

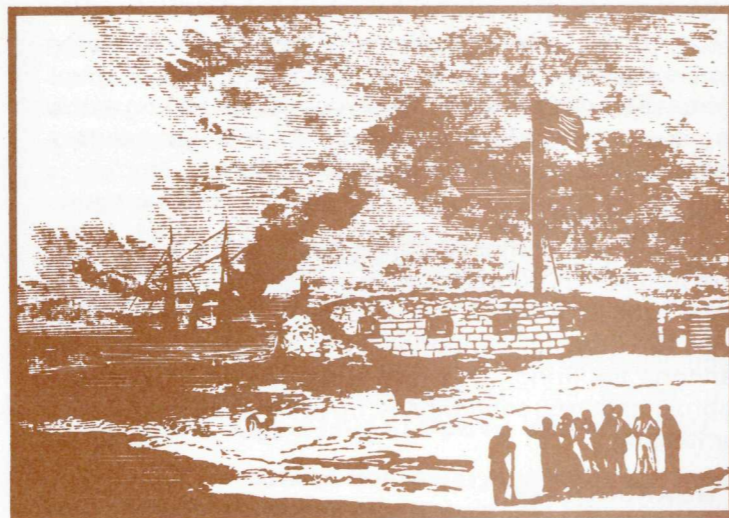
# History of Coastal Fortifications

The coastal fortifications of the United States had several purposes: to protect major cities and navy yards along the coasts, to close important harbors to the enemy, to protect approaches to major rivers, and to deprive the enemy of positions from which they could launch attacks on the United States.

During much of its history the United States has depended on seacoast defenses for security against foreign attack. Military planners knew powerful stationary guns on land were more than a match for cannons mounted on board ships. Coastal defenses, like missiles today, were deterrents offering the hope of avoiding war altogether.

The first national effort by the United States to fortify its seacoasts was in the 1790's. Most of those early defenses were of earthen construction and rather primitive compared to later coastal fortifications. When a second war with Britain threatened in the early 1800's, the United States began work on a second system of coastal defenses. Many of these fortifications were of a more permanent masonry construction. The success of Fort McHenry in protecting Baltimore from a British invasion during the War of 1812 encouraged construction of additional coastal forts. In 1816 a board of engineers made up of military officers was given the task of developing a third and more extensive system of coastal defenses for the United States. From 1816 to 1867 the Army Corps of Engineers supervised the construction of more than 30 permanent masonry fortifications along the nation's coasts.

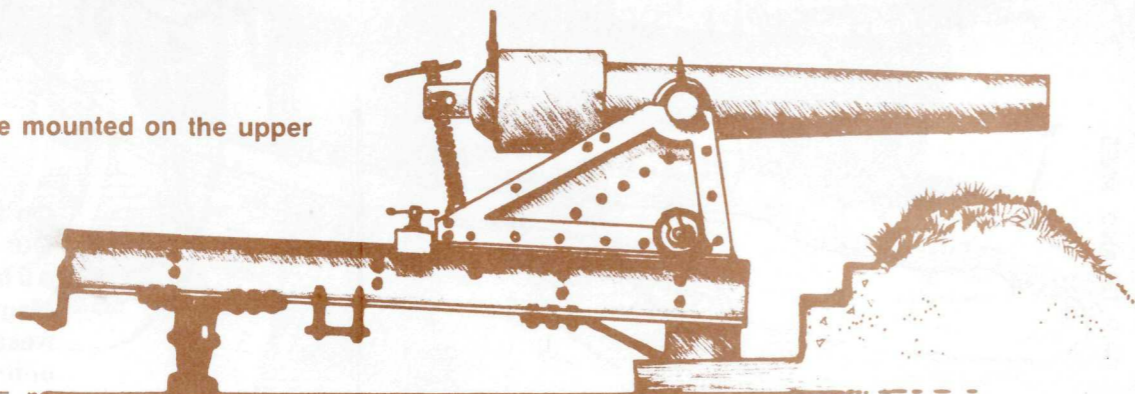
Although most seacoast forts in the United States were never involved in any military action, a number of those in the South saw combat during the Civil War. The war proved that masonry fortifications were no longer an adequate defense. Steam power



Fort Massachusetts as it appeared in 1862

gave ships greater mobility to avoid fire from guns on land, and armor provided them greater protection. Rifled cannons also helped bring about an end to the era of masonry fortifications. The forts had been designed to withstand the impact of cannonballs fired from smoothbore cannons, but were no match for rifled cannons with their greater range, accuracy, and destructive power.

