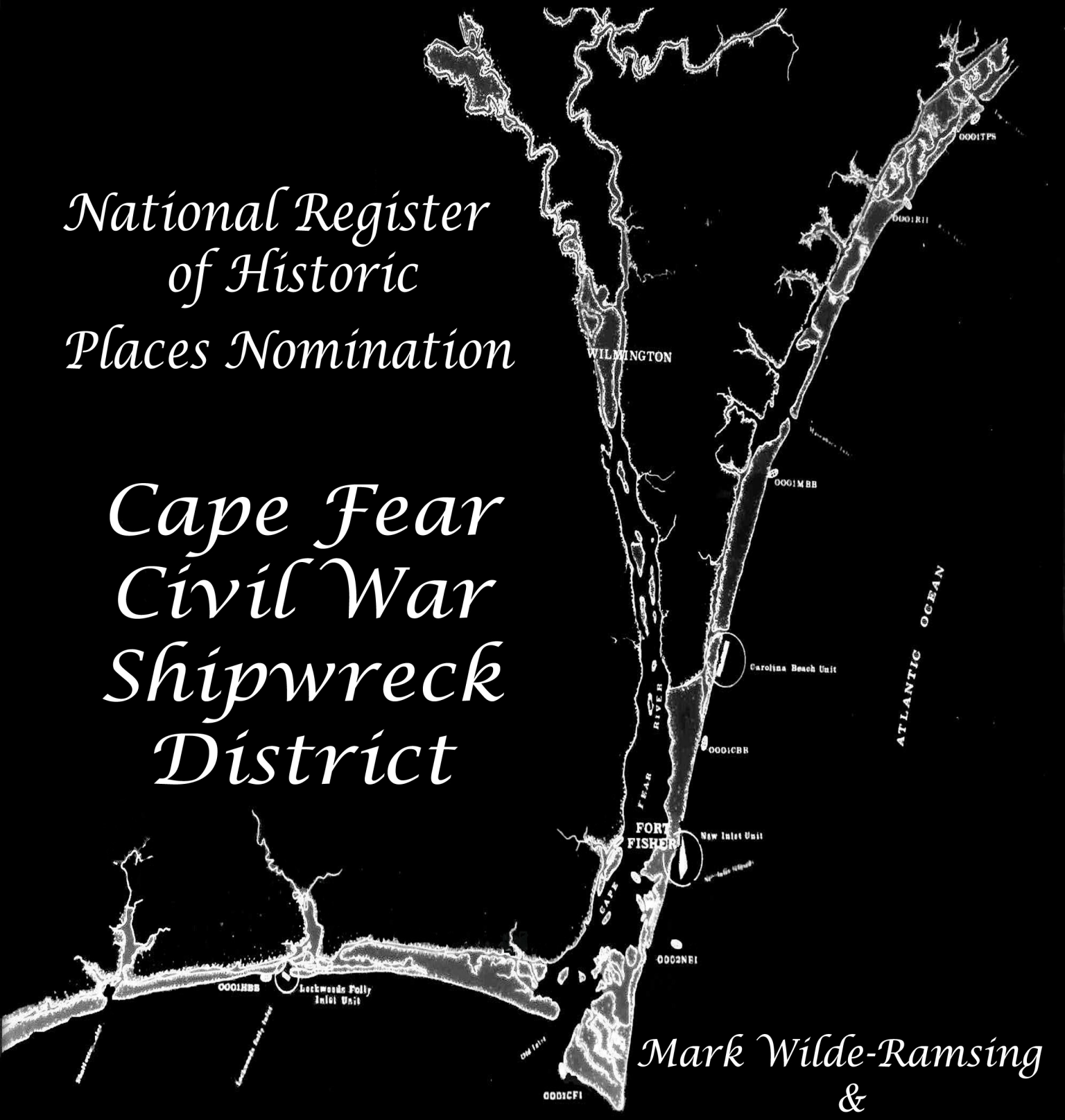
National Register of Historic Places Nomination

Cape Fear Civil War Shipwreck District



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NATIONAL REGISTER OF HISTORIC PLACES NOMINATION

CAPE FEAR CIVIL WAR SHIPWRECK DISTRICT

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SECTION I.

VESSEL DEVELOPMENT AND CONSTRUCTION

The Civil War came at a time in history when great technological changes were taking place in maritime construction. The two major innovations were the use of the steam engine both as a primary means of propulsion, and as a supplement to sail and the use of iron in hull construction. Great Britain was the major country involved in developing these new techniques though the United States, and the other European powers, were to a lesser extent also experimenting with and changing their ship designs. For many years British ship makers had experienced increasing difficulty in procuring an adequate supply of high quality timber with which to build ships, particularly oak. By the second decade of the nineteenth century iron manufacturing had developed to the point that it became economically and technologically feasible, in England, to use iron in the construction of ships.[1]

Along with this trend was continued development of the steam engine and its use connected to a paddle wheel or screw to power ships. The first iron steamer was the "*Aaron Manby*" built in England in 1821.[2] From that time on this was the trend in Great Britain and by 1860 there was no question in England that the new large iron screw steamers were more desirable than either American or British built wooden ones.[3]

In the United States use of iron was not so widespread due primarily to its high cost and the still readily available supply of shipbuilding timber. Steam engines were in use, mainly on river boats and coastal ships, though of an inferior nature to the British built steam engines. Few attempts were made in America to construct large ocean going steamers, and those took place in the northeast.

The lack of marine facilities in the South forced the Confederacy to rely on the vessels which could be seized, or those which could be purchased abroad, in order to carry on vital foreign trade. The fleet of available vessels was quickly exhausted with most being pressed into naval service. England with its active shipbuilding industry and established transatlantic trade relations became the logical supplier of merchant vessels for southern trade.

The most vital element in blockade running was acquiring a vessel capable of successfully eluding the Union blockade of southern ports, which was begun in 1861. Sailing vessels carried the bulk of commerce early in the War. The 253 different sailing vessels known to have run the blockade off North and South Carolina dropped to 145 in 1862, 53 in 1863, and 14 in 1864.[4] This reduction resulted from the realization that large sailing vessels were too slow to avoid the blockader's while the quicker schooner simply could not carry enough cargo. As Union strategists understood that steam vessels clearly would form the best blockade, the South arrived at a similar counter solution; steamships were needed to successfully run that blockade. Browning's figures support the increased use of blockade running steamers at Carolina ports: 21 in 1861, 49 in 1862, 73 in 1863 and 98 in 1864.[5]

In the beginning, almost any existing steamers were employed. Successful at first, they soon began failing in a similar manner as sailing vessels. The first steamship outfitted in the summer of 1861 for blockade running was the *Bermuda*, a large cargo ship built in the 1850s. The *Bermuda* and a similar vessel, the *Fingal*, were of good size and medium speed that were able to run the blockade due to the insufficient number of Union vessels. As that changed in late 1861, large steamers restricted by their draft to deep-water channels and making only eight to ten knots were becoming too great a risk. Their high freeboards were a disadvantage in offering the blockaders a highly visible profile, which allowed easy detection. [6]

The selection of the *Theodora* for an important mission carrying dignitaries from Charleston to Nassau where connections to England could be made began the use of small powerful packets for use as blockade-runners. Perhaps more importantly it began a trend toward the use of transshipment ports such as Nassau, Bermuda, and later Halifax. The three-day voyage in or out of southern ports allowed blockade-running vessels to evolve characteristics of speed and light drafts. The first speed merchants, such as the *Minho* and *Kate*, were highly successful, however, as with the schooners, were considered too small.[7]

What was needed was a vessel that combined the qualities of speed, low freeboard, large cargo capacities, and shallow draft. The answer to these specific needs was found in the paddle wheel steamers, which were in wide use as packets on the Clyde River in Scotland by 1860. These sleek vessels known as “Clyde Steamers,” combined long slender iron hulls and shallow draft with powerful engines enabling them to achieve tremendous speeds. The freeboard was low enough to reduce the vessel's silhouette, but high enough to give them stability in high seas. The *Antonica*, ex-*Herald*, was the first of these vessels to be employed as a blockade-runner when it made its first of twenty-four successful runs in March 1862.

By the end of that year similar vessels were being purchased and outfitted in Europe at a rapid pace. The following excerpt explains the typical alterations that were necessary to outfit a Clyde Steamer as a blockade-runner:

> "Cabin's were removed from the main deck to provide additional cargo space. The *LADONA*...took down all of her yards and topmasts to reduce her silhouettes, while the *ARIES* had her masts on hinges and dropped them onto the deck while running the blockade.
>
> Different hull colorings were experimented with. The first vessels were usually painted black, but this color was readily picked up at night and neutral tints were adopted, such as light blue or greenish gray. Such colors worked so well the ships could often pass very close to blockaders without being seen."[8]

In January 1863 the *Banshee I* was completed at British yards in Liverpool. This was the first vessel built from the keel up specifically for blockade running and served as the prototype for those built during the remainder of the War. Measuring 200-feet-by-20-feet-by-12-feet it had a flat bottom and was constructed of 1/3-inch thick steel plates. With a draft of 8 feet, the vessel had four watertight compartments. The transatlantic crossing by *Banshee I*, her maiden voyage and the first by a steel vessel was beset with problems brought on by structural weakness.

Basically the steel plates were too thin and badly fitted and the engines too powerful for her frame. Despite these problems, she succeeded in making fourteen runs in her eight-month career before being captured off Wilmington.

The two years that began with the building of the *Banshee I* was an intense period of innovation and construction of engines and vessels for use in blockade running. All along the Mersey and Clyde Rivers new vessel designs and steam machinery were being rapidly invented and "tested in the field," with subsequent vessels adapting and improving on the most successful features. During this period twin screw steamers were found to greatly enhance a vessel's maneuverability. However, they still required a deeper draft than side-wheelers (although less than a single screw steamer) and therefore near the end of the War mostly sidewheel blockade-runners were constructed.

> "Paddle wheelers had the advantage of being able to obtain a greater speed in less time, giving the ships the ability to dash past blockaders. It was also discovered that side wheelers could free themselves easier from sandbars than twin screws by working their paddlewheels in a rocking motion."[9]

English shipbuilders found that a narrow beam could only increase a vessel's speed to a certain extent before it became structurally weak. This restricted both cargo space and engine size. Therefore, the final blockade-runner design combined the sleek lines of the *Banshee I* with the large, sturdier Clyde Steamers. These boats were sturdy and fast, featuring large power plants, spacious stowage areas, and small silhouettes. Innovations in metallurgy, particularly iron and steel production and the employment of these metals to meet specific shipbuilding needs played an important part in achieving the final blockade-runner.

For the Union Naval strategists, the Civil War initiated a new era in warfare through the employment of large numbers of steam-powered warships to blockade southern ports. Gideon Welles, Secretary of the Navy, stated, "Steam has become such an indispensable element in naval warfare, that vessels propelled by sails only are considered useless for war purposes."[10] Their theory was that steam can always eventually run down sailing vessels and was certainly a necessity to hold Confederate ironclads in check. The blockading vessels therefore needed a combination of speed and power to an "extent never before displayed in naval warfare."[11] However, for vessels to work effectively in Southern waters demanded they have shallow drafts. These factors along with the necessity of keeping pace with an even more efficient blockade-runner,

> "forced the Union navy to specialize their vessels in order to keep an effective blockade. The Union vessels not only adapted to the use of faster vessels but adapted to specific functions which best suited the vessel's capabilities. This specialization though came only after the assignment of a large number of vessels to the blockade at Wilmington."[12]

The insufficient warships available, coupled with the lack of shipbuilding facilities at the beginning of the War, caused the Union Navy to obtain every available merchant steamer in the northern ports that could be converted into a blockade vessel. Although the Navy began a

rigorous building program, contracting for such vessels as the heavily armed screw gunboats of the *Unadilla* and *Pinola* type, it never was able to develop and build an efficient blockading vessel. Instead, the Navy had its greatest success adapting ships that had been built for other purposes. Of the 671 vessels in the Navy at the end of the War, 492 vessels had been purchased and 179 built.[13]

In addition to a complete overhaul, a merchant vessel prepared for naval duty would often undergo strengthening of its timbers to handle deck guns and the addition of brass sheathing to protect wooden hulls from teredo worm damage. The first type vessels to serve on the Wilmington blockade were large, heavily armed steamers, and generally proved too slow for capturing blockade running steamers. Of these naval blockaders, the most successful were coastal steamers and captured blockade-runners because of their speed.

"The [use] of light, speedy vessels was inaugurated with the tug *Violet* at the Western Bar of the Cape Fear River."[14] These blockaders, known as bar tenders, proved the most effective in preventing breaches in the blockade. Usually sea-going tugs, outfitted with light armament, bar tenders had shallow drafts enabling them to post up at night very near the inlet mouths. They often used the same ploys as their counterparts, such as removing masts and spars and employing light gray hull paint to reduce their profiles. When blockade-runners were spotted slipping out of an inlet, bar tenders capable of sudden bursts of speed, gave immediate chase while also sending up flares to alert companion blockaders. In many cases these small steamers could overhaul and cut off the fast, but heavily loaded blockade-runners from escape. The bar tenders with their smaller coal storage capabilities relied on the large steamers to refill their bunkers.

Even though the situation of the Federal Navy was bad at the beginning of the War the Confederates were in much worse shape. They had no existing Navy to call on, and a very limited ability to produce new ships, steam engines, iron plating, or ordnance. Considering the resources at their disposal, the South, under the leadership of Secretary of the Navy Stephen Mallory, did a remarkable job of refitting existing vessels as ships of war. The force of the Confederate Navy was too small however, to pose a threat to the ever growing Union blockading fleet.

Other than the existing vessels pressed into service as warships or transports, southern shipbuilding efforts revolved around the construction of iron-armored warships. It was felt that ironclads could "traverse the entire coasts of the United States, prevent all blockades, and encounter, with a fair prospect of success, their entire Navy."[15] As in Britain and the northern states, the Civil War became a testing ground for southern advances in naval technology, including the ironclad. These experimental warships were the South's most successful naval venture.[16]

The two ironclads built in Wilmington for use in Cape Fear area were of the Richmond class gunboat, a type similar to most other Confederate ironclads. The threat of their appearance off the coast of Wilmington was a great fear, called "ram fever" by naval blockaders.[17] However, although both vessels were completed; only the CSS *Raleigh* actively confronted the enemy and that was for less than a day. The lack of adequate marine engines, quality materials, and skilled workmanship rendered the Cape Fear ironclads useless.[18]

CIRCUMSTANCES OF LOSS

During the Civil War at least thirty-one steam and twenty-two sail blockade-runners, as well as a wide assortment of Federal and Confederate military vessels were lost in the Cape Fear River area. With the exception of the USS *Peterhoff*, which was lost in a collision, all wrecks were stranded along the beach or on inlet shoals and sank in shallow waters (<30 feet). Upon wrecking, a vessel became the focus of furious attempts to save it and its cargo. The Federals had the decided advantage in efforts to recover the total vessel since they could approach from sea with tugboats. The Confederates concentrated on a wreck's cargo, which was not only more important to their specific need, but could be unloaded with ease onto the beaches which they controlled.

Rough weather and artillery fire from the enemy hampered salvage attempts by either side. In only a few cases was a whole vessel refloated, or the cargo of a wrecked vessel completely salvaged. In most cases, the Confederates would recover a small portion of the cargo before Union boarding parties would destroy both the vessel and cargo by setting it afire. Steam machinery was often rendered useless at the time of wrecking due to the removal of key parts by the vessel's crew.

POST DEPOSITIONAL HISTORY

Despite the destructive activities, Civil War wrecks were never as intensely salvaged as they might have been during peacetime. Time and conditions of the War did not permit major recovery of a wreck's machinery, cargo, or hull structure. After the War when commercial salvors resumed normal activities, few of the Civil War wrecks were of interest. The raising of a portion of the hull of the *Venus* is one of the few confirmed salvage ventures.[19]

Wreckers charged with removing or leveling sunken vessels which posed a threat to navigation did affect several Civil War wrecks. In the mouth of the Cape Fear River a Federal gunboat, probably the USS *Violet*, and the *Georgiana McCaw* were partially destroyed as well as the CSS *Raleigh* in New Inlet.[20] A number of the Confederate transports scuttled in the Cape Fear River to block the channel below Wilmington were reportedly removed immediately after the war.

On the whole, vessels lost during the Civil War have rested on the ocean or river bottom undisturbed by man's activities. However, the continuous pounding of the waves, shifting sands, and marine fouling organisms have degraded their structural integrity over the years. The degree and nature of deterioration has been directly affected by the type of wreck.

Steamers, with their heavy metal power plants, support stanchions, and reinforced hulls have held up the best. Those iron hulls have fared far better than their wooden counterparts and often remain intact to the upper deck level in the very stern and bow areas. In the fore and aft cargo compartments the hull generally has broken near the turn of the bilge and fallen out exposing the inner portions of the vessel or fallen in on itself, offering some protection to

remaining contents. While wooden hull sections are eventually swept off the site, metal sections seem to hold up with varying degrees, perhaps dependent on the quality of metal used.

Wooden sailing vessels generally break completely apart, often in large sections, which are widely scattered. Only heavy materials associated with the wreck, such as anchors, ballast, certain cargoes, and armament remain on a wreck site. Hull preservation is often limited to the keel/keelson, floor frames, and bottom planking which are weighted and covered by ballast.

Post-depositional deterioration is also dependent on the type of nearshore environment within which a wreck exists. Wrecks lying on hard bottoms are exposed to the maximum force of longshore and wave-generated currents, while those that are entombed in sand can be greatly protected. The latter situation is most likely to occur in inlets where tons of sand may shift in a short period of time. Complete sections of hull, both metal and wood, have been found in North Carolina inlets.[21]

Wrecks submerged in sea water are subject to deterioration by natural processes of decay, oxidation, and electrolysis which occur rapidly at first and gradually diminish as a heavy layer of encrustation forms. Through time a delicate equilibrium has been achieved which aids in a vessel's protection. Currently the Civil War wrecks lying in the lower Cape Fear area are in a relatively stable condition.

The most detrimental natural occurrence to Civil War wrecks is severe coastal storms, either hurricanes or northeasters. During these storms intense currents cause bottom scour which can break up wreck hulls and cast small artifacts upon the adjacent beaches. Local newspapers have periodically reported this occurrence.

> "...Miss Mary F. Sanders has also procured for the museum a tallow candle which was taken from the old 'Beauregard,' which was wrecked near Carolina Beach in 1863. The candle contained in the hold of the wreck at the bottom of the ocean thirty-three years, until 1895, when the wreck was disturbed by the memorable gale of that year, and a quantity of candles washed to shore along the beach."[22]

Civil War wrecks act as artificial reefs which attract sea life and have served as prize fishing spots. In 1891, a Wilmington paper reported, "Ed Pemberton and friend of Fayetteville, caught forty-seven large sheephead from the wreck of the blockade-runner, 'Beauregard,' sunk off Carolina Beach, yesterday. The wreck is reached in a basket swung on wire from shore."[23] To capitalize on the greater abundance of fish, ocean piers have been built out to the *Vesta, Modern Greece* and *Fanny and Jenny.*

Swimmers and skin divers have often visited certain wrecks in search of fish or perhaps a souvenir. "Mr. J. F. Minn, while in bathing at Ocean View, swam out to the old wreck blockade runner and found a tortoise shell pocket knife."[24]

Today, the locations of several wrecks such as the *Venus* and *Modern Greece* have survived through oral tradition. Even strong identifications have stuck with the *General Beauregard, Ranger,* and *Bendigo* since a portion of each has remained visible at low tide.

However, most of the Civil War wrecks were forgotten soon after the War and their locations and identities are lost to the sea.

MODERN DISCOVERY AND INVESTIGATIONS

The invention of Self Contained Underwater Breathing Apparatus (SCUBA) and its popularization during the 1950s began a period of rediscovery of many wrecks in the Cape Fear area.

