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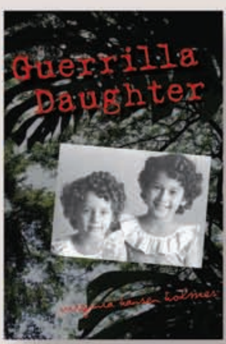

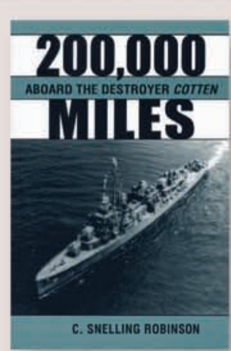

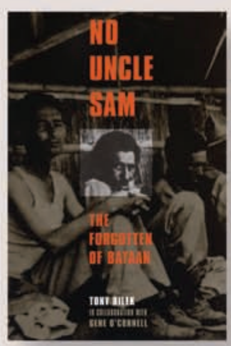

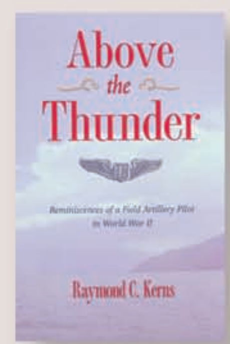

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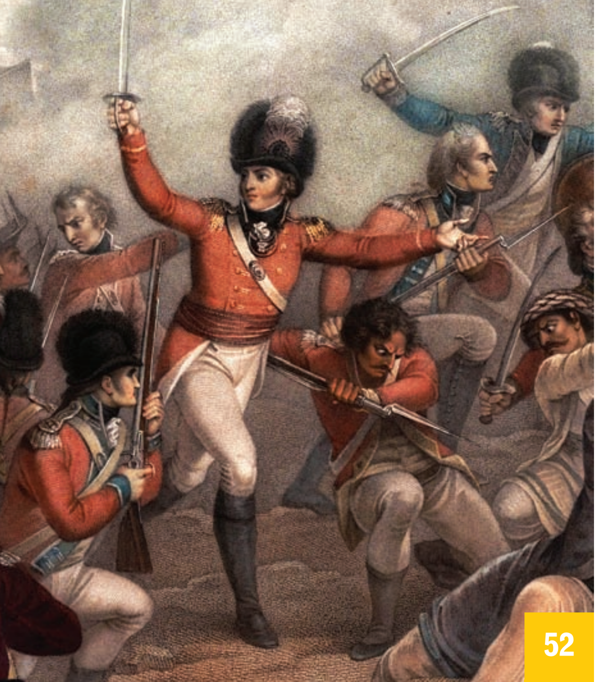

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Cover: Confederate General Thomas J. “Stonewall” Jackson was shocked by the carnage after the Battle of Port Republic in the Shenandoah Valley in June 1862. See story page 22.

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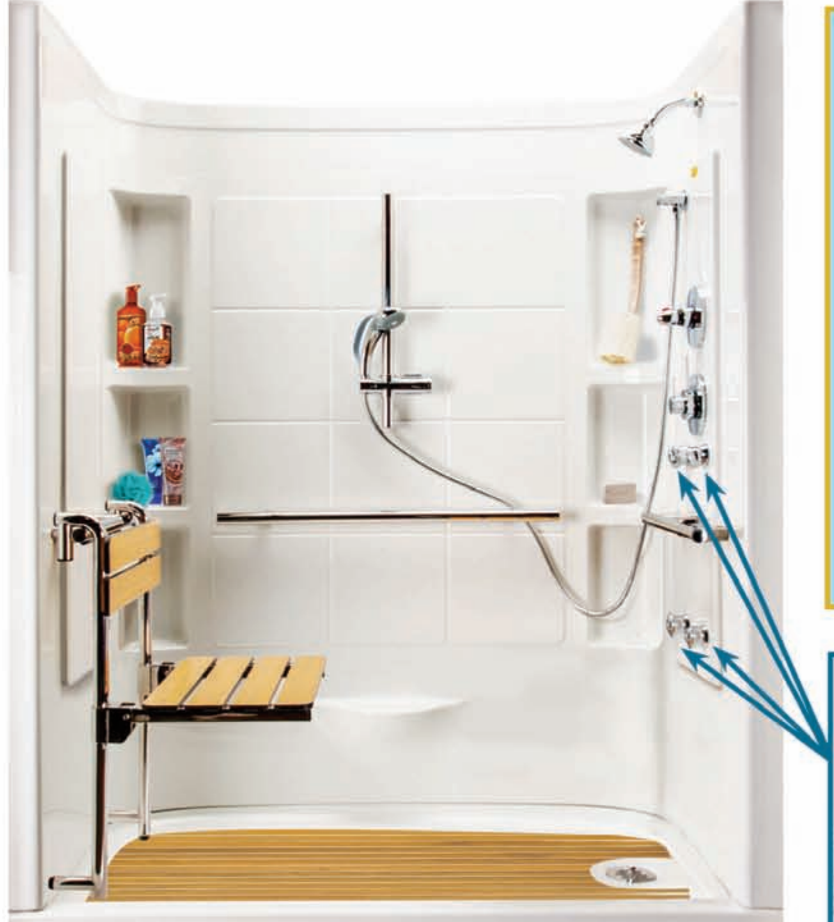

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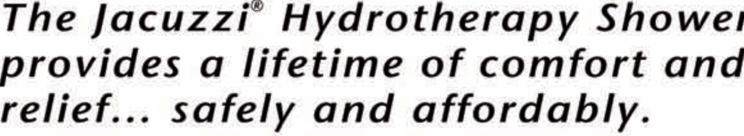

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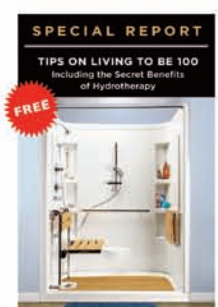

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"Aim Low, Men, and at Every Shot Let a Traitor Fall"

WHILE THERE IS NO DISCOUNTING A SOLID analysis of the strategy and tactics behind a great battle or battles, such as the climactic twin battles of Cross Keys and Port Republic on June 8-9, 1862, from Maj. Gen. Thomas J. Stonewall Jackson's famous Valley Campaign, it is equally rewarding to delve into the rich bounty of soldiers' journals, diaries, and letters from such battles.

These days it is easy to access such works. By examining the endnotes from the superb research of such noted historians of the Valley Campaign as Robert Tanner, Robert K. Krick, and others, one can identify firsthand accounts and access most of them through the nonprofit Internet Archive or period newspapers available via the Library of Congress website.

By reading soldiers' accounts, the grim nature of battle is more readily perceived. "Just before we reached the field a goodly number of our wounded were returning to the rear, limping, bleeding, and groaning," wrote Confederate George Neese of Chew's Battery of horse artillery, recalling his unit's advance to the front at Port Republic. "Some of them greeted us to the field with the unpleasing and discouraging expression of 'Hurry up. They are cutting us all to pieces.'"

Also etched permanently in Neese's memory was the sight of a field hospital. "In going toward the [battlefield] we passed a farmhouse that had been converted into an operating field hospital," Neese wrote. "I saw a subject on the kitchen table on whom the surgeon's were practicing their skillful severing operations. They tossed a man's foot out the window just as we passed."

Surprisingly, the two sides frequently complimented each other for instances of compassion to the wounded and captured, as well as for the personal bravery of their opponents. Colonel James Nisbet of the 21st Georgia Infantry noted that the Yankees under Brig. Gen. Erastus Tyler at Port Republic had fought with greater courage than did the Yankees of Maj. Gen. John Fremont's command at Cross Keys one day earlier.

"They had made a gallant fight like true Americans, and fell back in good order to form another line four miles away in marked contrast to Fremont's precipitous flight," wrote Nisbet in reference to the withdrawal of Tyler's force following the Battle of Port Republic.

The soldiers' accounts frequently furnish a poignant moment in time during the battle, such as a commander's address to his men just before they went into battle. Just before the 29th Ohio Infantry went into battle at Port Republic, its colonel spoke briefly to his men exhorting them to do their duty for the republic. "Boys, we fight against great odds," recalled W.E. Baldwin. "Aim low, men, and at every shot let a traitor fall."

Last but not least, the close calls experienced in battle by those who just barely escaped grievous wounds can make the reader stop and ponder a soldier's chance luck. In such accounts, the sense of doom is palpable. "The shells from the [Union] battery on the coaling was ripping the ground all around us, and the air was full of screaming fragments of exploding shell, and I thought I was a goner," Neese wrote.

As for his part, Baldwin had multiple close encounters with death. "It was an extremely hard-fought battle," Baldwin wrote of Port Republic. "I had six ball holes through my clothes with three black and blue spots on my person; one will ever be a reminder of that day's conflict."

In such battles many fell, and many had close calls with death.

—William E. Welsh

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Before the Belle

By Cassius Mullen with Betty Byron

CASSIUS MULLEN & BETTY BYRON
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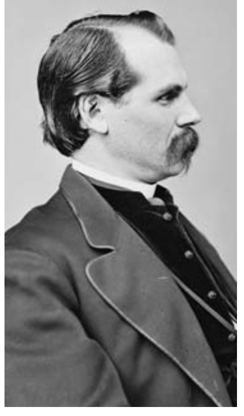
By Don Hollway



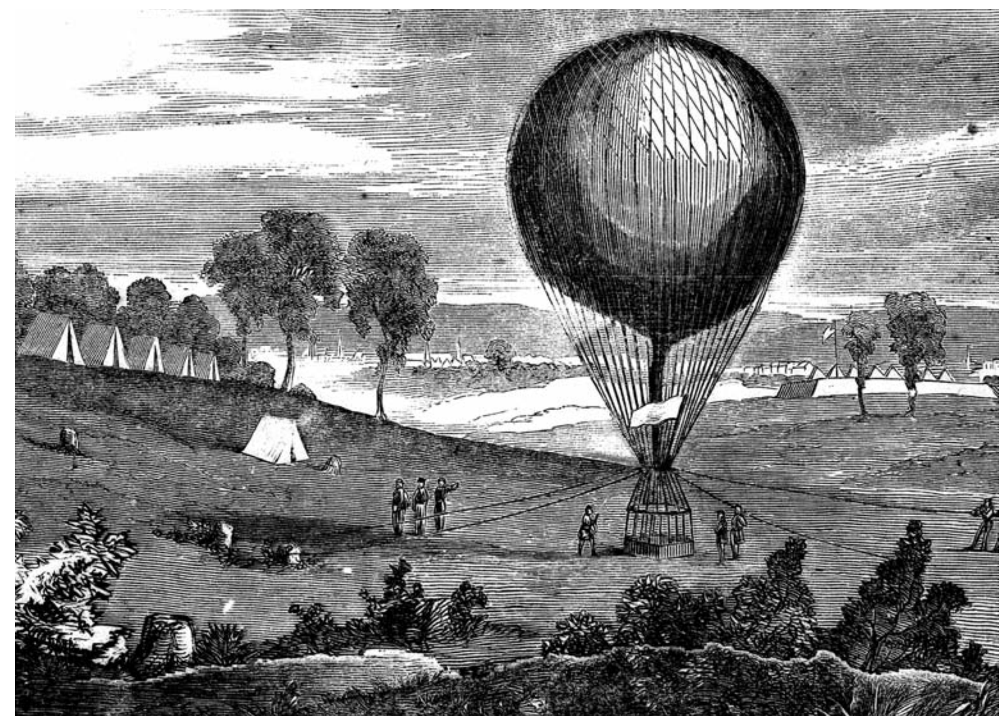
Thaddeus S.C. Lowe pioneered military aerial reconnaissance in the United States. BELOW: Professor Lowe's crew launch a reconnaissance balloon from Maj. Gen. Irwin McDowell's headquarters in summer 1861.

Thaddeus Lowe and his Union Army Balloon Corps pioneered aerial reconnaissance over some of the first battlefields of the American Civil War.

A WEEK AFTER THE FIRST SHOTS OF THE WAR BETWEEN THE STATES at Fort Sumter in April 1861, the future of warfare came to Appalachia. Plowmen in the remote Allegheny Mountains heard a voice calling, "What state is this?" and, seeing no one about, replied toward the nearest woods: "Virginia."The voice answered, "Thank you," and the farmers were startled by a stream of sand pouring, unbelievably, from the sky. Looking up they saw, hanging in space above them, a gargantuan cloth sphere. Professor Thaddeus S.C. Lowe had merely dumped ballast from his balloon, but remembered, "A yell of horror arose from them, and if fleetness of foot is any indication of fright, then they must have been terribly frightened."

If being observed from the skies was an alien experience to most people of the 1860s, navigating the skies was even more so. Lowe had lifted off from Ohio, hoping to reach Washington, D.C., as proof that a hydrogen balloon could make a trans-Atlantic passage, but contrary high-altitude winds carried his *Enterprise* more south than east: "I finally landed in South Carolina, a short distance from the line of North Carolina."

Upon touchdown he was disconcerted to find himself surrounded by ardent new Confederates. Virginia having seceded just two days earlier, he was very likely the first captive taken in the American Civil War. Lowe had long since established himself as one of the world's foremost aerialists. His title was born of showmanship rather than any official scientific degree, but Lowe never balked at self-promotion. In September 1860, only a gasbag tear had prevented his 103-foot-diameter balloon, *Great Western,* from taking off with an 11.5-ton load, including an eight-man gondola and lifeboat, across the Atlantic Ocean. His scientific credentials were enough to convince the Southern authorities that he was merely a stray Yankee. Rather than imprisoning Lowe, they politely put him and his floating contraption aboard a northbound train.



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Though Lowe had not reached Washington, word of his exploit had. The U.S. Army had little interest in using balloons over the Atlantic but much interest in using them over the Confederacy. On June 16, 1861, at the invitation of the War Department, he ascended in *Enterprise* 500 feet above the capital, telegraphing U.S. President Abraham Lincoln in the White House: "This point of observation commands an area nearly 50 miles in diameter," he wrote. "The city with its girdle of encampments presents a superb scene. I have pleasure in sending you this first dispatch ever telegraphed from an aerial station."

From above Maryland, observers could overlook Confederate outposts halfway to Manassas Junction, Virginia, 25 miles away. Control of this new "high ground" led, perhaps, to overconfidence. A month later Lowe packed his balloon and fol-

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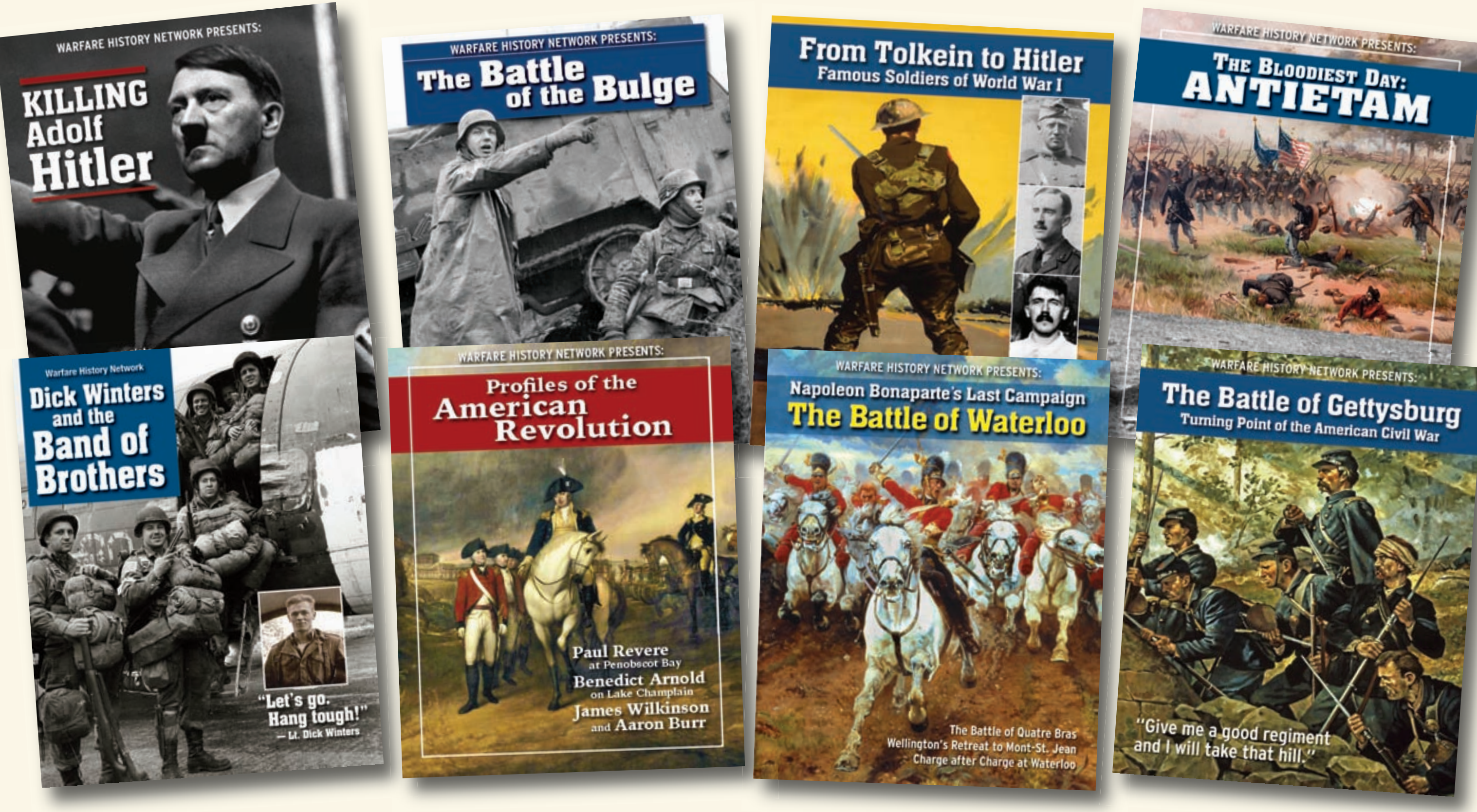

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lowed the Army of the Potomac toward the Battle of First Bull Run, only to run into a panicked throng of Federal troops, civilians, and day-tripping politicians fleeing the other way. When he took to the air to look out for any enemy pursuit, friendly forces vented their frustration on him. "Within a mile of the earth our troops commenced firing at the balloon, supposing it to belong to the rebels," Lowe wrote. "I descended near enough to hear the whistling of the bullets and the shouts of the soldiers to 'show my colors.'"

