On Sunday morning, March 9, 1862, two very strange looking ironclad ships fought each other for four hours to a draw in Hampton Roads, Virginia. The *Monitor*, the Union ship, and the *Merrimac*, or *Virginia*, the Confederate ship, neither of which were to survive the year, revolutionized naval warfare. How did all this come about?

President Lincoln, while denying belligerent status to the South, that is an enemy protected by and subject to the laws of war, nevertheless in April 1861, proclaimed the blockade of Southern ports. A blockade was understood to be the use of naval vessels to cut off access to a coast to prevent neutral shipping from trade with the enemy. The Declaration of Paris of 1856 provided that blockades be announced to all affected parties and be legal only if effective and enforced against all neutrals. Thus Lincoln, like modern day liberals in treating of terrorists, called the South criminals, but when it was convenient for him, treated them as belligerents. Secretary of the Navy Gideon Welles saw through Lincoln's charade. He said a blockade made a mockery of Lincoln's claim that the war was simply a rebellion: A nation did not blockade its own ports, it

closed them. For the Union to station squadrons off the Southern ports, denying passage to ships entering or leaving, constituted de facto recognition of the Confederacy as a sovereign power and thereby invited foreign powers to extend diplomatic relations to the South.

The North in 1861 had 3,549 miles of coastline to blockade with a fleet of 40 steamers and 50 sailing vessels with only 20 steamers and 16 sailing vessels in commission. The South had no navy. The North would have two objectives: to effect the blockade and to go into Southern harbors under the guns of its forts and sink any vessels found. The South had to break the blockade.

The technology for naval warfare in 1861 had seen five major developments in the last fifty or so years, namely steam, shell guns, the screw propeller, armor and rifled ordnance.

Steam propulsion had been applied by Fulton in 1807 and the screw propeller since 1837, but the big breakthrough was the *U.S.S. Princeton* designed by John Ericsson and built in 1842, a metal-hulled screw steamer with all of its equipment below the waterline. It also carried two 12 inch smooth bore cannon, one designed

and built by John Ericsson and the other built by Captain Robert Stockton, named the ‘Peacemaker’, but not as carefully made.

Heretofore naval ordnance consisted of the long gun and the carronade. The long gun fired a solid run shot and could also fire heated shot to set a target on fire. The carronade was a short barrel, large chambered gun for short range that could fire a solid round shot or the equivalent of grape shot for anti-personnel use. Col. George Bomford invented the columbiad for seacoast defense, a cross between a long gun and a carronade. Columbiads were usually large bore guns.

The 12 inch ‘Peacemaker’, unlike Ericsson’s gun, the ‘Oregon’, was not reinforced with rings at the breach, and on February 28, 1844, blew up off Fort Washington on the Potomac during a demonstration party cruise. President Tyler was below and unhurt, but Colonel David Gardiner, of Gardiner’s Island. New York and father of President Tyler’s fiancée, the Secretary of the Navy Gilmer, Secretary of State Upshur, and Commodore Beverley Kennon were all killed, along with four others. I remember a few years ago seeing Commodore Kennon’s sword on a breakfront in a house in Georgetown. His

widow was the doyenne of Tudor Place in Georgetown, D.C. Stockton managed to get Ericsson blamed for the disaster and Eridsson was never paid for his work, despite the efforts of Senator Stephen Russell Mallory of Florida, the future Confederate Secretary of the Navy. Finally Ericsson's executors procured payment. Ericsson swore he would never have anything to do with the Navy again.

Major T.J. Rodman studied the exploded 'Peacemaker' and designed what came to be known as the Rodman. His weapon instead of being bored out of cast iron was cooled from the hollow inside. It was improved by Admiral Dahlgren by making the chamber cone shaped for gas to expand against a greater surface, the result being the often used Dahlgren smooth bores of 9 inches, 11 inches and 15 inches in the War. Captain Robert C. Parrott, who also studied the Peacemaker, developed a gun with rifling in 1861, being cast iron, strengthened with shrunk wrought iron bands welded together on the breach. Lieutenant John Mercer Brooke, who had accompanied Commodore Matthew C. Perry on his first visit to Japan, invented the Brooke Rifle, a gun

similar to the Parrott, but with the rings separated from each other.

Ratings of guns had for many years been in terms of pounds of projectile, but by the time of the War the rating was changed to the diameter of the projectile in terms of inches. This may well have been a result of the use of shells.

