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EXPLORING THE DEEP: A scientific diver in training learns to operate an underwater video camera offshore on a deep North Carolina wreck. (Photo: ECU Dive Safety Office, summer 1997)

Stem to Stern

Newsletter of
East Carolina University's
Program in Maritime History
and Nautical Archaeology

Faculty:

Timothy J. Runyan, Ph.D.,
Director

Lawrence Babits, Ph.D.
Michael A. Palmer, Ph.D.
Anthony J. Papalas, Ph.D.
Bradley A. Rodgers, Ph.D.
Carl E. Swanson, Ph.D.
John A. Tilley, Ph.D.
Gordon P. Watts, Jr., Ph.D.

Staff Archaeologist:

Frank Cantelas, M.A.

Office Manager:

Karen Underwood

Editors:

Catherine M. Fach
Kathy A.W. Southerly

Contributing Editor:

J. Christopher W. Southerly

Contributors: Frank Cantelas, Wendy Coble, James Embrey, Scott Emory, Catherine M. Fach, Joe Greeley, Wayne Lusardi, Peter McCracken, Larkin Post, Dr. Timothy J. Runyan, Filippo Ronca, Kathy A.W. Southerly, J. Christopher W. Southerly, Jenna Watts, Robert Westrick.

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Stem to Stern

Program in Maritime History
and Nautical Archaeology
Admiral Ernest M. Eller House
East Carolina University
Greenville, NC 27858-4353

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From the Editor

East Carolina University's program in Maritime History and Nautical Archaeology is continuing its precedent of expansion and improvement in 1997 and 1998, despite the failure of the UNC system to approve its Ph.D. proposal. On a more positive note, Dr. Timothy J. Runyan has officially returned to ECU as the Director of the Maritime History and Nautical Archaeology Program, leaving his faculty position at Cleveland State University. Also, Gordon P. Watts Jr., long time faculty member in the maritime program, is now officially Dr. Watts, having earned his Ph.D. from St. Andrews University in Scotland.

ECU was involved in numerous field projects over the past year in a variety of locales. These included Delaware, Wisconsin, Puerto Rico, Maryland, Bermuda and coastal North Carolina. These projects provided students with varied opportunities in different experiences from the zero visibility environments of the Maryland and Delaware projects to the clear waters of the Caribbean. The work done by ECU on the alleged *Queen Anne's Revenge* gained the most notoriety locally, nationally, and internationally with inquiries coming from as far away as Australia.

This year proved to be a very productive year for the Diving Safety Office at ECU. With the longer, more detailed dive training this past summer, students were able to enjoy challenging dive sites safely and confidently.

Each year the Program in Maritime History and Nautical Archaeology raises its standards through the dedication and innovations of its faculty. This year the program will officially add another field experience on the U.S.S. Brig *Niagara* as well as the summer field school, and with the latest edition of an Ethics in Nautical Archaeology course added to the curriculum the standards and professionalism of ECU Maritime students will be raised even higher. This coming year should prove to be a productive one.

In Brief

In the Fall of 1997, **Dr. Michael Palmer**, became the new interim director of graduate studies in Geography.

Dr. Timothy J. Runyan returned this year to assume the permanent Directorship of the Program in Maritime History and Nautical Archaeology. Students, faculty and staff welcome his return to the helm from Cleveland State University.

The 1998 summer field school will be held in St. Augustine, Florida, under the direction of **Dr. Brad Rodgers**. ECU will be working in conjunction with Southern Oceans Archaeological Research run by program graduate Billy Ray Morris.

Dr. Lawrence Babits will accompany a group of ECU students back to Maryland for additional field work.

Maritime Students Receive Recognition

Department of History scholarships for the 1997-98 academic year were awarded to: **Paul H. Avery** and **Kathy A.W. Southerly**, Lawrence F. Brewster Fellowship; **Robert H. Kelley** and **Deirdre E. O'Regan**, first and second year Admiral Ernest M. Eller Fellowships in Modern Naval History; and **M. Todd Robinson** won the Early American Graduate Scholarship in History.

Private benefactors fund these awards to uphold and encourage high standards of student research in the field of history. A committee from ECU's Department of History faculty chose this year's winners based on their academic performances and essays titled: "Why I Have Chosen to Study History."

IN SEARCH OF BERMUDA'S MARITIME PAST

1997 FALL FIELD SCHOOL

Since 1983, East Carolina University and the Bermuda Maritime Museum have worked in conjunction with one another to organize underwater archaeology field schools. As a result of this close cooperation, for over a decade, students from the Program in Maritime History and Nautical Archaeology at ECU have been coming to Bermuda to study underwater archaeology.

Field schools in the past have documented the remains of a variety of historically significant shipwrecks including the *New Old Spaniard* (circa 1625), the "Stonewall" site (circa 1685), an 18th century British collier, the *L'Herminie* a French frigate sunk in 1838, and the *Mary Celestia* and the *Nola*, two Confederate blockade runners sunk during the American Civil War. This research has provided new insights into the design and construction of such vessels, and added to the legacy of Bermuda's rich maritime heritage.

This year's class, under the direction of Dr. Gordon P. Watts, Jr., included graduate students Jeff Enright, Richard Fontenez, Ryan Harris, Suzanna Pavelle, Fil Ronca, Chris Southerly, and Jenna Watts. Fil Ronca also served as diving safety officer and Rob Westrick who took part in the 1996 field school, served as crew chief.

It has been said that Bermuda, in relation to its size has more shipwrecks than any other area in the Western Hemisphere, with the possible exception of the Florida Keys and Cape Hatteras, North Carolina. Although it is impossible to know for certain just how many ships have been wrecked on the island's reefs, estimates range as high as 500. Bermuda played an important role in early navigation. Ships would attempt to pass within sight of Bermuda as a final checkpoint on their return trip from the New World. Because of faulty navigation and storms, combined with the deadly reefs, some of which stretch out for ten miles, shipwrecks spanning

nearly five centuries can be found off the island's shores.

For this reason, Bermuda offers students the unique opportunity to visit a wide range of shipwreck sites with examples dating from the earliest exploration of the Western Hemisphere to the present day. This year's class went to a variety of sites, several of which have been investigated by field schools in the past including the *L'Herminie*, *Lartington*, H.M.S. *Vixen*, *North Carolina*, *Hunter Galley*, *Nola*, *Constellation* and *Blanch King*. In doing so, students were able to witness first-hand the chronology of ship construction methods and how these methods changed over time.

With work on the "Stonewall" site completed last field season, the 1997 field school set out to

locate previously undiscovered sites for future documentation. Students used towboards to visually search for sites. In addition to towboarding, a magnetometer, an electronic device that measures changes in the Earth's magnetic field was used. A differential GPS (Global Positioning System) was also employed to accurately pinpoint shipwreck sites once found. The system uses satellites to triangulate geographical position and is accurate to within one meter. Using these methods students were able to locate and return to several new sites including a previously undiscovered 19th century schooner, an 18th century wreck, and the remains of an 18th century sloop, possibly built in Charleston, South Carolina. Students made rough sketches of these sites and upon further research, the univer-



Bermuda Field Crew 1997: (Top Left) Suzanna Pavelle, Chris Southerly, Richard Fontenez, Jeff Enright, Ryan Harris, Jenna Watts, (Bottom Left) Rob Westrick, Gordon Watts - ECU faculty, Filippo Ronca - ECU Dive Safety Office. (Photo: Bermuda Maritime Museum)

Bermuda Field School

(Continued from page 3)

sity and museum will determine if these wrecks are important enough to warrant further investigation.

When not on the water, students were able to gain practice in the use of AutoCAD, a computer aided design program. Students digitized several shipwreck maps using AutoCAD, including the "Stonewall," and conducted historical research in the Bermuda Archives in Hamilton.

Overall, the 1997 field school was very successful with only a couple of minor equipment problems and a few bad weather days. Students were able to learn important underwater archaeological skills and gain a better understanding of Bermuda's maritime past.

As always, the field school ended all too soon, but plans are already underway for ECU's return next fall. The 1998 underwater archaeology field school may excavate and map two 18th century sites discovered this year, while continuing the search for an early 16th century shipwreck.

Rob Westrick

The American Academy of Underwater Sciences

The Diving Safety Office of East Carolina University is an institutional member of the American Academy of Underwater Sciences (AAUS). The AAUS is a non-profit organization that promotes safe and productive underwater technology.

This year's AAUS scientific dive symposium was held at Northeastern University in Boston. This annual symposium brings together safety officers and scientific divers of all disciplines, from archaeology to biology, from specialized diving techniques to diving safety. East Carolina University had a strong showing with a zero visibility workshop put on by the Diving Safety Office. The Program in Maritime History and Nautical Archaeology was represented by staff archaeologist Frank Cantelas, who presented a paper co-authored with Dr. Brad Rodgers entitled "Tools, Techniques and Zero-Visibility Archaeology." The paper outlined the program's unique training as applied to ECU's most challenging project to date, the *Maple Leaf*.

The 1998 AAUS Symposium will be held in

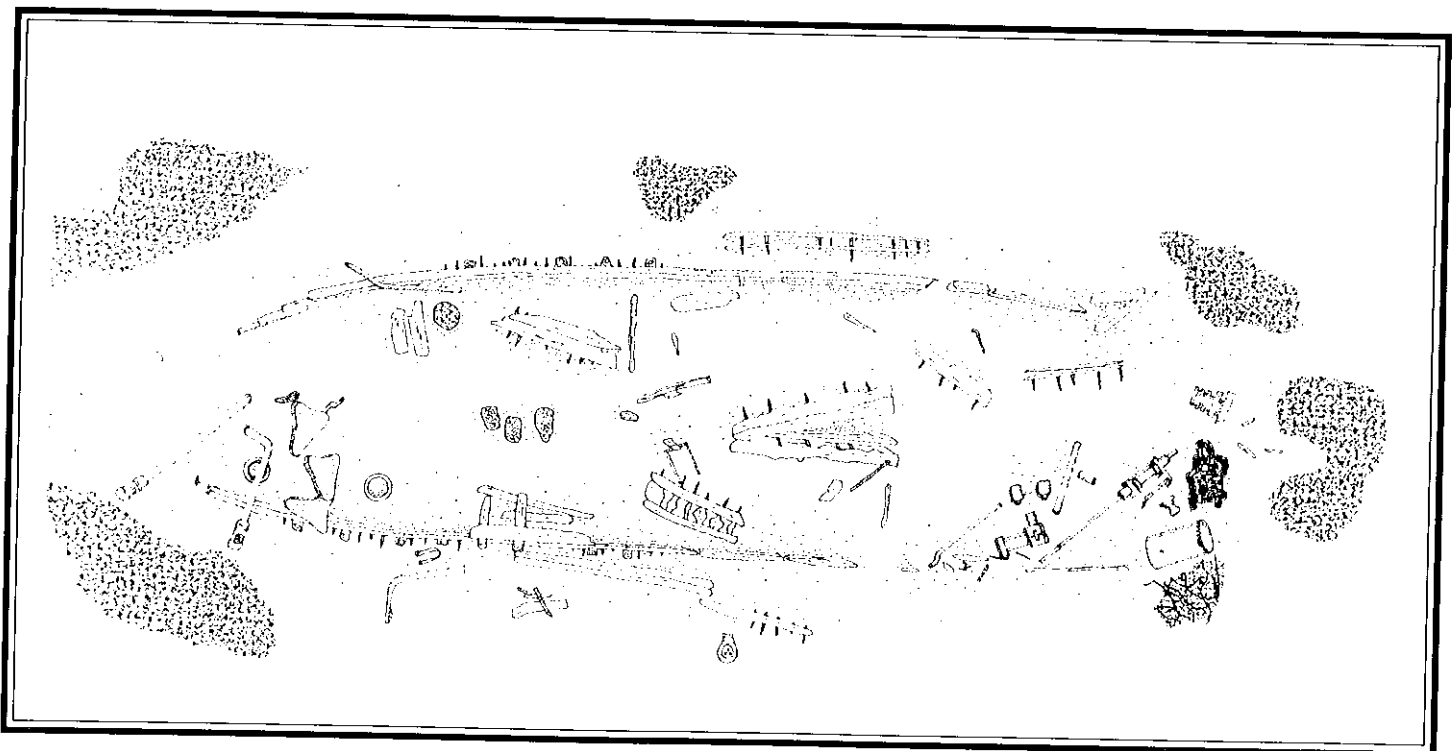
Vancouver, British Columbia, Canada, October 8-11. The call for papers has been issued.

Filippo Ronca



For more information on AAUS, subscriptions to their publication "The Slate" and general information, contact:

The American Academy of Underwater Sciences
430 Nahant Road
Nahant, MA 01908
(617) 599-7114
(617) 581-6076
E-MAIL: aaus@neu.edu



WHO'S AFRAID OF THE *QUEEN ANNE'S REVENGE*?