Historians, most notably the late Charles Foard, curator of the Blockade Runner Museum in Carolina Beach, worked with local fishermen and pilots, who spotted menhaden for the fishing fleets, to search out, explore, and identify the forgotten hulks. This was an exciting time of rediscovery for these early explorers. Accounts from Dave Horner's The Blockade Runners highlight the excitement and adventure generated during this period. This excerpt from his book reveals the method by which many wrecks were located, in this case the *Phantom.*

> "A maze of shallow waterways wound their way in and out of the sand flats toward Topsail Inlet. The sea appeared green and was relatively calm at 5:00 a.m., but several isolated whitecaps showed themselves occasionally, and we both knew that a stronger wind would be blowing later in the morning. At an altitude of 900 feet we made several passes near the mouth of the inlet. As we were making our third turn an obvious shadow appeared in the water below us. Clearly outlined was the hull of a vessel about 200 feet long. The wreck lay about 250 yards offshore. Water visibility appeared to be close to fifteen feet, and my heart pounded as we nose-dived on her. We could see the boiler quite plainly and something that looked like a rather large propellor.
>
> As I held onto my stomach, Hall (Watters) threw out a marker buoy and leveled off the Piper about five feet above the surface of the ocean. He turned and gave me a jaunty grin of success.[25]

After returning to the wreck site by boat, Horner describes the thrill of discovery during the ensuing dive.

> "Returning to the bottom it took fifteen minutes to find my partner. He had entered the hold near the jagged break in her hull. It was much darker there, and that's why I had missed him. As soon as my eyes became accustomed to the shadows, I saw Hall lying on the bottom throwing sand in every direction. Several eight-pound sheephead hovered near his uppermost shoulder, hoping he would uncover a morsel of food. I moved in and offered the crowbar. He beckoned excitedly to the hole he had dug. Scattered on the bottom were one, two, four, eight, or even more ingots. They were slightly encrusted and were so heavy I knew they were lead. Moving off about twelve feet I dug an exploratory hole and uncovered more lead, all very neatly stacked as if it had been stored there yesterday.

> Chipping away some of the calcified crust revealed the name 'Pontifex & Wood London'."[26]

The sport divers of the late 1950s and 1960s avidly explored and collected on at least ten wrecks. Although records of findings were not written down, helpful information has been gained from interviewing them. Some divers set up backyard facilities to clean and stabilize small artifacts. Upon completion of their conservation techniques many artifacts were donated to museums, particularly the Blockade Runner Museum (now closed; collection housed at New Hanover County Museum, Wilmington, North Carolina).

In 1962 local divers informed a team of U.S. Navy frogmen, on vacation in the area, of the whereabouts of the *Modern Greece*, and they subsequently reported the wreck to hold a wealth of intact artifacts, which had been exposed by a fierce storm earlier that year. The U.S. Navy and the North Carolina Division of Archives and History conducted a large scale salvage operation at the wreck and recovered over 10,000 artifacts. In order to handle the many delicate artifacts the North Carolina Division of Archives and History established the first preservation laboratory in the country, which helped develop conservation techniques for treating artifacts recovered from a marine environment. Stabilized artifacts were placed in museums throughout the country and an inventory of the *Modern Greece* artifacts was published, which reportedly is the largest single cache of Civil War period materials yet analyzed.[27]

With the publicity surrounding the *Modern Greece* salvage, and a heightened public awareness due to Civil War centennial celebrations, a permitting system was developed to allow sport divers to recover artifacts from known shipwrecks and to keep them after a short period of study by the state. During the sixties and early seventies ninety hobby permits were issued to approximately 500 divers. No new wreck sites were located, however, some additional information on the condition of known wrecks was gained from their site reports. At that time the North Carolina Skin Diving Council was a cohesive group and acted as a catalyst to interest their members in diving the Civil War wrecks and to see that they complied with the state's permitting system. In addition to the ongoing conservation of artifacts, state personnel spent much of their time overseeing the activities of sport divers and basically maintaining vigilance over the wrecks.

In 1965 commercial salvors were confronted, issued a restraining order, and taken to court because of the unauthorized recovery of artifacts from the *Modern Greece*. In this case, the State of North Carolina vs. Flying "W" Enterprises, the state was awarded the decision based on a statute derived from the Tar Heel constitution and from the Treaty of Peace with Great Britain in 1783. Despite the favorable court ruling, concern continued amid reports of renewed looting of the Civil War shipwreck sites by salvors, some of whom were reportedly using explosives to gain access to the interior of ship's hulls. In an effort to clearly define the state's interest in historic shipwrecks, and at the same time regulate their exploitation, the state legislature in 1967 enacted G.S. 121 Article 3, entitled "Salvage of Abandoned Shipwreck and Other Underwater Archaeological Sties." The North Carolina Division of Archives and History was empowered to develop rules and regulations and to establish a professional staff to manage historic shipwrecks.

During the early 1970s a splinter group of the diving council made up of several very energetic sport divers produced the first detailed mapping of a Civil War wreck under permit from the state. This group, named the Underwater Archaeological Associates (UAA), not only began to collect sound archaeological data on the *Ella* wreck site, but just as importantly began to address the problems inherent in working in the difficult nearshore environment.[28] The UAA dissolved after only a few years. However, they had begun scientific investigation and training exercises, which soon became the major emphasis of state managers. With the hiring of an underwater archaeologist and later several more, the state's program evolved away from defensive, reactionary management in which an emphasis was placed on limiting the looting of sites, to active management where field schools and local student interns were used to educate divers and collect data. From 1974 to 1977 a large part of the state's energies was spent on the Cape Fear Civil War shipwrecks. Bathometric and magnetometer surveys were conducted along the nearshore waters from New Topsail Inlet to New Inlet. Subsequent site assessments and coal sampling were conducted on six wrecks sites and detailed examinations and limited artifact recovery were committed to the *Sophia* and *Peterhoff* wreck sites.

By the late seventies, when the diving community's interest in the Civil War wrecks had waned considerably, and the state sponsored underwater field projects were committed to other areas, an environmental review system was developed by the underwater archaeology program to protect historic shipwrecks and other submerged sites from water-related construction projects. Recommendations for underwater surveys and site assessments were made through the State Historic Preservation Officer, not only for Federally funded projects, but for any projects requiring a Corps of Engineers permit, pursuant to Federal environmental legislation. Guidelines were developed by the state underwater archaeologists in consultation with Corps archaeologists for determining high, medium, and low cultural resource areas and then providing appropriate survey and assessment measures.[29]

Several of the first survey and assessment projects conducted in the state as a result of the environmental review process took place in the Cape Fear area because of the possibility of encountering Civil War vessels. Although none were found within construction impact zones, several new wreck sites were located as a result.

At the same time the blockade-runner *Bendigo* was at the center of disagreement between the State and the Corps of Engineers. Embedded in a shoal near the Lockwoods Folly Inlet channel and exposed at high tide, it was obvious to state underwater archaeologists that maintenance dredging within the shifting inlet at times came very close to the wreck and appeared to be causing a detrimental under-cutting of the wreck. In 1978 the Corps' prevailing attitude was that as long as the dredge boat did not hit the wreck, which the dredge captains assuredly would not do for fear of damaging their equipment, and then no harm was done. In the not too distant past wrecks were destroyed or removed as hazards to navigation without historic or archaeological consideration. Today, due to the strengthening of modern environmental laws, the *Bendigo* is being examined by archaeologists to determine the effects of continuous dredging. Of equal importance, undredged portions of all shifting inlets in the Cape Fear area maintained by the Corps are being hydrographically and magnetically surveyed for new sites as part of a general pre- dredging inventory program.

As a result of the archaeological assessment of the *Bendigo* wreck and the state's review and commenting responsibilities, an effort was begun in 1984 to compile existing site data to gain an understanding of the overall Civil War shipwreck resource. Shipwreck site files had been totally neglected. On wrecks such as the *Modern Greece*, which had been extensively salvaged and the USS *Peterhoff*, which was listed on the National Register in 1974, even the most basic measurements had not been recorded. At best only a very brief description of a known Civil War site's overall condition and general location existed and much of it could not be trusted. For many others that were known to exist, virtually no site information was on file. Only on the *Ella* site had enough measurements been recorded to begin to generate a detailed site map and even that was far from complete.

After realizing this dearth of recorded knowledge a two-fold project was initiated by state underwater archaeologists. First, a form was developed on which all past investigations and all the resulting site data that could possibly be found was recorded for each wreck. Old reports, books, letters and the like were searched for site information. Sport divers, salvors, and state personnel who were familiar with a wreck were contacted to supply additional information. After determining inadequacies, site investigations were undertaken on poorly documented or suspected wreck sites. The reconnaissance strategy was to first confirm the wreck's existence, obtain its location, and then, as possible, record basic site characteristics such as hull type, means of propulsion, site size and condition, and environmental setting.

Recent site inspections by state archaeologists have produced needed information on nine previously known shipwrecks and confirmed four suspected wreck sites. Archaeological contractors working for the Corps at Lockwoods Folly Inlet and Carolina Beach Inlet have supplied additional information on three previously known sites and added two new wrecks to the inventory. Presently there are twenty-one Civil War wreck sites with basic documentation leaving at leave twelve known sites in need of further investigation.

Such investigations will continue in the future on sites within the Cape Fear Civil War Shipwreck District. In addition to locating new wreck sites, research activities will determine which shipwrecks within the district are suited for educational, recreational, and archaeological projects. Studies will also identify effective methods for protecting these wrecks from accelerated deterioration and disturbance.

BOUNDARY JUSTIFICATION

The general area of the Cape Fear Civil War Shipwreck District is the same as those originally established by Union naval leaders for the Wilmington flotilla. Jurisdiction went as far south as Little River, at the North Carolina/South Carolina line, and to New Topsail Inlet, North Carolina. The current distribution of Civil War wrecks support the use of those same boundaries. Shipwrecks are densest in the vicinity of the Cape Fear River Inlets where the most intensive naval activities took place. As distance up and down the coast increases, wreck occurrence progressively becomes more sparse until it plays out at the historic boundaries. All wrecks lie close to shore and within the present state three mile limit.

To considerably reduce the acreage within this large geographical district, discontiguous units have been employed to enclose either individual wrecks or clusters of wrecks. This will also insure that vessels wrecked during periods other than the Civil War are not present to dilute the emphasis of the proposed district. Based on magnetometer surveys and on-site investigations, artifact dispersion of each Civil War wreck has been found to encompass an area approximately 300 feet in diameter centering on the machinery at midship. Since the longitudinal extremes of a wreck are generally intact, 300 feet can enclose the entire vessel length, which ranges from 150 feet to 250 feet. The additional distance provided by the boundaries allows for the inclusion of the anchors which usually lie just outside the wreck at the bow and stern. Although the width of these wrecked vessels is no more than 35 feet, it is common for the sides of the hull to be broken out and debris to be scattered some distance on each side. The 150-foot boundary to each side is sufficient to enclose the majority of scattered wreckage.

Six separate wrecks are isolated and therefore each is enclosed within individual 300-foot-diameter circular boundaries. At three locations wrecks are clustered and contained within larger unit boundaries. Within each of these units remote sensing surveys and diving inspections have been thorough enough to ensure that additional wrecks are not present. The New Inlet group encompasses seven wrecks and includes 185.38 acres. At Lockwoods Folly three wrecks are contained in 169.9 acres. An 82.07 acre unit along Carolina Beach surrounds four wrecks.

PHYSICAL ENVIRONMENT

The most prominent features of the North Carolina coast are its three Capes: Hatteras, Lookout, and Cape Fear. Cape Fear is the southern-most and includes Frying Pan Shoals, which extends nearly 50 miles seaward causing a considerable hazard to coastal shipping. The Cape itself is formed by a barrier island complex which extends to the north and west. In this region the islands are separated from the mainland by shallow sounds. Through the barrier islands are a series of natural openings which allow tidal flow between the sounds and the ocean. Although called inlets they actually function as tidal outlets and appear to be positioned adjacent to inland creeks and rivers where drainage pressures are granted.

The major river of the southeastern region of the state is the Cape Fear River, drained by both Old Inlet and New Inlet or Corncake Inlet. Smaller rivers in the area are Shallotte River associated with Shallotte Inlet and Lockwood Folly River with Lockwoods Folly Inlet. To a lesser extent the following creeks lie adjacent to corresponding inlets: Bradley Creek-Masonboro Inlet; Howe Creek-Mason Inlet; Futch Creek-Rich Inlet; Topsail Creek-Topsail Inlet.

Inlets are treacherous affairs because of the shoals or ocean bar (ebb tide delta) which guard their mouths. These bars vary from 2 feet to 6 feet mean low water (MLW) at the smaller inlets to 12 feet to 15 feet (MLW) at Cape Fear River Inlets. Although historically, inlet locations often appear stable, the depth and configuration of the channel and bar are subject to rapid changes.

The nearshore ocean bottom of southeastern North Carolina is made up of unconsolidated sand and shell hash and like the inlets are in a constant state of flux. Geologically labeled a high

energy bottom, it is constantly being transported by the ocean's longshore currents. Bottom contours that slope gently away to the southeast are interrupted only by occasional outcroppings of sedimentary coquina rock that exist in the area. The water, kept warm by the proximity of the Gulf Stream current, supports one of the most active collections of marine fouling organisms along the Atlantic coast.

Poor visibility of one to 4 feet caused by the southerly flow of sediment from inland rivers and bays, through the inlets of the Cape Fear area, is a major obstacle to efficient underwater archaeological research. Wind and tide must be considered to achieve maximum visibility. Since the shoreline below Frying Pan Shoals runs east and west, a light southerly wind will usually bring in clearer offshore water and better visibility. North of the shoals, the beach runs northeast and southeast and an easterly wind is best. During the rising tide particles of sediment fall to the bottom or are pulled back into the river and bays allowing maximum visibility at full high tide. With near perfect conditions visibility can exceed 10 feet and occurs around twenty days per year, primarily in the fall.

Working conditions in the Cape Fear area are also strongly dependent on the sea state. Wind and waves make it impossible to work safely and efficiently. Today's conditions are no different than during the Civil War when Union naval officers reported, "Rough water dominated 'in five days out of the week'."[30]

SITE DESCRIPTION

The proposed shipwreck district will include the wrecks of twenty-one Civil War vessels (see Table 1). As future survey and assessment activities are expanded that number may be nearly doubled.

Fifteen wrecks are blockade running steamers. They represent each key step in the evolution of the classic Civil War blockade-runner. Furthermore, these fifteen wrecks represent nearly 20 percent of all steam blockade-runners lost during the Civil War. The wreck of a British bark attempting to run the blockade is also a part of this group. No where in the world is there a comparable concentration of vessel remains.

Four Union and one Confederate military vessels are also included in the proposed district. Although not nearly as significant in terms of percent of overall Civil War naval losses, this group represents a good cross section of ships used in conjunction with blockade running activities. Two bar tenders, an ex-blockade-runner, and an ironclad are part of the military wreck assemblage.

The following synopsis of each wreck's historical background and site information is the result of recent efforts by the Underwater Archaeology Unit (UAU) staff members to compile such data. While the UAU's historical research files are extensive and include many primary source materials from local newspapers, letters, and official military accounts, two comprehensive works, "Lifeline of the Confederacy: Blockade Running During the Civil War", by Stephen Wise and Donald Shomette's Civil War Shipwrecks provide the basis for these historical summaries.

Wreck site assessments reported here are abstractions of data accumulated during twenty-five years of underwater research. Information has been gleaned from accounts by sport divers and salvors, field school activities, environmental survey and assessment projects, and recent archaeological inspections, and are contained in the appropriate UAU wreck site file.

TABLE I
CAPE FEAR CIVIL WAR SHIPWRECKS
TO BE INCLUDED IN THE PROPOSED NATIONAL REGISTER DISTRICT

Blockade-Runners	**Date Built**	**Vessel Type**	**Date Lost**
Sophia	(?)	Wood bark sail	11-5-1862
Arabian	1851	Wood sidewheel steamer	9-15-1863
Elizabeth	1852	Wood sidewheel steamer	9-3-1863
Beauregard	1858	Iron sidewheel steamer	12-11-1863
Modern Greece	1859	Iron screw steamer	6-27-1862
Bendigo	1863 (?)	Iron sidewheel steamer	1-4-1864
Phantom	1863	Steel screw steamer	9-23-1863
Hebe	1863	Iron twin screw steamer	8-18-1863
Duoro	1863	Iron screw steamer	10-11-1863
Wild Dayrell	1863	Iron sidewheel steamer	2-1-1864
Ranger	1863	Iron sidewheel steamer	1-11-1864
Venus	(?)	Iron sidewheel steamer	10-21-1863
Lynx	1864	Steel sidewheel steamer	2-26-1864
Condor	1864	Iron sidewheel steamer	10-1-1864
Stormy Petrel	1864	Iron sidewheel steamer	12-15-1864
Ella	1864	Iron sidewheel steamer	12-3-1864
USS *Iron Age*	1862	Wood screw steamer/bar tender	1-11-1864
USS *Peterhoff*	prewar	Iron screw steamer/ex-blockade-runner	3-6-1864
USS *Aster*	(?)	Wood screw steamer/bar tender	10-8-1864
USS *Louisiana*	1860	Iron screw steamer/powder ship	12-24-1864
CSS *Raleigh*	1863/64	Wood screw steamer/iron clad	5-7-1864

New Inlet Unit

Seven wrecks are located at the mouth of New Inlet off Fort Fisher. An eighth can be found on the inside of the inlet where it meets the Cape Fear River channel. It was in the New Inlet vicinity where the most active blockade running of the entire Civil War took place.

Since the closing of New Inlet in the late 1800s, the wrecks in this Unit have been subjected to a nearshore environment. Here the longshore currents have kept the wrecks unsanded and exposed to storm surge, therefore reducing the inlet's protective sands that may have originally covered these wrecks. While the exposure of wrecks above the bottom assists archaeologists, the present New Inlet area seldom provides more than 2 feet of visibility, particularly on the shallower wrecks. Light easterly winds blowing for several days generally provide the best diving conditions.

0001NEI - *Modern Greece*

The *Modern Greece* was one of the earliest and largest steamers to attempt the blockade. Built in Stockton-on-Tess, England, in 1859, it was a screw, iron steamer measuring 224 feet by 29 feet with a draft of 17 feet 3 inches. On its maiden voyage, loaded with a huge cargo including a large amount of clothing, barrels of brandy, cutlery, ammunition, and rifles, the *Modern Greece* was spotted by Union blockaders and run ashore just above Fort Fisher. On the same day, June 27, 1862, the opposing sides each attempted to prevent the other from salvaging the wreck and a lively exchange of firing took place. The Federals succeeded in opening many holes in the hull allowing sea water to ruin most of the cargo. However, the Confederates did succeed in removing some clothing, liquor, and other small items.

In 1962, U.S. Navy divers and representatives from the State of North Carolina conducted major salvage operations on site 0001NEI. The recovered artifacts numbered in the thousands and their content, along with the general wreck characteristics, confirmed that it is the wreck of the *Modern Greece*. An outstanding feature of the wreck is a rare two-blade propellor measuring 12 1/2 feet in diameter. The hull has suffered heavy destruction and deterioration and now its sides are laid out and exposed to the lower floor frames. However, a portion of the stern is intact to the deck level and cargo laden, while another section in the bow is also intact to deck level. The machinery area and forward hold areas are presently very confusing due to historic and recent salvage efforts.

0003NEI - CSS *Raleigh*

The CSS *Raleigh* was a Richmond Class steam ironclad built in Wilmington, North Carolina to serve as a key component in the defense of the harbor. Completed in the spring of 1864, it was a typical ironclad with thick iron plating over a heavily constructed wooden hull and a subsurface ram fitted at the bow. The *Raleigh*, measuring 150-feet-by-32-feet-by-12-feet, had the only available steam engines installed, which were totally inefficient. They characterized a problem common to most Confederate warships.

Outfitted with four 6-inch rifles, the CSS *Raleigh* was to help break the blockade by confronting and driving off Union warships from the Cape Fear River Inlets. However, her very brief career was ended when, after a few hours of indecisive naval maneuvers off Fort Fisher, the Confederate warship ran aground inside New Inlet and was severely damaged. Unable to refloat the CSS *Raleigh* it was ordered destroyed.

The *Raleigh* wreck site, 0003NEI, has been well-known from the time of its inking, because it posed a dangerous hazard to ship traffic until New Inlet was closed. The location has been well marked on navigational charts and can still be seen on charts today. The *Raleigh* was the scene of salvaging activities, when in 1881 a portion of its turret was removed after the wreck was dynamited. Magnetometer and sonar surveys show that a large anomaly still exists at the traditional location. Lying perpendicular to the river channel shoulder, only a small portion of the remains protrude into the river. The remainder of the vessel is embedded in mud and sand. A brief investigation by an UAU diver confirmed the presence of metal and wood fragments, but identified no wreck features. The riverine environment surrounding the site 0003NEI is a difficult one for underwater investigators to work in; however remains that were not removed by Confederates or destroyed by salvors should remain in an excellent state of preservation due to its buried state.