Lowe had not thought to bring a flag. "Knowing that if I attempted to effect a landing there my balloon—and very likely myself—would be riddled," Lowe wrote. "I concluded to sail on and to risk descending outside of our lines." He landed hard, punctured his gasbag, twisted his ankle, and spent a long night alone in enemy territory. Legend has it that his wife, Leontine, rode through the lines in a buckboard to retrieve him and his balloon. "A detailed account of my escape would be interesting, but it is sufficient to say that I was kindly assisted in returning by the Thirty-first Regiment New York Volunteers, and brought back the balloon, though somewhat damaged," Lowe wrote.

The Army offered to pay for a new gasbag. "From this time until the 28th of August was consumed in the construction of the first substantial war balloon ever built," Lowe wrote. "The main obstacle to the successful use of balloons still had to be overcome, namely, a portable apparatus for generating the gas in the field. I had already devised a plan for this purpose." His generators would use dilute sulfuric acid on iron filings to give off pure hydrogen.

When the Confederates pressed to within two miles of the Potomac, Lowe and his balloon rose in front of them. "The enemy opened their batteries on the balloon and several shots passed by it and struck the ground beyond," he wrote. "These shots were the nearest to the U.S. capital that had been fired by the enemy, or have yet been, during the war." He paid them back in kind, pinpointing Confederate positions from more than three miles away and using his telegraph to call down Federal artillery on them. It was the first aerially directed fire support in history.

Lincoln ordered the formation of the Union Army Balloon Corps, with Lowe as chief aeronaut, but the government neglected to fund his portable hydrogen generators. He had to inflate his new balloon, the *Union,* with coal gas from Washington, D.C., city lines—32,000 cubic feet of it—and tow it to the war zone. No sooner was it tied down in Virginia than a storm blew up. Mooring lines tore. The unmanned balloon

TOP: Lowe replenishes the larger *Intrepid* war balloon from the smaller *Constitution* during the Peninsula Campaign. BOTTOM: Lowe aloft in the *Intrepid.* The Balloon Corps furnished invaluable reconnaissance information to Union commanders when the Confederates went over to the offensive in the campaign.

whisked away to come down 100 miles away on the Delaware coast, but Lowe's military-grade gasbag held.

In early November the professor pioneered another military first: the aircraft carrier. He had the coal barge USS *George Washington Parke Custis* fitted with a "flight deck" and his new gas generator, towed out onto the Potomac by the steamer USS *Coeur de Lion* with his 20,000-cubic-foot-balloon, *Washington.* "I proceeded to make observations," he wrote, "and saw the rebels constructing new batteries at Freestone Point." These guns commanded the river from atop a cliff 90 feet above the water, invisible from the Maryland side except from the air; targeted by Federal warships, the site was soon abandoned.

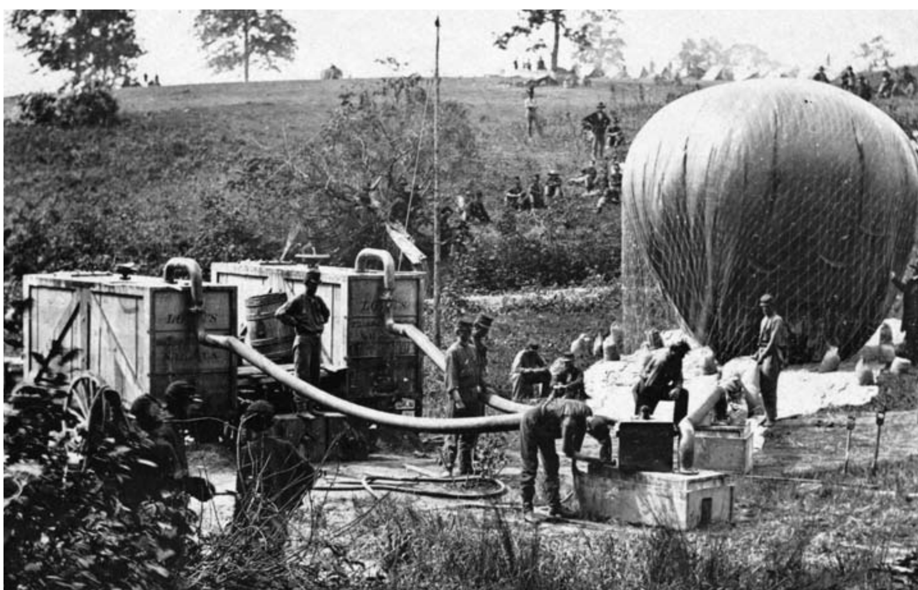
By the beginning of 1862, the Union Army Balloon Corps had five balloons in operation, including the 15,000-cubic-foot *Eagle* serving as eyes for the gunboat siege of Island No. 10 in the Mississippi at New Madrid, Missouri. "During the bombardment," Lowe wrote, "an officer of the Navy ascended and discovered that our shot and shell went beyond the enemy, and by altering the range our forces were soon able to compel the enemy to evacuate." The loss of the strategic river bend that April directly contributed to the South's eventual loss of the entire Mississippi—the cutting in two of the Confederacy.

The Southerners, however, were becoming wise to being watched from above. They had convinced Army of the Potomac commander Maj. Gen. George B. McClellan that they held overwhelming numbers until balloonists reported that they had in fact evacuated. Cautiously advancing Union troops found enemy artillery positions mounting "Quaker guns," which were logs painted black to fool observers.

Chastened by the deception, McClellan took the Balloon Corps along on his invasion of the Virginia Peninsula, where Union scouts reported another 100,000 Southerners blocking the way to Richmond. From 1,000 feet above the peninsula it was plain to Lowe that the reports had vastly overestimated enemy forces, but again McClellan played it safe, settling down to besiege Yorktown. The professor watched the Confederates strengthening their positions, to their mutual displeasure. "Almost daily whenever the balloon ascended the enemy opened upon it with their heavy siege guns or rifled field pieces," he wrote, "until it had attained an altitude to be out of reach, and repeated this fire when the balloon descended, until it was concealed by the woods." Southern ire was partly enflamed by the huge portrait of the Balloon Corps' patron, McClellan, emblazoned on *Intrepid*'s 50-foot envelope, looking down on them. (The balloon bag is referred to as the envelope.) They went so far as to build their own primitive hot air balloon, which Captain John R. Bryan flew over Yorktown, but clumsy handling and friendly fire made his a risky job; the Confederate balloon

ultimately crashed and was destroyed. On Saturday, May 3, Lowe lifted off from McClellan's own headquarters: "No sooner had the balloon risen above the tops of the trees than the enemy opened all of their batteries commanding it, and the whole atmosphere was literally filled with bursting shell and shot, one, passing through the cordage that connects the car with the balloon, struck near to the place where McClellan stood." Upon landing Lowe was duly informed, "The general says the balloon must not ascend from the place it now is any more."

The barrage continued all day. "The last shell fired after dusk came into [Brig. Gen. Samuel P.] Heintzelman's camp and completely destroyed his telegraph tent and instruments, the operator having just gone out to deliver a dispatch," Lowe wrote. "The General and I were sitting together discussing the probable reasons for the enemy's unusual effort to destroy the balloon when we were both covered with earth thrown up by the twelve inch shell. Fortunately it did not explode."



Lowe's crew inflated the balloon *Intrepid* so that he could observe enemy forces at the Battle of Fair Oaks in 1862. Lowe, who saw large enemy columns moving into position, was able to confirm that the Confederates were making a full-scale attack and not a feint against the Union left.

Cause for enemy concentration on the balloon soon became apparent. Lowe was awakened that night by reports that the barrage had abated and fires were burning in the city. "I ascended at a point near Yorktown and discovered that the enemy had left, and at 6 o'clock a portion of them were visible about two miles from Yorktown on the road to Williamsburg," he wrote. "It is fair to presume that the first reliable information given of the evacuation of Yorktown was that transmitted from the balloon to General McClellan."

Lowe and his unit joined the Union pursuit. By the end of May, the Confederates in Richmond could see balloons marking a near quarter-circle northeast of the city, hampering their efforts to counterattack. "The balloons of the enemy forced upon us constant troublesome

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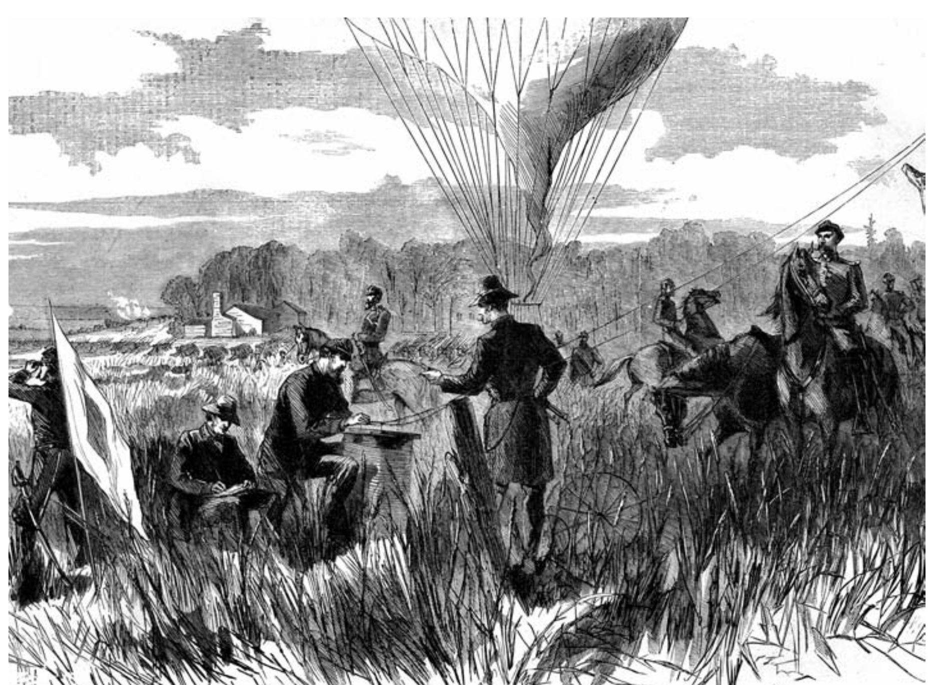

Lowe dictates a message to Union Maj. Gen. George B. McClellan during the Battle of Fair Oaks. After McClellan's removal, the Union Balloon Corps withered without the support of succeeding commanders.

precautions in efforts to conceal our marches," recalled Confederate Chief of Ordnance Lt. Col. Edward Porter Alexander. The Southerners fashioned a new balloon, the *Gazelle,* from swatches of silk dress fabric—not, as is often reported, from dresses donated by Southern ladies—and Alexander would fly it in the ensuing assault.

"The enemy commenced to concentrate their forces in front of Fair Oaks," Lowe wrote, "moving on roads entirely out of sight of our pickets, and concealing themselves as much as possible in and behind woods, where none of their movements could be seen, except from the balloon."

A French observer with the Union Army wrote, "There was some doubt whether the enemy were making a real attack, or whether it was merely a feint; but this doubt was soon removed by reports from the aeronauts, who could see heavy columns of the enemy moving in that direction."

"I knew exactly where to look for their line of march," Lowe wrote, "and soon discovered one, then two, and then three columns of troops with artillery and ammunition wagons moving toward the position occupied by Heintzelman's command." Isolated across the rain-swollen Chickahominy River at the crossroads of Seven Pines, Heintzelman's III Corps could be reached only via one rickety, flood-damaged bridge. "All this information was conveyed to the commanding general," Lowe recalled, "who, on hearing my report that the force at both ends of the bridge was too slim to finish it that morning, immediately sent more men to work on it."

The Southerners would not wait. "I used the balloon *Washington* at Mechanicsville for observations, until the Confederate army was within four or five miles of our lines," wrote Lowe, who "telegraphed my assistants to inflate the large balloon, *Intrepid*.... I then took a six-mile ride on horseback to my camp on Gaines Mill." On his arrival, however, he found *Intrepid* still only partially filled. "It was then that I was put to my wits' end as to how I could best save an hour's time, which was the most important and precious hour of all my experience in the army. As I saw the two armies coming nearer and nearer together, there was no time to be lost. It flashed through my mind that if I could only get the gas that was in the smaller balloon, *Constitution,* into the *Intrepid,* which was then half filled, I would save an hour's time, and to us that hour's time would be worth a million dollars a minute.... In the course of five or six minutes connection was made between both balloons and the gas in the *Constitution* was transferred into the *Intrepid*.... Then with the telegraph cable and instruments, I ascended to the height desired and remained there almost constantly during the battle, keeping the wires hot with information."

The *New York Herald* reported, "During the whole of the battle of this morning, Professor Lowe's balloon was overlooking the terrific scene from an altitude of about two thousand feet.... This is believed to be the first time in which a balloon reconnaissance has been successfully made during a battle, and certainly the first time in which a telegraph station has been established in the air to report the movements of the enemy and the progress of a battle. The advantage to General McClellan must have been immense."

McClellan ordered Brig. Gen. Edwin C. Sumner's II Corps over the bridge to halt the Confederate attack. Adolphus W. Greeley, then an 18-year-old soldier in Sumner's command but ultimately a major general and Chief Signal Officer of the Army, would write in *Harper's Weekly,* "It may be safely claimed that the Union Army was saved from destruction at the Battle of Fair Oaks ... by the frequent and accurate reports of Lowe."

Having barely withstood the assault, McClellan required three weeks to come up with a riposte, meanwhile relying on his balloonists to stand guard. To keep the initiative, General Robert E. Lee, commander of the Army of Northern Virginia, made targeting them a top priority. On the morning of June 26, Lowe's assistant James Allen (himself an accomplished prewar aeronaut) was floating in the *Union* near Mechanicsburg when he spotted a Confederate detachment about to surround his own base camp. He called to be pulled down, but when shots began flying past his basket he jumped out and slid down one of the mooring lines. He, his crew, and their balloon just escaped capture.

Along with the rest of the Army of the Potomac, the Balloon Corps was on the run all through the ensuing Seven Days Battles. They abandoned their base at Gaines Mill in such a hurry they had to leave two gas generators behind. Without hydrogen, the deflated balloons were simply cargo, packed along on McClellan's withdrawal to the James River. Lowe, shivering with malaria, turned the unit over to Allen and returned by boat to Washington, missing the Second Battle of Bull Run. Without the professor to stand up for them, the Balloon Corps' wagons, mules, and gear were reclaimed by the Army Quartermaster. The unit never consisted of more than seven aeronauts, with a few specialists in gasbag varnishing, hydrogen generators, a repairman, and machinist, and also a rotating detachment of enlisted men subject to recall at official whim. Command was handed off among various junior staff officers. "I was subject to every young and inexperienced lieutenant or captain, who for the time being was put in charge of the Aeronautic Corps," wrote Lowe on his

return. "These young fellows had no knowledge whatever of aeronautics and were often a serious hindrance to me rather than a help."

