

Stem to Stern

Vol. 2 1986

BERMUDA!!

Since the late 15th century Bermuda has been an important landmark for ships engaging in exploration and trade in the Americas. Early Spanish, French, English, Dutch, and Portuguese vessels sailed within sight of the islands to get their final bearings before voyaging across the Atlantic. These ships often came to grief on the shallow reefs that extend several miles out from the islands. During the American Civil War Bermuda provided Confederate blockade runners with ammunition and supplies. Among the hundreds of ships wrecked in the clear shallow waters of Bermuda are the blockade runners *Nola* and *Marie Celestia*.

One of the long-range goals of the Bermuda Maritime Museum (BMM) is the identification and documentation of these wrecks. In November 1983 at the request of Dr. Edward Harris, director of the Museum, a team of graduate students led by Gordon Watts, co-Director of the Program in Maritime History and Underwater Research, investigated the remains of the *Marie Celestia*. This past fall, Watts returned with ECU Assistant Archaeologist Brad Rodgers and 4 second-year maritime students.

This year's project, which was conducted in cooperation with Museum staffers Steve and Cathy Hoyt, focused on a survey of the *Nola*, and on preliminary excavation of an unidentified wooden vessel known as the *New Old Spaniard* (NOS). The *Nola*, a 225-foot paddlewheel steamer of about 750 tons, is thought to have sunk on December 30, 1863. The NOS could date to the 1560's. The team also conducted a partial visual and magnetometer survey of the reefs.

The team spent several days on the site of the *Nola* documenting structure with photographs and detailed measurements. Features of special interest, such as the boilers and bow section, were carefully drawn.

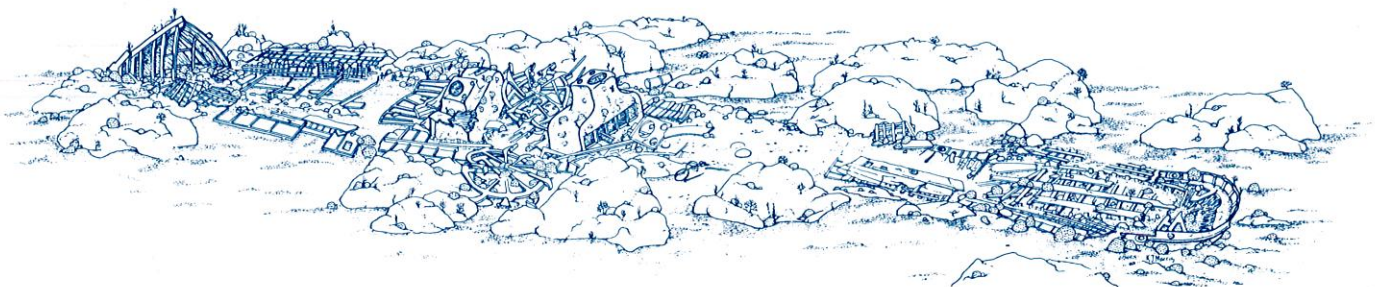
Mendel Peterson investigated the NOS for the Smithsonian Institution in 1964. Nevertheless, questions about the hull construction remained. Test excavations on the site confirmed that an extensive portion of the hull remains. The vessel is relatively flat-bottomed, exhibiting an unusual design in the exposed scarf joint and limbers. The team established a permanent baseline and recovered several diagnostic artifacts. The BMM and the ECU Maritime Program plan an extensive investigation of this site.

A magnetometer survey located another target near the NOS site. This may be another part of the NOS wreck buried beneath a large coral head. The survey also located the remains of a late 19th/early 20th century wooden sailing vessel with windlass, chain, and a surprising amount of rigging intact.

On the days that foul weather interrupted fieldwork, students worked in the museum conservation lab, or helped prepare a brochure on the history of local shipwrecks. The wrecks are a popular attraction for many tourists. Students also researched in the National Archives and the Bermuda Public Library. Rita Folse and Kaea Morris assisted Dr. Harris in the excavation of two historic human burials. The ECU team was also able to locate and map a possible Confederate torpedo raft in Dolly's Bay, reported to have washed ashore around 1869.