NORTH CAROLINA WRECK THOUGHT TO BE BLACKBEARD'S FLAGSHIP

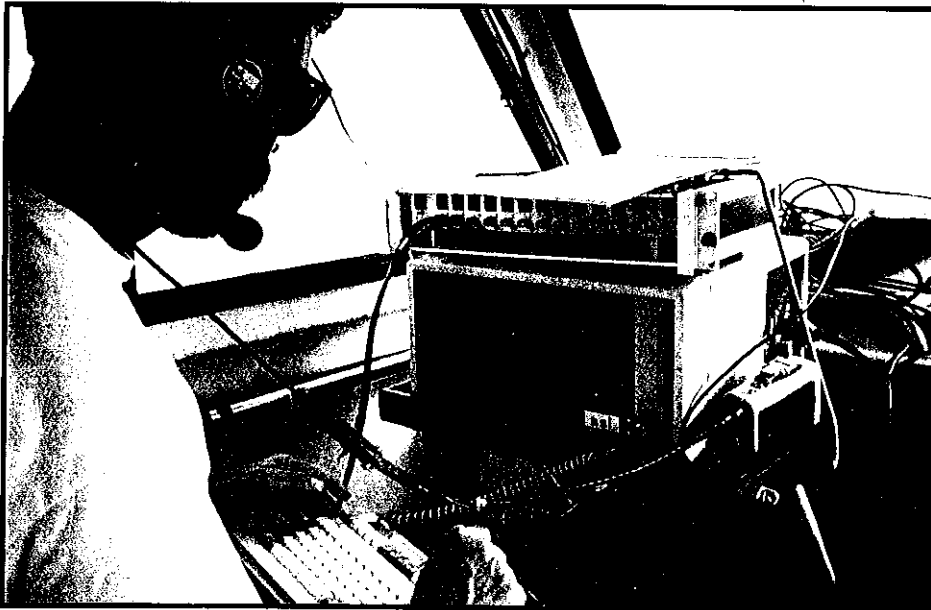
Most people have by now heard about site 0003BUI, believed to be the *Queen Anne's Revenge* (QAR). Captain Edward Teach, better known as the pirate Blackbeard, lost his flagship, the QAR, in Beaufort Inlet, North Carolina in the summer of 1718.

The North Carolina Underwater Archaeology Unit (UAU) carried out a four-week exploratory excavation of the site in October of 1997 to determine the nature and extent of the wreck. East Carolina's Program in Maritime History and Nautical Archaeology assisted in many areas of the excavation. The program's entire faculty and a number of graduate students have worked on the site.

More specifically, ECU was able to use a Sonic High Accuracy Ranging and Positioning System (SHARPS) to locate and map features of the wreck with great precision. Dr. Gordon P. Watts ran a magnetometer over the site to search for signs of other buried artifacts. Dr. Lawrence Babits helped to identify some of the



Program Director Dr. Timothy Runyan inspects a cannon from the alleged Queen Anne's Revenge. Maritime faculty, staff and students assisted in the cannon's excavation. (ECU News Bureau Photo by George Threewitts)



Staff Archaeologist Frank Cantelas enters data into the SHARPS system on the site of the Queen Anne's Revenge

material culture remains on the site, and Dr. Bradley Rodgers assisted in the removal and conservation of the cannon brought up at the end of the month long project. Additionally, graduate student Nathan Henry was hired by the UAU as a site conservator for the project.

The great amount of excitement and frenzy associated with this high profile project culminated with a conference on October 30th and 31st at the North Carolina Maritime Museum, where the UAU called for further investigation on the site. The scope of work for the coming field season is still undecided. As the only graduate program in nautical archaeology in this part of the country, East Carolina looks forward to contributing to the project in anyway we can. Keep your ears open for further QAR updates.

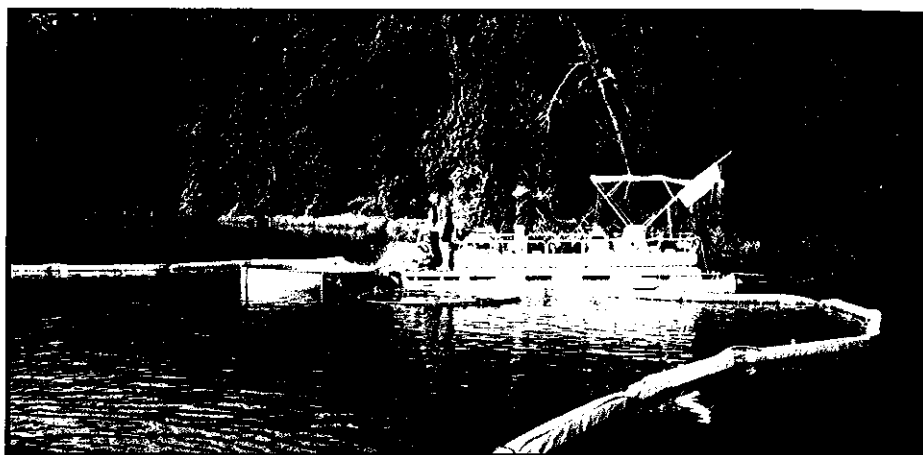
Catherine Fach

1997 SUMMER FIELD SCHOOL: ECU ASSISTS ON CHESAPEAKE FLOTILLA PROJECT

East Carolina University's 1997 Summer Field School took place in southern Maryland in the Patuxent River and its tributary St. Leonard's Creek from 30 June to 26 July. Dr. Larry Babits directed the field project with the assistance of student crew chiefs Rusty Earl and Deirdre O'Regan, and diving safety officers Steve Brodie and Fil Ronca. Participating students included Paul Avery, Jim Embrey, Jeff Enright, Cathy Fach, Caren Goldstein, Ryan Harris, Suzanna Pavelle and Chris Southerly. Volunteers from the Maritime History and Archaeological Society provided additional support. Donald Shomette, who conducted the initial survey and excavations of the Patuxent area in the late 1970s and 1980, directed the entire Chesapeake Flotilla Project, of which ECU's excavations were a part.

The plan was to concentrate on a Phase II excavation of two Jeffersonian Gunboats, #136 and #137 located in St. Leonard's Creek, in addition to ground truthing through probing and hydro-probing a variety of magnetometer and sidescan sonar targets in the upper Patuxent River and around the original St. Leonard's Town.

After the ordeal of getting the boats to Maryland, work started in Grover's Creek Cove where sidescan sonar placed the gunboats. Crew members probed the cove to locate the limits of the vessels, quickly identifying one boat but finding no evidence of the second. A general site outline was established by probing and key features including the stern post assembly and sections of the keelson were identified. A silt curtain was then placed around the site and two silt containment basins were anchored in place to catch the dredge spoils. A baseline was established along the axis of the vessel with three transects, forward, midship and stern, for reference. Predisturbance survey and mapping were done along the transects and baseline in preparation for dredging. During this survey and mapping, it became evident that the ves-



East Carolina Divers operating a dredge pump from the dive platform on the St. Leonard's Creek site. (photo: Don Shomette)

sel likely dated to a period later than the War of 1812.

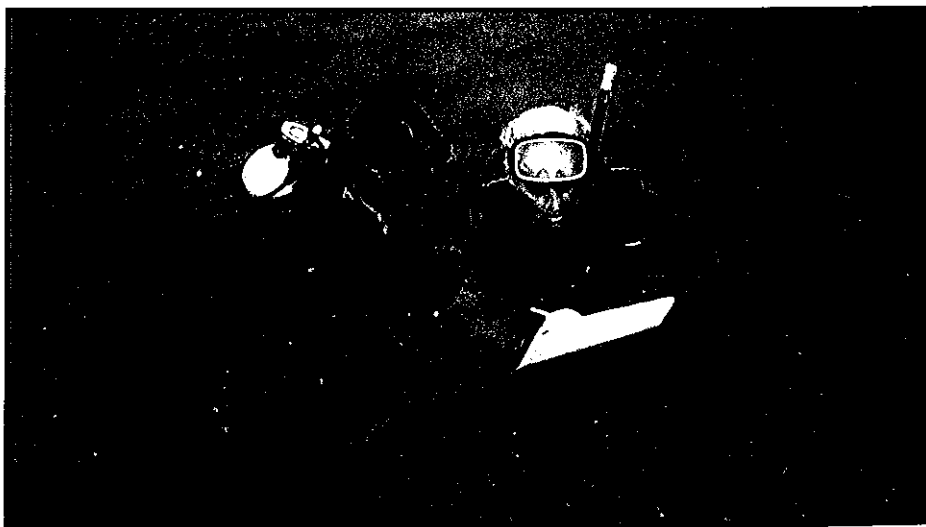
Dredging began along the midship transect, moving slowly because of debris and a clay bottom under the one to two feet of soft mud. Four frames along the port side and the associated planking were exposed and mapped. Subsequent dredging cleared the keelson from bow to stern, the stempost area and the interior and exterior of the stern area, allowing detailed mapping to be done.

Video and still photography was attempted on several occasions with poor results due to the limited visibility that varied from zero to eighteen inches depending on con-

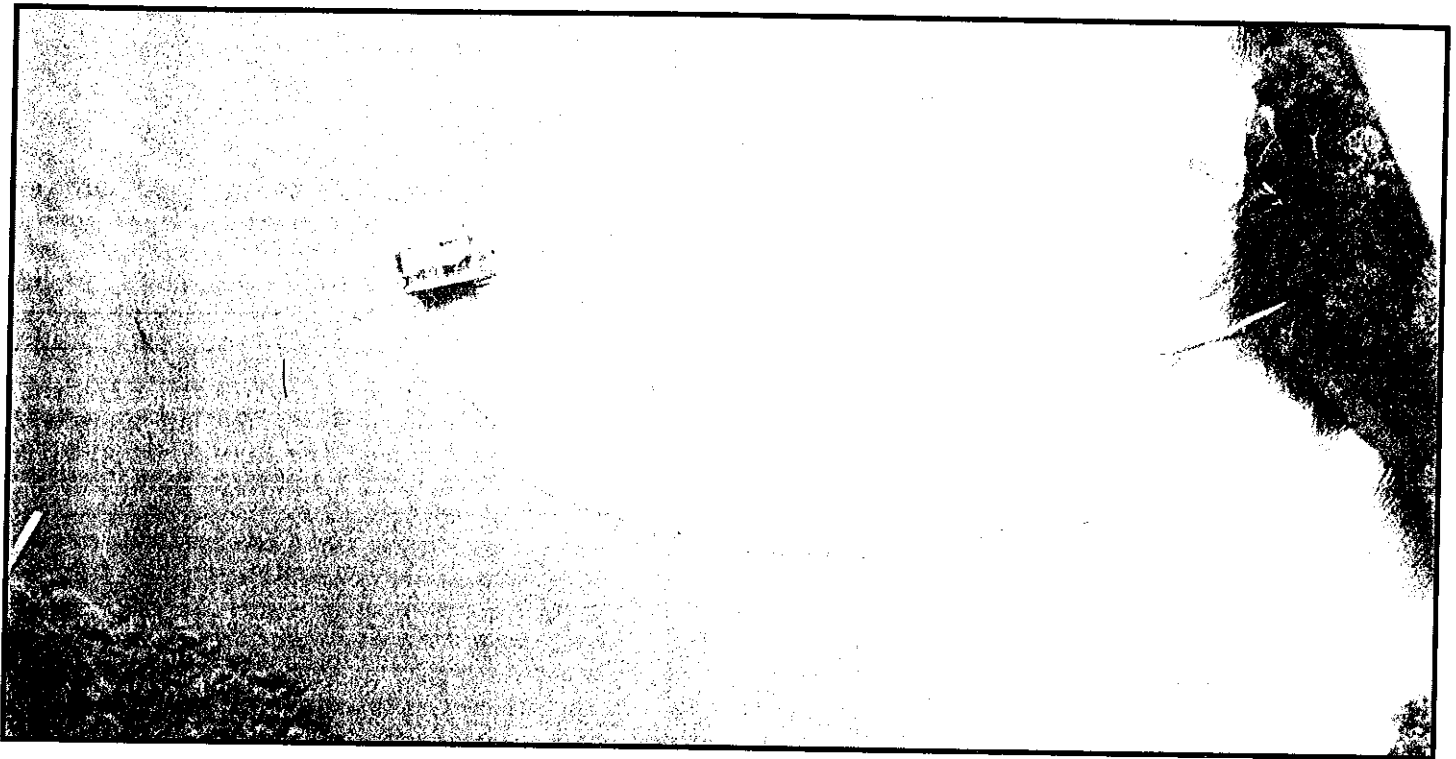
ditions. Polyvinyl sulfide casting was also attempted on three areas of the wreck.

The vessel had an estimated length of 60 feet and a beam of 20 feet. Material evidence such as wire rigging, ceramics, glass and other clues led to the conclusion that the vessel in question was likely a late nineteenth or early twentieth century Chesapeake Bay workboat. Dr. Babits concluded that it was probably a plank on frame, centerboard lugger.

While work was going on in Grover's Creek Cove, teams of two and three students were rotated to the upper Patuxent River where probing and hydro-probing was un-



Don Shomette and Deirdre O'Regan sketch their findings (photo: Larry Babits)



dertaken in an effort to relocate and identify the targets found in the initial Chesapeake Flotilla Survey done by Shomette. This met with little success due to the depth of the deposited material covering the targets.

