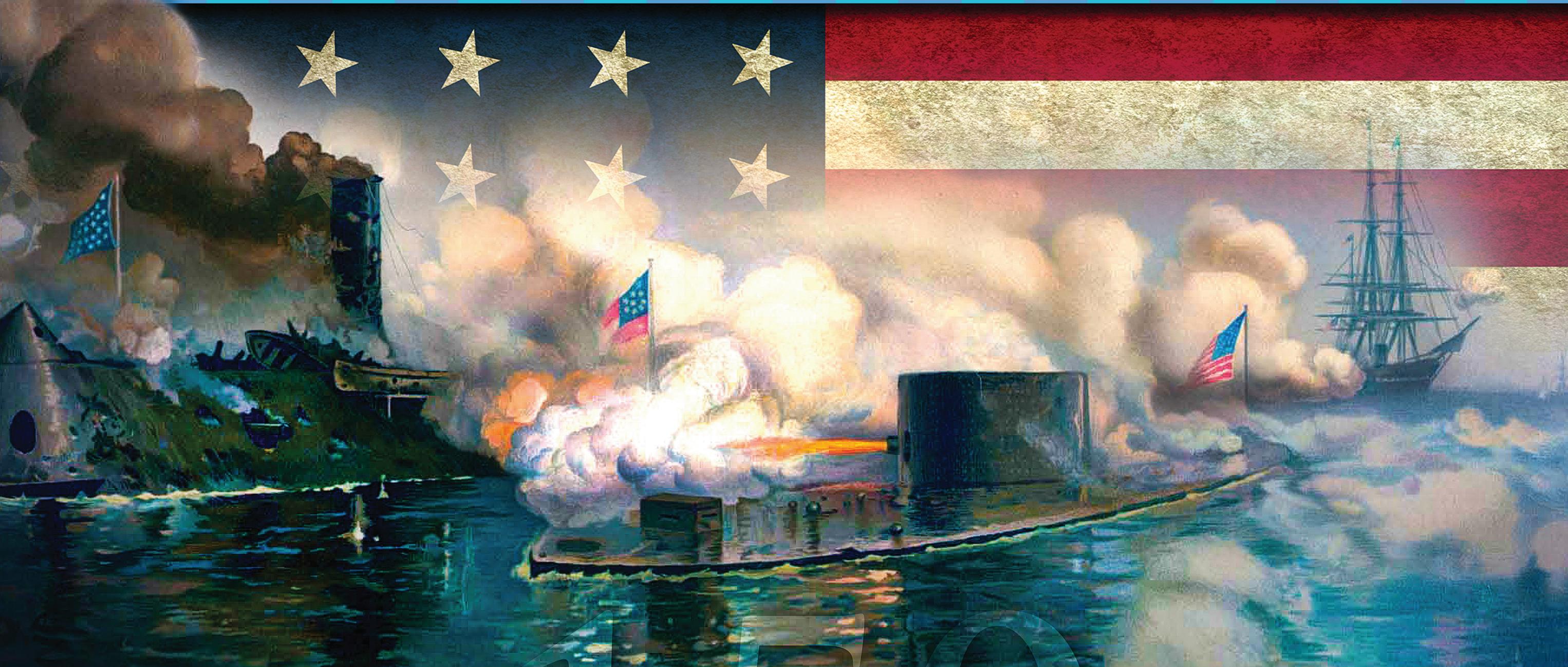


# USS MONITOR

Office of National Marine Sanctuaries  
National Oceanic and Atmospheric Administration

MONITOR NATIONAL MARINE SANCTUARY



# 150<sup>TH</sup> ANNIVERSARY

*"The fierce struggle in Hampton Roads on Saturday, and the terrible duel of the Merrimac and the Monitor on Sunday, have taught a practical lesson which no maritime power can afford to overlook. It was not merely the struggle of Loyalists and Rebels; it was a conflict of the old with the new and the new has won the day. It will stand out in bold relief in the history of naval warfare as one of the signal battles of the world."*

