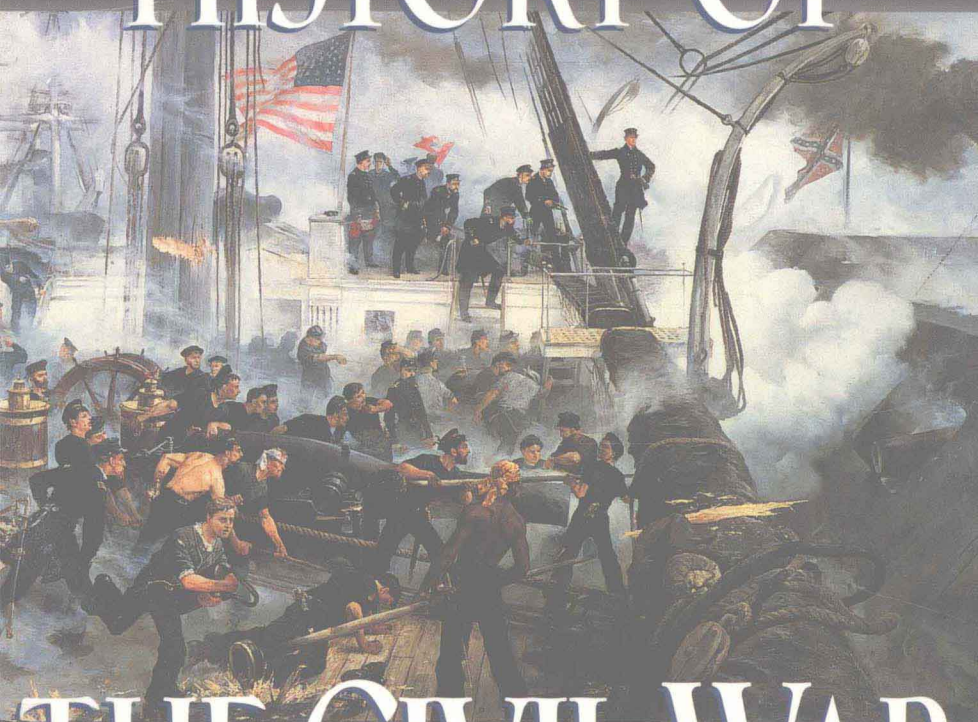


A SHORT HISTORY OF



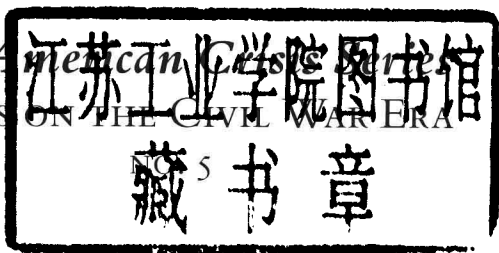
THE CIVIL WAR AT SEA

SPENCER C. TUCKER

A Short History of the Civil War at Sea



The American Classics Series
BOOKS ON THE CIVIL WAR ERA



Spencer C. Tucker



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The American Crisis Series

Books on the Civil War Era

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A Short History of the Civil War at Sea

For my granddaughter

Cathryn Carter McElroy

ABOUT THE AUTHOR

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INTRODUCTION

NEARLY 150 YEARS after its conclusion the Civil War continues to attract historians and the general public. Most of this fascination has been directed toward the fighting on land, and there is much to capture the attention, including the exploits of some of America's greatest generals, such as Robert E. Lee, Stonewall Jackson, Ulysses S. Grant, and William T. Sherman. But there were strong and effective leaders at sea, including David G. Farragut, Andrew H. Foote, Franklin Buchanan, and Raphael Semmes. Whereas the struggle at sea—the blue-water Civil War—was nowhere nearly as sanguinary as the contest on land, it is every bit as intriguing.