The area around St. Leonard's Town, at the head of St. Leonard's Creek, was examined toward the end of the project and resulted in the best prospects for work in the future. Ship timbers, a section of rudder, and portions of a keel were found and measured drawings made. It is thought that one or more ships may be present along with a colonial wharf and a prehistoric shell midden. The site area is located in two to three feet of water and three to ten feet of bottom sediments.

Time away from the project was spent on the beach at Calvert Cliffs, touring the Calvert Marine Museum, sailing on St. Mary's City's reproduction of the seventeenth century *Dove*, taking in an Orioles game at Camden Yard, and mixing with the southern Maryland locals at "Boyle's The Tavern" where our teams won once and placed once in the local quiz bowl competition. One weekend was also spent helping Jim Embrey with his thesis research at historic St. Mary's City.

East Carolina University

*Aerial view of
St. Leonard's Creek
Site.*

*Silt barriers were placed around
the site to contain the debris
generated during dredging
operations.*

(Photo by Jamie Henderson)

again showed the quality of its scientific diver training and the professionalism of its staff and students in accomplishing a variety of tasks in a zero visibility environment. Also, there were stinging nettles too numerous to count, and 100° heat. ECU earned the appreciation and praise of Chesapeake Flotilla Project director Donald Shomette.

Chris Southerly



Ryan Harris and Jim Embrey remove artifacts for conservation (photo: Larry Babits)

Wisconsin Waters Hold Archaeological Treasures

This past summer the State Historical Society of Wisconsin, Underwater Archaeology Program (SHSW) completed an active schedule of field research. In August the program finished documenting the *Selah Chamberlain*, an early bulk freighter lost in Lake Michigan near Sheboygan. Work on the site began in 1995 as a cooperative effort between the SHSW and the volunteer group Wisconsin Underwater Archaeological Association (WUAA). The field project brought together program alumni David Cooper, Director of the SHSW Underwater Archaeology Program, John Jensen, Frank Cantelas, and graduate student Jeff Gray. The City of Sheboygan, local residents, businesses, and several WUAA members provided valuable assistance.

Today's giant steel bulk freighters, some measuring over a thousand feet in length, lend themselves to the economic transport of grain, iron ore, and coal. Their humble origins are peculiar to the Great Lakes and were linked to the Midwest's rapidly expanding economy during the nineteenth century. The transportation of bulk commodities spurred the development of cargo handling technology which evolved from shovels and

wheelbarrows, to Hulett unloaders, and self unloading ships. The design of freighter hulls consequently changed to take advantage of the new unloading technology as well as advances in naval architecture. These developmental stages are well represented by the shipwrecks in Wisconsin's waters.

Built as a steam barge for Captain Alva Bradley in 1873, the *Chamberlain's* wooden hull measured 212 feet long, 34 feet in beam with a 14.4 foot depth of hold. The ship's tandem compound engine turned a four-bladed iron propeller. After hauling iron ore and grain across the lakes for thirteen years, the *Chamberlain* collided with the *John Pridgeon* on a stormy October night in 1886. The *Chamberlain*, bound from Milwaukee to Escanaba, Michigan for a load of iron ore, cut her tow loose before sinking in eighty feet of water near Sheboygan. Attempts to raise the vessel failed.

Today, the wreck is splayed open on the bottom with the lower hull mostly buried and the sides protruding above the sand. The fantail stern split and fell away from the engine, exposing the entire power plant and drive train which survive in extraordinary condition. The major features include two boilers

which rest wooden floors reinforced with steel I-beams. The cast iron frame of the tandem engine rises twenty-five feet above the bottom, displaying many decorative elements not found on later engines. This two-cylinder engine is a fine example of improving steam technology during the late nineteenth century. The horn timber and rudder still stand to mark the vessel's stern.

The *Chamberlain* survey is part of a continuing ten-year state wide inventory of submerged cultural resources which includes ships, port facilities, and timber industry related sites. The benefits of the inventory are now being realized in public education and outreach programs including publications, lectures, diver's guides, and the Ice Water Mansions WEB site (www.seagrant.wisc.edu/Communications/Shipwrecks/shipwrecks.html). Data collected on the *Chamberlain* over the past three summers are being used to prepare a National Historic Register nomination and the site will be incorporated in a future underwater preserve system.

Frank Cantelas

Get Online with the new MARITIME Listserv

Anyone affiliated with or interested in ECU's Program in Maritime History and Nautical Archaeology now has a new way of keeping in touch with the Program and with its activities. MARITIME is an unmoderated listserv for students, faculty, staff, alumni, prospective students, and others interested in the Program. The content of the list includes announcements and information for students; relevant job listings; new print, personal and electronic resources that students might find valuable; information of Program alumni; and discussion of issues relevant to students and others interested in the Program. Within 12 hours of announcement of the list it had nearly 50 subscribers in at least 10 countries.

MARITIME particularly seeks input from Program alumni and others who can provide comments and discussion for students currently enrolled in the Program. The listserv is managed by Peter McCracken, a current student in Maritime History and a Reference Librarian at ECU's Joyner Library. Anyone can join MARITIME by sending a message that reads "SUB MARITIME Edward Teach" (but use your name, not Blackbeard's) to LISTSERV@ECUVM.CIS.ECU.EDU. You'll receive a confirmation message, and after replying to that, you'll be a member of the list. See you online!

ST. MARY'S SHORELINE IDENTIFICATION

St. Mary's City, Maryland was settled in 1634 as Maryland's first capital, but it was abandoned about 1715 after all government functions were moved to other locations. Principal movement in and out of the city during its existence was by ships, but historians know little about the maritime archaeological record because the original shoreline is unknown. We attempted to identify this shoreline to its maximum extent. The project had the full support and cooperation of Historic St. Mary's City and the Maryland State Underwater Archaeology Program.

My sincere thanks go to the students and staff of the 1997 ECU Summer Field School who gave up one of their precious weekends to assist in this project of identifying the shoreline of Historic St. Mary's City. My thanks also go to the members of the Southern Maryland Chapter of MAHS, the students and staff of the St. Mary's College Archaeological Field School, Bill Faxon and numerous other friends and associates for their help.

During the mid-July weekend, field school members conducted a magnetometer survey. Divers investigated each magnetometer target identified in the survey. The



ECU students and volunteers help Jim Embrey survey the 17th century shoreline of St. Mary's City, Maryland

archaeological team also conducted investigations of a 19th century schooner, an unidentified small craft, and the remains of a 19th century dock. The group also conducted a hydrographic survey of the one mile shoreline.

The magnetometer survey produced fifteen hits; all but two

proved to be modern debris and the two unknowns were buried too deep to be identified. The reinvestigation of the 19th century schooner was a follow-up of a 1981 survey to determine the amount of damage suffered from current changes. The small craft, buried at the shoreline, was uncovered and recorded. The dock remains, which amounted to piling remains, were located and recorded.

The hydrographic survey from the present shoreline to 120 feet offshore, employed a technique developed and used by the Navy SEALs. It produced the data for a one mile hydrographic map in approximately four hours. This was the first time this type of survey was used in an ECU thesis project. Special thanks to my sons, Bill who directed the hydrographic survey, and Mark who assisted him.

Although the information collected has already provided some pertinent findings, additional data must be collected before any conclusions can be reached concerning the shoreline's location.

Jim Embrey

Graduate Theses In Maritime History

In 1997 Students in the Program in Maritime History and Nautical Archaeology completed the following theses.

Wade G. Dudley "That Splintered Wall: The British Blockade of the United States, 1812-1815."

Salvatore Mercogliano "Targets of Assassins: The American Merchant Marine during the Vietnam War 1964-1975."

Christopher Olson "An Historical and Archaeological Investigation of the Steamboat Curlew."

Joshua Smith "Sentinels of the Republic: Customs Collectors in the District of Maine 1789-1820."

News from the Diving Safety Office

The Diving Safety Office at East Carolina University oversees training certification and safety of compressed gas diving, for both educational and scientific purposes. The services of the office are provided by Diving Safety Officer Steven Sellers, Assistant Diving Safety Officer Steve Brodie, and graduate assistant Filippo Ronca.

This past year has been the DSO's busiest to date, with projects in the fields of nautical archaeology, geology and biology. The early part of the season was devoted to scientific dive training. The DSO participated in projects with Dr. Stanley Riggs of geology, a NURC project, and the Blackbeard Shipwreck Project, in addition to the ECU summer nautical archaeology field school in Maryland with Dr. Larry Babits, as well as the fall nautical archaeology field school with Dr. Gordon Watts in Bermuda.

In November, members of the Diving Safety Office attended the 17th annual American Academy of Underwater Sciences scientific diver symposium at Northeastern University in Boston. With the help of ECU staff archaeologist Frank Cantelas and fellow diving safety officers Rick Gomez (Miami) and Mike Phillips (UCLA), the Office offered a zero-visibility workshop for the diving safety officers attending the conference. The workshop

was very well received, with 30 diving safety officers going through this unique training.

In additional news, the Diving Safety Office will be offering T-shirts for sale. The shirts will display the office logo, designed by assistant DSO Steve Brodie. Those interested, please contact the office

at (919) 328-4041.

For more information on the diving safety program, or for a schedule of the upcoming training, visit our web site at:

<http://ecuvax.cis.ecu.edu/academics/schdept/diving/diving.htm>

Filippo Ronca



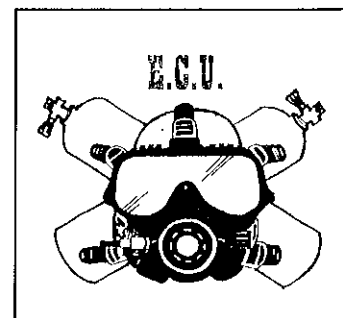
Divers do their safety hang under the dive boat after a deep dive off the coast of North Carolina. Deep diving is one of the modules that is offered for scientific dive training. (photo: Diving Safety Office)

ECU SCIENTIFIC DIVER TRAINING

Zero Visibility! Deep Diving! Nitox! Drysuit Training! No, this isn't training for the Navy SEALs, it is just a sampling of the modules East Carolina University maritime students are trained in during the Scientific Diver course. This annual course is offered by the Diving Safety Office at ECU, taught by Steve Sellers, Steve Brodie, Filippo Ronca, and ECU staff archaeologist Frank Cantelas.

The purpose of this course is to provide scientific and educational training, both in the classroom and in open water. It is gauged towards increasing the divers' composure, efficiency and safety, while simultaneously emphasizing nautical archaeology techniques and skills. This year's course was expanded to a one month modular format in order to provide more in-depth training. The participants primarily included students from the East Carolina University Maritime History and Nautical Archaeology Program: Jeff Enright, Ryan Harris, Chris Southerly, Cathy Fach, Rod Linder, Suzanna Pavelle, Kathy Southerly and Paul Avery. Highlights included the zero-visibility training, which is unique to this program. This module basically consists of an underwater obstacle course with a few "surprises" thrown in. Additional highlights included the regulator stress course; deep diving off the coast of North Carolina; and encounters with sand tiger sharks and a German U-boat!

It was our most successful diver training to date: the students enjoyed themselves, became safer divers, and had the opportunity to hone their archaeological skills prior to going out in the field.



THE INVESTIGATION OF THE VINYARD SHIPBUILDING COMPANY

The ECU staff and students recruited to document the maritime trappings of the Vinyard Shipbuilding Company in Milford, Delaware, discovered many differences from what one considers a traditional maritime archaeological site. Trash from the inland waterways appears to magically collect along the shorelines of the property. In most cases, the water visibility bordering a shipyard ranks just above total blackout conditions. The surrounding area comprises marshy land or urban development, not the best environment to work in. Project Director, Scott Emory, ECU maritime archaeologist, Larry Babits, Dive Safety Officer, Steve Sellers, and students, Rusty Earl, Kelly Bumpass, and Sarah Waters spent April 23 - 27 documenting the various remains of the shipyard's waterfront and associated equipment. All of the volunteer personnel received the opportunity to don drysuits and explore the murky depths of the waterfront.

Despite the urban setting of the shipyard, located in downtown Milford on the tidal Mispillion River, the site provided a surprisingly congenial setting. Water visibility varied from 2 to 3 feet depending on tide levels and the availability of sunlight. A thin layer of silt, averaging about one inch, covered the gravel river bottom, and unless disturbed, did not affect the divers' ability to record submerged resources. A gentle sloping shoreline inside

the main boathouse and along the western half of the property provided easy entry and exit from the river. The water temperature averaged between 55 to 57 degrees, temperatures that a drysuit and hot beverages could handle.

A wide variety of shipyard features and structures were identified. The east end of the property exhibited a 100-foot wharf composed of wood pilings with an overhead concrete cap. Underwater exploration revealed wooden revetments, thin wooden boards, driven into the river bed between the pilings. The revetments rested against a long timber anchored to the pilings, preventing the fill, composed of concrete rubble, rocks, tree branches,

and other debris, from spilling into the river. A rough plank, about 4 to 5 inches in thickness, sat on top of the pilings and revetments. A thick rebar-reinforced concrete cap 4 feet thick by 7 inches wide, topped off the wharf. The concrete cap provided a greater amount of weight than the force of the fill pushing against the revetments, effectively holding the whole wharf in place.

