

Naval Battle Between The Merrimac and The Monitor 1862

FACTS ABOUT THE MERRIMAC

The Merrimac, originally the U.S.S. Merrimack, was a steam-powered wooden frigate that belonged to the Union. However, it was scuttled and burned by the Union forces upon abandonment of the Gosport Navy Yard at Portsmouth, Virginia in April 1861. Stephen Mallory, Secretary of the Navy of the Confederate States of America, stated in a letter of May 8, 1861: "I regard the possession of an iron-armored ship as a matter of first necessity. Such a vessel at this time could traverse the entire coast of the United States, prevent all blockades and encounter, with a fair prospect of success, their entire navy."

CONSTRUCTION OF THE MERRIMAC

When the Confederate authorities took possession of the Gosport Navy Yard, the Merrimac was raised and converted into an iron-plated man-of-war of the most formidable character. She was placed in dry dock. Her hull was cut down to within three feet of her waterline. The gundeck was covered with a bomb-proof casement with sloping sides consisting of 24 inches of wood and two courses of iron four inches thick. Owing to some miscalculation, when launched, the edge of the casement barely reached the surface instead of being two feet below. Despite heavy ballasting, limited by the weakness of her wooden hull, the casement only extended six inches below the surface. Her bow and stern were also ironclad. A projecting 1500-pound ram of iron was added to the bow to pierce opposing ships under water. She had no masts, and there was nothing to be seen over her casement but the armored pilot house and smoke stack. Her armament consisted of six nine-inch Dahlgren smoothbore guns broadside and two 6.4-inch and two 7-inch Brooke rifles at the bow and stern. On February 17, 1862 she was rechristened the C.S.S. Virginia, though she continued to be known as the "Merrimac." Her principal characteristics were, according to historical records: displacement 3,120 short tons; length overall 276 feet; extreme beam 51'2"; draft 20 feet; length of casement 168 feet; height of casement 13'6"; speed 4 to 5 knots.

FACTS ABOUT THE MONITOR



THE "MONITOR"

THE "MERRIMAC"

The first battle between the Union and Confederate iron-clads on March 9, 1862 raged for four hours and resulted in a draw.

sink her. In fact, during the sea-trip to Hampton Roads, the Monitor was constantly engaged in fighting the water that came in under the turret and down the blower pipes. The idea of mounting guns in a revolving circular turret had been suggested before at various times, but had never been carried to the point of useful application.

The principal characteristics, based on contemporary drawings and accounts were: displacement approximately 1,000 short tons; length overall 173 feet; extreme beam 41'4"; draft 10'4"; freeboard 18 inches; speed 6 knots.

DESTRUCTION OF UNION FRIGATES AT HAMPTON ROADS, MARCH 8, 1862

aground and under attack by Confederate gunboats. The Minnesota, supposedly at the mercy of the Merrimac, was spared as Buchanan decided not to attempt the middle channel with the ebb tide and approaching night. He thought he could safely wait for the following day to capture the Minnesota as a prize instead of destroying her. There appeared no reason why the Merrimac might not destroy the Union fleet stationed there, all the stores and warehouses on the beach, and then break the blockade.

BATTLE BETWEEN THE MERRIMAC AND THE MONITOR, MARCH 9, 1862

On March 9, the Monitor, having left the flagship

ing on, the Merrimac would fire intermittently at the Minnesota, and then continue battle with the Monitor.

An untried design, all was not the best for the Monitor. The drawbacks to the position of the pilot-house were soon realized. The Monitor's turret officer was of the opinion that he could not fire ahead nor within several points of the bow, since the blast from Monitor's guns would have injured the people in the pilot-house, only a few yards off. Another complication was that the speaking tube from the pilot house to the turret had broken early in the action. The Captain, Lieutenant John L. Worden, was enclosed in the pilot-house, and the executive officer, working and firing the guns, was confined to the turret. Communications between them had to be relayed by voice and were difficult and uncertain. As the engagement continued, the working of the turret was not altogether satisfactory. It was difficult to start it revolving, or when once started, to stop it on account of rusting that had taken place during the voyage south and the crew's lack of opportunity to perform the necessary oiling of the turret machinery. Leaking and having trouble keeping up steam, the Merrimac ran aground about 10:30 AM and received a severe pounding from the Monitor. Getting free, she managed to ineffectively ram the Monitor. When the Monitor's supply of ammunition in the turret had been exhausted, the Monitor went into shoal water, too shallow for the Merrimac to follow. During the 30-minute delay the turret had to stand stationery to align its hatchway with the one in the main deck so the powder and shot could be hauled up from the magazines below deck. After resuming the battle, Lieutenant Worden of the Monitor was temporarily blinded by a shell that exploded on the pilot-house, and the Monitor moved off into shoal water during transfer of command to the executive officer, Lieutenant Samuel D. Greene. The Merrimac thought the Monitor was retreating from battle. However, the tide was receding and would be barely high enough to allow the Merrimac to pass over the sand-bar at the mouth of the Elizabeth River. Upon observing the Merrimac steaming back to the Elizabeth River, the Monitor's commander thought the Merrimac had decided to retreat from battle. The Merrimac

