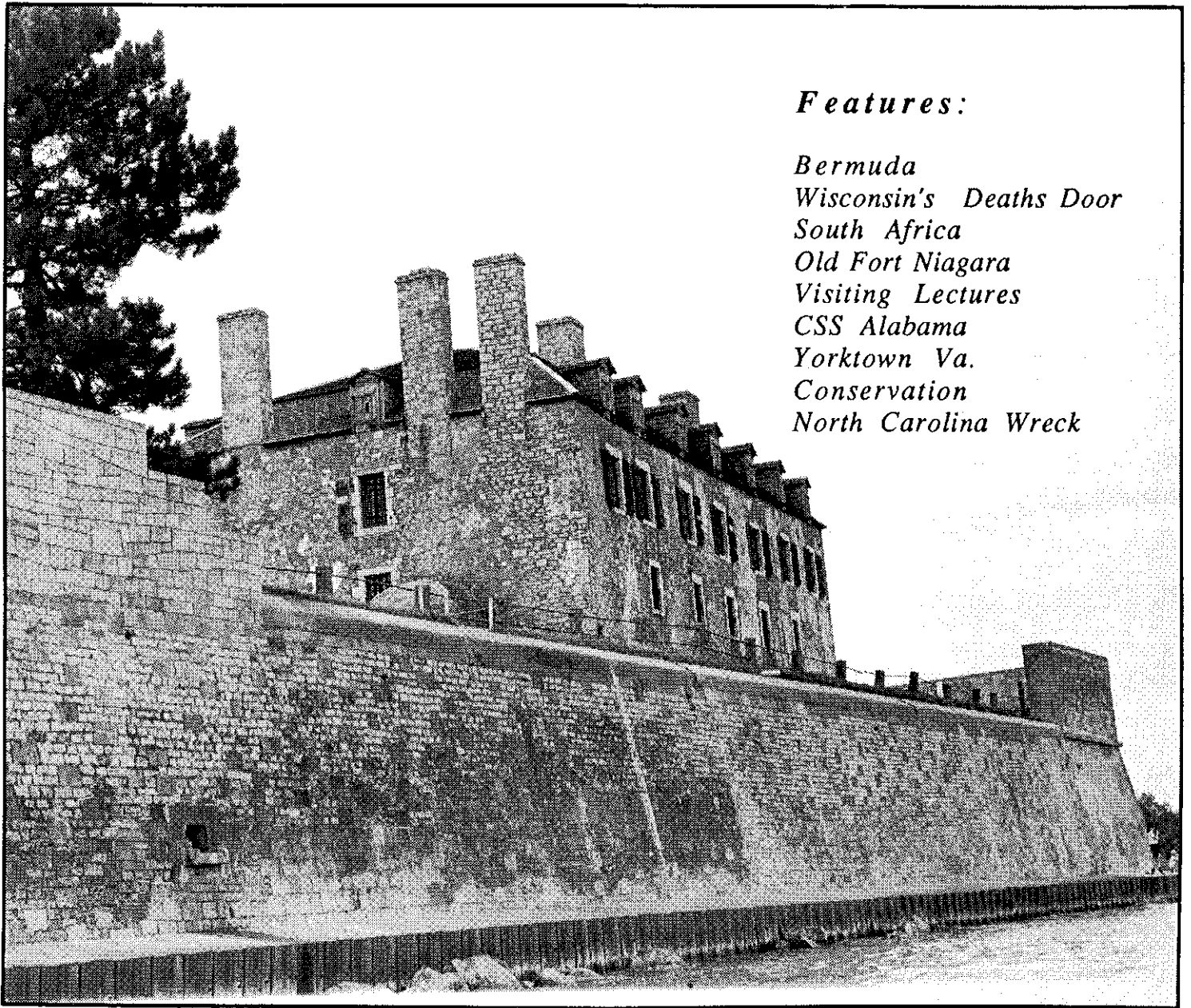


Stem to Stern

Program in Maritime History and Underwater Research
East Carolina University **Volume 4** 1988



Features:

Bermuda
Wisconsin's Deaths Door
South Africa
Old Fort Niagara
Visiting Lectures
CSS Alabama
Yorktown Va.
Conservation
North Carolina Wreck

Old Fort Niagara

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Summer Field School 89, Papers and Publications, and Graduate Student Research

East Carolina University
Program in Maritime History
and Underwater Research

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Volume 4 1988

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Photo Credits: p. 1, Tony Gladkowski. p. 3, Lynn Harris. p. 4, Kurt Knoerl. p. 5, William Utley. p. 6, Kurt Knoerl. John Jensen, p. 7, Bermuda Maritime Museum.