Three marine railways were located in the main boathouse. Two of the railways, one in a wooden bay and one in a metal bay, utilizing two different types of support for the rail lines at their drop-off point in the river. The far eastern rail in a wooden truss bay remained unsupported at its end point in the water, using two pilings approximately 6 feet from the rail end to hold the line in place. The far western rail in a metal girder bay used a pair of crossbars anchored to a large

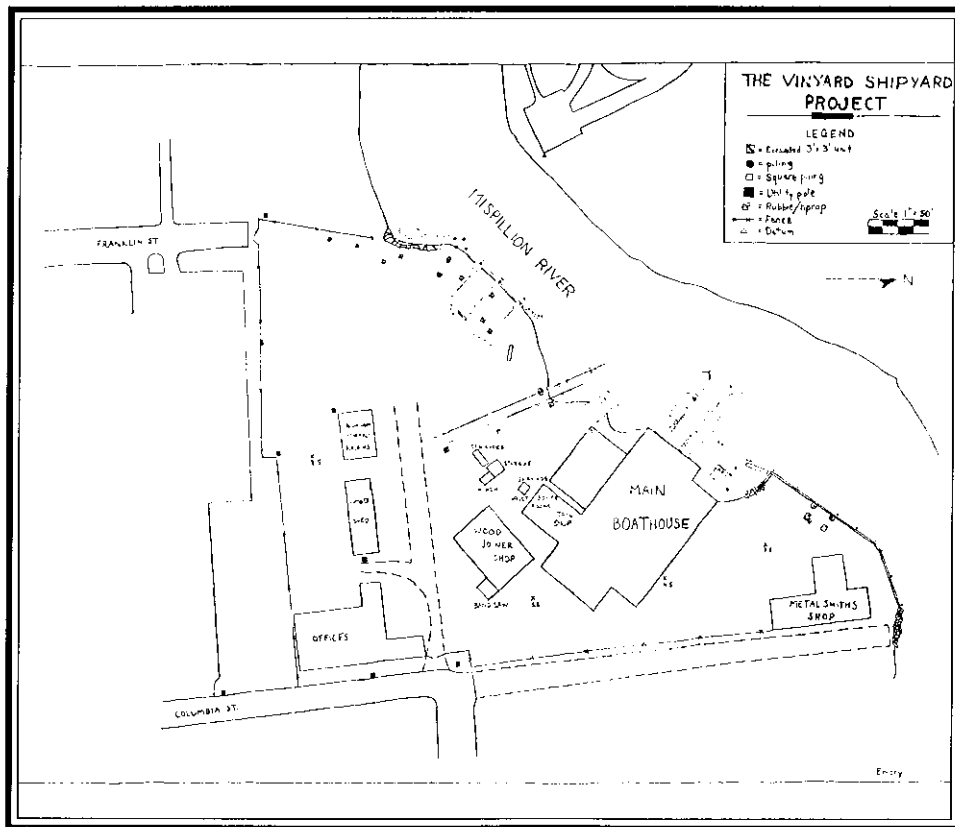
timber on top of two pilings at the rail's end. In addition, the western rail line stopped the dollies, small rail cars used in cradling the vessel in drydock, by means of two welded chocks at the end of the rail. The eastern line did not exhibit chocks on the rail line.

The western half of the property contained a selection of targets as well. An older exposed marine railway, once sheltered under a wooden boathouse, received a thorough inspection, but disappeared into the

river bed before the end could be found. Divers inspected and documented a modern wooden side-launch way constructed over an older wooden wharf. The wooden wharf structurally resembled that found at the eastern end of the property, providing a time reference point for the dates of the two specific construction episodes in the yard's history. The far western edge of the property also exhibited a continuous line of the wooden wharf structure, with revetments and pilings exposed above the river bed.

The Vinyard Shipbuilding Company, established in 1896, followed a career as varied as the

Continued on page 19

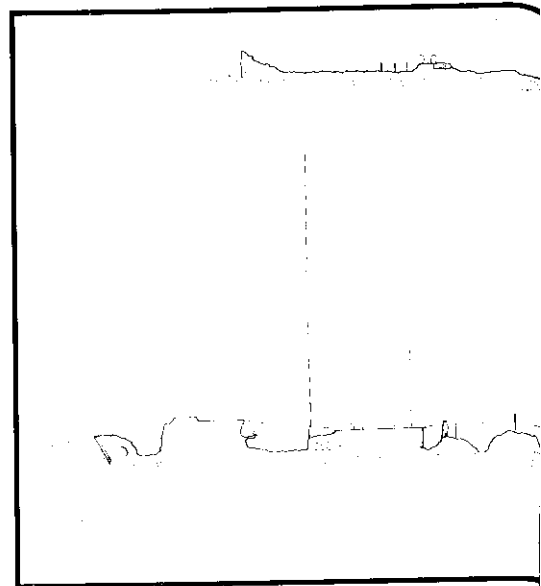


Archaeological Investigation of the *S.S. Kyzikos* and the *S.S. Paraguay*

Through the howling wind and inky black night valiant seamen struggled for their very lives. The international crew left Baltimore early that day and despite the storm warnings Captain Kantanos decided to race the storm for Cape Hatteras where he would turn due East and head for Spain. But the Captain misjudged the speed and intensity of the storm and instead of sailing in calm waters toward his home port in the Mediterranean he was now desperately trying to keep his ship afloat.

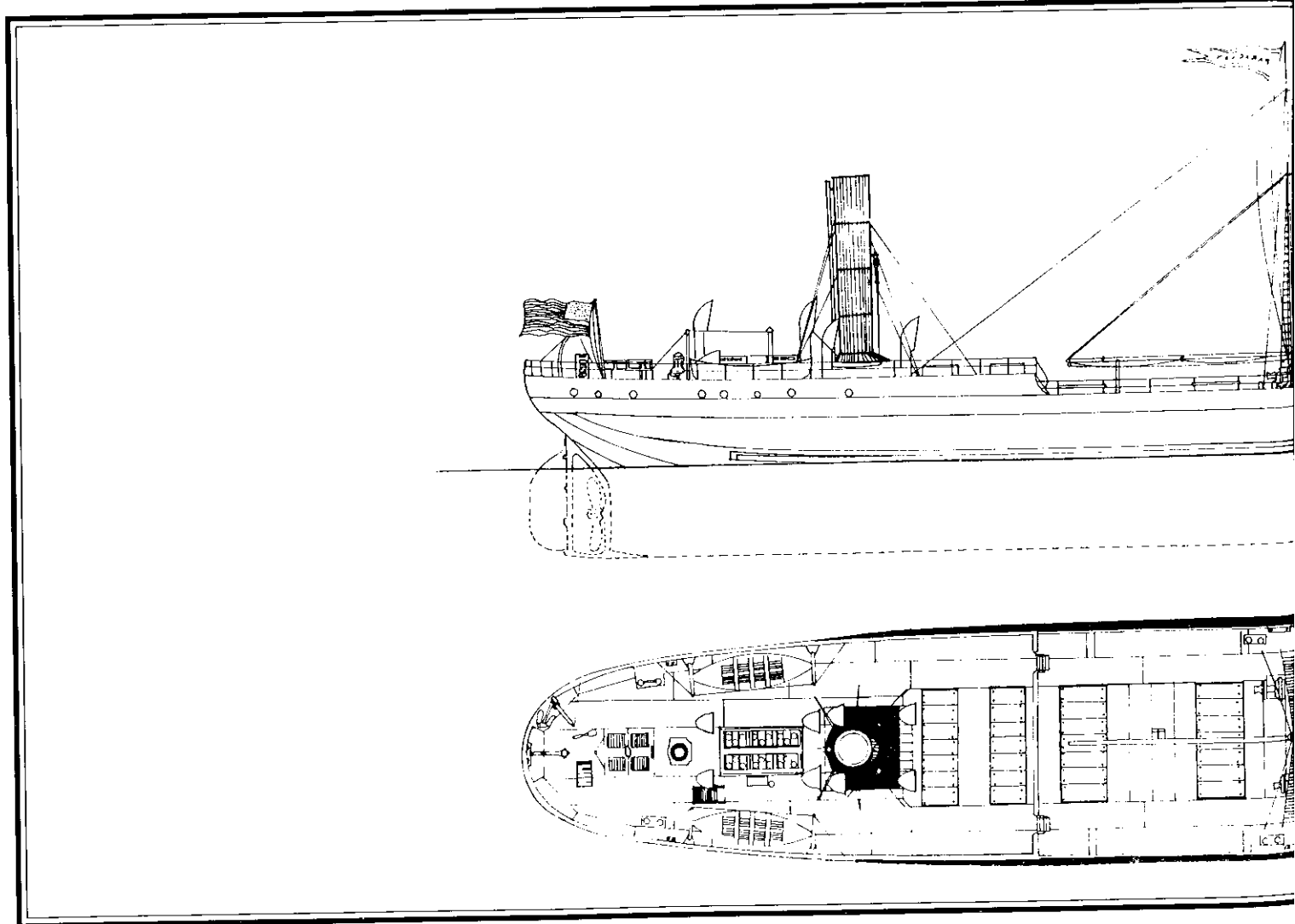
The *Kyzikos* began its service career as a Great Lakes ore

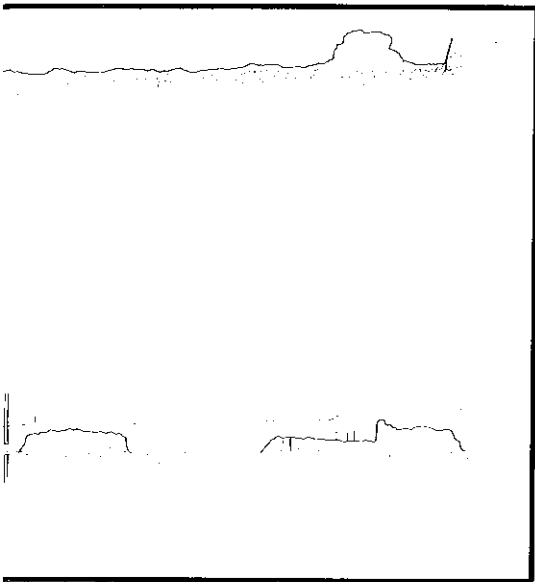
carrier in 1900 as the *Paraguay*. Due to a decline in freight rates the ship's owner, A.B. Wolvin, sold it to Sun Oil Company in 1901. Sun Oil converted the ship into its first oil tanker. Between 1902 and 1924 the ship served the company hauling oil from Texas to Pennsylvania and even went across the Atlantic twice. After World War I oil tankers increased in capacity and number, outclassing those of the *Paraguay*'s dimensions. In 1927 Sun Oil Company sold the ship to Costi Xydia and Sons and renamed it *Kyzikos*. It was on her maiden voyage under new registry



Above: Profile view of the *Kyzikos* wrecksite. Original drawing by Wendy M. Coble from field notes, 1988. Starboard, upper is port sides so on the upper drawing.

Below: Plan and profile views of the *S.S. Paraguay*. American Shipbuilding Company original plans.





ashed lines indicate the ship's original features. notes by Christopher Olson. Lower drawing is ing port bow is to the right.

n 1900. Original drawing by Wendy M. Coble from

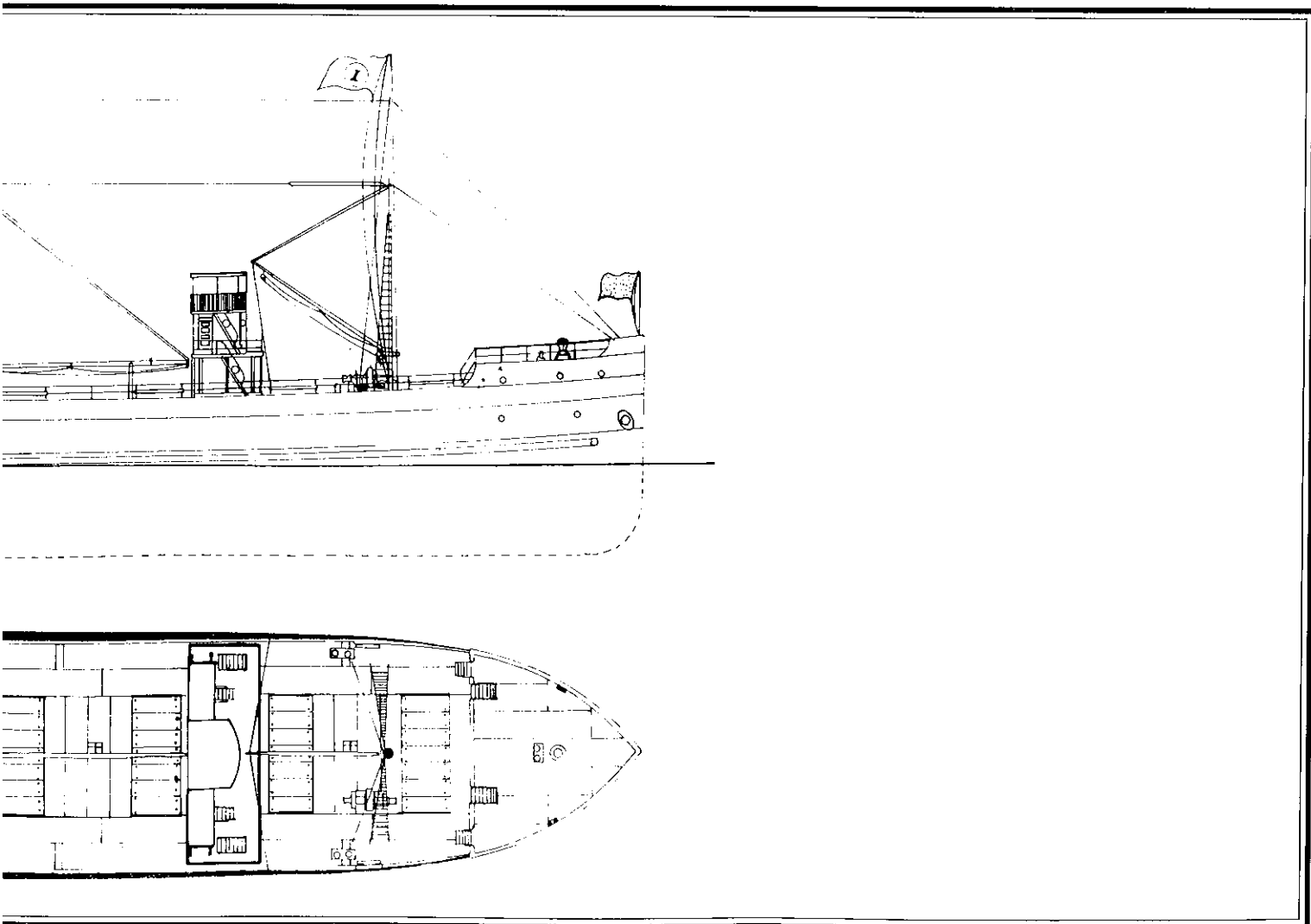
that Captain Kantanos encountered the storm. This was the last voyage for the *Kyzikos*.

