

Civil War Ballooning: The First U.S. War Fought on Land, at Sea, and in the Air

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World War I is typically considered the first war where the United States deployed aviation forces, but in actuality, the U.S. military began to rely on military aircraft over fifty years before WWI, during the Civil War. Both the Union and the Confederacy used hot air balloons for reconnaissance to help determine the location of troops and artillery. This innovation in aerial warfare was a trailblazer for its time, as it took place forty-two years before the invention of the airplane.



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Thaddeus Lowe, the civilian aeronaut behind the Union Army Balloon Corps, first saw the possibility of balloon reconnaissance after his eventful balloon trip in April of 1861. What was supposed to be a simple flight from Cincinnati to the Atlantic Ocean resulted in Lowe accidentally landing behind Confederate lines in South Carolina where he was captured and eventually released. With the backing of Smithsonian secretary Joseph Henry, U.S. Treasury Secretary Salmon Chase, and *Cincinnati Daily Commercial* editor Murat Halstead, Lowe traveled to D.C. to propose his idea of a balloon corps to President Abraham Lincoln. On June 16, 1861, he demonstrated the possibility of balloon reconnaissance and

communication on the National Mall using the balloon *Enterprise*. After his demonstration, Lowe and President Lincoln met and discussed using balloons to gather intelligence. President Lincoln was extremely enthusiastic and arranged for Lowe to meet with General Winfield Scott on July 25. The Union Army Balloon Corps, a civilian institution under the jurisdiction of the Union's Bureau of Topographical Engineers, was formed afterward. Lowe was named Chief Aeronaut and authorized to procure equipment and recruit personnel. On August 2, 1861, he received funds to build the first balloon.

Around the same time Lowe proposed his idea of a balloon corps, John LaMountain, another civilian aeronaut, was also trying to contact the Union Army to provide balloons. However, unlike Lowe, LaMountain did not have any influential backers, so he was unable to meet with anyone. He tried to have an audience with U.S. Secretary of War Simon Cameron but was unsuccessful. Despite the difficulties, he was able to get the attention of Major General Benjamin F. Butler, commander of Union forces at Fort Monroe in Hampton, Virginia. Butler privately contracted with LaMountain, who arrived at Fort Monroe on July 25, 1861. Poor weather prevented him from making a successful balloon flight for six days until July 31. The following day, he conducted the first



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aerial surveillance in the United States, spying on the Confederate camp at Young's Mill, sixteen miles from Fort Monroe. He was also the first to gather intelligence from a free, untethered balloon flight. LaMountain continued to make successful flights until August 10, 1861, when he left Fort Monroe after running out of supplies.

After leaving Fort Monroe, LaMountain failed to garner further Union Army support. Without backing from the military, he had trouble procuring equipment. On November 16, 1861, he lost his balloon, the *Saratoga*, but continued to experiment with other balloons near Alexandria Seminary in Alexandria, Virginia in December of 1861. By the time LaMountain returned to Fort Monroe, Major General John Ellis Wool had replaced General Butler. Wool had no interest in LaMountain's ballooning service. LaMountain subsequently joined Lowe's balloon corps. The two aeronauts did not get along and when their rivalry gained public notice, General-in-Chief George McClellan dismissed LaMountain from military service on February 19, 1862, ending his career in military ballooning.

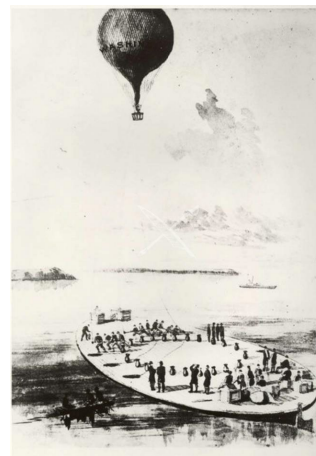


Dr. James L. Green

Excelsior. Each one was 15,000 cubic feet and could only be operated by a single person. The balloons were purposely colorful and easily visible to intimidate Confederate troops, making them feel as if nearby Union troops were watching them.

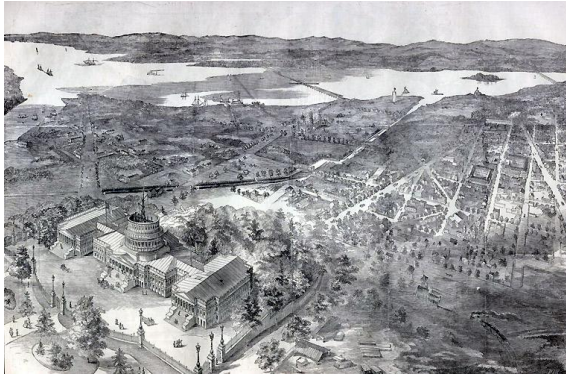
The Union Army Balloon Corps consisted of seven balloons. The two largest were the *Union*, the original balloon, and *Intrepid*. Both were 32,000 cubic feet and could carry five people in the basket. The *Constitution* and *United States* were the second largest, with both at 25,000 cubic feet and a capacity of three people. The *Washington* was 20,000 cubic feet and could carry two people. The two smallest balloons were the *Eagle* and

The balloons were first launched over land and tethered to the ground. There were a few instances where intelligence was gathered from a free flight, but only experts, like LaMountain, were capable of doing so. Eventually, the balloons were also able to be launched from the water. Both Lowe and LaMountain launched balloons from vessels, successfully combining airborne and naval forces, a first in military history. In August of 1861, Lowe built the first aircraft carrier, the USS *George Washington Parke Custis*, out of an old coal barge. The *Custis* was pulled by the USS *Stepping Stone*. LaMountain did not build his own carrier, but he did launch balloons from the USS *Fanny*



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and USS *Adriatic* in August of 1861. Other barges were converted into aircraft carriers as well.



