

# THE MARITIMES



THE MAGAZINE OF THE NORTH CAROLINA MARITIME MUSEUMS

HATTERAS • BEAUFORT • SOUTHPORT

SUMMER/FALL 2021



The William E. and Catherine F. Sell Coin Collection,  
donated in 2006 to the Graveyard of the Atlantic  
Museum in Hatteras. See story on page 2.

[www.ncmaritimemuseums.com](http://www.ncmaritimemuseums.com)

NORTH CAROLINA  
**MARITIME  
MUSEUMS**  
BEAUFORT HATTERAS SOUTHPORT



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*One historic coast.  
Three unique museums.*



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## Cover Story

### Historic Coins Span Centuries, Maritime Museums

By Cyndi Brown, *Informations and Communication Specialist*

A coin whose history has already spanned more than 9,000 miles and 24 centuries recently added another 230 miles to its journey. The William E. and Catherine F. Sell Coin Collection, which was donated in 2006 to the Graveyard of the Atlantic Museum in Hatteras, includes 55 coins collected by William Sell from 1931 to 2001 while he vacationed along the Outer Banks. One of the oldest coins in the collection—a Ptolemaic Kingdom drachm that dates to 221-203 B.C.—is one of seven recently brought from the museum in Hatteras to the conservation lab at its sister site N.C. Maritime Museum in Beaufort for condition assessment and treatment.

“The Zeus coin cleaned up really nicely,” the N.C. Maritime Museums Conservator Michelle Crepeau said, referring to the drachm, which includes a profile of Zeus on one side and an eagle on the other. “The design stands out a little bit more.”

Crepeau said her work included removing layers of dirt, dust, old coatings, and corrosion from the seven copper alloy coins, which also include two Roman coins from the third century; two Byzantine era coins (one from the sixth century and one from the 11th); and two coins of unknown provenance.

“A lot of them had some form of surface corrosion,” Crepeau said, noting that after cleaning and chemical stabilization she also added a protective coating to the coins. That coating creates a barrier between the artifacts and the environment as a way to prevent future corrosion, including ‘bronze disease,’ a particularly destructive form of corrosion that often affects copper artifacts from maritime sites.

The conservation work has been completed, and the coins recently returned to the Graveyard of the Atlantic Museum and their place in the Sell collection.

The collection also includes coins from China, Ecuador, England, France, Egypt, Germany, Greece, Italy, Mexico, Spain, and the United States, along with the previously mentioned civilizations that no longer exist. The array of coins—whose value is more historical than monetary—is most likely tied to the number of shipwrecks off the state’s coast, N.C. Maritime Museum System Director Joseph K. Schwarzer II explained. However, he added, that doesn’t necessarily mean that there were Greek and Roman sailors traversing the coast.

“The oldest of the coins were conceivably scooped up with ballast from the bottom of harbors overseas and then washed ashore here as ships broke up alongside our state’s treacherous shoals,” Schwarzer said.

There may also be some pirate loot in the haul. “Pirates would not have cared where a coin came from but would care about the material used to make them,” Schwarzer said. “So, the oldest silver coins could possibly have been carried here as ‘treasure.’”

The newer coins? It’s just as likely they were dropped by international tourists visiting a popular vacation spot, he said.

The collection is not currently on public exhibit at the Graveyard of the Atlantic Museum. Coins are notoriously hard to display in a format that allows visitors to see detail, as well as both sides, and understand the history and significance. Funding is needed for the museum to move forward with plans to create an exhibit that appropriately showcases the collection. That exhibit, as conceived, would include each coin displayed in a traditional case with a moveable magnifier to enlarge details. An accompanying electronic display would allow visitors to further explore each coin’s history and significance. Donations toward the exhibit may be made via the nonprofit Friends of the Graveyard of the Atlantic Museum.

For more information, visit [graveyardoftheatlantic.com](http://graveyardoftheatlantic.com).



## From The Friends

### BEAUFORT:

#### Dealing with Covid-19 Challenges

As the new president of the Friends in Beaufort, I am happy for this opportunity to engage with the broader North Carolina Maritime Museums community.

Recently we were able to hold our first modified event of 2021: the Clam Chowder Cookoff. Four local chefs prepare chowder and four bakers serve a variety of cornbread at the annual event. This year we modified our event to take-out only, with folks voting for their preferred chowder and cornbread online. We sold out and had lots of positive feedback. Finding this format works, we will try it again later in the year for our Crab Cake Cookoff.

One of our standout activities is the Junior Sailing Program. With modifications to accommodate Covid restrictions, last summer was a big success. We recently opened enrollment for the 2021 program, while remaining flexible to respond to Covid limitations that may face us in July. The program filled quickly, and we have now started a waitlist for those interested in any openings that come available.

In 2020, we installed new docks on the Gallants Channel waterfront for our on-the-water programs. We also added a gazebo for protection from sun and rain. This year, thanks to the generosity of Friends members and Junior Sailing parents, we will add a new modular classroom adjacent to the docks and gazebo to handle the land-based part of the learning program and permit classes to continue safely in the event of thunderstorms.

Thanks to our staff, members, and partners for helping us continue to serve the museum through the rough seas of Covid-19.

*Bruce J. Prager*  
President

Friends of the NC Maritime Museum in Beaufort ■

### SOUTHPORT:

#### Overcoming Challenges

Greetings from the mouth of the Cape Fear River!

The year 2021 has continued where 2020 left off—rough seas due to the pandemic. The public health restrictions have not daunted the crew of the NC Maritime Museum at Southport. Lori, Katy, and Kristan’s flexibility and how they have adjusted to the pandemic and the public health requirements are impressive. We remain in awe, too, of the flexibility of so many of our volunteers and their efforts.

The Friends are pleased to note the completion of a few more projects—in large part due to the efforts of tremendous volunteers. A new floor (the material was left over from the 2nd Deck upgrade for artifact

storage) is in the galley, and new gutters were installed on the back roof to provide better drainage away from the building. New, donated flooring gives the entrance a polished look as volunteers dedicated their Valentine’s weekend to installing the planks. Bravo Zulu to our crew!

We can continue to support our education programs, changes to exhibits, and inclusion initiatives through our fundraising efforts. In December, the Wintergreen raffle raised \$1330, and our kayak drawing in May promises to extend our goal. There are many ways to support the museum! Please continue to visit the Friends’ website at [friendsncmmsouthport.com](http://friendsncmmsouthport.com) where patrons can now join or renew their membership online, purchase items from the ship’s chandlery, or donate!

Come down and see us!