Lowe could not even reach Sharpsburg, Maryland, until the Battle of Antietam was over. "General McClellan remarked on several occasions that the balloon would be invaluable to him, and he repeated this to me when I arrived, assuring me that better facilities should be afforded me in future," he wrote. "On this occasion he greatly felt the need of reports from the balloons, which ... were perhaps not sufficiently valued."

But having risen with McClellan, the Balloon Corps declined with him. Lowe's ideas for high-resolution aerial photographic reconnaissance and using flares to signal across vast distances went nowhere. In April 1863, Captain Cyrus B. Comstock of the Army Corps of Engineers, to whom the Balloon Corps was relegated, was irked to learn the civilian professor was being paid as a full colonel, $10 per day. "Six dollars per day is ample payment for the duties he has to perform at present," wrote the captain.

Lowe appealed all the way up to the office of commander Maj. Gen. Joseph Hooker, getting nowhere. At the Battle of Chancellorsville in May 1863, a heavy storm damaged two of his balloons and destroyed much of his supplies of acid and iron trimmings for reinflating them. Comstock denied Lowe permission for their repair. It was the last straw. "As the battle was now over, I wished to be relieved, provided it was a suitable time," wrote Lowe, "to which Captain Comstock replied that if I was going I could probably be spared better then than any other time." Without its leader, the Balloon Corps fell into disuse and was disbanded that August.

"I have never understood why the enemy abandoned the use of military balloons early in 1863 after using them extensively up to that time," wrote Confederate balloonist Alexander, whose *Gazelle* had been captured on the Virginia Peninsula. "Even if the observers never saw anything they would have been worth all they cost for the annoyance and delays they caused us in trying to keep our movements out of their sight."

Though balloons would ultimately be outmoded on the battlefield, reconnaissance from on high is performed today by their technological successors, orbital spy satellites. Union commanders failed to exploit the air, but European observers did not. One German visitor to Lowe's Civil War camp took the idea home with him and would develop hydrogen balloon warfare to its furthest extent. His name was Count Ferdinand von Zeppelin. □

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By William F. Floyd, Jr.

The single-seat Focke-Wulf FW-190 fighter aircraft helped to even the odds against enemy fighters.

ON JULY 28, 1943, LUFTWAFFE OBERLEUTNANT ERWIN CLAUSEN shot down another two B-17 Flying Fortresses to add to the two he had shot down the previous day. There were 15 other Focke-Wulf FW-190 pilots that claimed downing a bomber in defense of the aircraft works at Kassel and Oschersleben. It is believed that this was the first time that the Luftwaffe's single-engined fighters had been able to employ under-wing rockets against the American bombers.

A pair of Focke-Wulf 190s in action over an Allied airfield in France. The Focke-Wulf FW-190 not only was a superb daytime fighter, but also was used extensively as a night fighter, interceptor, and ground attack aircraft.

The following day, as 15 groups of B-17s attacked targets on the Baltic coast, it was the weather that provided the best cover for the bombers. The Luftwaffe response was relatively weak with only four Jagdgruppen FW-190s sent up to oppose the bomber force. The Focke-Wulf group was credited with four of the 12 claimed to have been shot down, which agreed with what the Americans stated they had lost.

The next day the B-17s were headed for a second strike against the aircraft factories in Kassel. On this occasion, the Luftwaffe reacted stronger than before. Among the planes sent up, there were at least five Focke-Wulf FW-190 units. The Focke-Wulfs of Jagdgeschwader 1 did not engage the bombers until after they had left the target area and were about to recross into Dutch territory. At that point, they would be under the protection of Allied fighters that would escort them back to the United Kingdom. Despite this development, the pilots of JG1 were able to claim six B-17s and two enemy fighters destroyed. The successes came at a high price: the loss of seven aircraft. Among the pilots killed were two Staffelkapitane and the campaign's then-leading FW-190 four-engine bomber ace, Oberfeldwebel Hans Laun of 1.JG 1, who was shot down near Arnhem, Netherlands.

The Focke-Wulf FW-190 was widely believed to be the best fighter aircraft of World War II. As the war went on the FW-190 was manufac-

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tured in no fewer than 40 different models. The appearance of the new aircraft over France in 1941 was a rude surprise to the Allied air forces. The FW-190 was in service for the entire war, replacing a number of other aircraft including the Junkers Ju-87 Stuka dive bomber. Possibly the plane's biggest influence on the Allies was that it served to spur on greater advances in technology and aircraft design to counter the threat of the FW-190.

The Focke-Wulf FW-190 not only was a superb daytime fighter but was also used extensively as a night fighter, interceptor, and ground attack aircraft on the Eastern, Western, and Italian Fronts. The introduction of the FW-190 changed the capability of the Luftwaffe's combat operations. This was especially the case with the introduction of the FW-190D in 1944. This new model offered superior handling with a top speed of more than 400 miles per hour.

During the first two years of World War II, the Messerschmitt Me-109 was the preeminent German fighter plane, there was simply nothing else. But in 1941, during cross-Channel aerial warfare between the Royal Air Force and the Luftwaffe, a new challenger entered the fight on the German side. The Me-109 from that point forward would have a new partner in the air war.

The development of the FW-190 began with a contract in 1937 from the Reichsluftfahrtministerium for a new single-seat fighter. The new plane was designed by Focke-Wulf engineer Kurt Tank, a German aeronautical engineer and test pilot. He was chief engineer in Focke-Wulf's design department from 1931 to 1945. He was not only responsible for the development of the FW-190, but also the Focke-Wulf Ta-152 fighter-interceptor and the FW-200 Condor. The FW-190 was first developed as two different models, one using the water-cooled inline Daimler-Benz DB 601 engine and the other using the BMW 139 aircooled radial. The BMW 139 was selected for development in summer of 1938. The first prototype flew on June 1, 1939. The BMW 139 produced 1,550 horsepower, attaining a speed of 370 miles per hour. As the prototype was refined, the BMW 139 was replaced by the BMW 801, which was heavier but had greater potential for future development. Although the engine did have some problems to overcome, the FW-190 showed excellent handling characteristics and its wide undercarriage made takeoffs and landings less hazardous. Powered by the new BMW engine, which produced 1,600 horsepower, the FW-190A-1 was armed with four wing-mounted 7.9mm MG17 machine guns.

First impressions of the new BMW 801 engine were not good. "The new twin row, 14 cylinder, air-cooled radial engine gave us nothing but misery. Whatever could possibly go wrong with it, did. We hardly dared to leave the immediate vicinity of the airfield with our six prototype machines," reported one pilot. This criticism of the new plane is sometimes credited with saving the FW-190 project from cancellation. Eventually, the problems were sufficiently corrected for the plane to be cleared for service in July 1941. One of the major changes made by Tank and his designers was in the FW-190's armament. They replaced the inboard MG17s with two 20mm FF cannons. The modified fighter now had the designation of FW-190 A-2 and took the Royal Air Force completely unawares with descriptions of the plane being discounted by British intelligence.

In June 1942, a fortuitous event occurred for the Allies. A Luftwaffe pilot accidentally presented an intact FW-190A fighter to his enemies. Oberleutnant Armin Faber landed on what he thought was a Luftwaffe airfield on the Cotentin Peninsula that turned out to be the RAF airfield at Pembrey, Wales. As he slowly taxied to a stop, Faber was intensely surprised when someone jumped on the wing and pointed a pistol at his head. The pilot was so despondent that he attempted suicide.

The RAF quickly took advantage of its windfall by transporting the aircraft to the Royal Aircraft Establishment at Farnborough. The airframe and engine were dismantled and thoroughly analyzed before being reassembled. After being test flown the plane was delivered to the Air Fighting Development Unit at Duxford, Cambridgeshire, where it was put through intensive performance trials and flown competitively against several Allied fighter types. The AFDU trials had proven what the RAF already knew, that the FW-190 was an outstanding development in fighter aircraft but was far from unbeatable.

The detailed examination of the FW-190 had a huge influence on fighter development in Britain. It resulted directly in the specification F.2/43 to which was designed the Hawker Fury, which incorporated numerous features directly copied from the FW-190A and F.19/43, which produced the Folland Fd.118 fighter project. There could be no higher praise than to have one's enemies copy one of your designs. The FW-190A was one of the best models that could have come into the possession of the Allies. The FW-190A1 used the BMW 801C, 1600 horsepower engine, which powered a

ABOVE: A captured Fw-190 displayed by the U.S. Air Force. When hostilities ended in Europe, the Luftwaffe had more than 1,600 FW-190s of which more than 800 were ground-attack variants. TOP: An Fw-190 flown by Luftwaffe fighter ace Oberleutnant Horst Hannig, who was credited with 98 aerial victories before dying in combat in 1943.

Bundesarchiv Bild 101I-676-7975A-23; Photo: Keiner

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ABOVE: An Fw-190 over the desert in Libya. By the end of 1942, the Fw-190 was deployed with Luftwaffe forces in North Africa, Russia, and Western Europe. LEFT: Fw-190 designer Kurt Tank with Luftwaffe pilots. Tank incorporated into his design two 20mm cannons capable of firing a high-explosive round.

three-bladed variable pitch propeller that could attain a top speed of 388 miles per hour. The wide-track landing gear folded in toward the fuselage, which was extra strong to accommodate future weight growth and offered good stability on the ground. The FW-190A1 carried four rifle-caliber machine guns, two in the cowling and two in the wing roots, all of which were fired through the propeller arc. The event that resulted in the capture of the Focke-Wulf most likely contributed to saving the lives of countless RAF pilots.

In 1943, the Luftwaffe was in need of a fighter with better high-altitude performance. The answer to this need was the long-nosed "D" model or "Dora." The first production model was the FW-190 D-9 which attained production status in the early summer of 1944. The new plane's purpose would be to face the Allied bombers, particularly the American Boeing B-29 Superfortress, which was known to be coming into service. The FW-190 D was the first production FW-190 to use a liquid-cooled engine and was a very good high-altitude interceptor equal to the North American P-51 Mustang or Supermarine Spitfire MK XIV without the altitude limitations of the FW-190 A. Deliveries of the FW-190D-9 began in August 1944. The first mission of the new fighter was to provide top cover for Messerschmitt Me-262 jet fighters during takeoff when they were most vulnerable. The prevailing opinion among the FW-190D-9 pilots was that it was the best Luftwaffe propeller-driven fighter of the entire war and was more than a match for the P-51 Mustang. The D Model was the stepping stone that led to the high-altitude Focke-Wulf Ta 152.

In honor of Tank, the FW-190's designation was changed to Tank, or Ta-152. The inline engine fighter was going to be the top version of the now famous fighter, but delays prevented them being manufactured in adequate numbers. In the final chaotic year of the Third Reich only a few Ta-152Hs and possibly a few Ta-152Cs got into combat.

The FW-190 first saw action over the English Channel in 1941. In February 1942, it was providing cover for the German battlecruisers *Scharnhorst* and *Gneisinau* and the heavy cruiser *Prinz Eugen* as they tried to reach northern German ports. In one engagement, the 190s destroyed all six attacking Royal Navy Fairey Swordfish torpedo bombers. The new fighter was a shock to the RAF, faster and more agile than the Spitfire. The FW-190 was a stout opponent in a dogfight with its extremely heavy armament. The FW-190 pilots tended to work in pairs, giving each other good tactical support in battle. The excellent visibility provided by the plane's cockpit assisted the pilots in supporting one another. As time went on, the FW-190 became a terror to Allied aircraft in every region where the Luftwaffe was active. It inflicted huge losses on B-17 Flying Fortress and Consolidated B-24 Liberator bomber crews, and was almost impossible to stop until the long-range P-51 Mustang came into service in 1944 and began escorting bombers to their targets.

One of the more important roles played by the FW-190s was in the defense of the Reich, a strategic defensive aerial campaign. The Luftwaffe had set up a chain of fighter bases in northwestern Europe. These stretched from the Bay of Biscay to the Kattegat. By late summer 1942, the American Eighth Air Force was beginning to make its first forays into northern France. The first attack by the Eighth took place on January 27, 1943. Despite all the time, effort, and resources put in by both sides, the first fighting in the defense of the Reich was inconclusive. The FW-190s' first attack was on several Liberators of the 44th Bomb Group. Two of the Liberators went down into the shallows between the Dutch coast and the offshore island of Terschelling. One source suggests that one of the bombers was lost as a result of a midair collision with a battle damaged FW-190, which tore off the B-24's port wing and tail assembly. This action, like many of the claims made by pilots during the 27-month campaign, was never confirmed. If anything, this problem worsened as the number of aircraft involved in the never-ending air battles in the skies over Germany grew from dozens to the hundreds and eventually thousands.

The first month of the air campaign ended with the raid on Wilhelmshaven on February 26, 1943. In this phase of the campaign, the fighting ended in favor of the Luftwaffe, which downed 15 heavy bombers from the U.S. Eighth Air Force while it suffered seven pilots killed and one wounded. On March 4, the FW-190s played a major role in attacking a group of B-17s whose target was the marshaling yards at Hamm in North Rhine-Westphalia. Four of

the five bombers were shot down in the Eighth Air Force's first appearance over the Ruhr, Germany's industrial heartland. On April 17, the Eighth Air Force returned to Bremen, but this time its target was the city's Focke-Wulf aircraft factories. These were producing the very FW-190 fighters that the Americans were fighting in the air. During this raid the Americans lost 16 B-17s with 10 falling to the FW-190s. These losses were at least part of the reason that the Eighth Air Force did not reappear over the Reich for nearly a month. The attacks of June 25 brought to an end the first half of the fighting in the air campaign of 1943.

The opening rounds of the campaign had produced only mixed results. The overriding factor for this period was the absence of a fighter escort for the bomber formations. The final outcome was still far from certain. In the second half of 1943, the Eighth Air Force suffered catastrophic casualties, but the defenders' losses would begin to escalate as the year wore on. In this period, the U.S. Army Air Forces lost 87 bombers and had more than 500 damaged mostly due to Luftwaffe attacks, many of which involved FW-190s.

The air campaign would soon become a different arena of battle entirely. The arrival of U.S. escort fighters in ever increasing numbers would dramatically change the situation. The Luftwaffe pilots would no longer have the luxury of remaining unmolested beyond the range of the bombers' defensive fire and then deciding how to deliver the attack. Protected by their fighters, the bombers would be much more difficult to approach, and kills would become more difficult to achieve with losses inevitably becoming much higher.

The number of fighters escorting Eighth Air Force bombers was truly alarming to the Germans. The number would eventually exceed 500. One method which the Luftwaffe began to develop to counter the increased number of enemy fighters was to have the Me-109s keep the enemy fighters occupied while the FW-190s attacked the bombers. The Luftwaffe also transferred many of its most successful pilots closer to Germany to defend the Reich in the most critical campaign of the European air war.

By the end of 1942, the FW-190 was fighting in North Africa, on the Eastern Front, and in Western Europe. In the Soviet Union, the FW-190 was effective in low-flying ground attacks on vehicle convoys and tanks. In this theater, the FW-190 carried 250- and 500-pound bombs, either of which could knock out a tank. One major issue on the Eastern Front was keeping the FW-190s and other aircraft supplied. This was at a time when many of the planes were flying up to eight sorties a day. On the Eastern Front, the FW-190's reliable air-cooled engine and wide-track landing gear were well suited for service in the extremely harsh conditions. Operations on the Eastern Front led to a number of changes that resulted in the FW-190F fighter-bomber designed with a special emphasis on ground attack. This particular version carried 794 pounds of armor, which included sections of steel plate located behind the pilot's head, on the lower engine cowling, and in the wheel well doors. The F-8 version turned out to be the most important model of the "F" series. Frontline units, using kits supplied by the factory, could adapt these aircraft to carry various combinations of heavy cannons, bombs, rockets, and even torpedoes.

As the war went on, the different models of the FW-190 were in almost constant contact with enemy bombers. This led to improvements in the form of more cannons and underwing rockets. Later, bomb racks were fitted to the FW-190 airframe under the fuselage and under the wings to broaden the capability of the fighter for attacking ground targets. By the end of the war, German fighter airfields were forced back closer to Berlin for fear of being bombed, which resulted in the FW-190 becoming more of a ground attack and support aircraft as German air power dwindled in the final days of the war. In spite of this situation, the beleaguered German air crews fought on with their FW-190s despite mounting losses. The Allied bombing campaign reduced the number of FW-190s, and the added issue of pilot attrition only made the situation for the Luftwaffe much worse. In the end, the FW-190 had played its role well in defeat as the war came to a close.

