

THE MARITIMES



THE MAGAZINE OF THE NORTH CAROLINA MARITIME MUSEUMS

HATTERAS • BEAUFORT • SOUTHPORT

SUMMER/FALL 2022



Our Yard magazine, December 1941,
launching of *John D. Gill*.

Courtesy of Sun Shipbuilding Historical Society

www.ncmaritimemuseums.com

NORTH CAROLINA
**MARITIME
MUSEUMS**
BEAUFORT HATTERAS SOUTHPORT

THE MARITIMES

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NORTH CAROLINA
**MARITIME
MUSEUMS**
BEAUFORT HATTERAS SOUTHPORT

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*One historic coast.
Three unique museums.*



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Book Review: 'The Most Important Fish in the Sea'

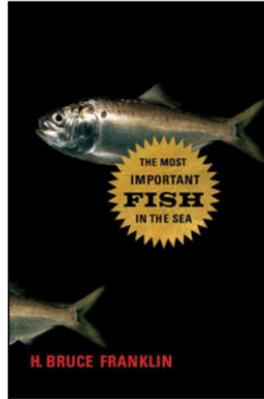
By Tessa Johnstone

H. Bruce Franklin's *The Most Important Fish in the Sea: Menhaden and America* chronicles the journey of the menhaden fish, a small fish that became one of America's largest marine harvests. Menhaden, which had been sustainably harvested by Native Americans for hundreds of years, boomed in popularity when they replaced whales as a major source of marine oil in the late 19th century. The widespread use of menhaden in cosmetics, lubrication, and animal feed caused the menhaden industry to become the largest commercial fishery in the United States until the 1980s. Depletion of the menhaden population through unregulated fishing practices caused drastic impacts to both marine habitats and human economy.

Franklin's study of the rise and fall of commercial menhaden fishing was, at times, bleak. These once-bountiful fish had almost disappeared, fished to near extinction. However, the population has rebounded in recent years due to restrictions on menhaden fishing along the Atlantic Coast, apart from one fishery in the Chesapeake Bay. Critical of the menhaden industry, Franklin is hopeful that the menhaden will continue to climb back to their pre-commercial abundance.

Part historical narrative, part environmental treatise, Franklin's recounting of the tale of the menhaden industry sheds light on a practice that could, even now, end in devastating consequences if not for the careful oversight of conservationists and commercial fisherman alike. The plight of the menhaden is beautifully illustrated in this book. It appeals to the reader through economic, environmental, and cultural channels the importance of keeping our consumption of nature sustainable, lest we lose it in the future.

Tessa Johnstone is the N.C. Maritime Museum system collections registrar and librarian at the Beaufort site. ■ ■ ■



The menhaden industry in North Carolina was predominately based in Beaufort, Morehead City, and near Cape Fear at Southport. Many men were employed in the operations, from boat captains and deckhands on board the fishing boats, to plant operators and mechanics at the processing facilities. The fishery funded the local economies for decades.

By 2005, the last menhaden operation in the state shuttered its doors, ending the chapter on the industry along our coast. In this image dated around 1940 from the Charles A. Farrell collection of the State Archives, fishermen are bunting the purse seine, which is full of menhaden, as the bail net scoops up the catch and lowers it into the hold of a larger menhaden boat. Scenes like this played out within sight of the shores of Carteret and Brunswick Counties almost daily during the heyday of the menhaden industry in North Carolina.



From The Friends

HATTERAS: Explore Operation Drumbeat

This year marks the 80th anniversary of World War II's German U-boat patrols off the United States coast. Our most ambitious exhibition to date, *Operation Drumbeat* will be opening later in May with a variety of components, including a stunning cutaway view model of U-552 done by master model maker Michael Mills coming in the next few months. Not only will you see the Enigma machine from U-85, which is part of our collection, but you will be able to type and print your own codes on a working Enigma machine. By using a periscope, you will be able to understand the importance of blackouts. We are also thrilled to have never before-seen artifacts from collectors, including a remarkable U-boat artifact collection from Roger Hunting. Many do not realize that World War II was right off our North Carolina coast. Local children walking to school on the beach would come across debris and bodies from ships that had been torpedoed the night before. Everyone heard the sounds and saw the flames, and all were sworn to secrecy. They never told their stories until the late 90's when they were first interviewed by Kevin Duffus and museum volunteers and staff. We are very grateful to our amazing design and collections team, based out of our sister museum in Beaufort, and to our own Friends group for handling all the finances. What history the Graveyard of the Atlantic holds!

Daniel C. Couch
President

Friends of the Graveyard of the Atlantic Museum ■

BEAUFORT: Dear Maritime Museum supporters,

As normalcy returns and visitors crowd the museum the Friends have ramped up as well. Our biggest fundraiser in several years is nearly upon us. On June 17, we will celebrate BOAT SHOES & BOW TIES under the moon and stars at Gallants Channel on the waterfront in Beaufort. Dance the night away with Sylvia Johns Ritchie, and savor delicious food provided by 34° North Restaurant. The evening will include both a Silent and Live Auction featuring wonderful gifts and opportunities, including trips, boat rides and much more. Socialize with existing friends and make new ones as we celebrate 30 years of the Friends Junior Sailing Program.

Junior sailing started with the vision of a few avid sailors who built seven Optimist Pram sailboats. With the new mobile classroom in place ready to receive hundreds of excited students this summer and the future Maritime Education Center at Gallants Channel on the horizon, it's a perfect opportunity to celebrate.

Please buy your tickets now! [CLICK HERE FOR TICKETS](#)

We are looking for sponsors for the evening at levels from \$500 (HOSTS) to \$10,000 (YACHTS) and many levels in-between (or even more if you're so inclined).

[CLICK HERE FOR SPONSORSHIP OPPORTUNITIES](#) We are also actively soliciting donations of items for our auctions. If you have boats, motors, other maritime items, gift certificates,

trips, boat rides, wine, artwork, services, or other desirable items that you can donate please let us know. Contact Wendi Oliver, our event chair, at wendi@fsv.group to arrange for your donations.

The operation of the rebranded Post of Call gift shop at the Museum by the Friends is proceeding splendidly. We are adding new merchandise weekly, so please stop by often. Don't forget that members of the Friends receive a 10% discount on purchases.

I'm pleased to report that the Wooden Boat Show put on by the Museum and supported by the Friends was a tremendous success after a two-year Covid hiatus. Held on a recent gorgeous Saturday, there were more than 40 classic and reproduction wood boats on display, including more than a half dozen in the water. Additionally, the Friends provided free boat rides in our classic sailing skiffs to more than 60 seafarers. It was great to have this popular event back.

See you at the museums.

Bruce J. Prager
President

Friends of the NC Maritime Museum at Beaufort ■

SOUTHPORT: Greetings from the mouth of the Cape Fear River!

