Coastwatch

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Photo from N.C. Division of Archives and History.

Was This Fort Fisher's Last Stand?

Fighting A New Foe.

By Nancy Davis

Drive south on Highway 421 as far as you can go.

You'll end up on the southernmost tip of New Hanover County on a narrow strip of land that's bordered by the Cape Fear River on one side and the Atlantic Ocean on the other.

It's on that piece of shifting sand that Confederate soldiers constructed Fort Fisher, one of the largest earthen forts ever built. It was to guard the lower Cape Fear River and keep the port of Wilmington open to the blockade runners that supplied the South.

And it did its job until the final days of the war, when Yankee soldiers, far outnumbering the Confederates, finally seized it.

Now, 125 years later, the fort is under seige again. But this time, the enemy is the sea.

The Atlantic Ocean is relentlessly bombarding the historic fort. And with every wave, history is washing away.

Gehrig Spencer, Fort Fisher historic site manager, estimates the sea has claimed as much as 80 percent of the earthworks. And in a last-ditch effort, he and other historians are trying to keep what's left of the fort from falling into the sea.

"At the current rate of erosion," Spencer says, ". . . Fort Fisher as it is will not be available to future generations."

The erosion at Fort Fisher was actually caused by a natural phenomenon; it wasn't man-induced, says Spencer Rogers, Sea Grant's coastal engineering specialist.

The beach runs north-south. Originally, the fort crossed the peninsula from the river to the ocean and then went south in the shape of a figure 7 along the oceanfront.

To the north of the fort, a rock outcropping, rare in North Carolina, occurs just along the shore. The outcropping has created a barrier for sand moving from north to south. Sand has accumulated to the north of the outcropping, but disappeared from the beach adjacent to Fort Fisher.

So far, most of the earthen mounds along the oceanfront have disappeared, leaving only the section of the fort that crosses from the river to the sea.

To some, the battle plan is obvious: build a seawall to protect the earthen mounds.

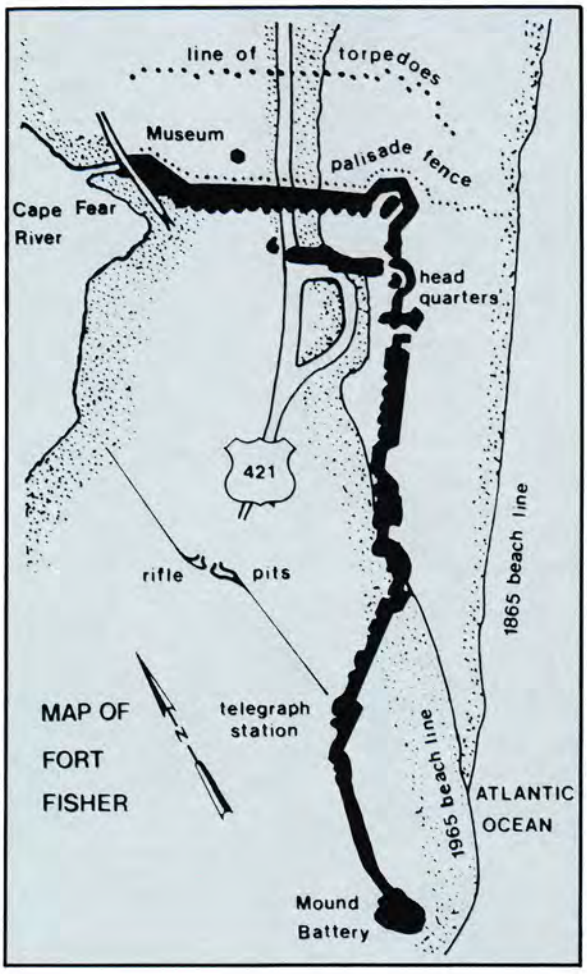
In 1982 the U.S. Army Corps of Engineers designed a $7 million rock revetment, similar to a seawall, to protect what remains of the historic site. It would be about 3,050 feet long and would be composed of a sloping pile of granite rocks.

But there's a catch.

In 1979, the state outlawed hardening of the shoreline. That includes bulkheads, seawalls and revetments. Although these structures sometimes preserve the immediate property, they often rob sand from the beaches on either side. And North Carolina law aims at preserving beaches, not structures.