*Tom Hale*

Chairman

Friends of the NC Maritime Museum in Southport ■

### HATTERAS:

#### Have bark Codorus remains resurfaced?

The museum’s library is chock full of fascinating maritime periodicals containing great stories within their pages, such as the wreck of *Codorus* on August 4, 1886. She was a striking bark with her sails fully set, a 675-ton veteran vessel of the lucrative Baltimore-to-Rio coffee fleet. She owed her demise to a stiff south-east breeze and a strong set of the Gulf Stream current conspiring together to drive her onto treacherous Outer Diamond of Diamond Shoals. She was inbound to Baltimore laden with \$118,000.00 of premium-grade Brazilian coffee and crew and passengers totalling thirteen. Fortunately, she suffered no loss of life, the lifesaving crew of Cape Hatteras Station comfortably sequestering all souls until passage to Baltimore could be arranged one week later. The wreck of *Codorus* proved an economic boon for shipwreck salvagers, including the intrepid and enterprising John Wallace Rollinson of Hatteras Village, who wrote in his journal, “Bark *Codorus* struck on Outer Diamond Aug. 4. Went to her in my pilot boat and got 30 sacks of coffee. Went back the next day and got 10 more before she went to Peecees and flote off said shoal.”

Some speculate that the unknown and recently uncovered shipwreck just a few hundred yards east of the museum may be the remains of *Codorus*. Years ago, Joe Schwarzer, director of the North Carolina Maritime Museum System, documented the site and tagged the remnants. Only time will tell whether it is indeed *Codorus* or yet some other long-lost victim of North Carolina’s famed Graveyard of the Atlantic.

*Daniel C. Couch*

President

Friends of the Graveyard of the Atlantic Museum ■



# North Carolina Maritime Museum at Southport

## Oysters: Cultural and Natural History Go Hand-In-Hand

By Lori Sanderlin, Museum Manager, Southport, NC

### A Bi-Valve Entrepreneur

Whether you call the area Middle Sound or North Ogden, oysters were an important fishery from 1950–2011; and everyone knew the “Oyster Man.” Cornelius Nixon Jr. was born in the Ogden area in 1921. He went to the Middle Sound colored school as a child and then to Wiliston in Wilmington. With incredible business acumen, this young man who purchased property before the age of 21 had a vision for the future. Several sources reveal that Mr. Nixon was selling seafood out of his truck to the North Carolina Shipyard workers during World War II but was stopped due to permitting issues. He did not give up, and this was not his only business venture. His vegetable and fishing trucks covered New Hanover, Brunswick, and Pender counties, selling various food. Nixon purchased property on Greenville Sound (the first with a permit) and then Wrightsville Sound for the express purpose of processing oysters.

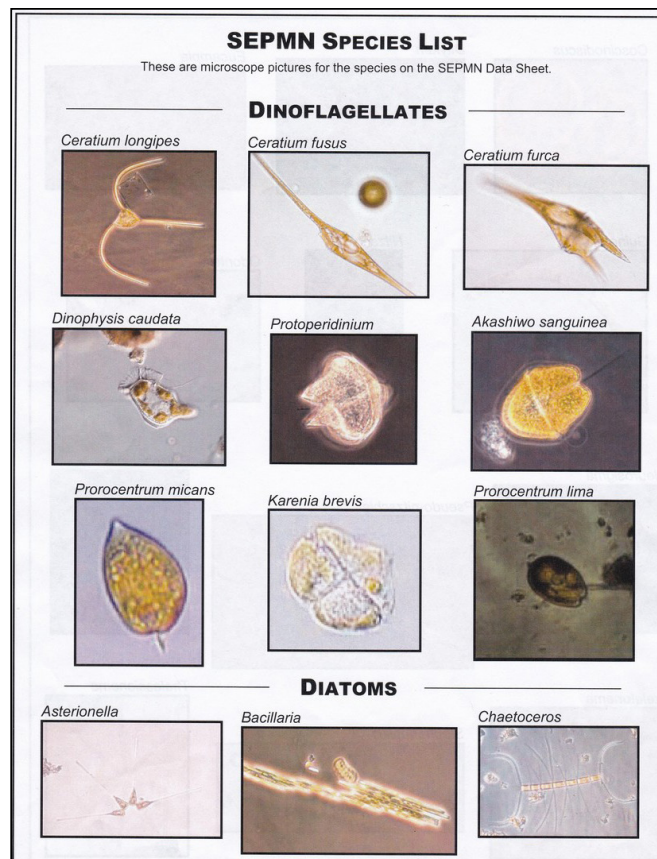
Many know the landmark on Market Street just south of the foot of Military Cutoff: A large painted sign on the side of the building reads OYSTERS. During the 1940s, Nixon grew his plant when oystering was growing and other fisheries were declining. He not only sold retail to locals and visitors, but he also supplied oysters to restaurants and other fish houses. Market Street is where Cornelius Nixon built his 10-acre oyster plant and became a pioneer for the oyster recycling program.



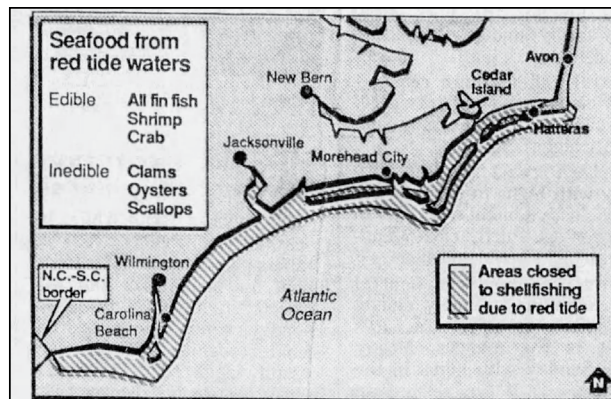
Bi-Valve Entrepreneur Cornelius Nixon. *Star News.*

### Red Tide

Locals hear the term and shudder, but Red Tide is a phytoplankton bloom and is not an isolated incident from the late 1980s. Understand that not all phytoplankton is dangerous. Harmful blooms occur when runoff from farms, sewage, or home fertilizers find their way into the water system. When there are too many nutrients in the water from runoff, blooms can occur. However, scientists and volunteers test the water and count phytoplankton for that reason: large blooms of bad algae can be catastrophic to shellfish and filter feeder fish. Fortunately, the National Oceanic and Atmospheric Administration (NOAA) has volunteers through the Southeastern Phytoplankton Monitoring Network to identify potential blooms and count good and bad phytoplankton. Once NOAA identifies the bloom, they can contact the public and fish houses to identify regions from where shellfish or local fish should not be consumed until it is safe.



Phytoplankton Images Courtesy of Elizabeth White and Dick Barmore.



## State extends shellfishing ban to S.C. border

By JERRY ALLEGOOD  
Staff Writer

The toxic red tide has spread from the central coast to the South Carolina border, prompting state officials to ban shellfishing in Brunswick County and to warn that the state's oyster season may be threatened.

Prime shellfishing waters from the Cape Fear River south to the border were closed to oyster and clam harvesting late Thursday after high counts of the poisonous algae were found. More than 200 miles of coastlines are off limits to shellfishermen, officials of the N.C. Division of Marine Fisheries said Friday. Shellfishing waters in a four-county area south of Hatteras Island have been closed since November.