Research on *CSS Alabama*

The wreck of the Confederate States Navy raider *Alabama* was discovered by French navy divers off Cherbourg, France in 1984. This was the most famous and successful sea raider in modern history, capturing or destroying more than sixty ships during her two year history. In May-June, 1988, a French team under Captain Max Guerout made the first systematic examination of the wreck. Because of the severe tide (four knots), diving was limited. Nevertheless, significant documentation was accomplished, including photographs, video, and line measurements. Also a number of artifacts were recovered.

Gordon Watts and William Still, Co-directors of the E.C.U. Program in Maritime History, were the only non-French invited to participate in this summer's project. They

have since then been elected to the Board of Directors of the *CSS Alabama* Association, a private organization created in France to sponsor projects on the American Civil War Ship.

Conservation Continues

1988 has been an exciting year for conservation in the Program. After a month of good experience at the Bermuda Maritime Museum's conservation lab second year students were given an opportunity to further develop practical conservation skills by working in the Maritime Program's facility alongside staff archaeologist Brad Rodgers. The major project this year was the continued work towards final treatment of the 2.5 inch cannon undergoing conservation since 1984.

In finishing the piece students gained valuable hands on experience impossible to teach in the classroom. The first assignment was to unload the gun, a proposition much easier said than done. To this end a pipe was driven into the cannon's muzzle in order to remove the stubborn remnants of a charge which was partially removed last year. To our surprise a solid iron shot was removed along with cotton wadding and gun powder. The gun, therefore, contained a double charge of anti-personnel shot (described in Vol. 3 *Stem to Stern*) and solid shot.

In conjunction with the final treatment of the great gun an experiment was conducted to develop an easy, cheap, and non-toxic method of testing for chloride ion content in the electrolytic solution of the cannon. Early results of this experiment seem promising and the preliminary results will be presented in "Conservation of the Chesapeake Mystery Gun" to be given at the Conference on Underwater Archaeology in January.

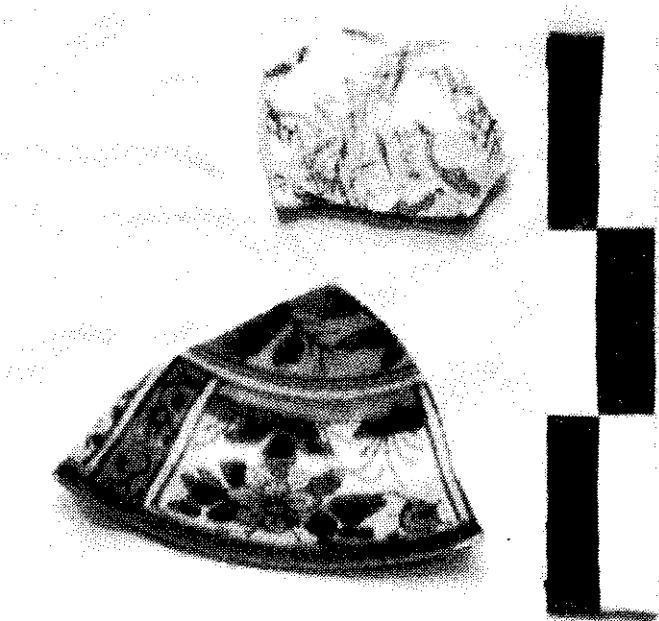
Further conservation experience combined with Museum experience will begin next semester when students create and build a display for the cannon in the second half of the Public History course under direction of Professor John Tilley. In this manner students will gain the practical museological experience of artifact acquisition from excavation to display.

Preparations will soon be underway to move our conservation lab to new facilities under construction. This move will occur in January or February of 1989 and will constitute a welcome upgrade of our laboratory.

Shipwreck Survey in South Africa

During November and December of 1987 ECU graduate student Lynn Harris conducted a preliminary historical and archaeological survey in the vicinity of Cape Town city, South Africa. The Cape seaport played an important historical role as a shipping station for the Dutch East India Company (1652-1795), a British base to suppress the slave trade, and as a shipping point for captured prisoners-of-war during the second Anglo-Boer War (1899-1902). Other uses of the Cape seaport included a stopover point for nineteenth century passenger ships and twentieth century troopships of World Wars I and II. Shipwrecks in the treacherous Table Bay anchorage caused financial loss to many nations, particularly the Dutch.