In the 18th century the use of shells was limited to non-horizontal trajectory ordnance, the howitzer and the mortar. In 1824 Colonel Henri-Joseph Paixhans developed an explosive shell for a howitzer for horizontal trajectory. The projectiles were known as shells because their metal casings enclosed the explosive charge which was detonated by metal fuses and could be set to explode on or after impact, hence the term shell gun. The worth of naval shell guns was demonstrated by the Russians in the Crimean War when they destroyed a Turkish wooden fleet in 1853 at Sinop.

By 1861 the Navies saw armor as the answer to the shell gun. The answer to armor was a larger gun and/or rifle throwing a heavy enough projectile to smash the armor. In comparing the two basic types of ordnance, smooth bore and rifle, the rifle of course had the longer

range (3 to 4 miles) greatest as opposed to smooth bore (1,500 to 1,600 yards) but the penetration of an elongated rifled projectile was variable; if the axis remained coincident with the trajectory, the penetration exceeded that of round shot by ¼ even though a greater charge was used for solid shot; however, if the projectile trajectory was off axis the degree of penetration was greatly reduced. The North, intent upon knocking down forts, preferred the certainty of smooth bore Dahlgrens to the less reliable rifles. Consequently all the later Monitor type Union ironclads were armed with Dahlgrens and not rifles. But the Confederates found the rifled ordnance a very attractive weapon that could hit the Yankee before the Yankee could hit the Confederate.

Accordingly in May 1861 Secretary Mallory advocated to the Naval Committee of the Confederacy that "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." On June 10, 1861, he selected Lieutenant John M. Brooke to draw up plans for an ironclad. By the 25th of June 1861, the plans to raise

the *Merrimac*, an 1855 screw frigate of 3200 tons with 40 guns, from the abandoned Norfolk yard had been submitted by William P. Williamson, Chief Engineer, Lieutenant John M. Brooke and naval constructor John L. Porter. The design called for submerged ends, with four inch thick iron sloping sides in two cross patterned plates two inches thick and 8 inches wide, sloping toward the roof at a 34 to 45 degree angle to a height of seven feet above the deck and penetrating the water line two feet. Under the iron plating 22 inches of wood protection was added. The rudder and propeller were protected by a fan tail. The four foot prow of cast iron was a ram. As built the *Merrimac*, now renamed the *Virginia* consisted of the 262 foot long old *Merrimac* hull with a 172 foot long 30 foot wide beam casemate with 35 degree sloping sides. She carried six 9 inch Dahlgrens from the old *Merrimac* and two 6.4 inch and two 7 inch Brooke rifles. The 7 inch rifles were fore and aft on a pivot. The 1500 pound ram was two feet below the surface. The pilot house was atop the casemate. Draft was 22 feet and top speed five knots. Ship's complement was 250. Turning around took 30 to 40 minutes. The engines were undependable, having been condemned on the *Merrimac*, which is why

she happened to be in the Gosport yard when it was abandoned. But despite early preparation and the beginning of actual work in July 1861, the *Virginia* was not able to undertake her maiden voyage from the yard down the Elizabeth River toward Hampton Roads until March 8, 1862, despite last minute rushes caused by the intelligence gathered on the state of the *Monitor*'s construction.

By March 1862 the North had placed from Newport News to Old Point Comfort the sailing sloop *Cumberland*, 24 guns,(22 9 inch, 0ne 10 inch and one 70 pound rifle), the sailing frigate *Congress* 50 guns, (ten 8 inch smooth bore and 40 32 pounders) , the screw frigate *Minnesota*, (28 9 inch, 14 8 inch, one 10 inch, two 12 pounders, and two 24 pounders), the screw frigate *Roanoke*, 46 guns and the sailing frigate *St. Lawrence*, 52 guns. These ships were positioned to attack any ships coming into the Roads or leaving the Roads. In addition there were other fleet assisting vessels.