Early in the evening a distress call came in and Coast Guard officials charted a position for the foundering vessel. Several ships went out to find the *Kyzikos*. No one could find the ship and no further radio messages were received. Shortly after daybreak December 4, 1927, Coast Guard surfman Jep Harris saw the form of a grounded ship through the stinging spray of the still intense storm. He signaled the freezing men clinging to the mast that help was on its way and then rushed back to his station to alert the crew.

The men from four lifesaving stations joined in the rescue. Although the ship grounded closest to Kill Devil Hills the men from Kitty Hawk and Nags Head stations and off duty surfmen from Caffey's Inlet also aided in the rescue. They attempted to launch a lifeboat but

the surf was too wild. Rescuers finally succeeded in shooting a line to the men and rescuing them one by one by means of a breeches buoy. Through these heroic efforts none of the crew was lost. Once on dry land, warmed and fed the crew told the harrowing story of their wild night in the Graveyard of the Atlantic.

Shortly after sending the distress call huge waves washed the wireless overboard along with the lifeboats and four crewmen. In short order the ship lost its steering leaving it at the mercy of the storm. Sometime in the early morning of December 4 the vessel grounded with the stern pointing toward shore. The impact of the grounding, coupled with the lashing of the waves broke the back of the tanker and the bow began to swing around and alongside the stern. Desperate men in the stern thought their signals had been answered when out of the dark lights began to appear. As the lights



PARAGUAY & KYZIKOS

(Continued from page 13)

grew closer they soon realized that the lights belonged to their own crewmen on the stern of their own ship. Crewmen on the bow quickly scrambled for a gangplank and moved the men from the stern to the more substantial section of the bow which was floating free and heading for shore. When the bow grounded the men headed for the highest point, the mast, and continued to signal hoping to alert someone of their predicament. They were fortunate to attract the attention of surfman Harris who brought expert aid and saved their lives.

Surprisingly the ship broke between the engine room and the first oil tanks so no oil was lost. Salvors recovered the entire cargo after the storm subsided. Two years later the stricken tanker served as a target for U.S. Army Air Force bombers in aerial bombing exercises. A few months after the bombing another freighter, a Swedish ship

named the *Carl Gerhard*, ran aground alongside the *Kyzikos*. This ship and its cargo of gypsum were abandoned and the site became known as the Triangle Wrecks.

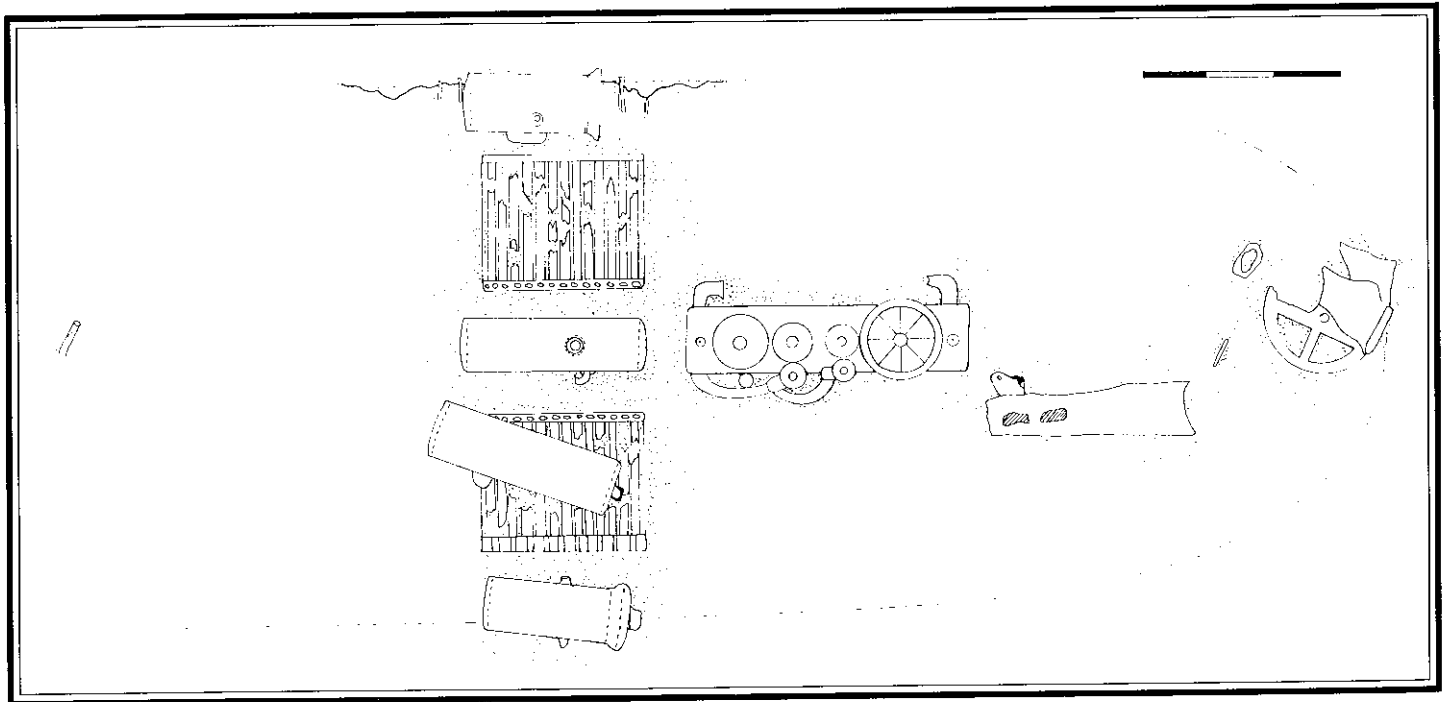
Over the years the Triangle Wrecks became a local landmark and with the invention of SCUBA a favorite location for sports divers. The site lies 250-300 yards offshore at mile marker 7 in Kill Devil Hills. The runway at the Wright brothers memorial is oriented directly toward the site and aerial sightseeing biplanes use the wrecks as the beginning of their tour.

In 1996 a team of divers including East Carolina graduate students Christopher Olson, Jinky Smalley-Gardner, Wendy Coble and North Carolina State Underwater Archaeologists Richard Lawrence, Leslie Bright and Julep Gilman-Bryant surveyed and mapped the site. The site consists of three parts: The stern of the *Kyzikos*, the entire hulk of the *Carl Gerhard* and the bow of the *Kyzikos*, forming the three legs of a triangle. The bow of the *Kyzikos* and *Carl Gerhard* lie in the surf zone at a depth of about 15 feet. The stern section lies in 20 feet of water. Nothing remains above water to mark the site although at low tide the surface is within inches

of the top of the stern section. Most easily discernible in the stern section of the *Kyzikos* is the huge quadruple expansion engine. This feature is covered with biotic life which attracts many fishermen. Also visible are the two Babcock and Wilcox Alert boilers, though their component parts have become disarticulated over time. Sand continuously covers and uncovers this site depending on the season and the intensity of storms, therefore the wreck's appearance constantly changes.

The information gathered by the team in addition to historical research will be combined as an onshore exhibit near the wrecksite. Reportedly, this site is one of the most frequently visited SCUBA-diving locations in North Carolina's Outer Banks because of its shallow depths and ease of accessibility. The exhibit is designed to educate both the divers and non diving visitors to the shore about the history of the ships, the wreck and the heroic rescue. It is only by reaching the public that we can ever hope to protect sites like this and others yet to be studied.

Wendy M. Coble



Stern section of the S.S. Kyzikos, plan view. Visible features include the quadruple expansion engine and the two Alert boilers. The boiler steam drums are disarticulated. Dotted line shows the suspected outline of the vessel. Original drawing by Richard Lawrence and Leslie Bright from field notes.

LONG TIME FACULTY MEMBER GORDON WATTS RECEIVES PH.D. FROM ST. ANDREWS UNIVERSITY

ECU faculty member Gordon P. Watts Jr. recently earned his Ph.D in Maritime History at St. Andrews University in Scotland. Dr. Watts dissertation entitled *Phantoms of Anglo-Confederate Commerce: A Historical and Archaeological Investigation of American Civil War Blockade Running*, was completed earlier this year.

In 1981, Dr. Watts joined Dr. William N. Still at East Carolina University to develop the Program in Maritime History and Underwater Research. The program designed by Watts and Still was established to provide graduate opportunities for students interested in maritime history and underwater archaeology. The program was designed to include both academic and field research. Traditional and maritime histories support the program to provide a context for underwater archaeology.

Since 1981, Dr. Watts has supervised and directed numerous grant and university-supported field research projects. Those investigations include remote sensing and archaeological investigations of Colonial ports in North Carolina, early ferry crossings in both North and South Carolina, and shipwrecks sites in North Carolina, South Carolina, Virginia, Georgia, Pennsylvania, Florida, Alabama, Wisconsin, Michigan, Minnesota and Virginia. Since 1981, Dr. Watts has worked with the Bermuda Maritime Museum to investigate a number of 16th-19th century shipwrecks.

In conjunction with other agencies and organizations Dr. Watts's research has included work on the USS *Monitor* in conjunction with the National Oceanic and Atmospheric Administration, the development of a planning document for the War of 1812 schooners *Hamilton* and *Scourge* in conjunction with the Ontario Heritage Foundation and investigation of the CSS *Alabama* with the Association CSS *Alabama* in France.

In addition to his work at East Carolina University, Dr. Watts is the director of Tidewater Atlantic Research. Tidewater Atlantic Research was formed by Dr. Watts in July, 1979 to provide historical and archaeological research and cultural resource management services to state and federal agencies, institutions, corporations and organizations requiring specialized skills. Under Dr. Watts direction Tidewater Atlantic Research has carried out high quality survey and assessment operations for a variety of local, state and federal agencies and numerous other firms, museums and institutions.

Dr. Watts is also the director of the Institute for International Maritime Research. The Institute was formed in 1993 to conduct and sponsor maritime, historical and underwater research. The non-profit organization promotes the teaching of marine and archaeological skills to students and avocational divers and promotes the dissemination of both professional and public information pertaining to maritime research. Research activities of the Institute include supporting student thesis research in North Carolina on the remains of Shell Castle, an 18th and 19th century trading

station in the Pamlico Sound, an on-going search for one of the Spanish shipwrecks of the 1750 Plate Fleet, investigation of the remains of the Civil War shipwreck USS *Peterhoff* and a remote sensing survey of the remains of an 18th century shipwreck tentatively identified as Blackbeard's *Queen Anne's Revenge*.

Prior to joining the staff at East Carolina University, Dr. Watts worked for the Underwater Archaeology Branch of the North Carolina Division of Archives and History from 1972 to 1981, and was head of the branch from 1978 to 1981. Dr. Watts earned his B.A. in History in 1968 and his M.A. in History from in 1975, both from East Carolina University.



Gordon Watts directing the Bermuda fall field school (photo: Nan Godet)

New Web Site Address!