Over the years efforts were made to modernize many of the masonry forts, and new concrete coastal defenses were built. Following World War II, with more emphasis being placed on the development of air power, most of the coastal defenses of the United States were eventually disarmed and abandoned.



100 - Pounder Parrott Rifle

Two cannons of this type were mounted on the upper level of the fort in 1873.

## ABOUT YOUR VISIT

### ACCESS:

Fort Massachusetts is located on the western end of West Ship Island, 12 miles south of Biloxi, Mississippi. From April through September excursion boats provide transportation to the island from Gulfport and Biloxi. The island is accessible year-round to private boats.

### REGULATIONS:

Pets must be on a leash and under control at all times. Metal detectors are not permitted. Glass containers are not allowed on the island. Picking or collecting plants is prohibited. Collecting shells is permitted, but please leave shells with animals inside. Camping or overnight docking is not permitted, but boats may anchor off the island. Primitive camping is allowed on East Ship, Horn, and Petit Bois Islands. PLEASE DO NOT LITTER.

### FACILITIES:

A bath house with cold showers is open year-round. A snack bar is open daily during the summer months. Lifeguards are on duty on the south beach during the summer. A ranger is on duty on the island throughout the year.

### SAFETY:

The island is famous for its mosquitoes and gnats, be prepared. Jellyfish can be a problem, particularly during the summer months. The summer heat can be intense, avoid overexposure.

Ship Island and Fort Massachusetts are administered by the U.S. National Park Service as part of Gulf Islands National Seashore; the address for the Mississippi District is:

3500 Park Road  
Ocean Springs, Mississippi 39564

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GULF ISLANDS  
NATIONAL SEASHORE

Fort Massachusetts



# A Brief History of Ship Island

Most geologists believe the barrier islands of the northern Gulf of Mexico are relatively recent geological formations, having first appeared about 3000 to 4000 years ago. Artifacts found on a number of the islands indicate at least temporary occupation by American Indians.

In 1699 the French explorer Pierre LeMoynes, Sieur d'Iberville and his men anchored at an island about 12 miles off the coast of what is now Mississippi. They eventually named the island "Isle aux Vaisseaux," or Ship Island, because of the protected deep-water anchorage it provided their ships.

Ship Island soon became a major port of entry for the struggling French colony on the mainland. Many of the early colonists took their first steps on American soil on Ship Island, it was indeed the "Plymouth Rock" of the Gulf Coast. Even after the capital of French Louisiana was moved from Biloxi to New Orleans in 1722, Ship Island's harbor remained important.

Very little changed on Ship Island during the 1700's except its flag. The island went from French, to British, to Spanish control, and was finally claimed by the United States in 1810 as part of the Louisiana Purchase.

Ship Island returned to the foreground of history during the War of 1812. In December 1814 a fleet of about 60 British ships, with nearly 10,000 troops, rendezvoused at Ship Island prior to their unsuccessful attack on New Orleans.

Following the War of 1812 the United States War Department began planning for the construction of an extensive system of masonry fortifications for coastal defense. Because of Ship Island's natural deep-water harbor and its location along a shipping route, it was considered important to the defense of New Orleans and the Gulf Coast. The island was declared a United States military reservation in 1847, and 9 years later Congress authorized construction of a fort. A site approximately 500 feet from the western tip of the island was eventually selected as the location for the fort.

Construction began in June 1859 under the supervision of an Army Corps of Engineers officer. The work was done by civilians, some of whom were slaves hired from their owners. The work force sometimes numbered as many as 100 men, and included carpenters, masons, blacksmiths, and stonecutters. By early 1861 the outside wall of the fort stood about 6 to 8 feet above the level of the sand.

In January 1861 Mississippi seceded from the Union, becoming the second state of the Confederacy. One of the first acts of war in the state occurred on Ship Island when an armed band of Mississippi militia took possession of the island and the unfinished fort. The militia soon abandoned the island and it remained that way until early July when Confederate troops occupied the island and mounted several cannons. On July 9 the Union ship *Massachusetts* came within range of the Confederate guns. The 20 minute exchange of cannon fire that followed resulted in few injuries and little damage to either side. That action was to be the only military engagement in which Ship Island or the fort would ever be directly involved.

