COAST Z WATCH

Photo by Gene Furr



N.C. Travel and Tourism photo



Towns that were

Portsmouth church steeple (left); Portsmouth from above (right)

Towns with names like Exeter, Old Town Point, Brunswick Town, Charles Town and Buffalo City once dotted the maps of coastal North Carolina. Towns whose only link to the present is a crumbling wall, an abandoned house, an excavation, a recollection.

The Roanoke Island colony may be North Carolina's most famous abandoned settlement. But other towns have flourished and then died. Brunswick Town, established on the shores of the Cape Fear River in 1728, was envisioned as a seat of government

and a trading center. But a nearby town, first called Newton, then Wilmington, grew to overshadow Brunswick Town.

Hurricanes, politics and a lack of commerce caused the demise of several coastal towns and villages. State and county histories tell us about their fate. But two Carteret County communities, deserted during the twentieth century, are still fresh in the minds of a few former inhabitants. This month, Coastwatch takes a look at Portsmouth Village and Diamond City.

Chronicle of a seaport village

Portsmouth Village is quiet now. But its history tells the story of a oncebustling community. Of a town that was established as a transshipment point, flourished for a while, then finally failed. Of a town whose residents managed to keep their village alive for another century. Of a town which, even today, folks still refuse to call deserted.

Portsmouth Island is the northernmost strip of land in Core Banks. The village lies on the tip of that island just across the inlet from Ocracoke.

Today, Portsmouth Village is part of the National Register of Historic Places. The Register recognizes outstanding historic buildings and districts. The 250-acre Portsmouth historic district has been part of the National Park Service's Cape Lookout National Seashore since 1976 when the state turned deeds to the property over to the federal government.

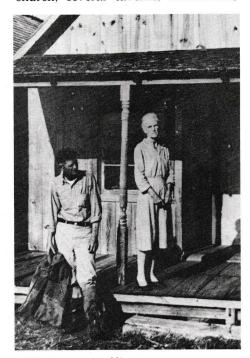
Like so many coastal towns, Portsmouth's existence depended on an inlet. In the days when Ocracoke Inlet was kind to seafarers, Portsmouth prospered. Old records indicate that the North Carolina colonial legislature authorized the village in 1753 as a point where ships' cargoes could be lightered ashore for shipment to the mainland.

Portsmouth owed much of its commercial success to a tiny neighboring island composed entirely of oyster shells. Shell Castle Island, to the west of Portsmouth in Ocracoke Inlet, served as a lightering station. Ships arriving at Ocracoke Inlet had their cargoes lightered to the island's warehouses where the goods were stored until they could be sent inland.

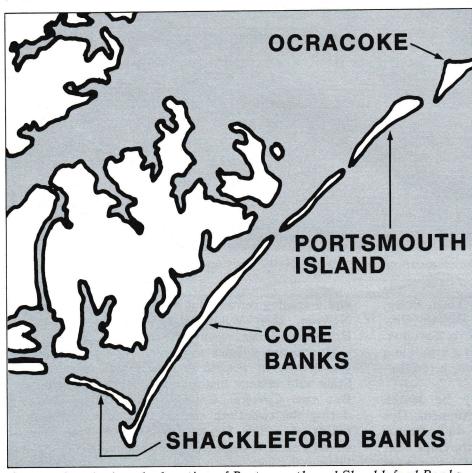
By 1759, Portsmouth Village was experiencing the perils of modern growth. A tavern owner, Valentine Wade, was charged with permitting dancing, drinking and card playing in his tavern on Sundays.

For many years, the tiny town went unnoticed. The Revolutionary War barely touched Portsmouth. The census of 1790 lists 96 free white males, 92 free white females and 38 slaves. The leading citizen, David Wallace Jr., owned 16 slaves and had two houses in the village. By 1810, with a population of 246, Portsmouth was the second largest town on the Outer Banks.

By 1860, Portsmouth Village and nearby Shell Castle Island boasted a population of nearly 600 residents. The village included about 100 houses, a church, several taverns, warehouses,



Village post office



A map pinpointing the location of Portsmouth and Shackleford Banks

shipbuilding yards and a post office.

But then came the Civil War. This war, Portsmouth didn't fare as well. During the first year, Confederate troops were stationed at Portsmouth. But as the Yankees pressed further South, the rebel soldiers withdrew and most of the inhabitants followed. Legend has it that only one Portsmouth resident stuck it out—by necessity. Supposedly, she was so fat that she couldn't fit through her door. According to the legend, the Yankee soldiers were kind to her.