0006NEI - *Condor*

The location of the *Condor* has been passed down through time and is confirmed by an 1865 Coast and Geodetic Survey Chart. The *Condor* was an iron hull, sidewheel steamer, 220 feet by 20 feet by 10.4 feet, built late in the War at Glasgow, Scotland. On its maiden voyage from Halifax to Wilmington with the daring Captain Robert's (Augustus Charles Hobart-Hampden) at her helm, the *Condor* ran aground on October 1, 1864. The vessel had reached safety under the guns of Fort Fisher but stranded while trying to avoid another blockade-runner. The *Condor* was carrying two prominent passengers, Rose O'Neal Greenhow, Confederate spy and authoress, and James B. Holcomb, Confederate Commissioner to Great Britain. Mrs. Greenhow lost her life trying to swim to shore after her life boat capsized in the surf. Although the Confederates hoped to salvage the *Condor*, it remained protected but helpless until December when the continuous pounding from the surf succeeded in breaking its back. Then it became the subject of Confederate target practice.

Wreck site 0006NEI lies in the reported location of the *Condor*, approximately 800 yards offshore of Fort Fisher headed into the mouth of New Inlet. Although the wreck has been examined by professionals from the early 1960s to the present, the most thorough description comes from a local sport diver's report written in 1974.

The most significant feature of site 0006NEI is its remarkably well-preserved steam machinery and propulsion system. The double piston engine, port paddlewheel assembly, and one of its bee hive boilers are intact. Most of the ship's remaining structure and cargo are in a poor state of preservation and scattered about the site. The stern section of the wreck has twisted and lies a short distance from the wreck. No intact features of the bow have been seen. While no structural measurements are recorded, the artifact dispersal is contained within a 300-foot area centering on the machinery.

0007NEI - Unknown Vessel

The vessel remains at site 0007NEI are the poorest understood within the original district wreck group. This can be directly attributed to its lack of diagnostic features and poor visibility at the time of data recovery. Magnetometer signatures resemble that of a typical steam blockade-runner in strength and duration (total variation of 1589 gammas over a 250-foot-diameter area). Although UAU divers confirmed it as a wreck by the presence of sections of iron hull and two large iron anchors, features such as boilers, machinery, or means of propulsion went undetected. The exact limits of wreckage could not be determined. From within one of a series of open metal cylinders, perhaps barrels, an intact but undiagnostic stoneware jug was recovered.

Not only do the environmental conditions at 0007NEI present a problem for identification, but historical records provide few likely candidates. In the mouth of New Inlet channel a wreck, labeled "2nd wreck," was charted on the 1865 Coast and Geodetic Chart in the exact location of site 0007NEI. It is possible then that the wrecking occurred during the Civil War. The Federal transport, USS *Union*, is the only wreck in the vicinity which remains unaccounted for. This 149- ton sternwheel steamer was abandoned on April 3, 1864 while in tow near New Inlet. Leaking badly it was set afire and cut loose and then drifted to within a half mile of the beach at Fort Fisher and sank.

0008NEI - *Louisiana*

The screw-driven, iron hull USS *Louisiana* was built in Wilmington, Delaware, in 1860 and a year later purchased by the U.S. Navy. Measuring 145 feet by 27 feet, it drew only 8 1/2 feet making it an excellent candidate as a blockader of southern ports. After serving an active career, primarily in the sounds and rivers of northern North Carolina, the USS *Louisiana* was selected to carry out an ill-fated plan to blow up the Confederate earthworks at Fort Fisher. In December 1864, she was stripped of her mast, coal, guns, and extra equipment and loaded with 300 tons of explosive powder. After being towed within 250 yards of the Fort, the anchors were set and fuses ignited. Soon after, the USS *Louisiana* went down in a tremendous explosion, however, it failed to inflict any damage to the fort.

Wreck site 0008NEI has been identified by its general position to Fort Fisher and from on-site measurements as that of the USS *Louisiana*. Although thought to have been reduced to an indiscernible mass at the time of its sinking, it retains relatively good structural integrity. The propellor and drive shaft, as well as machinery and boiler, remain in place. Iron hull plating remain intact up the turn of the bilge at midship, while 2 to 4 feet of sand cover the hull bottom.

The forward portion of the wreck is poorly understood owing to the original explosion, present day sanding, and/or poor diving conditions. The presence of several brass valves indicates little sport diving activity, while their stressed condition exhibit signs of exposure to intense heat.

0009NEI - *Arabian*

The *Arabian* is an example of a pre-war steamer pressed into blockade running. She was constructed in Ontario, Canada, in 1851 as a wooden vessel with side paddlewheels propelled by a vertical beam engine. The *Arabian* operated on Lake Ontario and the St. Lawrence River until it was converted for blockade running by Canadians. After this 1863 conversion the *Arabian* measured 174 feet by 24 feet by 18.4 feet.

On its third attempt to run the blockade from Wilmington to Nassau the *Arabian* was discovered leaving New Inlet. Its course was reversed in an effort to run back under the guns of Fort Fisher; however it ran aground short of the inlet. Within a few days, a storm had pounded its hull to pieces, although a majority of the *Arabian*'s cargo of cotton was salvaged and later sold.

Wreck remains of 0009NEI have been extremely difficult to interpret. Positive identification of the wreck is based on the presence of the supporting structure for a vertical beam engine. The *Arabian* was the only vessel with this type of steam machinery lost in this area. The wreck is pointing toward shore as determined by the relationship of the boiler to the machinery.

Although scattered wreckage was reported 88 feet forward of the machinery, the extent of remains at either extreme has not been determined. To further confuse the understanding of the *Arabian* site, an investigative dive in 1980 reported that a second, screw-propelled vessel may lie wrecked in the same position. It is unknown the extent of intact remains, other than the *Arabian*'s machinery, however, it is probable that the site has not been visited often by modern divers.

0010NEI - USS *Aster*

The USS *Aster* had been on blockade duty off New Inlet less than 24 hours before it was lost on October 7, 1864. While chasing a blockade-runner, it grounded on the eastern extremity of Carolina Shoals. After attempts to free the USS *Aster* failed, a fire was set over the magazine to destroy the stranded vessel.

The USS *Aster* was purchased late in the War on July 25, 1864, at Philadelphia, and converted for blockade duty as a bar tender. The wood screw steamer was built as an ocean going tug and measured 122 1/2 feet by 23 feet. The USS *Aster*'s draft was registered at 10 feet; however, it was apparently drawing 12 feet, which was considered by blockade strategists to be too deep to operate effectively on the Cape Fear Inlet bars. The officers of the *Aster* in their hasty attempt to capture a quick prize confirmed this contention.

Site 0010NEI was magnetically located by UAU members in 1984 using survey alignments calculated from a wreck location, labeled *Aster*, on the 1865 Coast and Geodetic Chart. Divers reported a four-blade iron propellor connected to a drive shaft which entered the machinery area at 34 feet forward of the stern. Although, poor visibility and heavy marine growth prevented identification of specific features, the machinery area is basically intact. The hull remains have been reduced to the very bottom portions in the stern, while the hull's

condition and extent is undetermined forward of the machinery. Measurements taken on the propellor indicate the vessel had a draft of 10 feet. The heavy deterioration of the hull suggests the wreck was that of a wood hull. Both of these findings add support to the USS *Aster*'s identification.

0011NEI - *Stormy Petrel*

The *Stormy Petrel* represents the last generation of blockade-runners constructed specifically for the American Civil War. It was built in Scotland in the fall of 1864. The steamer was attempting to make New Inlet on its maiden voyage when driven aground well out on the south breakers by Federal gunboats on December 15, 1864. After two days of unsuccessful Union attempts to destroy it, a northeast gale succeeded in completing the task. The *Stormy Petrel* was reputedly carrying a cargo of arms and munitions; the only wartime salvage reported was a full load of clothing by the Confederates.

Wreck site 0011NEI is that of a sidewheel steamer constructed of iron. Its recent discovery and the subsequent recovery of the ship's bell, inscribed with the vessel's name *Stormy Petrel*, have provided positive identification. The wreckage exhibits characteristic deterioration. The machinery and boilers remain intact as well as a 30-foot section of the bow. The hull in the fore and aft cargo holds has collapsed out at the turn of the bilge. The hull frames and bottom are partially covered with one-foot to 3 feet of sand

From the wreckage, vessel length was projected at 240 feet, while the beam was 32 feet. The extreme stern was not detected due to sanding. The presence of the ship's keel and other collectable small artifacts, usually recovered by sport divers, indicate that the site had escaped modern detection until a 1984 investigation.

Lockwoods Folly Inlet Unit

In Lockwoods Folly Inlet three wrecks have been located lying in a line across its mouth. All wrecks lie within the high energy inlet zone which are subject to abrasive tidal currents and intermittent periods of sediment accretion and erosion. Lockwoods Folly Inlet has remained in its same general location since the Civil War, however, the inlet channel has moved back and forth across the wrecks periodically. Water visibility is generally good at high tide on calm days.

0003LFI - *Elizabeth*

The *Elizabeth*, ex-*Atlantic*, was attempting to run in at Old Inlet, which lies 12 miles east of Lockwoods Folly Inlet, with a load of steel and salt peter. While creeping along the shore it grounded on an inlet bar shoal and being struck fast was burned by her crew to avoid capture. The *Elizabeth* was a wooden hull sidewheel vessel, 216 feet by 26 feet with a 10-foot draft and driven by a vertical beam or a walking beam, low pressure steam engine. It was built in New York and owned and operated by Charles Morgan's Southern Steamship Company.

The *Elizabeth* was seized by General Mansfield Lovel, CSA, in New Orleans in January 1862, but later released because it was considered too inadequate for military service. Private investors converted the *Elizabeth* for blockade running and successfully made seven runs before it was lost on September 4, 1863.

Wreck site 0003LFI lies on the outside of the western bar shoal and is the remains of a walking beam steamer. Only portions of the steam machinery were exposed above the bottom during archaeological investigations. The support structure or walking beam, piston rods, cylinder and steam pipes are reasonably intact, however interpretation is difficult due to the sanded condition of the wreck. No vessel measurements, nor orientation, have been determined for the vessel. Artifact dispersal at 0003LFI is roughly estimated to lie within a 250-foot-diameter area centering on the steam machinery.

0001LFI - *Bendigo*

Only a few months after the loss of the *Elizabeth* the *Bendigo*, ex-*Milly*, while running close to shore apparently mistook the wreck for a Union blockader and attempted to pass in shore. On the morning of January 3, 1864, the USS *Fahree* discovered the *Bendigo* stranded and upon examination found it to have been unloaded through the surf and burned. The present knowledge of the *Bendigo*'s construction and subsequent service as a blockade-runner is scant. The small iron sidewheel steamer was apparently built in a British shipyard in mid-1863 for Fraser, Trenholm, and Company who also owned the ill-fated *Elizabeth*. The *Bendigo* grounded in its third attempt at running the blockade.

Lying on the western margin of the inlet channel, wreck site 0001LFI, appears to have remained entombed in sand during most of its past depositional history. It is accessible today at low tide by beach strollers venturing out on the western bar shoal. Local tradition has maintained that it is the *Bendigo*.

The vessel remains are of an iron hull, paddlewheel steamer. The bow of the wreck points in a southeast direction which puts the vessel heading toward the mouth of the Cape Fear River but angled away from shore. The bow protrudes near, or in the inlet channel, and therefore had been subjected to tidal scour which has created a break in the hull near the forward boiler. No features were noted, nor the extent of wreck dispersal determined, for the forward portion of the wreck due to sanding at the time of investigation. Although deteriorated, the framing on the two boilers survive to preserve their construction details.

The steam machinery is in a good state of preservation. In addition, from midship to the stern, the main deck beams are still in place indicating that the majority of the hull remains intact. While the port paddlewheel shaft has broken from the wreck and is sanded over, the starboard shaft is in place and displays features such as the paddlewheel hub, lower spurs, and bracket mounts.

Probing in the stern at wreck site 0001LFI determined that the vessel extended in that direction 63 feet from the after boiler. This gives a projected vessel length of 176 feet; other

measurements produced an estimated hull beam of 20 feet 2 inches, a maximum beam of 36 feet 2 inches, and a depth of hold of 10 feet.

0002LFI - USS *Iron Age*

The USS *Iron Age*, the third vessel to meet its fate at Lockwoods Folly Inlet, grounded on January 10, 1864, while attempting to tow the recently wrecked *Bendigo* off the western shoal. After futile attempts to get free, the *Iron Age* was set on fire causing her magazine to explode, thus completing her destruction.

The *Iron Age* was a wood screw steamer built by Captain Nathaniel Lord Thompson at Kennebunk, Maine in 1862. She was reported to have a length of 144 feet, a beam of 25 feet, and a depth of 12 feet 6 inches. When purchased in April 1863 by the U.S. Navy, she was outfitted with three 30-pounder Dahlgren rifles and six VIII-inch Dahlgren S.B. and commissioned at Boston on June 25, 1863. The *Iron Age* arrived on the Wilmington Station, North Atlantic Blockading Squadron, in September 1863 and participated in the destruction of the blockade-runner *Venus* and the raiding of salt works near Bear Inlet before it went down.

On the eastern side of the present channel lying in the same orientation as the *Bendigo* wreck, are the remains of a wood hull, screw steamship. No information is recorded in the forward section of the vessel due to heavy sanding. Steam machinery is heavily damaged and collapsed making interpretation difficult, however, the remains of a rectangular boiler and a single-cylinder, vertical-operating steam engine have been observed.

The midship portion of the hull is broken out near the turn of the bilge. Hard oak frames, oak exterior planking, and bilge ceiling, possibly pine, are present. The hull deterioration is consistent until 20 feet from the stern where the sides gradually rise to a height of 7 feet. Here framing details are preserved, as well as remnants of copper sheathing. The four-bladed iron propellor and a wood rudder remain in place.

On the interior approximately 3 feet of sediment covered the hull and an 8-inch-diameter propellor shaft from the machinery area to the stern. A number of small artifacts were either observed or recovered including several round cannon shot and a navigational lantern. Fused coal, metal, and miscellaneous debris were indicative of a very hot fire at the time of wrecking.

The length of the vessel at 0002LFI measured approximately 110 feet from the boiler to the stern post and the beam amidship was 25 feet. The estimated dimensions of the original vessel is 150 feet by 26 feet, while artifact dispersion of 0002LFI is estimated to 200 feet by 50 feet. The wreck of 0002LFI is across the channel and on the same heading as the *Bendigo*. This further identifies it as the USS *Iron Age*, which was lost attempting to tow the former out to sea.

Carolina Beach Unit

Four blockade-runners were lost along the beach halfway between New Inlet and Masonboro Inlet. At the time of the Civil War this area was a long open stretch of beach which was sparsely populated. During the years since, Carolina Beach has grown into a sizable resort

town and in the 1950s Carolina Beach Inlet was artificially opened to provide ocean access for recreational and commercial fishing interests. The new inlet now strongly influences the four wrecks particularly the northern two, which undergo rapid sanding and unsanding as the inlet channel drifts south. Tidal flow through the inlet generally insures that sea water with good visibility will be present over the sites at high tide on calm days.

0002CBB and 0005CBB - *Venus/Lynx*

Presently there remains a question as to which two wreck sites, 0002CBB or 0005CBB, correspond to the blockade-runners *Venus* and *Lynx*. Both vessels were iron sidewheel steamers lost in the same general area between Masonboro and Fort Fisher (present day Carolina Beach), however, on-site investigations have not been detailed enough to resolve the identification problem. Local tradition and sport divers maintain that 0002CBB is the remains of the *Venus*, while recent visits by archaeologists studying Carolina Beach Inlet contend that it may be the remains of the *Lynx*. To add to the confusion the *Venus* is described as a 265-foot-long iron-sheathed steamer in some accounts, while other sources have it listed as more than 100 feet shorter with an iron hull. While the exact identification poses a query for future investigators, the reported historical locations and general vessel characteristics provide a good degree of certainty that the *Venus* and *Lynx* are represented at site 0002CBB and 0005CBB.

While the construction details for the *Venus* remain uncertain, the historical accounts of its career and loss are fairly consistent. Apparently on its seventh attempt the *Venus* was chased ashore while attempting to reach New Inlet. It was carrying a valuable cargo of quartermaster and commissary supplies which was subsequently destroyed with the vessel. While Civil War period destruction was reportedly thorough, additional salvage of a portion of its hull took place in June 1869.

The *Lynx* was built in Liverpool, England, during the spring of 1864 along the lines of the typical, late-model blockade-runners. Her steel hull measured 220-feet-by-24-feet-by-11.5-feet and mounted sidewheels driven by powerful steam engines. After a successful career, including nine runs into southern ports, chiefly Wilmington, the *Lynx* was chased ashore on September 25, 1864, above Fort Fisher. The vessel is one of few vessels wrecked on its outgoing voyage from Wilmington and carried a typical cargo of 600 bales of cotton, as well as $50,000 in government gold. Upon grounding the gold was removed, and the vessel was burned to prevent capture. Much of the cotton had been thrown overboard during the *Lynx*'s attempt to outrun Union steamers.

Although both sites 0002CBB and 0005CBB were reportedly visited by sport divers of the 1960s, site data was not recorded until the 1980s. The southern most wreck in Carolina Beach Unit, 0002CBB, is an iron sidewheel steamer in excess of 200 feet in length with a beam measurement of 23 feet at the turn of the bilge. Well-preserved steam machinery rises 12 feet above the bottom. Poor bottom visibility and a deteriorated hull have prevented positive identification of intact remains other than possibly those of a tubular boiler. The wreck rests nearly parallel to shore.

Site 0005CBB was located and investigated by U.S. Army Corps of Engineers archaeologists and their archaeological contractors. The remains were found to be covered in 8 to 10 feet of sand amidship with only paddlewheel shaft assembly, upper-most support beams, and the top of the forward boiler exposed. A small portion of the port stern with mooring bits attached was also reported. The vessel heading is northwest or angled in toward shore.

0003CBB -*Hebe*

The *Hebe* was an iron steamer driven by an experimental twin screw propulsion system. Built in London, England, in the spring of 1863, it measured 165-feet-by-23-feet-by-13-feet-6-inches. On her third run from Nassau, the *Hebe* was spotted at daybreak steaming for New Inlet and ran aground short of safety. Salvage attempts took place for several days after its loss on August 18th and concluded with the capture of several members of a Union boarding party and a destructive shelling of the vessel by blockade warships.

Wreck site 0003CBB is within the general area reported for the loss of the *Hebe* and has been identified as that vessel by its two propellors. Although reportedly visited in the 1960s and again in the mid-1970s, the majority of on-site data comes from a single dive by the UAU staff members in 1984 when visibility exceeded 30 feet. The vessel remains at site 0003CBB are lying diagonal to shore with its bow pointing in a northerly direction in 22 feet of water. Vessel length is approximately 169-feet-by-22 1/2-feet. In the extreme bow and stern the hull is well-preserved. In the fore and aft cargo holds the sides have broken out at the turn of the bilge, however, the hull floor beams remain in place. While the boiler is in good condition, the steam engine shows signs of heavy deterioration, most likely the result of partial salvage or destructive efforts at the time of sinking.

0004CBB - *Duoro*

The early history of the *Duoro* is not well known. It was apparently outfitted for blockade running in Liverpool during late 1862 and registered at 185 tons. While making an outward run through the New Inlet the iron screw steamer could not escape the Union blockade. After reversing its course the *Duoro* was run aground and destroyed just above the wreck of the *Hebe.* Uncertainty exists as to whether her cargo of cotton, tobacco, and naval stores were salvaged or fired with the vessel.

The extent of site 0004CBB is not fully understood since it has been heavily sanded during recent investigations. These were conducted in 1984 by Corps archaeological contractors, who found that a 20-foot bow section of an iron hull vessel was the only wreckage exposed. The presence of ship's fittings (i.e., a steam-powered anchor windlass) lying in place indicate that much of the wreckage at site 0004CBB are likely to remain in a good state of preservation.

Individual Wrecks

0001TPI - *Phantom*

The *Phantom* was built in Liverpool, England, as a steel, single-screw steamer in the summer of 1863. This "very handsome" steamer, measuring 192.6-feet-by-22-feet-by-12.4-feet, made four runs before it met its fate. Said to be one of the original line of steamers ordered by the Confederate government, it was run aground near Topsail Inlet on September 23, 1863. The *Phantom*'s cargo consisted of arms, medicines, lead ingots, and sundry merchandise.