By the end of the war, more than 20,000 FW-190s had been built by the Luftwaffe. At peak production, 22 FW-190s were being produced daily. When hostilities ended in Europe, the Luftwaffe had more than 1,600 FW-190's of which more than 800 were ground-attack variants. After the war, Tank, the primary developer of the FW-190, negotiated with the United Kingdom, the Nationalist government of China, and the Soviet Union for his services. However, negotiations with all three countries proved to be unsuccessful. He later accepted an offer from Argentina to work at its Aeronautical Institute under the pseudonym Dr. Pedro Matthies. Tank spent two decades designing aircraft abroad, including work in India, before returning to Germany in the late 1960s to work as a consultant for Messerschmitt-Bolkow-Blohm. The heavy demand for his services was a testament to his genius as an aircraft designer. □

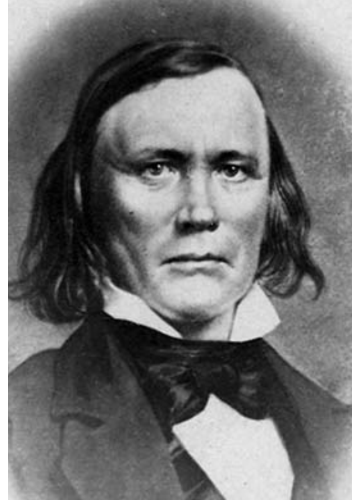
By Mike Phifer

In addition to his legendary exploits as a trapper and guide, Kit Carson also was an excellent U.S. Army soldier.

THE TWO INDIAN SCOUTS IGNORED THE GAWKING SOLDIERS AS they rode into where the bluecoated troops had bivouacked for the night at Mule Springs in the Texas Panhandle on November 24, 1864. They headed straight for Colonel Christopher Houston "Kit" Carson, commander of the expedition, to report what they had found. Ten miles to the east the scouts had cut the trail of a large group of Indians driving cattle and horses. Nearby Carson had 400 men, including New Mexico and California volunteer infantry and cavalry and Ute and Jicarilla Apache scouts. He also had two mountain howitzers, 27 supply wagons, and an ambulance. His mission was to defeat the hostile Comanche and Kiowa.

With word that hostile Indians were in the vicinity, Carson ordered his cavalrymen to mount up. Leaving the infantry to guard the wagons at Mule Springs and then follow in the morning, Carson's force moved out just before dark. The men were on strict orders not to talk or smoke. By midnight they had found the fresh trail of the band of Indians they were pursuing. Carson ordered a halt, preferring to wait for daylight before pushing any farther into hostile country.

When the first streaks of dawn finally appeared in the eastern sky, Carson and his men rode out again. The Ute and Jicarilla scouts quickly discovered three enemy pickets. After discarding their buffalo robes, the scouts galloped after the fleeing pickets. Carson ordered most of his cavalry after the scouts, knowing that a Comanche or Kiowa village could not be far away.



Kit Carson and fellow frontiersmen confer with Indians. Carson began his career as a trapper exploring the American West and gaining valuable knowledge of the land and the native peoples. INSET: Carson in 1845.

Both: Library of Congress

Carson followed along with a small detachment of cavalry acting as escorts for the slower moving howitzers. Just ahead the cavalry and scouts attacked a Kiowa village of 200 lodges. The Kiowa warriors retreated downriver followed by Carson's men. Unbeknownst to the bluecoats, the Kiowa women and children, along with a white captive woman and two children, were hiding in the foothills nearby.

When Carson caught up with the bulk of his men they were at Adobe Walls, a trading post that had been established in the mid-1840s but was now abandoned. The cavalrymen had corralled their mounts in the stout ruins of Adobe Walls and then spread out as skirmishers. About 200 Comanche and Kiowa were galloping back and forth in front of the skirmishers. They shouted at the

Waterloo. Normandy. Agincourt. Gettysburg.

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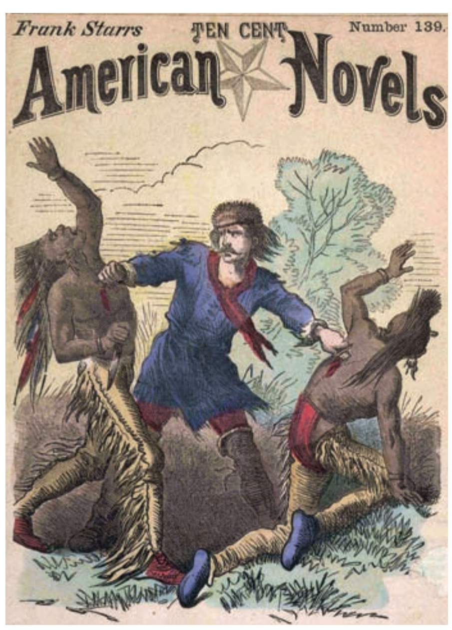
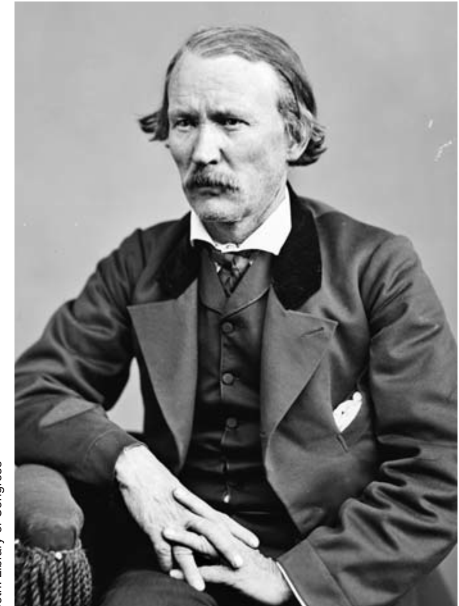
Charles Waterhouse

U.S. Army Lieutenant Carson fought dismounted in the Battle of San Pascqual during the Mexican-American War and was nearly trampled to death during a charge by the Mexican Lancers.





Both: Library of Congress

LEFT: Carson fights Indians on the cover of a dime novel that touted his feats in the untamed West. RIGHT: Carson sat for a photograph when visiting Washington D.C. in 1868.

bluecoats and fired at them from underneath the necks of their horses. More than 1,000 Comanche and Kiowa warriors were spotted moving forward.

On Carson's orders the howitzers fired on the Indians, sending them on a dead run for a Comanche village of 500 lodges that lay a mile away. Carson, believing the fight was over, ordered his men to eat something and water their horses before pushing on to destroy the Comanche village.

In less than half an hour the Comanche and Kiowa had returned. They were determined to fight. Carson and his men were in for the fight of their lives. Fortunately, they had a seasoned frontiersman leading them. If anybody could get them out of their predicament, it was Carson.

Born on December 24, 1809, in Richmond, Kentucky, Carson was raised in Missouri, where his family moved in 1811. Carson, who received his nickname from his family, grew up under the threat of Indian raids and did not get much schooling. He was unable to read or write but was good at learning languages. In addition to his native English, he also spoke Spanish and a number of Indian languages.

After his father died and his mother remarried, Carson became increasingly rebellious. At 16, Carson's mother apprenticed him to a saddle maker in Franklin, Missouri. Carson stuck it out for two years and then abruptly left his apprenticeship in August 1826. He landed a job working in a caravan headed for Santa Fe.

In the following years, Carson worked as a trapper exploring much of the American West gaining valuable knowledge of the land and the natives, having lived with them and fought with and against them. In 1842, Carson's life was to change when he met Lieutenant John Charles Fremont of the Corps of Topographical Engineers. Carson joined Fremont, the "Great Pathfinder," as a guide in three of his Western expeditions. In Carson's last expedition with Fremont, they crossed the Sierra Nevada Mountains during the winter to arrive in California, then part of Mexico. Carson, by Fremont's side, served with distinction in California during the Mexican War.

Fremont, brevetted with the rank of major, made Carson a lieutenant during the war. On September 5, 1846, Carson rode out of Los Angeles with a small group of men intending to carry a dispatch across the continent to Washington. A month later near Socorro, New Mexico, they ran into Brig. Gen. Stephen Kearny's Army of the West, which had been sent to capture New Mexico and California. Much to his chagrin, Carson was ordered to give the dispatch to another scout and guide the army back to California. Believing California was under American control, Kearny took only 121 dragoons and two mountain howitzers, sending the rest of his men back to Santa Fe.

Upon reaching California, Kearny was soon to learn that it was in rebellion again. Joined by a small force of men, Kearny pushed on toward San Diego. Before he reached it, though, Kearny's men soon found themselves engaged with enemy lancers at San Pasqual on December 6. Carson was dismounted during the fight and almost got trampled, but he survived unscathed, which could not be said for Kearny and many of his men. The battered troops slowly pushed on the next day while being harassed by the enemy. Thirty miles from San Diego, Kearny's men entrenched on a hill and sent three men forward for help. Carson was one of three men who slipped out in the darkness. All three men made it to San Diego, and reinforcements were ordered out to help Kearny.

Carson carried dispatches to Washington in 1847, where he met with President James Polk. The president commissioned Carson a second lieutenant in the Regiment of Mounted Riflemen and ordered him to carry dispatches back across the continent. Carson's early military career would be brief because the Senate refused to confirm the appointment.

The soft-spoken, diminutive frontiersman

was soon to become a national hero when Fremont wrote glowingly of him in his widely published reports of his expeditions. It would not be long before so-called blood and thunder novels were being penned about Carson's hair-raising, bloodthirsty fictional exploits.

After his first brief military service, Carson returned to his home and his young wife to take up farming and ranching in New Mexico. In early 1854, Carson was appointed as Indian Agent for the Ute tribe. He would hold this position for seven years until the start of the American Civil War. On May 24, 1861, Carson resigned his position and a month later was commissioned a lieutenant colonel, becoming second in command in the 1st Regiment of New Mexico Volunteers. When its aged commander, Colonel Ceran St. Vrain, resigned, Carson took charge of the outfit and was promoted to full colonel in October.

During the Confederate invasion of New Mexico, Carson led his men into action at the Battle of Valverde on February 21, 1862, along the Rio Grande. Although inexperienced, Carson's New Mexicans proved capable soldiers. At Carson's suggestion his troops were posted on the west side of the Rio Grande, allowing his men to watch the battle raging on the east side to steady themselves. Carson and his New Mexicans soon entered the bloody fray when they were ordered to cross the river and join in on an assault on the Confederates. The Rebels launched a two-pronged counterattack. Carson proved to be a steady leader pacing up and down the line calling out to his men, "Firme, muchachos, firme!" Carson's New Mexicans beat back the Confederates attacking them and considered the battle won. They were shocked and surprised when they heard the bugle call to retreat. The Rebel attack on the Union left had done much better, capturing some Federal guns and driving off the troops defending them. Following orders, Carson and his men forded the Rio Grande and retreated with the rest of the Union forces.

The Confederate advance into New Mexico was stopped at Glorieta Pass in late March 1862, and the Rebels were soon retreating to Texas. The Federal troops in the territory then turned their attention to dealing with raiding Mescalero Apaches, Navajos, Comanches, and Kiowas, in which Carson was to play a pivotal role. By this time Carson commanded the 1st New Mexico Volunteer Cavalry

Carson was ordered by Brig. Gen. James Carleton, commander of the Department of New Mexico, in late September to reopen Fort Stanton, which had been abandoned during the Confederate invasion. Fort Stanton was to serve as a base from which Carson could pursue the Mescalero Apaches. "There is to be no council with the Indians nor any talks," said Carleton. "The men are to be slain whenever and wherever they can be found. The women and children may be taken as prisoners, but, of course, they are not to be killed." Carleton informed Carson that if the Indians begged for peace, then their chief and 20 of their principal men were to go to Santa Fe, while Carson was to continue to hunt down Apaches.

Both: Library of Congress

ABOVE: Colonel Carson led the untested First Regiment of New Mexican Volunteers in the Battle of Valverde in February 1862 during the American Civil War. He led his men ably in an attack against the Confederates, but the Union forces lost the battle. BELOW: A soldier guards Navajos who surrendered to Carson in 1864 at Fort Sumner. Carson was brevetted a brigadier general in 1866, but by then he was in poor health and died two years later.

Carson did not like the order, thinking it too harsh as he had been friends at one time with the Mescalero Apaches. Carson argued for more humane treatment of them, knowing that they were poorly armed and had been driven to areas where there was little game. Carleton would have none of it. He wanted them hunted down and killed. Carson followed his orders and led his men after the Mescaleros.

It was a quick war with Carson leading his men from Fort Stanton, while two other detachments of troops moved against the Mescalero Apaches from Mesilla and Franklin. By the end of the year, Carson was looking after a large number of starving natives at Fort Stanton.

Afterward, Carleton turned his attention to the Navajos. Carleton had made peace offers to the Navajos that required them to go to the reservation at Bosque Redondo in eastern New Mexico to learn to support themselves by farming. He gave them until July 20, 1863, to go in or they would be considered hostile. Not surprisingly, they rejected the offer.

Carson would soon find himself back in the saddle campaigning against the Navajos; however, he was not keen on warring with them. By that time, Carson was in poor health. He had tried to resign from the army as early as February 1863, but Carleton had refused his resignation.

It was a brutal scorched-earth campaign that continued into the winter of 1863-1864. Carson would take his men right into Canyon de Chelly, the stronghold of the Navajo. On January 9, 1864, Carson led his men to the western end of a red rock, steep-cliffed canyon,

Continued on page 66

At Cross Keys and Port Republic in June 1862, Thomas J. "Stonewall" Jackson and his men proved more than a match for Union forces trying to trap them.

BY JOSHUA SHEPHERD

"GOD HAS BEEN

Painting © Bradley Schmehl

The regiment of Yankees, which was largely composed of German immigrants, advanced through a field of clover in the Shenandoah Valley in search of the Rebel line to its front on June 8, 1862. Its advance was watched closely by three regiments of Confederate soldiers lying prone behind a rail fence on a ridge crowned with timber to their south.

As they crossed the narrow ravine directly beneath the ridge, the 500 men of the 8th New York disappeared momentarily from view. Not only were the enlisted men of the Yankee regiment as green as early summer corn, but so were their field officers. The officers had failed to throw forward a line of skirmishers and mistook the handful of Rebel skirmishers that fell back in front of them as a few isolated, retreating foe.

When the Yankees crested the ridge in perfect alignment, approximately 1,300 Rebels, nearly an entire brigade, were concealed 50 yards away. The Rebels rose quickly to their feet to fire and unleashed a devastating volley. The tremendous crash of musketry felled scores of Federals in seconds. Even the Rebels were shocked by the lopsided bloodshed. "The dead and wounded Yankees were lying on the field as thick as black birds," wrote Sidney Richardson of the 21st Georgia.

In moments the shattered remnants of the 8th New York streamed in confusion back across the ravine, having lost half their number. The Rebels gave chase, but there was no reason since the unfortunate regiment was in full retreat.

The way the Confederates exploited the Union regiment's lack of experience had much to do with the success of Maj. Gen. Thomas J. "Stonewall" Jackson during his famous Valley Campaign of 1862. Although outnumbered in the Shenandoah, Jackson and his men frequently enjoyed tactical advantages because of the skill exhibited by the commanding general and his talented subordinate commanders.

In a whirlwind offensive that spring, Jackson had operated with relative impunity. After suffering his own disappointing reverse at Kernstown, just south of Winchester, on March 23, Jackson campaigned with a vengeance, repeatedly besting Federal troops in unexpected attacks across a wide extent of the Shenandoah Valley. For the Lincoln administration, it was an embarrassing debacle. Frantic that Confederate troops in the Shenandoah might be poised for a strike on Washington, the Union high command funneled an increasing number of reinforcements into the area.

OUR SHIELD"

Maj. Gen. Thomas J. "Stonewall" Jackson surveys the carnage in the aftermath of the charge of his Louisiana troops against Union guns posted at a patch of clear hillside known as the Coaling in a modern painting by Bradley Schmehl. Even when fighting a defensive battle, Stonewall fought aggressively.

It was exactly as Jackson wished. Under orders to relieve pressure on the Confederate capital at Richmond, which was targeted by the Federal Army of the Potomac, Jackson succeeded in tying up enemy resources in the Shenandoah Valley. Although the shuffling of Federal troops into the valley constituted a strategic gain for the beleaguered Confederate capital, it was nonetheless a double-edged sword for Jackson and his army, tasked with guarding the Confederacy's Department of the Valley. Jackson succeeded in scoring a major victory at Winchester on May 25, soundly trouncing a Federal corps under the command of Maj. Gen. Nathaniel Banks. The hunter, however, soon found himself the hunted.