Some say it was the Civil War that doomed Portsmouth. Others blame a major hurricane in 1933. Or, maybe there just weren't any jobs. Whatever the reason, only a fraction of the villagers returned after the war and the population steadily declined. By 1870 the population was 323. Just ten years later, that number had dropped by another hundred.

Those residents who remained continued to depend on the sea for their livelihood. But storms destroyed houses and more residents moved to

the mainland. A lifesaving station provided jobs for some residents from 1897 until 1938 when it was closed. In 1943, the doors to the one-room schoolhouse closed for good. The post office, opened in 1840, finally closed in 1959 when permanent residents numbered less than 15.

With the death of Henry Pigott, the island's last male resident, in 1971, the last two women left for the mainland (see page 4).

Portsmouth stands now—the town with no people. But, the village hasn't been ignored. Since 1978, the National Park Service has worked to stabilize the condition of the buildings. Some of the houses received a fresh coat of paint and new cedar shake roofs.

Bob Patton, the interpretive specialist with the National Park Service, says that while Portsmouth Village dates back to 1753, there is very little evidence of the early years. The oldest house still standing is the Washington Roberts house, built around 1850.

While the village is open to visitors,

the Park Service reminds that it's not easy to get there. You can reach the island by way of two concessioners who operate ferries from Ocracoke and from Cedar Island. Or, you can take your own boat to the island.

Patton adds that the management plan for the island doesn't call for making it any easier to get there. He says the Park Service is protecting the island by having limited access.

If you do plan a trip to Portsmouth, be prepared, says Portsmouth district ranger Dick Williams. Hardy mosquitoes, 99 percent humidity and no water—just a few of the things you'll be up against. Williams advises visitors to take insect spray, wear long pants and a long-sleeve shirt, and take along a supply of water.

Patton adds that for all the discomforts, it's well worth the trip. "It looks and feels just as it once did. And the challenge of getting to Portsmouth makes the visitor more appreciative of what it must have been like years ago," says Patton.

-Nancy Davis

Class of 1916

Children with familiar Portsmouth names like Salter, Babb, Gilgo and Dixon pose for their class portrait. After the turn of the century, the number of schoolaged children on the island steadily declined. A new school was built in the 1920s, but its doors closed for the last time in 1943.



Portsmouth: a town without people

National Park Service Photo



Henry Pigott at about 14

Photo by Steve Murray

Portsmouth Village may have seen its better days, but it's far from dead.

Ask its residents—well, former residents. They've left their village, but they haven't deserted it, they say.

Consider Marion Babb. She was one of the last children born on Portsmouth Island. That was in 1922 when there was still some life left in the already declining village. But, even then, Portsmouth was breathing its last breaths.

In 1971, Babb and her aunt moved to the mainland, the last permanent residents to leave the seaport village. But their home stands today, freshly painted, yard mowed, ready for their return. Babb points to a color photo of the old homeplace and says, "That's home. And it'll never be anything but home."

Although the National Park Service controls the land and buildings on Portsmouth Island, Babb maintains a lease on her house. For her and others like her, it's more than sentiment that draws her back. "I wish I could go back and stay forever—the quiet, no telephones," she says.

Babb remembers the good life. It was a time when all the young folks on the island would have candy parties or ice cream parties. Or, they'd play a little canasta, dominoes or chinese checkers.

She remembers having all the necessities plus a little more. A wooden tank held 1,600 gallons of water, a generator provided light and, in later years, they had a gas stove. Most of the homes had outdoor toilets as well as outdoor cooking houses, called summer kitchens, for cooking in hot weather. And, even



Former Portsmouth residents claim the fertile island marshes produce the best oysters in the world

-Margaret Willis

though she's living on the mainland now with the luxury of electricity, Babb still refuses to give up her kerosene lamps.

Once a month, a minister came from Ocracoke to preach in the little church next to Babb's house. Even the mail came to the island until the post office closed in the 1950s. Then, it was up to the island's last male resident, Henry Pigott, to row out into the channel to pick up the mail.

The Portsmouth residents were a mail order society, says Bob Patton, interpretive specialist with the National Park Service. The islanders placed orders, then waited weeks for their goods to arrive. Local lore has it that Henry Pigott ordered paint, in a buff color, from the Sears catalog. When it arrived weeks later, the package contained pink paint instead. Rather than returning it, then waiting for it to arrive again, Pigott settled for pink. And that was the color his house stayed until the Park Service restored it to its original buff color several years ago.