East Carolina University and the Bermuda Maritime Museum have agreed to an ongoing cooperative research program that will enable future graduate students to continue the study of Bermuda's rich maritime heritage. Next fall, students will participate in the excavation of the NOS and a search for the *San Pedro*, a Spanish vessel that wrecked off the coast in 1596.

Artist's conception of the *Nola*. Illustration by Kaea J. Morris.



Maritime Program Completes 5th Year

The Program in Maritime History and Underwater Research began in the fall of 1981 with 1 full-time and 1 part-time staff member, 5 graduate students, no facilities, equipment or budget. In only 5 years, the Program has grown to 2 full-time and 2 part-time staff members, and 3 supporting faculty members. In addition, the Program has acquired an array of equipment, including 3 vessels, 2 vehicles, 2 Apple computers, pumps, compressors, a magnetometer, surveying equipment, diving gear, laboratory, and model building tools. Since its inception, the Program has enrolled over 30 students. Two graduates are currently pursuing doctoral degrees; the remaining graduates are all employed in the field.

The Maritime Program recently underwent a 5-year review. The Review, which was conducted by a specially-appointed committee, evaluated the progress of the Program during its first 5 years, and made recommendations for

modification and improvement. Among the recommendations made by the committee were the addition of courses on conservation, and the expansion of the maritime history course into two courses. The internship option now offers up to 4 courses for a full semester's intership in museums or underwater agencies. Students will also now have greater flexibility in scheduling reading courses according to their particular research interests. These changes will allow the Maritime Program to continue to grow to meet the needs of its students and faculty while training qualified maritime historians and archaeologists.

A glance through this issue of *Stem to Stern* illustrates the growth and success of ECU's Program in Maritime History and Underwater Research. We are confident that the future will bring more growth for the Program, and more success for our students.

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The Program in Maritime History and Underwater Research is always in need of equipment and supplies for field and research projects, as well as books, journals and other materials for the Program Library. Please contact Gordon Watts or William N. Still to arrange a donation. Thank you.

Sinkentine: Ship Model for U/W Research

In previous years, students in the Summer Field School got their first experience in underwater mapping in the zero visibility conditions of North Carolina's Tar River. Thanks to a grant from the National Trust for Historic Preservation, students in the 1986 field school were able to learn the rudimentary skills of shipwreck documentation on a fiberglass model in the controlled conditions of a swimming pool.

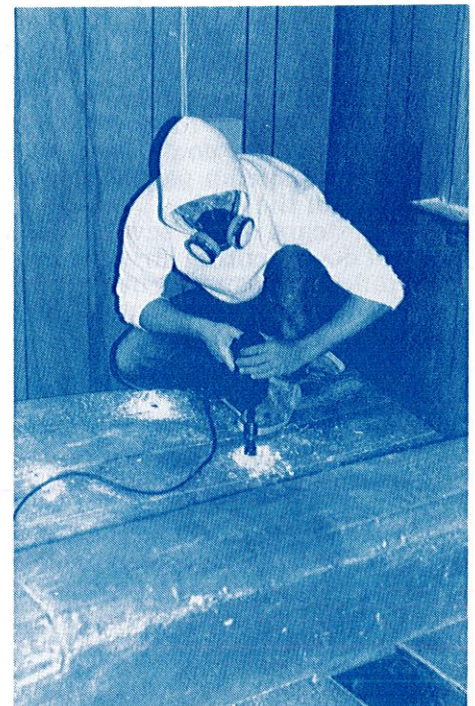
The model is a 10' by 10' ship section consisting of keel, keelson, frames, ceiling, hull planking, and fastenings. Individual pieces were molded in fiberglass and painted to simulate aged wood. The model assembles easily on a metal frame and can be disassembled for convenient storage.

Nicknamed the *Sinkentine* by its designer, Gordon Watts, the model was completed in time to

be tested during the 1986 Summer Field School. Grad student Bill Morris constructed the model, assisted by Gordon Watts and graduate student Wilkie Woodard. Kaea Morris is preparing a videotape documentary on the *Sinkentine*.