For more information about the Maritime History and Nautical Archaeology Program visit our web site at: <http://ecuwww.ecu.edu/maritime>

THE *PETERHOFF* PROJECT YIELDS VALUABLE INFORMATION FROM HISTORIC CIVIL WAR SHIPWRECK

In 1985 The National Park Service of the U. S. Department of the Interior established the Cape Fear River Shipwreck District designating twenty-one shipwrecks in the Cape Fear River area as historically significant Civil War shipwrecks. One of the vessels included on this list is the U.S.S. *Peterhoff*. The steamer represents one of the few surviving examples of a Confederate blockade runner converted into a Federal blockader. In 1975, the *Peterhoff* became the first shipwreck to be placed on the National Register of Historic Places. Although the *Peterhoff* holds that distinction, no site report had ever been done on the wreck.

The North Carolina Underwater Archaeology Unit's recommendation regarding the U.S.S. *Peterhoff* (site #0002NEI) advised that "future consideration for documentation of the site should at least involve a detailed mapping of the exposed features and limited testing to recover a representative sample of artifacts for study and display and to determine if additional ordnance is present."

The *Peterhoff* remained forgotten for nearly a century until 1962 when Charles Foard, a local historian from Wilmington,

became interested in finding the vessel. After much research and careful calculation, Foard contacted Hall Watters, a professional pilot and diver. The two men flew over the suspected position of the wreck and observed the discolored water characteristic around shipwrecks, but they were not able to fix a position until June 1963 after several additional flights. Mr. Watters and his brother then made an exploratory dive on the wreck, but were chased away by the "numerous sharks in the area."

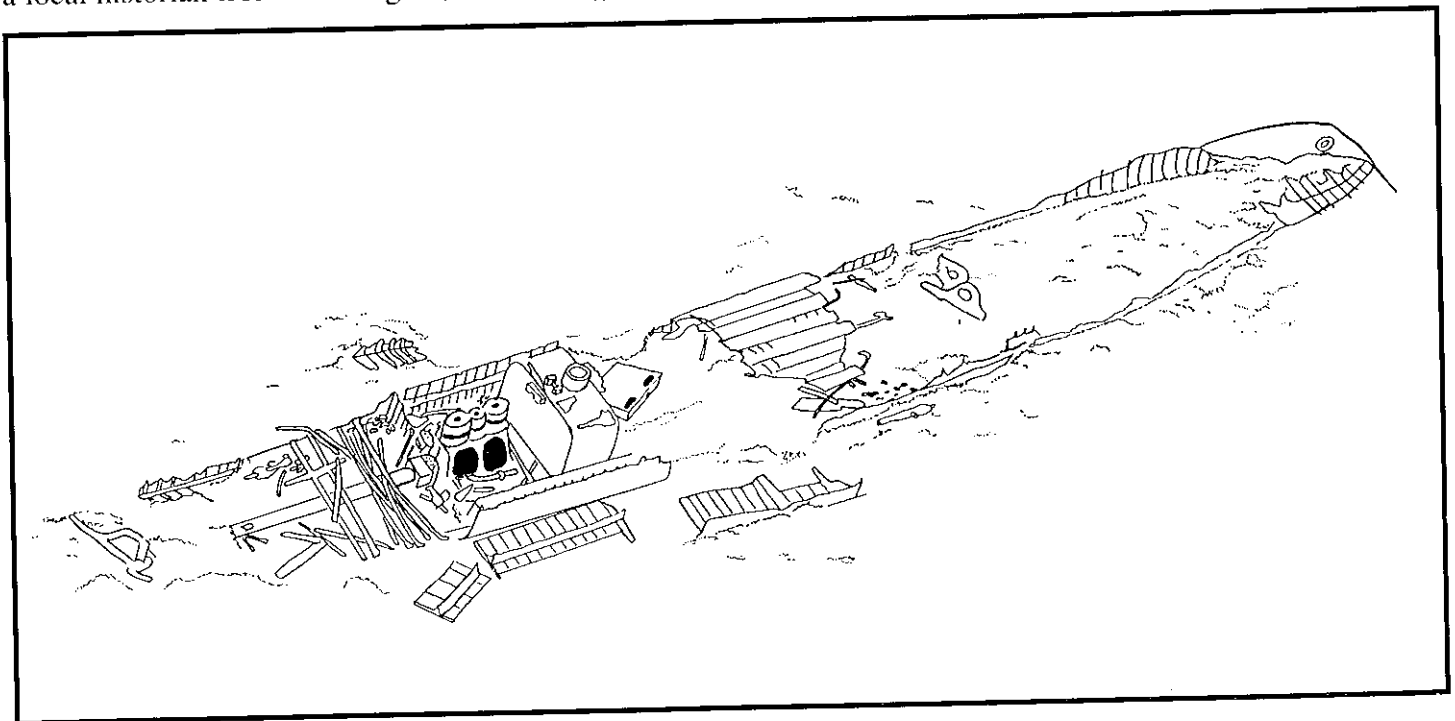
In 1964, the North Carolina Department of Archives and History became interested in the *Peterhoff*. At the request of Governor Terry Sanford, the state sent out a call to the chief of naval operations for cooperation of the Navy. The request was granted, and the U.S.S. *Petrel*, a submarine rescue vessel based in Charleston, South Carolina was dispatched to Wilmington to assist salvage operations. U.S. Navy divers subsequently recovered three of the 32-pound smoothbore cannon as well as a manufacturer's name plate from the ship's boiler, making almost positive the identification of the wreck as the *Peterhoff*.

During the summer of 1974 additional work was done on the *Peterhoff* by the University of North

Carolina at Wilmington through its Marine and Historic Site Archaeological Field School. The 30-pound Parrot rifle and parts of the carriage of the brass howitzer were recovered for protection and preservation. The cannon is currently on display on the grounds of UNCW. An additional find of note was the discovery of the base of an ironstone bowl with the inscription "Peterhoff" still clearly visible.

Because of the depth and relatively obscure location of the site, the *Peterhoff*'s remains exist in an excellent state of preservation. Thus, numerous technological details of the vessel's construction which cannot be found in the existing historical records are preserved on the site. The wreck represents one of the few alleged blockade runners converted for blockade duty available for examination. Since the vessel sank so quickly and no significant salvage was accomplished due to the depth of the water, the potential for data recovery were considered excellent.

On April 25, 1997, graduate students from East Carolina's Program in Maritime History & Nautical Archaeology under the direction of Gordon P. Watts, Jr. and members of the North Carolina Underwater Archaeology Unit made sev-



USS *Peterhoff*

eral preliminary dives on the *Peterhoff* in order to assess the site's current condition. Following these dives, a set of objectives and goals were determined for a project to take place in August.

The archaeological field investigation of the *Peterhoff* took place August 18-23, 1997. Gordon Watts, Rob Westrick, Robert Church, Steve Brodie and Frank Cantelas represented East Carolina University. The project was further assisted by members of the State of North Carolina's Underwater Archaeology Unit, including Richard Lawrence, Jim Dugan and Julep Gillman-Bryan.

During the project, investigators obtained sufficient information to generate a site plan, a perspective view drawing and a cross section profile of the wreck. Detailed measurements and drawings of the *Peterhoff's* engine, boiler and steam machinery were also made. Other significant features including the steam-operated anchor windlass which was revolutionary for the period, were documented. The investigation also obtained valuable data into the ship's construction and current condition of the site.

At the present time the vessel is heavily encrusted with marine growth but is generally in remarkably good condition with only moderate collapsing of hull plates. The bow is broken off and the port side badly damaged by the collision which sank her, but much of the upper structure remains intact.

The 1997 *Peterhoff* field investigation was a huge success as the weather cooperated and the objectives we set out to accomplish, were met. The project yielded valuable archaeological information from this significant Civil War shipwreck. Funding for the *Peterhoff* project was generously provided through the support of the Institute for International Maritime Research.

Rob Westrick

Archaeological Investigation at Emanuel Point

This summer Jenna Watts, second year Maritime History and Nautical Archaeology student, received an internship through the University of West Florida to participate in a three month field school at the Emanuel Point shipwreck in Pensacola, Florida. Archaeologists believe that this wreck site is the second oldest site in the United States and probably dates from the 1559 expedition of Don Tristan de Luna.

Florida archaeologists had not conducted research at the Emanuel Point site since the summer of 1995, due to the lack of funding. This summer, however, the State of Florida provided a \$150,000 grant and work resumed on the site. Joe Cozzi, site director for the project, hired six graduate interns from all areas of the U.S. and Canada. Under Mr. Cozzi's direction, these students constructed a large work platform from which many conservation activities were carried out.

The objectives for the summer

research were to excavate the bow section of the ship and to find the stem. During the 1995 field season, student's excavated the stern, and measured the overall vessel length. This summer's research also produced numerous artifacts, including many galley items. The penultimate event of the 1997 season came on October 29th when the 1,000 pound iron anchor and the main copper cooking cauldron were removed from the water. Representatives from Spain were present and the achievement marked the end of the 1997 season and the excavation at the Emanuel Point site. The project has not acquired funding for a field project in 1998, so the site will be backfilled indefinitely.

In the spring of 1998 Roger Smith, project director, plans to work in conjunction with the Navy and survey the rest of Pensacola Bay. He hopes to find one or more of the other six ships from De Luna's fleet.

Jenna Watts



Archaeologists on the Emanuel Point dive platform sift through material.

ECU Dives into the Waters of Puerto Rico: The Spanish-American War Vessel *Antonio López*

The year 1998 marks the 100th Anniversary of the Spanish-American War and the secession of Puerto Rico to the United States. Although the war only lasted 113 days, there were many naval engagements that are of interest to maritime historians. Most of the sea battles are not represented in the archaeological record, however, and very few shipwrecks are known from the war. The wreck of the steam vessel *Antonio López* on the north coast of Puerto Rico is an exception, and in August, 1997, archaeologists and students from ECU conducted a preliminary evaluation of the site.

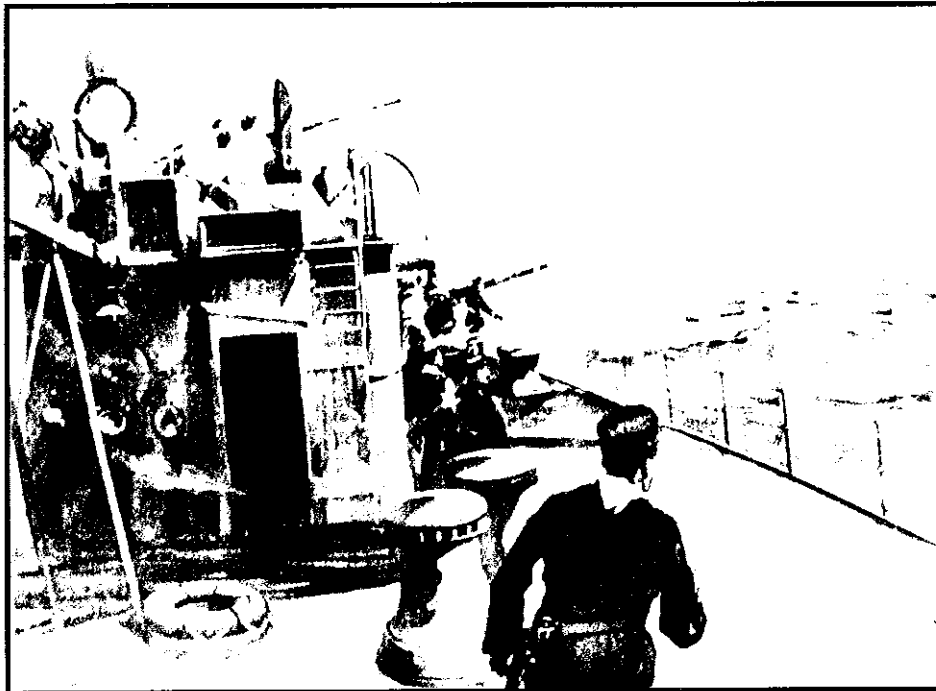
Built in 1881-82 by William Denny & Brothers of Dumbarton, Scotland for the Compañía Trasatlántica Española, the S.S. *Antonio López* was one of the first steel-hulled merchant vessels ever built with a complete electrical lighting system. The ship measured 370 ft. in overall length, registered nearly 3,500 gross tons, and although steam-driven, was also Barque rigged.

When war broke out between Spain and the United States, the *Antonio López* was contracted by the Spanish navy to resupply San Juan, Puerto Rico, at the time under American blockade. With a cargo consisting of six cannon, four mortars, two howitzers, 3,600 projectiles, 500,000 rations, 48 sabers and cutlasses, and 50 tons of gunpowder, the *Antonio López* arrived off San Juan on the night of 27 June. Because the city was under war-time blackout, the ship overshot the entrance to the harbor and sailed a few miles to the east before turning around. At dawn on the 28th, lookouts at Fort San Cristobal hoisted signal flags announcing the approach of the *Antonio López* from the west. The flags were spotted by the commander of the USS *Yosemite* who immediately attempted to intercept the Spanish vessel before it reached the safety of San Juan harbor. After sustaining several hits from American shells, the captain of the *Antonio López* decided to run his vessel aground in

a desperate attempt to get the cargo ashore. Within a mile of the beach, the *Antonio López* came to a sudden stop on Angelina Reef. Under the protection of shore batteries and an assisting naval squadron, the Spanish successfully salvaged the cargo from the heavily damaged merchant vessel. Attempts to tow the *Antonio López* off the reef failed, however, and on 15 July, the once proud transatlantic steamer was finally sunk by the American cruiser USS *New Orleans*.

