the captured logbook of another German U-boat, *U-171*, that they realized that it was likely that it was *U-171*, not *U-166,* the Coast Guard bombed, but missed. The US Navy sub-chaser, PC-566, which was accompanying *Robert E. Lee*, apparently destroyed *U-166* without realizing it.

When BP and Shell first realized the significance of their discovery, they shared the information with MMS and invited MMS archaeologists Jack Irion and Rik Anuskiewicz to accompany them on a reconnaissance of the wreck site using a video camera mounted on a remotely operated vehicle. For six decades, the sub's only other visitors have been the few marine organisms that can survive the crushing pressure and eternal darkness nearly a mile below the surface.

The video images confirmed Church and Warren's research and interpretations. The video clearly showed the *U-166's* conning tower and armament, a 105 mm gun on the forward deck, a 20 mm anti-aircraft (AA) gun mounted on a small deck behind the conning tower (called a *wintergarten*), and a 37 mm AA gun on the rear deck. The forward 50 feet of the bow was found lying 400 feet away with a large indentation in the deck suggesting the impact from an explosive depth charge. The news of the discovery solved a 59-year old mystery and ended decades of fruitless searching in what proved to be the wrong area of the Gulf of Mexico.

However, it is unlikely that this discovery, or many others that have been made in the waters of the Outer Continental Shelf, would have occurred without the regulation and oversight of a Federal agency, the U. S. Minerals Management Service (MMS). The MMS, as a Federal agency, is required by law to consider the effects of all its actions, including lease sales, studies, and permits, on the cultural heritage of the United States. To meet this responsibility, it requires the oil and gas industry to conduct marine remote-sensing surveys to search for shipwrecks and has, on staff, archaeologists trained to review the geophysical reports submitted by the oil and gas industry. The MMS reviews nearly 1,700 planned wells and pipelines every year for their potential effect on archaeological sites on the Outer Continental Shelf. Over a hundred shipwrecks have been discovered on the floor of the Gulf of Mexico

as a result of this regulatory requirement. While many of the wrecks are either local fishing and shrimp boats, crew boats, and other modern wrecks, over a dozen other casualties of World War II by the 24 known U-boats that patrolled the Gulf have been found. Older shipwrecks have also been identified and studied, including the passenger steamer *New York*, sunk in 1846, and the Civil War Union gunboat USS *Hatteras*. Just last year, the MMS listed the side-wheel steamer *Josephine* to the National Register of Historic Places, an official list maintained by the Federal Government of the nation's most important historical sites.

Because the remains of *U-166's* 52 crewmen are still on board, the German government has declared the site to be a war grave and has requested that it remain undisturbed. For more information contact: Jack B. Irion, Ph.D., U.S. Minerals Management Service, 1201 Elmwood Park Blvd. New Orleans, LA 70123 504.736.1742; e-mail: jack.irion@mms.gov. Robert Church C&C Technologies, Inc. 730 E. Kaliste Saloom Rd., Lafayette, Louisiana 70508 337.261.0660 rc@cctechnol.com

The Minerals Management Service announced that it has entered into a cooperative agreement with Texas A&M University (TAMU) to conduct an archaeological investigation of a 200-year-old shipwreck in over 2,600 feet of water in the Gulf of Mexico. The wreck, located last February by Exxon Mobil Development Company during pipeline construction for the Mica project, will be investigated next summer from aboard a research submarine. Scientists from both the Department of Oceanography and the Nautical Archaeology Program at TAMU will join MMS archaeologists in photographing and excavating the wooden-hulled sailing ship by using underwater robots called ROVs (remotely operated vehicles) deployed from both the submersible and surface support ships.

Exxon Mobil, which first reported the discovery to the MMS, sponsored a preliminary expedition to photograph the site. Exxon Mobil and its venture partner, BP, are providing funding for the upcoming archaeological investigation. This will be the first time in the Gulf of Mexico that a shipwreck this deep has ever been scientifically excavated. The nearly half-mile deep wreck is located about 30 miles off the mouth of the Mississippi River. The lower part of the shipwreck is almost completely intact and sitting upright on the seafloor. The ship is about 60 feet long and its wooden hull is covered with thin copper sheets, a means used by shipbuilders from the end of the 1700's to the mid-1800's to protect ships from wood-eating marine organisms. Because copper sheathing was quite expensive, it is unusual to find it on small merchant vessels. There also is evidence that the ship burned. Planks recovered from the wreck site last February clearly were charred and have been identified as American white pine, which is native to the Atlantic coast north of Virginia. The name of the vessel or what it was doing off Louisiana is unknown, but scientists hope to solve this mystery next summer with a combination of state-of-the-art technology and old-fashioned research.

