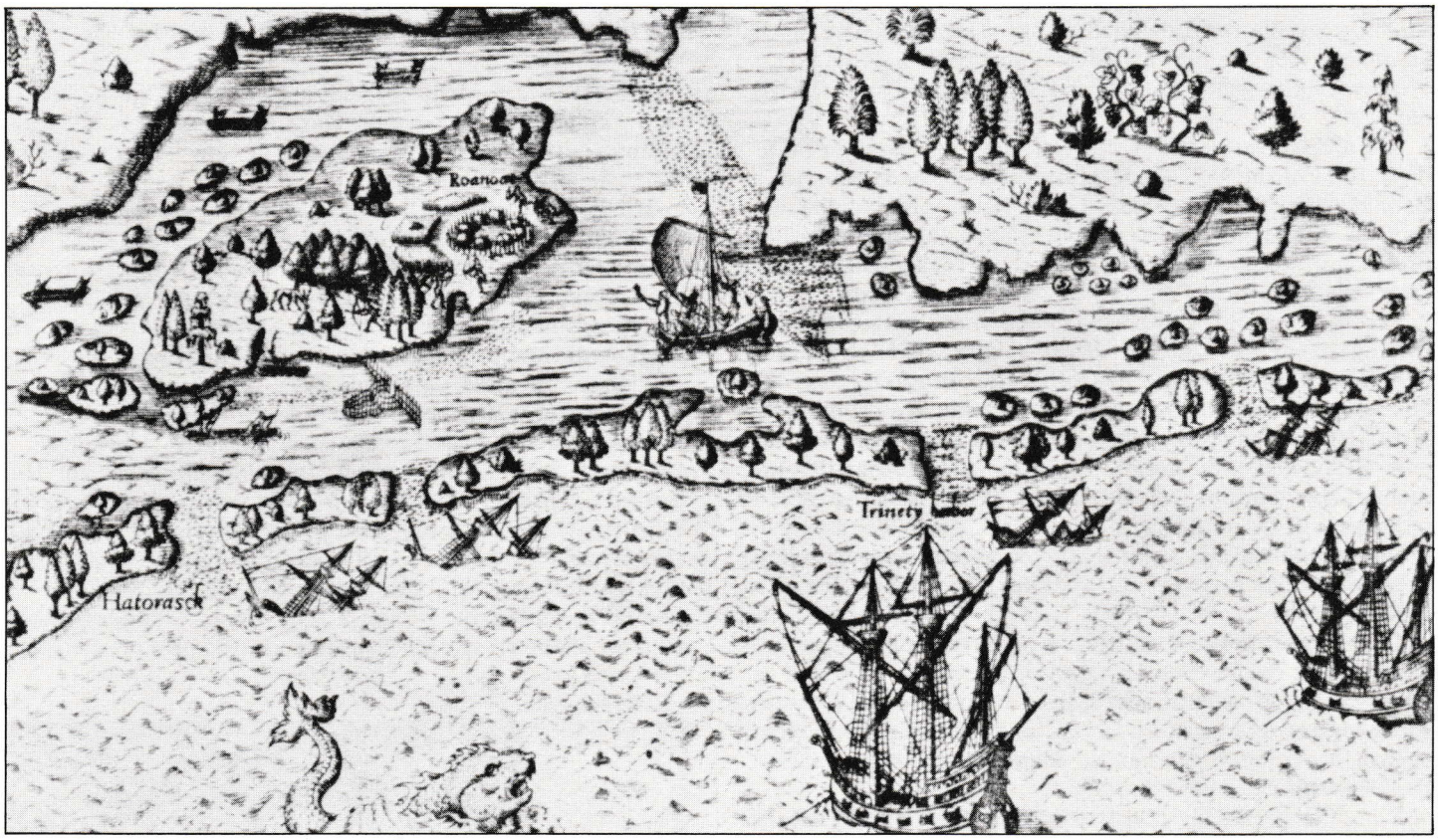
UNC Sea Grant

June/July, 1984

COASTWATCH



A Theodor de Bry drawing of a John White map

For 400 years, we've wondered,

speculated and fantasized about the fate of Sir Walter Raleigh's Lost Colony. What happened to the people John White left behind? Historians and archaeologists have searched for clues. And still the answers elude us.

Some people have filled in the gaps with fictionalized accounts of the colonists' fate. But experts take little stock in the legend of Virginia Dare growing up to become an Indian princess. Or, the one about the Lumbee Indians being descendants of the colonists.

Only a few people even know that Raleigh sponsored two previous expeditions to Roanoke Island. Or that those expeditions paved the way for the colonies at Jamestown and Plymouth.

This year, North Carolina begins a three-year celebration of Raleigh's voyages and of the people who attempted to settle here.

Coastwatch looks at the history of the Raleigh expeditions and the statewide efforts to commemorate America's beginnings.

In celebration of the beginning

In July, the tiny town of Manteo will undergo a transformation. In the middle of its already crowded tourist season, it will play host for America's 400th Anniversary. Town officials can't even estimate how many thousands of people will crowd the narrow streets. But, they say, it's going to be a big celebration.

From now until 1987, North Carolina is celebrating the beginning of English America. The three-year commemoration marks the 400 years since the Roanoke voyages sponsored by Sir Walter Raleigh. The party begins on the 400th anniversary of the first expedition and ends on August 18, 1987, with the 400th anniversary of Virginia Dare's birthday.

It's a celebration that's been at least ten years in planning. In 1973 the N.C. General Assembly created America's Four Hundredth Anniversary Committee. John Neville, executive director of the committee, says the group began preparing for the commemoration in 1978. Now, six years later, the celebration reaches beyond Dare County.