During the remainder of the summer of 1861 the Confederate forces on the island worked with sandbags and timber to strengthen the walls of the unfinished fort. Despite their work, the Confederates abandoned the island in mid-September.

Federal forces soon occupied the island and used it as the staging area for their successful capture of New Orleans in the spring of 1862. During the time before the Union Army occupied New Orleans, as many as 18,000 United States troops were stationed on Ship Island. The island's harsh environment took its toll on many of the men. More than 230 Union troops eventually



A map showing the strategic location of Ship Island

died and were buried on Ship Island during the Civil War. The bodies of many of these men were later reburied at Chalmette National Cemetery near New Orleans.

Throughout the remainder of the war Federal forces made good use of Ship Island. Union ships stopped at the island for repairs and to pick up supplies. One of the first black regiments in the United States Army was recruited in Louisiana and stationed on Ship Island for almost 3 years. A hospital, barracks, mess hall, and bakery were just a few of nearly 40 wooden buildings constructed on the island during the war. In addition, the Corps of Engineers resumed construction of the fort in 1862. It was during the Civil War the fort was first called "Massachusetts," probably in honor of the Union ship by the same name. However, the fort was never officially named, and was referred to simply as the "Fort on Ship Island" in most official records.

Because of its isolated location the Union Army also used the island as a prison. Civilian political prisoners, as well as a few Confederate prisoners of war, were at times confined on Ship Island during 1862 and 1863. For about the last 9 months of the war the island served as a prisoner of war camp for captured Confederate troops. In addition, a United States military prison stockade was constructed about 400 yards east of the fort in 1862, and remained in use until 1870. During its existence the stockade housed more than 1000 military convicts.

The Corps of Engineers continued work on the fort until the fall of 1866. It was then turned over to a civilian fort keeper whose duty it was to maintain the fort in a state of readiness. After cannons were mounted, an ordnance-sergeant was assigned to care for the fort's armament. He eventually assumed all responsibility for the upkeep of the fort. The last ordnance-sergeant was relieved of duty in 1903, and the Ship Island lighthouse keeper became the fort's caretaker.

Although the fort was no longer important to the defense of the Gulf Coast, the island's harbor was still vital to the area's economy. During the 1890's Ship Island was one of the busiest lumber ports in the United States. The island was also the site of the country's first national quarantine station. That facility was built on the east end of the island in 1880 to combat the spread of yellow fever. Ships from foreign ports were required to anchor at the island to be fumigated, and the station's hospital provided care for sick and injured sailors.

Lighthouses were among Ship Island's other important structures. The island's first lighthouse was a circular brick tower built in 1853. It was eventually undermined by the sea and was replaced by a wooden lighthouse in 1886. The wooden tower became a Gulf Coast landmark and survived numerous hurricanes only to be destroyed by fire in 1972. A steel navigational range tower now marks the general area where the lighthouses stood.