San Juan, Puerto Rico

US Army Corps of Engineers (USACE): The U.S. Army Corps of Engineers, Jacksonville District (Corps) is in the process of making navigational improvements to the entrance channel to San Juan Harbor consisting of widening and deepening the channel through dredging. Prior to the implementation of dredging operations the Corps conducted numerous environmental studies of the project area in fulfillment of their obligations under various federal and state statutes. Archaeological studies implemented by the Corps as part of their pre-construction obligation located the remains of two early iron-hulled vessels, *Manuela* and the *Cristobal Colon*. Both ships were intentionally sunk in May 1989 to block the channel during the Spanish-American War. These historically significant shipwreck sites must be removed to allow completion of entrance channel improvements. For more information on this project visit the web site at: www.saj.usace.army.mil/pd/sanjuan/SanJuan.html.

South Carolina

Warren Lasch Conservation Center: The Excavation of the Confederate Submarine H.L. Hunley: Interior excavations began with the removal of four of the upper hemispherical exterior hull plates. The entire interior of the submarine was filled with fine sediment with the crew members and their personal effect located on the bottom. Interior excavation was divided into two phases. Phase one, completed earlier this summer, concentrated on the excavation of the crew compartment (the central portion of the submarine located between the forward and aft hatch) and the removal of all organic remains. The human remains and the artifacts were in a remarkable state of preservation. While there was no flesh preserved, we did encounter adipocere and brain tissue. Artifacts that were within approximately 30cm of the bottom were remarkably preserved. Notable artifacts recovered include two pencils, one candle, eight pairs of shoes, one felt hat, one tobacco pipe, a lantern, canteens, buttons, and Lt. George Dixon's gold coin.

Dixon's girlfriend Queenie Bennett gave him the twenty dollar gold piece to carry with him as a good luck charm when he went off to fight in the Civil War. It was rumored that during the battle of Shiloh, a stray bullet, that would have probably crippled Dixon for the rest of his life, struck the lucky coin in his pants pocket. We assumed that if this event had happened, Dixon would have carried that lucky coin for the rest of his life.

The coin was recovered as shinny as the day it was minted and bore the markings of a US twenty dollar gold piece minted in 1860. The unique feature was that Dixon had sanded away the raised letters that once read "United States" and eloquently inscribed in the blank area: Shiloh, April 6th 1862, My Life Preserver, G. E. D

Phase two, currently underway, focuses on the excavation of the forward and aft ballast tanks and a small area located just below the crew's bench. While we do not anticipate finding any artifacts in the ballast tanks, we are hopeful that the area below the bench was used for storage and may contain additional personal items. The excavation of the Hunley has been and continues to be an incredible adventure.

Along with the *Hunley* excavation the Warren Lasch Conservation Center has begun accepting artifacts from other archaeological projects for conservation. Currently the Center is conserving two cannons from the C.S.S. *Alabama* and artifacts from the U.S.S. *Housatonic,* C.S.S. *Cumberland*, and C.S.S. *Florida*.

Australia

Flinders University, South Australia: The second Maritime Archaeology Field School (ARCH 3304) will be held at Port Victoria and Wardang Island, South Australia from 2 Feb to 17 Feb 2002. The aim of the field school course is to provide students with an introduction to the techniques of underwater survey, position fixing, mapping, photography (including video), recording, excavation and conservation. Lectures and videos will be provided on the various research methods and techniques used by maritime archaeologists.

The first part of the course (two days) will consist of the Australian Institute for Maritime Archaeology (AIMA) and Nautical Archaeology Society (NAS) Part 1 Training program. The remainder will comprise practical exercises and associated lecture/seminars. Previously, this course was taught jointly by staff of Flinders University and James Cook University of Townsville. In July 1998 and July1999 it was taught on Magnetic Island using the facilities and equipment of James Cook University. In February 2001 it was held in collaboration with both Heritage SA and James Cook University at Port Victoria/Wardang Island. International students will be provided with an official transcript of their academic record by Flinders University. The course will provide the equivalent of 1/6 of a US academic year. For further questions on credit transfer, please contact the Flinders University International Office .Ph: +618 8201-

2727; Fax: +618 8201-3177; Toll Free from USA: 1800 686 3562Email: study.abroad@flinders.edu.au . The course has a quota of 20 students.