Charles McNeill, Director of the Hampton Mariners Museum, likes to tell a story about his friend Henry Pigott. It seems that a magazine reporter from New York was writing a story about Portsmouth. McNeill showed her around the island and introduced her to Pigott.

The reporter began to criticize Pigott's lifestyle on the island, telling him he was crazy to live among all the mosquitoes, with no electricity and no running water.

Pigott thought for a moment, then replied that he had done some traveling. He had even been to New York. And, he had seen all the modern innovations. Then, says McNeill, Pigott paused and added, "And, I'm not sure which one of us is crazy." Such is the attitude of a true Portsmouth villager.

Babb says the mainlanders are soft. "It can get awful hot and the mosquitoes are bad. But they're bad here, too (in Beaufort). I never put a bit of bug spray on me. Those park rangers—well, I tell them they're timid," she says.

Babb scoffs at those who want to know what it was like to live on Portsmouth during Hurricane Hazel. "Storms—well, I was there through most all of them we had. 1944 was the worst one. It was a hurricane and I mean a bad one. There were ten-and-a-half inches of water in the house. But everybody wants to know about Hazel. It wasn't bad at all."

With the death of Henry Pigott, Babb and her aunt were alone on the island. When they decided to pack up and leave in 1971, Portsmouth was a village without a population.

But then Margaret Willis adopted the village as her home. From 1974 to 1977, she was the lone inhabitant of the village. Her home—the one-room schoolhouse. Her only companion—a dog.

Margaret likes to tell a story of how she enjoyed all the niceties of home at Portsmouth. She had coal for her stove, an inside toilet, a tub, and water in the cistern. Tiring of being alone, she left to visit her parents in Ocracoke. She arrived about the same time as a snow and ice storm. "There I was with no heat, no lights. I had left all the luxuries of Portsmouth behind."

Margaret was married on Portsmouth Island and her daughter, Caroline, was baptized there. These days, she's living in Sea Level, but she still holds a lease on a house in the village.

Margaret describes the allure of Portsmouth Village: "It's the peace, not necessarily being alone," she says. She was frightened only once in her three years on the island. She opened the door of the schoolhouse one night to let her dog outside. "It was like looking into a black hole. There was no moon, no stars. I couldn't see anything. I felt like I was in the middle of a void. I closed the door and for the very first time, I locked it."

While Margaret lived on the island, the Park Service paid her \$2.50 a day for serving as a volunteer. She watched for vandals and mowed the grass at about half the village houses.

Money wasn't important on Portsmouth, says Willis. "It's amazing how little you need." She estimates it took her about \$150 a month to live. And, if she were a seafood lover, her cost of living would have been considerably less, she adds.

Folks with ties to Portsmouth are sensitive to the labels that have been attached to the village. "People can call it abandoned or deserted, but it's not dead until it's forgotten. Portsmouth is more of a state of mind. It's the love the people have for the village that really keeps it going. The Park Service can paint the buildings and restore as much as they can. But, it's the love of the descendents that will hold it together," says Willis.

The abandoned communities of

Shackleford Banks

The Cape. Diamond City. Sam Windsor's Lump. Wade's Shore. Whale Creek. Guthrie's Hammock. Mullet Pond.

The names of these communities ring with the sound of fiction and fantasy. But, in fact, they were once as real as Beaufort and Wilmington are today. These communities dotted the shores of Shackleford Banks before the turn of the century. And families with names like Lewis, Davis, Guthrie, Chadwick, Willis, Rose, Wade and Moore eked out an existence along their shores, often battling the vagaries of the sea.

But it was the sea that drew people to settle Shackleford's shores around 1700. Whales, which were common in the waters off Cape Lookout, attracted Shackleford's earliest settlers. But the bank's first whalers never left the shore to make their catch. They depended on beached whales for their livelihood, wrote John Lawson in his 1714 history of North Carolina. They used no boats or harpoons like their northern neighbors.

But northern whalers soon ventured south to teach their counterparts a few whaling lessons. They lived in crude huts built between the dunes during whaling season. When a whale was sighted, they shoved off in their whaling boats, using harpoons to make the kill. Eventually some of these whalers decided to move their families to Shackleford. The Chadwick family along coastal North Carolina are descendents of a northern whaling family that moved south.

On early maps of North Carolina, the whaling village at Shackleford was called Whaler's Hutts. It would be another century before the village would be named Diamond City.