The Friends have been very busy this spring with fundraising efforts as we look to support exhibits — both upgrades and new. We held another very successful raffle of a Santee Sport kayak. Thanks to Adventure Kayak Company for their continued support of the museum. We then hosted a concert on the Garrison Lawn with the Back Porch Rockers where we raffled off various items including a Trunk of Grog and a Treasures of the Cape Fear basket; the venue for these concerts on the Cape Fear River is simply stunning! In May, we hosted our inaugural Jazz Night at the Southport Community Building with dancing, live and silent auctions, and incredible food and Friends. Again, the main focus of these fundraising efforts is to support exhibits. The crew's next focus is the commercial fishing exhibit, which will examine this story integral to the people of the Lower Cape Fear. Thank you to each and every one of you who have supported us!

Please check out the Friends website:

<https://www.friendsncmmsouthport.com/>. You can join or renew your membership with the Friends of the NC Maritime Museum at Southport online! You can learn about membership perks and shop in our ship's store. Also, look at the museum's calendar of events and sign up for classes. There is always something new and exciting happening here!

Thank you for your continued interest in preserving and sharing our maritime history — in Southport and throughout North Carolina and our nation! Enjoy your summer and come and see us in Southport!

Tom Hale
Chairman

Friends of the NC Maritime Museum in Southport ■

North Carolina Maritime Museum in Beaufort

Life Aboard Ship Means Going at Sea

By Christine Brin

On display at the North Carolina Maritime Museum in Beaufort are the remains of Blackbeard's head. Not the head of the pirate himself, but the head from his ship *Queen Anne's Revenge*. In the museum's exhibit hall is a flattened metal tube that would have connected to the ship's "seat of ease" and funneled the waste products of sailors, such as Blackbeard, to the ocean below.

While some visitors to the museum are aware that a ship's facilities are referred to as the "head," few know the origin of this term or the evolution of maritime "facilities." The use of the term "head" to refer to a ship's toilet dates to as early as 1708. Before the installation of modern plumbing, sailors and passengers would typically use the front area of the ship, known as the beakhead or "head." The area at the front of the ship was ideal as the wind and waves would carry waste away from the ship. A word of caution: While using the head on a sailing vessel was ideal, the opposite is true on a motorized vessel. When riding on a modern, motorized vessel the wind will be in a passenger's face, but on a sailing vessel, the wind would blow in the opposite direction.

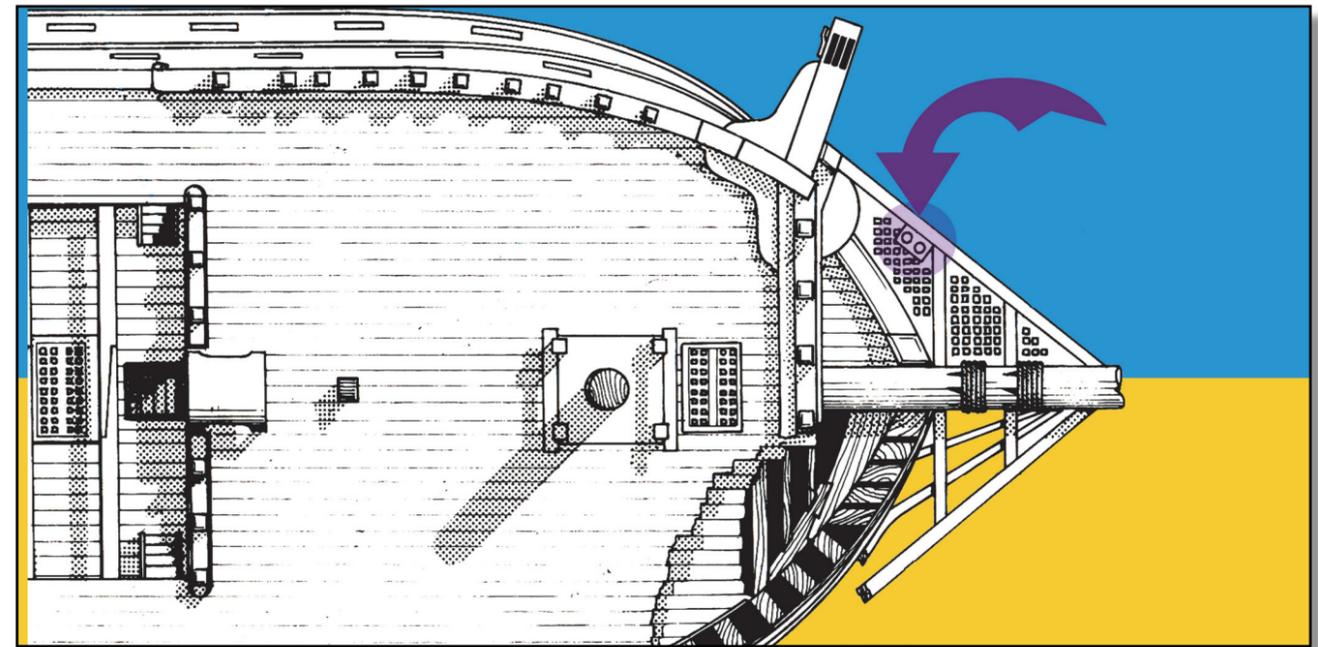
Between 1670 and 1680, shipbuilders began equipping larger ships with specialized accommodations called "seats of ease." Seats of ease could range from simple wooden boxes secured to the ship's head to more comfortable accommodations installed in the great cabin for the officers' use. The remains of seats of ease have been recovered from famous shipwrecks such as *Vasa* at Stockholm, Sweden, and *Queen Anne's Revenge* near Beaufort. Ironically, the area on a ship that shares its name with the



Archaeologists drawing of the remains of a "Seat-of-Ease" from *Queen Anne's Revenge*. On display at the NC Maritime Museum in Beaufort.



Using the "Seat of Ease" at the Ship's Head.