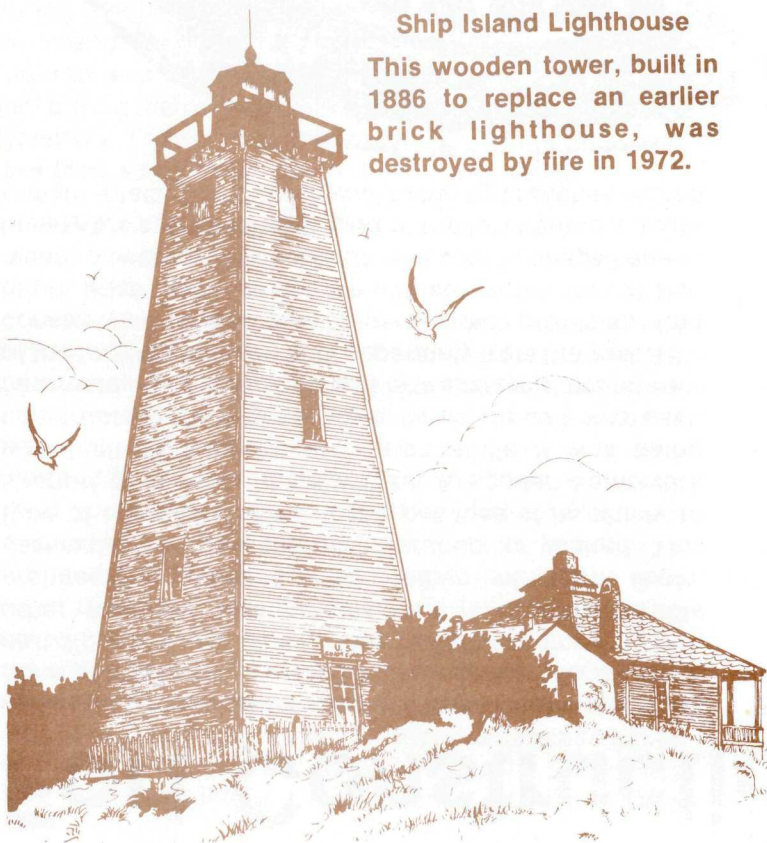
By the early 1900's Ship Island had lost much of its commercial importance. Yellow fever was under control and a ship channel had been dredged to Gulfport. Fishermen still anchored in the harbor and the fort became a popular local tourist attraction. As early as 1916 it was proposed the fort be made a national monument, but the War Department eventually transferred it to private ownership in the early 1930's. For a time during World War II the military again occupied Ship Island.

During the summer of 1969 Hurricane Camille, one of the most destructive storms in American history, struck the Gulf Coast. Although the force of the storm divided Ship Island in two, the fort sustained only minor damage.

In 1971 Ship Island came under the administration of the United States National Park Service with the establishment of Gulf Islands National Seashore, to be preserved for the enjoyment of future generations.

## Ship Island Lighthouse

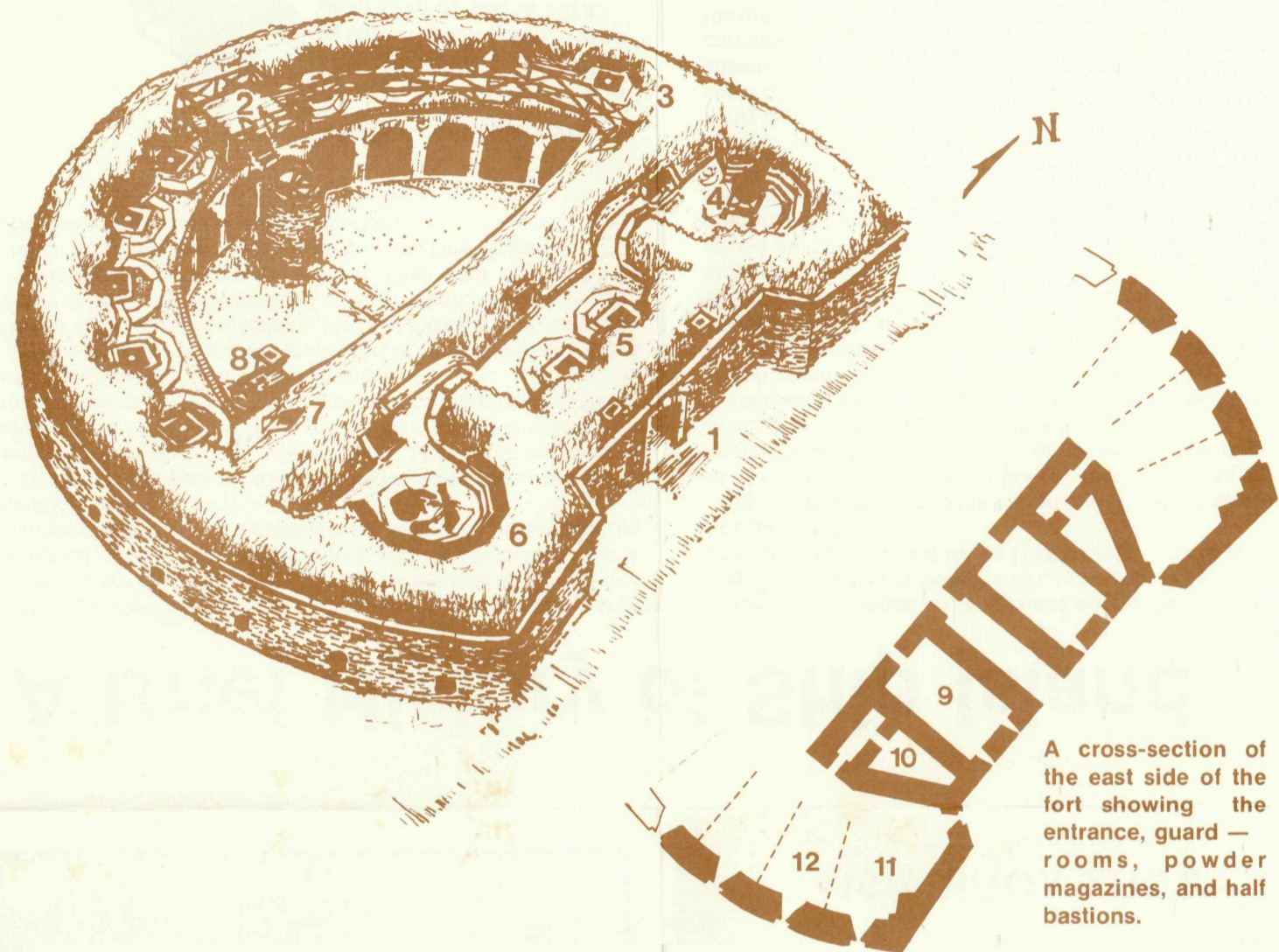
This wooden tower, built in 1886 to replace an earlier brick lighthouse, was destroyed by fire in 1972.