But Fort Fisher presents a kink in that strategy. The law was written with provisions for variances to be granted.

So far, that hasn't happened. "No variance has



ever been granted since the no-bulkheading law went into effect," says Robin Smith, assistant attorney general with the N.C. Attorney General's office.

Rogers says the Fort Fisher case presents the extreme of both sides of an erosion issue.

Historians argue that the fort's cultural value far outweighs the value of maintaining adjacent beaches. But on the other extreme, conservationists say that granting a variance could set a precedent and lead to more hardening of the state's shoreline.

But most of the other erosion control methods just won't work at Fort Fisher, Rogers says.

There are typically six options for dealing with erosion, he says.

1. Don't locate a structure in high-erosion areas. But it's too late for that option since the fort is already in place.

2. Move it. That's been proposed to save the famed Cape Hatteras Lighthouse. Moving the lighthouse is a viable option, but moving an earthworks fort is not.

3. Install sand traps, such as groins or breakwaters. But they are typically too expensive and don't provide protection from major storms.

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4. Nourish the beach. But at Fort Fisher, the erosion rate averages 10 feet per year. Tom Jarrett, with the Corps of Engineers, estimates beach nourishment would cost $23 million more than the revetment.

5. Take no action, and let the sea claim it—obviously not an option favored by historians.

6. Harden the shoreline.

The issue of hardening the shoreline often revolves around the adjacent beaches.

Fort Fisher is located at the end of a developed stretch of Kure Beach and just before several miles of state-owned beach.

If a revetment were installed, it would probably result in a slight increase in the erosion rate for the beach south of Fort Fisher, Rogers says.

This rubble is all that stands between the ocean and the fort.

But it wouldn't be a big loss, he adds, because there's so much public beach available. And, Fort Fisher is not a safe place for swimmers anyway. Rip currents occur there frequently.

In the end, "It's a matter of weighing the trade-offs and consequences," Rogers says. "What is the least wrong answer?

"The question then becomes, 'Is the historic value of the fort worth the reduction of the beach in front of the fort and a slight increase in erosion farther south?' " Rogers says. "The clear choices are either preserve the fort and lose a small amount of beach or preserve the beach and lose the fort."

The proposed revetment isn't the first attempt to save Fort Fisher.

Concrete and brick rubble from the demolition of a nearby industrial plant was placed along portions of the shoreline. And in the early 70s, a small revetment was constructed along most of the rest of the shoreline.

But that structure gradually failed and has settled onto the beach.

Now the state is under the gun to make a decision about the $7 million revetment. The state must pay for half of the project. And Corps projects are deauthorized if no federal money is spent within 10 years of approval of the project.

Jarrett says the Fort Fisher project must be under way by 1992 or the review and approval process must begin again. That costly process could take as long as 10 to 15 years.

And time is not on Fort Fisher's side, Gehrig Spencer says. The historic fort can't hold out much longer. Soon it may be in the hands of the enemy.

Gibraltar Of America.

By Sarah Friday Peters

On Dec. 24, 1864, Union soldiers headed for New Inlet with one thing in mind.

They were to seize one of the last Confederate forts that protected the thriving port of Wilmington.

But something stood in their way.

Fort Fisher.

From the flat lands of the beaches loomed the largest earthwork fortification in the South. Like a giant in the forest or pyramids in the desert, Fort Fisher awed them.

And they turned back.

The famous fort fell later, but remained one of the most important and unique structures from the Civil War.

Unlike other forts built of brick and mortar, Fort Fisher was built by hand with earth and sand.

And its strategic location played a vital role in the protection of Wilmington and the entire Confederacy.

Today trees and vegetation cover the remaining mounds.

In 1860, Wilmington was a commercial hub that boasted a population of nearly 10,000. In wartime, it became the last major port open to the Confederacy, and the destination of steamers, called blockade runners, that smuggled provisions to Southern troops.

These ships traveled to Bermuda, the Bahamas and Nova Scotia to exchange cotton and tobacco for food, clothing and munitions from British traders.

Keeping in the war for the Confederacy meant keeping Wilmington's accessways open.

Since 1826, Fort Caswell had protected one entrance to the port.

But New Inlet, which had been carved by a hurricane in 1761, remained defenseless.