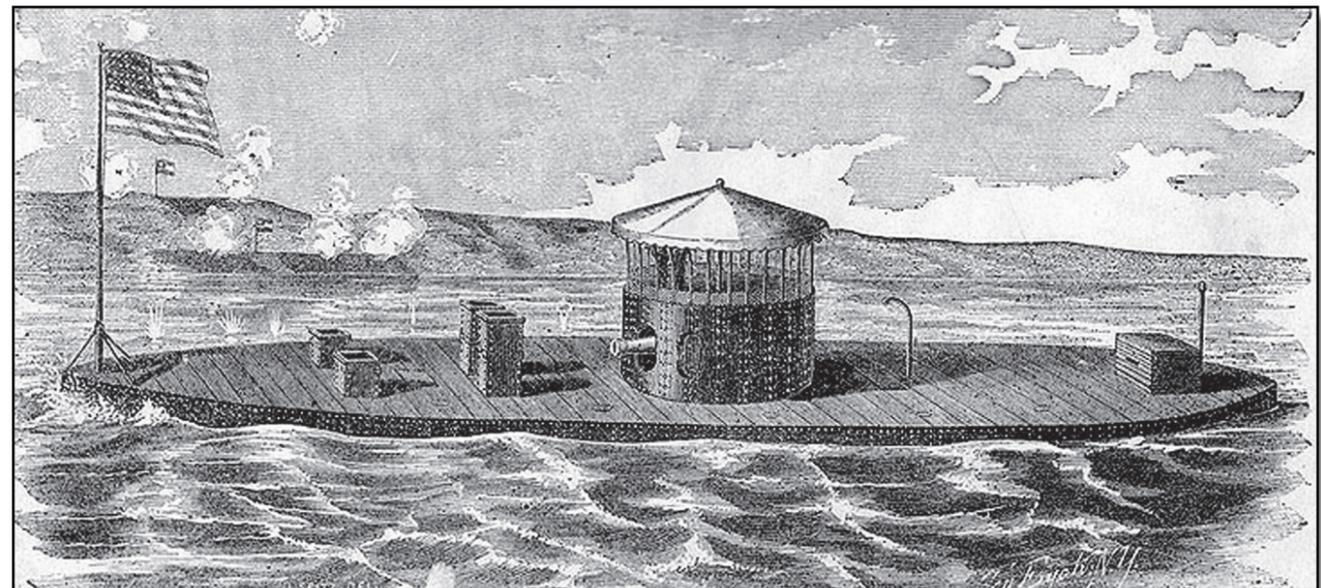
"Seat of Ease" at the ship's head

waste product, the poop deck, has nothing to do with waste. The poop deck is the highest deck at the back, or stern, of the ship. The name comes from the Latin word "puppis" meaning "the stern of a ship." Fun fact: The word "puppis" is also the name of the constellation representing the stern of the mythological Greek ship *Argo*. The word "poop" was not used to refer to human or animal waste until the early 1900s.

According to writer Thomas Lynch, "The flush toilet, more than any single invention, has civilized us in a way that religion and law could never accomplish." Just as the adoption of seats of ease on ships was significantly later than on land, the same held for flushing toilets.

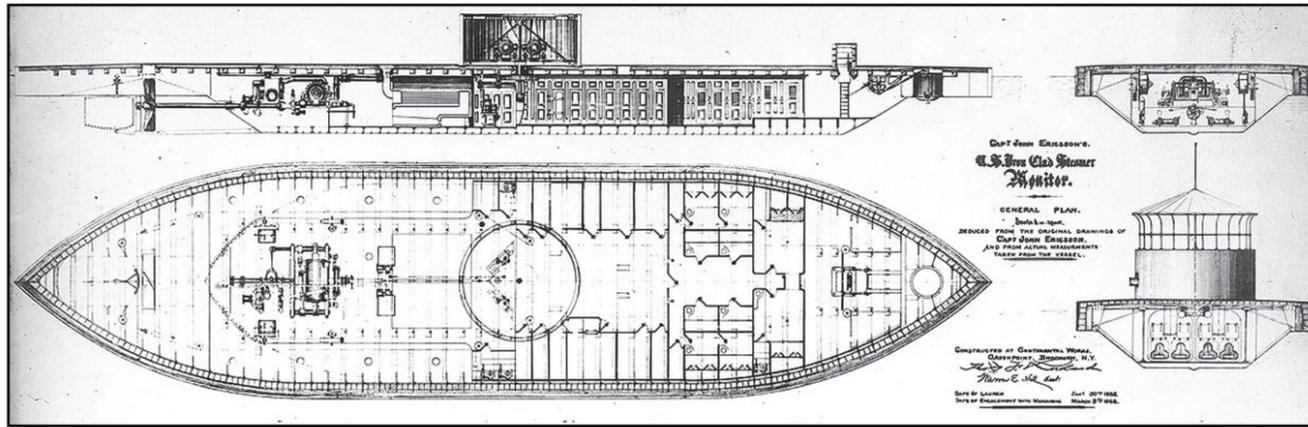
Initially, there had been no need to create a flushing mechanism for shipboard plumbing, as they could rely on gravity and the ocean to dispose of the material. It was not until the 1860s when designers started creating ships that sat partially below the water's level that it became necessary to design a flushing mechanism. It is amusing to think that if pirates had a flushing toilet, they may have found themselves more "civilized."

The first successful shipboard flushing toilet would be found on the ill-fated *USS Monitor*. *USS Monitor* was an ironclad warship built in 1862 for the Union Navy during the American Civil War. Engineers faced a series of challenges with the innovative *continued...*



USS Monitor

Life Aboard Ship Means Going at Sea continued...



USS Monitor general planning drawing

new ship, including the design of a flushing toilet. Since most of the ship rode below the waterline, they could not rely on gravity—the traditional power source for toilets. *Monitor's* designer, Swedish engineer John Ericsson, addressed the issue by developing a pressurized pump system. After a sailor used the toilet, he had to close a near valve, open a far valve, then actuate a pump to drive the waste out. It was tricky to use.

Sailors of the time told the story of a possibly fictitious sailor who turned the valves in the wrong sequence and was blown off the seat by a powerful jet of seawater. While the story of this fictitious sailor provides an interesting chuckle, there was at least one case where these complicated valve systems did prove the best of a ship. The unfortunately named Commander Schlitt found himself at the helm of a ship that was sunk by its plumbing. On April 15, 1945, the German U-boat 1206, was cruising at a depth of 200 feet off the coast of Scotland, when the commander, Kapitänleutnant Karl-Adolf Schlitt, needed to use the toilet. However, Schlitt found himself unable to operate the complicated flushing/valve system and called for a specialist. Neither man was able to properly resolve the issue. Seawater and sewage from the improperly operated toilet leaked onto the U-boat's batteries creating poisonous chlorine gas. The gas soon filled the U-boat, forcing Schlitt to surface in enemy territory. Schlitt's ship was immediately and aggressively attacked by enemy aircraft, causing him to order "abandon ship." Forty six of the 48 on board survived.



Kapitänleutnant Karl-Adolf Schlitt



The first flushing toilet was invented in 1596; it was added to ships by the late 1800s and saw significant evolution in design up to the 1950s, including the noteworthy creation and patent of the toilet seat. Over the next thirty years, the design of the toilet would see little



to no change (cushioned seat covers, different handles, were the extent). It wasn't until the 1980s that toilet design experienced new advances with the commercial introduction of the wall-mounted or "floating" toilet. The No. 1 feature of the floating toilet is the water tank placed behind the wall. The new design was particularly popular because of the then-current emphasis on smaller spaces, sustainability, and modern design. The wall-mounted toilet design is worth mentioning, because at the time that this design was being unveiled in Europe, the North Carolina Maritime Museum in Beaufort's current building was being built. In 1985, the museum in Beaufort was opened to the public at its Front Street home, with both a striking floating staircase in the lobby and floating toilets in the nearby bathrooms.

Averaging more than 150,000 visitors a year for the past 30 years, even the best-designed toilets wear out. In June of 2021, the museum closed the thirty-year-old bathrooms for a three-month renovation that included the replacement of the original toilets. Fortunately, the contractors and staff recognized the value in the wall-mounted toilets and have elected to keep with the original design, replacing the old wall mounted toilets with new, more efficient ones. The museum's head is a far cry from Blackbeard's.