# Fort Construction

Although some maintenance and stabilization work was done on the fort in the mid-1970's, it appears today much as it did in the past. The fort is small when compared with other masonry fortifications, but is of considerable architectural interest. The ceiling of each room, casemate, and passageway is arched, or vaulted. This type of construction was used because of its ability to support great amounts of weight. A wooden framework was built to support each arch while it was being constructed. The slight space between the ceiling of each casemate and the outside wall is the result of the interior of the fort having been built separately from the wall. This construction technique helped avoid problems that might arise from the uneven settling of the fort. It also meant a section of the outside wall could collapse due to enemy fire and the interior part of the fort behind it might remain intact. The outside wall of the fort reaches widths

of up to 8 feet. Its concrete foundation goes down more than 9 feet below sea level and is more than 13 feet in width at its base. Much of the brick used in the construction of the fort came from New Orleans. During the Civil War when the Corps of Engineers could not obtain building supplies locally, brick was shipped from Maine. Although several million bricks were used in its construction, the fort contains more concrete than brick. Instead of being solid brick, the walls and supporting columns are filled with concrete. This fort was one of the last masonry coastal fortifications to be built in the United States. Like most of the coastal forts of its day, it never saw any combat service. Although the fort eventually became a victim of advancing military technology, its craftsmanship and beauty alone make it well worth preserving.



A cross-section of the east side of the fort showing the entrance, guard rooms, powder magazines, and half bastions.

## A Tour of the Fort

### 1. SALLY PORT

The sally port, or entrance, in the center of the fort's east wall provides the only direct access to the interior of the fort. Some protection for the sally port was provided by a drawbridge well, an 8 foot deep pit, beneath the wooden planking in the entranceway. A drawbridge to cross the pit was planned but never completed.

#### PLAQUES

The plaques in the sally port were placed by the United Daughters of the Confederacy in memory of Confederate prisoners of war who died on Ship Island during the Civil War. From October 1864 until June 1865 an area about a mile east of the fort was used by the Union Army as a prisoner of war camp for captured Confederate troops. During that time the number of prisoners of war held on the island ranged from 10 to more than 4000. One hundred and fifty-three of the men are known to have died during their confinement, most from pneumonia and dysentery. They were buried on the island, but the graves have long since been lost in the shifting sands.