But Shackleford Banks may not have been populated entirely with whalers. Beaufort historian Grayden Paul says that North Carolina's most famous pirate, Edward Teach or Blackbeard as he was more commonly called, may have left some of his marauders on Shackleford Banks in 1718. Paul says that Teach left one boat in need of repairs in Cape Lookout Bay, while he traveled to Edenton for his yearly rendezvous with Governor Eden. The plan called for Teach to pick up the boat and crew on his way south. But Teach was captured and killed. Paul says the crew decided to give up their pirating ways and settle down on Shackleford Banks.

And just as Blackbeard used Cape Lookout's bay to harbor his crew, other privateers and pirates used the sheltered bay. To stop such use, several of North Carolina's royal governors appealed to the crown for money to construct a fort at the cape. But all pleas were ignored. In 1777, the Continental Congress considered building defenses at the cape. Again the consideration amounted to only talk.

But a spunky Frenchman, Captain de Cottineau de Kerloguen, finally made the fort a reality in 1778. Cottineau, bound for the colonies in an armed frigate, met with a chase from several ships of the British Royal Navy. To evade his pursuers, Cottineau sailed into Cape Lookout Bay, assuming the whalers' huts were part of a colonial fort that could offer him protection.

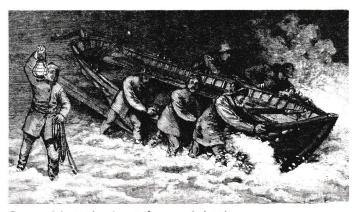
Cottineau was dismayed to find no fortress at the cape, says William Pohoresky, a Newport historian and writer. To remedy that oversight, Cottineau quickly wrote the North Carolina General Assembly, informing them of his plans to build a fort near the whalers' huts, which overlooked the entrance to Cape Lookout Bay.

With the help of the men from his frigate, Cottineau began to build the fort. On April 23, 1778, the North Carolina General Assembly authorized the fortification of Cape Lookout Bay and provided 5,000 pounds to pay for the construction. Cottineau outfitted the fort with guns from his frigate because arms were scarce. The fort was called Fort Hancock after Enoch Hancock, the man who owned the land the whaling village and fort were built upon.

After completion of the fort, Cottineau sailed on to play a larger role in history. He and his frigate fought at the side of John Paul Jones and the *Bonhomme Richard* in that famous naval battle where Jones uttered, "I have not yet begun to fight."

No one knows whether Fort Hancock ever saw any Revolutionary War action, but on May 4, 1780, the state senate ordered the "colors" to be lowered over the fort. Nothing remains of the fort today. Only through colonial histories can its existence be traced.

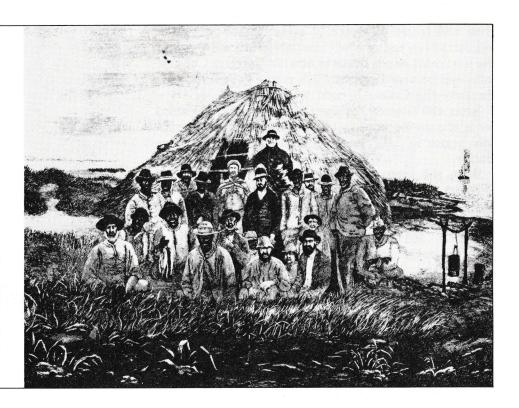
After the war, the Shackleford Bankers continued to depend on the sea for their livelihood. Though



Launching the boat for a nighttime rescue

A Mullet Camp

During the fall mullet runs, the Bankers set up temporary camps made of small thatched huts near the beach. Using nets 150 and 200 yards long, the fishermen seined the nearshore waters. After making the catch, the Bankers would clean, salt and pack the mullet in barrels for shipment to inland markets.



whaling was limited to four months a year, it provided the Bankers with a profitable income. One whale could yield from \$1,000 to \$2,000 in whalebone and oil. The oil was used as fuel for lamps. The bone was shaped into corsets, dress hoops and umbrella ribs. The remainder of the whale was sold for fertilizer.

The Bankers also caught porpoises for processing in a small factory that was located on Shackleford Banks. Like the whales, the porpoises yielded large quantities of oil that could be used to fuel lamps.

The mullet fishery proved to be profitable for the Bankers. The Cape Lookout Bight formed a natural trap that supplied the banker fishermen with an abundance of mullet and other fish. Salted mullet became a specialty that made the Bankers famous all along the East coast. They took special care in cleaning, salting and packing the mullet.