At the beginning of the Civil War the Union Navy had no immediate plans for armored vessels — although they were being built for the Army on the Mississippi. Gideon Welles, the far-sighted Secretary of the Navy, pushed through Congress \$1.5 million for the construction of ironclads to combat the enemy's growing plans and to blockade their harbors. Of the many proposals by inventors, three were selected for construction, the Galena, the New Ironsides, and at the last moment, John Ericsson's steam "Battery," the Monitor. Built in 120 days at the Continental Iron Works, she left New York under tow on Tuesday, March 6, 1862 after a flurry of hurried preparation. Surviving a perilous voyage south, she arrived in the approaches to Hampton Roads, Virginia on the evening of Saturday, March 8, 1862 to the sound of the guns coming from the battle raging between the Merrimac and the helpless Union ships. The weary crew of the Monitor, without sleep for 36 hours, little realized that the next day's action would save the Union fleet from destruction and mark a momentous milestone in naval warfare.

CONSTRUCTION OF THE MONITOR

The Monitor was steam-powered and her hull was built of wrought iron. She had the appearance of a long, oval raft rising only eighteen inches above the water with a low, round turret upon its center. The raft was the upper part of the hull of the vessel, and its sides were armored with live layers of one-inch iron plates backed by 27 inches of oak and pine so as to be shot-proof. It projected on every side beyond the lower hull which contained the machinery and crew's quarters below the waterline.

The turret was constructed of eight one-inch iron plates, and contained a battery of two, 11-inch Dahlgren guns. Originally it was to have larger guns but they could not be obtained in time. This was the only armament on the Monitor. The turret was constructed to revolve, bringing the guns to bear upon any point. This turret, nine feet high and twenty-one and a half feet in diameter, and an armored pilot house rising four feet were all that appeared in battle above the level deck. By means of these devices the ship was made to present a very small target. Her engines, boilers, screw, rudder and anchor, as well as her crew, were thoroughly protected, and neither rams nor projectiles could make much impression on her.

However, there were several defects. The low freeboard had one distinctive disadvantage, as it reduced the vessel's reserve of flotation, thus making it possible for a small influx of water to

comprised the sloop-of-war Cumberland, the sailing frigate Congress, the steam-frigate Minnesota and various small ships and some gun-boats of small class. The Merrimac, under the command of Captain Franklin Buchanan, left Norfolk on Saturday, March 8 and attacked the Union fleet in Hampton Roads. Hampton Roads is the waterway from the James River, Nansemond River and Elizabeth River to Chesapeake Bay. The Merrimac delivered a broadside of hot shot into the Congress, which caused fires in many places. The Merrimac approached the Cumberland at full speed and backing her engines at the moment of impact struck her on the starboard side, the iron ram fatally piercing the Cumberland under water. The two ships exchanged broadsides almost muzzle-to-muzzle for some 30 minutes. The inrushing water and the carnage wreaked by the Merrimac's guns were overwhelming. She sank at 3:30 p.m. with a fearful loss of life. After sinking the Cumberland, the Merrimac resumed her attack on the burning Congress. With the Congress ablaze, the Merrimac turned toward the Minnesota, helplessly

before, took a position alongside the stranded Minnesota, ready with steam up, to slip out and encounter the Merrimac. At that moment the Congress exploded as the fires reached her powder magazines. Early that Sunday, the Merrimac, now under the command of Lieutenant Catesby R. Jones, who replaced the wounded Buchanan, steamed within three miles of the Minnesota, and the Monitor then made its appearance. As the Monitor carried but two guns, while the Merrimac had eight in operation, of course the Monitor received two or three shots for every one she gave. The fight raged hotly for over four hours, with the opposing batteries engaging each other. The Monitor displayed much more maneuverability than the ponderous and battle-scarred Merrimac. At times the iron-clad ships were only a few yards apart. The Merrimac took 15 minutes to turn and did not move with the alertness of the Monitor, which could turn in three times her own length. The Monitor also had the advantage of taking choice of position due to her rotating turret and shallow draft. While the great naval battle was go-

ing have been destroyed the day before. The Merrimac now went to Portsmouth for repairs, additions to her armor, and projectiles of greater penetrating ability.