### 2. OBSERVATION PLATFORM

From this point Ship Island's importance can be better appreciated. Mississippi Sound, the body of water between the islands and the mainland, is relatively shallow with an average depth of about 12 feet. One of the few natural deep-water harbors on the Gulf Coast lies along the north shore of Ship Island. The harbor is formed by a channel that parallels the shore for several miles and reaches depths of more than 20 feet. It allowed ocean-going ships to anchor in safety while smaller boats transported their cargoes to the mainland. In addition, Ship Island Pass, a natural deep-water pass off the west end of the island, was a major route for ships traveling between the Gulf of Mexico and Mississippi Sound. The pass was also part of an important route to New Orleans. Before the days of steam powered ships it was easier to reach New Orleans by way of Ship Island Pass and Lakes Borgne and Ponchartrain, than to sail up the Mississippi River. By constructing a fort on the west end of Ship

Island the United States hoped to be able to protect the pass, guard the island's harbor, and provide some protection for shipping in Mississippi Sound.

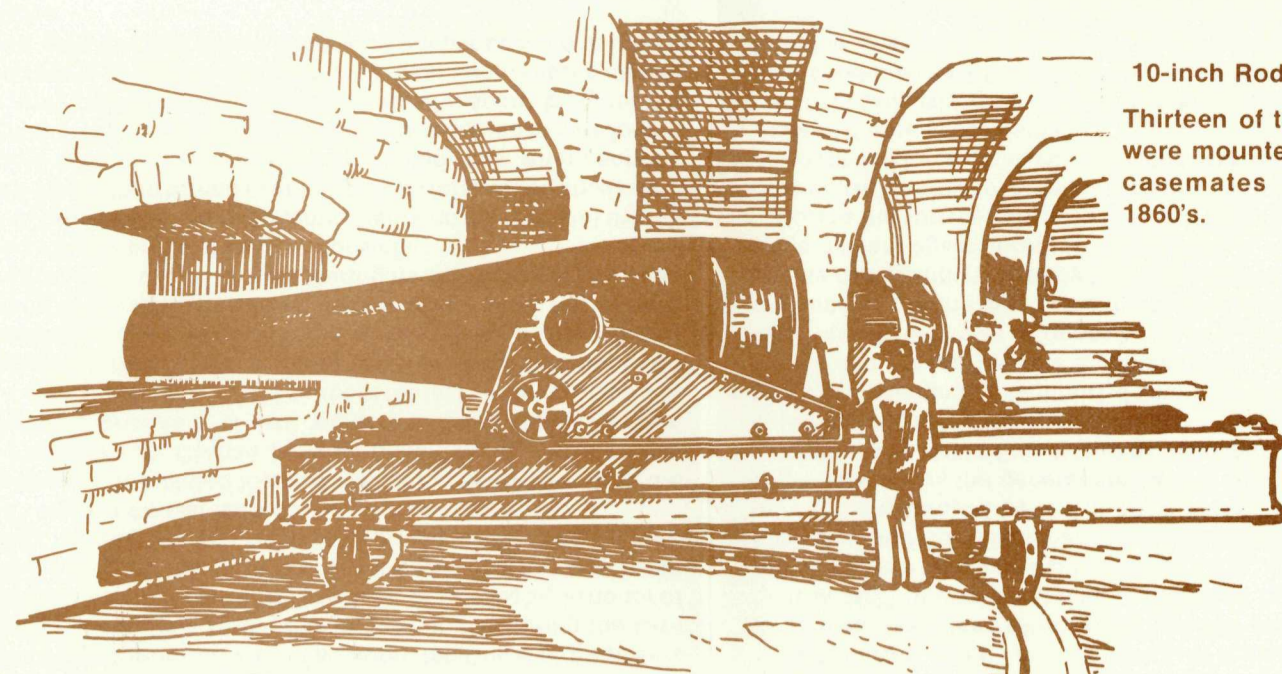
The fort was designed for its guns to provide a complete circle of coverage, but most of its fire power was to have been directed toward Ship Island Pass and its approaches. A cannon was to have been placed on each of the 10 granite platforms along the top of the curved part of the fort, but none were ever mounted on any of these positions.

### 3. PARADOS AND SERVICE MAGAZINES

The upper level of the fort is divided by a large earthen embankment, or parados, which provided additional protection for the gun positions on top of the fort. The parados houses four service magazines, one at each end, and two in the center. These small rooms provided additional storage space for powder and ammunition. Access through the parados is by two passageways, one near each end. Each passageway also provides access to a stairtower and a service magazine. The two center service magazines can be entered through an opening in the east side of the parados.