When on March 8 the *Virginia* steamed out of the Elizabeth River she was intent on destroying the Federal wooden fleet and carried shell shot for this purpose. Her casemates were covered with a thick coat of tallow to

increase the tendency of projectiles to glance off her sides. She was under the command of Captain Franklin Buchanan, (1800-1874), a lifelong Marylander and grandson of a signer of the Declaration of Independence, who had resigned his position commanding the Washington Navy Yard in April 1861 in anticipation of Maryland's leaving the Union. When Maryland did not secede he sought to obtain his commission back but was refused by Secretary of the Navy Gideon Welles. He had been the first Superintendent of the Naval Academy 1845-47, and commanded Commodore Perry's flagship, the *Susquehanna*, in the expedition to Japan. He was commissioned Captain in the Confederate Navy and named Chief of Orders and Details in command of the Chesapeake Bay Squadron. His brother McKean Buchanan was Paymaster on the *Congress*. Second in command of the *Virginia* was Lieutenant Catesby ap Roger Jones, a Virginian. Other officers included Lieutenants John Taylor Wood, Hardin Beverly Littlepage, John R. Eggleston, Hunter Davidson, Robert Minor, Charles C. Simms, and Walter Batt, Midshipmen Henry H. Marmaduke, Surgeon Dinwiddie B. Phillips and Captain of Marines Reuben T. Thom.

Before exiting the river Captain Buchanan had the boatswain pipe all hands to dinner, the noon meal. Upon entering the Roads, Captain Buchanan headed directly toward the *Cumberland*, intent on ramming her. As the *Virginia* passed the *Congress* she sent incendiary shot into the *Congress*, setting her afire. After the *Virginia* had placed a few shots into the *Cumberland*, Captain Buchanan called upon Lieutenant Morris of the *Cumberland* to surrender, but Morris replied "Never". As the *Virginia* next rammed the *Cumberland* she put a rifled shell into the center of the *Cumberland*. The ram got stuck in the *Cumberland* and the *Virginia* had trouble springing free. The *Cumberland* did manage to hit two of the *Virginia*'s Dahlgrens disabling them. When it was clear to Buchanan that the *Cumberland* was finished he backed off and headed up the James to turn around and to attack the *Congress*. When the *Minnesota*, *Roanoke* and *St. Lawrence* saw what was happening they sought to come to the aid of the *Congress*, but each in turn ran aground. The *Congress* had the steamer *Zouave* tow the *Congress* toward the shore to get into such shallow water that the *Virginia* could not follow to ram. But then the *Congress* ran aground headed into the shore. The

Virginia, two hundred yards off the stern of the *Congress*, raked the stranded vessel. The *Virginia* was aided by the Confederate Chesapeake fleet or James River Squadron consisting of the steamers *Beaufort,* (32 pound rifle and 24 pound carronade) *Jamestown*, (two guns),*Teaser*,(two guns), *Raleigh*,(one gun) and *Patrick Henry* (12 guns). Grounded, on fire, with heavy casualties Lieutenant Austin Prendergrast surrendered. Captain Buchanan sent the *Beaufort* and the *Raleigh* to receive the surrender and take the wounded prisoners. The 20th Indiana from the shore, assisted by some of the gun crews from the *Cumberland*, then fired on the Confederates. When a captain reminded Federal General Mansfield that the *Congress* had surrendered, General Mansfield noted that he hadn't surrendered. Captain Buchanan became infuriated and fired upon the *Congress*. He got hold of a rifle and on the top of the *Virginia* and open fire on the Yankee infantry. They returned the fire and wounded Buchanan in the leg. The *Virginia*, unable to reach the grounded *Minnesota* across the channel and out of range, returned toward Sewell's Point with her entourage of gunboats. The *Virginia* has sustained 21 wounded, left her ram in the *Cumberland*, had her smoke

stack and steam pipes shot away and almost all items on her exterior swept away. She was hit with 77 shots causing indentations, but was otherwise fully able to engage on the morning of March 9, 1862, under command of Lieutenant Catesby ap Roger Jones. She was not, however, sufficiently seaworthy to venture forth into the Atlantic to raid Northern cities as Secretaries Mallory wished and Stanton feared.

In his first report to Congress in July 1861, Secretary Welles recommended the appointment of a proper and competent board to enquire into the matter of having an ironclad steamer, as England and France had. Welles, with the assistance of Cornelius S. Bushnell of New Haven, on August 3, 1861, obtained passage of an authorization $ 1,500,000 for the construction of an ironclad steamer. He appointed three men to an ironclad board to examine the proposals. Welles advertised on August 7, 1861.