Students of the Civil War continue to be fascinated by its machinery, especially that used at sea. Of particular appeal are the new Dahlgren guns; the ironclads *Monitor* and *Virginia* and their clash at Hampton Roads, the first ever between ironclads; the extensive use of mines, or torpedoes as they were known at the time and identified here; and the development of submarines, one of which registered history's first successful sinking of a surface ship by a submerged vessel.

There also were dramatic major sea battles, although the numbers of ships involved did not approach those at Trafalgar in 1805, or in the later battles of Jutland in 1916, or Leyte Gulf in 1944. An advantage for the student of the war, the smaller numbers make it possible to examine the battles in greater detail. Single ship contests also attract attention—primarily the *Monitor* versus the *Virginia*—but also the *Kearsarge* versus the *Alabama*. Sea battles were not most of the war, of course. Typical of other conflicts, the bulk of a sailor's time was occupied with routine activities. There were long stretches of monotony, punctuated by a few episodes of intense and dramatic action.

The war at sea was immensely important in deciding the outcome. The North was able to exploit its significant naval and maritime advantage to turn the war on land in its favor. Above all there was the Union blockade of the Confederate coasts. This

action kept the South from selling its cotton crop abroad and using the revenue to purchase arms and machinery. Although blockade runners continued to get into Southern ports throughout the war, it became much more difficult as the conflict wore on, and much of this traffic, in any case, was not in war matériel. Control of the Confederate coasts afforded the Union the same advantage that the British had enjoyed during the War of American Independence and again in the War of 1812—the ability to project land forces at will against any point along some thirty-five hundred miles of coastline. Such actions intensified the South's already horrendous defensive problems, forcing it to dissipate scant resources over a vast area.

Union control of the sea also prevented foreign intervention in the war, a major goal of President Abraham Lincoln's diplomacy. There was another side to the blockade, too little mentioned. Union sea power allowed the North access to the world's markets. It not only permitted the United States to secure what it needed for the war from abroad, but it also allowed the North to sell its products to Europe and the rest of the world. Such activities strengthened the Northern economy. "Corn," as the English called grain, shipped from the North was more important to Britain than cotton. Of course, Confederate commerce raiders usually destroyed a number of Union merchant ships, thereby driving up insurance rates and forcing the fleet of ships to fly foreign flags. However, it did not affect Union trade to any appreciable extent.

In the interior, Union land and naval forces, working in tandem, bisected the South along its great interior rivers. Southern ironclads along these rivers were few in number and too indifferently propelled to be a major factor. Northern control over the Mississippi River, when it came at last, had profound political and economic influences, as well as the obvious military advantage of cutting off supplies from the Trans-Mississippi West to the remainder of the Confederacy.

Union naval forces, sometimes operating alone and at other times working with U.S. Army troops, seized many Southern coastal strongholds, including Port Royal, New Orleans, Hatteras Inlet, and Roanoke Island. Some ports, such as Charleston and Wilmington, held out much longer. Charleston was the scene of

one of the more dramatic confrontations of the war and one of the most sustained operations in naval history. The Union seizure of Confederate ports cut them off as a point for blockaders but reduced the land and sea power of the Confederacy and furnished bases for future Union operations. Sometimes Union naval forces operated independently, such as Commodore Farragut's operations against Vicksburg.

Further, ships engaged shore and river batteries on numerous occasions. In some cases large vessels operated at close range, such as at Fort Henry on the Tennessee River, in the passage to New Orleans, and against Vicksburg. But there were many more examples of smaller vessels employing boat howitzers at close range to engage a battery or single artillery piece along riverbanks. While ship-to-shore bombardment was not always successful, there were occasions when it was crucial to the outcome, such as at the Battles of Belmont and Shiloh.

Indeed, the Civil War saw extensive use of shore bombardment as a result of many factors, the most important of which was the introduction of ironclad vessels and steam power. The latter allowed bombarding vessels to choose the timing of their attack, independent of wind conditions, and to maintain position much more easily than old sail-driven warships. More accurate and more powerful guns also had appeared, although the effectiveness of these weapons against earthen fortifications was limited.