The *Sinkentine* is intended to be sunk in the pool where students will gain familiarity with structural parts, while practicing measurement techniques. The model proved a great success this past summer. It makes its official debut in January 1987 at the Conference on Underwater Archaeology in Savannah, Ga.

Graduate student Bill Morris adds details on the *Sinkentine*.



projects

This past year, ECU students have been involved in projects in the Carribean, Costa Rica, the Midwest, and up and down the eastern seaboard.

— Brina Agranat spent the summer as Archaeological Technician on a MAHRI (Maritime Archaeological and Historical Research Institute) project in Portsmouth, N.H. She also worked as an Excavator with the Fort Fisher Archaeological Project in Ft. Fisher, N.C., and volunteered on the Lake Phelps Canoe Project.

— For the second year in a row, Kathryn Bequette was Graduate Assistant for the College of William and Mary Field School in Underwater Archaeology in St. Eustatius, Netherlands Antilles. In addition, Kathy planned and conducted a magnetometer survey of the harbor of St. Eustatius. She has just completed the analysis of the remote sensing data with recommendations for further investigations.

— Colin Bentley participated in a survey of Presque Isle Bay in Lake Erie for the Philadelphia Maritime Museum. This past fall, he interned at the Chesapeake Bay Maritime Museum in St. Michael's, Md.

— David Cooper, assisted by Program Archaeologist Brad Rodgers, surveyed a Wisconsin wreck, the lumber schooner *Fleetwing*. He will present a paper about the project at the 1987 Conference on Underwater Archaeology in Savannah, Ga. This past summer, David worked as Graduate Assistant to ECU Anthropologist John Bort on a project in Costa Rica. While there, David investigated the potential for underwater research.

— Kevin Foster interned in the Naval History Division of the Smithsonian Institution before accepting his current position at the Mariner's Museum.

— Kaea Morris also participated in the MAHRI project in Portsmouth, N.H. In addition, she assisted Stuart Morgan of the Peabody Maritime Museum in Salem, Ma. in a preliminary survey of a paddlewheel steamer exposed by erosion at the Manchester Harbor Yacht Club in Massachusetts. Kaea recently directed the Lake Phelps Canoe Project.

briefs

Conservation of the anchor recoverd in August 1983 from the U.S.S. *Monitor* was finally completed in late Spring 1986. A dedication ceremony was held at East Carolina University. Curtiss Peterson, Conservator at the Institute of Archaeology and Anthropology, University of South Carolina, was in charge of the treatment.

The Program in Maritime History and Underwater Research is presenting a new look with a new recruiting brochure. The 11" x 17" poster attractively presents basic Program information along with an address for further information. The brochure has been sent to universities, mesuems, and individuals throughout the United States, and has brought increased interest in the Program. It was designed by graduate student Brina Agranat.

The 1987 Summer Field School in Maritime History and Underwater Archaeology will be held in conjunction with the Yorktown Shipwreck Archaeological Project. For information and application materials please write: Summer Field School, Program in Maritime History and Underwater Research, Department of History, East Carolina University, Greenville, N.C. 27858.

Bradley Rodgers joined the staff of the Program in Maritime History and Underwater Research as Assistant Archaeologist this past spring. Mr. Rodgers, who holds a bachelor's degree in Anthropology from the University of Minnesota, earned his M.A. from the ECU Maritime Program. His duties include running the conservation lab, maintaining equipment, and assisting with Summer Field School and Research Semester Projects.

ECU's new Colonial Historian is Dr. Carl E. Swanson. Formerly at York University in Toronto, Ontario, Dr. Swanson is the 1986 recipient of the prestigious Keith Matthews Prize, awarded by the Canadian Nautical Research

Scale models of the Blossom's Ferry vessels were completed by graduate student Robert Schneller this past winter. The "East" and "West" ferries, dating to the late 18th and late 19th centuries respectively, rest at the bottom of the Northeast Cape Fear River near Wilmington, N.C. They were documented by ECU graduate students during the Fall 1983 Field Research Semester.

Publication of the final report of the investigation of the Blossom's Ferry vessels is expected this spring.