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The advantage of balloon reconnaissance was that it gave a bird's-eye view of the area, allowing scouts to see and detect the enemy miles away. This proved to be useful during campaigns and battles. From late 1861 to early 1862, the balloons were tethered around D.C. along the Potomac River. This surveillance allowed the Union Army to protect the capital from any attacks by the Confederacy. The Union used reconnaissance balloons during the Manassas Campaign. On

September 24, 1861, Lowe gathered intelligence about the Confederates' position three miles from Union troops. This enabled Union troops at Arlington, Virginia, to accurately fire at Confederate troops stationed at Falls Church, Virginia, without having a visual on their targets, a first in warfare history. Balloons also played a crucial part in the Island Ten Campaign, Peninsula Campaign, Siege of Yorktown and Fredericksburg, Battle of Fair Oaks, Fredericksburg Campaign, and Chancellorsville Campaign. In the Peninsula Campaign, the Confederates would open fire at the balloon when it ascended and descended with guns and artillery, in hopes of shooting it down. This became a regular occurrence. Yet the balloon survived and helped the Union discover the Confederates' evacuation. During the Battle of Fair Oaks, the presence of Union balloons forced the Confederacy to hide their troops and conceal their locations. To achieve this, the Confederates blacked out their camps after dark and created counterfeit camps and artillery emplacements; however, this wasted precious time and energy.

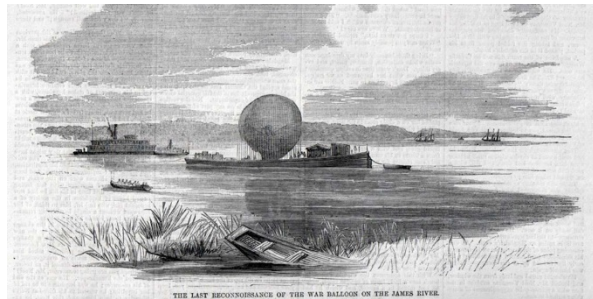
As a response to the Union Army Balloon Corps, the Confederate Army created its own smaller balloon corps in the spring of 1862. Captain John Randolph Bryan supervised the construction and deployment of a surveillance balloon. He wrote, "I have never even seen a balloon, and I knew absolutely nothing about the management of it." The cotton balloon was coated with varnish and filled with hot air, rather than hydrogen, because the Confederate Army did not have the equipment to generate hydrogen on battlefields. Bryan launched the balloon on April 13, 1862, over Yorktown, Virginia. During the flight, Bryan sketched Union positions. However, on the next flight, Bryan was forced to cut off the tether after someone on the ground got tangled in it. During his free flight, Confederate troops fired on the balloon believing it belonged to the Union Army. Bryan escaped and landed safely.

Confederate troops nicknamed their second balloon, *Gazelle*, the "Silk Dress Balloon" because it was made of multi-colored dress silk. A popular belief was that ladies donated their silk dresses

to make the balloon, but in reality, no dresses were used. Langdon Cheves built the balloon in Savannah, Georgia, personally paying all the expenses. When completed, the *Gazelle* was filled with gas in Richmond, Virginia, before being tethered to a locomotive and transported to the battlefield. The balloon was then moved to the tugboat CSS *Teaser* where General Edward Porter Alexander piloted it during the Seven Day Campaign near Richmond. On July 4, 1862,



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four days after the end of the campaign, the USS *Monitor* and USS *Maratanza* attacked the CSS *Teaser* on the James River, forcing the Confederates to abandon the tugboat and balloon. Union soldiers delivered the captured balloon to Lowe, who cut it up into pieces and sent them to members of Congress as souvenirs. This ended the Confederacy's balloon corps.

While military ballooning proved useful, the Union Army Balloon Corps did not last to see the end of the war. Reconnaissance balloons offered several advantages, but also some limitations. There were communication issues between the Balloon Corps and military officers, and intelligence was not always clearly delivered to the officers on the ground. Logistics and planning determined whether or not balloon reconnaissance would be useful. Additionally, Lowe had trouble navigating the Army bureaucracy. In 1863, Captain Cyrus Comstock, who oversaw the Balloon Corps, cut funding, rendering the Corps less effective. Lowe's pay was also reduced after he was accused of financial impropriety. He resigned from the Union Army on May 8, 1863. By August 1863, Ulysses Grant had dissolved the Balloon Corps, favoring attrition warfare over intelligence. On April 20, 1864, the army auctioned its remaining balloon equipment.

In terms of innovation, the Civil War is mainly remembered for its advancement of medicine, but the use of balloons modernized American warfare. Never have Americans used aviation in warfare before. The creation of the Union Army Balloon Corps was the start of the United States using aviation forces in warfare. Aviation reconnaissance would be seen in the Spanish-American War and First World War. The Union Army Balloon Corps was the predecessor to aircraft in warfare and could be considered the first U.S. air force. Additionally, the Civil War was the first time where maritime and air forces were combined. The USS *George Washington Parke Custis* was the first aircraft carrier and marked the beginning of the integration of vessels and aircraft. Lowe and LaMountain's innovation in aviation warfare has largely been forgotten, yet their legacy is prevalent. Their work helped to open a new branch of warfare and reconnaissance, as aviation warfare and reconnaissance would be used in later wars and become an integral part of modern combat, logistics, and strategy.