SUMMARY OF THE BATTLE BETWEEN THE IRON-CLADS

Both of the experimental iron-clads had survived their baptism of fire. The naval battle was a draw as long as the two iron-clads remained afloat. The Monitor had saved the Minnesota, but the Merrimac still controlled the James, Nansemond and Elizabeth Rivers. She had no chance of seriously damaging the Union ships at Hampton Roads or of escaping to break the blockade. Neither had inflicted serious damage on the other. While the Merrimac had demonstrated the vulnerability of the wooden ship against an armored foe, the Monitor had shown the effectiveness of the turret.

THE END OF THE MERRIMAC AND THE MONITOR

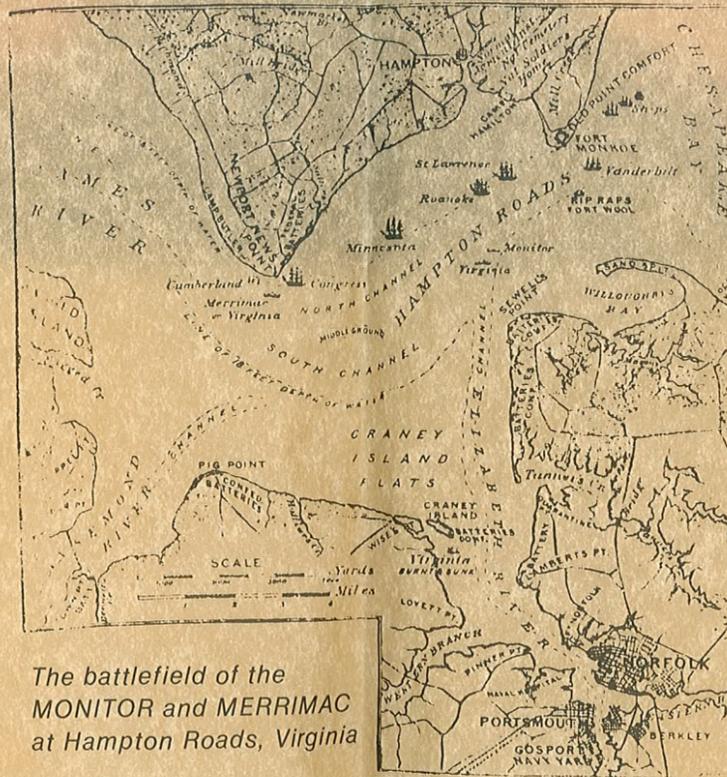
Norfolk surrendered to the Union forces May 10, 1862. The Merrimac, drawing too much water to permit her being moved to safety up the James River, was abandoned, set on fire and soon blew up.

With the evacuation of Norfolk by the Confederate forces and the removal of the threat of the Merrimac, the Monitor was ordered in December to proceed south to North Carolina to assist in the blockade there. However, she met extremely bad weather, and in the resulting high waves, it was impossible to keep the vessel free of water. When the water reached her boilers, she could no longer make steam and her pumps stopped. She sank seventeen miles south of Cape Hatteras, North Carolina, with a loss of 16 officers and men.

IMPACT OF THE BATTLE ON WORLD NAVAL CONSTRUCTION

The legend of the Merrimac inflamed the fears of the Union Navy by the threat of a fleet of armored rams under construction by the Confederates. The Monitor spawned a fleet of similar Union monitors — some sixty had been built by the end of the Civil War.

With the advent of iron-clads, all the great nations saw their naval powers reduced. Their wooden naval ships would be threatened by even a second or third-rate nation if they were the first to make a fleet of iron-clads. All the world's great navies rushed to make ships of iron and steel. Naval warfare would never be the same again.



The battlefield of the MONITOR and MERRIMAC at Hampton Roads, Virginia