Toilets are modern marvels that are probably the most underappreciated, but often utilized, pieces of technology; and their evolution is on display in our exhibit hall and in our bathrooms. They evolved from a simple seat at the head of a ship—like the remains of Blackbeard's head in our gallery—to today's modern floating design—like the facilities off our lobby. Visit the North Carolina Maritime Museum in Beaufort today to compare both. ■

Christine Brin is the associate curator of education at the North Carolina Maritime Museum in Beaufort.

Registration! Summer Science School & Junior Sailing Program

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. Registration now open, spaces limited. 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 exciting program teaches the arts of rigging, sailing and seamanship, and introduces students to maritime traditions and history. The program is designed to teach the basic skills of sailing to beginners and to hone the skills of more advanced students, using a combination of time in the classroom and on the water. Registration now open, spaces limited. For more information about Junior Sailing registration, contact the Friends office at (252) 728-1638.



Mark Your Calendar!

June 17 June Summer Party Fundraiser

July 9 Great 4th Race

July 22 15th Annual Crab Cake Cook-off

Aug. 6 Traditional Skiff Rally

Aug. 19 Summer Sunset Deck Cocktail Party

Oct. 22 Fall In-The-Water Meet

Nov. 5 Friends of the NC Maritime Museum Boatshop Bash

Dec. 4 Crystal Coast Christmas Flotilla

Dec. 5 Annual Membership Meeting & Holiday Open House

For details call (252) 728-1638 or visit www.maritimefriends.org

Graveyard of the Atlantic Museum in Hatteras

Project Nutmeg: Outer Banks Almost a Target

By Mary Ellen Riddle

Imagine the first national park in the nation as a site for atomic bomb testing. Hatteras Island was once targeted for this very reason.

In 1948, the chief of the Armed Forces Special Weapons Project assigned U.S. Navy Captain Howard B. Hutchinson the task of creating a study to determine the feasibility of using test sites for explosions of atomic bombs within the continental United States. The study was called Project Nutmeg. Along with sites in New Mexico, Nevada, Arizona, and the coastal areas of Maine, Delaware, Maryland, and Virginia, the search for a continental site included reviewing Cape Hatteras, Cape Fear, Portsmouth Island, Ocracoke Island, the Pamlico Sound, and the Camp Lejeune area. The government was seeking a continental site for continued testing because officials believed that such a testing

location would increase ease and flexibility over one in the Marshall Islands where operations Crossroads in 1946 and Sandstone in 1948 were conducted. A move, they said, would save time, money, and effort for logistic support. Yes, there could be short-term public relations problems caused by testing atomic bombs within the continental limits. But the government felt that would be offset by a gain in realism in the public's attitude.

Not all involved in the process were on board with using a continental testing site. Army Lieutenant General J.E. Hull noted that the logistical difficulties would be offset by several factors: Testing in an area remote from the United States would afford experience in military challenges coming from a remote area explosion that somewhat simulated an authentic wartime operation; it would be easier to control security in a remote area than in the United States; and difficulties

in controlling air, rail, and road traffic as well as continental shipping would increase using a continental site.

He noted there would be "... an ever-present possibility that a stray aircraft, car, train, or boat would either necessitate postponement of the test or would cause a fatal accident." This was pertinent to Cape Hatteras as the Gulf Stream located 12-15 miles from land and spanning 30-70 miles wide was a swift, heavily travelled shipping lane for domestic and foreign trade. Fishing vessels added to the maritime traffic as well. A snapshot of the Outer Banks during the late 30s shows anglers from northern states coming to Hatteras Island to sportfish. By 1945, the charter fishing industry accelerated due to a booming economy, an increase in recreation time, and the newly affordable ship-to-shore radio, which allowed captains to take charter fishermen

beyond site of land to pursue marlin and other species. There was already a robust commercial fishing industry.

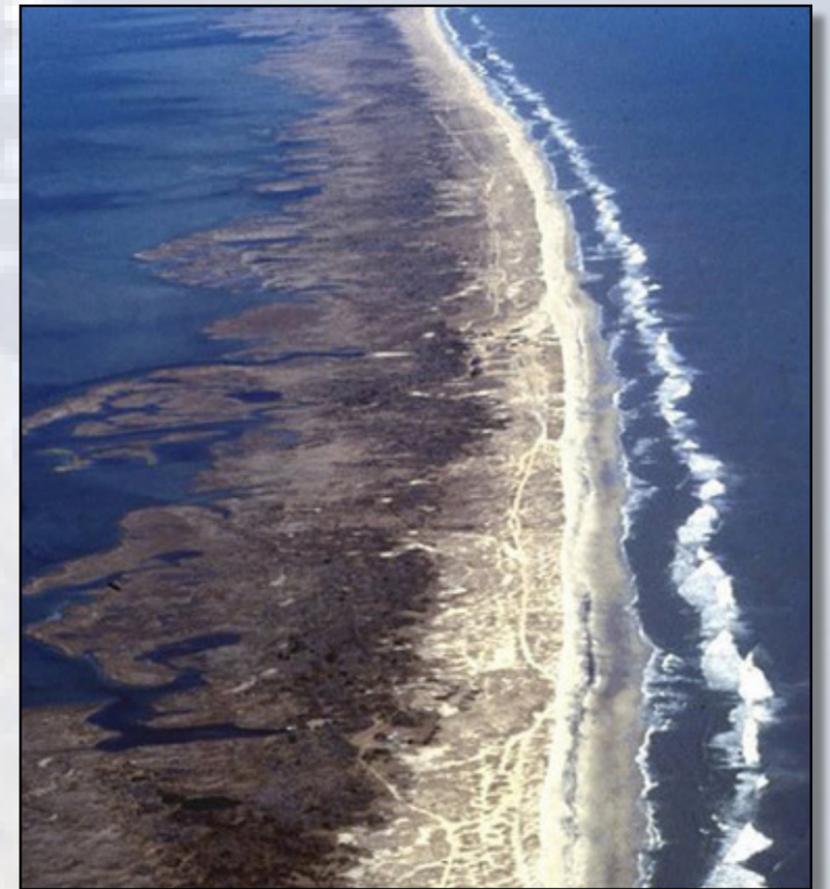
While the government was eyeing the Outer Banks for testing purposes, local planners long had a dramatically different vision for the area. With the development of a national seashore at Cape Hatteras in 1937 and the

establishment of the Pea Island National Wildlife Refuge the following year, the push was toward preservation and protection of the environment, counterintuitive to using the barrier island as a testing site for the atomic bomb. Hatteras essentially was an area with the physical capabilities of becoming not only a pristine vacation resort but a world class fishing capital, partly due to its unique combination of hydrography, biology, and geography. Cape Hatteras features a fishing ground that includes species indigenous to the area as well as pelagic fish that migrate through the coastal waters. One can't help but wonder how fallout would have

affected the myriad of species, environments, and people connected to those fish, far and wide.