Cornelius Henry Delamater, in whose iron works at the foot of West 13th Street in New York, John Ericsson, an inventor from a Sweden, had always had a free hand, suggested that Ericsson write to the President about Ericsson's 1854 floating battery ship he had

unsuccessfully presented to Napoleon III of France. Ericsson was disinclined because of his sad experience with the *Princeton*, but Ericsson took his friend's advice, yet he received no answer. Bushnell had submitted a proposal for the *Galen*a but he was uncertain whether the *Galena* could carry both a sufficient amount of armor and the weight of big guns. He ran into Delamater, some say in the Willard Hotel, and asked his opinion. Delamater told him to consult Ericsson. He did so and after obtaining a favorable opinion was about to depart when Ericsson asked Bushnell if he would care to see Ericsson's 1854 model. Receiving an affirmative reply Ericsson showed Bushnell the plans and model for his iron-clad with a revolving turret and the letter and medal sent him by Napoleon III. Bushnell was impressed with the plans and went to see Secretary Welles, then in Hartford, who upon seeing that this iron-clad fulfilled the two much needed and required characteristics of the Navy for an ironclad, namely shallow draft and maneuverability, directed him to the Navy Board and returned to Washington himself due to the importance of the matter. C. S. Bushnell left for Washington and contacted his subcontractors on the *Galena* , John F.

Winslow of the Albany Iron Works of Troy, New York and John A. Griswold of the Rensselear Iron Works of Rensselear, New York. These men of substance knew Secretary of State Seward from whom they secured an interview with the President after being unable to persuade Commodore Smith of the Ironclad Board of the virtues of Ericsson's plan. On September 8, 1861, Bushnell met with the President and Winslow and Griswold. The President liked the idea and suggested a meeting with the Board with himself present. At that meeting the next day at 11 a.m. the President stated in conclusion, "All I have to say is what the girl said when she put her foot into the stocking, 'It strikes me there's something in it.'" On September 11 Bushnell met with the entire Board. Commodores Smith and Paulding said they would agree to recommend the order of one vessel, if Captain Davis would, but Davis said "take the little thing home and worship it, as it would not be idolatry, because it was made in the image of nothing in the heaven above or on the earth below or in the waters under the earth."

Bushnell thought it would be necessary to get Ericsson to Washington to explain the matter properly

and he so told Welles. Bushnell, with Delamater, saw Ericsson. Pretending that the Board had accepted the plans but merely wanted to ask Ericsson some questions, they related a fictitious conversation. Ericsson agreed to go to Washington. When he came to the Board, he was told there was no contract and that his plan had been rejected. Ericsson lost no time, however, in convincing the Board of the merits of his design. He first asked what they didn't like about it and upon being told by Commodore Smith that it lacked stability, launched into a dissertation. He was asked to come back at 1 p.m. whereupon Commodore Paulding requested him to repeat his explanation. After twenty minutes of Ericsson on stability, the Commodore exclaimed "Sir, I have learned more about the stability of a vessel from what you have said than I ever knew before." Later that day Commodore Smith took him to meet Secretary Welles who told him of the Board's favorable decision, which may have actually been made at Welles' insistence, although Bruce Catton believed the decision to build the *Monitor* seems to have been made largely by the President. The contract for $ 275,000, payable in five installments, with a 25% retention and builders' guaranty

of performance, was signed October 25, the day the keel was laid. Ericsson formed a joint venture with Bushnell, Griswold and Winslow to build the *Monitor* in Brooklyn, New York. The *Monitor* was launched January 30, 1862, delivered to the Navy on February 19 and commissioned on February 29, 1862, with Lieutenant John Lorimer Worden commander with a complement of 58. She was 172 feet long by 41 ½ beam over a hull 124 feet long and 34 feet wide. Side armor was five feet high and extended below the water line. On top of the flat deck was a 20 foot revolving turret covered with eight inches of iron, nine feet high holding two 11-inch Dahlgren smooth bore cannon. Near the bow was a pilot house. She was powered by two engines driving a nine foot, four bladed propeller. The Monitor of 900 tons drew ten feet and made 5 ½ knots.

The turret was not a new idea by 1861, as even Ericsson acknowledged Gillespie's National Chronicle (1805) design, Abraham Bloodgood's (1807) and T.R.Timby's (1842) design for coast defense. Timby's patent was bought for $ 5,000 per vessel for the first twenty vessels. John B. Eads had a turret on some steamers for work on the rivers in the West.