Wreck site 0001TPI, lying parallel to the beach south of New Topsail, has been visited since the early 1960s. Sport divers found and recovered many lead bars weighing 155 pounds each. Investigations during the 1970s found that only the steam machinery and boilers were exposed, the rest being sanded in. Much of the hull is apparently broken out at the turn of the bilge.

0001RII - *Wild Dayrell*

Built in Liverpool, England, in the summer of 1863, the *Wild Dayrell* was an iron sidewheel steamer measuring 215 feet by 20 feet by 10.9 feet. It was built along the same lines as the *Banshee I* making it an example of the first class of steamers built exclusively for blockade running. On its fifth run through the blockade, the *Wild Dayrell* was reportedly run aground at New Topsail Inlet on February 2, 1864. Most of its cargo of shoes, blankets, and provisions had been discharged by Confederates. Pillaging of the cargo remains and final destruction of the vessel was rendered by a Union boarding party.

Wreck site 0001RII does not lie in the historical wreck location reported for the *Wild Dayrell*, however, it is strongly suspected to be that vessel. An examination by UAU staff members recorded a well-preserved iron, side-wheel steamer measuring 220 feet by 21 feet, all of which correspond to the *Wild Dayrell*. Further support for site 0001RII's identification comes from the fact that no vessel of the *Wild Dayrell*'s description has been found at New Topsail Inlet, nor were any wrecks reported lost in nearby Rich Inlet. Lying in the inlet where it has been sanded over much of its post-depositional history, site 0001RII is well-preserved. In addition to its steam machinery, much of its hull is intact to the deck level. A portion of articulated superstructure lies just outside the hull. Sport divers during the 1980s have reportedly removed portholes from the site.

0001MBB - *Sophia*

The *Sophia* is the only sailing blockade-runner included in the district group. It was a 375- ton British bark operating out of Liverpool. Having made two successful runs through the blockade, it was detected on its third attempt lying at anchor along the beach 4 miles south of Masonboro Inlet. The *Sophia* and its valuable cargo including three brass rifled field pieces, with gun carriages and other military supplies were destroyed by Union personnel before Confederates could transfer it to the beach. With the wrecking of the *Sophia* on November 4,

1862, came the realization that blockade running was very serious business since Union vessels for the first time in the war disregarded a white surrender flag and fired on the helpless boat.

Widely scattered wreckage exhibiting no intact vessel remains was examined by field school students in 1975 and 1976. Lying on a hard bottom covered by a thin layer of sand just outside the surf zone, the contents of the wreck are concentrated in a 250-foot-by-100-foot area. Among the features recognized was an anchor, anchor chain and winch, and several sets of wooden carriage wheels and hubs. The latter offers some confirmation that the wreck represents the remains of the *Sophia*'s cargo of gun carriages. Artifact types and their pattern of dispersion at site 0001MBB resemble that of a wooden hull sailing vessel.

0001CBB - *Beauregard*

The *General Beauregard*, ex-*Havelock*, built in Glasgow, Scotland, in 1858 was a coastal ferry boat converted for blockade running in early 1863. It was an iron sidewheel steamer measuring 223-feet-by-26 1/2-feet-by-14-feet-3-inches with a draft of 7 feet 6 inches.

The *General Beauregard* was running the blockade into New Inlet, making its seventeenth attempt, when it was boxed in short of her destination. The steamer was run ashore and destroyed north of Fort Fisher. There was no report of salvage by either Federals or Confederates.

Wreck site 0001CBB has been traditionally known as the *General Beauregard* since the time of its sinking because it has remained exposed at low tide. Its steam machinery is intact with its paddlewheel shaft and hubs remaining in place. Cooling tanks, grated cargo hatches, water tanks, a large rectangular aft boiler, bollards, and a davit exist on site. Both bow and stern sections are broken but not removed from the body of the wreck and are for the most part covered with sand. Although small artifacts have been recovered from the site, the wreck apparently has escaped serious salvage attempts.

0002NEI - USS *Peterhoff*

The *Peterhoff* was built prior to the Civil War as a pleasure yacht for the Czar of Russia in Petrodvorets on the Gulf of Finland. It was a screw-propelled, iron steamer, 210 feet in length, 28 feet in beam with a hold depth of 15 feet. During the war the *Peterhoff* was acquired by English interests and outfitted for blockade running. On its maiden voyage it was intercepted and searched by Union sailors. Finding contraband cargo on board, the *Peterhoff* was seized and sent to New York where it was condemned and purchased by the Union Navy.

The USS *Peterhoff* kept its name when it was converted to a warship at the Hampton Roads Naval Yard. Because of its narrow beam and long length it was fast and an excellent vessel for blockade duty. In addition, since the USS *Peterhoff* was screw propelled, its decks were free of the usual crankshaft and fenders of side paddlewheelers and allowed deck guns to be mounted from stem to stern. After only a week on the Wilmington station, the USS *Peterhoff* accidentally collided with the USS *Monticello* in the morning mist of March 6, 1864. Within

thirty minutes the ex-blockade-runner sank unceremoniously in 5 fathoms of water off Fort Fisher.

Site 0002NEI was located in 1963 by sport divers and later that year three 32-pound smoothbore cannon were salvaged by U.S. Navy divers. A 30-pound Parrott rifle and part of the carriage of a brass howitzer were recovered during a 1974 field school, as well as a porcelain bowl bearing the name, 'PETERHOFF'. As a result of these investigations, the wreck was listed as an individual property on the National Register of Historic Places (1975).

At the present time site 0002NEI is heavily encrusted with marine growth, but is in relatively good condition. This is due to its greater depth (35 feet to 40 feet) and distance from shore (1.5 miles) where current movement and surf surge are diminished. With only moderate collapsing of its hull plates the USS *Peterhoff* wreck still retains much of its upper deck structure. Although the bow and stern sections have broken from the main body of the wreck they remain in proper alignment. Besides significant portions of the hull and interior structural members, the boilers and steam machinery are prominent features. Two cannon as well as a variety of miscellaneous ship's equipment are still present on the site.

0001CFI - *Ella*

The *Ella* is an example of a late-model blockade-runner built in Dumbarton, Scotland, in the summer of 1864. It was an iron sidewheel steamer measuring 225-feet-by-28-feet-by-13-feet that had made four successful runs before running aground in Old Inlet loaded with a large supply of both military goods, arms and ammunition, and luxury items. The *Ella* was intercepted and sunk on the south end of Marshall Shoal near the light on Bald Head Island. For several days following the December 3, 1864, sinking furious attempts to salvage the vessel and its valuable cargo were made from both sides. The end result was the partial recovery of cargo by the Confederates and final destruction of the vessel at Union hands.

Site 0001CFI has been identified as the *Ella* from its location, vessel features and recovered artifacts. On-site data comes from extensive investigations conducted by private researchers, who detailed maps of the wreck's bow and midship sections.

Wreck site 0001CFI lies on a northwest heading parallel to the south shore of Bald Head Island. The most prominent feature on the site are the remains of two large boilers, steam machinery, and paddlewheel shaft. In addition, significant portions of the hull and structural framing, as well as a small amount of cargo, remain intact. Shifting bottom sands cover the site to varying degrees in response to tidal currents and ocean swells.

0001HBB - *Ranger*

Details on the construction of the 400-ton, blockade-runner *Ranger* are currently unknown. The steamer sailed from New Castle, England, November 11, 1863, to Bermuda and left there for the South Atlantic coast on January 6, 1864. After landing passengers and baggage near Murrell's Inlet, South Carolina, the *Ranger* continued up the coast toward Wilmington when Union ships spotted it. The *Ranger* was beached one mile west of Lockwoods Folly Inlet, North

Carolina, and destroyed by fire. It is unknown how much, if any, of its valuable government cargo was salvaged.

The wreck of the *Ranger* has been investigated since the 1960s. The modern recovery of several well-preserved cases of rifles from its hold apparently were a portion of its remaining ill-fated war supplies. The wreckage is that of an iron, sidewheel steamer which exists in a good state of preservation, particularly from midship forward. The machinery area and aft boiler remain intact, as well as large sections of the bow and stern structure. Although, the sides of the vessel are collapsed out in the hold areas, they remain as they fell with minimal redistribution.

FOOTNOTES

[1]Ewan Corlett, The Iron Ship: The History and Significance of Brunel's Great Britain (New York: Aero Publishing Company, Inc., 1975), 21.

[2]Corlett, The Iron Ship, 25.

[3]Corlett, The Iron Ship, 212-214.

[4]Marcus W. Price, "Ships that Tested the Blockade of the Carolina Ports, 1861-1865," The American Neptune, VIII (July, 1948), 199-200.

[5]Price, "Ships that Tested the Blockade," 199-200.

[6]Stephen R. Wise, "Lifeline of the Confederacy: Blockade Running During the American Civil War" (Ph.D. dissertation, University of South Carolina, 1983), 76-81.

[7]Wise, "Lifeline of the Confederacy," 93.

[8]Wise, "Lifeline of the Confederacy," 132.

[9]Wise, "Lifeline of the Confederacy," 204.

[10]Richard S. West, Jr., Gideon Welles: Lincoln's War Department, (New York: The Bobbs-Merrill Company, 1943), 185.

[11]Horatio L. White, "The Blockade of the Confederacy," Century Illustrated Magazine, XXXIV (July, 1898), 918.

[12]Robert M. Browning, "The Blockade of Wilmington, North Carolina: 1861-1865" (Masters Thesis, East Carolina University, 1980), 124.

[13]John R. Spears, The History of our Navy from its Origin to the Present Day 1775-1897, 4 vols. (New York, 1897), IV, 38.

[14]Benjamin Sands to Samuel P. Lee, October 21, 1863, Richard Rush and others, (ed.), Official Records of the Union and Confederate Navies in the War of the Rebellion, 30 vols., Washington, 1894-1914), Series I, Vol. II, 248-249.

[15]Stephen R. Mallory, ORN Series II, 152.

[16]William N. Still, Jr., Iron Afloat: The Story of the Confederate Ironclads, (Vanderbilt University Press, 1971), 5.

[17]William Frederick Keeler to his wife Anna, "Aboard the USS *Florida*: 1863-65," Robert W. Daly, Ed., (United States Naval Institute, Annapolis, Maryland), Volume Two, 66-68.

[18]Still, Iron Afloat, 165-167.

[19]The Wilmington Morning Star, June 10, 1869.

[20]The Wilmington Morning Star, April 26, May 25, 1881; The Wilmington Weekly Star, October 9, 1891.

[21]Underwater Archaeology Unit, Underwater Site Files, Kure Beach, North Carolina, Site Numbers 0001LFI, 0001RII, 0004NEI, 0001NWI.

[22]The Wilmington Morning Star, February 26, 1868,

[23]The Wilmington Morning Star, July 16, 1891.

[24]The Wilmington Morning Star, September 24, 1895.

[25]Dave Horner, The Blockade Runners (New York: Dodd, Mead and Co., 1968), 49-50.

[26]Horner, The Blockade Runners, 51-52.

[27]Leslie S. Bright, The Blockade Runner *Modern Greece* (Wilmington, North Carolina: Division of Archives and History, 1977).

[28]Underwater Archaeology Unit, Underwater Site Files, Kure Beach, North Carolina, Site Number 0001CFI.

[29]Richard W. Lawrence and Mark Wilde-Ramsing, "Project Review and Assessment Procedures," A paper presented during the workshop session, "State and Federal Agency Review and Assessment of Projects Affecting Submerged Cultural Resources," chaired by Richard Kimmel, Conference on Underwater Archaeology, Philadelphia, 1982.

[30]Browning, The Blockade of Wilmington, North Carolina: 1861-1865, 87; George W. Young to David D. Porter, January 9, 1865, ORN I, XI, 416-417.

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SECTION II.

GENERAL SIGNIFICANCE

Throughout history ships have been one of man's most elaborate artifacts, in which design and build reflect specific needs. Through the study of ships, insight can be gained into the economical and social mandates of the society in which they were built and the industrial technology available at the time of construction. Shipping was of paramount importance during the Civil War since the vast majority of both raw materials and manufactured goods, necessary to sustain the Confederate War effort, were transported across the Atlantic.

Today the Cape Fear area boasts the largest collection of Civil War shipwrecks anywhere in the world. This group represents the full range of rapidly evolving merchant vessels used to elude the Union naval blockade, as well as a compliment of naval warships involved either in restricting or assisting merchant traffic. The physical remains of these vessels preserve important details concerning the transition in naval architecture and technology from sail to steam and wood to iron.

Artifacts collected from the Cape Fear Civil War shipwrecks are often well-preserved and closely dated. As a group these artifacts can shed light on military and civilian activities during the war. When conserved and placed in museum, these artifacts serve as tangible reminders to highlight historical awareness. As sport diving gains popularity, the educational potential of wreck sites themselves can be developed through the use of interpretive maps and underwater trails.

The Cape Fear Civil War Shipwreck District preserves a physical record of an important part of the United States history. The shipwrecks within it provide the means to more fully understand the Civil War period through the development and utilization of their historical, archaeological, educational, and recreational potential.

SPECIFIC CRITERIA

The Cape Fear Civil War Shipwreck District is significant according to the following criteria:

A. It is associated with events that have made a significant contribution to the broad patterns of history in North Carolina and the nation. Blockade running during the American Civil War provided the lifeline of international commerce so vital to the Confederacy's war efforts. Tremendous energies, money, and time were spent promoting and protecting this trade, while Union efforts attempted to restrict it. As the war progressed many southern ports were effectively closed so that by 1863, Wilmington, North Carolina, and the Cape Fear area, became the focus of blockade running activities.

C. It embodies distinctive characteristics of a period and method of construction whose components may lack individual distinction. This group represents vessels built from 1852-1864, a period in which significant advances were being made in marine technology. The merchant vessels collectively trace the evolution of the classic blockade-runner, the fastest and most efficient steamship of its day. Union and Confederate military vessels reflect major innovations during the dawn of modern naval warfare.

D. It is likely to yield information important to the nation's history and to marine construction. General areas of research include:

1. Intact vessel remains can provide details on the rapidly developing technological advances of the Civil War period. Due to the urgency and haste in wartime shipbuilding, as well as a veil of secrecy, many gaps were left in the historical documentation recording construction details. Archaeological investigations on wreck sites can both fill these gaps, and act as important counter measures to check and better understand written records. Comparative studies of steam machinery and propulsion systems, hull designs as they affected speed and carrying capacity, and the use of various types and grades of metals, particularly iron and steel, in marine construction are a few of the specific research problems that exist.

2. An examination of the remains of ship's supplies and equipment can shed light on resources available when each was outfitted. Differences in the types of anchors, mooring devices, hull protection, steam equipment, etc., may be significant between Confederate naval, Union naval, and merchant vessels during the Civil War.

   A specific area of research involves investigation into coal use, particularly by blockade-running steamers. A contradiction exists in historical references since on the one hand it was said that blockade-runners preferred 'smokeless' anthracite coal to avoid detection, while on the other, Union blockaders reported that heavy black smoke, a result of burning soft English coal, was a characteristic of blockade-runners. Since anthracite coal was generally mined in the northeast section of the United States, its use for the Southern cause would imply underground trading connections. Coal samples recovered from each of the wrecked steamers, will reveal a pattern of coal use by blockade-runners over time, as well as comparing its use on those vessels with their military counterparts.

3. The examination of cargoes can add knowledge to the general understanding of Confederate trade and its economic system during the Civil War. Bogus manifests and port records often obscure the actual supplies a blockade-runner was carrying. Content studies of surviving cargoes can point out the types of materials being exchanged with foreign markets. The proportions of imported

items, particularly war supplies, civilian staples and luxuries, reflect the needs and demands of the Confederacy and its attempt to regulate maritime trade.

4. Civil War wrecks may serve as valuable control groups for certain interdisciplinary research. For scientists interested in the deterioration and corrosion of different types of metals after submergence in salt water, the Civil War wrecks provide long term, tightly dated samples. Marine geologists may also gain some insight into recent geomorphological processes from the wrecks, because they have remained stationary since their loss and act as control stations.

STATEMENT OF HISTORICAL SIGNIFICANCE

On 19 April 1861, only a week after the fateful shots were fired at Fort Sumter, President Abraham Lincoln proclaimed a naval blockade of the Southern coastline from South Carolina to Texas, inclusive. In a supplemental proclamation on 27 April, the blockade was extended to the coast of North Carolina to Virginia.[1] Quickly an alarm spread throughout the ports of the South, and the majority of foreign vessels made a hasty departure.[2]

Even before the outbreak of the Civil War, the South had been heavily dependent on imports for many necessities of life, especially so with regard to the products of industry. It was clear to Southern leaders, and to their Union adversaries as well, that the Confederate States of America could hope to wage war successfully only if they were able to obtain the vast majority of their military supplies from abroad. Moreover, it was also clear that the South's ability to obtain these supplies would be greatly impaired by its lack of an adequate navy and merchant fleet.[3] The implementation of the blockade soon precluded the possibility that the South would be able to develop a conventional trade with Europe in order to supply its domestic needs and fuel its war machine. The only alternative was to devise a means of penetrating the blockade and thereby maintain and increase the flow of essential imports from overseas, especially form Great Britain.[4]

As early as 13 May 1861, Queen Victoria issued a proclamation of neutrality with respect to the massive clash of arms that had begun some 3,000 miles away.[5] Yet, pervasive throughout the South was the persistent belief that Great Britain would intercede on the Confederate side in order to assure the continued flow of cotton to her textile mills. It was not until the fall of 1862 that the hopes for British intervention finally went aglimmering. More realistic, however, was the expectation that British merchants and industrialists would be eager to develop a covert trade with the Confederate States involving the exchange of military supplies and other commodities for cotton and, to a lesser extent, rice, sugar, tobacco, and other products of Southern agriculture.

From the very outset, it was intended that the blockade of the Confederate coastline would follow the 1856 Declaration of Paris that:

> Blockades, to be binding, must be effective; that is to say, maintained by a force sufficient really to prevent access to the coast of the enemy.[7]

At the same time, however, it was hardly feasible to blockade every portion of a coastline measuring some 3,549 miles in length. Indeed, the enormity of the task encouraged Southern leaders to believe that an effective blockade would be impossible to accomplish.[8]

Rather that attempt a uniform blockade of the entire Southern coastline, Union naval strategists focused their efforts and initially limited resources on those Confederate ports which had deep harbors, well-developed commercial and banking facilities, and adequate links by water or rail to the interior. These ports had the greatest potential for supplying armies in the field. The South's principal ports at the beginning of the Civil War were Norfolk, Savannah, and Charleston along the Atlantic seaboard, and New Orleans and Mobile on the Gulf Coast. Eighth largest in terms of customs collections among the pre-war Southern ports was the town of Wilmington, North Carolina, some twenty-eight miles upstream from the mouth of the Cape Fear River. Though lacking a well-developed merchant community, Wilmington held the potential, at least, of developing as a major trading center.[9]

The ships initially comprising the Federal blockade were a motley assemblage of vessels drawn hastily together from every conceivable source. Ships of war were urgently recalled from their foreign stations, and by December of 1861, some 264 ships had been purchased and armed for blockade duty.[10] Numerous sailing vessels were numbered among the blockading force during the early period, but the transition to steam powered ships was made as soon as possible. By this means a clear advantage could be gained over Southern shipping, the vast majority of which was being carried on by sailing ships. Steam merchantmen and coastal steamboats were quickly converted for service in the blockade; and their presence along the Southern coast soon convinced those engaged in running the blockade that they would have to place increased reliance on steamers themselves. The vital struggle between competing technologies would, before the War's end, produce revolutionary and lasting changes in shipbuilding, naval strategy, and transoceanic trade.[11]

Only gradually was the United States Navy able to put the declared blockade of the South into effect, with Confederate authorities being notified as Union vessels took up their positions off Southern ports. On 30 April 1861, Norfolk was the first to be blockaded, followed during the next month by Charleston, Mobile, and New Orleans. It was not until 21 July that the blockade was extended to Wilmington.[12]

During the first few months of the War, the blockade of the Atlantic seaboard was the responsibility of the unified Atlantic Blockading Squadron. In September, however, this command was divided into the North Atlantic and South Atlantic squadrons, with the former assigned to the coasts of Virginia and North Carolina. The ports along the Gulf of Mexico were assigned to the Gulf Blockading Squadron.[13]

Despite its early limitations, the blockade of the Confederacy soon began to accomplish its aims. From June through August of 1861, it is reported that not a single steamer entered or cleared from a Southern port. Only a relatively few sailing vessels did so. It soon became apparent that extremely swift steamers would be necessary if the blockade were to be penetrated. However, the few oceangoing steamers formerly operating out of the Southern ports had either

been taken over by the military or sold by their owners.[14] This situation was not long allowed to continue. By the fall of 1861, various British firms were beginning blockade running ventures for profit, and Confederate agents were arranging for the purchase of blockade-runners through British intermediaries.[15] Nassau, on the Bahamian Island of New Providence, soon developed as the center of the early blockade-running activity, serving as a convenient point of transshipment between Great Britain and Southern ports along the Atlantic Coast.[16]

The potential for fabulous profits lured many private companies into the trade from Great Britain and from within the Confederacy in 1862 and 1863. At the same time, however, it was obvious that the Confederate government itself would have to get involved more directly by purchasing and operating its own vessels. With Nassau already crowded by the activities of private companies, the government chose to focus most of its operation on the island of Bermuda, where the port of St. George possessed a fine, deep harbor and ample facilities for coaling. A significant disadvantage of Bermuda was its increased distance from the Atlantic coast. It is 674 miles to Wilmington and 772 miles to Charleston from St. George, as opposed to 570 and 515 miles from Nassau. As a result, vessels bound to or from Bermuda were forced to carry a two-day supply of coal, thus sacrificing valuable cargo space. Late in the summer of 1864, yellow fever epidemics in Nassau and Bermuda caused some blockade-runners to shift their bases of operations northward to Halifax, Nova Scotia; but Halifax never rivaled the two more important centers.[17]

Charleston had already emerged as the favored port for the private trade out of Nassau; but the Confederate government's blockade-running activity out of Bermuda focused from the outset on the small, and initially less important, port of Wilmington. By the early part of 1863 three iron-hulled sidewheel steamers had been purchased for the Bermuda-Wilmington trade.[18] With the passage of time, Wilmington was to supplant Charleston as a center of blockade running on the Atlantic Coast and emerge as the premier center of blockade running in the entire South.