Students should contact the Course Coordinator as soon as possible in order to reserve a place. Travel, accommodation and equipment: Students will be expected to make their own arrangements for air travel to Adelaide and back. Travel to and from Port Victoria will be provided. During the field school students will stay in air-conditioned cabins at Gulf Haven Caravan Park in Port Victoria. Boats, SCUBA diving tanks, weights and air fills will be provided. Students will need to provide their own wetsuit and basic diving equipment (not tanks and weights). Expenses: For International students the tuition fees for the short course are AUD $1787.00 (approx US $900 or UK 600 pounds for six units). In addition there is a fee of AUD $400 for accommodation, transport and tank fills that will include AIMA/NAS Part 1 Training. Anyone who is not currently a University undergraduate or postgraduate student should contact the Course Coordinator in order to discuss possible participation. Assessment: Assessment is comprised of two components:- course participation, both in practical skills and lectures, as continuous assessment (50%)- site reports and student folders (50%). Diving/safety requirements: Flinders University has strict requirements for diving and boating safety. As a minimum, students will need to hold a certified open water diving certificate, have logged a minimum of 15 hours, have a current diving medical certificate and will be expected to complete diving competency test

For further details contact: Dr Mark Staniforth - Topic Coordinator Senior Lecturer in Maritime Archaeology, Department of Archaeology, GPO Box 2100Adelaide, SA 5001, Australia; Phone (08) 8201 5195; Fax (08) 8201 3845; Email Mark.Staniforth@flinders.edu.au . WWW site: http://wwwehlt.flinders.edu.au/archaeology/. You may also contact Ms Sarah Mitchell, Study Abroad & Exchange Officer, International Office, GPO Box 2100, Adelaide SA 5000, Australia. Phone + 61 8 8201 3779; Fax + 61 8 8201 3177. Callers from the USA: Toll free 1800 686 3562; Email study.abroad@flinders.edu.au; WWW site: http://adminwww.flinders.edu.au/intloff/home/html.

France

Naval Historical Center (NHC): In 2000, the Naval Historical Center's (NHC) Underwater Archaeology Branch (UA) began a three-year archaeological remote-sensing project off the Normandy coastline, France. Dr. Robert Neyland (UA Branch Head), serves as the project's Principal Investigator. The project area includes offshore segments of the American landing sectors, designated Utah Beach, Point du Hoc, and Omaha Beach. Project funding came through the Department of Defense's Legacy Resource Management Program. The Institute of Nautical Archaeology (INA) and a non-profit organization, RPM Nautical (FS 2000-01) provided additional financial support. In FS 2001, the Naval Surface Warfare, Carderock Division (NSWC) joined the NHC's project to provide video documentation using a remotely operated vehicle (ROV). In addition, Fugro SeaSTAR (UK) provided a satellite DGPS.

In FS 2001 (May-June), the UA returned to Normandy and completed the near-shore (shallow water) segments of Utah Beach (605.6 hectares), Point du Hoc (226.5 hectares), and Omaha Beach (570 hectares), shoreward of the caisson breakwater. In addition, the NSWC group assisted UA to examine sites at Utah (six sites, including one intact LBV), Point du Hoc (one LBV), and Omaha (15 sites including three Double Duty [DD] tanks). The UA and NSWC also documented the remains of five known sites (USS *Corry*, USS *Meredith*, USS *Rich*, USS *Tide*, and, LST 523). For more information on this project contact: Dr. Robert Neyland, e-mail: neyland@hunley.org.

Northern Ireland

Centre for Maritime Archaeology (CMA): Archaeological investigations on land and sea were undertaken continuing the holistic approach to the study of coastal heritage. The year started with the developer-funded archaeological mitigation of a major capital dredging scheme in Belfast Lough. Although this produced little material of archaeological interest a good precedent has been established in

underwater commercial activities in the region. Collaboration between Martin Dean, Archaeological Diving Unit (ADU), and Dr Rory Quinn, Centre for Maritime Archaeology (CMA), attempted to locate known deposited material on the seabed in Belfast Lough. Relatively small amounts of water logged wood, flint and pottery were laid on the seabed and the area was then surveyed using a caesium magnetometer, a sector scanner and a ground discriminator. High quality data was recovered from the test site and this exercise should help in developing interpretation skills of how wreck material is represented as geophysical data. In a separate exercise in the same area ground-truthing of geophysical anomalies led to the discovery of thirteen 19th and 20th century wrecks but earlier material was not encountered.