Frank Cantelas and Wayne Lusardi of ECU, and several local volunteers under the direction of Puerto Rican archaeologist and ECU student Richard Fontanez-Aldea, conducted a two-week investigation of the *Antonio López*. The project was funded by a Coastal Zone Management Grant to consider the wreck's potential as an underwater preserve. A detailed site plan was compiled, and although the ship is badly broken apart, many of its components remain recognizable including the entire length of the propeller shaft, six Scotch boilers, a considerable portion of the double bottom, the masts and bowsprit, a violin or "diddle-head" bow, piston rods and spare engine parts, several Trotman anchors, and extra propeller blades.

Because of its incorporation of first-of-a-kind ship construction techniques, together with its distinction of being perhaps the only vessel sunk during the Spanish-American War that has been archaeologically investigated, the *Antonio López* is an important site in Puerto Rican, Spanish, and American maritime history. The site's historical significance also makes it a prime candidate for nomination to the National Register.



Harper's Weekly depiction of the naval engagement off San Juan harbor, 1898

Wayne Lusardi

Vinyard Shipbuilding Company

(Continued from Page 11)

remains found on the property. Although the size of the yard paled next to the ship construction giants in Boston, New York, Philadelphia, and Newport News, the vessels built at Vinyard's sailed from ports around the world. Hand-made luxury wooden yachts, ranging in size from 33 feet to 55 feet, incorporated local white oak and cedar, as well as exotic hardwoods like ebony, teak, and mahogany. These vessels provided the utmost in luxury and found ports of call around the globe. During World Wars I and II, Vinyard switched production to military craft, building 110-foot wooden subchasers and Coast Guard vessels. One subchaser in particular, according to a Wilmington, Delaware, man who served aboard the craft, saw service as a spotter ship for the invasion fleet at Normandy. In the early 1970's, production at the shipyard changed focus to steel fishing vessels, tug boats, barges, and other commercial craft.

Today, the shipyard sits quietly along the waterfront, reliving the glory days of vessel production only through the testimony of the shipyard survivors. The new property owner has taken an interest in preserving the historical character of the shipyard, repairing and maintaining the original tools in the wood and metalsmith shops and refurbishing the exterior of the buildings. His open invitation to survey the archaeological remains of the yard offers historians and maritime archaeologists a golden opportunity to unravel how a late 19th early 20th century shipyard operated amidst the technological advances in metals, engineering, and economic transitions, especially one located in an isolated southern Delaware town. The Vinyard Shipbuilding Company project received excellent praise from local historians, both in Milford and from various state agencies. This is what maritime archaeology is all about — discovering information for the benefit of the public.

Scott Emory



Athletes dare to brave the challenges of underwater hockey. Games are played every Monday and Wednesday night at 8:30.

Test Your Fitness: Underwater Hockey

Underwater hockey has become a familiar pastime for many students of the Maritime History and Nautical Archaeology Program at East Carolina University, and the interest is spreading to other disciplines within the University. Although the sport originated in South Africa in the 1950's, it was an easy import to the United States. Currently, the sport is played in over twenty countries.

When most people hear of the sport, they normally assume that the players must don a full set of SCUBA gear to participate. But all that is needed is a short, foot long, wooden stick and snorkeling gear (mask, fins and snorkel). The only other piece of personal gear a player uses is a glove to prevent skinned knuckles. Teams play in a shallow pool of constant depth.

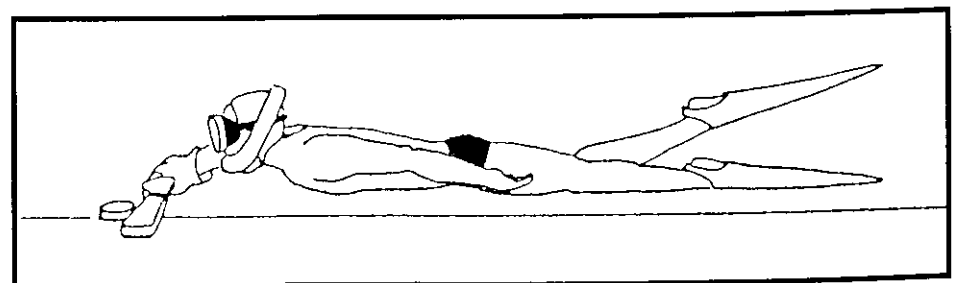
The object of the game is to get a plastic coated lead puck into the other team's goal — much the same as in ice hockey. Officially,

teams consist of seven players, and unlike ice hockey, the underwater variant is a non-contact sport. The abilities of those who have played for some years can be daunting to a newcomer to the sport, but new players quickly learn that it is a game of passing as much as it is of making a dash for the goal. Since the best underwater passes range a maximum of five feet, it is imperative that teammates remain close to one another.

Underwater hockey is a popular pastime among mariners at ECU. It is a fast paced game that requires teamwork and strategy.

Larkin Post

ECU'S underwater club hockey plays regularly in Minges pool Mondays and Wednesdays from 8:30 to 10:00. All are welcome to play.



MARITIME STUDIES ASSOCIATION

The Maritime Studies Association is alive and well at East Carolina University for the 1997-98 academic year. The purpose of the association is to assist students working toward a degree in the Maritime History and Nautical Archaeology Program at ECU. The officers for this year are: President, Filippo Ronca; Vice-President, Chris Southerly; Secretary, Ryan Harris; Treasurer, Jenna Watts; Social/Activity Director, Jeff Enright, and Rod Linder as GSAC representative. Staff archaeologist Frank Cantelas is serving as the current faculty advisor.

So far this year MSA co-sponsored, with the maritime history program, a fall gathering to welcome incoming maritime

students and has held several tailgate celebrations at ECU home football games. Many more social functions are being planned for the spring.

Academically, MSA worked to get classes added to the Spring calendar, ascertained student interest and feedback for potential summer field school projects.

Everyone here is looking forward to the Society for Historical Archaeology Conference, held 7-11 January, 1998 in Atlanta. This year MSA has worked with the Graduate Student Advisory Council (GSAC) to obtain funding to assist students going to Atlanta for this professional conference.

For information on membership, contact any MSA officer by leaving a message at Eller House.

MSA T-Shirts

Currently available: long and short sleeve T-shirts in several different designs and colors.

Orders: for polo shirts placed on a demand basis..

Also; Call for new MSA logo any suggestions or submissions welcome.

Please leave a message for Jenna Watts at Eller House (919)328-6097

She Sails Again: U. S. Brig Niagara Update

On July 24, 1997, maritime history student, Joe Greeley, signed aboard the U.S. Brig *Niagara* for a three week passage that began in Erie, Pennsylvania. He was a volunteer crew member for *Niagara's* Great Lakes summer tour.

The U.S. Brig *Niagara*, owned and operated by the Pennsylvania Historical and Museum Commission (PHMC), hails from Erie, Pennsylvania. As a reconstruction of Commodore Oliver Hazard Perry's historic flagship from the Battle of Lake Erie in 1813, the vessel's mission is to bring historical interpretation to the public both as a museum and as a fully operational lake and ocean-going ship. The *Niagara* needs approximately forty hands to operate the ship in a twenty-four hour period, and twenty volunteers assist the professional crew in the sailing and



maintenance of the ship.

This summer's voyage was a tour of the Great Lakes. *Niagara* embarked from her home port in Erie, Pennsylvania, passed through the Welland Canal, and stopped in various Canadian ports such as Toronto and Hamilton.

As was true with previous ECU student experiences, Joe Greeley was assigned to a division aboard ship, specifically, the Starboard Watch Division. He learned many shipboard skills such as rigging and splicing lines, and as he quickly learned, sailing the *Niagara* was no easy task. It provides a unique opportunity to experience the past first hand.

For information on volunteering for the Brig *Niagara*, contact the Flagship Niagara League, East Front Street, Erie PA 16507.

Joe Greeley

The U.S. Brig Niagara will be sailing again this summer.

WHERE ARE THEY NOW?

James Allen - Institute for Western Maritime Archaeology, Berkeley, CA

Ray Ashley - Director, Maritime Museum of San Diego, CA

Adrienne Askins - Submerged Cultural Resources Unit, NPS, Santa Fe, NM

David Baumer - Curator of Small Boats, Mariners' Museum, Newport News, VA

David Beard - Private Consultant, Tacoma, Washington

Colin Bentley - Sailing Instructor, College of Charleston

Kathryn Bequette - Director, Maritime Archaeology and Research, OELS, Evergreen, CO

Jemison Beshears - Butterfield & Butterfield Auction House

Robert Browning, Ph.D. - Historian, US Coast Guard, Washington, DC

Frank Cantelas - Staff Archaeologist, East Carolina University, Greenville, NC

Edwin Combs - PhD candidate, University of Alabama

David J. Cooper - State Underwater Archaeologist, State Historical Society of Wisconsin, Madison, WI

Diane Cooper - Curator, San Diego Maritime Museum

Annalies Corbin - PhD candidate, University of Idaho. Received John C. Calhoun Fellowship.

Lee Cox - Contract Nautical Archaeologist, Dolan Research, Philadelphia, PA

James P. Delgado - Executive Director, Vancouver Maritime Museum, Canada

Stanley K. Duncan - Working in the insurance field

Rita Folsie-Elliott - Archaeologist, LAMAR Institute, GA

Sabrina S. Faber - Fulbright Coordinator, AMIDEAST

Robert Feingold - Program Specialist, NOAA, Florida Keys, FL

Paul Fontenoy - Assistant Director, North Carolina Maritime Museum, Beaufort, NC

Kevin Foster - Maritime Historian, National Park Service, Washington, DC

Joe Friday - Sergeant, Greenville Police Department

Steve Gibbons - Manager - Party Success Rentals, Greenville

Amy Gottschamer - Real estate agent, Santa Fe, New Mexico

Wesley K. Hall - Director, Mid-Atlantic Technology, Wilmington, NC

Lynn B. Harris - Assistant Head, Underwater Division, South Carolina Institute of Archaeology and Anthropology, University of South Carolina, Columbia, SC

Rick Heron - PhD candidate, Texas A&M University

Robert Holcombe - Director, Confederate Naval Museum, Columbus, GA

Claude V. Jackson - Underwater Archaeology Unit, State of North Carolina, Ft. Fisher, NC

John O. Jensen - PhD candidate, Carnegie Mellon University, Pittsburgh

John Kennington - Retail Book Salesman, Detroit, MI.

Mike Krivor - Panamerican Consultants, Memphis, TN

Richard Mannesto - Great Lakes Historical Shipwreck Museum, Ste. Sault Marie, MI

Amy (Knowles) Marshall - Archaeologist, US Army, Fort Bliss, TX.

I. Roderick Mather - Assistant professor, University of Rhode Island

Ann Merriman - PhD candidate; University College London, Dept of Egyptology

Amy Mitchell - Texas Historical Commission - *La Belle* project.

Dave Moore - Registrar, North Carolina Maritime Museum, Beaufort, NC

Stuart Morgan - PhD candidate, University of South Carolina

John W. (Billy Ray) Morris - PhD candidate, University of Florida, and Director, Southern Oceans Archaeological Research

Kaea Morris - Archaeologist, El Paso, TX

Sam Newell - Public School Teacher, Greenville, NC

Chris Olson - PhD candidate, Kings College

Martin Peebles - Archaeological Illustrator, St. Petersburg, FL

Edward Prados - Director, Educational Institute, US Navy Memorial Found., Washington, DC

James R. Reedy, Jr. - Contract Archaeologist, Beaufort, NC

Shannon Richardson - Archaeolo-

gist, Fort Niagara, NY

Matthew Russell - Submerged Cultural Resources Unit, National Park Service, Santa Fe, NM

James Schmidt - Nautical Archaeologist, Espey Huston Assoc., Houston, TX

Robert Schneller, Ph.D. - Historian, Naval Historical Center, Washington, DC

James Spirek - Nautical Archaeologist, SC Institute of Archaeology & Anthropology

Thomas Stoltman - Northwest Maritime Museum, Empire, MI

Lex Turner - G.I.S. Coordinator - City of Greenville, NC

Hans Van Tilburg - Ph.D. candidate, Univ. of Hawaii

Bruce G. Terrell - Maritime Historian and Acting Maritime Archaeologist, NOAA, Washington, DC

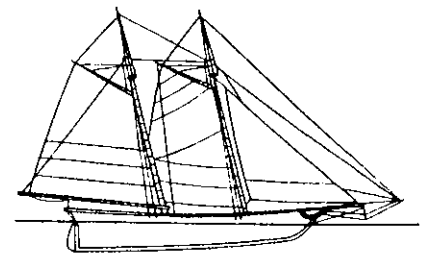
William H. Thiesen - Ph.D. candidate, University of Delaware

Ray Tubby - Nautical Archaeologist, Tidewater Atlantic Research, Washington, NC

Lolly Vann - Contract Archaeologist, MD

Daniel Warren - Archaeologist, Missouri Department of Transportation

Wilson West - Ph.D. Candidate, University of Alabama.