### 4. 15-INCH RODMAN CANNON

The 15-inch Rodmans were among the largest smoothbore cannons manufactured, the barrel alone weighs 50,000 pounds. This type of cannon fired a 15-inch diameter cannonball weighing more than 300 pounds, and had a maximum range of about 3 miles. As much as 50 pounds of black powder was used each time a cannon like this was fired. Beginning in the 1860's the armament of many seacoast fortifications eventually included 15-inch Rodmans. Two were mounted on the upper level of this fort in 1873, one at each end of the east wall. Men using wooden derricks and block and tackle were able to raise the barrel of each cannon over the outside wall and into position. The circular iron tracks bolted to the granite platform would have allowed the



10-inch Rodman Cannon

Thirteen of these cannons were mounted in the fort's casemates in the late 1860's.

cannon to be turned and fired in any direction. Approximately 300 fifteen-inch Rodmans were manufactured, but none were ever used in combat. This one is the fort's only remaining cannon.

### 5. 100-POUNDER PARROTT RIFLE POSITIONS

In 1873 a 100-pounder Parrott rifle was mounted on each of the two granite platforms on the upper level of the fort above the entranceway. These rifled cannons differed from Rodmans and other smoothbore cannons in several respects. Rifled cannons fired bullet-shaped projectiles instead of cannonballs, and had spiral grooves, or rifling, cut into the inside face of the barrel. When fired, the rifling caused the projectile to spin while in flight. The spinning motion gave the projectile more accuracy, range, and penetration power than a cannonball fired from a smoothbore. A 100-pounder Parrott rifle could fire a projectile weighing about 100 pounds nearly 5 miles using about 10 pounds of black powder. Development of rifled cannon was one of the factors that eventually made masonry forts obsolete.

### 6. CANNON DEBRIS

Although the fort was designed for 37 cannons, only 17 were mounted. The cannons in the fort eventually became obsolete and were sold for scrap iron in 1901. Explosives were used to break up the cannons to make them easier to remove. Pieces of the other 15-inch Rodman, a 10-inch Rodman, and the two 100-pounder Parrott rifles can be seen here.

### 7. STAIRTOWER

The fort's three circular brick stairtowers provide access between its two levels. Each tower has a spiral staircase made of granite. The domed brick ceiling in the stairtower is a fine example of the outstanding craftsmanship evident throughout the fort.

### 8. SHOT FURNACE

In the south corner of the parade ground is the fort's shot furnace. Its purpose was to heat cannonballs red-hot to be fired at wooden ships. Special implements were used to carry hot cannonballs from a shot furnace to cannons for firing. This shot furnace could have held approximately 60 cannonballs, up to 8 inches in diameter, for heating.

### 9. GUARDROOMS

The two guardrooms, one on either side of the sally port, were part of the defense system for the fort's only entrance. The narrow openings in the walls of each guardroom permitted observation and fire coverage of the entrance in the event of a land attack.

The hole in the center of the floor of each guardroom provides access to a cistern that was used for storing fresh water. The top of the fort served as a catch basin for rainwater which was channeled through a system of cast-iron pipes to a large cistern beneath each guardroom. Each cistern is about 8 feet deep and capable of holding more than 17,000 gallons of water.

Although the guardrooms could have been used to house military personnel, the men assigned to Ship Island lived either in tents or wooden barracks.

### 10. POWDER MAGAZINES

Next to each guardroom is a powder magazine that was used for storing the fort's supply of black powder. The magazines were originally lined with wood to help keep the powder dry. The narrow vertical slots in the walls are for ventilation. Each vent was constructed with two 90 degree turns and copper screens to reduce the possibility of a spark entering the magazine. Although the powder magazines are often referred to as dungeons, there is no evidence they were ever used for that purpose.