By the time of the Civil War, Wilmington had already become North Carolina's principal seaport, with its exports consisting primarily of naval stores, lumber, rice, and other agricultural products of the Cape Fear region. Although it lacked prominent banking and commercial establishments, its potentials as a major center of trade for the Confederacy were apparent in its relatively deep harbor and its well established links with the interior through three separate railroad lines and daily steamboat runs to Fayetteville. Steamboat connections also existed with Charleston and New York.[19]

Events anticipating the approach of the Civil War had come early to the lower Cape Fear area. On 10 January 1861, a group of well armed men from Wilmington took it upon themselves to seize and occupy forts Johnston and Caswell near the mouth of the River, though only for a short time. On 16 April these two forts were again seized and held, even though secession did not formally occur until the 20th of May. From the very beginning of the War, it was felt very strongly that the entrance to the Cape Fear would have to be protected if at all possible.[20]

The defense of Wilmington and the lower Cape Fear region was assigned to Gen. William Whiting, who had been with General Beauregard at Fort Sumter. Whiting was

extremely well qualified for the command, having served with the Corps of Engineers and with the Coast Survey. He had, moreover, been stationed at Smithville (present Southport) and was intimately acquainted with the coastline of southeastern North Carolina. Eventually, Whiting's troops would be stationed along the coastline as far northward as Topsail Sound, as well as in Wilmington and along the lower reaches of the Cape Fear itself.[21]

When the Civil War began, Fort Caswell was already in existence at the mouth of the Cape Fear, on the west side of Old Inlet. It was immediately apparent, however, that no comparable defenses were in place at New Inlet, the river's second entrance some six miles to the north. It was here that Fort Fisher would be constructed on Federal Point (or Confederate Point, as it was renamed). Construction began in the spring of 1861, but the results remained unimpressive until after the arrival of Colonel William Lamb during the summer of the following year. Lamb was assigned to Fort Fisher and the defense of New Inlet on 4 July 1862. The rudimentary works already established at the time consisted of several poorly-armed batteries and a large commissary bombproof.[22] In view of the strategic importance of New Inlet, it was clear to Lamb that provisions for its defense had scarcely been begun:

> I thought, on assuming command, and experience afterwards demonstrated, that as a defense of New Inlet against a Federal fleet, our work amounted to nothing.
>
> I determined at once to build a work of such magnitude that it could withstand the heaviest fire of any guns in the American navy.[23]

From that time onward, Lamb worked ceaselessly with as many as 1,000 laborers to create "the largest seacoast fortification in the Confederate States."[24] One of his first tasks was to salvage and put in place four powerful artillery pieces from the blockade-runner *Modern Greece*, which had sunk just north of New Inlet only shortly before his arrival at Fort Fisher. These weapons were to provide invaluable protection for many another blockade-runner during the remainder of the War.[25]

At the outer tip of Federal Point, Lamb constructed the towering Mound Battery, which was heavily armed and equipped with a range light to assist blockade runners in finding New Inlet and crossing the bar safely into the Cape Fear.[26] Along the beach north of Fort Fisher, Lamb stationed a flying battery to protect blockade runners that had run aground or were otherwise incapacitated.[27]

In addition to forts Caswell and Fisher, numerous smaller fortifications were developed or improved as components of the formidable Cape Fear defense system. Fort Holmes stood opposite Fort Caswell on the east side of Old Inlet. To the west of Fort Caswell were forts Shaw and Campbell. Fort Johnston (or Pender) stood watch over the river at Smithville, while forts Lamb and Anderson were situated farther upstream on the west bank of the river. Farther still upstream, on the east side of the river, forts Meares, Strong, Lee, and Stokes provided additional protection against enemy vessels which might threaten Wilmington itself.[28]

The Federal blockade of the port of Wilmington began on 21 July 1861, with the arrival of the steamer *Daylight* off the mouth of the Cape Fear at Old Inlet.[29] From that time onward

until the ultimate collapse of the Cape Fear defense system nearly four years later, a continual and progressively crucial struggle would be waged between the vessels attempting to maintain the blockade and those endeavoring to penetrate it.

From the very outset, the geography of the Cape Fear area presented formidable obstacles to the blockading vessels assigned to seal the port of Wilmington. Old and New Inlets, the two entrances to the Cape Fear, are only about six mile apart in a straight line; yet the configuration of the intervening coastline and the existence of extensive and treacherous shoals increased the effective distance by sea several fold. The crucial importance of this was clearly recognized and appreciated by Captain John Wilkinson, one of the most successful and celebrated runners of the Wilmington blockade:

> The natural advantages of Wilmington for blockade-running were very great, chiefly owing to the fact that there are two separate and distant approaches to the (the) Cape Fear River, i.e., either by "New Inlet" to the north of Smith's Island, or by the "western bar" (i.e., Old Inlet) to the south of it. This island is ten or eleven miles in length; but the Frying Pan Shoals extend ten or twelve miles further south, making the distance by sea between the two bars thirty miles or more, although the direct distance between the two is only six or seven miles.[30]

As a result of these geographical factors, it was necessary for the Union Navy to station blockading vessels in a loose crescent or semicircle, perhaps ten miles in length, off each of the two inlets. During the daylight hours these vessels rode patiently at anchor. At night, when the vast majority of blockade running occurred, the ships on each end of the crescent positioned themselves as near to the shore as possible. While maintaining their relative positions, each vessel was well advised to maintain a respectful distance from the forts which guarded the two inlets. A further impediment to an effective blockade was the lack of an adequate number of ships. From the arrival of the *Daylight* through much of 1863, it was rarely possible to assign more than a half-dozen vessels to each of the inlets.[31] This situation was to alter dramatically, however, during the last two years of the War, when Wilmington was the premier center of blockade running in the entire South.

In addition to the blockading vessels stationed off each inlet, armed barges or launches were frequently assigned to patrol the bars or enter the lower reaches of the Cape Fear River itself. From these vantage points, they could send appropriate signals to the blockading fleets. Operations in such close proximity to the Confederate forts, however, could only be carried out with the greatest of stealth and caution.[32]

When sufficient vessels were made available for the purpose, second and third lines of blockaders were strung along the edge of the Gulf Stream and across the route of blockade-runners entering or leaving Nassau. Under the worst set of circumstances, then, a vessel attempting to run the blockade between Wilmington and Nassau might be faced with three separate encounters with the enemy.[33]

During the summer of 1864, when Wilmington was the sole major port remaining open to the embattled Confederacy, the headquarters of the North Atlantic Blockading Squadron were

moved southward from Hampton Roads, Virginia, to Beaufort, North Carolina. This reduced considerably the amount of time vessels spent away from their stations, when it was necessary to receive a new supply of coal or replenish exhausted provisions. By the fall of 1864 the blockading fleets off Old and New Inlets had risen to fifty vessels, among which were some of the fastest ships available to the Union Navy.[34]

Although the primary responsibility of Union blockading vessels was to guard the two entrances to the Cape Fear, it was also essential for them to maintain a more or less constant vigilance over the smaller inlets along the southeastern coast of North Carolina-from Little River Inlet at the North Carolina-South Carolina line to New Topsail Inlet at the lower end of Topsail Sound. Virtually all of these minor inlets were used by shallow draft brigs, barks, and schooners. The activities of these vessels contributed significantly to the overall effort to penetrate the Union blockade, even through their collective contribution was on a vastly smaller scale than the blockade running by the steamers to and from the Cape Fear River and Wilmington. Indeed, the trade through these inlets in some instances reflected the Confederacy's desperate need for supplies in even the most meager quantities. In February of 1863, for example, a Union reconnaissance through Little River Inlet chanced upon "a boat with five men in her, pulling up the river." The boat's cargo was found to consist of:

> 5 muskets, 23 each of jackets, caps, drawers, shirts, stockings, 23 pair shoes and 1 dozen blankets intended for the use of company of infantry stationed at this place.[35]

Confederate salt works were established and operated along the mainland shores of the various sounds; and signal stations, shore batteries, and small contingents of Confederate troops were frequently present near the inlets to assist blockade running vessels and to guard against Union incursions.[36]

In addition to serving as minor arteries of trade, the smaller inlets also served on occasion as avenues of escape for steam blockade-runners in distress. Still other ships attempting to run the blockade were chased ashore or deliberately beached near the inlets. As a result, the sound and ocean waters in the vicinity of these inlets contain the wrecks of a considerable number of both sail and steam-powered vessels. At least five ships were sunk in or near tiny Lockwoods Folly Inlet during the course of the War.[37] At nearby Shallotte Inlet, at least three vessels were lost.[38] A minimum of three vessels came to grief at New Topsail Inlet.[39] Finally, no fewer than eight vessels sank in the vicinity of Masonboro Inlet, including a Union gunboat and at least three steam blockade runners.[40]

The use of these small inlets persisted throughout the War and was a constant source of irritation and concern for Union naval authorities forced to concentrate most of their resources around the far more important inlets leading into the Cape Fear River. Even as late as 5 February 1865, some three weeks after the fall of Fort Fisher, Rear Admiral David D. Porter informed the Secretary of the Navy, Gustavus Fox, that:

> The rebs still keep up flashing lights at Little River Inlet, and no doubt vessels will attempt to run in there, we have to look out for that place--there is nine feet of water there.[41]

As the size and resolution of the blockading fleets off Wilmington increased over time, so too did the port's role in supplying and sustaining the Confederate War effort. During the first two years of the War, the blockade running at Wilmington was only moderately important in the overall scheme of things. One by one, however, the large ports of the south fell under Union control, and Wilmington's strategic importance eventually became paramount.

Among the first steamers to run the blockade off Wilmington were the *Thomas L. Wragg*, the *Kate*, and the *Cornubia*, all of which entered and cleared from the Cape Fear in 1862. The *Kate* made three runs to Wilmington during this period, while the *Thomas L. Wragg* and *Cornubia* made one each. All runs originated at Nassau except for that of the *Cornubia*, which ran the blockade from Bermuda.[42]

It is of interest to note that the first of these three steamers to penetrate the blockade the *Thomas L. Wragg*, experienced extreme difficulty on what was to be its only run to Wilmington. Having skirted along the shoreline from the northeast, it safely entered New Inlet, but then ran aground on the bar. Fortunately for the vessel and it crew, there were no blockading vessels present at the time, but it was only with considerable difficulty that it was finally gotten free and pulled into the lower reaches of the river and out of harm's way.[43]

After several successful runs to both Charleston and Wilmington, the *Kate* suffered a misfortune of far greater severity in the Cape Fear. After making its way into the river in November of 1862, it struck a snag and sank near Smithville. The ship's cargo was subsequently salvaged, but it was a total loss.[44] The experience of the *Thomas L. Wragg* and the *Kate* did not seem to bode well for the future use of Wilmington as a major center of blockade running.

During the first year of the War, New Orleans was a port of extreme importance to the Confederacy. This ended abruptly, however, in the spring of 1862, when the city fell to Union naval forces under Adm. David G. Farragut. With the fall of New Orleans, the South lost not only a port and shipbuilding center of major strategic and commercial importance, but the gateway to the Mississippi valley as well. The focus of blockade running in the South now shifted increasingly to ports along the Atlantic seaboard, which English shippers and the Confederate government had, in fact, always preferred.[45]

Charleston and, to a lesser extent, Wilmington now began to receive much of the trade which might formerly have gone to the Gulf Coast. The beginning of the Confederate government's blockade running activities out of Bermuda late in 1862 concentrated almost exclusively on the North Carolina port, where the demand of facilities was not nearly so great.[46]

Despite the Confederate government's heavy reliance on Wilmington as a blockade running port, Charleston remained far and away the more important of the two cities as a center of trade and as a source of vital supplies for the Confederacy. Indeed, after the loss of New Orleans, Charleston clearly emerged as the most important center of blockade running in the South. This ended in the summer of 1863 when Union naval and land forces seized control over Morris Island, at the entrance to Charleston harbor, and took steps to drastically curtail blockade running activity. With the effective loss of Charleston, virtually all major blockade running now

focused on Wilmington. From this time until the fall of Fort Fisher in January 1865, Wilmington was to have no rivals in the South as a center of trade and maritime activity.[47]

From December of 1862 through December of 1863, steam blockade-runners made at least 127 entries at Wilmington, a great many of these coming after the closure of Charleston. During this same period there were some 115 departures from the port by vessels of the same type. Even in this early period several vessels were captured or destroyed off Wilmington as the blockade gradually grew more stringent.[48] The flow of covert trade through the Wilmington blockade increases still further in 1864. During just the first nine months of the year, steam blockade runners entered at least 126 times and cleared outward some 128 times.[49]

The special demands placed on vessels attempting to run the blockade into Wilmington and other Confederate ports brought about revolutionary developments in many areas of design and construction. Every avenue was explored to combine great speed and maneuverability with maximum cargo capacity.[50] At the commencement of hostilities the sailing ship was still dominant, not only in coastwise, but transoceanic trade as well. As carriers of cargo on the open sea, steamers were only just beginning their rise to prominence. The important transition from sail to steam was greatly accelerated by the Civil War.

Vessels initially employed as blockade runners, like those used in the blockading fleets, were of various types. Colonel William Lamb recalled that the early blockade running into the Cape Fear was "carried on by any light-draft sea-going steamer that could be procured, and even by small sailing craft.[51] Early in 1862, however, a decided preference began to develop for the so-called "Clyde Steamers" of the British Isles. These iron-hulled, light-draft, sidewheel steamers carried powerful engines and were capable of impressive speeds. The Clyde Steamers purchased for use in running the blockade initially underwent conversions which increased their cargo capacity and reduced their visibility to a minimum.[52] These conversions soon became unnecessary, however, for the British shipyards along the Clyde and Mersey Rivers began to develop highly specialized steamers for the sole purpose of running the blockade. Until late in 1863, there was a pronounced tendency among shipbuilders to narrow the beam as much as possible for increased speed; but experience soon demonstrated that the few knots of additional speed were being achieved only at the expense of structural weakness and reduced cargo space.[53]

Colonel William Lamb of Fort Fisher gave the following description of the typical blockade runner during the late years of the War:

> The blockade became so effective that to run it successfully was quite a science. The fastest steamers were built for the purpose, side-wheelers or double screws, long, low and narrow, usually nine times as long as wide and from four hundred to seven hundred tons burthen. They were all painted a light gray, making them as nearly invisible as possible; light lower masts without yards, with a small lookout on the foremast. Funnels could be lowered close to the deck in case of need....[54]

Blockade-runners attempting to enter or leave Wilmington, had the valuable option of choosing either Old or New Inlet for their passage between the sea and the lower reaches of the

Cape Fear. New Inlet had been created by a storm in 1761 and had been used by sailing ships for precisely a century when the War began. Although the depth of its channel was somewhat limited, it carried sufficient water over the bar to admit shallow-draft steamers. It was, moreover, defended by Fort Fisher, which had by 1863 already been developed into the largest coastal fortification in the South. Once within the range of its guns, blockade-runners were reasonably secure from the fire of enemy vessels lying offshore.[55]

Especially during the latter part of the War, when the plight of the Confederacy was growing increasingly desperate, New Inlet served as the single most crucial artery of supply in the entire South. Its strategic importance was constantly borne in mind by Colonel William Lamb:

> As blockade running was of such vital interest to the Southern cause, I did everything to foster it, and New Inlet, protected by Fort Fisher, became the most popular entrance to the South. Wilmington was the last gateway closed, and during the last year I commanded the fort, there was scarcely a dark night that I was not called upon the ramparts to admit friendly vessels.[56]

Ships seeking to enter New Inlet from the sea would generally run along the coast from the northeast, taking care to pass inside the blockading vessels just offshore. Once this was accomplished, entering vessels would commonly display a signal light on their inshore sides. This signal was then answered by a system of signals along the beach, established to guide incoming vessels safely to the inlet channel. The range light atop the Mound played an especially prominent role in accomplishing this purpose, but it was only one of a series of lights which could be moved if necessary to coincide with the changes in the channel's depth or variation.[57]

Old Inlet, at the mouth of the Cape Fear, had been in use since the seventeenth century, when the initial attempts to settle the Cape Fear had occurred. Its shifting and somewhat hazardous bar carried a depth of between 10 and 15 feet.[58] Its approaches were guarded by Fort Caswell, a facility begun in 1826.[59]

Blockade-runners routinely approached Old Inlet by skirting along the coastline from the west. A lightship just inside Old Inlet was destroyed by Union troops in December of 1861; but lights were subsequently placed on Smith's Island and along the shoreline adjacent to the inlet, under Captain John Wilkinson's capable supervision.[60]

One of the principal hazards for vessels running the blockade through Old Inlet was "the Lump," a sandy knoll on the ocean floor some two or three miles outside the bar. Wilkinson, himself, nearly came to grief on "the Lump" while steaming desperately for Old Inlet on the night of 29 December 1862:

> About ten o'clock we passed inside the first ship of the blockading fleet about five miles outside the bar; and four or five others appeared in quick succession as the Giraffe was cutting rapidly through the smooth water. We were going at full speed when, with a shock that threw nearly everyone on board off his feet, the steamer was brought up "all standing" and hard and fast aground! The nearest

> blockader was fearfully close to us, and all seemed lost. We had struck upon "the Lump," a small sandy knoll two or three miles outside the bar with deep water on both sides of it. . . . Many a ton of valuable freight has been launched overboard there. . . .[61]

It was only with difficulty that Wilkinson was finally able to get his imperiled vessel off "the Lump" and proceed onward to Wilmington.[62]

If at all possible, the captains of blockade-runners timed their departures from Nassau or Bermuda so as to arrive off the entrances to the Cape Fear on a moonless night and at high tide, for these conditions afforded the greatest opportunity for success.[63] Every practical measure was taken to increase the chances that their vessels would be able to pass unseen and unheard through the Union ships strung across their path:

> On dark nights it was very difficult to discern their low hulls, and moonlit nights, as a rule, were nights of rest, few ships venturing to run the gauntlet when the moon was bright. No lights were used at sea. Everything was in total silence and darkness. To speak above a whisper or to strike a match would subject the offender to immediate punishment. Orders were passed along the paddles to deaden the noise, and men exposed to view on deck were dressed in sheets, moving about like so many phantoms on a phantom ship.[64]

Inward bound blockade-runners frequently shaped their courses to bring them to shore some 30 or 40 miles above New Inlet or below Old Inlet.[65] The depth of water along the southeastern coastline of North Carolina made it possible for them to approach either inlet within "a stone's throw of the breakers," usually well inside the nearest blockading vessels.[66] If necessary, the more lightly drafted blockade-runners could take refuge in one of the several inlets in the area to conceal themselves from view or to await nightfall. Masonboro was perhaps the inlet most frequently used for this purpose.[67] As navigational aids for incoming vessels, signal stations were established along the coastline for many miles on either side of the two entrances to the Cape Fear.[68]

When the most favorable circumstances presented themselves, incoming blockade-runners would make their dramatic and all-important dash for Old or New Inlet, often closely pursued and under fire, not finally gaining safety until under the protective guns of Fort Caswell or Fort Fisher.[69] On occasion, the captains of blockade-runners would disdain the practice of hugging the coastline and, instead, steam directly through the blockading vessels. This course of action, though, usually entailed considerably greater risk.[70]

Because it was readily available, blockade-runners generally burned bituminous coal while on the open sea. This coal, however, produced a good deal of black smoke, which was easily sighted by enemy vessels. During the actual running of the blockade, both inward and outward bound vessels used Welsh semi-bituminous coal, even though this fuel also produced more smoke than was desirable. The coal best suited for use by blockade-runners was American anthracite coal, which produced relatively little smoke; but exportation of this fuel was strictly prohibited by the Federal government, and it was virtually impossible to obtain.[71]

During the first two years of the War, most of the captains of blockade-runners were Scottish or English. As the dangers increased, however, more and more blockade-runners were commanded by Southerners, from whom patriotism served as an added incentive. Many of the common seamen on blockade-runners were of English or Irish extraction, largely because so many Southern men had earlier joined the Confederate Navy or been conscripted into the Army. The pilots, so essential to the success of the blockade-runners, were drawn principally from the ranks of those who had served along the Southern coast prior to the War. Many of these had served on the Cape Fear and had gained valuable experience in guiding vessels through Old and New Inlets an onward to the docks of Wilmington.[72]

Because of the risks and great stakes involved in blockade running, the men and vessels employed in the trade were the objects of considerable admiration and celebrity. Many vessels were captured or totally lost while attempting to maintain a vital lifeline of supplies for Confederate troops in distant fields of battle. Yet, the dangers were not quite so great as they appeared. Incoming blockade-runners from Nassau or Bermuda enjoyed significant advantages over the Union vessels seeking with great vigilance to bar their entrance into the Cape Fear, especially in their ability to choose the most opportune moment for their attempt to reach either Old or New Inlet.