While Cape Lookout became noted for its abundance of fish, it also garnered less favorable recognition as a treacherous shoreline. And added to the danger of the shoals was the fact that the profile of the land was so low that even in clear weather a ship might be on the shoals before the captain realized his vessel was close to land.

To aid mariners in their navigation of the cape, Congress authorized the erection of a lighthouse. The lighthouse was completed in 1812 and consisted of two towers, one brick and the other wooden. The wooden building was painted in red-and-white horizontal stripes.

Mariners soon found fault with this lighthouse, saying its structure was too short to make its light visible for long distances at sea. In answer to complaints, the

Lighthouse board authorized a taller tower, which was completed in 1859 and built of red brick. It would be sixteen years before the lighthouse was painted in its now familiar black-and-white diamond pattern. Diamond City was named for the diamond-patterned Cape Lookout lighthouse in whose shadow it stood.

But even the beams of the lighthouse couldn't save the crew of the Crissie Wright, which ran aground just off Wade's Shore on a cold January night in 1886. The Crissie Wright, a schooner bearing a crew of seven men and a cargo of phosphate, was sailing for her home port of New York City when she was caught in a blistery southwester. The captain decided to take refuge from the storm in Cape Lookout Bay. But as the schooner approached the hook of the cape, the wind shifted and pushed the vessel into the shore.

The Crissie Wright was broached larboard side-to and taking on water fast when the captain gave the order for the crew to lash themselves to the mast and riggings. During the night the wind shifted to the northeast and the temperature dropped to eight degrees above zero.

At daybreak the wreck was sighted from shore. The Bankers quickly gathered and made numerous attempts to launch their whaling boats into the surf. But stiff winds and 10-foot waves pushed the boats back at every attempt.

A huge bonfire was built to keep the rescuers warm and to signal the men on the Crissie Wright that efforts were being made to save them. But it would be the next day before the winds calmed and a rescue could be accomplished. By then, all but one of the

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crew had frozen to death or been swallowed by the sea. And even today when the temperature drops and the northeast winds begin to howl in Carteret County, folks can be heard saying, "It's gonna get colder than the time the Crissie Wright went ashore."

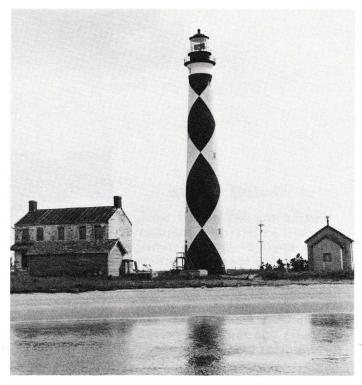
After the tragedy for the Crissie Wright, the need for a life-saving station became apparent. A station was begun in 1887 and completed in 1888 on Core Banks.

With the appraoch of the twentieth century, the Bankers began to see a change in their island environment. Two hurricanes swept across Shackleford and Core Banks in 1878. In 1879, a hurricane packing winds of 168 miles per hour, lashed the North Carolina coast. In a report of the 1879 hurricane, it was written that "on the Outer Banks the storm caused great destruction at Diamond City . . ."

The thick maritime forest, which covered much of Shackleford and Core Banks, began dying from the effects of the storms. The sand began creeping over the dunes and killing much of the underbrush. Soon vegetables refused to grow and the fruit trees began dying.

In 1897, three more hurricanes hit the coast. But the last straw came in 1899 when a slow-moving August hurricane whirled its way up the Outer Banks, bringing with it 120- to 140-mile-per-hour winds. Several houses along Shackleford Banks were destroyed; others were severely damaged. Many of the Banker's cattle and sheep drowned.

After this hurricane, many Bankers moved their families, their belongings and their homes, plank by



The diamond-patterned Cape Lookout Lighthouse

plank, to Harkers Island and The Promised Land, an area of Morehead City. Yet another hurricane ravaged the banks in October, 1899. Only a few families remained on Shackleford after the 1899 hurricanes and all of these would eventually move away.

—Kathy Hart

A look back at life on the Banks

Ninety-one-year-old Alan Moore, Uncle Alan to his friends, remembers Diamond City and the communities of Shackleford Banks first hand. Moore was born on Shackleford Banks, three to four miles west of Diamond City. He lived there for twenty years before moving to Harkers Island.

Moore remembers Diamond City as a tightly clustered group of homes and a few stores. "There were about 35 or 40 houses," he says. "You could stand in the door of one house and talk with all of your neighbors."