The fragility of the natural habitats on Hatteras Island and in the surrounding waters, and dependence on them by the citizens of the area has prompted action for protection of the resources over the years since Project Nutmeg. During the 1980s Mobil Oil was considering drilling for oil in a prime Cape Hatteras fishing location. Cuttings from the drilling process alone would be toxic to the fishery, not to mention the threat of crude oil leaks or spills. Not enough was known about the environment in question, even then, to have North Carolina Governor Jim Martin support Mobil Oil's plan to drill just one test well, never mind set off an atomic explosion. An examination of the site helps illustrate its environmental sensitivity. Offshore Hatteras is an area locals call The Point (not to be confused with Cape Hatteras Point). Here the Gulf Stream, an extension of the Labrador Current, the Western Deep Boundary Current, and lesser known currents meet and/or pass at the slope of the inner continental shelf. Combine the convergence of the Gulf Stream and the Labrador Current with "scattered upwellings of cool waters rich in oxygen and nutrients along the edge of the continental shelf, and the churning waves that characterize the so-called Graveyard of the Atlantic..." and the area is renowned "as one of the best deep-sea, sport-fishing areas in North America" remarks the late David S. Lee, research biologist, curator North Carolina Museum of Natural Sciences, and author of *Gulf Stream Chronicles*. According to Lee, species of fishes found on the slope "were present in densities four to seven times greater than similar shelf studies conducted to the north and south of the Hatteras area." The fishes were not only dense, but the dominant species were different. It's unclear whether Project Nutmeg considered impact on pelagic species that migrated through the area to distant points across the globe and instead reviewed only those species that were indigenous to the Cape Hatteras area.

As part of Project Nutmeg, the results of prior testing were reviewed from scientific and psychological viewpoints to compare those sites with continental sites. They looked to solve when, where, and how the tests would be conducted without economic or physical harm to people. The studies discovered that atmospheric layers and wind and its direction were primary factors in the distribution of radioactive materials; and that the movement of the radioactivity from a site through atmospheric processes are peculiar to a target environment. Project Nutmeg research noted that with the Air Commerce Act, passed



The barrier islands of the Outer Banks straddle the border between the Pamlico Sound and the Atlantic Ocean. One of the most productive habitats of the continent, but also one of the most fragile.

in 1926, that "Ability to forecast the routine weather for stations in North America is a certainty," and therefore would aid in the choosing of detonation dates that predicted favorable conditions. To modern-day Outer Bankers who deal often with nor'easters and hurricanes, they might refute that predicting weather is a certainty. Anecdotal evidence provided by fishing captains aware of weather patterns, reveals how, on occasion, weather could be clear one minute then quickly change without warning the next.

Evidence collected in the early atomic bomb studies included the fact that the prevailing winds in high levels over the United States were of a westerly nature. This element of atmospheric circulation over North America, in part, duplicates the westerlies where winds between 20,000 feet to 50-60,000 feet before shifting from the east were reviewed for the removal of fission products from a test site in the Marshall Islands. Project Nutmeg noted that: "This flow of atmosphere from West to East assures the continuous ventilation of North America and supplies the scavenging action necessary to remove the fission products from any continental test site," and that with winds aloft prevailing from the west, meteorological conditions between Cape Hatteras and Cape Fear were satisfactory for removing the *continued...*

Project Nutmeg: Outer Banks Almost a Target *continued...*

radioactive products. Time has shown, though, that to share even some of the same westerly wind conditions in the Marshall Islands in North America could be problematic to people, water, flora, and fauna.

From 1946 through 1958, the military conducted multiple atmospheric nuclear weapons tests, primarily at Bikini Atoll, about 75 miles from Rongelap Atoll. Predictions weren't always accurate. "On March 1, 1954, the testing of the Castle Bravo hydrogen device produced an explosion that was 2½ times more powerful than predicted and produced unexpected amounts of fallout that resulted in widespread radioactive contamination." It contaminated more than 7,000 square miles of the surrounding Pacific Ocean including some of the nearby islands like Rongelap Atoll. Irradiated debris fell over the island. The inhabitants suffered severe sickness including vomiting, diarrhea, sore skin, and fatigue as well as burning eyes and swelling of the neck, and extremities. Three days after the test, the people were forced to abandon their island homes, leaving behind everything they owned. They relocated to Kwajalein for treatment. Six days after the explosion, the U.S. government set up a secret project to study the effects of radiation on the residents of the Marshall Islands. The government was accused of using the subjected people without their consent to study the effects of radiation. Up until then, the United States Atomic Energy Commission hadn't thought much about the possible effect of widespread fallout and impacts on people and the environment beyond the boundary of the atomic bomb test site. Darryl Lorenzo Wellington reports in his New Politics article *In the Shadow of the Manhattan Project*, "The indigenous of the Rongelap in the Marshall Islands, where the United States conducted blasts, today suffer generational immune system vulnerabilities; cataracts; cancers and leukemia; miscarriages, congenital defects, and infertility." It was reported that there were dangerously high levels of Strontium-90 in inhabitants' well water and that residents were found to be carrying abnormally high concentrations of Caesium-137 in their bodies despite having been relocated in 1946 to Rongerik Atoll, 125 miles from Bikini Atoll.

Imagine such a catastrophe off the Outer Banks. What of the immediate impact of fallout on shelf waters, sargassum weed nursery grounds for sea life, and island salt marshes? What of the island's aquifers? While the government's focus was more on the area south of Cape Hatteras, including Ocracoke and Portsmouth islands, overlooking the nature of the Gulf Stream was problematic. One wonders where waste products with a long shelf life would move in a changeable, windy, current-rich area such as Cape Hatteras. At a speed of approximately 60 miles per hour per day, U.S. Geological Survey Water Science School reports the Gulf Stream moves "100 times as much water as all the rivers on Earth." ⁸ Irradiated debris could be

swept along its lengthy path affecting marine life, fish that feed on marine life, and birds and people that feed on the fish from Cape Hatteras to Europe. And it is not unusual for eddies to spin off from the Gulf Stream and become prime fishing spots for local fishermen.

Project Nutmeg noted that there wasn't a lot of plankton in the Gulf Stream for fish to feed on that, in turn, would impact the economy. But, as we know today, there are plenty of bait fishes in the stream. A scientific study in the '50s carried out on a Hatteras charter boat that analyzed the gulfweed, which edges the stream, documented 52 different species of minnows that attract bigger fish and even larger fishes feeding on the big fish. And while Project Nutmeg calls the area sparsely inhabited, which, compared to a city it certainly was, there were schools in every town. The 1940 and 1950 census for Ocracoke, Hatteras Township, and Kinnakeet registered between 2,131 and 2,532 people living on the island who would have to be relocated. Would they have relocated to towns north or south of Cape Hatteras, which certainly were within reach of fallout as we since have learned from Rongelap and Rongerik Atolls? A 2010 report on the long term affects of nuclear testing at the Marshall Islands stated, "In 1957, they were returned to their homeland even though officials and scientists working for the U.S. Atomic Energy Commission determined that radiation doses would significantly exceed those allowed for citizens of the United States. The desire to study humans living in a radiation-contaminated environment appeared to be a major element of this decision. A scientist in a previously secret transcript of a meeting where they decided to return the Rongelap people to their atoll stated an island contaminated by the 1954 H-Bomb tests was "by far the most contaminated place in the world."