The Centre for Maritime Archaeology continues to thrive. Visit the web site at: http://www.ulst.ac.uk/faculty/science/crg/cma.htm CMA staff involved in the government program of work are still wrestling with the publication of the Strangford Lough volume but it is now at the editorial stage and light is visible at the end of the tunnel! In January, led by Colin Breen, Tom McErlean and Rory Quinn, the CMA undertook its first season of fieldwork in Mombasa in collaboration with the National Museums of Kenya and the East Africa Institute of Archaeology. The purpose of the program of research is to study the Swahili maritime culture that existed along the eastern seaboard of Africa from Oman as far south as Zanzibar between AD 800 and 1800. The inter-disciplinary project involved archaeologists, geologists, geophysicists and historians in an examination of the development of Mombasa's cultural landscape. Survey of the foreshore revealed settlement evidence of the 7th and 8th century AD, evidence of the Portuguese settlement of the island as well as remains of early fish traps and landing places. The seabed was surveyed using geophysical equipment providing a three-dimensional perspective of the area including 50 suspected cultural anomalies in the vicinity of the Old Port. The site of the *San Antonio de Tanna,* a Portuguese wreck, earlier excavated by Robin Piercey, was also surveyed. Work on this project is scheduled to continue over the coming years and will improve knowledge and understanding of the maritime archeology of the east African coast.

Queens University Belfast: A number of interesting coastal sites were excavated on land. Professor Jim Mallory and Dr Tom McNeill of Queen's University Belfast, School of Archaeology and Palaeoecology (QUB) excavated at Rough Island, Co. Down. A coastal shell midden containing Neolithic pottery has provided substantial environmental evidence about coastal communities of that period. For information on archaeology at Queen's University Belfast, visit the web site at: http://www.qub.ac.uk/arcpal

Environment and Heritage Service: Declan Hurl of the Environment and Heritage Service (EHS) directed an excavation of a coastal monastic graveyard at Portmuck, Co. Antrim. Human remains dating from the Early Christian and Medieval periods were recovered and are to be studied as an actual sample of an early coastal community by QUB's Dr Eileen Murphy. Norman Crothers (EHS) directed a third season of excavation at the Early Christian period tidal mill at Nendrum monastery, County Down. Three phases of the mill, built between AD 619 and 788 have been uncovered. This season a wooden landing place for phase 1 of the mill has been excavated and found to contain re-used timbers from buildings, some timbers possibly from a boat, wooden barrel-staves and bone pins. Norman Crothers also excavated Sketrick Castle, County Down. Built on an island in Strangford Lough, excavation showed it to be a single-period structure dating from the 15th-century. Ruairi O Baoill (EHS) directed excavations at Greencastle, County Down which is part of a well-preserved medieval landscape on the shore of Carlingford Lough. This royal castle was built by Hugh de Lacy in the 1230s and had an interesting history until the mid-17th-century. The excavation was located outside the castle precinct and evidence indicates that the area may have been used for light industry dating to the period of the castle's construction and during the subsequent century. Finds included coins, imported pottery, iron arrowheads, a spur and a fragment of a tuyere and metal working tongs. Ruairi O Baoill is to undertake major excavations in September at Mahee Castle, County Down, located on the same island as Nendrum monastery. According to historical sources the small castle was built in the late 16th century and a vaulted room in the castle has previously been interpreted as a boathouse.

Canada

The International Committee on Underwater Cultural Heritage (ICUCH): Through its President, Robert Grenier, ICUCH is seeking the development of a list of individual conservators and institutions that might be prepared to offer their expertise, advice or assistance to less well equipped regions or countries seeking assistance from ICUCH in the conservation of their underwater cultural heritage. The list is envisioned to include details of institutions and individuals both practicing and retired, voluntary and professional who would be in a position to provide expertise, advice or assistance to others through ICUCH.