Although fighting on land continues to hold center stage, much more is being written about the Civil War at sea. The naval war is coming at last to receive the attention it so richly deserves.

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CHAPTER ONE

THE SEA WAR BEGINS

MID-NINETEENTH-CENTURY NAVAL REVOLUTION

WHEN THE CIVIL WAR began, a revolution in ships and naval ordnance was under way. The war both benefited from, and enhanced, that change. As far as ships were concerned, the revolution meant a change from wooden vessels propelled by wind to iron ships powered by steam.

Americans had led in the revolution. Robert Fulton's *Demo-logos* was the world's first steam warship, and John Ericsson and Robert F. Stockton's *Princeton* was the world's first screw propeller warship. Robert L. Stevens, who had begun the ironclad revolution, came up with the idea of attaching iron plates to a vessel to protect it from enemy fire. The Stevens Battery, as it came to be known, was never completed. When Stevens received congressional funding in 1842, it was the first government appropriation in history for a modern ironclad warship, but then Ericsson arrived in the United States with a 12-inch gun. Tests with this powerful gun confirmed that its projectiles could smash through 4.5 inches of iron. This fact forced Stevens to increase armor thickness to 6.75 inches, and the ship had to be enlarged to take the extra weight. There was talk during the Civil War of completing the Stevens Battery, but the cost was too great, and it was sold for scrap in the 1870s.

Other powers took up the idea, especially the French. Similar to the Confederacy in that their chief rival, the British, possessed overwhelming naval power, the French sought to offset the British advantage by new technology. The effectiveness of ironclads was demonstrated during the 1854–1856 Crimean War. In October 1855 three French floating batteries, armored with 4-inch forged iron over their wooden sides, attacked Russia's Kinburn forts at the mouth of the Dnieper and Bug Rivers and

reduced them to rubble. The French vessels were largely undamaged, and many observers concluded that the days of wooden ships-of-the-line were over.

The British also built floating batteries, but it was the French who most fully understood their implications. France halted construction of wooden ships-of-the-line and began converting its fleet into fast, single-gun deck ironclads. In 1858, France laid down the steam screw frigate *Gloire*, which entered service in 1860. Her sails were secondary only. Protected by a 4.5-inch belt of iron that ran her entire length and extended from 6 feet below the waterline to the upper deck, she mounted 30 rifled, breech-loading guns. France launched its first iron-hulled capital ship, the *Couronne*, in March 1861.

The British, however, were slower to act. Although well aware of the new developments, London continued to build wooden ships-of-the-line. The British did not have great confidence in ironclad vessels. Indeed, in 1856 they responded to the U.S. Navy's new large *Merrimack* class of steam frigates with the *Mersey* and *Orlando*, the largest and most powerful single-deck wooden warships ever built. But news of the construction of the *Gloire*, which reached Britain in May 1858, created something akin to panic and goaded London into action. Britain led the world in metallurgical techniques, and its armor plate was superior to that of France.

The result of Britain's advanced shipbuilding techniques was the *Warrior* of 1862. She demonstrated British determination to retain leadership in naval technology. She was larger than the *Gloire* and longer than any wooden warship. Whereas her rival was merely a wooden ship protected by iron plate, the *Warrior* was virtually an iron vessel. Whereas the *Gloire* was designed for coastal purposes, the English ship was an ocean-going warship. The *Warrior* immediately made every other warship in the world obsolete. By 1861, Britain and France had a total of twenty-eight ironclads built or under construction.

Armored turrets to encase the guns on ships also appeared. As early as 1843, T. R. Timby of New York had patented the metallic revolving fort for use on either land or ship. Capt. Cowper Coles of the Royal Navy developed the same idea during the Crimean War and perfected it by 1858. His turret, based on a rail-

road turntable, was mounted on a roller path (John Ericsson's turret design for the *Monitor* utilized a central pivot instead). Combined with iron hulls, the turret allowed small vessels to mount a few of the heaviest guns.