In March 1949 Sumner T. Pike of the Atomic Energy Commission issued a reply on the study to find a continental test site. He addressed several reasons that Cape Hatteras would not make a good choice. The land was mostly inhabited, too many people would require relocation, too much offshore and waterway shipping traffic, and too much passing air traffic. In 2021 National Park Service sites on the Outer Banks welcomed 4 million visitors. Thankfully, for the millions of people who visit the entire Outer Banks annually and for the infrastructure that make those visits possible, Cape Hatteras was not chosen for testing the atomic bomb. This pristine coastal region turned idyllic beach resort could, today, be another Rongelap. Instead, visitors can come to the Outer Banks and Hatteras Island to enjoy fresh seafood, breathe clean air, and swim in unpolluted waters. It is a haven of rest for travelers from across the globe. What a contrast to becoming a tragic site riddled with fallout. ■

Mary Ellen Riddle is the curator of education at the Graveyard of the Atlantic Museum in Hatteras.

Salty Dawgs Speaker Series 2022

The Graveyard of the Atlantic Museum 2022 Salty Dawgs Speaker Series features presenters on North Carolina maritime history and culture including topics on piracy, shipwrecks, whaling, sea shanties and the mystery of the Lost Colony. The speakers are historians, divers, maritime history Masters candidates, musicians, professors, researchers, and authors. These talks are scheduled on Tuesdays from May through September at 11 a.m. They run 30-45 minutes. The public is invited. No reservations are necessary. Call 252-986-0723 for more information.

June 14:

Sharon Peele Kennedy
Cooking Seafood
Hatteras Style:
Clam Chowder



June 21:

Sharon Peele Kennedy
Cooking Seafood Hatteras Style:
Fish Chowder

June 28:

Doug Stover
The Cape Hatteras
Lighthouse Restoration
in Progress



July 5:

Marc Corbett
A Picture Show of Outer Banks
Shipwreck Diving

July 12:

Sharon Peele Kennedy
Cooking Seafood Hatteras Style:
Seafood Chowder

July 19 and 26:

JR Shanty Co
Sea Shanties and Songs of the Sea

August 2:

Jason T. Raupp
Safe in the Seagrass: Archaeological
Invitation of a Possible Pirate Wreck at
Somerset Bermuda



August 9:

JR Shanty Co
Sea Shanties and
Songs of the Sea



August 16:

Allyson Ropp
Wrecked on Chicamacomico: An
Examination of the Shipwrecks along
Wimble Shoals, Rodanthe, N.C.

August 30:

Lydia Downs
A Coharie Canoe



September 6:

Marc Corbett
Shore Wrecks of
the Outer Banks

September 13:

Nathan Richards
Queen Victoria
(1856-1866):
From the
River Clyde
and Canadian
Confederation
to a Carolina
Shipwreck



September 20:

Joan Collins, Darrell Collins, and
Coquette Brooks
Freedmen, Surfmens, Heroes: Keeper
Etheridge and the Pea Island Lifesavers

September 27:

Marc Corbett
A Picture Show of Outer Banks
Shipwreck Diving

North Carolina Maritime Museum at Southport

Creation and Impact of SS *John D Gill*, 1942 Tanker Attacked by U-boat

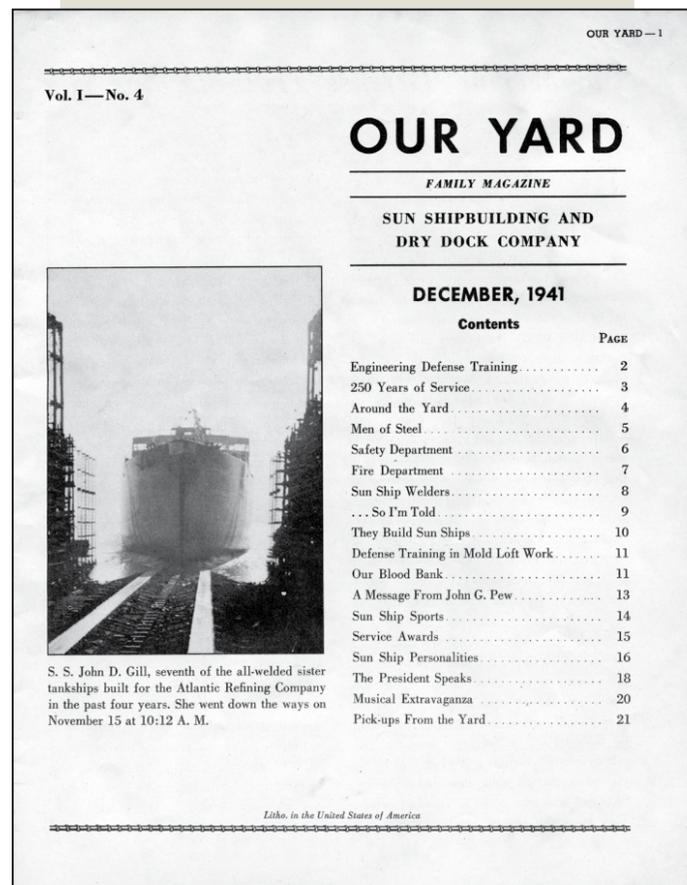
By Katy Menne

CAUTION: To our readers, some portions of this article are graphic, describing death and dismemberment. The historical events covered reveal the reality of war; they may be too sensitive for some readers.

Before December 9, 1941, German Unterseeboote (U-boats) were only permitted to defend themselves if they were attacked by American vessels first. On the ninth, Adolf Hitler lifted all restrictions on attacking American vessels, launching the Atlantic Ocean into pandemonium. Submarine warfare that occurred in the North Atlantic during World War II is often folded into Operation Paukenschlag, or Operation Drumbeat to English speakers. However, Operation Drumbeat occurred exclusively from January 13 through February 7, 1942, and strictly between the Saint Lawrence River, which is north of New Brunswick, Canada, and Cape Hatteras in North Carolina. The Lower Cape Fear and the attack date discussed herein officially fall outside of those parameters. Likewise, there are many shipwrecks from World War II in the waters off the southern end of North Carolina and around Texas that are not part of this specific German Campaign. *John D Gill* is one of them.

Shipyards worked diligently during World War II to launch vessels in record time, even with war materials in great demand. Liberty Ships were constructed at the North Carolina Shipbuilding Company in Wilmington, North Carolina; and oil tankers were the focus at the Sun Shipbuilding and Dry Dock Company in Chester, Pennsylvania. This shipyard exclusively welded vessels and had their version of Rosie the Riveter or Wendy the Welder: Tillie the Toiler. The list of purchasers from Sun Shipbuilding were nearly all oil companies. One company, the Atlantic Refining Company, needed these vessels to make runs between Texas and Pennsylvania.