Officials had hoped the algae would be killed by a cold snap late last week that produced 5 to 7 inches of snow along the coast. Instead, the algae moved farther south.

South Carolina officials said Friday that they would begin testing their coastal waters to see whether the red tide had hit the northern beaches.

Rich Carpenter, manager of the division's southern district in Wilmington, said clam fishermen would be especially hard hit by the most recent closing.

"Down here there are hundreds and hundreds of people that depend on shellfishing," he said in a telephone interview.

Marlene Varnum, a Brunswick County seafood dealer,

said clam fishermen had been enjoying especially good prices for clams despite a decline in seafood sales. Harvesting clams was like "finding a gold nugget," she said, because clams that usually sold for 16 cents each had been bringing 18 to 20 cents a piece.

"Clams were real high, and everyone was real excited about the price," she said. "It [the ban] is going to affect this area pretty bad. There are a lot of people who depend on it."

The division had previously estimated that financial losses from the red tide in Carteret, Onslow, Pender and New Hanover counties would total at least \$3.3 million from November to February, said James A. Tyler, a division spokesman in Morehead City. Potential losses in Brunswick County had not been tabulated.

Tyler said fishermen and other coastal businessmen were being urged to make long-range plans for losses because of indications that the red tide could continue. He said state officials were not optimistic that the waters would be clear in time to salvage much of the oyster season. The season runs from October to March, and clams are harvested year round.

Fishermen received \$1.5 million for oysters and \$7.5 million for clams in 1986, the most recent year for which figures were available. The five-county area affected by red tide accounts for 81 percent of the

See SHELLFISHING, page 5A

The News and Observer, Saturday, Jan. 23, 1988.  
Red Tide Shellfishing ban extends to SC.

## Stewards for our Maritime Environment

You can help protect shellfish environments for today and tomorrow by remembering the following:

**Runoff:** What you put on the ground eventually winds up in our water. The use of chemicals and fertilizers is not just an issue on factory farms; the ones you use on your plants and grass can harm aquatic life.

**Boat Activity:** Go slow and watch your prop — damage to the shell bottom and submerged aquatic vegetation can have long-term effects on oysters and other marine life.

**Marinas and Vessels:** Be mindful of pollutants and what goes into the water—your waste can affect marine life and future catch.

**Pick Up:** Clean the beach and make sure to leave it better than you found it. Grab litter on your beach travels or while out for a paddle. Every bit counts to help the environment.

**Please share with the next generation:** Reading books like *Max The Little Green Monster* together can help teach younger children the importance of being good stewards to our maritime environment.

To learn more, visit these links:

[NOAA Oyster Reef Habitat](#)

[NC Environmental Quality Threats to Habitat](#)

[NC Coastal Federation Oyster Shell Recycling](#)

Stories for Kids:

[Max the Little Green Monster: I Can Save the Earth](#)

[How the Oysters Saved the Bay](#)

[Want to learn more about Fisheries and Oysters in Southport?](#)

[YouTube Video: Below Deck](#)

[YouTube Video: Cooking with Ms. Lori](#)



## Oysters: Cultural and Natural History Go Hand-In-Hand *continued..*

### Fishing Exhibit Coming Soon!

Commercial and recreational fishing are integral to the maritime history of the Lower Cape Fear. Oystering, shrimping, crabbing, menhaden processing, and charter fishing all play an important role in the region's history. The NC Maritime Museum in Beaufort and the NC Maritime Museum at Southport are working together to create a new exhibit, *Nets to Plates: Commercial and Recreational Fishing*. This exhibit will examine the environmental, cultural, and social aspects of the industry. Not only will the exhibit share where your food comes from and how it is caught, but other ways fish are used in everyday products from animal food to cosmetics. If you are interested

in donating an artifact from the Lower Cape Fear or would like to help financially, please reach out to the museum: 910-477-5152 or [southportfom@gmail.com](mailto:southportfom@gmail.com). ■



Coming Soon - fishing exhibit artifacts.

## Education Programming Updates for 2021

By Katy Menne, Curator of Education, Southport, NC

With the official completion of a challenging year at the stern, the crew is looking ahead to more programming and learning. As many have grown accustomed to hearing, this is all dependent on the state of the world and Governor Cooper and Secretary Cohen's insight. With some restrictions easing, the staff has decided what programs will remain digital, move to hybrid, or move to limited in-person. We all place the safety of our patrons at the top of the list when considering these changes.

The programs that will remain virtual are Sensory Saturday, Third Tuesday, and Spring into History. Sensory Saturday is created for our neurodiverse patrons, thus placing them in the high-risk category. We hope to resume this program in-person toward the end of summer or early fall. Third Tuesday attracts another higher risk category, ages 65+, and takes place in the Southport Community Building. Currently, the city buildings remain closed until, at minimum, Memorial Day Weekend in May. Spring into History also attracts the higher risk category of ages 65+ and requires travel as a group, which we are not permitted to do yet. These



Field Trips were made virtual this past winter! Here Ms. Lori films Miss Katy, as she teaches 6th graders who are watching from the mountains of North Carolina.

three will remain virtual on their respective platforms. Sensory Saturday is hosted live on Zoom (registration is required) and contains movement, a craft or activity, and a story time. The instructions, minus the book, will be recorded and posted onto YouTube for those who are not morning people or would like to watch on a different day. The monthly Third Tuesday lectures are edited into a cohesive video and posted onto Facebook and YouTube. Spring into History will consist of two recorded tours, a lunch special offered by Moore St. Market, and a live question time with the curators of each museum featured.

Only one program—National Maritime Day in May—will be moving into a hybrid style. Last year it was hosted completely virtual with videos created by various organizations in the Lower Cape Fear. This year, there will be a mix of things to do at the museum and things that can be done online or at home. Check in for more details as May 22 approaches.

