



and faculty played remarkable roles in the nation's bloodiest conflict—serving both North and South.

BY W. BARKSDALE MAYNARD

IT'S been 150 years since Abraham Lincoln visited Philadelphia in February 1861, on his way to be inaugurated in Washington. The Union was already splintering, and with its many economic and social ties to Dixie, the Quaker City was deeply divided, but big crowds turned out to cheer Lincoln as he rode from the railroad station to the Continental Hotel at 9th and Chestnut streets.

As they greeted throngs from the hotel balcony, the city's mayor, Alexander Henry, may have directed Lincoln's gaze just up the street, where the University of Pennsylvania, of which Henry would soon be named a trustee, was then located. Penn had known better days. Its College program had shrunk to just 100 students, and many called the place "that medical college on 9th Street."

But University alumni would figure significantly in the coming Civil War. Some 4,000 served in some capacity in the conflict, with hundreds taking up arms. The number of casualties has never been tabulated, but certainly the 19 Northern dead listed on an 1879 plaque in College Hall are just a fraction.

At least 200 Union Army officers were educated at Penn, including 15 brigadier generals (several of whom attended the University before winning places at West Point). But the University's long-standing affiliation with the South meant that many graduates served the Confederacy as well, including more than 80 officers.

If the College was sputtering in the Civil War era, the medical school was famous everywhere, and the source of Penn's greatest contribution to the national conflict: 800 alumni served as surgeons in the Union forces, while Confederate hospitals were staffed with more than 500 of Penn's graduates.

**Not all of Penn's contributions** to the era were proud ones. In the years leading up to the war, the University produced quite a few pro-slavery Fire-Eaters, whose polemics fanned the flames of secession. Penn graduates edited the pro-secessionist Montgomery Advertiser and Southern Literary Messenger, where Samuel Dickson M1819 argued in 1844 that negroes were "an inferior and degraded race" who benefited from the civilizing effects of being enslaved. If freed, they would revert to savagery. Robert Walker C1819, senator from Mississippi and Secretary of the Treasury under pro-Southern president James Polk, led the effort to annex Texas as a huge slave state. The Fugitive Slave Act of 1850, which outraged many Northerners, was written by James Mason C1818, senator from Virginia. A friend of Jefferson Davis, he was sent to England in 1861 to curry favor for the Confederacy. His seizure from the British ship *Trent* by Union sailors provoked an international furor.

As slavery became the burning issue of the antebellum years, Philadelphia was the center of the so-called "scientific" study of the negro race. Samuel Morton M1820 collected more than 1,000 skulls from across the globe, then measured them to determine which race had the greatest intellect. He concluded that African blacks were so inferior, God must have created them separately from Adam, as their own lowly species. Josiah Nott M1827 popularized this separate-creation theory in his standard text, *Types of Mankind* (1854).

**With Lincoln's election,** the South resolved to break away, and its bombardment of Fort Sumter raised the curtain on war. Samuel Crawford M1850, a surgeon at that garrison, rushed to the parapets to fire cannons as the fort doughtily answered its attackers.

Word of Fort Sumter's capitulation on April 14, 1861, stunned Philadelphians. Penn students spilled out into College Yard when they heard the news. Although most were too young to enlist, they soon organized the University Light Infantry, drilling in gray cadet uniforms under the watchful eye of their English professor, West Point graduate Henry Coppee, whose Georgia origins seemed to hinder his chances of becoming a top Union officer.

Wealthy alumni funded the creation of military units in the city. One was lawyer William Wister C1846, who as an undergraduate had established Penn's first organized sport, cricket. In May 1861 he organized Cavalry Troop Company, drilling on a field in Chestnut Hill where, 22 years later, his Philadelphia Cricket Club would rise.

Wister survived years of cavalry fighting, but other officers were not so lucky, and their bodies were shipped home for lavish funerals. Among them was Colonel J. Richter Jones C1821, a former judge who read Caesar's *Commentaries* in his tent at night and proved a terror to Confederates in the thickets of coastal North Carolina. They singled out this "bold, dangerous, bad man" for elimination: a sniper shot him through the heart from behind a chimney. Jones lay in state in Independence Hall.