Salvage, urban development, and heavy surf have depleted or buried many seventeenth and eighteenth century shipwreck sites. The only material evidence of these sites comes from divers, collections donated to the South African Cultural History Museum and the timbers of the vessel, *Nieuwe Rhoon* (1776), excavated during a city building project. A magnetometer survey to locate and identify any remaining sites in the near shore area of Table Bay was undertaken. The survey located five sites; three dating to the nineteenth century and two to an earlier time period. Mapping the site of the *Huis de Crayenstein* (1698) provided data about cannons and anchors carried aboard Dutch East Indiamen.



Porcelain from Dutch East Indiaman in Table Bay

ECU Begins Public Education

To the public, treasure hunters are often folk heroes, going for the gold. They do not see the destruction of important cultural resources. As underwater archaeology is a relatively new field, it has some catching up to do in the public relations department. Movies and TV documentaries on treasure hunting abound but only recently have archaeologists been reaching out to the public which is ultimately responsible for supporting research. ECU recently began to speak directly with an important segment of the public, the children.

In the Spring of 1988 Brad Rodgers, Mary Miller, Dr. William Still and Kurt Knoerl created a lecture program which travels to elementary schools and colleges. This program has been designed so that any of the graduate students can give this presentation with little prior notice. The actual content of the program varies with the age group being addressed. Basically it consists of a demonstration of diving equipment, a slide show discussing research from archives through conservation, and finally a chance for a hands on experience with artifact analysis which challenges the children to make observations about an artifacts physical and cultural properties. Kurt Knoerl conducted 16 of these lectures in two states and found teacher response to be very positive. The students found it fascinating and generally come away with a very different attitude about treasure hunting when they see what can be done by archaeologists.

In the fall of 1988 graduate student Jim Allan will bring the program to California. It is hoped that because of the wide geographic background of the students in the Maritime History program, that many areas of the US and other countries can be covered.

In a further attempt to reach more people with information about Maritime History and Underwater Research, a video is scheduled to be produced during the Spring of 1989 by Dr. Chip Cox of ECU's TV and Broadcasting department and Graduate student Kurt Knoerl. The video should be completed by summer of 1989. For more information about the above programs write to the editor in care of the history department.

ECU Completes Third Year at Yorktown Shipwreck Archaeological Project

The Yorktown Shipwreck Archaeological Project is a large scale, long term research project of the Virginia Research Center for Archaeology, a part of the Virginia Division of Historic Landmarks, Department of Conservation and Historic Resources. In 1978 remote sensing located and identified nine shipwrecks in the York river to be part of Lord Charles Cornwallis' fleet. These vessels were lost by the British in 1781 at the Battle of Yorktown.



Working platform at the cofferdam

From 1983 to 1988 the best preserved of these vessels was excavated and disassembled. Designated site 44YO88, the excavation was carried out within a steel cofferdam. The use of the cofferdam and its associated filtration system created a protected environment around the shipwreck free from the strong currents, low visibility and stinging jellyfish that had hampered previous archaeological investigations in the York river. This situation also offered an

excellent teaching opportunity for students of nautical archaeology.

The Program in Maritime History and Underwater Research at East Carolina University has participated in the project since its inception. Summer field schools and fall research semesters have enabled ECU's students to participate in excavation, recording, site maintenance, dive support and conservation. This cooperative effort has provided the project with skilled and enthusiastic personnel. It is worth noting that the professional staff for the project had three members who had been through ECU's program.

During ECU's 1988 summer field school, the lines of the hull were taken off enabling the staff to recreate the vessel and analyze her sailing characteristics. By disassembling the vessel underwater the construction details were recorded with a high degree of accuracy. The excavation had revealed the well preserved vessel to be a British collier hired by the Admiralty to serve as a transport supporting British forces in the colonies. With so little documentation available on merchant ship construction the Yorktown project has made significant contributions to the limited existing body of knowledge on 18th century merchant naval architecture. The project has also further defined the details of shipboard life and the contribution



Tom Adams and David Whipple discuss the days work.

of merchant vessels to combined operations in the American revolution.