Exasperated by the elusive Jackson's continued marauding, Lincoln ordered an overwhelming concentration of force to secure the Shenandoah Valley and trap Jackson. While Banks would menace the Rebels from the north, two divisions under Brig. Gen. James Shields would enter the valley from the east. Maj. Gen. John C. Fremont, operating west of the Shenandoah, would move his army into the valley and occupy Harrisonburg, Virginia, directly on the Confederate line of retreat. It was a sensible plan. Unfortunately for Lincoln, his field commanders proved discouragingly feeble. Fremont, rather than head directly east toward Jackson's supply lines, opted to swing farther north. Shields, who seized Front Royal with his division, was leery of moving farther until he was reinforced. Banks, fecklessly citing the chaotic state of his demoralized command, simply sat tight north of the Potomac and refused to budge.

By June 1, Jackson succeeded in edging past Shields. A desperate foot race ensued, and Jackson made the most of the valley's geography. The lower valley is bisected by Massanutten Mountain, a 60-mile ridgeline passable at a single locale, New Market Gap. While Confederates raced up the Valley Pike, Fremont advanced on their rear. Shields, who moved up the Luray Valley on the eastern flank of the Massanutten, was unable to effect a linkup with Fremont. Jackson, who was driving his men hard, had ordered out a cavalry detachment that burned two key bridges commanding the approaches to New Market Gap. As the Federal pincer began to close around the southern end of Massanutten Mountain, Shields was certain the game was up, exuberantly writing to Fremont, "I think Jackson is caught this time."

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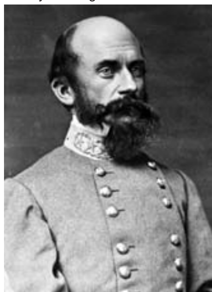
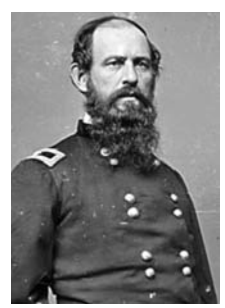




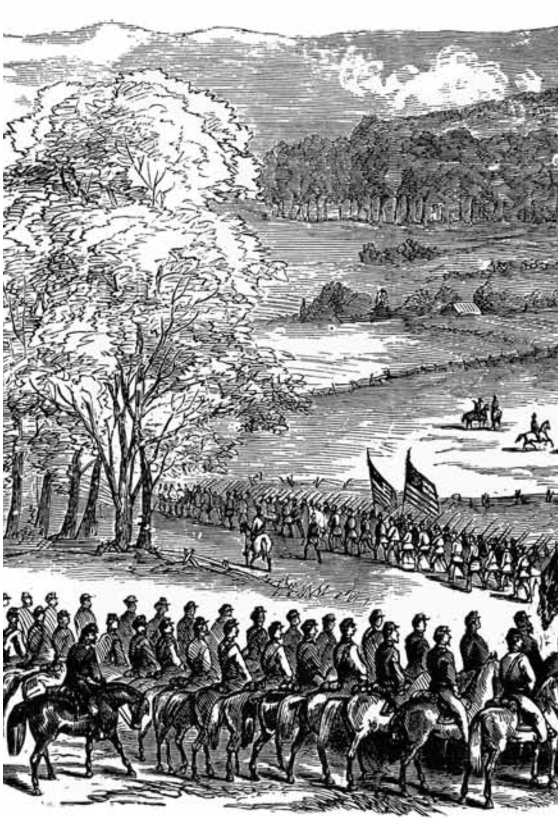
Maj. Gen. Richard Ewell, Brig. Gen. Erastus Tyler.

Jackson entertained other ideas. By June 6, he had established his headquarters at the hamlet of Port Republic. The village sat at the confluence of the South River and the North River, which join to form the South Fork of the Shenandoah. By controlling the bridges and fords at the vital confluence, Jackson could continue to deny direct cooperation between Fremont and Shields. To block Fremont's advance, Stonewall posted a division under Maj. Gen. Richard Ewell five miles north at Cross Keys Tavern. Confederate horsemen operating near Harrisonburg sparred with Fremont's vanguard, and Jackson's charismatic cavalry chief, Brig. Gen. Turner Ashby, was killed. Despite the spirited skirmish, Jackson was beginning to believe that opportunities for offensive action had disappeared. "At present," he reported, "I do not see that I can do much more than rest my command."

Two days later, such a conclusion proved erroneous. The pious Jackson looked forward to Sunday, June 8, as a quiet opportunity for divine worship. Confederate cavalry, however, in a good bit of disarray in the wake of Ashby's death, failed to give timely warning that Yankee cavalry was riding hard for Port Republic. Ironically, the 150 troopers were from the Unionist 1st Virginia Cavalry. At about 8:30 AM, the Federals splashed across the South River into Port Republic, which was held by just three companies; the bulk of Jackson's army was camped across the North River. Stonewall, who spent the night in town with his staff, had just a few moments notice of the impending raid.

While the Federals thundered through the streets rounding up prisoners, Jackson barely escaped over the North River Bridge. The raiders made for the army's supply wagons south of town but ran into an ambush orchestrated by a doughty company commander, Captain Samuel Moore. Jackson rallied his infantry across the river, and when Confederate troops swarmed over the bridge the horsemen fled the village in a good bit of confusion. For a chagrined Jackson, it had been an inauspicious morning.

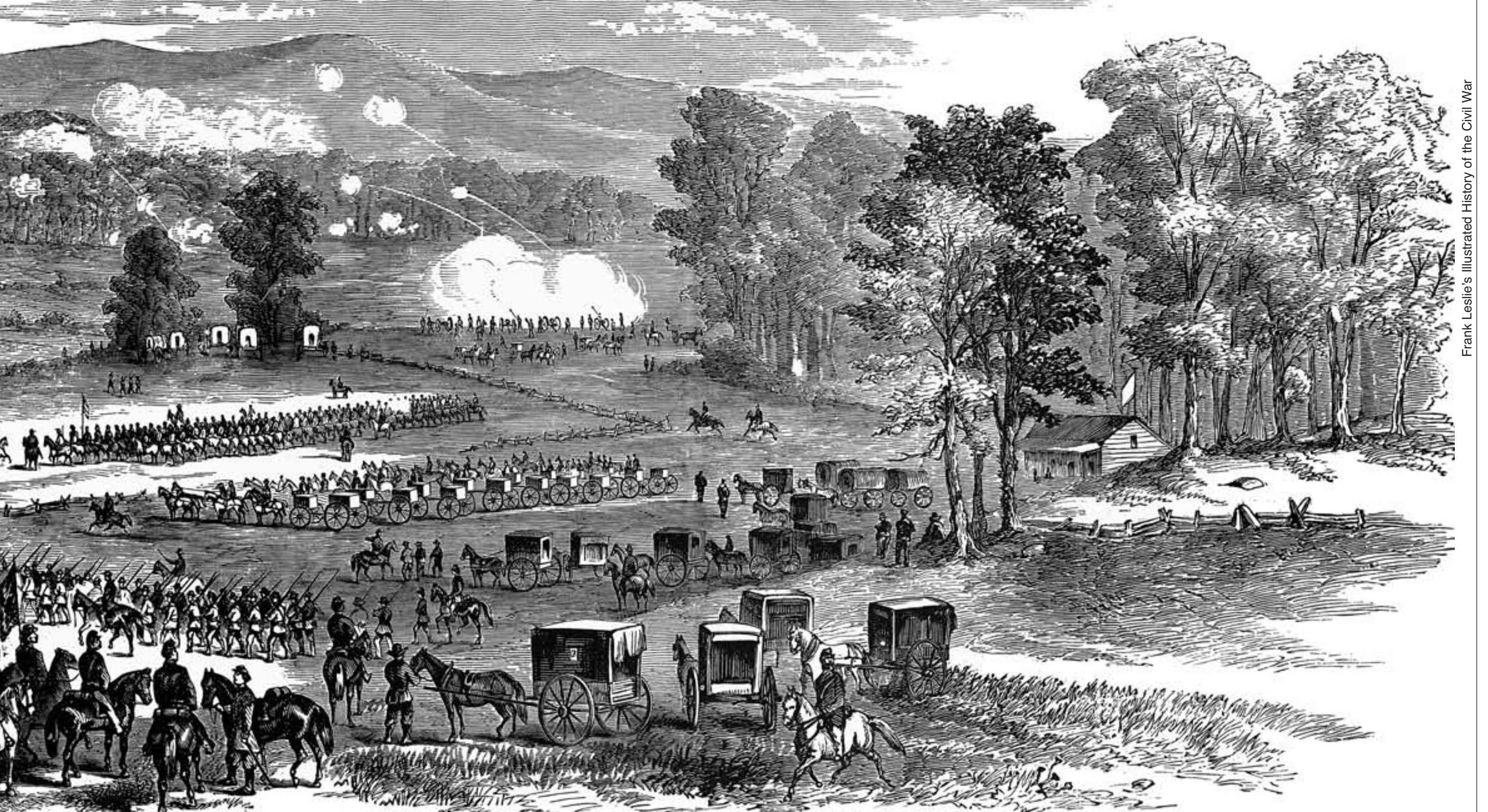
While Jackson solidified his grip on Port Republic, the situation west of town presented potential disaster. At daybreak, Fremont had his army on the move from Harrisonburg and embarked on a collision course with Ewell's division at Cross Keys. Known by the grandiose sobriquet "Pathfinder" for his legendary explorations of the Rocky Mountain West, Fremont had seven brigades at his disposal, roughly 10,500 men, itching for a chance to bring the elusive Rebels to bay. Only Ewell, with three brigades and some 5,000 men, blocked the Federal advance on Jackson's rear.



Maj. Gen. John C. Fremont's troops go into battle against the Confederates at Cross Keys. Fremont failed to pin Ewell's division in place, and it slipped away to join Jackson the next day at Port Republic.

Notwithstanding his decided numerical advantage, Fremont faced tough opposition. Endowed with pop eyes and a dramatically receding hairline, Ewell had earned the unflattering sobriquet "Old Bald Head" from his waggish troops. But despite an eccentric appearance, Ewell was a thoroughgoing soldier. A West Point graduate and respected Mexican War veteran, Ewell was regarded as a tough fighter who knew his business. Perhaps more importantly, he had chosen his ground well, deploying his troops on a formidable ridgeline a mile south of Cross Keys. The position was ready made for an energetic defender. "A valley and rivulet in my front," reported a delighted Ewell, "woods on both flanks, and a field of some hundreds of acres where the road crossed the center of my line."

Fremont, however, gave little serious thought to maneuver and ordered his men into line of


Frank Leslie's Illustrated History of the Civil War

battle across the open ground in Ewell's front. At about 10 AM, the artillery opened up. For jittery troops on both sides, it was a deafening overture. From their stronghold atop the ridge, Confederate gunners played havoc with Fremont's crouching infantry and engaged in spirited counterbattery fire with their Federal opponents. For nearly an hour the big guns slugged it out, shaking the valley with an incessant rumble. It was, thought Federal Colonel Albert Tracy, a "positive roar."

Brigadier General Julius Stahel's brigade began the Union attack. The 1,300 Confederates who had shattered Colonel Francis Wutschel's 8th New York belonged to Brig. Gen. Isaac Trimble's Brigade. Their unfortunate foe had constituted the far left of the Union line.

Trimble, far from resting on his laurels in the aftermath of the repulse of the 8th New York, was eager to hammer the disorganized Federals. He soon had his eye on Yankee artillery across the valley, the Unionist Virginia battery of Captain Frank Buell.

Trimble ordered a portion of the 15th Alabama to execute a wide swing around the Federal left and then fall on the enemy flank. Led by Lt. Col. John Treutlen, the Alabamians gamely charged the position but ran into unexpected resistance. In addition to Buell's guns, the hill was held by elements of the 27th Pennsylvania and a crack outfit of Pennsylvania riflemen, the Bucktails, who stubbornly contested the ground. After a bloody exchange of gunfire, Treutlen was forced to pull his men back to regroup.

The Pennsylvanians, however, were soon assailed by Trimble's other two regiments. The 16th Mississippi drove into the center of the hill and suffered heavily from enfilading musketry emanating from the 27th Pennsylvania; the Mississippians' commander, Colonel Carnot Posey, was badly wounded and carried to the rear. The stalemate was broken by the 21st Georgia, which crashed into the Pennsylvanians and unhinged the Federal position. Union troops fled for the rear in some disorder but had given a good accounting of themselves. Their bravery, thought Brig. Gen. Robert Milroy, "was evidenced by the number of dead rebels" strewn on the hillside.

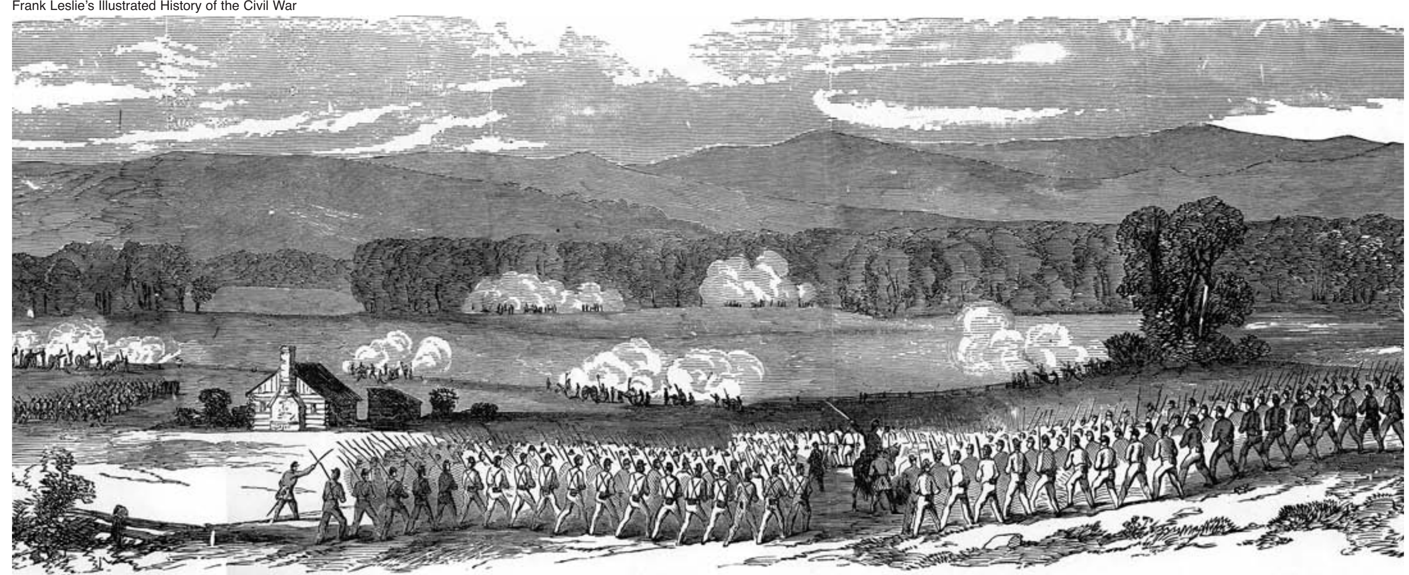
Trimble's blood was clearly up, and he was eager to maintain his momentum by keeping up pressure on the enemy. His next target was another Federal line stretched across two hillocks near the homestead of farmer George Evers. The position was a stout one, occupied by the Federal brigade of Brig. Gen. Henry Bohlen, who commanded four regiments of New York and Pennsylvania volunteers. Bohlen's brigade stood in support of two New York batteries commanded by Captains Louis Schirmer and Michael Wiedrich.

The Confederates would face a tough fight at the Evers farm. Trimble, personally leading half of the 15th Alabama, swung around to the right; the rest of his brigade was regrouping from their previous attacks. He had help in the form of two Virginia regiments, the 25th and 13th, under the command of Colonel James Walker. Coming in on Trimble's right, the Virginians were subjected to a punishing fire. Musketry swept their ranks, and Wiedrich's artillery switched to canister. Stalled but by no means willing to give up the fight, Walker took up positions behind a rail fence and traded fire with the Federals on the hill. With the Yankees thus occupied, Trimble readied his Alabamians for a final push that he was certain would smash Bohlen.

He was only partly correct. The Federal position was disintegrating largely due to an unfortunate disagreement in the officer corps. Although Wiedrich's battery had driven back the enemy with heavy casualties, the artillerymen were abruptly ordered from the field by Schirmer. Bohlen and Wiedrich protested the move but were overruled in a bizarre arrangement, which left Schirmer, the senior artillery officer on the scene, with the final word. As Wiedrich pulled out, Federal infantry followed suit, and Trimble's final drive to secure the hill was somewhat uncontested.