Bob Schneller constructs Blossom's Ferry models.

Society for the best article in maritime history by a scholar at a Canadian University. The winning article, "American Privateering and Imperial Warfare, 1739-1748," appeared in the July 1985 issue of the *William and Mary Quarterly*. He is currently revising his doctoral dissertation, "Predators and Prizes: Privateering in the British Colonies during the War of 1739-1748" (University of Western Ontario, 1979) for publication.

Also new at the Maritime Program is Katherine Ruffin. An undergraduate working towards her teaching certification here at ECU, Katherine took over as part-time secretary after the departure of Dina Hill.

where have they gone?

Although still very young, the ECU Program in Maritime History and Underwater Research has an impressive rate of student employment in the field:

David Beard is consulting Archaeologist for the State of Delaware on the *DeBraak* Project in Lewes, Del.

Lee Cox is an Underwater Archaeologist for the Philadelphia Maritime Museum.

James Delgado is Maritime Historian for the National Park Service.

Kevin Foster is an Assistant Curator at the Mariner's Museum in Newport News, Va.

Wes Hall is employed as Research Associate at Tidewater Atlantic Research in Washington, N.C.

Dave Moore works as an underwater archaeologist

in Florida.

Stuart Morgan is a Curator at the Peabody Museum of Salem, Ma., and Assistant Editor of the *American Neptune*.

Bill Morris is Assistant Director of the Yorktown Shipwreck Archaeological Project in Yorktown, Va.

Rob Reedy is Project Archaeologist on the *Whydah* Project off Cape Cod, Ma.

Brad Rodgers is Assistant Archaeologist of the Program in Maritime History and Underwater Research here at ECU.

Bruce Terrell is at the Hampton Roads Naval Museum.

Wilson West is Curator of the U.S.S. *Nautilus* Museum in Groton, Ct.

In November 1985, the Underwater Archaeology Branch of the North Carolina Division of Archives and History removed a cypress dugout canoe from Lake Phelps, a shallow (average depth is 2 - 3 feet) lake situated on the North Carolina coastal plain amid what was once part of the Great Dismal Swamp. Since then, 3 additional canoes have been recovered, and others located.

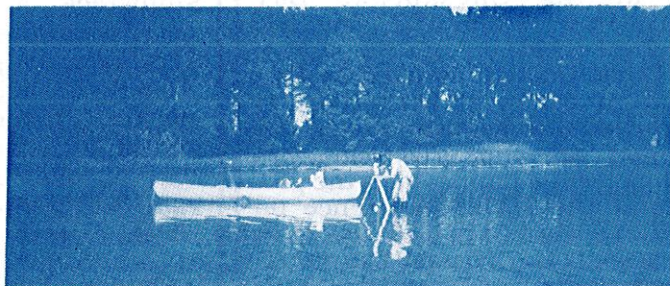
This past fall, second-year graduate student Kaea J. Morris directed a project to survey and record the Lake Phelps dugout canoes. Working in cooperation with Richard Lawrence of the Underwater Archaeology Branch, Morris led a team of students and volunteers from several states. Rita Folsie, also a second-year student in the Maritime Program, was Assistant Archaeologist on the project.

The 3-week project located 18 additional canoes, bringing to 22 the number of dugouts found in Lake Phelps to date. Time allowed for the careful investigation of 14 canoes. These were excavated, measured, and photographed in situ, and then backfilled. A limited number of artifacts were recovered and are being analyzed by Dr. David Phelps of the ECU Anthropology Department. The

Lake Phelps Canoe Project

Underwater Archaeology Branch took wood samples for identification and dating.

According to Morris, Lake Phelps probably represents the largest single concentration of well-preserved dugout canoes yet found. Plans are being drawn for the continued study of this important find. The 1986 project was a joint effort by the ECU Maritime Program, the North Carolina State Parks System, the North Carolina Division of Archives and History, and the North Carolina Maritime Museum in Beaufort.