The final field season on the project was a tremendous success. A large volume of highly accurate data was gathered and the students received invaluable training. The cooperative relationship between the Yorktown Shipwreck Archaeological Project and ECU's Maritime Program has benefitted all involved.

Old Fort Niagara

The Underwater Archaeology Unit of Old Fort Niagara began ten days of survey work last August in the cove area located in the Niagara river. Old Fort Niagara is located where the Niagara river enters lake Ontario at Youngstown, N.Y.. Historically the cove area served fur traders and supply vessels that passed through the Niagara region to either the outposts and beaver hunting grounds of the west or the colonial centers of the east. Captured in 1759 by the British in the French and Indian War, the fort was seen as the key post needed to control the western Great Lakes. The Fort came under American control in 1796 and witnessed fierce fighting in the War of 1812.

ECU graduate students Kurt Knoerl and Roderick Mather worked as volunteers under the direction of Dr. Stuart Scott and Patricia Scott. The crew used a 100' x 100' grid composed of two permanent and two adjustable steel cables placed on the cove bottom which tied the provience of the artifacts to datum points used for terrestrial archaeology.

The work conducted last August provided a unique opportunity for the students to work on what might be an 18th century shore line. A band of ceramics, glass, nails, pins, and numerous other 18th century artifacts were located, providing an interesting contrast to



ECU Students Kurt Knoerl and Roderick Mather in cove area of Old Fort Niagara

the artifacts of the same period which have been discovered in the terrestrial archaeology conducted over the past nine years inside the fort. The artifacts from the cove appear to be more utilitarian in nature, reflecting the activities of that area.

Further investigation of the possible shore line and other features will be conducted next summer by ECU graduate student Kurt Knoerl for his masters degree with the support of the Old Fort Niagara Archaeology Unit.

North Carolina Shipwreck

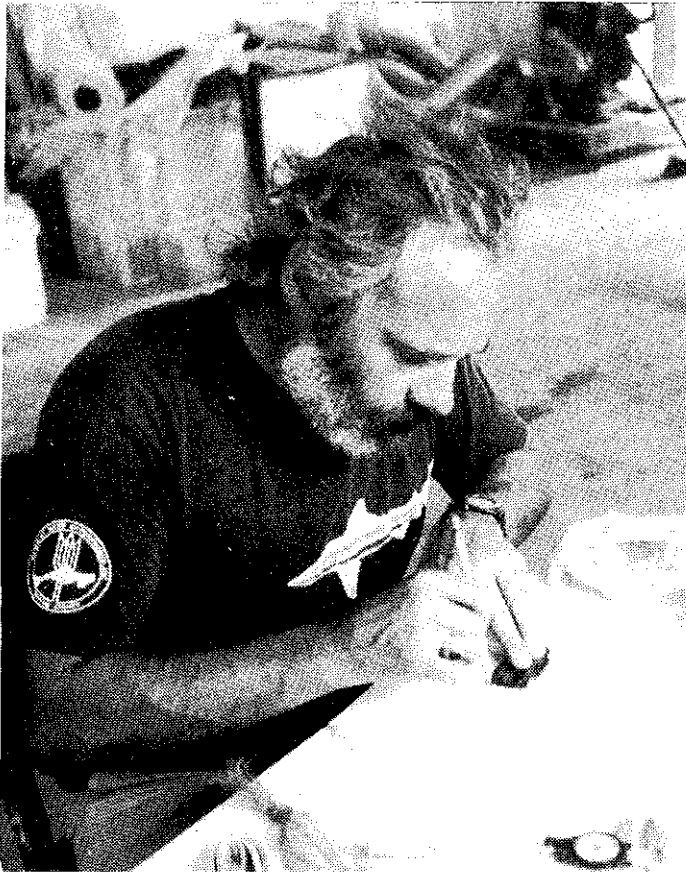
In August, 1988 ECU graduate student Sandy Jackson worked with underwater archaeologists, museum curators, and an international group of students known as Operation Raleigh representing seven countries in a project to excavate the remains of a shipwreck located near Oriental, North Carolina. This late 18th century vessel was discovered in December 1986 at the confluence of Green and Otter creeks. Most of the vessel lay buried under three feet of sediment. Limited excavation exposed a portion of the keelson, ceiling, and outer planking. Some stoneware ceramics and glass artifacts were also recovered.