Have we missed you? Please let us know where you are. Drop a line to Eller House (919-328-6097) and we'll happily update the next issue. - The Editor

FACULTY & STAFF PAPERS AND PUBLICATIONS

Larry Babits:

Book Reviews

Beating plowshares in swords: the political economy of American warfare. Paul A. C. Koistinen. *Choice* (April 1997).

Fatal glory: Narciso Lopez and the first clandestine U.S. war against Cuba. Tom Chaffin. *Choice* (April 1997)

Ghost Fleet: the sunken ships of Bikini Atoll. James P. Delgado. *Choice* (April 1997)

Papers

Families and Boats: Locating Maritime Archaeological Sites through Survey and Oral Interview. 8th International Symposium on Boat and Ship Archaeology, Gdansk.

(w/Annalies Kjorness) A Derelict Small Boat Survey, Pamlico Drainage, North Carolina, USA. 8th International Symposium on Boat and Ship Archaeology, Gdansk.

Confederate Earthen Fortifications, Mass, Mobility, and Manpower Requirements on the Southeast Atlantic Coast: A Strategic Assessment. Thirteenth Naval History Symposium, Annapolis, MD.

Frank Cantelas:

Papers

Tools, Techniques and Zero Visibility Archaeology. Proceedings of the American Academy of Underwater Sciences, Boston, Mass. 1997.

Anthony Papalas:

Journal Articles

"The Development of the Trireme," *Mariner's Mirror*. Vol. 83, No. 3. August 1997: 259-271.

Michael Palmer:

Journal Articles

"The Soul's Right Hand: Command and Control in the Age of Fighting Sail, 1652-1827." *The Journal of Military History*. Vol. 61 (October 1997): 679-705.

"The 'Military Revolution' Afloat: The Era of the Anglo-Dutch Wars and the Transition to Modern Warfare at Sea." *War in History*. Vol. 4 (April 1997): 123-149

Bradley Rodgers:

Site Reports

"The 1996 Anguilla Shipwreck Survey." Maritime Studies Program,

East Carolina University, 1997.

"The 1996 Richmond Ship Dock Archaeological Survey." Contributors: Frank Cantelas and Wendy Coble. Maritime Studies Program, East Carolina University, 1997.

"The 1995 Predisturbance Wreck Site Investigation at Claflin Point, Little Sturgeon Bay, Wisconsin." Maritime Studies Program, East Carolina University, 1997.

Book Reviews

Tidewater Time Capsule: History Beneath the Patuxent. Donald Shomette. *The Northern Mariner*. April, 1997, Vol. 11, No. 2.

Timothy Runyan:

Journal Articles

"National Maritime Heritage Grants Program," *American Neptune*. Vol. 57, No. 3 (summer 1997): 267-68

Book Reviews

Medieval Ships and Shipping. Gillian Hutchinson. (Leicester University Press, 1994) in *International Journal of Maritime History*. Vol. 8 (Dec. 1996): 229-231

Roundtable article on *Cargoes, Embargoes and Emissaries, The Commercial and Political Interaction of England and the German Hanse, 1450-1510.* J.D. Fudge. in *International Journal of Maritime History*. Vol. 8 (August 1996): 247-50

Papers

"Mahan on Theories of Seapower and the History of Medieval Europe". The American Historical Association, New York City.

"New Technologies and Naval Archaeology". Naval History Workshop, Washington, D.C.

"Ships and Museums: The Interpretation of Maritime Technology". Meeting of the Society for the History of Technology, Huntington Library, CA. Fall, 1997.

"Warfare in the Northern Seas, 1350-1545". The Southern Historical Association, Atlanta, GA. November, 1997.

"Shipwrecks and Ethics". North Carolina Maritime Museum. October, 1997.

John Tilley:

"Coast Guard, United States," in *Collier's Encyclopedia*. New York:

P.F. Collier,

Gordon P. Watts:

"Raising Standards: A Modern Framework for Protecting our Common Maritime Heritage" Contributors: Roderick Mather and John C. Neville. *Common Ground*, Vol. 1, No. 3/4 (Fall/Winter) 1996.

Phantoms of Anglo-Confederate Commerce: An Historical and Archaeological Investigation of American Civil War Blockade Running. A Thesis presented to the University of St. Andrews in fulfillment of the requirement for the degree Doctor of Philosophy.

From the Director:

The recent events in the field of maritime history and nautical archaeology have reinforced the beliefs of many of us that we chose an exciting and challenging field of study. Attracting most of the recent attention was the discovery of the vessel thought to be a ship of the pirate Edward Teach, known as Blackbeard. Located about two miles off Beaufort, North Carolina and about 75 miles from ECU, our program will continue to work with the North Carolina state Underwater Archaeology Unit and the Division of Archives and History on the project. Pirate fever runs high along the coast as museums and communities compete for the right to exhibit artifacts from the site. Visitors to the region will soon find pirate trails, new "Pirate" gift shops, and Blackbeard's likeness on every sort of marketable item. Behind all the hoopla is a serious and important story to be told if indeed this wreck proves to be the *Queen Anne's Revenge*.

The of new students taken into the program this past year are quite ambitious. Several began their program of studies early by participating in the summer field school in Maryland. Diving on shipwrecks connected with the Chesapeake Bay Flo-tilla Project offered challenging limited, and often zero visibility diving.

GRADUATE STUDENT RESEARCH PROJECTS & PUBLICATIONS

The following list reflects current research interests of Program students:

Adriane Askins: Site Report on the *Sacred Heart of Jesus*, Edenton, NC.

Paul Avery: The Impact of the 18th Century Navigation Revolution upon Pacific Cartography

Charles Bayman: Operational Difficulties Experienced by Admirals Graves, Shuldham, and Howe on the North American Station, 1775-1778

Jemison Beshears: Dutch Maritime Trade in the Caribbean and Related Shipwreck Sites

Kelly Bumpass: Archaeological Investigation of the Stonewall Wreck, Bermuda

Mark Burdette: Development of United States Navy Air Defense, 1929-1941

Darryl Byrd: Piracy in the Ancient Mediterranean

Joe Cato: Imperial Japanese Naval Planning and Maneuver Warfare

Marlo Chittick: Great Lakes Maritime History, Specifically the Great Storm of 1913

Robert A. Church: The Shortage of

Timber in England During the Seventeenth Century and the Effects on Ship Construction.

"Storm on the Northwestern Plains: Blackfeet and American Fur Traders," accepted for publication in *The Journal of the West*. April 1997

Wendy Coble: The Quest for Historical Relevance in the Common Freighter SS *Paraguay*.

"Hawaii's Sunken Flying Boat." Paper presented at the 30th Annual Meeting, Society for Historical Archaeology Conference on Historical and Underwater Archaeology. (Corpus Christi, Texas) 1997.

"Courage and Heroism Under Fire." Paper presented at the 3rd Annual Meeting, Symposium on Pacific History and Archaeology. (Honolulu, Hawaii) 1997.

Molly Conlin: World War II Aviation

Cissy Deas: The "New Old Spaniard": A Dutch East Indiaman in Bermuda

Stuart Derrrow: Historical and Archaeological Study of Sixteenth-Century Spanish Shipboard Subsistence

Ted Dunlap: Development of US Naval Regulation Over its Historic Shipwrecks

Rusty Earl: American Naval Administration at the Turn of the 19th Century

Jim Embrey: Archaeological Investigation of St. Mary's City Submerged 17th Century Shoreline

Scott Emory: The Wilson Vineyard Shipyard: From Sail to Steam, 1896-1974

Jeffrey Enright: Dendrochromatic Record of Eighteenth Century Spanish Vessels

Richard Fontanez: Early European Shipbuilding in Puerto Rico

Patrick Fleming: Rumrunners of the Eastern US Seaboard, 1920-1934

Glenn Forest: Confederate Domestic Wooden Gunboat Programs: the Porter Gunboat program and the Chicod Creek Vessel, a *Macon* Class Porter Gunboat.

Steve Gibbons: Piracy and Economics of the Carolinas, 1675-1725: Emphasis on North Carolina after 1700

Jeff Gray: Claflin Point Wreck: Great Lakes Tugs, Steamers, and Lumber Trade

Richard Haiduven: Historical and

Archaeological Examination of the Steamboat *Madison*

Tim Hastings: History and Archaeological Site Report of the CSS *Gaines* Sunk at the Battle of Mobile Bay

Nathan Henry: Site Report on the Civil War Gunboat USS *Underwriter*

Robert Kelley: The Impact of the Development of United States Naval Attack Submarines during the 1980's.

Chris Kirby: Confederate Torpedo Boats: A Design, Construction, and Historical Survey

Karen Kozlowski: An Archaeological Investigation of the Destroyer Escort USS *Amesbury*

Mike Krivor: Research and Documentation of an Eighteenth-Century British Collier in Bermuda

Rod Linder: Environmental impact assessment for the St. Augustine Marine Archaeological Preserve cultural resource plan

Wayne R. Lusardi: Shipwrecked Swords: Edged Weapons from Spanish Colonial Wrecks

Eleftheria Mantzouka: Classical Transport Amphorae from a Shipwreck at Alonnesos, Northern Sporades, Greece

Tom Marcinko: Maritime History of Hatteras Inlet, North Carolina

Tim Marshall: Historical and Archaeological Examination of the Steamship *Arabian*

Heather McAllister: Eighteenth-Century Silver Trade From Mexico to Spain

Peter McCracken: 'Symbolic History' and Sailors: Image Development Through Song at Sea

Phil McGuinn: Shell Castle, A North Carolina Entrepot: A Historical and Archaeological Investigation

John McWatters: US Coast Guard Cutter *Northwind*, 1945-1989

Kerry O'Malley: North Carolina Privateering in the War of 1812

Shawn Moore: Impact of Yellow fever on 19th century Maritime Health Issues

Jeff Morris: Chicohominy Shipyard site

Kaea Morris: Prehistoric dugout canoes from Lake Phelps

Deirdre O'Regan: Sails and Sail-making in The United States, 1700-1900.

Robert J. Owen: History of the USS

Director...

Our graduates continue to thrive and find challenging positions as noted in this issue. Our connection to the British Isles grew closer as one faculty member received a doctorate at St. Andrew's University in Scotland, while one of our graduates entered the program there. Another program grad completed a PhD at Oxford, and another is completing a degree at King's College in London.

Recent visitors included archaeologist David Brose, director of the Schiele Museum of Natural History in Gastonia, NC, who discussed career opportunities with students. Also visiting was Dr. Dorian Barrow, vice-chancellor of University College Belize., whom we proposed to work with on a joint research project in Belize.

Everyone seems to be working hard. Perhaps inspired by the recently posted sticker in Eller House: "Have ye flogged yer crew today?" How prescient that the nickname for East Carolina University is the "Pirates."

Dr. Timothy Runyan

(Continued on page 24)

GRADUATE STUDENT RESEARCH

(Continued from page 23)

Marblehead in the Asiatic Fleet, Dec. 7, 1941 - May 6, 1942: The Long Voyage Home

Suzanna Pavelle: Archaeological Investigation of the Submerged Colonial Town of Woodstock, NC

Harry Pecorelli: Spanish Colonial Maritime Commerce in the Eighteenth Century

Larkin Post: Turn of the Century Ferro-Cement Hull construction

Darren Poupore: United States Naval Operations During the Battle of the Santa Cruz Islands, 26 October 1942

Coral Magnuson: Comparison of Hawaiian Canoes in the Archaeological to Historical Record

Phillip Reid: Segelschiffedam-merung [Twilight of Sailing Ships]: Passat, Great German Barques, and the End of an Era

Shannon Richardson: History and

Future of Waterlogged Artifact Conservation

Todd Robinson: Children of Empire: A Social and Political History of the Buccaneers, 1605-1655.

John Rossi: Habsburg Imperial Navy during the Thirty Years War, 1625-1630

Jinky Smalley: Manila Galleon Trade and its Relation to Spanish, Filipino, and Chinese Intercourse as Evidenced in Ship Construction, Trade Goods, and Ship Complements

Joshua Smith: Sentinels of the Republic: Customs Collectors and the Rise of Federal Authority in the District of Maine, 1789-1820

Paul Steinberg: Historical and Archaeological Investigation of the USS *Flambeau*: A Civil War Blockader Located off Fort Fisher, NC

Ray Tubby: Historical and Archaeological Investigation of the 1750 Span-

ish Fleet Ship *El Salvador*

Lex Turner: Site Report of the Civil War Era Merchant Schooner *Scuppernong*

Dan Warren: SS *Monumental City*: The Archaeology of the First Trans-Pacific Steamship


Rob Westrick: Investigation of the USS *Peterhoff*: A Civil War Blockade Runner/Blockader off Fort Fisher, NC.

"In Search of Shipwrecks" *Maritimes*, Quarterly Magazine of the Bermuda Maritime Museum, Vol.10, No.4 Winter 1997/1998

"The Urca de Lima: Florida's First Underwater Archaeological Preserve" *Plus Ultra Quarterly*. Vol.15, No.2, Spring 1997.

Judy Wood: Savannah River Pilot Boats

Avrahm Witz: History of the Shad boats in North Carolina

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Admiral Ernest M. Eller House
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