Kaea Morris uses an EDM to plot canoe locations during Lake Phelps survey.

papers and publications

ECU staff and students presented 7 papers at the 1986 Conference on Underwater Archaeology in Sacramento, California;

— Agranat, Brina J. "The Riddle of the *Peacock* Naval Policy and Politics in the Early-Mid 19th Century."

— Beard, David E. "U.S.S. *Baron de Kalb*: The Archaeological Potential of an Armored Civil War Gunboat."

— Bequette, Kathryn, E. "C.S.S. *Chattahoochee*."

— Foster, Kevin. "Marine Steam Engines: A Typology."

— Morris, John William III. "Second World War Wrecks of North Carolina: A Potential Study Collection."

— Stephenson, Richard A. "The Interface Between Submerged Archaeological Sites and Environmental Conditions."

— Terrell, Bruce G. "The James River Bateau: Tobacco Transport in Virginia."

Other publications this past year include:

— Rodgers, Brad. "The Beaver Island Incidents." *Anchor News* 12.1 (Jan./Feb.).

_____. "The Iron Sentinel's Final Years." *The Journal of Erie Studies*, Fall 1986.

— Still, William N., Jr., et al. *Captains of the Old Steam Navy*. Annapolis, Md.: Naval Institute Press, 1986.

_____, et al. *Why the South Lost the Civil War*. University of Georgia Press, 1986.

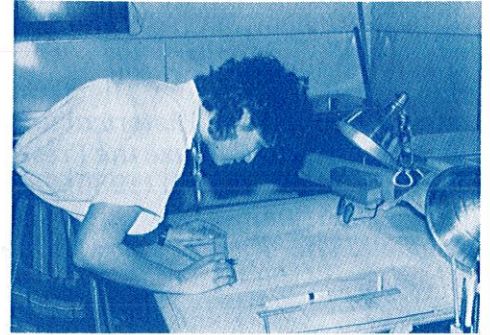
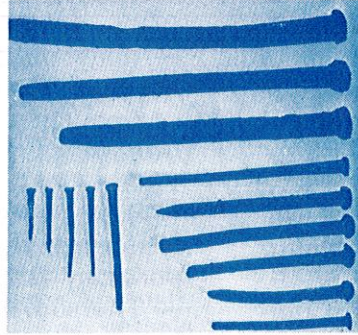
Conservation Lab

The Conservation Lab is back in action. Assistant Archaeologist Brad Rodgers directed the renovation of the conservation lab, located in the basement of Ragsdale Hall. The facility allows artifacts recovered through ECU Projects to be conserved using methods like electrolytic reduction, treatment with polyethylene glycol (PEG), sucrose, microcrystalline wax impregnation, and dehydration by methanol.

Currently, artifacts from the Swansboro River Project and the Blossom's Ferry vessels in the Northeast Cape Fear River are undergoing treatment. Conservation of artifacts recovered from the

C.S.S. *Chattahoochee* in Georgia's Chattahoochee River is 90% complete. Preparations are underway to return the *Chattahoochee* artifacts to the Confederate Naval Museum in Colum-

bus, Georgia for permanent storage and display. A 3 lb. English cannon dating the 18th century given to the Program by Dr. John Sands is also being conserved at the ECU lab.



Left, artifacts from the C.S.S. *Chattahoochee*. Right, graduate student Kaea Morris draws artifacts from the Blossom's Ferry vessels for publication.

Roanoke

Survey 1986

In August 1590, Governor John White returned to Roanoke Island, N.C. to find the second of Sir Walter Raleigh's colonial settlements abandoned and in ruins. Only the word "CROATAN" carved on a tree, remained to offer a clue to the colonists' disappearance. Gordon Watts, Director of Underwater Research at ECU, believes that the original colony site has been inundated due to erosion processes and a documented rise in sea level. With a grant from the America's 400th Anniversary Committee the ECU Maritime Program has been searching for the so-called "Lost Colony" beneath the waters of Roanoke Sound.

A reconnaissance survey conducted in 1983 identified priority areas for future survey activities. Watts returned in the fall of 1985 with maritime graduate students Kathryn Bequette and Bill Morris.



Gordon Watts and Bill Morris monitor survey instruments aboard the Program's *Privateer* during the search for Sir Walter Raleigh's Roanoke Colony.