Fremont was quickly losing interest in the fight altogether. After Trimble had battered in his left for roughly a mile, the general opted to pull in that flank and press forward the rest of his line. His prosecution of the attack was perfunctory at best. Milroy, commanding in the center, was game enough for a fight but had little support as he approached the formidable enemy position on the ridge. Confederate artillery subjected his men to a fearful barrage as they came forward, and Milroy attempted to gain a modicum of cover in a shallow ravine. It afforded only a momentary respite.

Frank Leslie's Illustrated History of the Civil War



IT WAS A HORRIBLY MISMATCHED AFFAIR. WINDER'S MEN ADVANCED UNDER FIRE AND HELD ON AS BEST THEY COULD. BUT AS THE VALLEY FLOOR ERUPTED WITH SHEETS OF MUSKETRY, IT LIKEWISE BECAME APPARENT THAT FEDERAL ARTILLERY FIRE FROM THE RIGHT SHOWED NO SIGNS OF LETTING UP.

As soon as Milroy's troops approached a second ravine, recalled the general, "We discovered it was full of [Rebels] lying behind a fence in the tall grass almost wholly concealed from view."

The results of the surprise were predictable. Milroy's lead troops were shot down, and the demoralized Federals, firing blindly at an enemy they could not see, became hopelessly stalled. Milroy angled toward his right front but fared no better in further attempts. He again ran into woods full of Rebels. "A deadly fire came out of it," wrote a dismayed Milroy, "and my boys were dropped by it rapidly."

The expected support to his right, Brig. Gen. Robert C. Schenck's outfit, was a virtual no-show that left Milroy's troops to bear the brunt of Confederate attention. Schenck led a ponderous brigade of five Ohio regiments backed up by two batteries, but the politician-turned-general had only the vaguest notion of how to use them. Colonel Albert Tracy of Fremont's staff disgustedly reported that while Milroy's brigade was being chewed up Schenck made a lukewarm approach on the Confederate right, which he merely "brushed with emphasis."

With that, the Federal offensive at Cross Keys, such as it was, fizzled out in anticlimax. Alarmed that his troops had faced a real fight from an enemy half their strength, Fremont was content to pull back and assume the defensive. Ewell characteristically moved forward and occupied the surrendered ground. In thinly veiled contempt for his opponent's tactical bumbling, "Old Bald Head" caustically observed that "he felt all day as though he were again fighting the feeble, semi-civilized armies of Mexico."

Back in Port Republic, the encouraging news of the victory proved crucial as Jackson planned his next move. Following the embarrassing dustup with Federal cavalry that morning, Jackson was eager to pounce on the exposed lead elements of Shields's column northeast of town. With a passive Fremont clearly on his heels at Cross Keys, Jackson was free to take advantage of the situation. Jackson decided to throw his full weight at Shields rather than Fremont because Shields was nearly begging to be attacked, explained Jackson afterward. His force was smaller, badly straggling, and his line of retreat lay over poor roads. Most importantly, Shields's isolated vanguard, under the command of Brig. Gen. Erastus Tyler, was invitingly positioned just two miles from Port Republic.

Jackson wasted little time making his move. His first order of business was concentrating his forces for the proposed attack. Stonewall was pleased with the outcome of the fight at Cross Keys and eventually issued orders for a token holding force to contest the ground in front of Fremont while the bulk of Ewell's division slipped away for the combined blow against Tyler. The rearguard duty fell to Trimble, a static task for which he was poorly suited. It was all that Jackson and Ewell could do to keep the impetuous brigadier from attacking the Yankees single handed.

Jackson would have little rest that night. In addition to organizing the consolidation of his army, Jackson ordered a last minute fix to the very real obstacle of getting his infantry over the South River. An engineering outfit undertook the construction of a makeshift bridge but had little time for such a daunting task. The crew wrestled six wagons into the river and filled them with stones to serve as makeshift piers. The wagon beds were finally spanned by lumber hastily scrounged from a local sawmill, but the pioneers ran short of planks. After a few hours of backbreaking labor the bridge was completed. The bridge was serviceable but far less sturdy than desired.

Confederate troops, who had no idea what Stonewall had in store for them, were on the move before daybreak. At Cross Keys the men of the 13th Virginia, who had not eaten all day on June 8, began cooking a belated meal at 3 AM. They would be sorely disappointed again. "Boys, I am sorry for you," Ewell announced, "but you have to put your utensils back as we have to march at once." Senior officers were equally in the dark. Brig. Gen. Charles Winder was awakened at 3:45 AM with orders from

Jackson that clearly meant a fight was in the offing. Winder was to have his brigade in Port Republic within the hour.

About sunrise the troops began crossing the South River before turning north toward the Yankees. The river crossing, however, proved a fiasco from the outset. The results of moving thousands of armed men over a few rickety boards were predictable. While artillery batteries forded the river, infantry moving over the improvised foot bridge found that the crossing quickly degenerated to a precarious trapeze act. Due to the bottleneck at the river, Confederate troops would necessarily be thrown piecemeal into the fight.

The unenviable task of launching the attack was assigned to Jackson's old outfit, the legendary Stonewall Brigade. The general still regarded the unit as one of his very best, and it was ably led by Winder. Trained at West Point and blooded on the Western frontier, Winder combined unimpeachable personal bravery with rock solid dependability. Alarmed by his superior's penchant for risk taking and hard marching, Winder at one time referred to Jackson as insane. But in spite of the personality clash, the brigadier could be counted on to execute his orders with cool and deliberate judgment. At about 7 AM, Winder made contact with the enemy.

A skirmish line drawn from Colonel James W. Allen's 2nd Virginia quickly brushed aside a thin screen of Federal pickets. It became apparent, however, that stiffer resistance lay ahead. In front of the Confederates lay several miles of farmland that stretched along the Shenandoah River's south fork. The ground was primarily worked by the Baugher and Lewis families, who carved a comfortable living from the fertile bottomlands. Largely planted in wheat, the fields, laced by farm lanes and rail fences, afforded little cover.

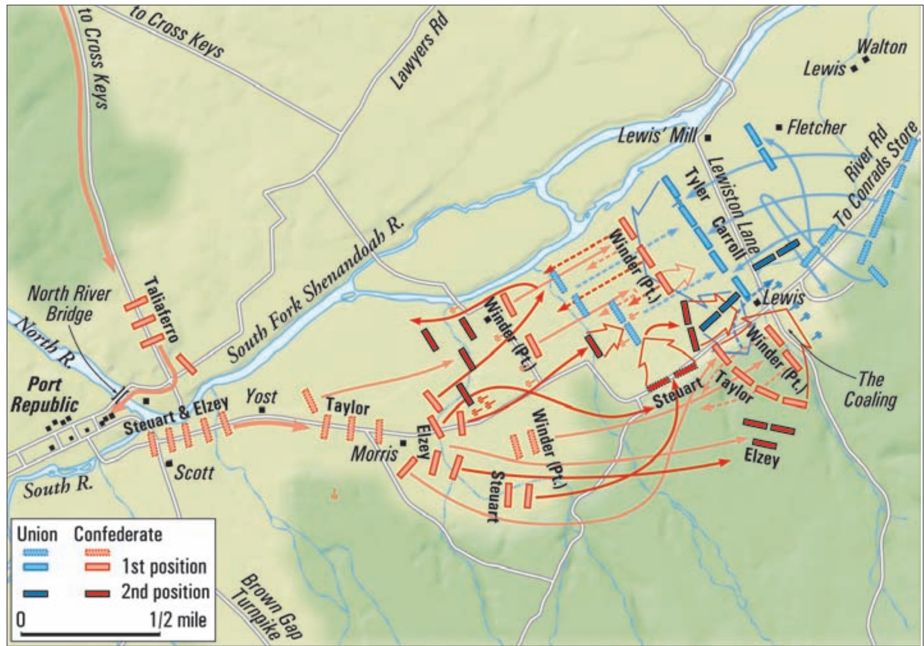
Worse yet, topography afforded a decided advantage to the Federals, and Tyler would enjoy a position of considerable strength. As Confederate troops came into view, he calmly held his men under cover near the Lewis homestead. The Confederate advance, which would come across open ground, was hemmed in by the river on the left. More ominously, the Federal left rested on a prominent knob that commanded the entire field. The Lewis family had leveled the site for a charcoal-burning operation that supplied the needs of the farm, rendering the site an ideal artillery platform. Tyler valued the spot for its abrupt elevation, an imposing 90 feet above the valley floor, and had six guns situated there. The locale would soon be enshrined in the American military lexicon as the scene of some of the most savage fighting of the war: the Coaling.

Jackson immediately grasped that possession of the Coaling carried victory with it and ordered Winder to seize the hill. Winder, however, had only four regiments of the Stonewall Brigade with which to work. The brigadier ordered the 2nd and 4th Virginia to execute a wide flanking maneuver through the woods on the right from which they could assault the Coaling. Captain Joseph Carpenter's "Allegheny Roughs" Battery was to support their advance. As Carpenter moved forward to occupy the enemy, Winder deployed his remaining two regiments: the 5th Virginia on his left, the 27th on his right. The infantrymen were backed up by the stalwart gunners of the Rockbridge Artillery led by Captain William T. Poague.

Winder initially held his outnumbered infantry in support. The bulk of the Rockbridge Artillery, four guns, were smoothbores that Winder realized would be next to useless in any duel with Federal guns on the Coaling. Poague consequently deployed with just two Parrott rifles, which went into battery in a wheat field next to the Baugher farm lane. They were soon joined by two pieces from Carpenter's battery, which had gotten nowhere in a failed attempt to work its way through the underbrush off the Confederate right. From the outset, the Confederate attempt to flank the Coaling was deteriorating.

In the face of such uneven odds, Rebel gunners worked their pieces manfully but took a beating in the process. Federal gunners quickly acquired the range and from their elevated perch sent shells plunging through the Confederate crews. For their part, Federal gunners remained largely unscathed, noting that the majority of incoming fire passed harmlessly overhead. Jackson was proud of his artillerists, but he noted that they were outmatched. "The artillery fire was well sustained by our batteries, but found unequal to that of the enemy," he wrote.

Map © 2016 Philip Schwartzberg, Meridian Mapping, Minneapolis, MN



ABOVE: Jackson discerned that the key to victory at Port Republic was the capture of the Union guns at the Coaling. Once the Southerners had silenced the guns, Brig. Gen. Erastus B. Tyler's attack quickly unraveled. OPPOSITE: Union troops at Cross Keys advance across the rolling landscape of the Shenandoah Valley. Although the morale of Union troops was high at Cross Keys, they were let down by Fremont, who was outmatched by Ewell.

Winder worked his men toward the left in a desperate attempt to gain cover from the cannonade, and the 5th Virginia took up posts adjacent to the Shenandoah. Tyler finally unleashed his own infantry, wheeling left in a broad arc that left his line stretched across the valley floor along the Lewis farm lane; he comfortably anchored his right on the river, his left on the Coaling. It was, though, a somewhat disjointed arrangement. The two-regiment Confederate thrust likewise caused Tyler to split his force, and a yawning gap opened in the center of the Yankee position. The Federal line "was formed in two distinct and unconnected parts," wrote Captain James Huntington, who commanded Battery H, 1st Ohio Artillery.

Still, the 3,000-strong Union force easily dwarfed Winder's two regiments, which brought fewer than 600 men into action.

Library of Congress

A period illustration captures the despair of Tyler's troops as they retreat north from Port Republic. The victorious Confederates pursued the demoralized Yankees for miles, snatching up stragglers by the dozen.

It was a horribly mismatched affair. Winder's men advanced under fire and held on as best they could. But as the valley floor erupted with sheets of musketry, it likewise became apparent that Federal artillery fire from the right showed no signs of letting up. Much to Winder's dismay, the planned flank attack of the 2nd and 4th Virginia Regiments against the Coaling ended in an anticlimactic flop. The two regiments had reached a ravine in front of the hill, exchanged a few volleys with its defenders, and summarily fallen back.

For Winder's beleaguered infantry, the full force of Tyler's line was simply more than they could bear, and the general pulled back to a safer distance. As Winder regrouped along the Baugher lane, reinforcements arrived on the field. It was Brig. Gen. Richard Taylor's Louisiana Brigade, a hard-fighting outfit that was one of Jackson's best brigades. Although attached to Ewell's division, the Louisianans had missed the action at Cross Keys and were itching for a fight.

The Pelican Staters were a colorful lot. The four-regiment brigade included the Louisiana Tigers, a motley set of New Orleans street toughs who were poorly disciplined but fierce brawlers. The unit was led by Major Roberdeau Wheat, a barrel-chested Army veteran, soldier of fortune, and no-nonsense combat officer. For Jackson, their timely arrival on the field was nothing short of providential, and he immediately directed Taylor to send one of his regiments up in support of Winder and lead the bulk of his brigade to the vortex of the fighting. The Louisianans would assault the Coaling.

Winder's men were glad to have the help. Under the pressure of a Federal counterthrust, the Rebels were holding on as best they could at the Baugher lane. Winder strengthened the center of his line with Colonel Harry Hays' 7th Louisiana and rushed forward a battery of horse artillery under the command of Captain R. Preston Chew. As the guns rolled into action, they entered a maelstrom. Enemy fire swept the field, which, recalled artillerist George Neese, was covered with "limping, bleeding, and groaning" men. Winder's hard-pressed troops were nearly frantic for assistance amid the storm. "Hurry up," they shouted to the gunners, "they are cutting us all to pieces."

With his line stabilized, Winder faced a crucial decision. Even after strengthening his line, the position, subjected as it was to a terrible plunging fire from enemy artillery, was a treacherous one. With the Louisiana Brigade on the move for the Coaling, Winder felt compelled to make the most unenviable of tactical judgments by launching his men directly into the Federals. The counterattack was a desperate attempt to distract attention from Taylor's Louisianans, on whose fortunes the fate of battle obviously rested. The Confederates went forward gamely enough, recalled an admiring Winder, "in gallant style with a cheer."

Winder's forlorn counterattack was a grim sacrifice. The Confederates braved a firestorm and suffered horrendous casualties. Guns on the Coaling, thought 7th Louisiana Captain Daniel Wilson, "poured streams of shell and shot, mowing down our men like grass. The earth seemed covered with the dead and wounded." Union musketry added to the bloodshed, and the three assaulting regiments were badly mauled. Their Federal opponents fared little better. The 7th Indiana on Tyler's right suffered especially heavy losses as it fought it out with the 5th Virginia. Colonel James Gavin stalked up and down his line of Hoosiers bellowing orders and waving his sword overhead. The common soldier died without such heroics.

Despite taking a toll on their Northern opponents, the Rebels were forced to fall back, and Winder's scratch brigade rallied behind a rail fence. Sensing victory, Federal infantry lunged forward in a counterattack. As the Northerners sprinted headlong across the wheatfields, the Confederates broke for the rear. Backwoods hunters from the 7th Indiana worked around the left flank of the 5th Virginia and unleashed a galling enfilade fire. Gavin shouted simple orders to his Hoosiers: "Load, charge bayonets, and at them." It was more than the outnumbered Confederates could bear. The enemy pressed his men so hard, reported Winder, "that

it was impossible to rally them."

Just when all appeared lost, Winder caught a glimpse of two Confederate regiments lying prone well to the front. It was Ewell, fresh on the field after a march from Cross Keys and eager to strike a blow. He had arrived at the head of two regiments, the 44th and 58th Virginia, after swinging through the woods to the right and turning back toward the valley until he was facing the left rear of the charging Federals. He immediately knew what had to be done. Leading a headlong charge into the open, Ewell burst into the Federal rear, delivered a volley at close range, and stalled the Federal advance. But Ewell's Virginians, who had exposed their own flank by moving forward, paid a dreadful toll for their effort. Federal guns on the Coaling sent shells crashing through their ranks, and the Rebels fell back to the cover of the woods. Despite a continued trickle of Confederate reinforcements, morale flagged after Winder had been so roughly handled. Only the capture of Federal artillery on the Coaling could save Jackson from a crushing defeat.

Right on cue, Taylor's brigade arrived at the ravine in front of the Coaling just as troops in the valley were on the verge of collapse. The Louisianans were considerably winded after thrashing through tangled underbrush on their circuitous march toward the Federal right and found that they had missed their mark. Far from coming in on the Coaling's flank, they were facing the muzzles of enemy artillery head on. With little time to waste, Taylor immediately ordered his entire brigade, approximately 1,700 strong, to the attack. "Forward! Charge the battery and take it," he shouted.

In an instant, the brigade rushed into the ravine and clawed its way up the other side, yelling, thought Neese, "like mad demons." Startled Federal gunners on the hill frantically redirected their aim into the ravine and let loose with canister. The Louisianans took a fearful beating but could not be stopped. Without pausing to regroup, bayonet-wielding Confederates rushed into the battery, thrusting, clubbing, and cursing with wild abandon. Union artillerists defended their guns with admirable tenacity but were overwhelmed in hellish hand-to-hand fighting. Apprehensive that a Federal counterattack could withdraw the six captured guns, Confederate troops began slaughtering the battery horses.