Below the sediment the heavily built oak ship was in good condition to just above the turn of the bilge. Worms had destroyed any portion of the ship left exposed. Mingled with the ceramic and glass shards were a number of barrel staves, nut shells, including coconut which may indicate that the vessel plied the West Indies trade. The most unusual object recovered is what appears to be a metal button stamped from a coin. The words Carolus II or III appear with the date of 1777 imprinted on the reverse side. Carolus, the Latin wording for the name Charles, was used by the Spanish at the time. Two holes drilled through the center of the object may indicate its use as a button.

The scarcity of artifacts found in association with the site and its location in shallow water, led investigators to assume that the ship was intentionally scuttled, or that it may have grounded while seeking shelter from a storm. The vessel was probably built in New England or Britain and used to trade with the coastal states, Europe, and West Indies during its lifespan.

Recording the construction of this merchant ship and the associated artifacts will shed more light on the vessels that sailed North Carolina waters nearly two centuries ago.

Bermuda 1988



Graduate Student Jim Allan records artifact



Visual survey was assisted by the use of towboards

Once again the Program in Maritime History and Underwater Research assisted the Institute of Maritime History and Archaeology (IMHA), a branch of the Bermuda Maritime Museum, with their ongoing project to analyze the maritime history of their Island. Co-directors of the IMHA, Steve and Cathy Hoyt, focused the project on "Bermuda in the Age of Exploration."

With these objectives in mind, six second year graduate students, under the direction of Gordon Watts and Bradley Rodgers, spent a substantial portion of their fall research semester working in conjunction with the museum. The students rotated between three important aspects of nautical archaeology; surveying, mapping and excavation, and conservation.

Magnetometer and visual survey techniques were used by ECU staff and students to discover twenty two sites representing about fifteen different wrecks two of which may date from the 16th century. These wrecks represent the many phases of Bermudas rich maritime tradition.

The students also helped the IMHA complete the final phase of a project to map and excavate the *New Old Spaniard (NOS)*, a wreck that is now thought to date from the early 17th century. The major objective was to help complete the documentation of the remaining structure through illustration and a photo-mosaic. Only a section of the lowermost hull structure remains, but the floors, keel, keelson, and first futtocks still in situ should contribute significantly to our understanding of the development of ship construction.

The Bermuda Maritime Museum's conservation facilities provided the students with an ideal opportunity to gain experience in the treatment of metals, ceramic, wood, and bone. Artifacts from the *NOS* and *San Pedro* (1596) were photographed and catalogued prior to treatment. Graduate students participated in all stages of the conservation process, gaining experience in such things as encrustation removal, photographic processing, illustration, artifact cleaning, and electrolytic reduction.

The multi-faceted approach adopted in



Students work on the NOS

Bermuda combined with favorable working conditions, gave the students the broad practical experience so necessary for their chosen field.