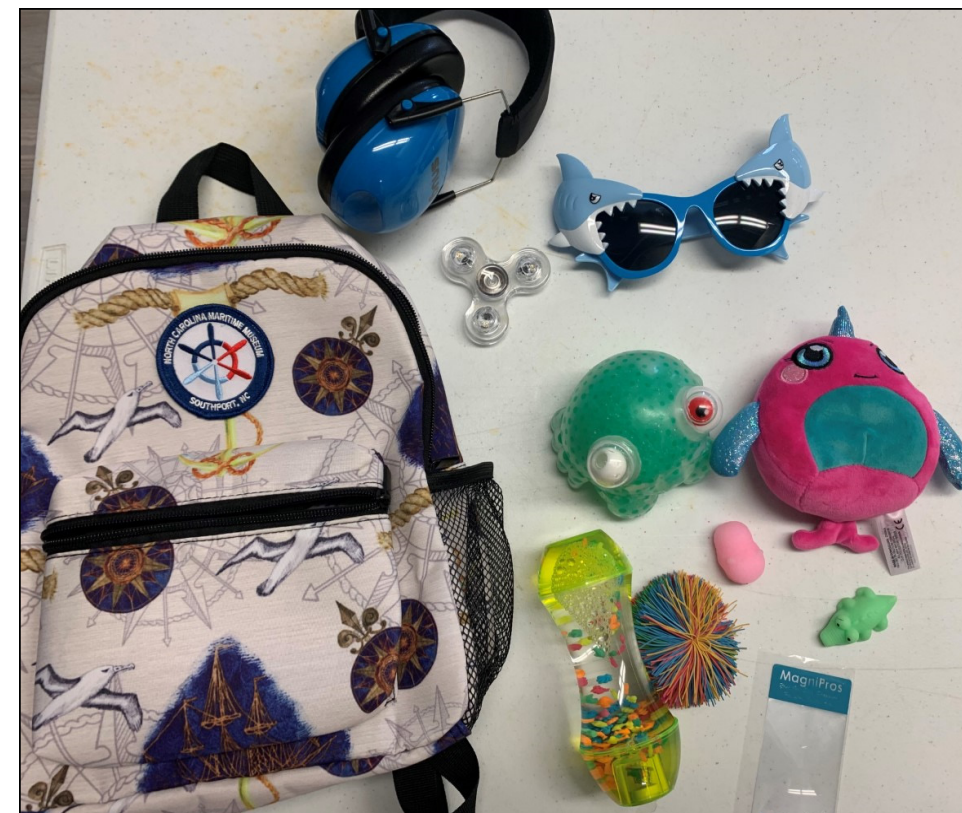
We are happy to announce that some learning will return to in-person! These all require limited numbers, distancing, masks, and frequent hand washing or sanitizing. The programs that will move

to in-person this spring and summer are Homeschool Friday, Salty Dog Saturday, Camps, and Aquatic Adventures. Each of these will have a different capacity limit and be structured slightly differently. Details about individual programs will be released about a month before for proper planning.

When you do return to the museum, you will notice some changes beyond the standard COVID protocols. The crew took 2020 as a pause to reflect on the mission, vision, and goals of the museum. We are thrilled to announce that we are one of the few organizations that offers a tour with American Sign Language interpretation readily accessible for all visitors. This semi-guided tour runs approximately 23 minutes and is an overview of the permanent exhibits. iPads are available to check out so patrons can watch, read, or listen to this tour without the limitations of personal technology. Also available for check out are Sensory Backpacks. Through state and private funds—and the assistance of four interns from Cape Fear Community College's Occupational Therapy Assistant Program—there are now eight sensory backpacks for use within the facility. Each is unique and offers patrons a choice of what they connect with. A Sensory Walk was designed and available on certain days for those wanting to experience outdoor fun! Learn about the specific availability of this initiative through social media or contact the museum directly. All these initiatives include proper sanitization and quarantining of materials before they can be distributed out again.



Sensory Walk on Moore St. Porch will be available on certain days during daylight saving time.



One of eight sensory backpacks available to check out while visiting.

On the horizon is some additional inclusive fun! A Sensory Room will be available soon for those needing to completely remove themselves from a class, program, tour, or visit. This room will be stocked with a variety of options to calm and soothe patrons. Also on the horizon is an initiative for those with low vision or total blindness. This summer, a temporary art exhibit will share how the maritime world speaks to individuals identifying as LGBTQIA+. More information on those initiatives will be available soon. Remember to visit our social media platforms or our website for more information. The museum is constantly moving forward to make the facility an inviting and educational space for all. ■



# North Carolina Maritime Museum in Beaufort

## A Whale Skeleton Teaches About Music, Biology, and Culture

By Keith Rittmaster, Natural Science Curator, NC Maritime Museum; Director, Bonehenge Whale Center, Beaufort, NC

On a cool February day while jogging on the beach after school, a young music teacher noticed a small round object protruding from the sand. The shape was unlike any of the scattered stones and shells around it. He turned around to investigate and realized it was bone. The year was 1971 in Wellfleet, Massachusetts. The teacher was Paul Berliner. Over the following several days Paul repeatedly returned to the site to carefully exhume what turned out to be the skeletal remains of an adult female long-finned pilot whale (*Globicephala melas*) – a skeleton that would have a significant role in shaping Paul's creative and imaginative career, and inspiring the minds of children and adults.

With help from William Schevill and Dr. Andrew Konnerth Jr. of Harvard's Museum of Comparative Zoology and the Woods Hole Oceanographic Institute, Paul began to assemble the bones of his whale skeleton. Being a young and creative music teacher, Paul soon realized musical opportunities in the whale bones. He discovered that by tapping a rib on the vertebrae, he could play musical notes and even a scale, like a xylophone. The variable mass of each vertebra, when struck, vibrated and produced a distinctive pitch.

Using his discovery, Paul integrated his whale skeleton (which he named "Mogal") into his music curriculum and began carting his whale around in his VW Bug to the schools (Eastham, Wellfleet, and Orleans Elementary Schools and Nauset High School) where he was teaching music that year. He contextualized the skeleton for students by lecturing about whale anatomy and the cultural significance of humans using bones to play music. Bio-acoustician and biologist Roger Payne had recently produced the album *Songs of the Humpback Whale* and Paul played those recordings for students. He also played recordings of American folk songs about, and sung by, whalers.

Initially, with students' help, Paul laid out the whale skeleton on the ground. He then handed out mallets that would not damage the bones and invited the students to tap on the bones so they could discover for themselves that the bones produced different sounds. Students then learned that the further away

the bones were from one another (anatomically), the greater the differences between the tones. They explored the reasons for this in terms of basic principles of sound production relating the mass of a bar or string, rates of vibration, and sound waves. Then Paul taught and demonstrated a few rhythms from his African music studies which students could use to guide their experiments by playing different sequences of bones, improvising, and searching for patterns. Soon the students were creating their own melodies. Finally, in ensemble, students played different patterns together with their friends.

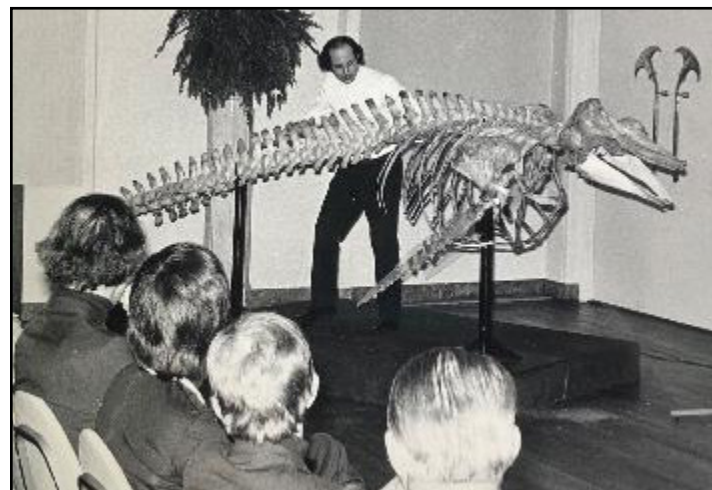
Paul performed with his whale skeleton for the NY Zoological Society. He then participated in a "Save the Whale" benefit in Tokyo, Japan. His musical pursuits introduced him to Paul Stookey of *Peter, Paul, and Mary*, the *Paul Winter Consort*, and many other great popular musicians of the era with whom he collaborated. During all of this, Paul earned a Master's degree and then a PhD from Wesleyan University in



Students learned about music, biology, and culture using Paul Berliner's long-finned pilot whale skeleton, Eastham Elementary School, 1971.