Such fears were not misplaced. Tyler was able to hastily scrape together three Ohio regiments, the 5th, 7th, and 66th, who were thrown at the Coaling. The Buckeyes came on, recalled Taylor, in "a determined and well conducted advance," and then pitched into the Rebels in a brutal close quarters fight. Considerably disorganized after their chaotic charge, Taylor's Louisianans fell back in front of the Union wave.

Horrendous seesaw fighting ensued. Confederates fired on the position while they regrouped and then once again scrambled back up the hill into the midst of its Yankee defenders. The Federals fell back, rallied, and charged again, seizing the summit amid nightmarish fighting that participants would never forget. "Men beat each other's brains out," recalled an anonymous Louisianan. "Those who go down to die think only of revenge, and they clutch the nearest foe with a grasp which renders death stronger."

Once again, Ewell showed impeccable timing. Coming up at the head of desperately needed reinforcements, the general threw his weight into the fight. In the midst of savage yelling, the Confederates rallied for a final attempt. Swarming up the hill and into the battery, Rebel troops at last shattered enemy resistance in an impetuous and bloody attack. Federal troops fled the position and succeeded in drawing off just one gun. The scene of the bitter struggle resembled a charnel house. The hillside was littered with dead Confederates, and the summit was heaped with the dead and wounded of both sides, strewn about the guns. In moments, the fortunes of the battle had shifted irrevocably.

With the fall of the Coaling, the Federal line down in the valley began to unravel. Tyler issued orders for a general withdrawal, and although some of his troops put up a running fight, the retreat eventually degenerated into a chaotic rout. Sensing that a total victory was within grasp, Jackson rode to the front and ordered his entire line forward. The Rebels "threw the rear of our column in great disorder," recalled Federal Colonel Samuel Carroll. It was a miraculous and sudden turn of events. Confederate troops who had been taking a grim beating all day rushed forward on the heels of the retreating Federals, and Jackson hurriedly sent up reinforcements that were arriving on the field. With the Yankees on the run, an exuberant Jackson was clearly in his element. "He who cannot see the hand of God in this is blind sir, blind," Jackson said to Ewell.

For Tyler, it was an utter disaster. Confederates pursued his demoralized troops for miles, snatching up stragglers by the dozen. After the battle had ended in catastrophe and his presence on the scene was nearly pointless, Fremont at last stumbled his way onto the hills overlooking the battlefield. His approach had been quite leisurely. Rather than threatening Jackson's rear, the Pathfinder had simply inched his way forward. By the time he arrived at Port Republic, Fremont was, naturally, stranded on the north side of the river; Confederate troops, who had ample time to get out of his way, had burned the North River Bridge. The Pathfinder then made one of the most pathetically impotent gestures of the war. Unlimbering his artillery on the heights overlooking the river, Fremont commenced shelling the battlefield, where ambulance crews, as well as the wounded of both sides, desperately scrambled for cover.

For his part, Jackson had no further desire to meddle with either Fremont or Shields, both of whom had been largely emasculated during the fighting of the previous two days. By the following morning, Jackson's troops had drawn off and were safely tucked away in the upper reaches of Brown's Gap in the Blue Ridge. After their lackluster performances, both Federal commanders received orders to fall back. Maj. Gen. Irvin McDowell explained that Shields's troops were needed for the campaign against Richmond, and it was "not considered expedient to continue the chase." Exactly whom had been chasing who during the Valley Campaign was likely an inscrutable mystery to the Lincoln administration.

Jackson's stunning twin victory came at a heavy price, and the ghastly human wreckage that littered the battlefield belied any pretenses to martial glory. Confederate losses for the two days amounted to roughly 1,200 overall, including 239 killed. Federal forces had suffered even greater losses: 272 killed and 1,600 wounded and missing. Even the unflappable Jackson was shocked by the carnage. "I never saw so many dead in such a small space in all my life," he wrote.

The strategic magnitude of the Federal repulses at Cross Keys and Port Republic became readily apparent in the coming weeks. Jackson, having thrashed every Federal command in the Shenandoah, was at liberty to transport his troops to Richmond where, during the last week of June, the swelled ranks of the Army of Northern Virginia would triumph in the Seven Days' Battles, an epic contest that eliminated the Union threat to the Confederate capital. Jackson's Valley Campaign, one of the most legendary exploits in American military history, ensured that the fertile Shenandoah Valley would largely remain free of Federal incursions for the succeeding two years.

Lionized as a military genius in the Southern press, Jackson was ensured a place in the pantheon of Confederate legends. The deeply religious Jackson explained the stunning close to the Valley Campaign in far different terms. "God has been our shield," he wrote, "and to His name be all the glory." □

NEAR DISASTER AT SALERNO

FOUR DAYS AFTER THE ALLIES LANDED AT SALERNO, THE GERMANS LAUNCHED A DEVASTATING COUNTERATTACK. AS A RESULT, THE ENTIRE OPERATION TEETERED ON THE BRINK OF DISASTER.

BY ARNOLD BLUMBERG

ON the morning of September 13, 1943, Col. Gen. Heinrich G. von Vietinghoff, commander of the German Tenth Army, faced a difficult decision. He could order his forces to abandon the line with which they contained the Allied landing at Salerno, or he could order them to launch a large-scale counterattack. When he learned that morning that a seven-mile-wide gap existed between the British and American sectors of the Salerno beachhead, Vietinghoff could not resist the impulse to exploit it.

From his headquarters at St. Angelo just north of Naples, Vietinghoff immediately ordered measures to repel the enemy incursion, enjoining his subordinates to make a "ruthless concentration of all forces at Salerno" and drive the Allies into the sea.

German officers barked orders. Veteran troops rushed to get their vehicles and equipment ready. By mid-afternoon tanks, self-propelled guns, and half-tracks of the 16th Panzer Division were clattering toward the U.S. position on the north bank of the Sele River, while elements of the 29th Panzergrenadier Division advanced toward the U.S. position south of the Calore River. Panzer grenadiers marched behind the vehicles singing "Lili Marlene" and shooting flares and fireworks into the sky to deceive the enemy into believing that a massive force was making the counterattack. The two German armored divisions hoped

KEITH ROCCO

to catch the regiments on the American left flank in a pincer movement and destroy them. Once that was done, Vietinghoff could inform his superior commander, Field Marshal Albert Kesselring, that the Germans were on the verge of a great victory.

Operation Avalanche, the code name for the Salerno landings to be carried out by Lt. Gen. Mark Clark's Fifth Army, began in the early hours of September 9, when elements of three Allied divisions, two British and one American, began landing on the beaches south of the small port of Salerno.

The two main components of Clark's Fifth Army were Lt. Gen. Richard McCreery's British X Corps and Maj. Gen. Ernest J. Dawley's U.S. VI Corps. British X Corps was composed of the 46th and 56th Infantry Divisions, which landed five miles north of the Sele. The U.S. VI Corps was composed initially of only the U.S. 36th Infantry Division, which landed at Paestum south of the Sele. A portion of the U.S. 45th Infantry Division was scheduled to reinforce it immediately. To the left of the British, U.S. Rangers and British Commandos landed on the Sorrento Peninsular to block the Germans from reinforcing the battle zone from the direction of Naples.

The challenge the Germans faced at Salerno on the first day of the invasion was how to confront the initial Allied amphibious force of 54,000 infantry supported by large numbers of artillery batteries and several battalions of tanks and self-propelled tank destroyers. The Allied armada was composed of 627 troop and supply transports and warships. The U.S. Navy and Royal Navy warships had the capacity to deliver massive and devastating naval gunfire onto the shore in support of the beachhead.

Soldiers of the U.S. 36th Infantry Division storm ashore in a modern painting by Keith Rocco. The Allies chose the beaches south of Salerno as their invasion site because of the excellent approaches by sea to a 20-mile stretch of beach.

Keith Rocco / National Guard

Ullstein Bild

Map © 2016 Philip Schwartzberg, Meridian Mapping, Minneapolis. MN

TOP: German artillerymen load a camouflaged 75mm antitank gun during the battle. BOTTOM: Allied planners tasked the British X Corps with making the main assault at Salerno. To support it, the Allies inserted U.S. Rangers and British Commandos on its left flank and the U.S. VI Corps on its right flank. OPPOSITE: Allied landing ships unload men and tanks on the beach south of Salerno on the first day of the battle. German guns on the mountains 10 miles from the beach pummeled supply and landing transports as they offloaded men and equipment.

The Allies had approximately 1,000 medium and heavy bombers, as well as 1,400 fighters and fighter bombers flying from bases in Sicily. In addition, one light and four small British escort carriers, fielding a total of 120 aircraft, were present to support the Allied fleet and assault force.

The Allies chose to strike Italy in 1943 for a number of strategic reasons. First, an invasion would most likely force that demoralized country out of the war. Second, the move would take some pressure off the Soviet Union by forcing Germany to redeploy a large number of troops from the front lines in Russia to replace Italian units garrisoning the Balkan region. Third was the need to actively employ the Allies' vast air, land, and sea forces already staged in the Mediterranean Sea.

The Allies picked Salerno as their invasion site on the Italian mainland because of the excellent approaches by sea to a 20-mile stretch of beach five miles south of the town. The absence of shoals and good underwater gradients permitted ships to come close to land. A narrow strip of sand between water and dune and numerous beach exits leading to the main coastal highway, which led from Agropoli north through Salerno to Naples and eventually to Rome, would facilitate shore operations. Salerno harbor and the tiny port of Amalfi nearby would be helpful in receiving supplies. Coastal defenses in the area, including six fixed shore batteries, were almost exclusively fieldworks rather than permanent installations. What is more, Salerno was within reasonable striking distance of the port of Naples, which the Allies needed as a supply depot to sustain combat operations in Italy.

But there were some serious disadvantages posed by using Salerno as an entry point into Italy. The distance of Salerno from the toe of the Italian boot precluded mutual support by the two Allied invasion forces: the Fifth Army, under Clark, invading by water at Salerno, and Lt. Gen. Bernard L. Montgomery's 240,000-strong British Eighth Army, which on September 3 crossed from Sicily into Calabria and was moving north up Italy's west coast. The Sele River, which empties into the Gulf of Salerno 17 miles south of Salerno and divides the coastal plain, split the Allied invasion forces. The coastal plain was flat, low lying, and bisected by many irrigation ditches, drainage canals, and fences and walls.

The steep vertical banks of the Sele and its principal tributary, the Calore River, which paralleled the Sele until joining it four miles from the sea, hampered maneuver and communication between McCreery's forces north of the river and Dawley's forces south of the river.

The flat coastal plain was ringed by mountains just 10 miles inland from the beaches. The presence of mountains so close to the shoreline exposed the attackers to enemy observation, fire, and assault from higher ground. The main ridgeline in the area, which was the rocky spur of the Sorrento Peninsula, blocked access to Naples except for two narrow gorges that pierce the ridge. All told, the prospects for the success of Operation Avalanche were mixed. The Allies would have to contend not only with the terrain disadvantages but also with an enemy that was determined to do its best to hurl the invasion force back into the sea.

As they waited for the Allies to press their attack on the Italian mainland, the German high command and the German commanders

in Italy debated the best strategy for the Italian Theater. On the one side, the German high command advocated abandoning all of Italy below the Po Valley. On the other side, Kesselring, the commander of all German forces in southern Italy, argued for defending Italy south of Rome. Kesselring was heavily engaged at the time with the continued disarmament of the Italian Army after its surrender to the Allies on September 7.

Facing the Allies along the entire invasion front were 15,000 men belonging to the 16th Panzer Division of Generalleutnant Hermann Balck's XIV Panzer Corps. The 16th Panzer Division, which was led by Generalmajor Rudolf Sieckenius, had been partially destroyed at Stalingrad the year before, but the Germans had rebuilt the unit around its core of 3,400 veterans from the original division. Contrary to Vietinghoff's orders, Balck did not move directly to Salerno; instead, he halted 10 miles north of the port. As a result, the 16th Panzer Division fought alone on September 9, absorbing the full force of the invasion.

Having taken over their area of responsibility only hours before, Sieckenius and his men had made the most of their limited time to prepare to defend the coastline. In addition to manning the six Italian shore batteries between Salerno south to Agropoli, they placed artillery and mortars in a semicircle covering the whole shoreline. Artillery spotters took posts on the high ground surrounding the invasion site, enabling the Germans to direct fire on the gulf, the beaches, and the plain. For direct defense of the beaches, the Germans used the division's 105 tanks and 36 assault guns in small groups, sometimes supported by a platoon of infantry, to stage attacks and keep the enemy off balance and thus slow his progress inland.

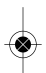
In addition, the Germans laid antipersonnel Teller mines randomly 15 yards from the water's edge in a belt extending 100 yards inland. Eight strongpoints containing machine guns, infantry, artillery, and antitank guns protected in the front and rear by barbed wire were sited to cover likely landing points. For the first several days of the invasion, German ground forces enjoyed the support of their brethren in the Luftwaffe, who conducted upward of 450 sorties against the Allies on the beaches.

By the end of day one of Operation Avalanche, as a result of Allied naval gunfire and the support of field artillery, much of the enemy fire covering the beachhead had been destroyed and losses in men and armored vehicles due to German action were relatively light. However, the anticipated advance inland by the Allies fell far short of expectations. Although the Allies had hoped that by the end of the first day the beachhead would be 4,000 yards deep, in most places it was only 400 yards deep.

Avalanche planners had thought a beachhead line taking in Salerno, Battipaglia, Eboli, and Ponte Sele would be reached by the close of the first day. The X Corps was supposed to have linked up with VI Corps, and the battle line would then continue through the mountains beyond Altavilla and Albanella to include Monte Soprano and Monte Sottane. This line would have given the invaders ample room to maneuver on the beaches and would have provided commanding positions over the entire beachhead, thus giving the Allies a firm base from which to advance on Naples.

Due to the efforts of the German defenders, however, the actual line the Allies held after dark on September 9 ran three miles southeast of Salerno, about two miles inland, and back to the coast four miles short of the Sele River mouth. The VI Corps had moved from the beach and taken the town of Cappacio, and a unit of the 36th Division was nearing capture of Monte Sottane. However, on the corps' right flank the landing area was still under fire, and American soldiers there were pinned down. Moreover, three of the most desirable objectives of day one, Montecorvino airfield, Salerno harbor, and Battipaglia, were not taken from the Germans.

Kesselring endorsed Vietinghoff's decision on September 10 to fight at Salerno by directing Generalmajor Eberhard Rodt's 15th Panzergrenadier Division and Generalleutnant Paul Conrath's Luftwaffe Panzer Division Hermann Göring, both of the XIV Panzer Corps, to move toward Salerno. The field marshal also released Generalleutnant Fritz-Hubert Graser's 3rd Panzergrenadier Division to move south from Rome to Salerno.



At the same time, Generalmajor Smilo Freiherr von Luttwitz's 26th Panzer Division and Generalmajor Walter Fries' 29th Panzergrenadier divisions, both of which belonged to Generalleutnant Traugott Herr's LXXVI Panzer Corps, having disengaged from Eighth Army's front, raced north to Salerno.

Vietinghoff moved the 16th Panzer Division out of the American sector to the British sector of the battlefield. He hoped the 29th Panzergrenadier Division's anticipated arrival would allow that unit to contain the U.S. VI Corps while the XIV Corps attacked the British X Corps. By the second day of Operation Avalanche, the Germans had managed to concentrate the bulk of their forces in the area against the British, thus barring the most direct route to Naples.

The X Corps sent out probes against these new enemy dispositions early on September 10.

National Archives

Progress was negligible due to heavy concentrations of enemy artillery fire expertly directed from spotters on the mountain range to the British front and strong German counterattacks. The 56th Division opposite Battipaglia took the heaviest punishment. After penetrating into the town, its soldiers were first pounded by artillery barrages and then driven out by tanks and infantry from the 16th Panzer Division. Another German tank attack between Battipaglia and Montecorvino airfield, at the tobacco factory, drove elements of the 56th Division's 201st Guards Brigade back toward the beach.

On the far left flank of VI Corps in the American sector, the 179th Regimental Combat Team of the 45th Division sustained heavy casualties as it advanced to the Calore River but was still able to secure the destroyed bridge at Ponte Sele. On the American right flank, battalions from the 142nd RCT of the 36th Division advanced from Paestum toward Hill 424 and captured the town of Altavilla. A counterattack by 25 German tanks was repulsed with the help of naval guns and field artillery. During the course of the day, the division's beachhead was extended with the capture of Monte Soprano. Throughout this period massive Allied naval gunfire proved critical in supporting the advance, defense, and retreat of the British and American ground combat units against relentless German counterattacks.