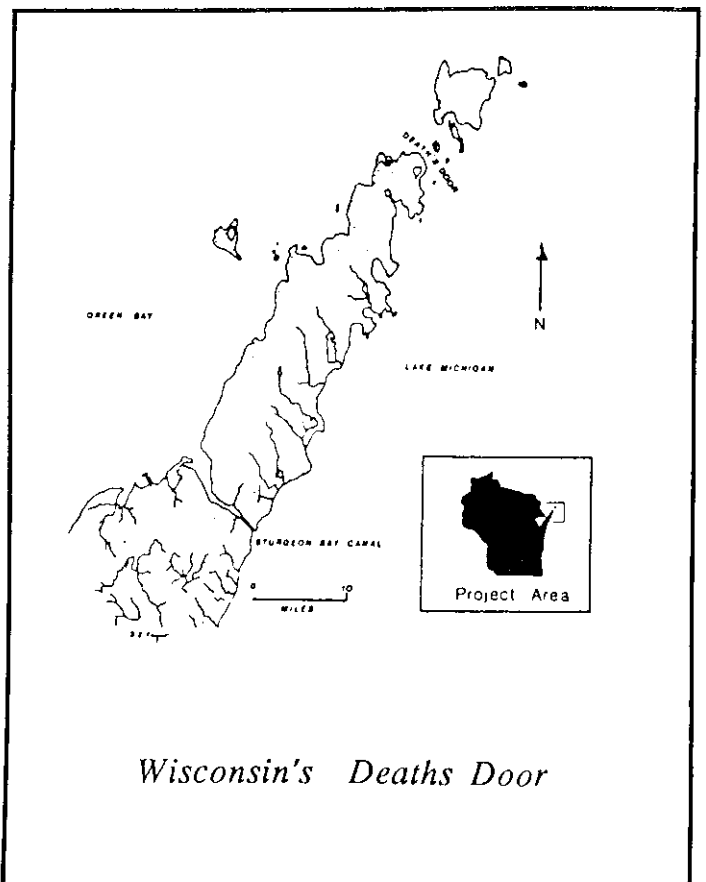
ECU at Death's Door

As part of their summer field school, a team of ECU researchers participated in a submerged cultural resource survey project with the State Historical Society of Wisconsin from July 25 to August 5. In a jointly funded project staff archaeologist Brad Rodgers and graduate students Lynn Harris and Kurt Knoerl worked with state underwater archaeologist and ECU graduate, David Cooper to identify and evaluate selected sites in the northern Door County region of Wisconsin, located where Green Bay meets Lake Michigan. Work was conducted offshore of Hog Island and North Bay. Inshore work was conducted in the vicinity of Plum Island and Europe Bay. The reconnaissance level survey produced preliminary documentation of five

sites, including the 1871 stranding of the schooner *Winfield Scott*, the 1872 beaching of the bark *Cherubusco*, the 1900 beaching of the schooner *Boaz*, and the scattered wreckage of two or more unidentified lake vessels.

Of special interest was the unusual double-centerboard configuration of the *Boaz* (most lake schooners of this size carried a single centerboard) as well as the offset centerboard arrangement in the *Winfield Scott*. The *Scott* construction reflects some of the early efforts to modify vessel construction to accommodate centerboards (ca. 1840-1850) on the Great Lakes. New archaeological information is helping nautical archaeologists and historians to better understand the many adaptations and innovations which contributed to the unique nature of Great Lakes maritime traditions and technology.

Projects such as this one give students a unique opportunity to work in varied geographic areas, exposing them to variations in ship construction and working conditions. It also affords students the chance to gain experience in survey techniques and equipment which has been discussed in the classroom.



Papers and Publications

Nine papers will be presented at the First Joint Archaeological Congress being held in Baltimore, Maryland January 5-9, 1989.

Beard, David V., "HMS *Debraak* An Architectural Study of an 18th Century British Brig.

Morris, Kaea J., "The Dugout Canoes of Lake Phelps: Results of the 1986 and 1987 field Seasons."

Delgado, James P. and Larry Murphy, "Bleached and Scattered Bones: Implications of Natural Site Formation Processes with Beached Shipwreck."

Harris, Lynn. "Survey of Shipwreck Sites in the Vicinity of Cape Town, South Africa."

Cooper, David J., "Underwater Archaeology in Wisconsin: Past, Present, and Future."

Bream, Jonathan W., "The Spanish Influence on and around Bermuda: 1492-1615, The Archival Report."

Rodgers, Bradley A., "Conservation of the Chesapeake Mystery Gun."

Still, William N., Jr., "The Historical Importance of the CSS *Alabama*."

Morris, John William III, John Broadwater, "Yorktown Shipwreck Archaeological Project: An Interim Hull Analysis of Site 44YO88."

Staff and student papers and publications include:

Finegold, Robert. A Proposal to Establish an Underwater Archaeological Preserve in the Florida Keys. Tallahassee: Department of State. 1988.

Foster, Kevin J. "Builders and Blockaders: The Evolution of the Blockade Running Steamship" in Global Crossroads and the American Seas. Pictorial Histories Publishing Co. Nov. 1988.

Still, William N., Jr., Archer Jones, Richard E. Beringer, Herman Hattaway. The Elements of Confederate Defeat. University of Georgia Press. 1989.

_____, Ed. Two Years on the Alabama. (Arthur Sinclair), Naval Institute Press. 1989.

_____, "Monitor Companies: A Study of the Major Firms that built the USS *Monitor*." American Neptune. Spring 1988.

_____, "Rear Admiral William A Kirkland" Dictionary of North Carolina Biography. Vol. 3. University of North Carolina Press. 1988.

_____, "The Historical Importance of the USS *Monitor*" Naval History: The Seventh Symposium of the US Naval Academy. Scholarly Resources, Inc., 1988.