Across the country, advertisements have touted the upcoming events in *Better Homes and Gardens, The Smithsonian, Natural History* and *Southern Living*. Newspapers from as far away as Alaska, California and Great Britain have published articles featuring the 400th.

A television mini-series is being produced, a commemorative stamp will be issued, and more historical writings will be published.

On a smaller scale, plans call for each North Carolina county to hold local events to honor the nation's English roots.

The scope of the celebration has required coordination between state, county and local 400th committees, as well as coordination of events scheduled in England. The state-sponsored events actually began in April with the dedication of a plaque at Plymouth, England, to commemorate the first expedition's departure.

The official opening of the commemorative period is July 13-15 with the festivities taking place in Manteo.

Plans for the three-day weekend include the dedication and opening of the *Elizabeth II* Visitor Center, the commissioning of the ship, an Elizabethan fair, and the largest silent fireworks display in history. (The fireworks will be "silenced" to avoid interfering with "The Lost Colony" outdoor drama.)

State, national and international dignitaries will be on hand for the festivities. Princess Anne of Great Britain is scheduled to join Governor James B. Hunt Jr. on Friday, July 13, to officially open the celebration. On Saturday, Walter Cronkite will lead a flotilla of boats into the Manteo harbor.

And will President Reagan make an appearance at the nation's birthplace? Well, we'll know by July 13.

With that guest list, it's no wonder the town of Manteo wanted to spruce up its look. Five years ago, Manteo's Board of Commissioners made a commitment to ready the town for the anniversary celebration, says Mayor John Wilson. Then, the town's waterfront was in a state of disrepair. By contrast, at the turn of the century more than 100 shops and businesses operated in the downtown area. The 400th provided the impetus to return that "healthy mercantile bustle" to the town, says Wilson.

In 1982, the Manteo commissioners adopted a $10 million plan to redevelop the waterfront. After an 18-month search, the town found a developer willing to take the risk.

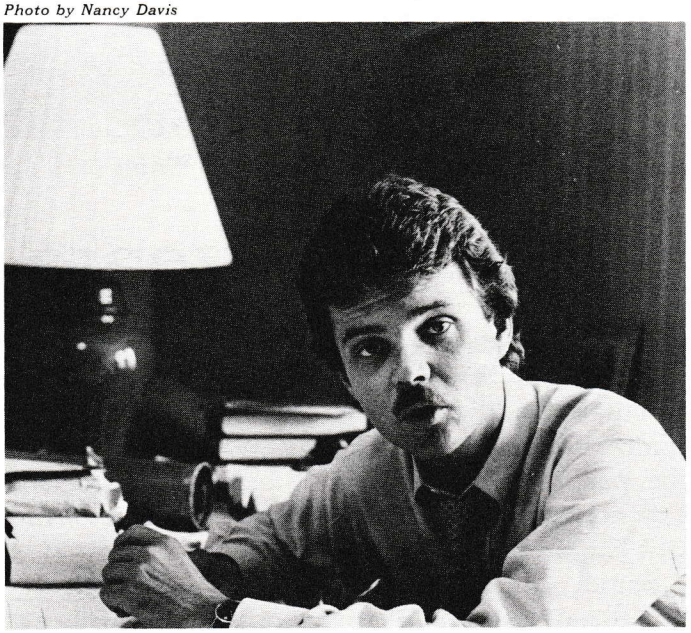
Not all the townspeople supported the redevelopment. "I think the idea that the town would change this dramatically in such a short period of time was a source of fear," says Wilson.

The plan called for three major redevelopment sites. To date, only one of those is under construction and should be completed sometime this summer. The site mixes residential and retail units, including a restaurant overlooking the water, sandwich shops, a bookstore, a candy store, and an English antique and gift shop. Above the shops will be 36 condominium units.

Wilson says the shops will remain open year-round because Manteo is a year-round residential community.

Dare County also is doing its part to prepare for the festivities. Herbert "Hubby" Bliven, chairman of the Dare County 400th Advisory Committee, says the three-day event has meant coordinating police, medical, sanitation and traffic crews. But Bliven says that all the "behind-the-scenes" work is going to pay off. "We have a chance to show the rest of the state, the country and the world our heritage

Photo by Nancy Davis



Manteo Mayor John Wilson

and how our history has evolved."

But some Dare County merchants are worried that the festival may present problems. The events are scheduled during the peak travel season, when most of the available lodging on the Outer Banks is already filled to capacity and the two-lane road into Manteo is bumper-to-bumper.

The merchants felt the celebration should have been scheduled for the off-season. Unfortunately, history didn't cooperate, says John Bone, executive vice president of the Outer Banks Chamber of Commerce.

How many people does Bone think will converge on Manteo? That's anybody's guess, he says. But he adds that the merchants will be ready. "It's just another three-day weekend. Crowds in the summer are a fact of life here."

The crowd may be an unknown, but there are only a set number of rooms to be had in the county. A market study conducted by the Chamber of Commerce estimates a capacity for between 60,000 and 77,000 overnight visitors.

To alleviate some of the pressure for lodging, Rich Novak, Sea Grant's recreation specialist in Manteo, has been working with area residents interested in turning their homes into bed and breakfast lodging. Novak says this alternative offers travelers homey lodging and a light breakfast at reasonable prices. For more information about bed and breakfast businesses, contact Novak at 919/473-3937.

Whether visitors come for the day or spend the week, John Bone and the Chamber of Commerce have one thing in mind. "Our main goal is for people to come to the festival, be attracted to the area and return," says Bone.

Charles Heatherly, Director of the N.C. Division of Travel and Tourism, says his department has advertised the three-year celebration in Florida, Ohio, New York, Pennsylvania, New Jersey and the suburban Washington, D.C. areas. But, the ads are scheduled to encourage travelers to visit in the spring and fall.