*— Philadelphia Inquirer, March 12, 1862*



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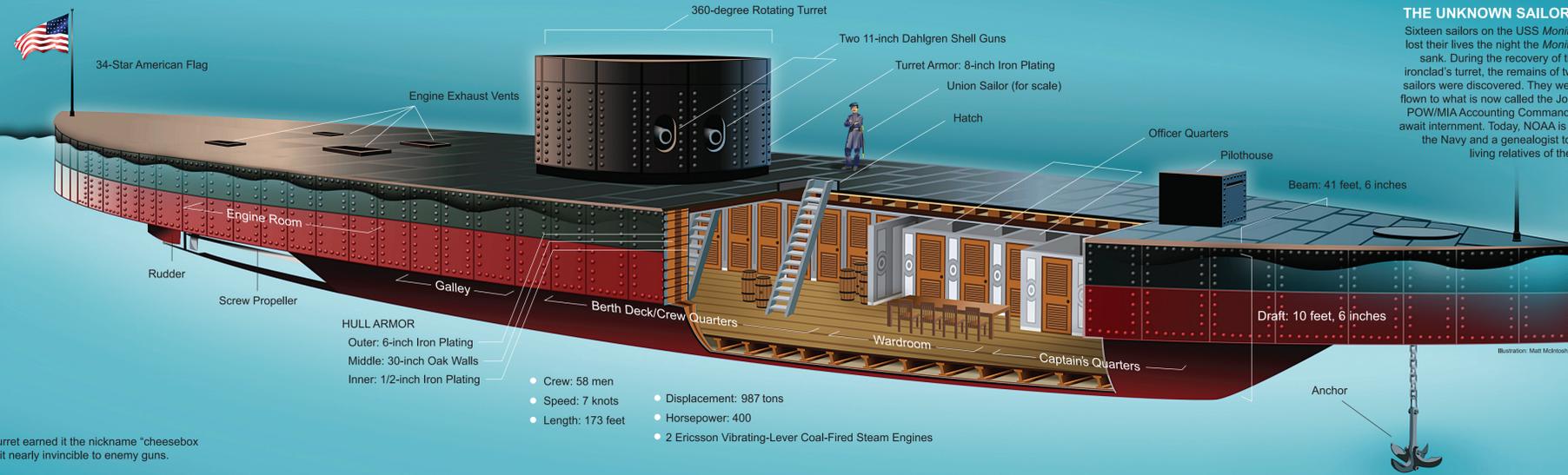
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## THE FIRST U.S. NAVY IRONCLAD WARSHIP

On Jan. 30, 1862, in the midst of the Civil War, the USS *Monitor* emerged from the Continental Iron Works in Brooklyn, N.Y. The strange, iron-plated warship was unlike anything the world had seen. For centuries, wooden vessels had ruled the seas, but when the *Monitor* clashed with the Confederate ironclad CSS *Virginia* at the Battle of Hampton Roads, it marked the dawn of a new era of iron warships. In 2012, NOAA celebrates the 150th anniversary of this revolutionary vessel and its role in shaping our maritime history.

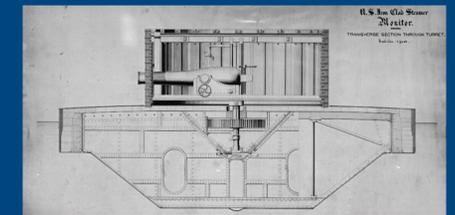
**RED SIGNAL LANTERN:** The night the *Monitor* sank, eyewitnesses reported that at approximately 12:30 a.m. on Dec. 31, 1862, the red distress signal lantern atop the turret had disappeared from sight. More than a century later, this lantern was discovered lying on the sandy seafloor near the *Monitor's* turret in 1977, making it the last sign of the ship before it sank and the first artifact recovered from its wreckage.



**THE UNKNOWN SAILORS**  
Sixteen sailors on the USS *Monitor* lost their lives the night the *Monitor* sank. During the recovery of the ironclad's turret, the remains of two sailors were discovered. They were flown to what is now called the Joint POW/MIA Accounting Command, where they await internment. Today, NOAA is working with the Navy and a genealogist to identify any living relatives of the two sailors.

## FAMOUS FIRSTS

- U.S. Navy ironclad warship
- Battle between ironclads
- Revolving gun turret on a warship
- In an entire class of warships
- National marine sanctuary
- Below-the-waterline flushing toilet



One of the most significant features of the *Monitor* was its rotating gun turret, which allowed it to fire in any direction without turning the ship. The revolutionary design has been used on warships ever since.

**A STRANGE SIGHT:** When the *Monitor* was launched, its low profile and odd, round turret earned it the nickname "cheesebox on a raft." Many doubted whether it could float, let alone fight — but its unusual design made it nearly invincible to enemy guns.

## MASTERMIND OF THE MONITOR

Born in Sweden on July 31, 1803, John Ericsson joined the Swedish Army at age 17 and moved to England in 1826, where he gained a reputation as a talented young engineer. He relocated to New York City in 1839 and helped design the U.S. Navy's first screw-powered warship, but was unfairly blamed for an explosion aboard the ship in 1844. Nearly two decades later, he again went to work for the Navy, this time on an ironclad warship to battle the Confederacy. Ericsson oversaw the design and construction of the *Monitor* in less than 100 days — one of the most remarkable engineering achievements in modern history.