A community house was used for church gatherings and school. Nettie Murrill, a Morehead City resident whose family lived on the banks for generations, says school was held for three months each year during the summer. There was no resident teacher, minister or doctor. "They doctored with herbs and Indian curealls," she says.

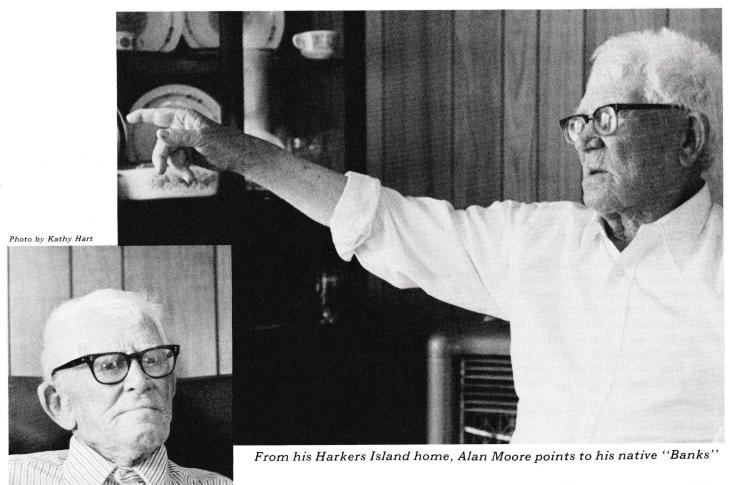
Social life and entertainment were limited, says Lillian Davis, a Harkers Island native. Davis has compiled a local history of Shackleford Banks. During summer the families often walked to the beach on moonlit nights, she writes. The adults talked among themselves, while the children played tag in the surf. On summer Sundays, people came from the mainland to church services and revival meetings.

Like the pioneers who settled the west, the Bankers survived by learning how to "make do" with what was

available. And fish and seafood were readily available and free for the taking. The Bankers ate oysters, clams, crabs, mullet and other fish. Shackleford women were known as excellent seafood cooks, Davis says.

Besides seafood, the Bankers had small gardens where they grew collard greens, sweet potatoes, Irish potatoes and onions. They also owned pigs, cows, sheep and goats.

Marcus Hepburn, a sociologist and former Sea Grant researcher, says the Bankers ate a wide variety of birds and waterfowl. Hepburn spent two years living on Harkers Island, delving into the history and sociology of the island residents. Many islanders told Hepburn of their family histories, which



and then beat into small pieces for brewing.

Moore remembers how the lush

Moore remembers how the lush maritime forest, thick with cedars, oaks and pines, once covered the island. The Bankers' homes, built from forest timbers or wreck lumber, sat on stilts that lifted them off the ground. Hepburn says the Bankers piled empty clam and oyster shells beneath their houses to prevent the wind from cupping under the house during storms.

And no talk of Diamond City would be complete without mention of whaling. The Bankers grouped together in crews for whaling season, which lasted from Christmas until April. One crew member kept a constant watch for the giant mammals from a "crows nest" established on the tallest dune.

When a whale was sighted, a crew of six to eight men would run into the surf carrying their 22-foot whale boat, or pilot boat as it was called. The pilot boats were light-weight, sturdy vessels with lapstraked hulls. Once in the water, the pilot boats were propelled by oars and sails.

The whalers used harpoons and harpoon guns to make their kill. The most accurate man with the harpoon was always stationed at the head of the boat; another at the stern. Once the harpoons were fired and the whale began its struggle for life, the crew and boat were always in danger of being struck by the whale's lashing tail.

After a kill was made, the whale was pulled to shore. Huge chunks of blubber were cut from the whale and taken to a board where they were sliced into smaller pieces. The small pieces were cooked in iron pots to release their oil. The oil was skimmed from the surface of the boiling pot. The cooked blubber was removed from the pot, squeezed for its last drop of oil, and thrown in the pot's fire for fuel. This process was called "trying out" the whale and it could take from one to two weeks to complete.

The Bankers liked to name the whales they killed. One whale caught in May was donned Mayflower. Another was named "The Little Children" because it was captured by a group of young boys. And for lack of good name, one whale received the title of "Haint Bin Named Yet."

Moore says he made one whaling trip with his father, but didn't enjoy

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more often than not included a relative from Shackleford Banks.