Neville is quick to point out that while July 13-15 is the big kickoff, the celebration will continue three more years. The 1985 festivities will focus on the 400th anniversary of the landing of Ralph Lane's colony. 1986 will be the year of the Indian. And in 1987, the state will close out the commemorative period by celebrating Virginia Dare's 400th birthday.

By 1987, the state and its residents may tire of celebrating events that happened 400 years ago. But at least they'll be a little more educated about their beginnings here in English America.

And, according to Manteo Mayor Wilson, it's about time. "History books give the Roanoke colonies nothing more than a paragraph. But we are first. We are before the others. Every school child across the country knows of the Pilgrims and Plymouth Rock. Everyone knows of Jamestown. And by the end of 1987, every school child in this country is going to know that Roanoke Island and the Raleigh colonies is, in fact, where it all started."

—By Nancy Davis

Photo from Renaissance Development Co., Inc.

Rendering of the redevelopment of Manteo waterfront

The Roanoke voyages

There's more than a Lost Colony

For most people, Sir Walter Raleigh's colonization attempts hold a vague memory of a colony lost, but never found, and a child named Virginia. Ask folks what Ralph Lane, Arthur Barlowe and Sir Richard Grenville mean to Raleigh's efforts and they draw a blank.

But Raleigh sponsored three voyages to North America—one for exploration and two for colonization. All of these efforts involved a small island that today we call Roanoke.

Under a charter granted by Queen Elizabeth I, Raleigh's first expedition of two ships set sail from Plymouth, April 27, 1584, led by Philip Amadas and Arthur Barlowe. These explorers were charged with finding a suitable site for a subsequent colony.

April 1584—Amadas and Barlowe set sail from Plymouth, England

Utilizing the circular wind patterns of the Atlantic Ocean, the expedition sailed south to the Caribbean, then north with the Gulf Stream. On July 13, 1584, the voyagers anchored off the Outer Banks, calling their anchorage Port Ferdinando after their pilot, Simon Ferdinando. They claimed the nearby land for their queen.

The English established friendly contact with the native Algonkian Indians soon after their arrival. They traded items such as clothing and tin cups for the Indians' deerskins and food.

After a trust had been built between the Indians and English, Barlowe and seven other men took a small boat to visit an Indian village on an island called "Roanoak" about 20 miles away.

No one knows how far the English explorers traveled during the 1584 expedition. Barlowe, who recorded a brief history of the voyage, wrote of an "inclosed sea" (probably the Pamlico Sound) and numerous islands. He also wrote extensively about the abundance of fruit, wild game, fish and forestland.

In August, the 1584 expedition set sail for England, taking two Indians,

Raleigh never sailed on the voyages he sponsored

Manteo and Wanchese. And, if Spanish reports are accurate, the ship commanded by Amadas stopped at Chesapeake Bay, where it met with hostility from the Indians there.

As a result of this expedition, Raleigh was knighted in 1585. The land discovered was named Virginia in honor of the virgin Queen Elizabeth and Raleigh was authorized as its lord and governor.

In April of 1585, Raleigh launched another expedition that included seven ships and 600 men under the command of Sir Richard Grenville. Also aboard were Ralph Lane, the governor of the colony; John White, an artist; Thomas Harriot, a scientist; and Manteo and Wanchese.

April 1585—Grenville and Lane set sail from Plymouth, England

In the fight against the Spanish, Raleigh had charged this expedition with establishing a colony and a military outpost. The 1585 colonists were soldiers and adventurers who hoped to find quantities of gold and silver like the Spanish had found in Central and South America.

The Grenville expedition arrived off Cape Fear near the end of June. Then they explored the Pamlico Sound in small, shallow-draft boats. During this exploration, Grenville burned the Indian village, Aquascogoc, to force the return of a missing silver cup.

After this unfortunate incident, Grenville moved north to establish a colony on Roanoke Island in late July. One month later Grenville returned to England, leaving behind 107 men, a newly completed fort and the promise of return by Easter to replenish supplies.

In the fall, Lane sent an exploration party north to the Chesapeake. Some historians believe this party overwintered there before returning to Roanoke Island in the spring. During the spring of 1586, Lane also detached men to explore the Albemarle Sound and the lower waters of the Chowan and Roanoke Rivers.

Through drawings and notes, White and Harriot recorded much of what the colonists saw as they explored.

White made detailed drawings of the Indian villages. And together they drew the first map of North America, depicting the area between the Neuse River and the James River and inland to the head of the Albemarle Sound.

Unfortunately, much of their work was lost as they were leaving to return to England. Some of White's drawings survived to be displayed in the British Library in London. And Harriot wrote *A briefe and true report of the new found land of Virginia*, published in 1588 as the first English book about North America.

By the spring of 1586, Lane's supplies were scarce. No relief vessel had arrived from England. The soldiers had not bothered to plant fall crops, planning instead to depend on trade with the Indians for their food. But the English items of trade no longer presented an allure for the Indians. And, the Indians did not have enough food stored to regularly feed a colony of 100 men.

June 1586—Drake transports Lane colony back to England

Relations with the Indians soured. While Manteo remained a friend to the colonists, Wanchese turned foe. It is believed that he may have incited Wingina, king of the Roanoke Indians, to plan an attack on the English. Lane learned of the plot. After entering the Indian village under false pretense, Lane killed Wingina.

In June of 1586, Sir Frances Drake stopped at Port Ferdinando with supplies, equipment and men for the colony. Drake offered Lane a small ship to explore the Chesapeake for a better place of settlement. But a hurricane struck, sending many of Drake's smaller vessels to a watery grave and others fleeing to England. After the storm passed, Drake had little to offer Lane except passage for the colonists back to England. Lane accepted the offer.