> The run past the inshore squadron was always a critical moment, though by no means so dangerous as it looked. It was no easy matter on a dark night to hit, much less to stop a small and obscure vessel, going at the rate of fifteen knots, whose only object was to pass by. But the service nevertheless called into action all of the faculties of the blockade-runner.... It was a combat of skill and pluck against force and vigilance.... But the chances, both outside and inshore, were all in his favor. He had only to make port and run in, and he could choose time, and weather, and circumstances. He could even choose his destination. He always had steam up when he wanted. He knew the critical moment, and was prepared for it; and his moments of action were followed by intervals of repose and relaxation. The blockader, on the other hand, was in every way at a disadvantage. He had no objective point except the blockade-runner, and he never knew when the blockade-runner was coming.... He was compelled to remain in the worst of all situations, incessant watchfulness combined with prolonged inaction. There would be days and nights of anxious waiting, with exception strained to the tensest point, for an emergency which lasted only as many minutes, and which came when it was least expected.[73]

The frustrations vented by the captain of the United States steam sloop *Dacotah*, on 14 February 1863, must have been similar to those felt by many another Union naval officer in attempting to enforce the blockade of Wilmington:

> Sir: I have the honor to report that a large side-wheel steamer succeeded in eluding us and got into this river (the Cape Fear) this morning at 4 a.m. I had a picket boat from this vessel inside the bar, and one from the *Monticello* was anchored on the bar in 13-feet of water. The latter saw nothing of the blockade

> runner, but my picket boat .... saw her pass between him and the shore, and came near being run over by her soon after discovering her. The boat was anchored in 12-feet water on the western side of the channel, with the fort bearing N.N.E., and the steamer passed between her and the beach, evidently having tracked the beach along, where, under cover of the dark land, she could not be seen a quarter of a mile off in the obscurity of the hour before daylight. The moon, in its last quarter, was just rising, but was behind clouds. The *Chocura* was stationed at the Western Bar, the *Monticello* farther west, near the shore, and the *Dacotah* guarding the approaches to the bar. Yet neither vessel, with all their accustomed watchfulness, saw anything of the blockade runner, and it is with much chagrin that I am obliged thus to report a rebel success.... Without more vessels to string along the beach in sight of each other, and a line, or even one steamer, outside, to intercept before they make the land, I can not see how we are to prevent these successes in running the blockade, which I had flattered myself we had made a close one....[74]

Runs outward from Wilmington were even somewhat less risky that those inward. Once laden with their valuable cargoes of cotton and other commodities, vessels would commonly drop down the Cape Fear River to Smithville, roughly equi-distant between Old and New Inlets. From this vantage point, "both blockading fleets could be distinctly seen." The captains of blockade-runners could then choose at their leisure which of the inlets to use for their departure.[75]

The most serious threat to blockade-runners, both inward and outward bound, was posed by the swift Union cruisers, which could match or surpass them in speed. Especially during the last months of the War, these cruisers took up positions in the Gulf Stream or in the waters surrounding Nassau. Once sighted by a cruiser, blockade-runners were compelled to make all possible speed. Often they were overtaken and captured, but with luck they could prolong the chase until darkness, fog, or some other favorable circumstances made possible their escape.[76]

It was through a chance encounter with one of the Union Navy's swiftest vessels, and after a desperate chase on the open sea, that the blockade-runner *Advance* finally ended its extremely successful career for the State of North Carolina. Having been purchased in Glasgow at the instigation of Governor Zebulon B. Vance, the *Advance* (formerly *Lord Clyde*) had brought vast quantities of goods into Wilmington to help sustain North Carolina's troops in the field. On what was to be her final voyage for the state, she cleared outward through New Inlet on 9 September 1864, safely eluding the fire of blockading vessels. Later in the morning, however, she was spotted by the *Santiago de Cuba*, which finally overhauled and captured her after a day-long chase. Taken north by her captors and remodeled, she returned, like many former blockade-runners, to become part of the Wilmington blockade.[77]

The coming of the Civil War wrought dramatic changes in the hitherto quiet port city of Wilmington. Especially was this true after it became the center of blockade running in the South. Many of its citizens evacuated the city, and its streets and waterfront teemed with foreign seamen, military men, opportunists, speculators, bawds, and scoundrels of every description. Authorities attempted to maintain order through various regulations and curfews, but these measures were not entirely successful.[78]

Many residents lacked the basic necessities of life, while others luxuriated in their private wealth. A lively and often bitter competition developed between the Confederate government and individual and corporate investors for precious space on blockade-runners and railroad cars; and vital supplies for Southern troops in the field were frequently excluded from incoming cargoes in order to make room for non-essential commodities which would bring enormous profits to those who imported them.[79] Dire shortages and the depreciation of Confederate currency produced drastically inflated priced in Wilmington, as throughout the South:

> The plainest necessities were almost unobtainable--$50 for a ham, $500 for a barrel of flour, $500 for a pair of boots, $600 for a suit of clothes, $1,500 for an overcoat, and $100 a pound for coffee or tea, were readily paid as the fortunes of the Confederacy waned.[80]

The extreme scarcity of provisions in Wilmington and the increasing dependence on the blockade-runners evoked a keen and even desperate interest in their activities; and the entire life of the city came to focus on the waterfront. It was sadly observed by a Confederate officer in Wilmington that whenever a blockade-runner arrived, "men, women,[and] children rushed down to the wharves to see it, to buy, beg, or steal something."[81]

During the fall of 1862, the already mounting dislocations and difficulties in Wilmington were compounded by an epidemic of yellow fever-the first visitation by the dreaded disease in forty years. It came to Wilmington from Nassau aboard the steamer *Kate*. Before its deadly force was spent, more than 700 people (over fifteen percent of the population) had died.[82]

The presence of blockade-runners was also blamed for several destructive fires which broke out along Wilmington's waterfront. The most serious of these occurred in February of 1864, when more than 1,000 bales of cotton, valued at nearly $700,000 were consumed. As a precaution against similar fires in the future, Gen. William Whiting ordered that, henceforth, blockade-runners would be towed into the river before starting their engines.[83]

Notwithstanding the pernicious effects and various abuses incident to the blockade running at Wilmington, it is beyond question that the trade produced a sustaining flow of supplies absolutely essential to the South's war effort. With the gradual loss of alternative arteries of trade, it became increasingly apparent that the fall of Wilmington would be followed inevitably and soon by the fall of the Confederacy itself.

From the major points of transshipment at Nassau and Bermuda, there flowed into the Cape Fear River a vast variety of provisions, raw materials, and manufactured articles, primarily from Great Britain. Through a vital network of internal transportation, they were delivered to distribution points and apportioned to troops throughout the South. Included among the innumerable manufactured articles were arms and ammunition, cloth, medicines, blankets, and various articles of clothing. Governor Zebulon B. Vance later stated that North Carolina's state-sponsored blockade running alone had resulted in the importation of some 250,000 pairs of shoes, 50,000 blankets, gray wool cloth for 250,000 uniforms, 12,000 overcoats, 2,000 of the

finest Enfield rifles, 100,000 pounds of bacon, $50,000 worth of medicines, and various other items of vital necessity.[84]

The export commodity of pre-eminent importance was cotton for use in British textile mills, although naval stores, rice, tobacco, and other commodities were also carried outward by the blockade-runners. The powerful steam presses on the west side of the Cape Fear were constantly at work compressing bales to their smallest possible bulk. Blockade-runners commonly departed from Wilmington carrying 600 to 1,200 bales of cotton weighing 500 to 600 pounds each. In addition to the cotton in their holds, it was not unusual for vessels to carry two or three tiers of bales on their decks. As many as twenty blockade-runners might be in port at any given time; and crews worked feverishly around the clock to see that their cargoes were loaded or discharged with all practical speed. Enormous profits could be made from both the outward and inward voyages; and it was possible, under favorable circumstances, for the owner of a blockade-runner to recover the cost of a vessel from as few as two successful trips.[85]

By the latter part of 1863, the increasingly desperate Confederate government found it necessary to impose regulations on the activities of the private blockade running companies with which it was often in competition for railroad cars, wharfage space, coal, and other essential good and services. Rail lines leading to Wilmington were ordered to carry government cotton as at least one-half of their freight; and privately owned blockade-runners were required to make available half of their outward cargo space to the government at a "liberal freight rate." Measures were also taken to centralize and coordinate purchasing operations in Europe.[86]

These steps to increase government control over blockade running came largely as a result of the devastating reverses suffered at Gettysburg and Vicksburg. Moreover, there were severe and growing shortages of food and supplies which could only be obtained through blockade running activities, now centered almost exclusively at Wilmington. The crucial importance of Wilmington grew increasingly more pronounced throughout 1864, with the loss of more and more territory and of alternative sources of essential raw materials. The armies of the North were pressing forward on all possible fronts, especially in the areas surrounding Atlanta and Richmond.[87]

At the same time, the blockade of Wilmington became increasingly stringent, and the risks posed to the blockade-runners grew steadily higher. With Wilmington now the only major port left open in the South, it was possible for the Union Navy to concentrate more and more of its resources off the two entrances to the Cape Fear and along the adjoining coastline. In May of 1864 the Wilmington-based ironclad *Raleigh* made an ineffectual attempt to intimidate the blockading fleet off New Inlet; but it returned from its brief sally only to run aground and sink ingloriously just inside the inlet on a shoal known as "the Rip.[88] An added incentive for strengthening the Wilmington blockade was the desire to prevent the escape of the Confederate commerce raiders *Tallahassee* and *Chickamauga* from the Cape Fear. The additional blockading vessel finally proved unable to accomplish this aim; but their presence off the coast further increased the chances that a blockade-runner would be captured or sunk rather than complete its trip unscathed.[89]

In the latter half of 1864, the number of unsuccessful runs rose alarmingly as the blockade became more formidable and efficient. Between 1 August 1863 and 30 September 1864, some twenty-four steam blockade-runners were destroyed and another twenty-six captured while attempting to run the blockade off Wilmington.[90]

By the fall of 1864, President Lincoln and his chief military leaders had at last resolved to deliver a mortal blow to the Southern War effort by capturing Fort Fisher and sealing the Cape Fear River-the last major artery of supplies for the beleaguered Confederacy. But because of the tireless and conscientious labors of Colonel William Lamb and other, Fort Fisher had become a nearly impregnable bastion. Its capture could now be brought about only through the coordination of massive forces on both land and sea.[91]

There were considerable delays and difficulties in preparing for the expedition; but on 19 December 1864, under the command of Admiral David D. Porter, an unprecedentedly large Union armada sailed over the horizon and within view of Fort Fisher to await the coming attack. The fleet's appearance sent an alarm along the Wilmington waterfront, and several steamers prepared to clear outward with all possible dispatch. Three vessels ran out from Old Inlet without incident; another was damaged on the wreck of the ironclad *Raleigh* near New Inlet, and was forced to return to Wilmington for repairs. General William Whiting was denied permission to use some of the remaining steamers as block-ships at New Inlet; but he was allowed to employ two of them to transport troops along the river.[92]

At about 2 o'clock on the morning of 24 December, the Union powder ship *Louisiana* was detonated just offshore from Fort Fisher in hopes of severely damaging its outer walls. This stratagem, however, proved an embarrassing fiasco, for the horrendous explosion accomplished little other than sink the vessel and awaken the Confederate garrison. All in all, the incident did not bode well for the success of the coming siege.[93]

The power ship having failed, it remained for Porter's huge flotilla to attempt to reduce Fort Fisher and to prepare it for an assault by land. The appearance of the fleet was an impressive one even to the fort's commander, Colonel William Lamb:

> A grander sight than the approach of Porter's formidable armada toward the fort was never witnessed on our coast. With the rising sun out of old ocean, there came upon the horizon, one after another, the vessels of the fleet, the grand frigates leading the van, followed by the ironclads more than fifty men-of-war heading for the Confederate stronghold.[94]

For the better part of the day, Fort Fisher was subjected to a furious bombardment. On the next day, Christmas Day, the fleet resumed its fire in support of a large contingent of land forces. The fort, however, withstood the naval bombardment and repulsed the advances of skirmishers who came within yards of its outer walls.[95]

While the bombardment was still being carried on, one blockade-runner escaped through Old Inlet. Two others attempted to come in at about this time: one was successful; but the other was driven ashore and wrecked west of Fort Caswell. As relative calm returned to the lower

Cape Fear, Capt. John Wilkinson cleared outward with the blockade-runner *Chameleon* (formerly the raider *Tallahassee*), his mission to obtain vital foodstuffs in Bermuda for Confederate troops. Before he could return, however, Fort Fisher was to be subjected to a second and far more successful siege.[96]

Remarkably, the only vessels lost during the first attack on Fort Fisher were the powder ship *Louisiana* and a Union barge, which was cut in half by artillery fire near New Inlet bar. And yet, it was readily apparent from viewing the coastline of southeastern North Carolina that numerous vessels, primarily blockade-runners, had been lost during the preceding four years. In describing the difficulties encountered in maneuvering his fleet into position, Admiral Porter observed that "wrecks by dozens strewed all along" the shore had been his "only beacons."[97]

The departure of the Federal fleet from the Fort Fisher area gave scant comfort to Confederate officials or to those engaged in running the blockade, for it was widely and correctly assumed that the respite would be temporary. Within a week, seven blockade-runners left Wilmington in haste, their captains confident that the attack on Fort Fisher would soon be resumed. The blockade-runner *Wild Rover* cleared outward from the city on the night of 2 January 1865. In the event, it was to prove the last such vessel to do so.[98]

The anticipated and much dreaded return of Porter's armada occurred on the evening of 12 January. The fleet was even larger and more awesome than before. Moreover, the second attack was to prove from the outset to be better organized and more closely coordinated than the first.[99]

From the 13th to the 15th of January the Union flotilla "kept up a ceaseless and terrific bombardment," while thousands of troops landed north of the fort unopposed. By the afternoon of the 15th, Fort Fisher had been severely damaged, and the massive assault by land commenced against the hopelessly outnumbered and battered garrison. The defense, nevertheless, was a valiant one; and it was not until 10 o'clock in the evening that the seriously wounded Colonel Lamb finally surrendered. An even more seriously wounded General Whiting was by his side.[100]

After the fall of Fort Fisher, the Confederate forces at Fort Caswell, Fort Johnston, and other installations near the mouth of the Cape Fear had little choice but to retreat upriver and attempt a stand at Fort Anderson. The steamer *Cape Fear* (formerly *Flora I*) was sunk by Confederate troops near Fort Caswell just prior to their evacuation from the area. At about this same time, the blockade-runner *North Heath* was sunk as an obstruction near Fort Strong, just downstream from Wilmington.

Flushed with their victory at Fort Fisher, Union forces were quick to seize and occupy the freshly abandoned forts along the lower Cape Fear and nearby coastline. Federal monitors and gunboats also eased over the bar at New Inlet to take up their positions in the river, now irretrievably sealed to Confederate vessels.[101]

Several days passed before the devastating news of Fort Fisher's fall could reach Nassau and Bermuda. In the meantime, six hapless blockade-runners reached Old or New Inlet or

entered the Cape Fear itself before their masters discovered what had transpired. Three of these vessels were intercepted and seized, together with their precious cargoes.[102]

By February 17th Federal troops had advanced northward along the west bank of the Cape Fear to attack the Confederate position at Fort Anderson. Vessels from the Union fleet also moved upriver to begin a punishing bombardment of the fort. For two days Fort Anderson was subjected to a combined assault from Union naval and land forces, and on the 19th, Confederate troops were forced to abandon their position and to fall back behind Town Creek. Meanwhile, a separate Union force moved inexorably northward along the east side of the Cape Fear. Union naval vessels, too, continued their gradual progress up the Cape Fear, taking care to avoid the numerous torpedoes which had been placed in the river channel. On the afternoon of the 20th, the overwhelmingly outnumbered Confederates retreated into Wilmington itself; but the defense of the port city was now clearly hopeless. During the following night Wilmington was reluctantly evacuated, and on 22 February victorious Union forces swept into the city virtually unopposed.[103]

Just prior to their departure from Wilmington, Confederate troops destroyed valuable river front facilities and a large quantity of supplies to prevent their falling into Federal hands. The destroyed property included the cotton presses on the west side of the river and several thousand bales of cotton which had been prepared for export. A small Confederate torpedo boat, the *General Whiting*, was deliberately sunk near Point Peter; and it was also reported that "two or three little steam-tugs" were deliberately destroyed. Shortly after Wilmington's fall, the *Chickamauga* was sunk in the Cape Fear at Indian Wells, in a vain attempt to prevent Union vessels from ascending the river to Fayetteville.[104]

With the loss of Wilmington, the fate of the Confederacy was all but sealed. The remaining troops in the field had grown almost totally dependent on the supplies received through the blockade; and the last and ultimately the most important of the South's ports was now securely in enemy hands. On 9 April 1865, well less than two months after Wilmington's fall, Gen. Robert E. Lee surrendered to Gen. Ulysses S. Grant at Appomattox courthouse, Virginia. Only seventeen days later, Gen. Joseph E. Johnston surrendered his army to Gen. William T. Sherman near Durham, North Carolina. These two events brought a virtual end to the Civil War, though scattered resistance continued for a brief period.

Defiance of the Wilmington blockade had taken a heavy toll in vessels along the inlet-ridden coastline of southeastern North Carolina, especially during the last two years of the War, when Wilmington was of paramount importance. At least sixty-five steam blockade-runners were captured or destroyed, to say nothing of numerous sailing vessels which were also engaged in trade.[105] The existence of many of these wrecks was long ago pointed out by a Cape Fear historian who, himself, had served aboard blockade running vessels as a young man:

> The beach for miles north and south of Bald Head (Smith's Island) is marked still by the melancholy wrecks of swift and graceful steamers which had been employed in this perilous enterprise.