Colonel William Conant Church in his 1890 biography of Ericsson stated its mission well. He wrote

"It was proposed to build a vessel that could navigate the shallow Southern rivers, and the draught was limited to eleven feet. This absolutely compelled the adoption of the plan of a sunken hull. It was manifestly impossible to carry the weight required to protect a high sided vessel. The adoption of a covered cylindrical turret followed logically, from the necessity for protecting guns and gunners. The plan of revolving this turret on a vertical axis, was adopted to secure an all-around fire while the vessel remained stationary, as it was clearly impracticable to manoeuvre the battery in narrow rivers. The slight draught of the vessel brought the propeller and rudder near the surface; to protect these the deck was extended over the hull at the stern and also at the bow, where the anchor, hanging in a cylindrical well, could be lowered and lifted by machinery within the hull without exposing the crew."

The *Monitor* contained over 40 patentable inventions, including an underwater flushing john.

The *Monitor* left New York on March 6, 1862, under orders to report to Hampton Roads with her crew, and

by tradition, workmen from the Delamater Iron Works, who had built the engines and propeller, working the engines. She was towed by the *Seth Low* and nearly sank in a storm on her way. The Navy had placed hemp on the ring on which the turret sat. When this got wet sea water flowed in. Ericsson had designed the turret to fit snugly on its brass ring and to be raised when in action. The *Monitor* reached Hampton Roads at 9.00 p.m. on March 8 and reported to Captain John Marston of the *Roanoke* who directed Worden to go to the assistance of Captain G.J. van Brunt of the *Minnesota* grounded off Newport News. The *Monitor* got there after 1.a.m. and the crew remained up all night. Ericsson anticipated sleeping on a submarine because he provided sleeping hammocks for only one half the crew.

As the *Virginia* came forward to attack the *Minnesota* on March 9, Worden headed the *Monitor* right at the *Virginia*. Worden desired, in order to protect the *Minnesota*, to engage the *Virginia* in circles as far as possible from the *Minnesota*. Ericsson had explained to Assistant Secretary of the Navy Fox that the *Monitor* could fight effectively at 200 yards where the vision from the pilot house opening of 5/8 of an inch allowed a

vertical view of 80 feet and a dead level horizontal shot from the eleven inch Dahlgrens would strike the enemy not only at the water line, but at the correct angle to hit the sloping casemate square.

During the next four hours the two vessels fought it out at close quarters, touching each other five times. The *Monitor* withdrew after two hours to hoist shot into the turret which permitted the *Virginia* to direct her - attention with some effect once more on the *Minnesota*, but the *Monitor* returned to the engagement, always maintaining a position to protect the *Minnesota* towards which the *Virginia* continued her efforts, but through the fears of her pilot not as effectively as may have been possible. During this time each vessel probed for weaknesses, but none being apparent, changed direction and looked for others. Had either known how effective some shots were, the outcome would have been different; as it stands neither maximized her offensive strength. The *Monitor* attempted to get at the propeller and rudder of the *Virginia* which although planned to be protected were not. Missing by two feet Worden did not try again. None of the *Monitor*'s shots were aimed at the waterline where they undoubtedly could have caused

damage. The *Virginia* wasted many shots trying to hit the ports in the revolving turret, with muskets, shells and grapeshot which may have prompted the famous response of Mr. Eggleston to Lieutenant Jones's inquiry as to why Eggleston was no longer firing, "Why, our powder is very precious, and after two hours incessant firing, I find that I can do her about as much damage by snapping my thumb at her every two minutes and a half."

The *Virginia* also tried very unsuccessfully to ram the *Monitor*, considering even trying then to board her only to take two shots that knocked the crew of the after gun to the deck and to have a leak opened in the bow. It was not until 11:30 a.m. that Lieutenant Jones directed fire at the pilot house which proved very successful, for the shot blinded Worden, who placed Lieutenant S. Dana Greene in command. The injury to Worden was the only really serious casualty on either side in the fight, although Acting Master L.N. Stodder of the *Monitor* had been thrown to the deck by the impact of a shot hitting the turret against the wall of which he had been leaning.