The top commander of Union forces in the East, General George McClellan, was the son of a Penn-educated doctor of the same name who founded Jefferson Medical College in 1824. McClellan enrolled at Penn at age 13 before transferring to West Point. As a young officer he visited Crimean battlefields, then returned home to Philadelphia to write an official report for then-US Secretary of War Jefferson Davis. Lincoln appointed McClellan head of the Army of the Potomac and counted on him to crush Robert E. Lee—a hope that would prove unfounded.

During McClellan's 1862 campaign for Richmond, fighting was furious. The first Philadelphia doctor to sign up for military duty when war began, Owen Stillé M1851, lost all his equipment in the battle of Fair Oaks but nonetheless tended the injured until his own demise from sickness and exhaustion.

Many Philadelphia men were slaughtered in the murderous Confederate countercharge at Glendale, including Major Henry Biddle C1834, formerly a banker in the city. His body would be exhumed in 1865 and brought back to Laurel Hill Cemetery overlooking the Schuylkill, last home of many Union officers, including 40 generals.

**As armies struggled** for control of Richmond, navies clashed at Norfolk, where the first appearance of ironclad ships changed warfare forever. An officer on the sailing frigate *USS Congress*, surgeon Edward Shippen M1848 raised his spyglass to behold a new era: "There was a huge black roof, with a smoke-stack emerging from it, creeping down towards Sewell's Point." This was the fearsome Confederate ironclad *Virginia*.

Congress fired a thunderous broadside with 35 guns, but cannonballs bounced off the iron plating of *Virginia* "like hail upon a roof." Then *Virginia* devastated *Congress* with a broadside of its own, leaving Shippen stunned amidst "lopped off arms and legs and bleeding, blackened bodies scattered by the shells, while blood and brains actually dripped from the beams."

Forced to surrender, *Congress* burned, then exploded. Among its officers was McKean Buchanan C1817, brother of the Confederate admiral commanding *Virginia*—which faced off with the *USS Monitor* the following morning in an epic duel.

Monitors (warships modeled on the original *Monitor*) would play important roles throughout the war. Some of their huge engines were built at Port Richmond Iron Works, Philadelphia, under the oversight of Henry Towne C1865.

**Several alumni perished** as armies surged back and forth in Virginia in 1862. At Second Bull Run, Lt. Colonel Thomas Martin C1842 was mortally wounded as graycoats attacked his line. Bleeding in the dirt on Bald Hill, he waved help away:

"Never mind me, boys. Go back to the regiment. You are wanted there."

Charged with defending Washington, General Francis Patterson C1841 heard locomotive whistles and thought Rebels were coming. For ordering a panicked retreat, he was arrested by General Daniel Sickles. Patterson eluded court-martial by shooting himself to death in his tent.

**Lee's army** invaded Maryland only to be turned back on September 17, 1862, at bloody Antietam, where 5,750 combatants died. Fighting that day was Penn professor of civil engineering Fairman Rogers C1853, who taught horsemanship to cavalrymen. After the war, the devoted equestrian designed a special camera shutter to take high-speed photographs of galloping horses and encouraged the stop-motion studies of Eadweard Muybridge at Penn.

Also at Antietam was Lt. Colonel Oliver Hopkinson C1832, son of the author of the patriotic song "Hail Columbia" and grandson of a signer of the Declaration of Independence. The Philadelphia lawyer served with the First Delaware at the horrific Sunken Road, where eight of their 10 officers were casualties. Hopkinson fell with a gunshot wound to the ankle, but survived to become Penn's oldest graduate of his day, buried at Laurel Hill in 1905 at the age of 93.

With the coming of spring in 1863, war erupted again in Virginia. John Haddock C1859 fell waving his saber in a cavalry charge at Chancellorsville. Colonel Benjamin Tilghman C1839 was shot in the thigh, but recovered enough to later command a Philadelphia regiment, 3d US Colored Troops, in action in coastal South Carolina. After the war, this chemist invented sandblasting, which speeded the carving of 274,000 Union headstones in military cemeteries.

Major Henry Whelan C1853 survived the biggest cavalry battle ever fought in America, at Brandy Station, Virginia, in June 1863. "We dashed at them, squadron front with drawn sabers, and as we flew along—our men yelling like demons—grape and canister were poured into our left flank," Whelan recalled. "Our brave fellows cut [the enemy] out of the saddle and fought like tigers ... The air was almost solid with lead." He finally went down in a heap when his horse was shot out from under him. Whelan's Medal-of-Honor-winning comrade in Rush's Lancers was architect Frank Furness, who designed the campus landmark now known as the Fisher Fine Arts Library.