> The *Beauregard* and the *Venus* lie stranded on Carolina Beach; the *Modern Greece*, near New Inlet; the *Antonica*, on Frying Pan Shoals; the *Ella*, on Bald Head; the *Spunky* and the *Georgiana McCall*, on Caswell Beach; the *Hebe* and the *Dee*, between Wrightsville and Masonboro. Two others lie near Lockwood's Folly Bar; and other, whose names are forgotten, are half-buried in the sands, where they may remain for centuries to come.[106]

Since these words were written, archaeological investigation and historical research have made known the locations and identities of many other steam blockade-runners which came to grief along the southeastern coastline of North Carolina or in the lower reaches of the Cape Fear River. Those wrecks bear silent witness not only to the daring of their crews, but to technological advances in ship design and construction as well. The Civil War came at a critical time in the early development of the modern oceangoing steamer; and the exigencies of war greatly accelerated the changes already underway. In addition to the various types of steam blockade-runners, there are the wrecks of Union and Confederate naval vessels and of numerous sailing ships. Together, these sunken vessels comprise a large, varied, and unique collection of Civil War period vessels, many of which are in a remarkable state of preservation. As submerged cultural resources of major significance, they merit every practical measure of protection and possess an almost unlimited potential for further investigation and research.

FOOTNOTES

[1]James Russell Soley, The Navy in the Civil War: The Blockade and the Cruisers (New York: Charles Scribner's Sons, 1898), 27; and Stephen R. Wise, "Lifeline of the Confederacy: Blockade Running During the American Civil War" (Ph.D. dissertation, University of South Carolina, 1983), 4-7.

[2]Wise, "Lifeline of the Confederacy," 36; and James Sprunt, Chronicles of the Cape Fear River, 1660-1916 (Raleigh: Edwards and Broughton, 1916), 389.

[3]Wise, "Lifeline of the Confederacy," iii and 1-3.

[4]Wise, "Lifeline of the Confederacy," iii and 1-3.

[5]Soley, The Navy in the Civil War, 30.

[6]Wise, "Lifeline of the Confederacy," 1-3, 7, and 92.

[7]Soley, The Navy in the Civil War, 16 and 26-33; Wise, "Lifeline of the Confederacy," 33-24; and Sprunt, Chronicles of the Cape Fear, 389.

[8]Sprunt, Chronicles of the Cape, Fear, 390; and Wise, "Lifeline of the Confederacy," 7.

[9]Wise, "Lifeline of the Confederacy," 3, 5, 7-8, and 33.

[10]Sprunt, Chronicles of the Cape Fear, 390.

[11]Wise, "Lifeline of the Confederacy," 34-35.

[12]Wise, "Lifeline of the Confederacy," 35-36.

[13]Soley, The Navy in the Civil War, 82 and 90; and Sprunt, Chronicles of the Cape Fear, 390.

[14]Wise, "Lifeline of the Confederacy," 36 and 46-47.

[15]Wise, "Lifeline of the Confederacy," 80-83.

[16]Wise, "Lifeline of the Confederacy," 107.

[17]Wise, "Lifeline of the Confederacy," 190-192, 217 and 436-437.

[18]Wise, "Lifeline of the Confederacy," 192.

[19]Wise, "Lifeline of the Confederacy," 12-14 and 33; and Sprunt, Chronicles of the Cape Fear, 283.

[20]Sprunt, Chronicles of the Cape Fear, 272, 276, and 279-280.

[21]John Johns, "Wilmington During the Blockade," Harper's New Monthly Magazine XXXIII (September, 1866), 497; Wise, "Lifeline of the Confederacy," 262-263; and Sprunt Chronicles of the Cape Fear, 281-284.

[22]William Lamb, "Defense of Fort Fisher, North Carolina." Papers of the Military Historical Society of Massachusetts IX (1912), 349-350.

[23]Lamb, "Defense of Fort Fisher," 350.

[24]Lamb, "Defense of Fort Fisher," 350.

[25]Lamb, "Defense of Fort Fisher," 354; and Leslie S. Bright, The Blockade Runner *Modern Greece* and Her Cargo (Raleigh: North Carolina Division of Archives and History, 1977), 6-9 and 12-15.

[26]Lamb, "Defense of Fort Fisher," 353; Sprunt, Chronicles of the Cape Fear, 333; and John Wilkinson, The Narrative of a Blockade-Runner (New York: Sheldon and Co., 1877), 152-153.

[27]Wise, "Lifeline of the Confederacy," 264-265.

[28]Jim Pleasants, "The Fall of the Cape Fear Defense System 1865" (Map published by the preparer, 1978); and Sprunt, Chronicles of the Cape Fear, map facing p. 412.

[29]Soley, The Navy in the Civil War, 89 and 91; and Sprunt, Chronicles of the Cape Fear, 390-391.

[30]Wilkinson, The Narrative of a Blockade-Runner, 130. See also Soley, The Navy in the Civil War, 91; and Johns, "Wilmington During the Blockade," 501.

[31]Soley, The Navy in the Civil War, 92-94; Wise, "Lifeline of the Confederacy," 280; and Sprunt, Chronicles of the Cape Fear, 390-391.

[32]Sprunt, Chronicles of the Cape Fear, 391 and 402.

[33]Sprunt, Chronicles of the Cape Fear, 391 and 402.

[34]Soley, The Navy in the Civil War, 93-94; and Wilkinson, The Narrative of a Blockade-Runner, 134.

[35]Richard Rush and others, editors, Official Records of the Union and Confederate Navies in the War of the Rebellion, 30 vols. (Washington: Government Printing Office, 1894-1914)

Series I, Volume 8, pp. 529-530. Hereinafter cited as Rush and others, War of Rebellion Naval Records.

[36]See, for example, Rush and others, War of Rebellion Naval Records, Series I, Volume 8, pp. 174, 193-199, 214-216, 431-437, and 548; Volume 9, pp. 177, 402-405, and 590; and Volume 10, p. 388.

[37]Rush and others, War of Rebellion Naval Records, Series I, Volume 9, pp. 385-386 and 400-405; and Volume 15, p. 224; Jim Pleasants, "A Partial List of the Vessels Destroyed or Captured off the Coast of North Carolina During the Civil War ... (Typescript prepared at Hatteras, North Carolina, 1976); and North Carolina Division of Archives and History, Underwater Archaeology Unit, shipwreck files.

[38]Rush and others, War of Rebellion Naval Records, Series I, Volume 8, pp. 218-219; Pleasants, "A Partial List of Vessels Destroyed or Captures;" and Underwater Archaeology Unit, shipwreck files.

[39]Rush and others, War of Rebellion Naval Records, Series I, Volume 8, pp. 151 and 499; Volume 9, p. 177; Pleasants, "A Partial List of Vessels Destroyed or Captured;" and Underwater Archaeology Unit, shipwreck files.

[40]Rush and others, War of Rebellion Naval Records, Series I, Volume 8, pp. 193-199, 214-216, and 431-437; Pleasants, "A Partial List of Vessels Destroyed or Captured;" and Underwater Archaeology Unit, shipwreck files.

[41]James M. Merrill, "The Fort Fisher and Wilmington Campaign: Letters from Rear Admiral David D. Porter," North Carolina Historical Review XXXV (October, 1954), 474.

[42]Wise, "Lifeline of the Confederacy," 136.

[43]Wise, "Lifeline of the Confederacy," 115.

[44]Wise, "Lifeline of the Confederacy," 123 and 136.

[45]Wise, "Lifeline of the Confederacy," 370-371.

[46]Wise, "Lifeline of the Confederacy," 192.

[47]Wise, "Lifeline of the Confederacy," 256-258.

[48]Wise, "Lifeline of the Confederacy," 294-299.

[49]Wise, "Lifeline of the Confederacy," 362-367.

[50]Wise, "Lifeline of the Confederacy," iii.

[51]Wise, "Lifeline of the Confederacy," 354.

[52]Wise, "Lifeline of the Confederacy," 219-220.

[53]Wise, "Lifeline of the Confederacy," 303-304.

[54]Lamb, "Defense of Fort Fisher," 354. See also Soley, The Navy in the Civil War, 156-157.

[55]Lamb, "Defense of Fort Fisher," 351; Sprunt, Chronicles of the Cape Fear, 437; and Wise, "Lifeline of the Confederacy," 13 and 264.

[56]Lamb, "Defense of Fort Fisher," 355.

[57]Wilkinson, The Narrative of a Blockade-Runner, 152-153; and Soley, The Navy in the Civil War, 160-161.

[58]Wise, "Lifeline of the Confederacy," 13.

[59]Sprunt, Chronicles of the Cape Fear, 379.

[60]Wilkinson, The Narrative of a Blockade-Runner, 197-198; and Soley, The Navy in the Civil War, 159.

[61]Wilkinson, The Narrative of a Blockade-Runner, 127-128.

[62]Wilkinson, The Narrative of a Blockade-Runner, 127-128.

[63]Soley, The Navy in the Civil War, 157.

[64]Sprunt, Chronicles of the Cape Fear, 421.

[65]Johns, "Wilmington During the Blockade," 501.

[66]Wilkinson, The Narrative of a Blockade-Runner, 131.

[67]Soley, The Navy in the Civil War, 158.

[68]Wilkinson, The Narrative of a Blockade-Runner, 197-198.

[69]Soley, The Navy in the Civil War, 91-93.

[70]Johns, "Wilmington During the Blocking," 501.

[71]Wilkinson, The Narrative of a Blockade-Runner, 159 and 163-164; Sprunt, Chronicles of the Cape Fear, 420; Soley, The Navy in the Civil War, 157; and Wise, "Lifeline of the Confederacy," 459-460.

[72]Wise, "Lifeline of the Confederacy," 220-222; Sprunt, Chronicles of the Cape Fear, 421; and Lamb, "Defense of Fort Fisher," 354-355.

[73]Soley, The Navy in the Civil War, 159-160. See also Wise, "Lifeline of the Confederacy," 222-223.

[74]Rush and others, War of the Rebellion Naval Records, Series I, Volume 8, pp. 527-528.

[75]Wilkinson, The Narrative of a Blockade-Runner, 130; Soley, The Navy in the Civil War, 91; and Wise, "Lifeline of the Confederacy," 223 and 267.

[76]Wilkinson, The Narrative of a Blockade-Runner, 131-133; Soley, The Navy in the Civil War, 165-166; Sprunt, Chronicles of the Cape Fear, 391-392; and Wise, "Lifeline of the Confederacy," 261-262 and 266.

[77]Wise, "Lifeline of the Confederacy," 212-216, 457-458, and 522-523, and Sprunt, Chronicles of the Cape Fear, 157-158.

[78]Wilkinson, The Narrative of a Blockade-Runner, 199-200; Johns, "Wilmington During the Blockade," 498-499; Sprunt, Chronicles of the Cape Fear, 283-284; Wise, "Lifeline of the Confederacy," 262-262 and 266.

[79]Johns, "Wilmington During the Blockade," 498.

[80]Sprunt, Chronicles of the Cape Fear, 288.

[81]Johns, "Wilmington During the Blockade," 498.

[82]Wise, "Lifeline of the Confederacy," 258-261; Sprunt, Chronicles of the Cape Fear, 283.

[83]Wise, "Lifeline of the Confederacy," 300.

[84]Sprunt, Chronicles of the Cape Fear, 157-158; and Wise, "Lifeline of the Confederacy," 262 and 476-477.

[85]Soley, The Navy in the Civil War, 166; Bright, The Blockade Runner *Modern Greece* and Her Cargo, 1-3; Sprunt, Chronicles of the Cape Fear, 30 and 283; and Wilkinson, The Narrative of a Blockade-Runner, 202-203.

[86]Wise, "Lifeline of the Confederacy," 254-255, 261-262, 265-266, 288, and 290.

[87]Wise, "Lifeline of the Confederacy," 302, 303, 357-358, and 476-477.

[88]Sprunt, Chronicles of the Cape Fear, 480-483; Wilkinson, The Narrative of a Blockade-Runner, 204; and Johns, "Wilmington During the Blockade," 500.

[89]Wise, "Lifeline of the Confederacy," 455-456.

[90]Rush and others, War of Rebellion Naval Records, Series I, Volume 10, p. 504.

[91]Wise, "Lifeline of the Confederacy," 477-478.

[92]Wise, "Lifeline of the Confederacy," 480-481.

[93]Wise, "Lifeline of the Confederacy," 479 and 482; and Civil War Naval Chronology, Part IV (Washington: Government Printing Office, 1964), 149.

[94]Lamb, Defense of Fort Fisher," 362.

[95]Lamb, "Defense of Fort Fisher," 362-368; and Civil War Naval Chronology, Part IV, 149-150.

[96]Wise, "Lifeline of the Confederacy," 482-283.

[97]Merrill, "The Fort Fisher and Wilmington Campaign," 468.

[98]Wise, "Lifeline of the Confederacy," 483.

[99]Wise, "Lifeline of the Confederacy," 484; and Civil War Naval Chronology, Part IV, 10.

[100]Lamb, "Defense of Fort Fisher," 370-382; and Civil War Naval Chronology, Part IV, 11-16.

[101]Sprunt, Chronicles of the Cape Fear, 131-133 and 380-381; David Amen, The Navy in the Civil War: The Atlantic Coast (New York: Charles Scriber's Sons, 1883), 239; Civil War Naval Chronology, Part IV, 16; and Wise, "Lifeline of the Confederacy," 239.

[102]Wise, "Lifeline of the Confederacy," 485-488; Wilkinson, The Narrative of a Blockade-Runner, 233-235; and Civil War Naval Chronology, Part V, 21.

[103]Sprunt, Chronicles of the Cape Fear, 495-499; and Civil War Naval Chronology, Part V, 22, 31, 37, 39, 43, and 46-47.

[104]James Sprunt, Tales and Traditions of the Lower Cape Fear, 1661-1896 (Spartanburg, South Carolina: Reprint Company, 1973. Reprint of original edition of 1896), 30; Sprunt,

Chronicles of the Cape Fear, 500; Wise, "Lifeline of the Confederacy," 485 and 513; Ammen, The Navy in the Civil War, 243-244; and Johns, "Wilmington During the Blockade," 500.

[105]Lamb, "Defense of Fort Fisher," 354-355; Soley, The Navy in the Civil War, 94; and Wise, "Lifeline of the Confederacy," Appendix 526-676.

[106]Sprunt, Chronicles of the Cape Fear, 460-461.

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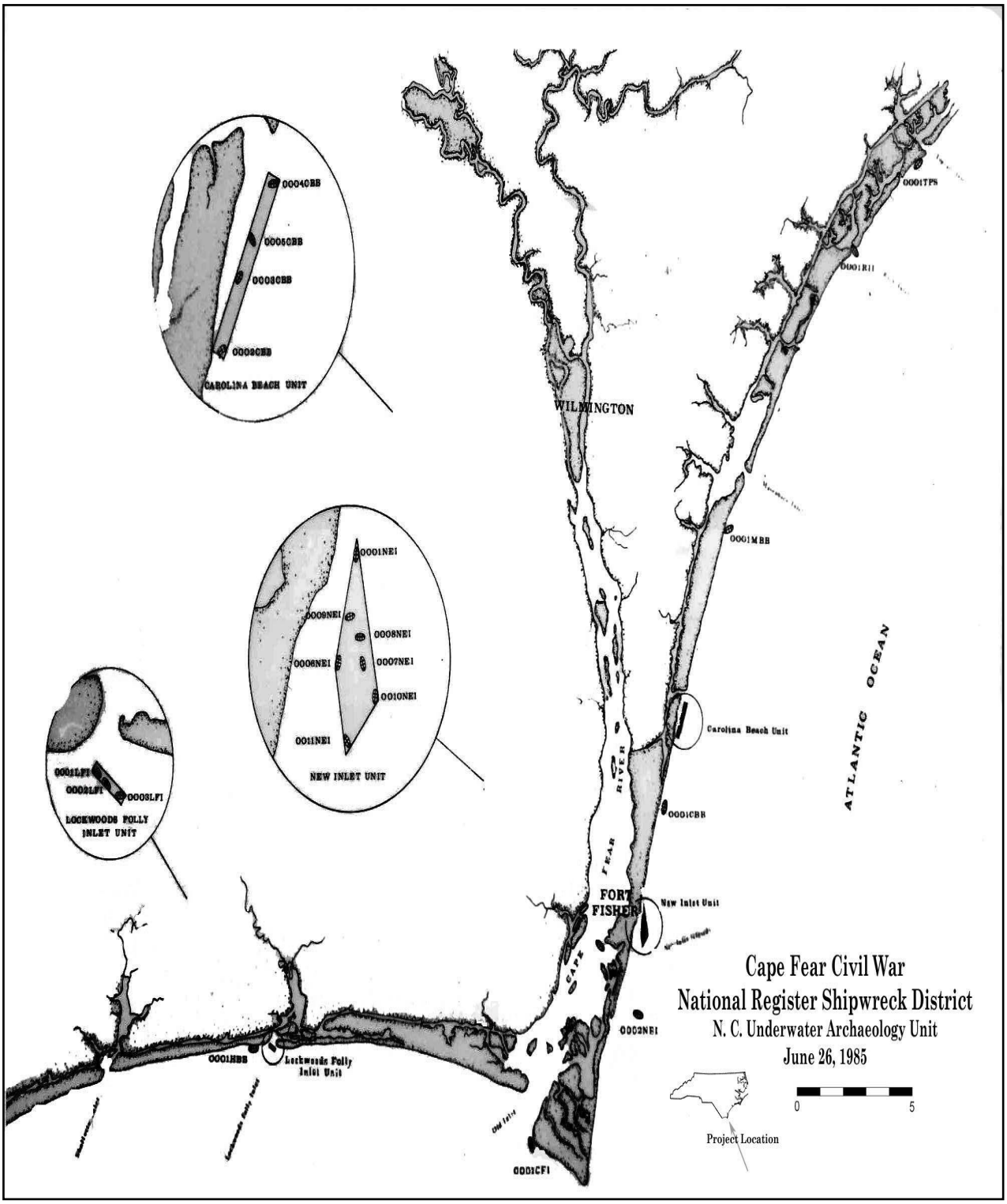

Figure 1: Map of Southeastern North Carolina showing the boundaries of the Cape Fear Civil War Shipwreck District

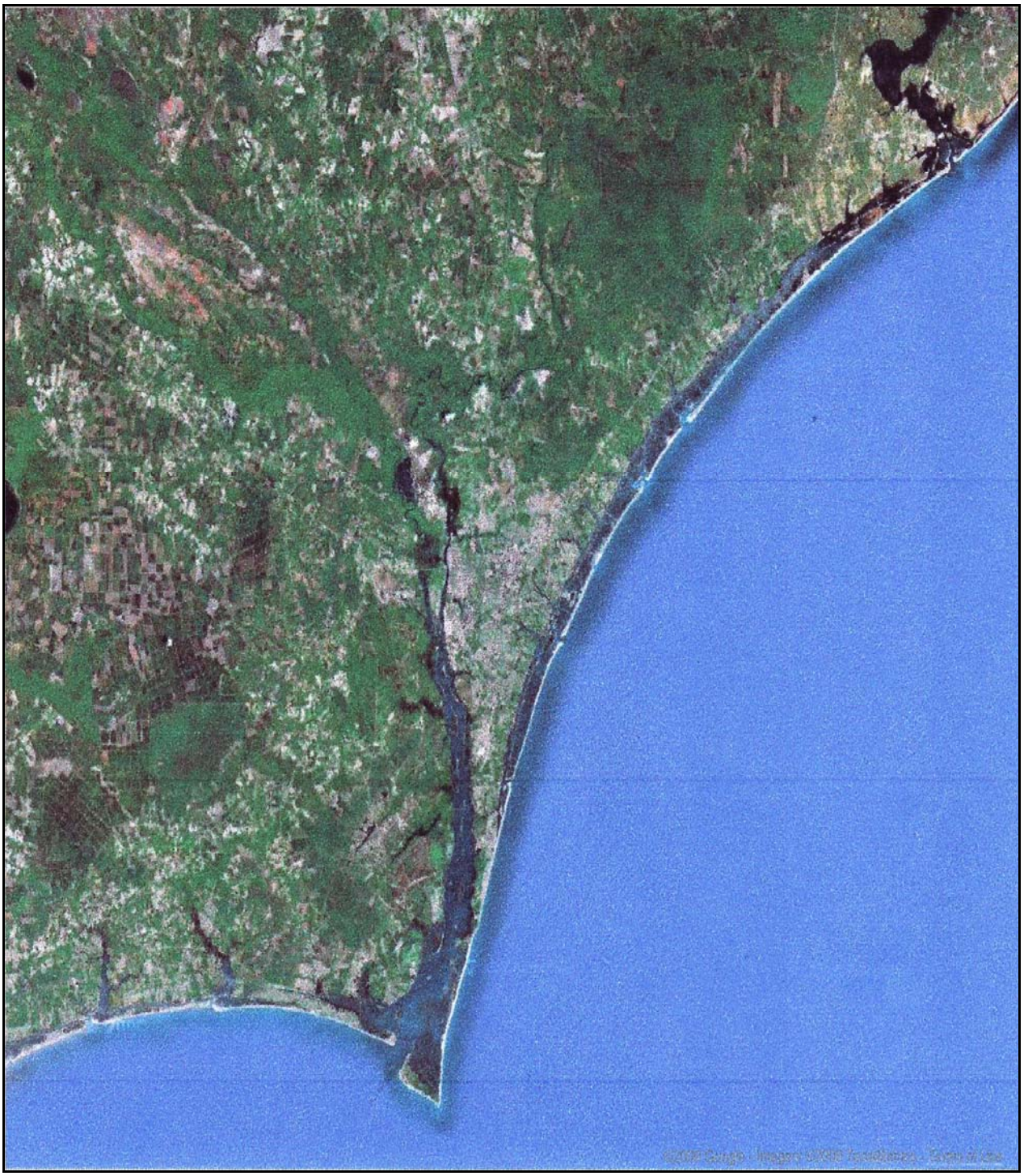

Figure 2: Satellite view of the Cape Fear River and Southeastern North Carolina

Figure 3: Painting of the *Modern Greece* on the beach at Fort Fisher, Site 0001NEI