## LIFE ABOARD

During the *Monitor's* short time in service, an average of 55 sailors ranging in age from 19 to 44 squeezed into the cramped space below its decks. Through letters written by Crewman George S. Geer, we know that their life was difficult. In summer, temperatures inside the ship rose to 150° F. Many nights, the men slept on the deck for relief from the heat. Inside the ship, it was crowded and lighting was poor. Food was limited — bean soup with precious few beans was a staple. Sundays were bath days, when the crew stripped to the waist and washed with a pail of water. Yet despite these hardships, the *Monitor* crew persevered.



## AN IRONCLAD OPPONENT

The CSS *Virginia* was the Confederate Navy's first ironclad. It was completed March 7, 1862, the day before it clashed with the *Monitor* at the Battle of Hampton Roads. The two ironclads were equally matched but different in many respects. While the *Monitor* was designed from scratch, the *Virginia* was built on the salvaged wooden hull of the Union ship USS *Merrimack*. And instead of a rotating turret, the 275-foot *Virginia* was armed with 10 guns and an iron battering ram. Two months after the stalemate at Hampton Roads, as Union forces approached Norfolk, the *Virginia* was run aground and destroyed rather than being allowed to fall into enemy hands.

## TURRET CONSERVATION

In 2002, the *Monitor's* turret broke the ocean's surface for the first time in nearly 140 years. Today the 120-ton wrought-iron turret sits in a tank filled with 90,000 gallons of treatment solution at The Mariners' Museum, where conservators seek to reverse the damage done by more than a century of immersion in salt water. The delicate conservation process is slow and painstaking, and will likely take another 20 years to complete.



TIMELINE



Construction on the USS *Monitor* began Oct. 25, 1861 at the Continental Iron Works in New York. The ironclad was launched just 98 days later, on Jan. 30, 1862.

On March, 8 1862, the USS *Monitor* steamed into Hampton Roads, Va., to find a scene of carnage. Earlier that day, the CSS *Virginia* had destroyed three wooden Union ships with ease. The next morning, the two ironclads met for the first time, fighting for hours at close range. The Battle of Hampton Roads ended in a draw, but the age of iron warships had just begun.

On New Year's Eve 1862, less than a year after launch, the USS *Monitor* was under tow by the USS *Rhode Island* when it sank in a storm off the North Carolina coast. Sixteen sailors died that night.

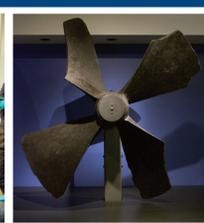
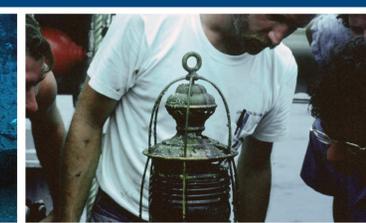
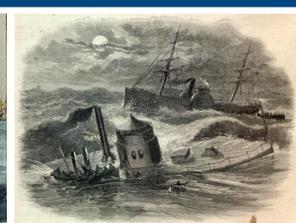
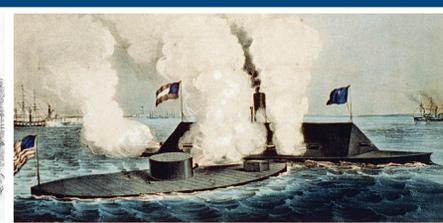
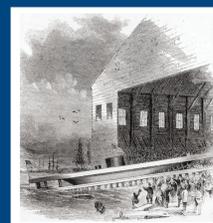
In 1973, a team of scientists led by John G. Newton of the Duke University Marine Laboratory located what appeared to be the *Monitor* lying upside down in 230 feet of water, 16 miles off Cape Hatteras, N.C. The wreck's identity was confirmed by divers in April 1974.

Designated by Congress, the wreck site of the USS *Monitor* became the nation's first national marine sanctuary on Jan. 30, 1975. Today, Monitor National Marine Sanctuary protects the wreck for future generations and works to share this iconic vessel's historical and cultural legacy with the public.

Between 1977 and 2002, several expeditions worked to document the wreck of the *Monitor* and recover artifacts like the ship's red signal lantern, anchor, propeller and steam engine. On March 9, 1987, The Mariners' Museum in Newport News, Va., was designated the principal museum for artifacts from the wreck.

In 2002, a 41-day multi-agency recovery expedition raised the *Monitor's* turret and two 11-inch Dahlgren cannons from the ocean floor. The mission took careful planning, ingenuity and the courage of divers who braved hazardous conditions to free the 150-ton structure.

The Mariners' Museum unveiled the 63,500-square-foot USS *Monitor* Center in 2007, offering visitors of all ages an unparalleled opportunity to learn about the revolutionary ironclad through state-of-the-art exhibits. For more information, visit <http://www.marinersmuseum.org/>.



Find out more at <http://monitor.noaa.gov/150th>