Many historians believe that Lane left behind three or four men who were exploring the Chowan River when the

Elizabeth I provided limited funds for Raleigh's voyages

colonists departed. These men may have been the first "lost colony."

Just two weeks after the Lane colony departed with Drake, Grenville arrived with supplies. Finding the colony site deserted, Grenville placed 15 to 18 men at the fort and returned to England.

Although Raleigh was discouraged by the return of his first colony, he wasted no time in collecting a third expedition. The 1587 colony included women and children, and its pursuits were to be more agricultural than military. The colonists financed much of this expedition, probably in return for 500 acres they were each promised in the document that incorporated the "cittie of Ralegh in Virginia" under Raleigh's trust. John White was appointed governor.

July 1587—White colony forced to make Roanoke Island its home

The destination of this colony was to be Chesapeake Bay and what we today consider as Virginia. White did plan to stop at Roanoke Island to pick up the men left by Grenville. When White and 40 of his men disembarked to search for the Grenville party, Ferdinando, now in command of the vessels, told his sailors not to bring back any of the colonists except White. It seems Ferdinando had plans for waylaying several Spanish ships traveling in his return path.

Thus the third expedition was forced to make Roanoke Island its home. Of the fifteen men left by Grenville, only the skeleton of one man was found—thus a second lost colony arises.

The fort had been leveled and the houses abandoned. White immediately had the colonists restore the fort and repair the houses.

In a month's time, White returned to England for supplies. With his departure came the beginning of a mystery that has intrigued archaeologists and historians for years—the 1587 colony that was lost, but never found (see story, page 7).

—By Kathy Hart

Ship sails through history

A foul stench rises from the sweaty bodies of the 50 passengers crowded in the dark hold of the 70-foot English vessel. The odor, made worse by molded bread and stale ale, cannot be eased by opening a window. The gun ports have been caulked shut for the two-month voyage to North America.

The passengers aboard the *Elizabeth*, one of seven vessels carrying colonists to Roanoke Island in 1585, were adventurers. They sought wealth, a possible North-West passage to the Orient and a military outpost.

Beginning this July, the events of Sir Walter Raleigh's second expedition to Roanoke Island will be recreated in Manteo on an authentic replica of the *Elizabeth*. Visitors can climb aboard the *Elizabeth II* and listen to costumed "living history" guides tell of their 16th century voyage.

Special care was taken to design and construct the *Elizabeth II* just like her prototype. Architect William Avery Baker, an expert of 16th and 17th century ships, was first commissioned to design the vessel. When he died in 1981, his work was resumed by Stanley Potter. By June, 1982, everything was shipshape when O. Lie-Nielsen of Maine began the construction in Manteo.

Like her 1585 counterpart, the *Elizabeth II* is completely handmade. Shipwrights cut each board by hand. And instead of using nails and screws, they joined the beams, frames and decks by wooden trunnels (pegs) and spikes. After 15 months of painstaking work, the craftsmen launched their finished product—a sea-blue, red and white replica sporting three towering masts and weighing more than 95 tons.

Stepping aboard the *Elizabeth II* is like stepping back 400 years into history. At the stern is the small captain's quarters with only a bedroll and a desk. At the bow, there is a beakhead that the seafarers used as a toilet. The remaining deck is home and workplace for the 25 or so mariners on the journey.

On the *Elizabeth*, there were about 12 categories of crewmen, says Lokey Lytjen-Collins, historian for the *Elizabeth II* Historic Site. The captain, believed to have been Thomas Cavendish, was in charge of the ship, its navigation and passengers. Often, a captain's mate and a navigator assisted him. Next in command was the pilot, Simon Ferdinando, who steered the ship. Petty officers, or boatswains, maintained the rigging and sails. Seamen and

Photo by Nancy Davis

Horace Whitfield, captain of the Elizabeth II

yonkers, the younger sailors, also worked with the riggings and on the deck. A ship's boy, or grommet, helped on deck.

A carpenter, cook and barber-surgeon took care of daily chores and problems, Lytjen-Collins says. The lowest mariner, the swabber, cleaned the deck and beakhead as punishment for not carrying his weight on the ship or for lying.

Below the deck of the *Elizabeth II* is the hold, the area where the passengers stayed. Underneath it, provisions, anchors, farming and building equipment, ammunition and a cannon were stored.

These hearty seafarers slept on straw ticks or mattresses, using a coil of rope for a pillow. A small fireplace toward the bow warmed the men and cooked them simple meals.

For dinner, they ate hardtack (sea biscuits) and salthorse (salted beef or pork), says Lytjen-Collins. But the hardtack usually became damp and molded, and the salthorse, full of maggots. Their ale tended to be green or stale after the first keg because the supplier knew they would be far out to sea and could not exchange it. Occasionally, the menu was supplemented with bread, cheese, honey and fresh fruits picked up in ports.

Entertainment for mariners on the *Elizabeth* included games of cards or dice, says Lytjen-Collins. Passengers may have taken along musical instruments such as tabors or flutes to bide their time. Because most of the voyagers were

of the lower classes, they did not read.

Evidence shows that the men, loyal to the Church of England, attended religious watches in the morning and evening. The captain led the daily prayers and hymns on the *Elizabeth*.