Strategic command for securing the Cape Fear River from attack was placed in the hands of Maj. Gen. W.H.C. Whiting of Wilmington. Fort design and engineering became the task of Col. William Lamb, also of Wilmington.

Lamb envisioned a fort that could not be taken. So he modeled Fort Fisher after a Russian fort that survived three years of onslaught during the Crimean War.

Troops and slaves began construction in May 1861.

First they built approximately 14,000 square feet of underground bombproof shelters, powder magazines and tunnel works. Then they piled sand mounds on top and stacked mud from the marsh around them for support. Timbers reinforced gun platforms.

In the end, Fort Fisher resembled the figure 7. It ran 680 yards from west to east and 1,800 yards south. The massive mounds averaged 32 feet in height. The tallest reached 60 feet.

Forty-seven cannons stood guard. And a nine-foot tall palisade fence ran from the river to the ocean on the land face.

On Dec. 24, 1864, the "Gibraltar of America" got its first test.

Union forces knew the capture of Fort Fisher would open the river to federal gunboats and make the other Confederate camps easy to occupy.

The Union planned to blow up Fort Fisher with a boat loaded with 215 tons of powder. At 1:45 a.m., that boat, the *Louisiana*, exploded with little more than a fizzle and left the fort unharmed.

Undaunted, the Union Army charged ashore and advanced toward Fort Fisher.

Photo from N.C. Division of Archives and History.

Photo of Fort Fisher taken more than a century ago.

But before Gen. Benjamin Butler brought in his troops, he sent engineers to survey the fort.

What they saw amazed them.

The fort's looming defenses prevented direct assault, they said. So the troops turned around.

Only 800 Confederate troops guarded Fort Fisher that day. Six thousand more were camped five miles away at Sugar Loaf, but never moved in to help.

From the flat lands of the beaches loomed the largest earthwork fortification in the South. Like a giant in the forest or pyramids in the desert, Fort Fisher awed them.

Whiting and Lamb expected a second attack soon. Troops repaired parts of the fort, got more ammunition and doubled their numbers.

On Jan. 13, the Yankees came back.

Fifty-eight warships carried 600 cannons and 8,000 men.

The Union Army moved in. Then the Navy.

At 3 p.m. on Jan. 15, the sailors and marines attacked Fort Fisher on the ocean side. Then the Army came in from the river side.

The enemies fought hand-to-hand combat for five hours. Each mound was its own battlefield, and whoever held the high ground claimed victory.

By 8 p.m., hundreds of Union and Confederate soldiers lay dead. The rest were tired. Whiting and Lamb had been wounded leaving Maj. James Reilly in charge.

Then a band of black Union infantry came in, prolonging the battle two more hours until Reilly waved a white handkerchief from Battery Buchanan.

A month later, Wilmington fell.

Then on April 9, 1865, Gen. Robert E. Lee surrendered to Gen. Ulysses S. Grant at Appomattox.

Union troops occupied Fort Fisher after the battle. Hunters and fishermen slowly took their place after the war.

The intricate underground network of shelters and tunnels burned or collapsed.

The palisade fence fell to the forces of wind and water.

And the ocean claimed more than half of the fort and its grounds.

What stands today is all that's left to tell the story of "The Last Major Stronghold of the Confederacy."

Rebel With A Cause.

By Sarah Friday Peters

If Gehrig Spencer played Jeopardy and the category "Fort Fisher" flashed on the screen, his fellow contestants would be in trouble.

Spencer, Fort Fisher's historic site manager, knows more about the last fort to fall in the Civil War than anyone.

Volumes of North Carolina Civil War history line his office shelves. Notes, records, photos, letters and diaries fill his file cabinets. And he's stored hundreds of conversations and articles in his "gray matter," as he likes to say.