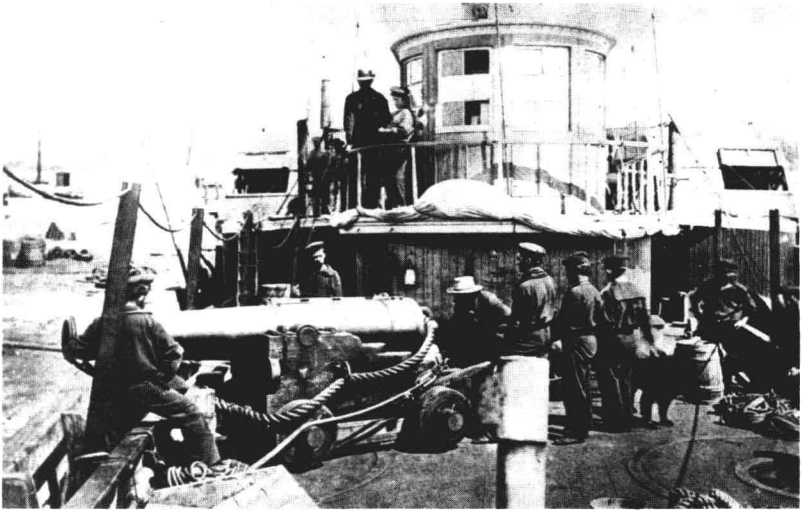
A revolution also was under way in types of projectiles and ordnance. For centuries the mainstay at sea had been solid shot projected from smoothbore muzzle-loading guns. Shot tended to leave smooth round holes that were easy to patch, and few ships were actually sunk by it. Rather, it was personnel casualties and the damaging of masts and spars by shot that tended to be fatal. Probably more ships were taken by boarding than were sunk. In the 1820s, however, individuals, especially Col. Henri Paixhans in France, had become advocates of explosive shell. Paixhans and others argued that guns should be developed to project large shells at sufficient velocity so that they would lodge in the side of the target wooden vessel and then explode, tearing large irregular holes that would be difficult to patch and that perhaps would even sink the intended victim.

Commander John Dahlgren was the principal ordnance innovator in the U.S. Navy before the Civil War, and in 1844 he had been assigned to the Washington Navy Yard to conduct ordnance ranging experiments. Soon he was designing locks for guns and had developed a new system of naval ordnance. In 1849 he produced a new howitzer for the navy. Cast of bronze, these appeared as 12- and 24-pounder smoothbores and 3.4-inch (12-pounder) and 4-inch (20-pounder) rifles. The boat howitzers were the finest guns of their time in the world. Extensively used by both sides throughout the Civil War, they remained in service with the U.S. Navy until the 1880s. They also were copied by other navies. But Dahlgren is chiefly remembered for his system of heavy smoothbore, muzzle-loading ordnance. The first prototype 9-inch Dahlgren gun was cast at Pittsburgh's Fort Pitt Foundry and delivered to the Washington Navy Yard in May 1850.

The new guns, with their smooth exterior, curved lines, and weight of metal at the breech, which was the point of greatest strain, resembled soda water bottles and were sometimes so called. Dahlgren designed them to place the greatest weight of metal at the point of greatest strain at the breech. The 9-inch remained the most common broadside, carriage-mounted gun in

the U.S. Navy in the Civil War; the 11-inch, the prototype of which was cast in 1851, was the most widely used pivot-mounted gun. A shell from the latter could pierce 4.5 inches of plate iron backed by 20 inches of solid oak.