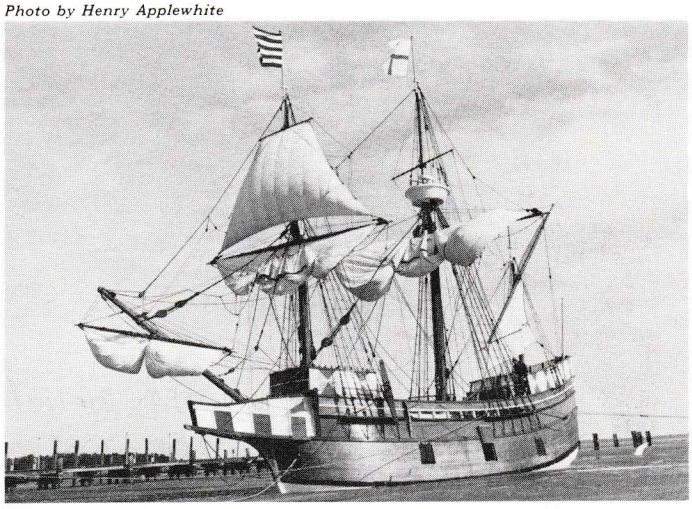
Unlike her 16th century double, the *Elizabeth II* will travel in and out of ports all along the North Carolina coast.

"One of the challenges to me is that we're going to encounter some of the same natural forces that they did 400 years ago," says Horace Whitfield, the ship's captain and manager of the state historic site. "I'm going to take that ship everywhere in North Carolina that she's capable of going."

It won't be as easy as it sounds, though, says Whitfield. "We've got to pick our way through 400 years of trash."

—Sarah Friday

Photo by Henry Applewhite



16th century replica will sail N.C. waters

The Lost Colony

Few answers to 400-year question

For almost 400 years, explorers, historians and archaeologists have been trying to solve a puzzle. But, the pieces don't fit. In fact, most of them—117 men, women and children—are missing.

What we know about Sir Walter Raleigh's final expedition to North American is limited. Most of the puzzle pieces come from the records of John White, writer, artist and governor of the 1587 colony.

White writes that the Croatan Indians, led by Manteo, helped the colonists by sharing their knowledge of the area and food. The English showed their appreciation to Manteo on Aug. 13, 1587, by baptizing him and making him a lord. This was the first Protestant baptism and the first granting of an English title in North America.

But not all the natives were as friendly. Hostilities flared with the Roanoke Indians when they killed colonist George Howe. White writes that he and more than 20 men retaliated by attacking the Indians' village a few days later. But instead of finding the Roanokes, they found the Croatans gathering corn. The Roanokes had fled after killing Howe.

In August, White left the island for supplies, but not before his granddaughter, Virginia Dare, the first English-American child, was born on the 18th. Soon after, another child, whose sex and first name remain unknown, was born to Margery and Dionas Harvey.

White's accounts tell us little about the lifestyle of the 1587 colonists. Those puzzle pieces come from historians and archaeologists.

Historian Lokey Lytjen-Collins says the colonists intended to make Roanoke Island more of a town in 1587, depending more on its own agricultural endeavors. Raleigh even gave them a coat of arms and a motto saying, 'Through harmony, small things grow.'

Historians believe the colonists lived in story-and-a-half or two-story dwell-

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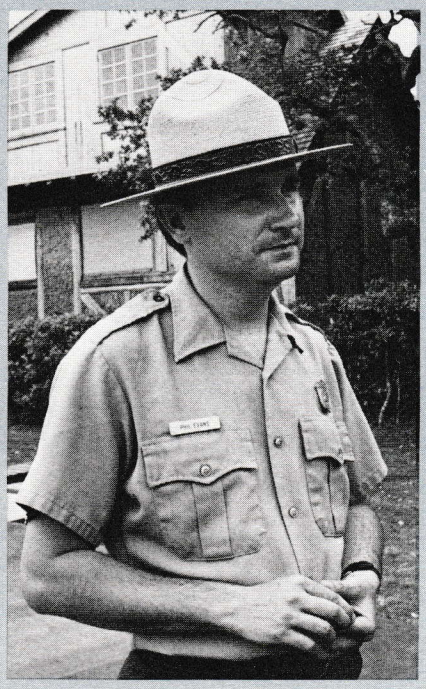
CROATOAN — *White's only clue to his lost colony*



"My belief is that, for the most part, the majority of the colonists made good their original desire or intention to go to the Chesapeake Bay."

—Phil Evans

ings that resembled typical English homes—thatched-roof, half-timber or log structures.

The colonists brought tiles and bricks, but these were usually reserved for the governor's house or a church, says William Powell, professor of history at the University of North Carolina at Chapel Hill.

The colonists' lifestyle was probably simple, as it had been in England. Powell, who has done extensive research in England on the families of the Lost Colony, found that most of the men were laborers—tilers, bricklayers, farmers, cobblers. Powell says that some of them may have been graduates of Oxford and Cambridge universities.

The colonists ate and drank from simple pottery and wore plain dresses and breeches. They entertained themselves with activities typical of the day such as dancing, bowling, playing stringed and wind instruments and children's games.

To protect against possible Spanish attack, the colonists had coats of mail, guns, axes and a cannon, says Powell. For sport, the English used their weapons to hunt rabbits, birds and deer.

Fall and winter passed without word of John White and the needed supplies. At the time of White's return to England in 1588, friction had intensified with Spain. The Spanish king was organizing his famous Armada for a naval attack on England. Elizabeth ordered all ships to remain in port for her country's defense. But White told Raleigh of his urgent need to return to the colony, convincing him to secure two small ships from Elizabeth—the *Brave* and the *Roe*.

But, White was not in command of the ships and they engaged in privateering on the way. The *Brave* was defeated in an attempt to overtake a French vessel, so both ships retreated back to England.

Raleigh had since turned his attentions to South America, hoping it would provide the wealth that Roanoke Island had not, says Lytjen-Collins.

In 1590, a year-and-a-half after the ruin of the Armada, White finally was able to sail to North America on a trip sponsored by merchants. On August 15, nearly three years after his departure, White set foot on the island again.

The next day, White's hopes were raised when he spotted smoke. White says the "smoake put us in good hope that some of the Colony were there expecting my returne." But no one was found.