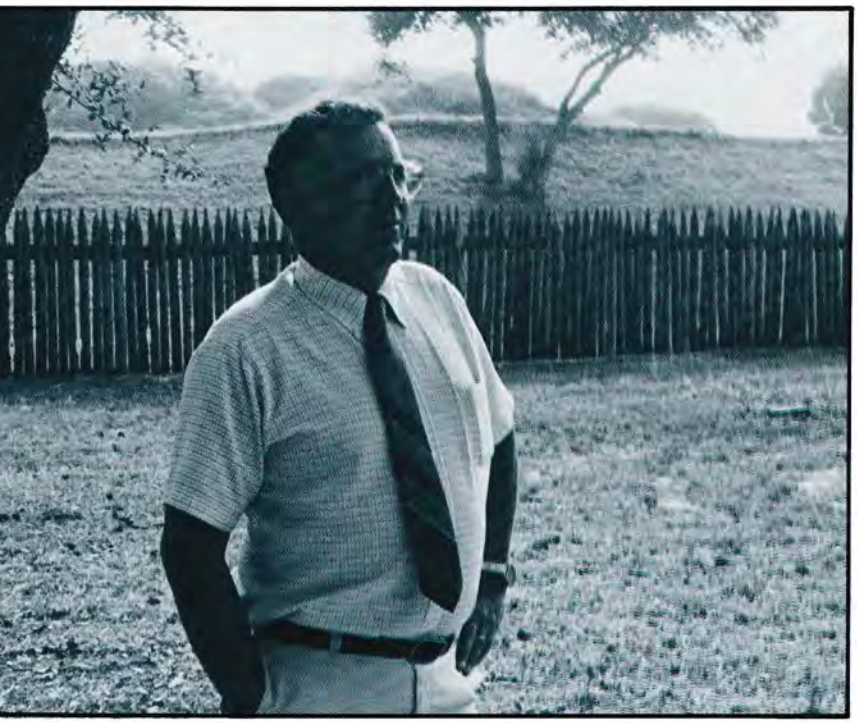
Now Spencer hopes the records will not be all that's left of the fort's history.

And he's not playing games with its future.

"There's no place quite like Fort Fisher," Spencer says.

Painstaking research and reconstruction have taken place to make the fort as authentic as possible and to help people understand what happened here, he says.

Gehrig Spencer



"To lose the physical evidence of Fort Fisher would be a tremendous loss," he adds.

To look at the big piles of sand and mud covered with grass and a few trees, it's hard to see why.

But to talk to Spencer and walk the grounds, the concern becomes real.

Since the state historic site opened in 1965, Spencer has delved into the fort's past like a rebel with a cause.

He knows the history back and forth now, and can quote passages from letters and diaries verbatim.

"There's no place quite like Fort Fisher," Spencer says.

You soon believe he must have been there, too.

Spencer's intrigue comes from growing up in nearby Brunswick County.

Most of the troops came from that county, as well as others in the area such as Bladen, Columbus and Cumberland counties.

When Fort Fisher's construction began, most of the troops were young, Spencer says. But by the end of the war, junior and senior reserves protected the fort.

"They worked half a day, drilled half a day and walked guard duty at night," he adds. If they took leave, they went to Wilmington. They formed a garrison band, sang, played cards, sailed and looked forward to "boxes" from home.

Like other Civil War troops, they ate salt pork, biscuits and cornbread. One letter mentions collards. "In this area," Spencer says, "they had seafood delicacies as I would call it . . . fish and oysters."

Troops slept in basic barracks on the flat land behind the fort. A telegraph station was set up in one of the mounds; a hospital in another.

No doubt, the fort and its men were strong.

"We will be rite hard to whip," wrote J.A. McNeil, a soldier from Robeson County. "We works nine hours (through) hot day. . . . .Compared with what we has to put up with still we has som fun. . . .We has a heap a satisfaction a getting letters on one thing or another."

And now Gehrig Spencer gets a heap of satisfaction reading them.

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, Box 8605, NCSU, Raleigh, N.C. 27695-8605.

Some professional football players love to play on it; others despise it.

But no matter how players in the National Football League view AstroTurf, bay scallops in North Carolina find it a great place to settle.

That's one of the findings of a Sea Grant research team assembled to study bay scallop aquaculture and natural populations.

To collect spat for laboratory experiments and aquaculture grow-out, scientists Pete Peterson of the University of North Carolina Institute of Marine Science and Will Ambrose of East Carolina University tested several collection materials. They found that the young scallops settled most abundantly on suspended pieces of AstroTurf.

Collection methods are important because resource managers could use them to increase natural populations and shellfish aquaculturalists could use them as a source of stock.