When guns began to roar at Gettysburg, just 105 miles from Penn's classrooms on 9th Street, on July 1, 1863, Colonel Thomas Carter M1852, a cousin of Robert E. Lee, partly guaranteed the Confederate success on the first day of fighting. His cannons poured deadly fire from the hilltop where the Peace Light Memorial (designed in the 1930s by longtime Penn architecture professor Paul Philippe Cret) now stands. Soon the Union Army formed its defensive "fishhook," the far right of which was anchored by dashing General Thomas "Beau" Neill C1845, formerly a drawing instructor at West Point. Neill Avenue on today's battlefield is named for him.



The second day of fighting brought glory to Samuel Crawford, the Penn alumnus and surgeon last seen manning the cannons at Fort Sumter. Now a brigadier general, he rushed to the battle-field with Pennsylvania reserves, just in time to sweep over Little Round Top and drive exhausted Confederates back through the Valley of Death. Seizing the moment, the flamboyant Crawford grabbed a flag from his own color bearer and ran at the head of his troops. A statue of Crawford dedicated at Gettysburg in 1988 shows him proudly clutching his bullet-riddled flag.

At war's end Crawford found himself at Appomattox, one of only two men known to witness both the alpha and omega of the Civil War.

**Gettysburg proved** the South's high-water mark. At exactly the same time, an equally important battle was under way for control of the Mississippi River at Vicksburg. That town was under the command of Southern Lt. General John Pemberton, who attended Penn as an undergraduate in the 1830s before transferring to West Point.

Born in Philadelphia, Pemberton was said (apocryphally) to have play-acted the historic Battle of New Orleans from the War of 1812 in the streets with boyhood friends George McClellan and George Meade (who would become the general who won Gettysburg). Pemberton was a hero in the city, awarded an engraved sword for his exploits in the Mexican War. But being stationed in the South, plus marrying a Virginia belle, shifted his allegiances. In 1861, against the objections of his Philadelphia family (and his brothers, who joined City Troop), he offered his services to Jefferson Davis.

All ended disastrously, however: Pemberton failed to save Vicksburg, and the South's doom was sealed. A pariah in the Confederacy for being the Yankee who surrendered Vicksburg on the Fourth of July, Pemberton eventually skulked back to

Philadelphia after the war, dying at suburban Pennlyn in 1881. Protests accompanied the burial of this Rebel in the sacred precincts of Laurel Hill.

**Throughout the long years** of war, the Quaker City remained divided. The city's numerous Democrats voted for Lincoln's opponent in the election of 1864—native son George McClellan—and hoped to make peace with the South. One of the most vocal antiwar men, or "Copperheads," was pamphleteer William Reed C1822, a former history and English professor at Penn.

In response to anti-war rumblings, pro-Lincoln citizens founded the Union League, which is still active today. It was the brainchild of Judge Clark Hare C1834, and two of its first four presidents were Penn alumni. Among its patriotic activities was the recruiting of soldiers. At the head of the 6th Union League Regiment when it charged near Petersburg, Virginia, was Major Charles McEuen C1853. In a strategy conceived by Gettysburg hero Joshua Chamberlain, Pennsylvanians forded waist-high Gravelly Run in the rain, then faced terrible fire from dug-in Confederates. McEuen was gunned down. A portrait in the Union League clubhouse honors his memory.

In 1864 the League advocated an event akin to a world's fair to raise money for the US Sanitary Commission, an organization that distributed medical and hygienic supplies to soldiers in the field. Penn trustee John Welsh was put in charge. The name *Great Central Fair* was coined by top USSC officer Charles Stillé, who was destined to play a crucial role in Penn's postwar revival.

In a whirlwind effort, 1.5 million feet of lumber was shipped to Logan Square and assembled in just 40 days into a gigantic fairground. More than 3,000 citizens volunteered in organizing the exhibitions, with Philadelphia attorney Horace Howard Furness—an ardent abolitionist, though too deaf to fight—put in charge of refereeing feuds among numerous committee heads. The brother of the architect, Furness was a Penn trustee who would later bequeath his extensive collection of Shakespeare materials to the University.