Soon afterward, White found the letters *CRO* carved on a tree on a bank at the north end of the island. He proceeded from there to the settlement site—only to find it deserted and "taken downe." But, White found another clue left by the colonists—the word *CROATOAN* carved on one of the entrance posts to the palisaded village.

Before White left in 1587, he asked the colonists to carve their destination on a tree if they left the island. If they had to leave because of an attack, they were to add a Maltese cross.

Thinking the colonists had retreated to the village of the Croatans, White and the mariners went back to their boats with the intention of sailing to Hatteras to look for them. But a storm blew up and the captain insisted that they go on to the Caribbean or back to England. Having no choice, White returned to England, never to see Roanoke Island or his family again.

Theories of the fate of Raleigh's Lost Colony abound. But none can be proved. The theory of Phil Evans, historian and park ranger at Fort Raleigh National Park in Manteo, is typical of most.

"My belief is that, for the most part, the majority of the colonists made good their original desire or intention to go to the Chesapeake Bay." And, "unfortunately, were just caught up in the vastness of the wilderness and the hardships that would come in living stranded on a completely different continent with a socially and culturally different group of people."

Powell says, "They may have gone to Croatan before going to Virginia, or maybe divided." There also is speculation that the colonists traveling north were killed by two bands of Indians.

"I think archaeology will be the answer," Powell says, adding that the colonists were bound to have taken some metal or other objects on their trek.

The mystery surrounding the colony's disappearance has whetted the imagination and curiosity of many people, but it wasn't until the late 1800s that any serious research was done. About 50 years later, in 1941, Congress granted the National Park Service care of the fort.

After World War II, National Park Service archaeologist Jean Carl Harrington undertook a thorough investigation of the area encompassing the 1585 fort. His work resulted in the reconstruction of the fort on what he believes to be original site. And he

found indications of houses where the colonists may have lived. Researchers with the National Park Service continue to search for clues today.

The 400th Anniversary Committee also is sponsoring research on the Lost Colony. David Phelps, an archaeologist at East Carolina University, is searching for the Indian villages. And Gordon Watts, co-director of the maritime history and underwater archaeology program at ECU, will conduct a series of underwater tests in the late summer or fall of this year.

Watts believes that because there has been a considerable amount of erosion and a 4-foot rise in the tide during the past 400 years, that the former settlement may be located in the sound. One-third of a mile off the north end of the island, Watts and his crew will scan the bottom of the sound with sonar and attempt to detect metals, brick footings and the like with a proton-precession magnetometer. If sufficient data is found, actual diving and more testing will take place next year.

Like Watts, many hope that one day the pieces of this giant puzzle will be found. But others, intrigued by the mystery, don't want it to end.

—By Sarah Friday

Photo from UNC News Bureau

William Powell

Theodor de Bry engraving of a John White drawing

Roanoke chieftain

Sifting native soils

Beneath tilled Carolina farmland rest the secrets of an Indian civilization here long before the British were even aware of the New World. Today, much of that civilization is as lost as the Roanoke colony of 1587.

But with the help of modern archaeology, we may find some clues. As part of the 400th Anniversary Celebration, archaeologist David Phelps is sifting the soils of coastal Carolina in search of some of the Indian villages the English visited 400 years ago. His work is sponsored by the American Quadricentennial Corporation with funds from the Z. Smith Reynolds Foundation.

Much of what we know of the Indians comes from colonists' accounts and from John White's drawings. Phelps has uncovered additional information, piece by piece.

The people of the northern tidewater zone of North Carolina in the 16th century are known collectively as the Carolina Algonkians, says Phelps. They were divided into about 16 societies or separate sociopolitical units, each governed by a king.

While popular myth portrays Indians as savages on the verge of starvation, the Algonkians were a well-developed agricultural society. In fact, says Phelps, the colonists might have starved if it hadn't been for the Indians' farming expertise. They donated food to the hungry Englishmen and taught them how and what to plant.

"English agricultural practices didn't lend themselves to the North Carolina climate. It would have taken a long period of adjustment and trial-and-error had they not had the knowledge and experience from the Carolina Algonkians," says Phelps.

These days, North Carolina farmers are not only plowing the same fields the Indians used years ago; they're growing the same crops. The English colonists reported the Indians grew corn, beans, squash, pumpkins, gourds, tobacco and sunflower.

The Indians' agricultural system operated on the slash-and-burn method, says Phelps. When the soil of one field was exhausted, they'd move to another, clearing the land by cutting and burning. The Indians probably used a field two to four years before they abandoned it.

When the English arrived, the Indians gave them farmland. But Phelps has a theory that the Indians were donating land that they were already

Continued on next page

planning to abandon.

Recently, Phelps has been excavating the village of Chowanoke on the west bank of the Chowan River in Hertford County. In March 1586, Ralph Lane visited Chowanoke probably the most powerful of the Carolina Algonkian villages.

This spring, Phelps and his crew tested what he believes is the public area of the village where the political and religious buildings would have been. Early findings indicate that much of the evidence is still intact.

The town, which extends for about a mile along the river, was occupied from about 825 to 1644, says Phelps. At least 30 houses, some as wide as 40 feet and as long as 150 feet, housed clans or extended families. On that basis, Phelps estimated that 7,000 to 10,000 Indians lived along the Chowan River in the 1500s.