Upon taking command of the pilot house, Lieutenant Greene left the turret in charge of Chief Engineer Alban

C. Stimers, the government inspector, admired by Ericsson, who was only along for the ride to report on conditions, not being a member of the ship's complement. At the outset of the engagement the speaking tube from the pilot house at the bow to the turret had broken and commands had to be carried in person. Then the turret machinery ceased functioning properly and the turret spun perpetually forcing Greene to shoot as the turret swung by the *Virginia*. Later the turret ceased to revolve properly and shots had to be aimed by changing the vessel's course. It was also later determined that the turret could not safely fire over or nearby the pilot house 30 degrees port and starboard nor too close over the boilers 30 to 40 degrees, so the *Monitor* did not have a 360 degree range of fire. Lieutenant Greene, however, only avoided shooting over the pilot house.

In the twenty minutes spent during the change of command, the *Monitor* drifted away from the *Virginia* toward shallow water and the *Virginia* after waiting an hour returned up the Elizabeth River to Norfolk, as she could not get closer to either the *Minnesota* or the *Monitor*, the tide was right for the return voyage, she

feared if she struck bottom again, having done so for 15 minutes during the fight, that she would not be able to get off again, and she was leaking from the attempted ramming by the *Monitor*. The *Monitor* then steamed back to the *Minnesota*, as she was under orders not to follow the *Virginia* back to her port. Lieutenant Greene agonized for years afterwards over his decision not to renew the fight before the *Virginia* returned.

In the four hours fighting the *Virginia* with eight guns hit the *Monitor* about 23 times, the deepest penetrations of which were four inches on the sides, with only two inches on the turret and one half inch on the deck with distribution of hits nine on the turret, two on the pilot house, three on the deck and eight on the sides, while of the *Monitor*'s 41 shots, only 20 left indentations on the *Virginia*, however six of her top layer plates were broken by the *Monitor*'s shot. And remember the *Virginia* had no solid shot or bolts for her rifles. The *Monitor* had cast solid shot which for want of homogeneity in the casting caused the shot to go almost anywhere except where the gun was aimed. The Navy's fear of the memory of the 'Peacemaker' on the *Princeton* at this time forbad the use of wrought iron shot and

restricted the powder load to 15 pounds. Later 30 pound loads became safely common. Ericsson was furious that the *Monitor* had not sunk the *Virginia*, but he was thinking that the *Monitor*'s mission was to do so, rather than to protect the *Minnesota*. Thus the *Monitor* never fired at the *Virginia* from the ideal of 200 yards.

After the battle Lieutenant Henry A. Wise, a classmate of Lieutenant Worden and the Navy Department's assistant inspector of ordnance took the wounded commander back to Wise's home Washington. When Wise recounted the battle to the President, Lincoln said "Gentlemen, I am going to shake hands with that man." The President paid a call the next day, bursting into tears upon seeing the injured officer. Wise said "Jack, here's the President, who has come to see you." Worden sat up as the President took his hand and said "You do me great honor, Mr. President, and I am only sorry that I can't see you." The President said "You have done me more honor, sir, that I can ever do to you." At that time Worden warned the President that the *Monitor* in another engagement should not get too close to the *Virginia*, not because this was the wrong place from which to shoot, but because Worden feared the

Monitor was vulnerable to attack by boarding parties who could wedge the turret. The President promptly issued such a suggestion to Secretary Welles that the *Monitor* should not go 'sky-larking up to Norfolk.' Secretary Welles then telegraphed Assistant Secretary Fox "It is directed by the President that the *Monitor* be not too much exposed, and that in no event shall any attempt be made to proceed with her unattended to Norfolk."

The *Virginia* under command of Commodore Josiah Tattnall made two subsequent appearances on April 11 and May 8 when she sought in vain to entice the *Monitor into* deep water where the Confederates planned to capture her. Commodore Tattnall was not permitted to run past the forts and fleet as such action would expose Norfolk to capture, so all he could do was act defensively. The *Monitor* was also under such defensive orders, which were rationalized by Bruce Catton that "The Navy people were too well aware that until more ironclads were built the one they had must be preserved at all costs, and so *Monitor* was kept strictly on the defensive; if she went out and provoked a finish fight she might conceivably get sunk – a disaster too horrible to think about." One is

reminded of Winston Churchill's remark about Lord Jellicoe, commander of the British Fleet at Jutland, May 31, 1916, as the only man who could lose the war in an afternoon.