Utilizing a side-scan sonar and proton precession magnetometer, the ECU team surveyed portions of 8 high-probability areas in Roanoke Sound and Shallowbag Bay. During the last 2 days of the 3-week project, archaeologists donned SCUBA gear and investigated several targets identified by the remote sensing survey. The *Preliminary Report on the Search for the Site of Sir Walter Raleigh's Roanoke Colony* was published in January 1986.

This past summer, students in the ECU Field School in Maritime History and Underwater Archaeology continued the search

for the Lost Colony, with remote sensing and diver surveys. A historic streambed identified during the project may yield significant clues.

The staff and students of the Maritime Program are currently analyzing the field survey data. The results will assist Program archaeologists in planning future activities.

The staff and students of the Program in Maritime History and Underwater Research offer their best wishes to Mildred Still for a healthy and speedy recovery.

Maritime Theses

The following is a list of theses by students in the Program in Maritime History and Underwater Research, and the Department of History, on maritime and naval topics. They may be ordered through the Interlibrary Loan system at your local university or public library from Joyner Library, East Carolina University, Greenville, N.C.

- Bray, William J., Jr. *The Career of the C.S.S. Rappahanock*. (1975)
- Cox, J. Lee D., Jr. *The Delaware and Susquehanna Rivers: A Historical and Archaeological Investigation to Analyze the Presence of Submerged Cultural Resources*. (1985)
- Delgado, James P. "Great Leviathan of the Pacific": *The Saga of the Gold Ruch Steamship Tennessee*. (1985)
- Dressel, Barry L. *The Early Career of Commodore James Biddle*. (1972)
- Frye, Barry E. *Privateers and Letters of Marque in North Carolina During the American Revolution*. (1980)
- Gutierrez, Joseph A., Jr. *Confederate Naval Ordnance, 1861-1865*. (1977)
- Herron, Richard D. *Chesapeake Bay Privateer-*

ing During the American Revolution: The Patriots, the Loyalists, and the British. (1985)

- Jennette, Alexander T. *Consuls and Commodores: The Initial Unsuccessful Campaign Against the Barbary Pirates, 1801-1803*. (1985)
- Morgan, W. Stuart, III. *The Commerce of a Southern Port: New Bern, North Carolina, 1783-1812*. (1985)
- Rodgers, Bradley A. *The Iron Sentinel: U.S.S. Michigan 1844-1949*. (1985)
- Schneller, Robert J., Jr. *The Development of Dahlgren's Heavy Cast-Iron Smooth-Bores and Their Adoption by the Navy*. (1986)
- Scott, Ralph Lee. *Welding the Sinews of War: A History of the North Carolina Shipbuilding Corporation*. (1979)
- Thorson, Bradley D. *Origins and Early Development of the North Carolina Division of Commercial Fisheries, 1822-1925*. (1982)
- Watson, Phyllis A. *John Humphrey Small and the Development of the Atlantic Intracoastal Waterway, 1899-1921*. (1971)
- West, W. Wilson, Jr. *The U.S.S. Tecumseh*. (1985)

1986 Summer Field School

Each year, East Carolina University offers a Summer Field School in Maritime History and Underwater Archaeology. The Course attracts graduate and advanced undergraduate students from all over the United States. Students receive a basic introduction to American maritime history, ship construction, underwater research techniques, coastal processes, and related subjects. During the first two weeks students stay on campus for classroom lectures and pool training sessions. Activities then shift to the project site where students gain hands-on experience in the field.

The 7 students and 3 staff members in this year's

summer field school took to the water to continue the search for Sir Walter Raleigh's Roanoke Colony. Students participated in magnetometer surveys of a large area in Roanoke Sound, and in follow-up dives on remote sensing "targets." Divers made visual searches, swimming lane corridors in the Sound. Students also practiced underwater mapping skills, and used an underwater dredge. Although no firm evidence of the colony was found, several possible targets were eliminated. The survey located the possible remnants of an historic streambed, which Project Director Gordon Watts feels may provide a valuable clue to the whereabouts of the Roanoke Colony.

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