The North Carolina General Assembly funded the study because the 1987 red tide devastated bay scallop populations, killing 98 percent of the young scallops. The study is designed to determine how natural populations can be increased and whether bay scallops are good candidates for aquaculture.

In laboratory experiments, Peterson was able to spawn bay scallops and raise them to adulthood. But Peterson says the scallops are more finicky than their cousins, the hard clams.

Sea Grant agent Skip Kemp agrees. He worked with a Pender County clam culturist to raise a small crop of scallops.

"Scallops are much more delicate," Kemp says. "They don't like silt, and they have to have a constant supply of food and water."

Last year, the scallops were raised in onshore upwellers. This year, Peterson plans to experiment with placing the young spat into nearshore submerged cages.

Meanwhile, Ambrose will be determining exactly who the bay scallops' predators are and when they are most voracious. And NCSU economist Jim Easley will calculate whether scallop aquaculture is profitable.

For demonstration purposes, Kemp will build a portable laboratory to show prospective aquaculturists the hatchery and nursery phase of scallop grow-out.

By now you've probably heard that the fish and chicken available at most fast-food restaurants isn't all that good for you.

And it's probably true.

A recent report from the Massachusetts Medical Society, published in *The New England Journal of Medicine*, claimed that health-conscious diners were being fooled at fast-food counters.

The report says that a fast-food chicken sandwich can contain as much fat as 1½ pints of ice cream. A fish sandwich is probably just as bad.

But the news is no reason to avoid seafood at home, says Sea Grant seafood education specialist Joyce Taylor.

After all, it's what you do to the fish in the preparation that makes it less than nutritious.

In its natural state, seafood is low in fat, calories and cholesterol and high in protein and minerals.

But sprinkled with salt, dipped in batter, fried in deep fat, seafood loses its edge.

"I meet a lot of people who tell me they're on a diet, so they eat a lot of fish. When I ask them how they prepare it, they say they roll it in cornmeal and fry it up. Now that's not a low-calorie food," Taylor says.

With the drop of a fish into the deep fat, you can add as much as 12 percent more fat to the fish, Taylor says. And the extra fat means more calories and cholesterol.

Instead of deep-frying or pan-frying, Taylor recommends poaching, steaming, baking, broiling, barbecuing, stir-frying or oven-frying.

And instead of topping fish with a cream or butter sauce, try herbs and spices. They won't disturb the delicate taste of the seafood.

As alternatives to salt, Taylor uses herbs and spices and white table wine as a broth.

Taylor's message is. . . If you prepare seafood properly, you can eat it to your heart's content.

For more information on seafood, contact Taylor at the NCSU Seafood Laboratory, P.O. Box 1137, Morehead City, N.C. 28557.

Happy Anniversary to Fort Fisher! Jan. 13 and 14, the famous fort will celebrate 125 years of history. A commemorative program will include tours of the grounds and historic interpreters recounting the days of battle at the fort. A special night program will feature a re-enactment of Maj. Gen. James Reilly's surrender to Union forces at Battery Buchanan.

For more information, write the Fort Fisher State Historic Site at P.O. Box 68, Kure Beach, N.C. 28449. Or call 919/458-5538.

Teachers, it's now available in video.

The instructional program, *North Carolina Coastal Plain: A Geologic and Environmental Perspective*, has been made into a video. This educational program was originally published as a filmstrip for use in 8th-grade science classes.

The video uses the coastal plain to explain geological, ecological and environmental science concepts. It runs 1¾ hours long and is divided into eight segments that range from 8½ to 17 minutes long.

With the video, teachers get an activity

continued next page

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☐ Commercial fishing
☐ Educator
☐ Farming
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☐ Lawyer
☐ Marina operator
☐ Marine recreation
☐ Mass media
☐ Seafood processing/marketing
☐ State government
☐ University professor/researcher
☐ Other_____

Coastal property owner: ☐ yes ☐ no Boat owner ☐ yes ☐ no

$_____ contribution to defray printing costs for *Coastwatch*

guide that provides hands-on activities and a script with supplementary information for teacher and student use.

The coastal plain video was developed as a cooperative project between the N.C. Department of Public Instruction and Texasgulf Chemicals Co. It is available from Sea Grant. Ask for UNC-SG-89-02. The cost is $30.

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