"They ate loons and a bird they called a teetee bird, which was some kind of sparrow," Hepburn says. "They ate robins. I've often heard they prepared a dish called 'rice and robins.'"

For drinking water, the people of Shackleford Banks built wells by sinking two or three large pork barrels into the ground, Moore says. They dipped the water out with a long stick which had a bucket at the end.

The Bankers sold salted mullet and whale oil to buy necessities such as cloth, flour and coffee. Moore says the coffee was bought green. It had to be parched in an iron pot over a low fire

the activity. "As long as I could see the whale I was satisfied," Moore says. "But I was scared when the whale went under because you didn't know where it was going to surface."

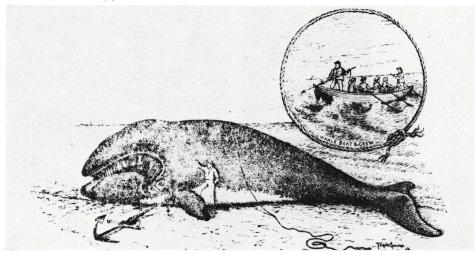
Some say the whaling activities of the Bankers have been overglamorized. And indeed it was just one of the ways the Bankers made their living. Moore says he ran fish to market and raised sheep to sustain himself. The sheep ran free on the island and were rounded up each summer for shearing, Moore says. The fine silky wool was sold to Leaksville Woolen Mills, outside of Charlotte, where it was woven into blankets.

But Murrill says the poor Banker families could not afford to own sheep. She remembers her uncle saying that when a poor family needed wool for socks the mother would send her children to chase a few sheep through the briars. "Some of the sheep's wool would snag on the briars, where it could be collected for weaving," Murrill says.

Before Barden's Inlet was carved by a 1933 hurricane, Bankers could walk from Shackleford to Core Banks. Moore says a storm caught him and his father by surprise while they were crabbing along Core Banks. Strong winds and a frothy sound forced the pair to walk home. They walked 17 miles, passing the lighthouse and Diamond City, before reaching home, Moore says. "Mama was standing out in the rain watching for us when we came into sight," he says. "I've never seen anyone happier to see two bodies than Mama was to see us that night."

—Kathy Hart

N.C. Archives and History photo



One whale yielded as much as \$2,000 in oil and bone



Divine Guthrie, a Shackleford boatbuilder, near the turn of the century

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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).



What's tougher than a pier piling made out of steel and covered with concrete? Spencer Rogers, Sea Grant's coastal engineering specialist, says the

answer is plastic.

Rogers says a new method of constructing piles for piers and marina docks uses a PVC pipe as a casing that is filled with concrete reinforced with steel.

While the initial cost is slightly higher than concrete construction, Rogers says the long-term cost is probably less expensive. The PVC piles require less maintenance and they last longer.

A wooden pile has a lifetime of about 30 years, but the PVC piles have lasted up to 50 years. And, they're stronger than a concrete pile of the same size. In the conventional concrete piles, water penetrates the concrete to rust the steel inside, causing the concrete to crack.

Rogers says the new method is useful for new construction as well as for repair work on docks using the older, conventional methods.

UNC Sea Grant Director B.J. Copeland was elected to the Board of Directors for the Marine Division of the National Association of State Universities and Land-Grant Colleges (NASULGC). Copeland was one of two Sea Grant directors elected to the board.

Dirk Frankenberg, director of the marine science curriculum at the Uni-

versity of North Carolina at Chapel Hill and coordinator for UNC Sea Grant's coastal studies research, was also elected to the board.



Jim Bahen, a Sea Grant marine advisory agent at Ft. Fisher, is testing an excluder trawl for shrimping. Working with a local shrimper who has agreed to use

the trawl, Bahen will compare the catch results from the excluder trawl with those of a standard trawl.

An excluder trawl has two tailbags and a mesh panel in the belly of the net. As the trawl is dragged along, the catch enters the mouth of the net. The shrimp will pass through the mesh of the panel and into the main tailbag. Bycatch, such as fish, jellyfish and crabs, will strike the panel and be forced into the other tailbag, which can be left open so that the fish can pass back into the water.

The excluder trawl is designed to extend the vessel towing time and free many of the juvenile fish and shellfish that often die in the trawl.



The blue crab grows only periodically through a molting process, called shedding. For a period of several hours after shedding, the hard blue crab, includ-

ing its shell, appendages and internal parts, is soft. We know the crab in this soft state as a delicacy. And, fishermen can land extra profits if they're willing to cull out peelers (crabs preparing to shed) and hold them until they shed. With a plentiful supply of crabs in North Carolina's waters, more fishermen are giving soft-shell crabbing a try.