Paul Berliner transported his modular pilot whale skeleton to schools in his VW Bug.



Paul Berliner's musical performance on his long-finned pilot whale skeleton for the New York Zoological Society, circa 1974.



The long-finned pilot whale skeleton test suspension in the Bonehenge Whale Center.



The bone preparation and rearticulation team of (L to R) Nan Bowles, Cary Spencer, and Keith Rittmaster under the completed whale skeleton "Mogal" prior to delivery to Durham, NC.

Connecticut. He then became an ethnomusicology professor, first at the State University College, Geneseo, NY, then at Northwestern University in Illinois, before ultimately landing at Duke University in Durham, NC. As a Professor of Music he focused on jazz, the mbira, and musical traditions of the Shona People of Zimbabwe. His impressive resume is replete with awards, honors, lectures, performances, commissions, and publications. Through much of his travels, his whale "Mogal" was in tow.

In January 2018, Ryan McAlarney in the Marine Biology Department at UNC-Wilmington, contacted me seeking advice about rearticulating a whale skeleton. Certainly, I wanted to be helpful, but eventually Ryan determined that it was a project beyond his skill set and experience, so he suggested that I contact the guy who had the skeleton: Paul Berliner. The following month when NC Maritime Museum volunteer Josh Summers and I visited Paul in his office on Duke's East Campus, my initial response was ... WOW! The walls were lined with mbira, calabashes, hosho (gourd rattles), marimbas, drums, harps, and other African musical paraphernalia I barely recognized. Down the center of his office occupying most of the floor space were various sections of the whale's vertebral column on wooden rolling carts surrounded by small tables upon which other components were stacked: the skull, mandibles, flippers, scapulae, teeth, and ear bones. Paul was preparing to retire. He no longer planned to teach or perform with his whale skeleton. He expressed interest in honoring the skeleton appropriately by displaying it as a durable, accurate, and attractive exhibit. Since Paul could demonstrate that he had collected the whale's skeletal remains prior to the U.S. Marine Mammal Protection Act of 1972, he could legally possess them through a letter of authorization issued to him by NOAA Fisheries. I became excited to be part of this unusual story.

In November 2019, Paul delivered his whale skeleton to the recently completed Bonehenge Whale Center in Beaufort, NC where we would do the work. Many of the

bones had deteriorated and some were damaged by connective hardware and through years of travelling. Some bones were missing. Bonehenge Whale Center Volunteer Cary Spencer, Friends of the NC Maritime Museum Research Assistant Nan Bowles, and I are currently working together on the project. We disassembled the skeletal components, removed rusty hardware, repaired the damaged bones, fabricated some missing bones, and have rearticulated the skeleton for display. We used Alumilite casting resin mixed with bone dust for repairs. The vertebrae are mounted on 1/2" stainless steel pipe. The ribs are attached to the thoracic vertebrae and sternum using steel pins and Alumilite casting resin mixed with bone dust. Polyethylene foam represents the intervertebral disks. We installed the teeth and ear bones using E6000 industrial adhesive. The flipper bones are mounted on 1/4" plexiglass cutouts. With all the components complete, we did a test suspension in the Bonehenge Whale Center to make appropriate tweaks to the posture and flipper orientations. A custom-built studio in Durham, NC has been prepared for the skeletal display. The installation was completed in March. ■



# The US Signal Service Weather Station at Cape Lookout

By John Hairr, Education Curator, Beaufort, NC

United States Congressman Halbert Paine introduced a resolution on February 2, 1870, that provided for the establishment of a systematic observation of weather conditions at the various military outposts across the United States, both along the shores of the oceans as well as the Great Lakes. The resolution passed and was signed by President Ulysses S. Grant on February 9, 1870. From this legislation came the establishment of the Division of Telegrams and Reports for the Benefit of Commerce, which was officially a part of the U.S. Army's Signal Service, headquartered in Fort Myer, Virginia.

One of the new organization's duties was to provide for the reporting of the "approach and force of storms" along the sea and lakes by means of "marine telegraph and marine signals." To accomplish this, the Army established several weather observing outposts along the shores of the country which were connected via telegraph with the Signal Service headquarters in Virginia. By the late 1870s, a telegraph line running along the coast connected these stations with each other, as well as Fort Myer.

One outpost in the Signal Service's line of stations along the shores of North Carolina was established at Cape Lookout. On March 8, 1876, Sergeant E. F. Brady officially opened the Signal Service's station at this location. According to their *Annual Report for 1876*, the office was set up on the second floor of the lightkeeper's house, and the meteorological instruments were placed on poles fifty feet to the north of the house.

The following year, on October 29, 1877, the meteorological instruments were moved to a new location. The *Annual Report for 1878* noted, "The instrument shelter was moved from posts fifty feet away from the building to the middle north window of the lightkeeper's home." There was no mention of the reasons behind the change.

In addition to observing the weather, Signal Service personnel at Cape Lookout were responsible for keeping the telegraph line running along the coast in working order, "one half way to Portsmouth and one-half way to New River, a distance of 62 miles." Oftentimes men stationed here were sent off on detached duty repairing the lines up and down the coast, not just along the Core Banks, Shackleford Banks, or the Bogue Banks near Cape Lookout.

Duty for the soldiers assigned to these weather observation outposts was often monotonous. Since the stations were manned by only one or sometimes two people, the duty could become lonely and dull. Fortunately, unlike at other remote stations, the Signal Service folks at Cape Lookout had the lightkeepers and their families to keep them company.

At first, few people availed themselves of the information provided by the Signal Service at Cape Lookout. But eventually people began to take note of their warnings. The *Annual Report for 1878* noted, "The display of cautionary and cautionary offshore signals at this point is chiefly of benefit to the fishermen on the beach, enabling them to secure their nets and boats, and to small coasting vessels. During gales or the appearance of bad weather large vessels give these shoals a wide berth, and very seldom come near enough to the station to discern the signals displayed. Numerous parties from all parts of the State of Virginia visit this point during the summer months, and all take a lively interest in the service."