Contracted in December 1940, the SS *John D Gill* had its keel laid on July 10, 1941. It spent the next four months and five days under construction on the ways. Shipbuilders beat the delivery date by one day. *John D Gill* was owned by the Atlantic Refining Co. and was named for one of the company's directors; John D. Gill's wife was the ship's sponsor at the christening. *John D Gill* mirrored the other tankers constructed at Sun Shipbuilding: it had a length of 521 feet and a 70-foot beam. Historian and author Gary Gentile described the vessel at launching: it's "paint was fresh and her decks unspotted by rust in its maiden voyage."



Our Yard magazine, December 1941, Distributed by the Sun Shipbuilding and Dry Dock Co., Philadelphia, Pennsylvania. This monthly magazine contained updates on vessels launched, morale building games and socials for workers, as well as information and news from management. Courtesy of Sun Shipbuilding Historical Society

Single Screw Turbine
Cont. # 236 - S/S "John D. Gill"
Built on Way # 8 D.W.T. Tonnage 19,165
Owner: Atlantic Refining Co.
Sponsor: Mrs. John D. Gill

Keel Laid	7-10-41	On Ways	129	Days
Launched	11-15-41	Wet Dock	77	Days
Delivered	1-31-42	Total	206	Days

Hull Steel	Tons	Base Price
Plates	4,481	36.10
Shapes	515	6.40
Total	4,996	42.50

Fabricating Cost Per Ton:
Total Rivets Driven: 30,000, 112 1/2

Cost Per Rivet:	Labor	Burden		
Cost	Hull	Per Dwt.	Eng.	Per Dwt.
Labor	474,606.	24.76	226,957.	11.84
Burden	284,786.	14.86	136,195.	7.11
Mat'l	457,843.	23.89	268,820.	14.03
Total	1,217,235.	63.51	631,972.	32.98

Labor	701,563.	36.60
Burden	420,981.	21.97
Mat'l	726,663.	37.92
Total	1,849,207.	96.49

Miscellaneous

O. T. Bonus	55,514.	2.89
Hull Extras	101,711.	5.31
Errors and Defects	287.	.01
Misc. Credits	115,629.	6.03
Total Cost	1,891,090.	98.67
Total Sales Price	2,072,359.	108.13
Profit 12/31/44	181,269.	9.46
Contract Price	1,810,000.	94.44
Extras & Changes	262,359.	13.69
Total Contract Price	2,072,359.	108.13

A-Credits to Costs

Burden Cr.	106,408.13
Scrap Cr.	9,221.11
Total Credits	115,629.24

B-Extras & Changes

Inc. Labor Costs	106,384.69
Bonus Overtime	47,718.91
National Defense Features	69,376.98
Degaussing System	36,672.28
Hull Extras	2,205.80
Total Extras & Changes	262,358.66

Note: -Value of Machinery supplied by Owner \$ 511,000.00 not included in Sales or Costs.

Pages on the SS *John D Gill* from the Sun Shipbuilding and Dry Dock Co. building records notebook. Courtesy of Sun Shipbuilding Historical Society

This would soon change. In the late hours of Thursday, March 12, 1942, while the crew was navigating the waters near Frying Pan Shoals off Cape Fear they received warning from the U.S. Coast Guard that German U-Boats were in the area and to return to Charleston, South Carolina. At 9:10 p.m. EWT (the equivalent of Eastern Daylight Time), *John D Gill* was hit with a torpedo from the German U-boat *U-158*. The crew had only a brief time between being hit and receiving the order to abandon ship by Master Allen D Tucker. The gun crew searched for the attacking boat during that time but could never identify it.

The scene on the Atlantic that night started calmly but it quickly worsened as "a geyser of crude oil gushed skyward and spread over the sea for hundreds of yards..." once the oil ignited, the ocean was ablaze. Gunnery Commander Ensign Robert Hutchins said, "two of my boys go into those flames, and I heard them scream as they died."

In the attack, the torpedo had destroyed Lifeboats 1 and 3, leaving only 2 and 4 available for crewmembers to abandon ship. The abandon ship process was not smooth. This was *John D Gill*'s maiden voyage. Some crew members were on their first assignment, and at this point, agencies were still learning how to handle

submarine attacks. As the crew worked to launch the functional lifeboats, Lifeboat 4 encountered a malfunction and flipped. Herbert Gardner related, "I saw two of my comrades ground to pieces by the propeller of the ship as they tried to escape the flames."

At 2:48 a.m. on the 13th, five explosions were reported. The U.S. Coast Guard relayed that there were two vessels eight miles away. About twenty minutes later, U.S. Coast Guard Station Oak Island noted explosions. Even with the weather being classified as "Clear with becoming partly cloudy to cloudy to overcast," Station Oak Island and the Base at Charleston had difficulties communicating with the vessels underway. It was not until 8:05 a.m. that the Coast Guard vessel *Agassiz* received a dispatch that read:

ARRIVED AREA AT TWO FORTY FIVE X FOUND BURNING OIL TANKER X UNABLE TO IDENTIFY ALSO ONE EMPTY LIFEBOAT X NO SURVIVORS LOCATED X WILL CONTINUE SEARCH X

By 9:05 a.m., eleven survivors arrived in Southport, N.C. *continued...*

Creation and Impact of SS *John D Gill* *continued...*

Several vessels responded to the attack, starting in the early hours through daybreak, but ultimately called off rescue attempts by 1 p.m. U.S. Coast Guard Station Oak Island spotted a signal flare at daybreak and launched their motor lifeboat. The first to arrive was U.S. Coast Guard Cutter *Agassiz*. *Agassiz*, based in Charleston, S.C., and the U.S. Navy Tug *Umpqua*, also stationed in Charleston, aided in the response efforts. Station Oak Island's Motor Lifeboat 4405 with its crew of three assisted in transferring survivors to *Agassiz* then collected the bodies of the deceased. *Agassiz* took the eleven survivors to Southport. Motor Lifeboat 4405 and USS *Umpqua* collected 14 bodies, which were taken to Southport. Wilmington Motor Lifeboat #4342 found one more deceased victim and brought him to Southport as well. SS *Robert H Colley*, *Gill*'s sistership, happened upon Lifeboat 2 with fifteen crewmembers. *Colley* continued its route to Charleston where the injured were offloaded at 6:00 p.m. Ultimately, twenty-three survivors were pulled from the Atlantic Ocean; there were fourteen fatalities.

SS *John D. Gill* was one of 30 U.S. Merchant vessels sunk by U-boats during the war in March 1942.

The end of U-158

Sent to the area in the wake of Operation Drumbeat, *U-158* was commanded by Kapitanleutnant Erich Rostin and manned by a crew of about fifty men. Rostin and his crew were to carry out two sets of orders. During that time, *U-158* wreaked havoc on the Atlantic waters from Nova Scotia to the Gulf of Mexico. Its assault impacted several countries, including the United States, Great Britain, Norway, Panama, and Latvia. All but one of the vessels attacked by *U-158* were tankers; the other was a freighter. Of the twenty vessels Rostin and his crew acted against, only four were part of a convoy

group, which were usually escorted by armed ships.