That's why UNC Sea Grant is sponsoring a soft-shell crab workshop. The workshop will be held March 10 from 10 a.m. to 4 p.m., at the Beaufort

County Community College in Washington. Experienced shedders will be on hand to tell fishermen about their successful shedding methods. The workshop will include discussions on blue crab biology, peeler identification, harvesting methods, facility design and marketing. Fishermen will find out what it costs to get into the business and what the potential return is.

The fee for the workshop is \$5 in advance and \$6 at the door. For a complete agenda and a registration form, write Jim Murray, UNC Sea Grant, 105 1911 Building, North Carolina State University, Box 8605, Raleigh, N.C. 27695-8605 or call (919) 737-2454.



Do you need a new engine for your shrimp trawler, but you can't decide what to buy? Attend the North Carolina Commercial Fishing Show, March 16, 17 and

18, at the Crystal Coast Civic Center in Morehead City. Manufacturers and dealers will be on hand with the latest in boats, nets, engines, motors, traps, pots and accessory gear.

The show will be open 6 to 9 p.m., Friday, March 16; 10 a.m. to 5 p.m., Saturday, March 17; and 11 a.m. to 5 p.m., Sunday, March 18. Admission is free. The Crystal Coast Civic Center is located off U.S. 70 in Morehead City, on the campus of Carteret Technical College.

A series of short seminars will be presented throughout the three-day event. Seminar topics will cover everything from crab shedding to the prevention of boat fouling.

The North Carolina Commercial Fishing Show is sponsored by UNC Sea Grant, the N.C. Agricultural Extension Program, the N.C. Division of Marine Fisheries, the N.C. Fisheries Association and Carteret Technical College.

Continued on next page



Where do the 1984 gubernatorial candidates stand on the development of North Carolina's outer continental shelf? On the stabilization of Oregon

You can find out. The North Carolina Marine Science Council is sponsoring a public forum March 5, at 7 p.m. in the auditorium of the Archives and History Building, 109 East Jones St., Raleigh. During the forum each candidate will be given 15 minutes to address the important coastal and marine issues facing North Carolina's next governor. Besides the topics mentioned above, candidates will be asked to address the issues of peat mining and land drainage on the Albemarle-Pamlico peninsula, and the promotion of North Carolina's fisheries products.

Inlet? On submerged land ownership?



Sea Grant researchers Donald Stanley, Bob Christian and Hans Paerl recently met with representatives of governments from Washington, D.C. and sur-

rounding communities to discuss the algae blooms on the Potomac River and on the Neuse and Chowan Rivers in North Carolina. Christian says they found a lot of similarities in the problems of the three rivers.

All three rivers have a large number

of point source polluters. Each river "bloomed" at about the same time during the summer of 1983. And, each of the rivers had a low river flow at the time of the bloom. As the salt water began to intrude up into the river, there was a rapid decline of the bloom on all the rivers, says Christian.

Christian says that while environmental managers in the D.C. area rely on an elaborate computer model to predict and monitor blooms, researchers in North Carolina have the advantage of doing more experimental work to understand the process of an algae bloom.



The North Carolina Coastal Resources Commission recently adopted a mitigation policy. Now, development that occurs within the jurisdiction of the Coast-

al Area Management Act may be eligible for mitigation, says Walter Clark, Sea Grant's coastal law specialist.

Clark says that in the natural resources context, mitigation means the trading of one valuable resource for another resource of equal or greater value. For example, suppose a waterfront property owner wants to excavate some coastal wetland to gain boat access to deep water. The owner applies to the state for a permit, but the permit is denied based on the permanent loss to the wetland.

Under the new mitigation policy,

the property owner can offer another resource in exhange for the resource lost. In this case, the owner might offer to create additional marsh by lowering other high-ground property to marsh elevation. And, if the Commission accepted the offer, the owner could complete his project.

If you'd like more information on mitigation, contact Clark at (919) 737-2454.

Tom Blevins, a North Carolina State University zoology graduate, has joined the staff at the Sea Grant Aquaculture Research and Demonstration Center in Aurora. Blevins will assist Sea Grant marine advisory agent Randy Rouse with his aquaculture work.

Before coming to Sea Grant, Blevins worked with Sea Grant researcher Howard Kerby on his striped bass project.

If you'd like to contact Blevins, call (919) 322-4054.

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