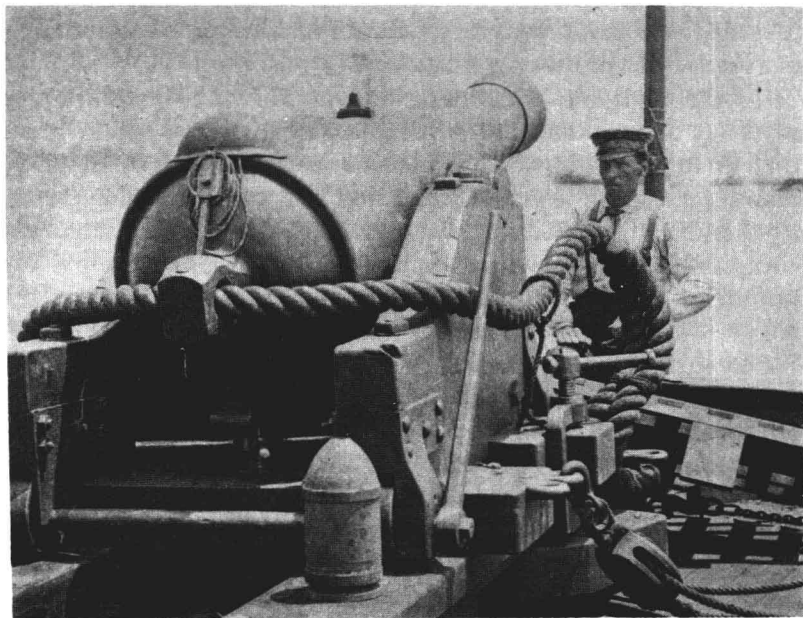
Dahlgren guns appeared in a variety of sizes including 32-pounder, 8-inch, 9-inch, 10-inch (a lighter gun for shell and heavier gun for firing primarily shot), 11-inch, 13-inch, and 15-inch. The latter weighed 42,000 pounds. There was even a gun of 22-inch bore (97,300 pounds) that did not see service aboard ship during the war, however. The 15-inchers were used aboard Union monitors. Dahlgren also designed rifled guns, somewhat similar in shape to his smoothbores. Some of these had separate bronze trunnion and breech straps. Dahlgren rifles appeared in 4.4-inch (30-pounder), 5.1-inch (50-pounder), 6-inch (80-pounder), 7.5-inch (150-pounder), and 12-inch (only three of which were cast). They were not successful, and in February 1862 most were withdrawn from service. Apart from the rifles, Dahlgren guns were extraordinarily reliable. Ironically, in the Civil War the best chance of damaging an ironclad was with a smoothbore gun firing solid shot, not shell, at the greatest possible velocity.



Old guns and truck carriages were widely used during the war, as may be seen in the photograph of U.S. Navy steam tug *Thomas Freeborn* of the Potomac Flotilla in May 1861. Naval Historical Center. NH 60990

The most reliable rifled guns on the Union side were those designed by Robert P. Parrott, former army ordnance captain and then superintendent of the West Point Foundry Association, one of the major suppliers of ordnance to the army and navy. Rifled guns were extremely vulnerable to bursting because of closer tolerance and greater strain on the gun in burning the powder charge. Recognizing the vulnerability of the cast-iron tube, Parrott shrunk a hot wrought-iron spiral-wound band over the breech of the gun. On cooling, it contracted and gripped the tube with its tensile strength.

Parrott's first rifle was a 2.9-inch (10-pounder), but before the Civil War he also made a 3.67-inch (20-pounder) and a 4.2-inch (30-pounder). After the start of the war larger Parrotts were manufactured for both the U.S. Army and Navy. These appeared in 5.3-inch (60-pounder), 6.4-inch (100-pounder), 8-inch (150-pounder), and 10-inch (300-pounder) sizes. By February 1864 the navy had received 790 Parrott guns, from 3.67- to 8-inch size,



A 6.4-inch (100-pounder) Parrott rifled gun aboard USS *Teaser* during the Civil War. Note the compressor gear and shell in the foreground. National Archives. 90-CR1-482