Fierce storms that rage along the Outer Banks of North Carolina often added adventure to the normal routine of the weather observers. These storms strike at all times of the year, whether they be nor'easters of the cooler months or the powerful tropical cyclones of the summer and fall.

The most notable of these tempests to strike Cape Lookout while the Signal Service weather observers were on hand was the Great Beaufort Hurricane, which made landfall along the Bogue Banks in the vicinity of Swansboro on August 18, 1879. This storm is best remembered as being the hurricane that toppled the Atlantic Hotel at Beaufort, where many dignitaries had gathered for the annual meeting of the North Carolina Press Association. Among those in attendance was Governor Thomas Jarvis and his wife, Mary.

Private H.J. Forman was in charge of the Signal Service's weather station at Cape Lookout when this powerful storm came ashore. In his official report, Forman described what happened that eventful morning: "The howling of the wind and the rushing of the water past the station woke us at 5 a.m., 18th. Velocity at this time being 80 mph and rapidly increasing. The rain pouring down in torrents, and the sea rushing past the house at a fearful rate and rising rapidly. It soon undermined the Signal Service stable, the Light House Establishment Store House and a cook house, which were blown down and carried away by the rushing tide. The Signal Service mule which became loose when the stable washed away tried to come to the dwelling house but could not face the raging storm; she turned and rushed into the foaming billows. The fence around the lighthouse next went carrying the keeper's fuel with it."

Forman noted that at 6:30 a.m., the barometric pressure had dropped to 29.15 inches, and the winds were howling at a sustained 138 miles per hour. Unbeknownst to Forman and the other occupants of the lightkeeper's house, this was the highest officially recorded sustained windspeed measured during a hurricane along the North Carolina coast.

Unfortunately, the anemometer that was measuring the record winds at Cape Lookout blew away shortly after the 138 miles per hour was recorded. Thus, Forman was unable to precisely measure the actual wind speed during the height of the storm, a little after 7 a.m. Forman estimated that the wind was blowing during the peak of the storm at the Cape Lookout Lighthouse at a sustained 165 miles per hour. If his estimate was accurate, this hurricane has the distinction of being one of the few Category 5 hurricanes to make landfall in the United States and ranks this storm with more famous killer storms such as the Labour Day Hurricane of 1935 or Hurricane Camille of 1969. The Great Beaufort Hurricane's windspeed record was nearly eclipsed twenty years later by the winds officially measured during the San Ciriaco Hurricane at Cape Hatteras, but the anemometer blew down while the wind was blowing at a sustained 120 miles per hour, though they did measure winds of 160 miles per hour for a fraction of a minute during a squall. These two records for maximum sustained winds officially measured at weather stations along the seacoast of North Carolina still stand. ■

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Summer Science School offers courses for children entering preschool through tenth grade. Each class provides an opportunity to learn about the maritime history, culture and environment of coastal North Carolina through classroom and field trip experiences. The most popular class topics include seashore life, pirates and fishing. For more information about Summer Science School registration, contact the museum registrar at (252) 504-7758.

The Junior Sailing Program offers basic through advanced sailing instruction to youth ages 8 and older. This advanced program teaches the arts of rigging, sailing, seamanship, and introduces students to maritime traditions and history. The program is designed to teach the basic skills of sailing to beginners and the skills of more advanced students, using a combination of time in the classroom and on the water. For more information about Junior Sailing registration, contact the Friends office at (252) 728-1638.

For more information click these links:

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- June 12** Maritime Day
- July 9** Great 4th Race
- July 23** 14th Annual Crab Cake Cook-off
- Aug. 7** Traditional Skiff Rally
- Oct. 16** Fall In-The-Water Meet
- Nov. 6** Friends of the NC Maritime Museum Boatshop Bash
- Dec. 4** Crystal Coast Christmas Flotilla
- Dec. 5** Annual Membership Meeting & Holiday Open House

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# Graveyard of the Atlantic Museum in Hatteras

## Vessels with Connections to Clyde/Scotland and the North Carolina Coast

By Mary Ellen Riddle, Education Curator and Volunteer Coordinator, Hatteras, NC

Clyde-built ships, said to be the crème de la crème in the global shipbuilding field, achieved worldwide predominance, manufacturing everything from a “humble steam puffer” to an “underwater warship.”<sup>1</sup>

Used worldwide, some Clyde-built vessels eventually found their way into the depths of the sea off the Outer Banks of North Carolina where some 2,000 vessels met their end. The Graveyard of the Atlantic swallowed up Clyde-built Civil War blockade runners, iron paddle and screw steamers, tankers, a fishing trawler, and sailing ships. Yes, war and weather even claimed the crème de la crème from across the pond.

The development of shipbuilding along the River Clyde in Scotland is a time-worn story of need inspiring growth. In the beginning, only small vessels could sail on the shallow river. During the 16th century, the idea of deepening the river arose due to industry being developed in and near Glasgow. But it was not until 1770 that the idea became a reality. Jetties were constructed; “...the regular swirling action of the river caused by the ends of the jetties catching the ebb and flow of the tide set up a scouring motion of the river bed.”<sup>2</sup> Silt and sand filled up the spaces between the jetties therefore deepening the river. By 1781, the river was 14 feet at the channel in Dumbuck, a far cry from the 10.5 feet found at Port Glasgow in 1762. In about 100 years, what started as a stream was now a deep-water river. Shipbuilding grew. Added factors supported that venture.

The location supplied access to coal and minerals such as iron ore, therefore enabling the manufacture of iron and, later, steel. Following the deepening of the river and influx of trade, an increase in population supplied readily available labor. An education system that laid emphasis on the practical applications of science, chemistry, and mechanics—coupled with innate skills and intuition of early manufacturers—played a role in the success of the River Clyde shipbuilding operations. Some companies constructed

a wide range of ships, and others specialized. The variety included sailing ships, ocean passenger liners, surface and underwater warships, oil and gas tankers, cable ships, drill ships, dredgers, tugs, coastal paddle and screw passenger vessels, yachts, fishing boats, ferries, and excursion vessels.

Here is a snapshot of Clyde-built vessels—some well-known and others less so, but not less important—that either ended their careers in Outer Banks waters or suffered there more than 3,500 miles away from their world-renowned and historic homeland on the River Clyde.

### SS *Blenheim*/SS *Richmond*

SS *Blenheim* was an iron hulled, paddle wheel steamer that ran aground January 24, 1866. “An article in the Baltimore Sun on January 30, 1866 states *Richmond* ran aground due to an imperfection in the compass.”<sup>3</sup> The wreck is partially exposed and is in 10-15 feet of water and can be seen off Salvo, NC. It was renamed SS *Richmond* when it was sold to Jacob Brandt of Baltimore, Maryland. It is said to be the last blockade runner captured during the Civil War. The ship was built in 1848 by Tod and MacGregor in Glasgow, Scotland. Its length was 208 feet and was 698 tons. The vessel’s homeport was New York. *Richmond*’s master was J. M. Barney.