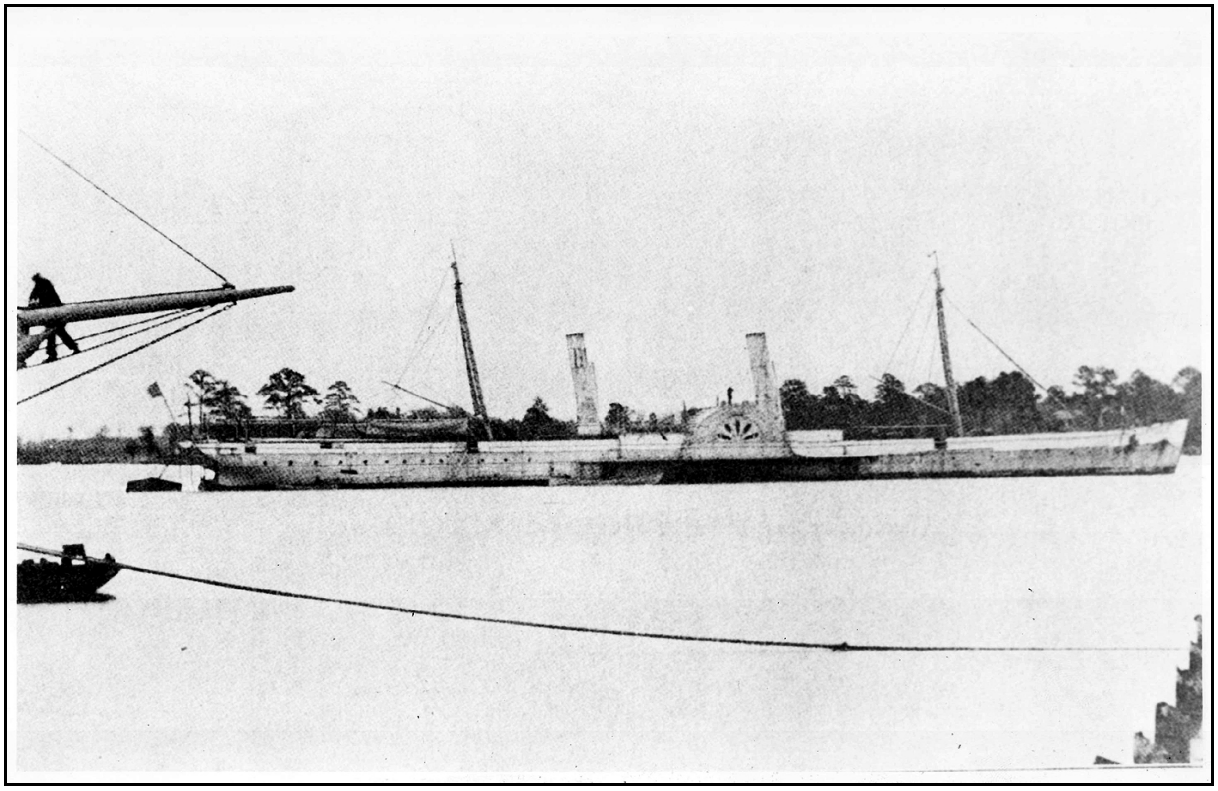

Figure 4: The *USS Fort Donelson* after conversion from a blockade runner.

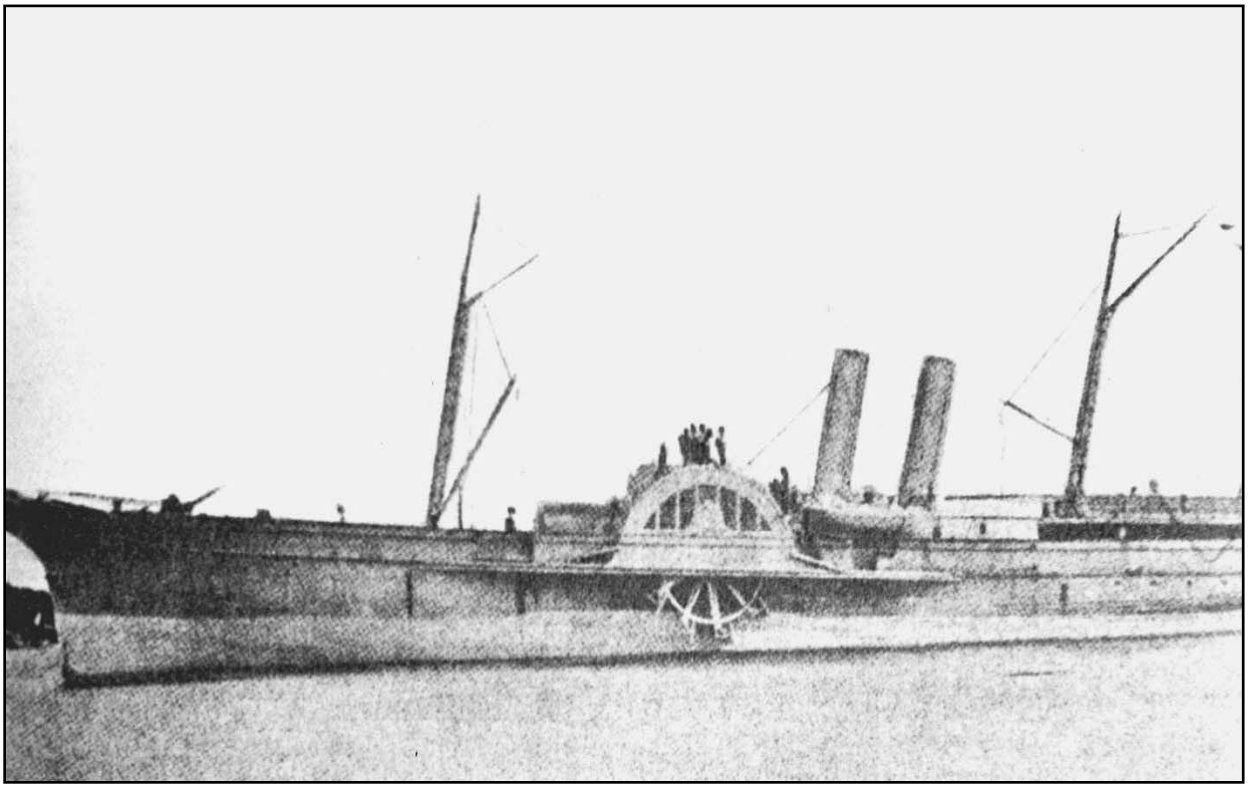

Figure 5: *A. D. Vance* in Boston Harbor after its capture

Figure 6: Top of boilers looking east across Lockwoods Folly Inlet from Holden Beach, Site 0001LFI (*Bendigo)*

Figure 7: Aerial view of the *Bendigo* (the visible end of the wreck is the stern pointing west, Site 0001LFI

Figure 8: Exposed boilers of the *Bendigo* (left foreground) and the US Army Corps of Engineers dredge boat, *Currituck,* Site 0001LFI

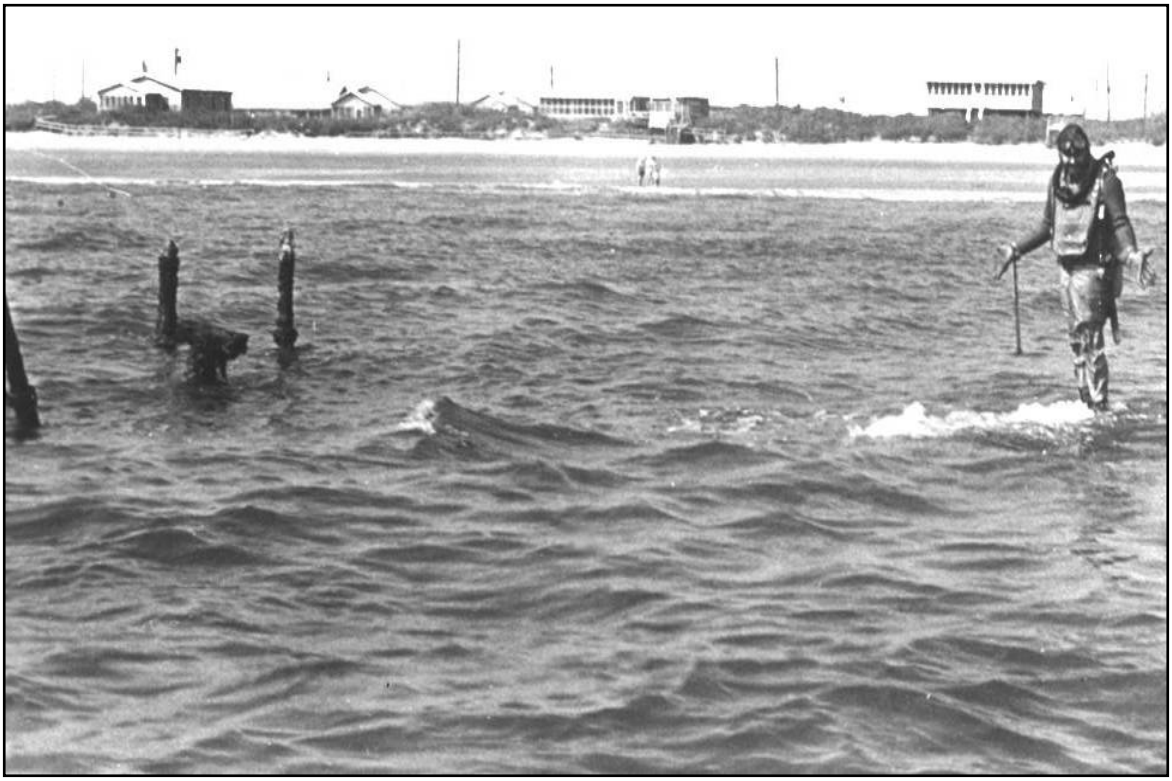

Figure 9: Diver standing on the forward boiler of the *Ranger* at low tide, site 0001HBB

Figure 10: Aerial view of the *Ranger* ("V" portion is the bow facing east)

Figure 11: Underwater shot of a steam valve on the *Ella*, Site 0001CFI

Figure 12: Dr. Charles Peery, Underwater Archaeological Associates, with artifacts recovered from the *Ella,* Site 0001CFI

Figure 13: U.S. Navy divers with artifacts recovered during the exploratory dive on the *Modern Greece,* Site 0001NEI

Figure 14: Recovery platform used during the *Modern Greece* salvage operation (bar of lead in foreground), Site 0001NEI

Figure 15: A random sample of artifacts recovered from the *Modern Greece,* Site 0001NEI

Figure 16: Underwater view of a student diver recovering a carriage wheel from the *Sophia,* Site 0001MBI

Figure 17: Positioning the *Sophia* site transit stationed on Masonboro Beach, Site 0001MBI

Figure 18: Investigation of magnetic anomaly targets using a hydrolic probe. Work took place in Masonboro Inlet as required through environmental investigation, Site 0001MBI

Figure 19: Diver with navigational lantern recovered from the *USS Iron Age,* site 0002LFI

Figure 20: A navigational lantern from the *USS Iron Age* after preservation, Site 0002LFI

Figure 21: The ship's bell from the *Stormy Petrel* before cleaning, Site 0011NEI

Figure 22: Partial inscription of the ship's bell from the *Stormy Petrel* during cleaning, Site 0011NEI

Figure 23: The final steps in cleaning the ship's bell from the *Stormy Petrel,* Site 0011NEI

Figure 24: Ship's bell from the *Stormy Petrel* after cleaning and conservation, Site 0011NEI

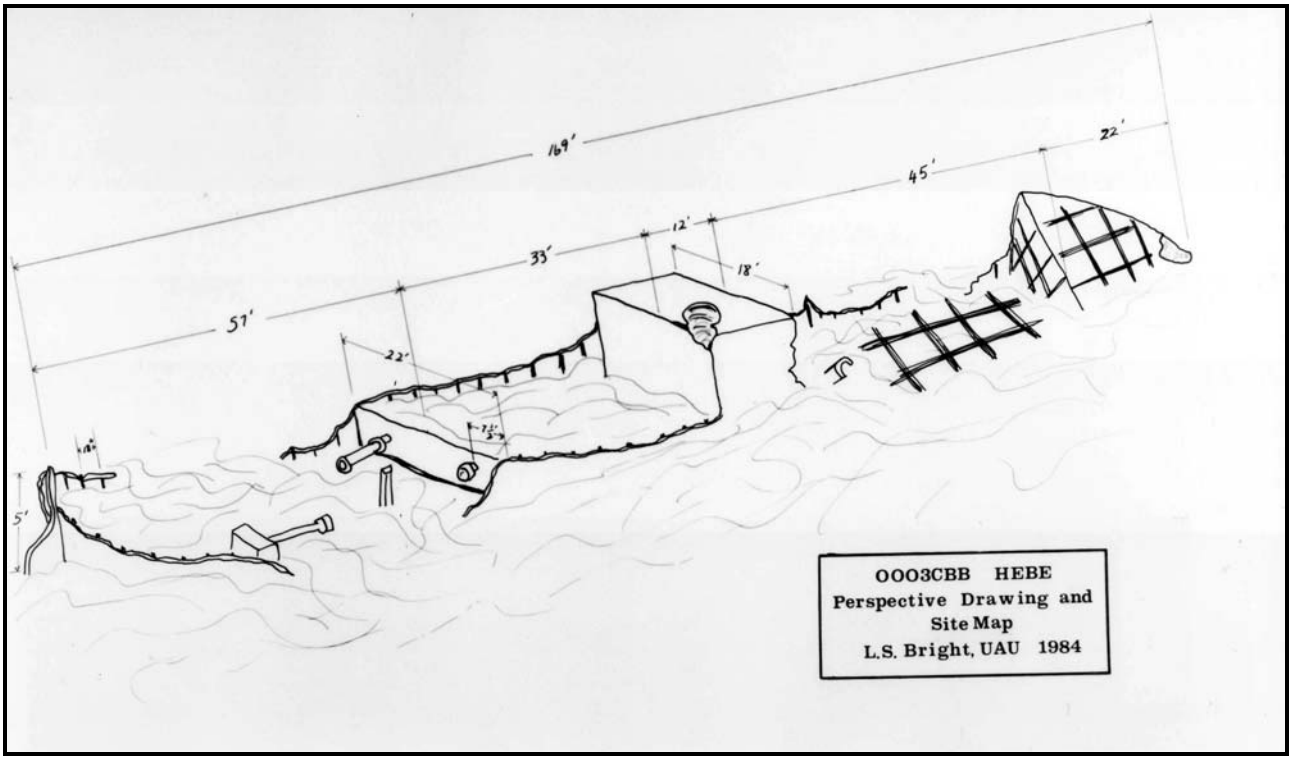

Figure 25: Site 0003CBB, *Hebe*

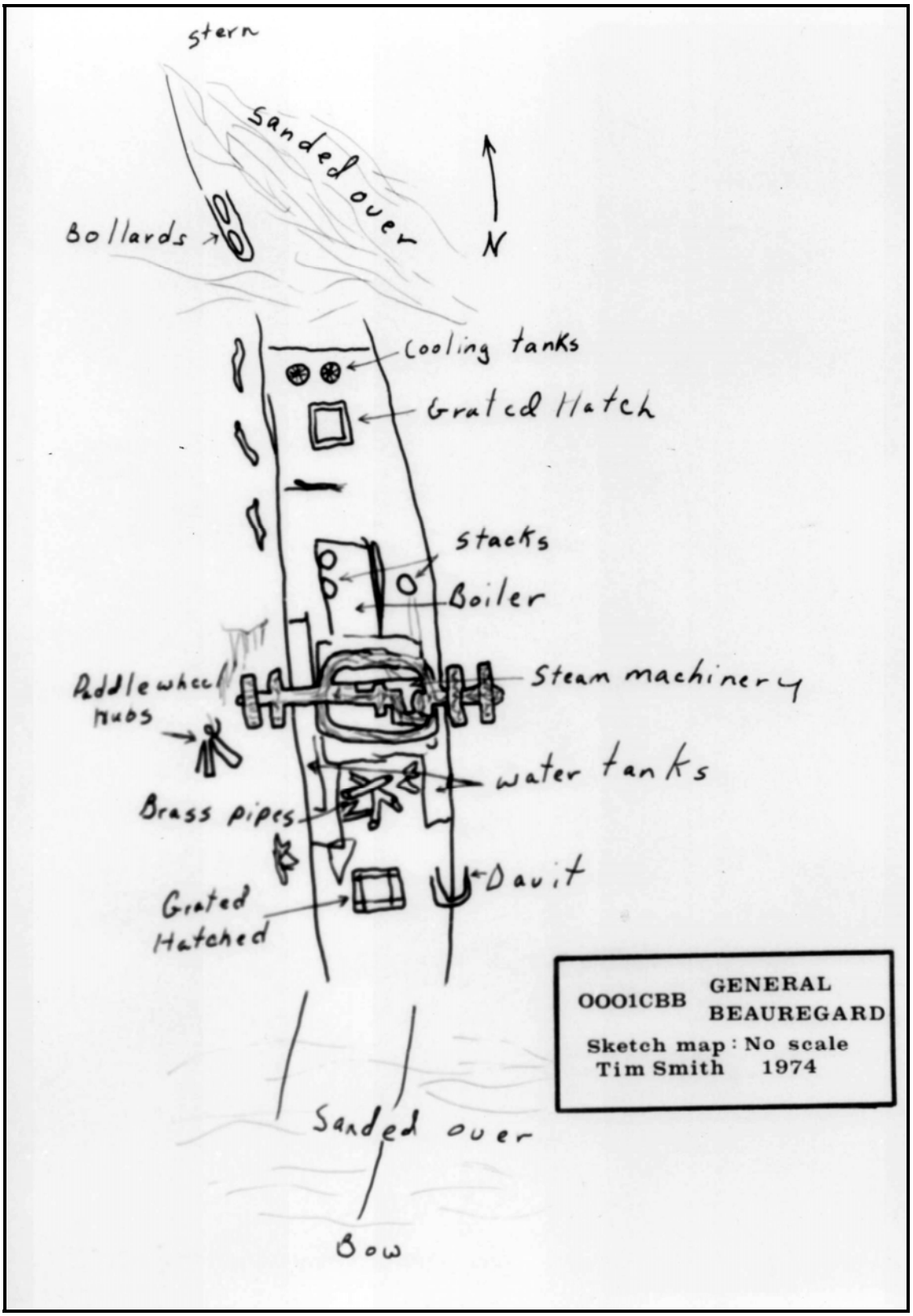

Figure 26: Sketch of Map of the *General Beauregard*, Site 0001CBB