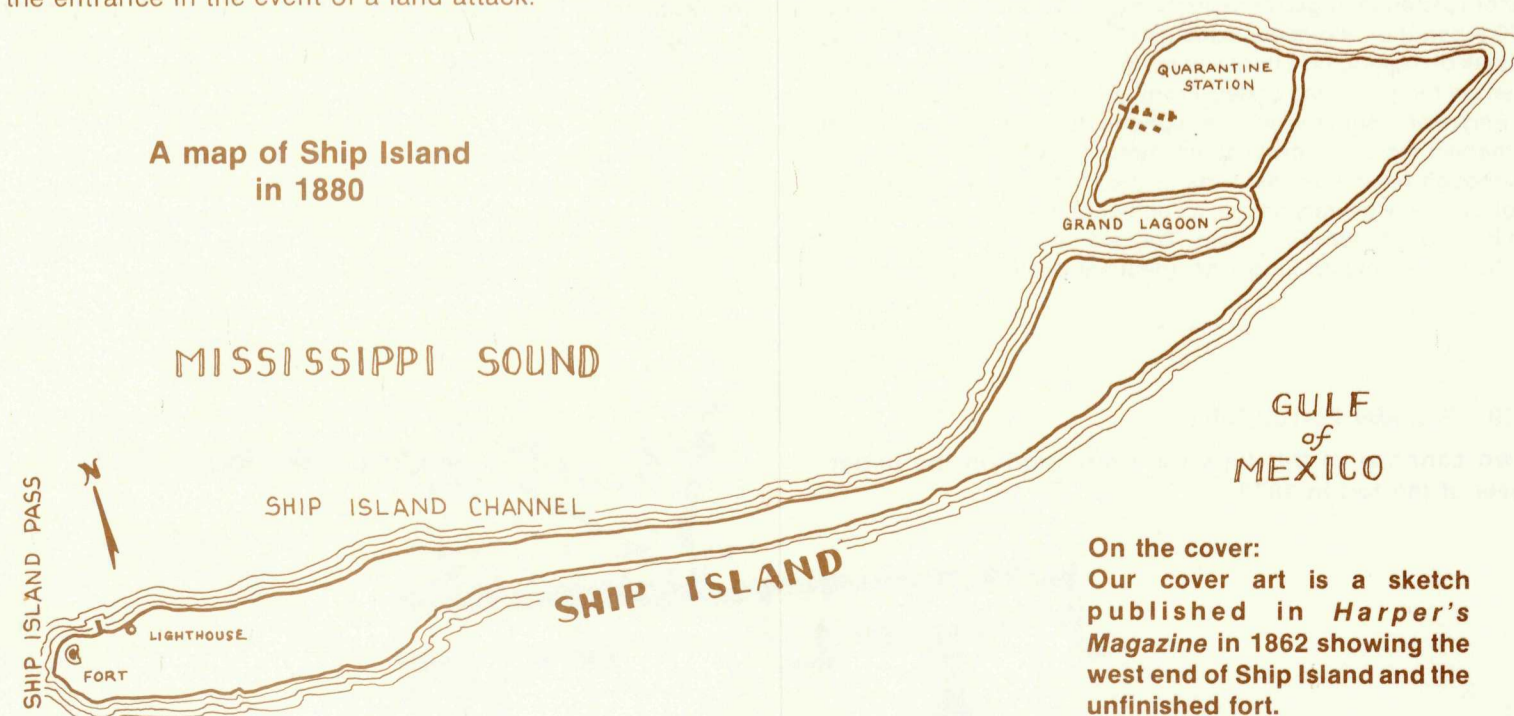
### 11. HALF BASTIONS

The half bastions are the large wedge-shaped areas at each end of the east wall that project out from the regular line of the fort. Their purpose was to allow the fort's defenders to set up a cross-fire between the half bastions to protect the entrance. A small cannon was to have been mounted in each half bastion, but neither position ever received its armament. The large concrete blocks in the half bastions were added after the fort was transferred to private ownership in the 1930's, and at one time mounted electrical generators.

### 12. CASEMATES

The casemates are the protected gun positions within the circular part of the fort. Each of the 21 chambers was designed to mount a cannon that could have fired through one of the openings in the outside wall. Each opening, or embrasure, was covered with heavy iron shutters to help protect the gun crews. Thirteen 10-inch Rodman cannons were mounted in this level of the fort in the late 1860's. They were smaller versions of the 15-inch Rodmans mounted on top of the fort. The iron carriage of each casemate cannon had an iron "tongue" that fit into a wall slot just above the floor level. This allowed each cannon to be anchored to the wall. In addition, the wheels of each carriage and the semi-circular iron tracks that were bolted to the stone floor, permitted the cannons to be moved from side to side in an arc for aiming.

A map of Ship Island in 1880



On the cover: Our cover art is a sketch published in *Harper's Magazine* in 1862 showing the west end of Ship Island and the unfinished fort.