_____, Iron Clad Captains: The Commanding officers of the USS *Monitor*. Marine and Estuarine Management Division, National Oceanic and Atmospheric Administration, US Department of Commerce, 1988.

Watts, Gordon P., Jr., "Bermuda and the American Civil War: A Reconnaissance Investigation of Archival and Submerged Cultural Resources" The International Journal of Nautical Archaeology and Underwater Exploration, Vol. 17, No. 2. May 1988.

_____, "The Civil War at Sea: Dawn of and Iron Age of Engineering" in Ships and Shipwrecks of the Americas. Thames and Hudson. 1988.

Maritime Theses

The following is a list of theses completed within the last year by students in the Program or the Department of History, on maritime and naval topics. They may be ordered through Inter-Library Loan at your local university or public library from Joyner Library, East Carolina University, Greenville, North Carolina.

Elliott, Rita Folsie. "The Pulse of Petersburg: A multidisciplinary Investigation of a Submerged Tobacco Town in Georgia." (1988)

Friday, Joseph. "A History of the Wreck of the USS *Huron*." (1988)

Harris, Lynn. "A Preliminary Investigation of the Seaport, Table Bay, and Shipwrecks in the Vicinity of Cape Town, South Africa." (1988)

Terrell, Bruce. "The James River Bateau: Tobacco Transport in Upland Virginia, 1745-1840." (1988)

Tyndall, Kenneth. "To Arm or Disarm? The 1929 Cruiser Bill and the Big Navy / Small Navy Debate." (1988)

Briefs

In the spring of 1990, the program in Maritime History and Underwater Research will be co-sponsoring "The South Atlantic Regional Maritime Heritage Conference" with the East Carolina University Division of Continuing Education and the North Carolina Maritime Museum in Beaufort.

Graduate Student Research

The following is a list of students currently enrolled in the program and their areas of research.

James Allan, An investigation into the maritime history of Fort Ross, California.

David Baumer, A history of walled fishing vessels of the East and Gulf coast of the United States.

Diane Cooper, The shipbuilding industry in the San Francisco Bay area, 1847-1883.

Marianne Federal, Classical Greece and underwater archaeology in the Mediterranean.

Robert Finegold, Elizabethan Privateering under Sir Francis Drake.

Cris Gober, A history of the USS *Kearsarge*.

John Jensen, A history of the naval sloop of war the USS *Jamestown*.

T. Kurt Knoerl, An archaeological investigation of the cove area of Old Fort Niagara.

Roderick Mather, Advice boats of the Royal Navy.

Betsy Mathews, A study of the construction and design of the six masted schooner *George Wells*.

Glenn Overton, An analysis of 19th century coastal Carolina centerboard schooners.

Steve Schmidt, An examination of the Potomac Flotilla operations and the loss of the USS *Tulip*.

Heidi Tobias-Glover, The impact of the Yankee Whalers in the Pacific on the port town of Lahaina, Hawaii.

Rusty Willingham, The Development of the destroyer escorts.

In Print

A limited number of the following publications are now available through the Maritime History department. Requests should be directed to Mary Miller in care of the Department of History, East Carolina University. Checks should be made payable to East Carolina University.

Cooper, David J. 1986-1987 Archaeological Survey of the Schooner Fleetwing Site, 47 DR168, Garrett Bay, Wisconsin. ECU Research Report NO. 6. Program in Maritime History and Underwater Research. East Carolina University. 1988.....\$10.00

Watts, Gordon P., Jr., An Investigation of Blossom's Ferry on the Northeast Cape Fear River. ECU Research Report No. 1. Program in Maritime History and Underwater Research, East Carolina University. 1986.....5.00

In Search of Our Maritime Past. Proceedings of the Fifteenth Conference on Underwater

Archaeology. Program in Maritime History and Underwater Research. East Carolina University.
1988.....10.00

1989 Summer Field School

This year, East Carolina University will again offer a Summer Field School in Maritime History and Underwater Archaeology. It is open to both graduate and advanced undergraduate students. Students receive a basic introduction to American maritime history, ship construction, underwater research techniques, and related subjects. During the first two weeks students stay on campus for classroom lecture and pool training sessions on the *Sinkentine*. The remainder of the field school will be spent working on a project in the field. For more information and applications write to: Summer Field School, Program in Maritime History and Underwater Research, ECU, Greenville, North Carolina 27858. Applications must be received by April 1, 1989.

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