The fair was a great success, visited by 250,000 people—including Abraham and Mary Todd Lincoln—during its run in June 1864, and it raised more than \$1 million. Stillé, who had earlier penned a popular pamphlet *How a Free People Conduct a Long War*, of which 500,000 copies were distributed, wrote the Commission's official history before joining Penn's faculty as a professor of English and belles lettres.

**Meanwhile the war raged on.** In fighting in the Valley of Virginia, Confederate forces overran Union positions along Cedar Creek in a dawn attack. Captain Henry du Pont, a Penn student in 1855-56, stood by his artillery until the last possible moment, which earned him the Congressional Medal of Honor.

When Union forces took the town of Lexington, du Pont was ordered to burn Virginia Military Institute, which he reluctantly did. The memory troubled him. Fifty years later, as US Senator from Delaware, he introduced a bill giving the school \$100,000 for a new building—an act of repentance honored by a plaque at VMI in 2009.

Grant's huge army lumbered south into Virginia, a logistical challenge overseen by Quartermaster General Montgomery Meigs, who attended Penn in 1831-32 prior to West Point. Before the war,

the capable Meigs helped build Fort Delaware (later a prison camp for Confederates) as well as the US Capitol dome, the completion of which in 1863 seemed to symbolize the enduring Union.

The armies of Lee and Grant converged at the grinding siege of Petersburg, on Richmond's doorstep. John Parke, at Penn in 1843-45, was promoted to high command there after a bungled attempt to knock a hole in rebel lines at the Crater. Confederate Brigadier General James Morton C1847, son of the "scientist" who measured skulls to assess the relative intelligence of the races, was sent to Petersburg to improve the breastworks; earlier he had built the war's largest fort, Fortress Rosecrans in Tennessee. Studying the lay of the land just before a Union attack, he was shot in the chest and killed. Cecil Clay C1859 received the Congressional Medal of Honor for a charge against Confederate Fort Harrison, where his arm was blown off as he waved the flag. These and many other terrible sacrifices were needed before Petersburg finally fell, in what proved to be a prelude to Appomattox.

**Given its many doctors** and excellent rail connections, Philadelphia became the nation's most important center of wartime medical care, 150,000 sick and wounded being treated at more than 20 military hospitals.

Once it became clear that this was going to be a long war, construction of hospitals began in earnest. The largest Army hospital in the world went up amid cow pastures in West Philadelphia, where healthful breezes blew and a steamboat landing stood nearby on the Schuylkill. Opened in June 1862 on 14 acres (just 900 yards southwest of today's University high-rises), Satterlee Hospital could house 4,500 stricken soldiers. After Gettysburg, it was overflowing.

Considered ultra-modern at the time, Satterlee might strike us as a vision from Hell: amputation victims groaning in long wooden barracks, the air reeking with the stench of maggoty wounds and gangrene. And yet the doctors there were among the finest in the country. Director Isaac Hayes M1853 had been an intrepid Arctic explorer. Joseph Leidy M1844, famed for his use of the microscope to study disease (and as the first expert on dinosaurs), conducted autopsies in the Dead Building and studied the role of houseflies in spreading infection in wounds.

Penn chemistry professor Robert Rogers M1836 designed a huge laundry machine for Satterlee, but in showing a woman how to use it, his right hand got chewed up. Bravely he threw the machine out of gear. As workmen lifted the 800-pound cylinder, it fell and smashed his hand again. Rogers insisted on walking up to his front door lest his wife faint upon seeing him in an ambulance. After the amputation, he taught himself to conduct science experiments with his other hand.

So successful was Satterlee, it was replicated in 1863 at Mower Hospital, 47 buildings arranged like spokes in a wheel along railroad tracks at today's Wyndmoor, near Chestnut Hill. Amid the salubrious air of that lofty hilltop, more than 20,000 soldiers were treated. Hayes Agnew M1838, later a famous professor of surgery at Penn, rushed through the hallways performing multiple amputations daily, gaining invaluable experience that would make him one of America's great surgeons. When he retired from teaching at Penn in 1889, he was immortalized in *The Agnew Clinic* by Thomas Eakins.