The standoff lasted until May 10 when the Union Army under General Wool landed, with the President's assistance in selecting the spot, at Willoughby's Point and General Huger abandoned Norfolk. Willoughby's Point was sufficiently far away from the Elizabeth River that the landing could be made before the *Virginia* could intercept it. The *Virginia*'s draft was too deep to permit her to steam up the James, even when shod of several hundred pounds. With nowhere to go, Commodore Tattnall blew her up on May 11.

Thereafter the *Monitor, Galena* and others sailed up the James and attached Fort Darling on Drewry's Bluff where they were turned back. Some of the Confederate artillery was manned by members of the *Virginia*'s crew who sported the *Virginia*'s flag.

The *Monitor* went to Washington to be refitted and opened to public view. The ladies of Washington made off with anything as souvenirs that wasn't tied down. Thereafter the *Monitor* was directed in December to go

to North Carolina, but on December 31 in the tow of the *Rhode Island* she went down in a storm off Cape Hatteras with 16 members of her crew.

Some contend that the standoff from March 10 to May 11 delayed McClellan's advance on Richmond, as if he needed yet another excuse. Others, noting that British ship, *Rinaldo,* and *French* ship, Gassendi, that witnessed the famous battle responded as Ericsson had intended when he named his invention the *Monitor*. He wrote on January 20, 1862, to Assistant Secretary Fox

"In accordance with your request, I now submit for your approbation a name for the floating battery at Green Point. The impregnable and aggressive character of this structure will admonish the leaders of the Southern Rebellion that the batteries on the banks of their rivers will no longer present barriers to the entrance of the Union forces.

"The iron-clad intruder will thus prove a severe monitor to those leaders. But there are other leaders who will also be startled and admonished by the booming of the guns from the impregnable iron turret. "Downing Street' will hardly view with indifference this last 'Yankee notion,' this monitor. To the Lords of the

Admiralty the new craft will be a monitor suggesting doubts as to the propriety of completing those four steel-clad ships at three-and-a-half million apiece. On these and many similar grounds I propose to name the new battery Monitor."

White notes that the British and French captains "had been ordered to Hampton Roads expressly to observe the behavior in battle of the two ironclads. Vital decisions, despite previously announced neutrality, hung on the reports that these captains would send back to their respective governments after this day's first encounter. The threat of foreign intervention, bearing with it the promise of inevitable Southern Victory, rested in this balance of the *Monitor-Merrimac* score."

For the rest of the war the South's 20 ironclads nearly all copied the *Virginia*'s design and they generally called these ships "rams." The North authorized construction of 35 monitor type ironclads, none of which were ever sunk by a Confederate iron clad, although some succumbed to mines, then called torpedoes. None of them carried rams.

Gideon Welles stayed at his post in the Andrew Johnson administration and died in 1876. Stephen

Mallory spent a year in Federal prison then returned to practice law in Pensacola where he died in 1873. John Ericsson died March 8, 1889, just two months after the death of his friend Cornelius H. Delamater, who had named his country estate on Eaton's Neck, Long Island New York, Vermland in honor of Ericsson's birthplace in Sweden. Now Admiral, John Lorimer Worden attended his funeral. Worden had been Superintendent of the Naval Academy and commodore of the European Squadron. He subsequently became President of the Metropolitan Club in Washington where he died in 1897. Lieutenant S. Dana Greene who stayed with the *Monitor* until she sank December 31, 1862, brooded over whether he should have continued the fight on March 9 after Worden was wounded and while stationed at Portsmouth Naval Base in a state of high nervous excitement, on December 11, 1884, entered a ship house on the base, put a pistol to his head, and blew his brains out. Franklin Buchanan went on to become a Confederate Admiral and commanded the *Tennessee* at the battle of Mobile Bay in 1864. He later became President of the Maryland Agricultural College. He died in 1874 and is buried at Wye House on the Eastern shore of

Maryland. Commodore Tattnall was censured for the loss of the Virginia but demanded a court martial in which he was acquitted. He became inspector of the port of Savannah, Georgia after the war where he died in 1871. Lieutenant Catesby ap Roger Jones went on to supervise one of the South's few iron works in Selma, Alabama to cast canon for the Confederacy. He died in Selma, Alabama in 1877 in an affair of honor.

In 1973 the remains of the *Monitor* were found and the turret and other parts are now at the Mariners Museum in Newport News. Parts of the *Virginia* were raised in 1868 and in 1874/5 the hulk was raised and broken up for scrap metal with a few pieces sent to museums. Thus ends the story of two of the most famous ships of our country.