### Clyde

On March 9, 1906, British sailing ship *Clyde* grounded south of Cape Hatteras while en route from Barbados to New York. After running aground, it was refloated on May 9, 1906, and taken to New York for repairs. *Clyde* was built by Russell & Company, Port Glasgow, Scotland, as the last sailing vessel built for the Nourse Line. Named after the River Clyde, and launched on July 25, 1894, the ship was mostly used for the transportation of laborers to the colonies. On July 31, 1906, *Clyde* was sold to M & G.R. Clover of London. The vessel was resold several times to various Norwegian ship owners and was then broken up in 1924.

**“The Graveyard of the Atlantic swallowed up Clyde-built Civil War blockade runners, iron paddle and screw steamers, tankers, a fishing trawler, and sailing ships. Yes, war and weather even claimed the crème de la crème from across the pond.”**

### Empire Gem

The tanker *Empire Gem* was built in 1941 by Harland and Wolff, Ltd., Belfast and Glasgow, Scotland. It began service on May 29, 1941. It was fitted with defensive weaponry and began service October 24, 1941, as a petroleum tanker for the British Ministry of War Transport. On December 19, 1941, *Empire Gem* left for the United States, sailing with a convoy headed to Mobile, Alabama. After arriving on January 10, 1942, and four days for dry docking and repairs, the vessel made its way to Port Arthur, Texas, where it picked up approximately 10,000 tons of spirits/kerosene and then headed up the East Coast.

On January 23, 1942, the tanker was sailing astern of tanker *Venore*, just a few miles southeast of the Diamond Shoals Light buoy. U-66 spotted the vessels and waited until *Empire Gem* was closer to *Venore*. U-66 fired two torpedoes. They struck *Empire Gem*’s aft starboard tank resulting in an explosion and subsequent fire. The radio operator sent out an SOS, which was picked up by *Venore*. A second message was sent and received by the Fifth Naval District shore stations. The crew of the struck tanker tried to launch lifeboats. They were hindered by intense heat. Only two of the 51 crewmembers survived. Eventually the tanker broke in half with the stern section sinking first. Following the attack on *Empire Gem*, U-66 fired several torpedoes on *Venore*, sinking the ship and killing 17 of its crew of 41.

### HMS *Senateur Duhamel*

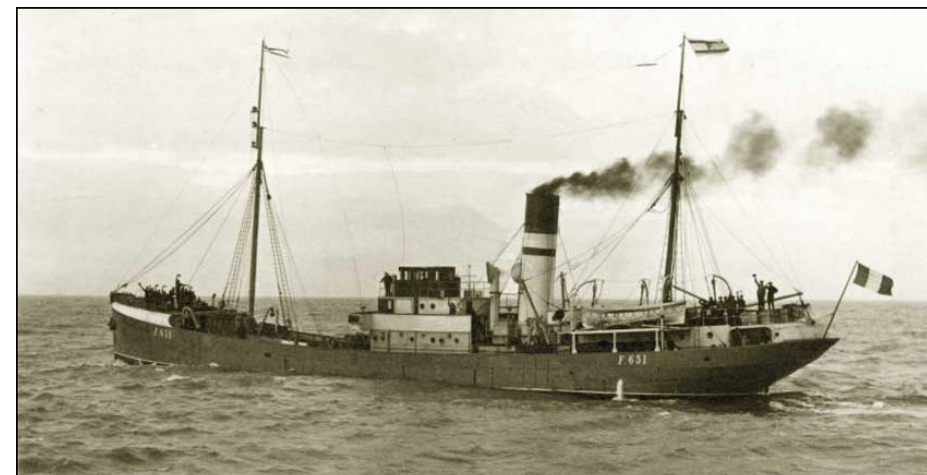
HMS *Senateur Duhamel* was built in 1927 by Hall, Russell and Company in Aberdeen, Scotland. It had a gross tonnage of 913, a steel hull, triple expansion three-cylinder engine, and two boilers. The ship was bought by a French fishing company and worked in the

commercial fishing business until it was captured by the British in December 1938. The trawler was converted for anti-submarine patrol and named *Senateur Duhamel* running out of Belfast, Northern Ireland. In February 1942, the patrol ship transferred to the United States Navy and was sent along with additional British converted trawlers to aid in patrolling the East Coast.

Aiding in performing convoy escort duties, *Senateur Duhamel* operated out of Morehead City, North Carolina, with the converted fishing trawler HMT *Bedfordshire*. On May 6, 1942, while near Beaufort Inlet, the crew of *Senateur Duhamel* sighted USS *Semmes* about a mile away. Due to fog, they were unable to identify the vessel. The message they flashed asking “what ship?” temporarily blinded *Semmes*’s crew. *Semmes* bow continued...



*Empire Gem* courtesy of the National Archives



*Senateur Duhamel* courtesy of Shaw Collection, Steamship Historical Society Archives



## Vessels with Connections to Clyde/Scotland and the North Carolina Coast *continued...*

crashed into *Senateur Duhamel*. Following the impact, *Semmes* moved back and contacted USS *Roper* for help. *Senateur Duhamel* sank in about 65 feet of water and later had to be blasted and wire dragged to prevent it from being a hazard to navigation. The crew were uninjured.

### SS *Ashkhabad*

The Russian cargo ship SS *Ashkhabad*, a 402 Type vessel, was built in 1917 in Glasgow, Scotland, by Harland & Wolff Ltd. The 5,284-ton ship sits today at the bottom of the sea off Cape Lookout. It was torpedoed by U-402 on April 29, 1942, and later shelled by Allied forces after being perceived a navigational hazard. The shelling was done in error. *Ashkhabad*, traveling from New York to Cuba, was scheduled to be salvaged by the tug *Relief*. But before the salvage ship could arrive

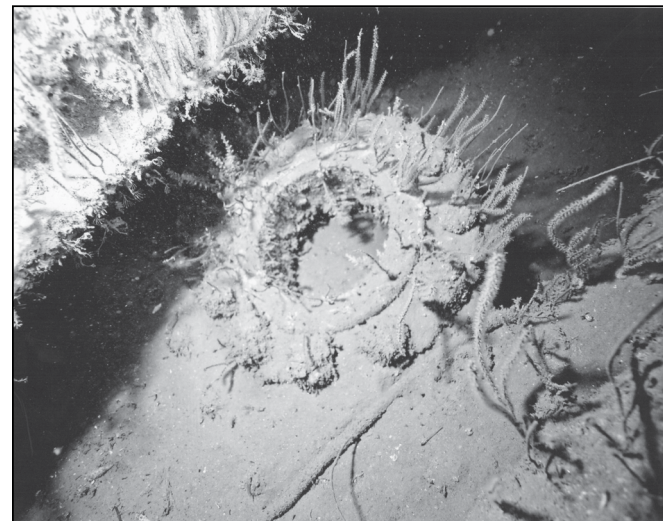


*Ashkhabad* courtesy of The Mariners Museum, Newport News Virginia.