Medical men on the Confederate side included Joseph

Jones M1856, who wrote a major report about illnesses raging in Georgia's infamous Andersonville Prison. He was the first person ever to describe the terrifying flesh-eating disease now known as necrotizing fasciitis.

In Richmond, Alexander Garnett M1841 was personal doctor to Jefferson Davis, fleeing the city with him at war's end. Professor of surgery at the Medical College of Virginia, Charles Gibson M1836 was named surgeon general of the state and ran General Hospital No. 1 on Shockoe Hill. Exhausted by overwork, his heart began to fail, and orderlies had to hold up his arms so he could amputate. He died just days after the war ended and was buried in an unmarked grave. Local citizens finally honored him with a marker 140 years later, in 2005.

Five days after Lee surrendered at Appomattox, Lincoln went to Ford's Theater to see a play. In the audience that night was Albert King M1865, who heard the fatal gunshot and saw the assassin flee. "Murder!" screamed Mrs. Lincoln, followed by the cry, "Is there a surgeon in the house?" King rushed to the president's side, and he and another doctor held his arms as a third pumped his chest. Then they carried him across the street to a townhouse, where Lincoln's family doctor, Robert Stone M1845, took over. Soon the surgeon general, Joseph Barnes M1838, arrived and probed the gunshot wound to the victim's head. Nothing could be done.

Four doctors performed the autopsy in an upstairs bedroom at the White House. All were Penn graduates: Stone, Barnes, Joseph Woodward M1853, and Edward Curtis M1864. As Curtis lifted out the brain, a sharp clatter broke the silence of the room: the bullet had fallen out, landing in an empty basin on the floor. "There it lay upon the white china," he recalled, "a little black mass no bigger than the end of my finger—dull, motionless and harmless, yet the cause of such mighty changes in the world's history as we may perhaps never realize."



Lincoln's body was shipped home to Illinois by a circuitous route, with numerous public viewings. Accompanying the cadaver was William Newell M1839, a friend of Lincoln's since they were in Congress together; he had been summoned to the White House when Lincoln's little boy Willie was dying. So extensive was the funeral tour, that 20 days elapsed between Lincoln's assassination and burial. To withstand this ordeal, his body was embalmed-a process that had been popularized during wartime by former Penn professor Henry Smith M1837, permitting 40,000 grieving families to look upon their sons and husbands one last time. As surgeon general of Pennsylvania, Smith developed a technique by which dead soldiers were embalmed on the battlefield by having arsenic pumped into their arteries with a syringe. Then the corpse was shipped home by train in a zinc-lined coffin. This same process was used on Lincoln.

In Philadelphia, huge crowds like the ones that turned out in 1861 now gathered to watch Lincoln's funeral procession. The University Battery of Penn student-soldiers—clad in blue uniforms with red stripes—fired six-gun salutes to the casket. But one of the guns discharged early, and an undergraduate lost an arm.

The seminal history of the Civil War was written in 1867 by John Draper M1836, a chemistry professor at New York University who had earlier perfected the art of photography for portraiture and also had taken the first pictures of the Moon. Penn graduates were also at the forefront of recording the surgical history of the war. During the Battle of Gettysburg, William Norris M1861 had dressed wounds in a church converted into a hospital for two-and-a-half days without food or rest, before collapsing from exhaustion. He also pioneered the use of cameras to study injuries, as well as photography of tissue sections using a micro-

scope; now he provided samples to the Army Medical Museum, where Alfred Woodhull M1859 catalogued grisly specimens. The museum's two Penn-educated curators edited the landmark *Medical and Surgical History of the War of the Rebellion*, 3,000 pages of battlefield case studies and gruesome illustrations.

The postbellum decade marked an historic turning point for Penn. Charles Stillé, who had proved his genius for organization with the Grand Central Fair, was appointed Penn's provost in 1868. Soon after came the symbolic rebirth of Penn with its removal to West Philadelphia, to a new campus designed for Stillé by architect Thomas Richards, who built military hospitals during the war. Now the school started anew. It had a fresh vantage point, amid sunny fields near the site of Satterlee, where alumni had worked so heroically to alleviate soldiers' hellish suffering. Even as it turned a hopeful face to the future, the University could look back with pride to the extraordinary contributions it had madewhether on great battlefields or at hospital bedsides-during America's most terrible hour.

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