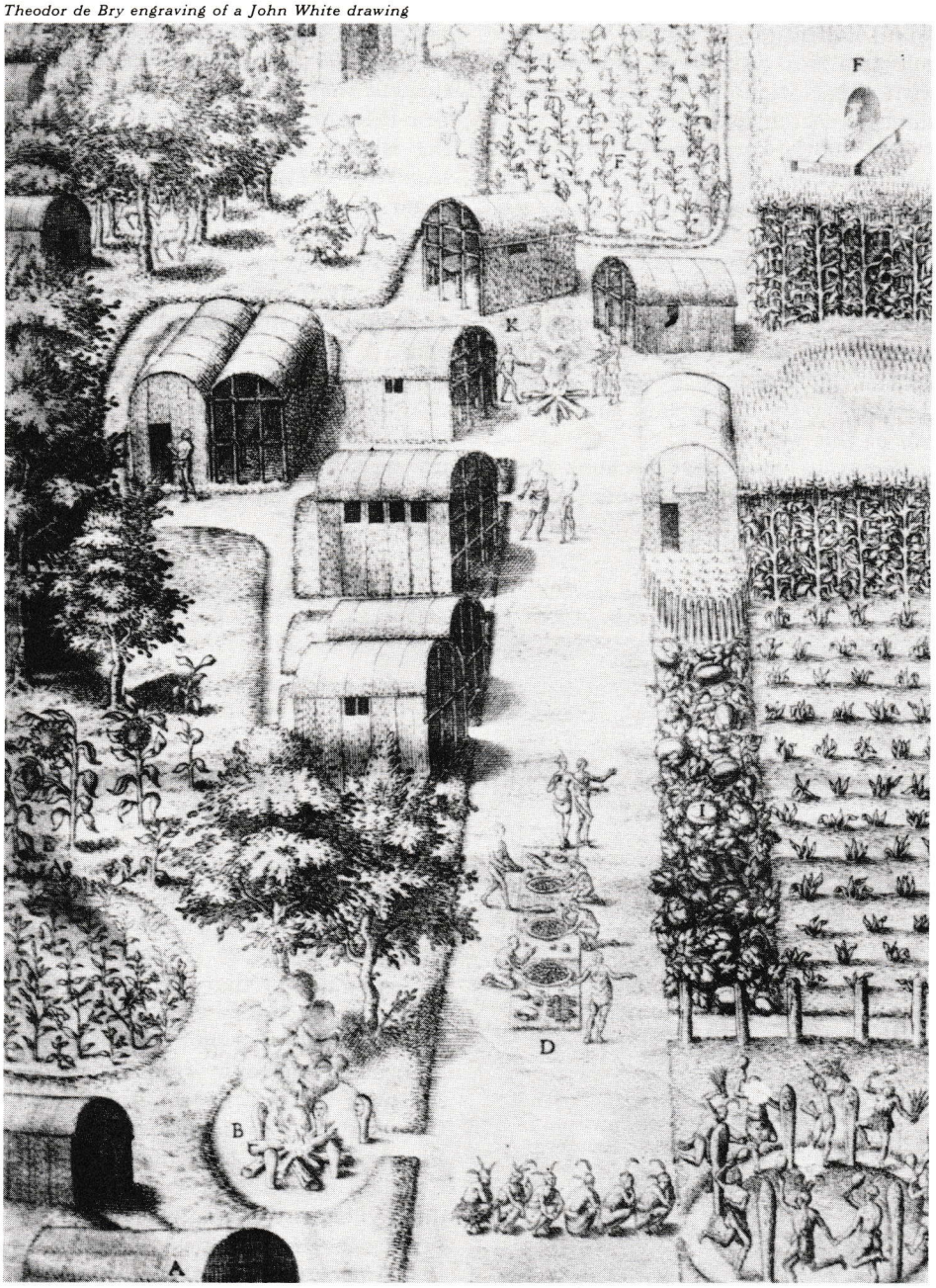
The population of the Chowanoke society was probably higher than other Algonkian societies, says Phelps. The fertile farmland along the Chowan supported greater numbers than the sandy soils of Roanoke Island and the Dare mainland, he explains.

Phelps doesn't have to dig far to find clues of life 400 years ago. Most of the evidence is directly under the "plow zone," he says. In addition to the post patterns of houses, the excavations have uncovered the remains of cooking pots, drinking vessels, weapons, bone tools and ornaments, axes, stone knives and shell beads.

Those Algonkian relics are all that's left now. The first English attempt at a colony may have failed, but English America eventually flourished. The Indians were't so lucky.

—By Nancy Davis

Theodor de Bry engraving of a John White drawing



16th century Algonkian Indian village

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__Marina operator
__Marine recreation
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__State government
__University professor/researcher
__Other _____

THE BACK PAGE

"The Back Page" is an update on Sea Grant activities — on research, marine education and advisory services. It's also a good place to find out about meetings, workshops and new publications. For more information on any of the projects described, contact the Sea Grant offices in Raleigh (919/737-2454). For copies of publications, write UNC Sea Grant, NCSU, Box 8605, Raleigh, N.C. 27695-8605.

Wayne Wescott, marine advisory agent on Roanoke Island, was recently named the Sea Grant Southeast Marine Advisory Service's Agent/Specialist of the Year. Wescott was chosen for his work with the soft-shell crab industry.

When Wescott began his project, only a few commercial fishermen were aware of the profit possibilities in a soft-crab production. But Wescott sold them on the idea of shedding. The bottom line was this: At the beginning of the 1983 crabbing season, the highest recorded price for hard crabs was $1 per pound. At the same time, soft crabs were bringing as much as $2.33 each or $28 per dozen.

Wescott went to work, compiling information, visiting shedding facilities, and presenting workshops. An article in *Coastwatch* on soft-shell crabbing resulted in several hundred requests for information. And his book, *A Guide to Soft Shell Crabbing*, was distributed to over 800 people during the first month after its publication.

In 1983, as a result of the increased interest, more than 100 crabbers began to cull out peelers—a five-fold increase from 1982. Over 50 new shedding facilities were constructed, resulting in an estimated additional $2 million in gross sales of soft crabs.