The first patrol for *U-158* ran from September 1941 to February 1942; it was with the 4th Flotilla based out of Stettin, Poland. *U-158*'s activity was highly concentrated in January and February of 1942. The crew acted against eight vessels from the northern Atlantic to the South Carolina coast. For the second patrol, from February to June 1942, *U-158* was moved to the 10th Flotilla out of Lorient, France. This patrol posted the submarine in the South Atlantic Ocean and the Gulf of Mexico. During these final months, Rostin and his crew acted on twelve vessels. Their orders, and lives, ended on June 30, 1942, when *U-158* was sunk with all hands aboard by the flying boat P-1 of the U.S. Navy VP-74 Bombing Patrol Squadron.

During VP-74 P-1's ferry flight over the Atlantic, Radioman Wrencie Vickers learned the location of *U-158*. Two bombs were dropped on Rostin and crew. When no survivors surfaced, all 54 crew members were marked as fatalities. Reports on the incident stated the following.

30 Jun 1942: Plane #1, flown by Lieutenant Richard E. Schreder, was credited with sinking U-158, Korvettenkapitän Erwin Rostin commanding. The submarine was spotted by the crew during a ferry flight.

The VP-74 squadron consisted of PBM-3C Mariner aircraft. This Patrol Bomber (PB) was designed by the Martin Company (M). The original was constructed in 1937, with five renditions to follow. During the spring of 1942, Lt. Schreder and his P-1 were stationed in Bermuda.

Depth charges from this type of aircraft, a PBM Mariner, were dropped on U-158.

Courtesy of Naval History and Heritage Command



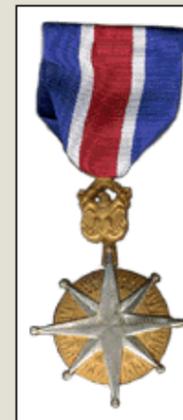
Heroic Efforts Recognized

Lieutenant Richard E. Schreder
- *Distinguished Flying Cross*

The Distinguished Flying Cross was authorized in 1926 by an Act of Congress. It is awarded for "heroism or extraordinary achievement while participating in aerial flight." Schreder was awarded the medal for sinking *U-158* in the North Atlantic on June 30, 1942. This sinking marked the first of six U-boat sinkings for Patrol Bombing Squadron Seventy-Four and only the third U-Boat sinking for the United States as a whole.

Able Seaman Edwin F. Cheney Jr.
- *Merchant Mariners Distinguished Service Medal*

Able Seaman Erwin Cheney from John D Gill was awarded the Merchant Marine Distinguished Service Medal for his heroic actions following the U-boat attack. He rescued six of his shipmates. Courtesy of American Merchant Marine at War, www.usmm.org



The Merchant Mariners Distinguished Service Medal was authorized by a joint congressional resolution which then provided "decorations for outstanding conduct or service by persons serving in the American merchant marine." Recipients could be awarded this medal for actions occurring since September 3, 1939. Able Seaman Erwin Cheney was awarded this medal for his actions on March 12, 1942, when SS *John D Gill* was struck by two German torpedoes. Cheney was the first person to receive this award on October 8, 1942. His citation reads:

For heroism above and beyond the call of duty during enemy attack when he released and launched a life-raft from a sinking and burning ship and maneuvered it through a pool of burning oil to clear water by swimming underwater, coming up only to breathe. Although he had incurred severe burns about the face and arms in this action, he then guided four of his shipmates to the raft then swam to and rescued two others who were injured and unable to help themselves. His extraordinary courage and disregard of his own safety in thus rescuing his shipmates will be an enduring inspiration to seamen of the United States Merchant Marine everywhere. ■

Katy Menne is the curator of education at the North Carolina Maritime Museum in Southport

Upcoming Events

June

- 4 Sensory Saturday: *Sensational Sharks*
- 4 Salty Dog Cooking: *Grouper Sandwiches*
- 8 Little Mariners: *Maritime Medicine*
- 14-17 First Mate: *Pirate Crew*
- 21 Third Tuesday Program: Jay Barnes, *North Carolina Hurricane History*
- 24 Member Program: (Patron & Above) *Summer Sips*
- 22 Little Mariners: *First Mariners*
- 28-July 1 First Mate: *Mess Mates*

July

- 3 & 4 NCMM at Southport is open its regular hours!
- 4 Member Program: (Benefactor & Above) *Dock your Dinghy*
- 6 Little Mariners: *Red, White, and Blue Whale*
- 9 Museum Closed
- 12-15 First Mate: *Salty Sea Life*
- 19 Third Tuesday Program: Dr. Salvatore R. Mercogliano, *The Submarine Blitzkrieg against North America and the U.S. Response: December 1941 to August 1942*
- 20 Little Mariners: *Duck Dash*
- 26-29 First Mate: *Colonial Days*

August

- 3 Little Mariners: *Maritime Art*
- 6 Sensory Saturday: *Summer Wreath*
- 6 Salty Dog Cooking: *Crab Nachos*
- 9-12 First Mate: *Maritime Mayhem*
- 16 Third Tuesday Program: Dr. Andrew Kahrl, *The Land Was Ours: African American Beaches in a Changing South*
- 17 Little Mariners: *Sunset Summer*
- 26 Homeschool Friday: *Underwater Archaeology*

September

- 3 Sensory Saturday: *Sand Art*
- 3 Salty Dog Cooking: *Shrimp Dip*
- 17 World War II Living History
- 20 Member Program: *Membership Potluck*
- 20 Member Program: Dr. Elissa De Falco, *Ripe for Any Mischief in the World*
- 30 Homeschool Friday: *Sneaky Spies*

October

- 1 Sensory Saturday: *Oy! Oysters*
- 1 Member Program: (Sustaining & Above) *Shell-e-brate National Fried Scallop Day*
- 15 Fall into History: *Invincible Ironclads*
- 18 Third Tuesday Program: Dr. Charles Ewen, *Wilkes & Liberty!: Coastal N.C. on the Eve of the Revolution*
- 20-Nov. 1 Scary Schooner Craft Bags
- 28 Homeschool Friday: *Maritime Mascots*

November

- 5 Sensory Saturday: *Pirate Flags*
- 11 Museum Closed
- 12-26 Harvest Yawl Craft Bags
- 15 Third Tuesday Program: Kyle Ward, *Charting in the Carolinas*
- 18 Homeschool Friday: *Native Mariners*
- 24 Museum Closed
- 29 Giving Tuesday

December

- 3 Sensory Saturday: *Frozen Snowflakes*
- 10-31 Sea-seasons Snow Craft Bags
- 23-27 Museum Closed

Friends of the Museum
North Carolina Maritime Museum, Inc.
315 Front Street
Beaufort, NC 28516



NC DEPARTMENT OF
NATURAL AND CULTURAL RESOURCES

The North Carolina Maritime Museums in Hatteras, Beaufort and Southport are part of the North Carolina Department of Natural and Cultural Resources, Reid Wilson, Secretary.



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