at her destination, USS *Semmes* DD-189 and HMS *St. Zeno* shelled her. All crew members were rescued following the torpedo action and taken to Morehead City by the AWS trawler *Lady Elsa*, which had been escorting *Ashkhabad* on her journey.<sup>4</sup>

### Lancing

*Lancing* was built in 1898 by C. Connell & Company, Glasgow, Scotland. She was converted from a coal-burning whaling factory to an oil-fired steamer used to transport fuel oil for the British Isles. On her final war-effort cruise, the 7,866-ton vessel was carrying 8,802 tons of marine fuel oil from Curacao to England. She was armed and had lookouts in place. On April 7, 1942, U-552 torpedoed *Lancing*, putting a hole in her starboard side. Due to fast flooding in the engine room, crew member Emil Hansen drowned. Capt. Bjerkholt ordered the ship abandoned. Not being able to radio for help, 49 survivors waited approximately five hours



Lancing brass pipe fitting on port side by Marc Corbett.

before two ships, *Pan Rhode Island* and HMS *Hertfordshire*, came to the rescue.<sup>5</sup>

### Spunkie

*Spunkie* was a passenger/cargo iron paddle steamer built in 1857 by Tod & MacGregor, Glasgow, and the Meadowside Yard 86. It had a gross tonnage of 166. It was first owned by Peter McGregor, Glasgow, and Archibald Denney, Dumbarton Glasgow. By 1863, the vessel was operating in the Civil War as a blockade runner and completed four round trips from Nassau to Wilmington, North Carolina. The steamer ran ashore and sank off Old Inlet, Wilmington, with army supplies.

### Ella

*Ella* was an iron paddle steamer built by William Denny & Bros, Dumbarton, in 1864. *Ella* had a gross tonnage of 634 and a 200 hp steam engine. Its first owner was James Carlin of Carrickfergus. *Ella*'s port of register was Glasgow. The ship was sold November 7, 1864, at Wilmington. Operating as a blockade runner, *Ella* grounded while being chased by USS *Emma* and USS *Pequot* near Marshall Shoal. The vessel was shelled and burned and later sank. The steamer was carrying rifle muskets, munitions, and gin.

### Clyde/Clythia

The three-masted iron sailing vessel *Clyde* was built in 1860 by Alexander Stephen & Sons Ltd., Kelvinghaugh. *Clyde* had a gross tonnage of 1,151. The first owner was J. & F. Somes, London. The vessel's name was changed to *Clythia*. In 1890 the vessel was sold to Helgeson & Co, Christiana, and reduced to a barque rig. *Clythia* stranded January 22, 1894, on Pebble Shoals at Wash Woods just south of the Virginia-Carolina line while carrying a cargo of Italian marble.



*Clythia* masthead light courtesy of Graveyard of the Atlantic Museum, North Carolina Office of Archives and History.

### William Coulman

The iron screw steamer *William Coulman* was built in 1866 by Macnab & Co., Greenock. *Coulman* had a gross tonnage of 406. *Coulman*'s name changed to *Bluefields*. The vessel sank off Hatteras in January 1908, while headed from Jacksonville to Philadelphia.

### USS *Princess Royal*

USS *Princess Royal* was an iron screw steamer built in 1861 by Tod & MacGregor, Glasgow. The steamer had a gross tonnage of 652. *Princess Royal* was registered in Glasgow July 25, 1861. The first owner was Mathew Langlands & Alexander Drysdale (M Langlands & Sons). The vessel had six later owners, including the US Navy, who changed its name to *Sherman* in 1865. In 1862, it was bought through Fraser Trenholm & Co to run the United States Civil War blockade, carrying engines for naval ironclads under construction in Charleston, South Carolina. Before meeting its end, *Princess Royal* was captured January 29, 1863, by USS *Unadilla* off Charleston after being forced aground; the steamer was subsequently towed off. It changed ownership in March 1863 when bought by the Navy and commissioned as USS *Princess Royal*. In 1865, the vessel was sold at auction. In June of 1865, while traveling from New York to New Orleans, the ship collided with *Mathilde*. *Princess Royal*'s troubles ensued. In August of 1874, it sprang a leak and had to anchor off Little River. A month later, the steamer sank off Cape Fear. All on board were saved, as well as some of the cargo.

### Cara

*Cara* was a steel screw steamer built in 1905 by William Hamilton & Co., Port Glasgow. The steamer was launched November 15, 1905. It had a gross tonnage of 4,006. The engine was built by David Rowan & Co., Glasgow. *Cara*'s history includes being a phosphate carrier. On December 14, 1905, the ship was bought by Cara Steam Ship Co. Ltd.-Japp & Kirby, Liverpool. The vessel's name changes from *Cara* to *Kennemerland* in 1913 and *Olinda* in 1934. *Cara* was bought and sold twice before meeting its fate off Cape Hatteras. Running from Pernambuco to New York with cocoa and castor beans, *Cara* was torpedoed on February 18, 1942, by U-432.

### Havelock

*Havelock* was an iron paddle steamer built in 1858 by James & George Thomson, Govan. The steamer was launched May 13, 1858, under the ownership of Dublin & Glasgow Sailing & Steam Packet Co, Dublin. In 1862, *Havelock*'s name changed to *General Beaugard*. On December 11, 1863, the vessel was destroyed by USS *Howquah* off Wilmington.

### Herald

*Herald* was an iron paddle steamer built in 1851 by John Reid & Co, Port Glasgow. The vessel was launched on March 12, 1851. Her gross tonnage was 450. *Herald* was powered by two side lever engines built by James & George Thomson, Finnieston, Glasgow. The steamer was first owned by Dublin & Glasgow Sailing Steam Packet Co., Dublin. *Herald* eventually was sold in 1861 to Chicora Importing & Exporting Co. of Charleston as a blockade runner. Its name changed to *Antonica* in 1862. In December 1863, the ship ran ashore at Wilmington and was destroyed.

### Dundalk

*Dundalk* was an iron paddle steamer built in 1844 by Robert Napier & Sons, Govan. The steamer had a gross tonnage of 601. Initially it could hold 32 passengers and was fitted to carry cattle. *Dundalk*'s first owner was the Steam Packet Company, Dundalk. In April 1864, the ship was purchased by Melchor George Klingender, Liverpool, to participate in the Union blockade during the Civil War. *Dundalk* was run ashore and destroyed by USS *Victoria* while entering Old Inlet at Wilmington. ■

1. *Clyde Built Ships*, James Pottinger
2. *Clyde Built, A History of Shipbuilding on the River Clyde*, John Shields
3. *SS Richmond*, Marc Corbett
- 4-5. *Shipwrecks of the Outer Banks, Graveyard of the Atlantic*, Mary Ellen Riddle



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