Now, shedding facilities have been set up in almost all coastal communities in Dare and Currituck counties. In Currituck County, Wescott worked with zoning officials to establish conditional use permits to allow fishermen to build shedding facilities on their property in residential areas.

Wescott says his soft-crab industry project isn't over yet. If you have questions about soft-shell crabbing, contact Wescott at the N.C. Marine Resources Center/Roanoke Island, P.O. Box 699, Manteo, N.C. 27954 or call 919/473-3937.

Michael Orbach, a maritime anthropologist at East Carolina University and a Sea Grant researcher, will teach a course about marine policy at the Duke University Marine Laboratory in Beaufort from July 16 to August 17.

The course will introduce students and marine-policy professionals to the study of marine policy and policy-making. Course participants will trace the history of marine-related organizations, legislation and issues, and their effects on local, regional, national and international policies.

The course may be taken for credit at either Duke University or the University of North Carolina at Chapel Hill. Students may enroll up until the first day of class.

For admissions information, contact the UNC Institute of Marine Sciences, 3407 Arendell St., Morehead City, N.C. 28557 (919/726-6841) or Duke University Marine Laboratory, Beaufort, N.C. 28516 (919/728-2111).

At the North Carolina Marine Resources Center at Fort Fisher, visitors are coming face to face with sharks. The feared fish are at home in their new 17,000-gallon shark tank. And, they're willing to meet the public.

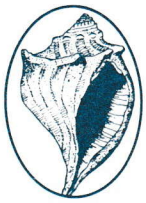
The tank is 28 feet long, 7 feet deep and over 13 feet wide. That makes it one of the largest free-standing fiberglass aquariums in the world, says Jim Lanier, director of the center. Most tanks are made of concrete.

The new inhabitants of the tank will be sharks caught from North Carolina waters. The largest of the eight species to be represented in the tank will be about 5½ feet long.

Lanier says the aquarium will show folks that there's more to a shark than big jaws and big teeth. "We're going to use that exhibit to teach them about the hydrodynamics of how fish swim, about fish physiology, about the value of sharks for research, the value of sharks as food. We're going to capitalize on that interest to teach people an awful lot about the sea."

The shark tank was donated to the center by the Telephone Pioneers of America.

For more information on the new aquarium, call 919/458-8257.



After a hard day's work in the field back in 1587, colonist Ananias Dare probably thought there was nothing better than a hot meal served up in a pancheon and a corrugated bowl.

Not much is known about the Dares or any of the other members of the Lost Colony, but artist Jan Mann has an idea of what the pottery they used may have looked like. She and her husband, owners of Wildflower Pottery in Godwin, N.C., were commissioned by America's 400th Anniversary Committee to recreate 16th-century eating and drinking vessels.

Their work is on display and for sale in many places including the site of the *Elizabeth II* in Manteo and the N.C. Museum of Natural History in Raleigh. If your school or library would like to see some of their work, Jan and her husband have donated a set to UNC Sea Grant for educational loan. The collection includes drinking

Continued on next page

jugs, bowls, pancheons (plates) and other reproductions.

Also, Sea Grant has available a treasure chest of ship artifacts. It includes samples of wood that are similar to those used in building the *Elizabeth II,* spikes, rope, hemp and other nautical pieces.

Both collections can be borrowed from Lundie Spence, Sea Grant's marine education specialist, or from the regional social studies coordinator in your area. The collections cannot be mailed, so users must provide a means of transporting them.

For more information, write Spence at UNC Sea Grant, Box 8605, Raleigh, N.C. 27695-8605.

There's more to know about the beach than sloughs and sand castles, and Lundie Spence, UNC Sea Grant's marine education specialist, is helping to teach educators about North Carolina's coast.

Spence will assist in the "Coastal and Marine Science Workshop" to be held July 23 to 25 at Elizabeth City State University. The workshop is co-sponsored by the university and UNC Sea Grant.

The two-day workshop, organized for educators teaching grades 5 to 9, will include programs on coastal and marine geology and ecology, estuarine field studies and trawling. Information on classroom activities also will be provided.

Larry Giardina is Sea Grant's new marine advisory agent at Bogue Banks. Advisory Service Director Jim Murray says Giardina will be developing applied research and extension programs for seafood marketers. And, he'll be promoting North Carolina seafood through marketing and merchandising.

If you'd like to contact Giardina, write him at the N.C. Marine Resources Center/Bogue Banks, Box 896, Atlantic Beach, N.C. 28512, or call 919/247-4007.

Teenagers will take a first-hand look at coastal habitats in the 4-H Marine Environment Workshop August 5-10 at the Bogue Banks Marine Resources Center and Mitchell 4-H Camp in Swansboro. Activities will include marsh habitat studies, beach investigations, trawling, snorkeling, laboratory studies and more.

The workshop is sponsored by the N.C. 4-H Program, the N.C. Marine Resources Centers and UNC Sea Grant. The workshop is one in a series of 4-H activities that have grown out of a Sea Grant project conducted in 1981 and 1982 to promote marine awareness.

Registration is open to teens ages 14-18 and is not limited to 4-H members. The fee for the week-long workshop, including meals, lodging, insurance, equipment fees and field trips, is $125.

For more information, contact Jaynee Medlicott, Box 7606, North Carolina State University, Raleigh, N.C. 27695-7606 or call 919/737-3243.

The new writer in Sea Grant's communications office is Sarah Friday. She joins Kathy Hart and Nancy Davis as a staff writer for *Coastwatch*. She'll also help produce Sea Grant advisory publications, brochures, news releases and public service announcements. Friday, a graduate of the University of North Carolina at Chapel Hill School of Journalism, comes to Sea Grant from *The News and Observer* in Raleigh.

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