Details that should be provided for individuals and institutions include:
Name, title and qualifications:
Address:
Email details:
WWW site, if any:
Area of expertise:
Experience: e.g. In-situ conservation of the iron, barque Santiago (1845-1955), conserved of metals raised from SS Xantho (1848-1872), conserving organics from the Zuytdorp (1712), presently treating assorted materials from submerged pre-historic Aboriginal site etc. Present Status:.. e.g.. practicing (full-time, part time), retired, occupied elsewhere.
Availability: e.g.. Anytime, during leave from work
Costs: e.g. Expected remuneration (if any), contractual arrangements etc.
Other: Comments or information as required

For more infomation or to submit information contact Mike Macarthy, Western Australia Maritime Museum, Materials Conservation Department, Cliff Street, Fremantle 6160, W. Australia, or via e-mail at Michael.McCarthy@museum.wa.gov.au

Meetings of Interest

December 2001. Australasian Institute for Maritime Archaeology (AIMA) annual conference, to be held in Geelong, Victoria in the first week of December 2001. The theme of 'Ports and Port Cities' will hopefully strengthen linkages between maritime and terrestrial sites as well as focus on specific port issues such as heritage and port and foreshore development. Port Phillip Bay itself is currently the focus of investigation into channel deepening operations to take larger ships, which will involve dredging and blasting with potential impacts on archaeological sites. Geelong is Australia's busiest regional port, situated 60 km from Melbourne, which is Australia's busiest port. Port Phillip Bay has some unique aspects of port archaeology such as the Popes Eye and South Channel shoal fort (with disappearing gun emplacements), remains (and existing examples) of pile lighthouses, and of course shipwrecks! http://www.heritage.vic.gov.au/What-2.html For further information and expressions of interest for presenting papers please contact Ross Anderson, ross.anderson@doi.vic.gov.au; Maritime Archaeologist, Heritage Victoria, Level 22, Nauru House 80 Collins St , MELBOURNE VIC 3000; Tel: (direct)+0061 03 9655 9721 Tel: (HV reception) +0061 03 9655 6519 Fax: +0061 03 9655 9720. You may also contact or Peter Harvey at: peter.harvey@doi.vic.gov.au.

April 26-28, 2002. The DeepArch research group at MIT is pleased to announce the second conference dedicated to Archaeology, Technology, and the Deep Sea. Details are posted on the DeepArch webpage. A call for abstracts is online at: http://web.mit.edu/sts/deeparch/ For information or questions, contact the Dr. Aaron Brody, Program Chair at e-mail: ajbrody@postmark.net

Underwater Archaeology, the Internet, and the World Wide Web (WWW): The internet is a forum for the exchange of information on underwater archaeology and related maritime resources. The location of

new sites that focus on maritime or related fields will be included as a regular feature. Share the news with your colleagues by forwarding new listings or sites to tlcarrell@shipsofdiscovery.org for future inclusion in the SHA *Newsletter.*

Archives Maritimes announces a multi-language website dedicated to archiving history for all divers from all countries. It is a growing web site where you can contribute your knowledge and experience. Visit it at: www.archivesmaritimes.com

Arqueologia Brazileira: The site makes available information in Portuguese, English and Spanish, about Brazilian research institutions, a long list of museums, Brazilian legislation, the Culture Ministry (IPHAN/Minc), tips of reading material, pointing out courses and events, in addition to introductory texts concerning the discipline splendidly illustrated broaching research subjects and professionals' acting fields, like the contract Archaeology, always aiming at accessible language. Visit it at: www.itaucultural.org.br/arqueologia

Recent Publications

Journal of the American Institute for Conservation (JAIC)

Now available online at: http://aic.stanford.edu/jaic/ . The site was made possible by a grant from NCPTT and contains the complete text and image contents of the Journal from the first issue in 1977 through 1999, and is fully searchable. Issues of the earlier AIC Bulletin will be added soon, as will more current issues on a yearly basis. Further details about this resource are available on the web site.

Ross, Seamus

2001 *Changing Trains at Wigan: Digital Preservation and the Future of Scholarship*. National Preservation Office, United Kingdom. Copies are available free of charge from the NPO, and the text is also available in PDF on the NPO website which can be found at www.bl.uk/npo/ under publications. For more information you may also contact: National Preservation Office, British Library, 96 Euston Road, London NW1 2DB, UK; Tel: ++44 (0)20 7412 7612, Email npo@bl.uk

ACUA Photo Competition

The ACUA invites all SHA members to participate in the sixth annual Archaeological Photo Festival Competition. Entries must be received by December 1, 2001. If you are unable to submit in advance, contact Dr. John Bratten, below. Results of the judging will be sent to all entrants by January 31, 2002. Selected images will be displayed at the SHA Conference on Historical and Underwater Archaeology in Mobile, Alabama, January 8-12, 2002. Look for your entry forms in your conference mailing or contact Dr. John Bratton, Program Chair-Underwater, University of West Florida, Archaeology Institute, 11000 University Parkway, Pensacola, FL 32514, e-mail: jbratten@uwf.edu; Tel: 850-474-3015; Fax 850-474-2764.