The following day, September 11, the pattern of seesaw combat seen on September 10 continued. In the American sector the fighting around Ponte Sele was unrelenting as German armored

Ullstein Bild

thrusts forced the Americans to give up some ground near the bridge, which the Americans had repaired, and at Calore. That same day, the 142nd RCT was stopped cold by enemy attacks directed at Altavilla.

On the X Corps front the most intense fighting involved the batle for Battipaglia, and the tobacco factory. After elements of Brig. Gen. Julian Gascoigne's 201st Guards Brigade penetrated the town, they were flung out by a violent German tank attack. Another attempt to take the Tobacco factory was crushed by German panzers with many British killed and captured. By day's end, the British held only a toehold in Battipaglia.

To the north of the beachhead, the Commandos and Rangers passed the day under increasing pressure as Kesselring's reinforcements stiffened the defense of the passes leading to Naples.

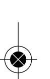
By the end of the third day, the Allies had expanded their foothold and occupied the port of Salerno. But the port facilities were so heavily damaged that they could not be used by the Allies. In the American zone the beachhead had been pushed 10 miles inland, while the British foothold was only one mile deep. Clark remained optimistic about the possibility of his forces soon being able to clear the Germans from the Sorrento Peninsula. Once that was done, they could advance directly on Naples.

September 12 saw the Germans mount strong attacks along the entire beachhead as reinforcements continued to arrive, albeit piecemeal, from both northern and southern Italy. At the southern end of the beachhead, attacks on the left of VI Corps were made by elements of the 16th Panzer and 29th Panzergrenadier Divisions. In the area around Montecorvino, the Germans made concerted attacks on the British X Corps.

In all sectors the Allies had a tough time warding off these determined assaults and in many instances were forced to retreat. The 45th Division, which had set out in two columns toward Ponte Sele was threatened with an enemy encirclement. To prevent this, Clark trnasferred the division's 157th RCT, which had gone to the British sector, to the Sele area to protect the flank of its parent division as it advanced northward. The regiment was hit by German tank and machine-gun fire from the high ground around Persano and from the tobacco factory after the Germans had crossed the Sele and occupied those two sites. (This tobacco factory was not the complex of warehouses of the same name previously mentioned in the British area of operations.) The intense enemy fire knocked out seven tanks accompanying the 157th RCT and stopped the outfit in its tracks. Even worse, the ground held by the Germans formed a threatening wedge in the weakly held seam between the British and American beachheads.

The fighting around Persano and the tobacco factory swung back and forth throughout the day. A ground attack by the 45th Division, which was supported by naval gunfire from the cruiser USS *Philadelphia,* eventually cleared the Germans from those two vital locations.

In the afternoon a battalion of the 142nd RCT lost Altavilla and Hill 424 after being pummeled by artillery fire and assaulted by elements of the 15th Panzergrenadier Regiment. At Battipaglia, the 56th Division was pushed out of the small part of the town it held and retreated 3,000 yards to the southwest to form a new line of defense.



Clark had come ashore early in the morning and established his headquarters in the VI Corps area. As he toured the battlefield and took in the situation, he recounted later that he felt the landing force had gotten itself into a bind and was at risk of being driven into the sea.

For this reason, Clark considered transferring the U.S. VI Corps north to the British X Corps' zone. He eventually dismissed the idea. Indeed, to attempt a major redeployment of his forces in the face of an aggressive opponent would have been an invitation to disaster. Clark decided that if the Germans were going to push the Allied Fifth Army off the beach they would have to do it one step at a time. The next day it looked as if the Germans were going to do exactly that.

By mid-morning on September 13, Vietinghoff had chosen a bold course of action. He was aware of the gap between the American and British sectors and wrongly concluded that the Allies had deliberately split themselves into two sections in preparation to evacuate the beachhead.

Having arrived at that erroneous conclusion, Vietinghoff looked at other evidence, miscon-

strued its significance and adopted it to support his theory. He believed that additional ships had arrived in the Gulf of Salerno to assist with the evacuation. He also believed Allied smokescreens around Battipaglia on the British right flank were intended to cover the British withdrawal. Sensing victory, Vietinghoff wanted not just to drive the Allies from their beachhead but also to prevent their escape. Kesselring endorsed his plan to attack. "The invaders in the area Naples-Salerno and southward must be completely annihilated and, in addition, thrown into the sea," said Kesselring.

The British Eighth Army was still days from joining the Fifth Army at Salerno. Skillful delaying actions by German rear guards, demolition of roads and bridges in the path of Montgomery's force, and the Eighth Army's lack of bridging equipment had slowed its northward advance. On September 12, the Eighth Army was still 80 miles from Salerno; it would not make contact with the Fifth Army until September 16.

From the American point of view, the German efforts on September 13, which became known afterward as Black Monday, were at first less a concerted attack than a sharp increase in resistance. An example of this was the stalled attack by the U.S. 36th Infantry Division against Altavilla and nearby Hill 424. Both attacks encountered stiff resistance.

The failure at Altavilla was overshadowed by near disaster in the Sele-Calore corridor. The 2nd Battalion of the 143rd RCT, after having relieved the 179th RCT, set up a defense two miles northeast of Persano and three miles from Altavilla, while the 157th RCT was two miles to the rear covering the Persano crossing of the Sele from its north bank. As a result, both of the 2nd Battalion's flanks were in the air, and the Sele-Calore gap was undefended. Meanwhile, Vietinghoff, supported by Herr, more than ever believed that the Allies were preparing to embark. At 2:30 PM he directed his XIV Corps to assemble all available forces for an attack south of Eboli to disrupt the supposed enemy withdrawal.

An hour later, 20 German panzers, an infantry platoon, and a few pieces of towed artillery left Eboli and moved toward the tobacco factory just north of the Sele held by the 1st Battalion, 157th RCT. As shells slammed into the American position, six German tanks attacked the battalion's left while 15 more struck the battalion's right. Although the Americans fired artillery and antitank guns at the Germans, the Germans routed the 1st Battalion. The Germans continued their advance and captured the Persano crossing and the tobacco factory.

Having uncovered the crossing of the Sele, the Germans entered the Sele-Calore corridor and struck the left rear of the 2nd Battalion, 143rd RCT. Meanwhile, more German armor advanced to Ponte Sele and cut the battalion's right flank. Barely hindered by the weak defense of the American infantry and light American artillery fire, the Germans overran 2nd battalion capturing 500 men.

At 5 PM the Germans held undisputed control of the corridor. They placed artillery near Persano and sent 15 tanks toward the juncture of the Sele and Calore Rivers. Within an hour German tanks and infantry stood on the north bank of the Calore. The only Americans between the Germans and the sea were the 158th and 189th Field Artillery Battalions of the 45th Infantry Division. Just 200 yards behind them was Fifth Army's command post.

Upon seeing the enemy on the north shore of the river, the American batteries, positioned on a gentle slope overlooking the corridor, opened fire at point-blank range while headquarters personnel formed a battle line on the southern bank of the river. Tank destroyers of the 636th Tank Destroyer

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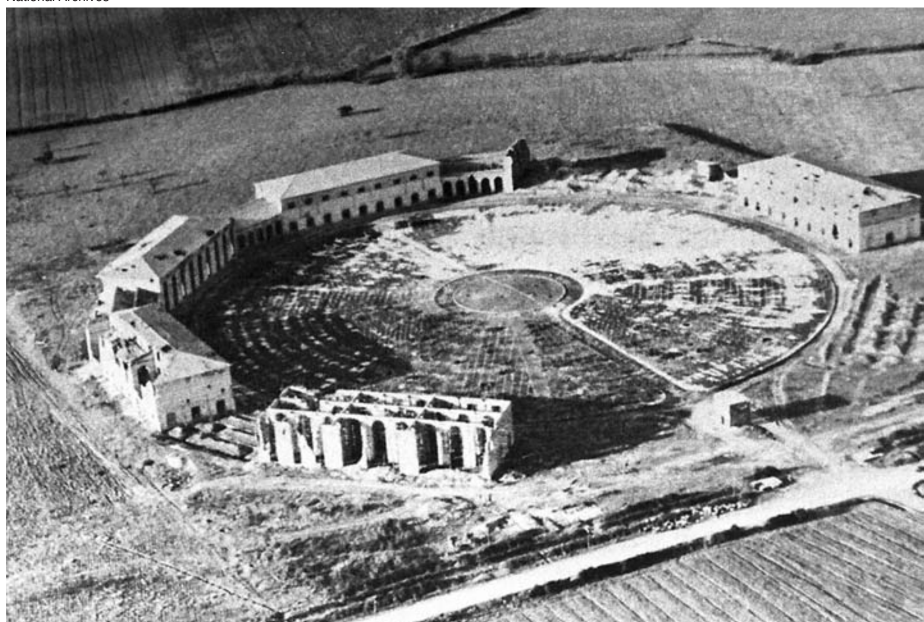
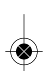


Imperial War Museum

TOP: The German counterattack on September 13 exploited the poorly defended boundary between the British and American zones. Heavy fighting occurred at the tobacco factory near Persano as the Germans sought to drive a wedge between the two corps. BOTTOM: British infantry advances behind a camouflaged Sherman tank as smoke from a burning ship drifts skyward. OPPOSITE: Germans defend a roadblock during the Allied advance. The Germans excelled on defense because of their training and superb weapons.



Battalion, 36th Division, just coming ashore, rushed to aid the gunners. Finding the situation extremely critical and realizing that the American forces might sustain a severe defeat in the area, Clark arranged to send his staff by boat to the British sector. Shortly after the Germans penetrated the Sele-Calore gap, Clark received a call from Dawley, who asked him what he planned to do about the worsening situation. "Nothing," said Clark. "I have no reserves. All I've got is a prayer."

In the X Corps sector, units were overextended. Conrath's Panzer Division Hermann Göring near Vietri threatened to cut communications between the X Corps and the Rangers to the north. But the VI Corps predicament south of the Sele was the most precarious. Clark called a meeting of his senior commanders at 7:30 PM and announced that plans to evacuate the American beachhead were being made. While the Americans discussed the looming crisis, Vietinghoff informed Kesselring of his troops' successes. "After a defensive battle lasting four days, enemy resistance [is] collapsing," wrote Vietinghoff. "Tenth Army pursuing on wide front. Heavy fighting still in progress near Salerno and Altavilla. Maneuver in progress to cut off the retreating enemy from Paestum."

Thirty minutes later, Herr told Vietinghoff that he doubted the Allied front was crumbling. Herr pointed out that enemy resistance was stiffening and American tanks were countering the German attacks. Vietinghoff refused to believe Herr's news. He urged his corps leaders to press the attack. Meanwhile, Balck also was skeptical of an impending Allied defeat. As a result, he failed to attack on September 13 with the newly arrived battlegroups from the 15th and 3rd Panzergrenadier Divisions; instead, he opted to make more preparations and then strike the next day.

Fifth Army found itself on the brink of defeat by nightfall on September 13. This was mainly because it could not build up the beachhead as fast as the Germans who could insert reinforcements by land faster than the Allies could by sea because of an acute shortage of transport ships. The question remained that night whether Fifth Army could hold the beachhead.

National Archives

A Sherman tank advances past a destroyed German tank. The arrival of British and American reinforcements on September 14 gave the Allies additional strength and compelled the Germans to begin withdrawing toward Rome.

As night approached on September 13, near where the Sele and the Calore Rivers met, less than five miles from the shoreline and a stone's throw from Highway 18, men of the 158th and 189th Field Artillery Battalions stood along with a handful of tanks and tank destroyers and Fifth Army headquarters' personnel, formed into makeshift infantry units in an effort to hold the most critical portion of the VI Corps front. Against a company of German tanks and a battalion of infantry, the Americans had fired more than 3,600 artillery rounds in four hours. Another 300 shots were fired by the newly arrived 27th Armored Field Artillery Battalion. The artillery fire, coupled with tank and tank destroyer fire from the base of the corridor, stopped the German penetration. With no immediate reinforcements available, the Germans pulled back to Persano at nightfall.

For the Americans, the situation remained precarious due to the lack of infantry needed to counter the enemy threat. The 1st Battalion, 142nd RCT was almost destroyed at Altavilla. The 2nd Battalion, 143rd RCT stationed in the Sele-Calore gap had ceased to exist. The 3rd battalions of the 142nd and 143rd RCTs had lost heavily at Altavilla, while the 157th RCT's 1st Battalion had been mauled at the tobacco factory.

Because of these circumstances, American commanders decided to shorten the American line. The 45th Division refused its right flank by moving parts of the 157th and 179th RCTs back along the Sele. The 1st Battalion, 179th joined the defenders at the base of the corridor, holding the junction of the Sele and Calore. In the center of the VI Corps line, the 36th Division drew back two miles to La Cosa Creek, while 1st Battalion, 141st RCT positioned itself on Monte Soprano and 2nd Battalion of that regiment took station near the corps' left, immediately south of Highway 18. The VI Corps' extreme right was entrusted to a battalion of the 531st Engineer Regiment. The 3rd Battalion, 141st RCT and an engineer detachment guarded the corps' left flank. Remnants of the depleted battalions chewed up at Altavilla made up a general corps reserve. The new defensive line was dug in, mined, and held at all costs.

On Clark's request, immediate help was sent to the American beachhead in the early hours of September 14 when two battalions of the 504th Parachute Infantry Regiment, U.S. 82nd Airborne Division, were dropped near Paestum and then trucked to Monte Soprano on VI Corp's right.

The Germans also adjusted their positions during the night of September 13-14. One regiment of Luttwitz's 26th Panzer Division went into line that evening near Eboli. Since its armored regiment was on detached service near Rome and one of its battlegroups was still retarding the progress of Eighth Army, the 26th Panzer Division could only contribute one regiment to the fight at Salerno. Vietinghoff ordered Luttwitz to take over the northern portion of the 16th Panzer Division area and attack toward Salerno. The hope was that the fresh 26th Panzer Division would be able to break through the British lines and make contact with Panzer Division Hermann Göring, which was scheduled to strike Vietri and then Salerno.

As these plans were being formulated, Balck informed his army commander that the British were fighting hard to regain the heights west of Salerno near Vietri. He argued that unless the Germans could cause more trouble in the Sele-Calore gap, no large-scale attack near Vietri or between Salerno and Battipaglia would be feasible. Despite the pessimistic but more realistic views of his corps commanders, the Tenth Army leader demanded that the XIV Corps and LXXVI Corps attack.

German pressure on September 14 against the British was at first centered on Salerno, where the 46th Division, dug in on the hills around the town, put up a determined defense. The Germans shifted their attack to the Battipaglia area where the 56th Division fought tenaciously on the open ground in full view of

its opponents. It received effective aid in the form of friendly naval gunfire and aerial bombing, which pummeled the Germans along the Battipaglia-Eboli road. By the end of the day, the British held firm. "Nothing of interest to report during daylight," reported McCreery.

In the American sector on September 14, the Germans attacked with eight tanks and a battalion of infantry from the 16th Panzer and 29th Panzergrenadier Divisions at 8 AM. Moving from the tobacco factory the attackers came up against the newly aligned 2nd and 3rd Battalions of the 179th RTC. Working in tandem, American tanks and artillery pummeled the German flanks. American aircraft and naval gunfire also harried the Germans as they advanced. After all the German tanks were destroyed, the panzergrenadiers withdrew.

During mid-morning, close to the river a company of infantry and six tanks advanced toward the 1st Battalion, 157th RCT and 3rd Battalion, 179th RCT. Effective fire, including many naval salvos, threw the Germans back. The Germans launched two more attacks against elements of the 45th Division, but they both failed to budge the Americans. German attacks against the 36th Division met the same fate. When a company of German infantry supported by tanks tried to cross the Calore River, U.S. artillery fire shredded them. Throughout the rest of the day, heavy land- and sea-based artillery barrages kept the Germans at bay. By nightfall on September 14, the VI Corps was in firm command of its position. Altogether, the Americans had knocked out 30 enemy armored fighting vehicles.

By the evening of September 14, the Allied position at Salerno had vastly improved. The seam between X and VI Corps southeast of Battipaglia had been stitched together with friendly units. Just as important, the British 7th Armored Division had arrived in the X Corps zone, and the 180th RCT, 45th Division came ashore to form a reserve force near Monte Soprano. In addition, 2,100 paratroopers from the 505th Parachute Infantry Regiment, 82nd Airborne Division dropped at Paestum.

On September 14, Vietinghoff slowly realized that his chance to drive his enemy into the sea was slipping away. Furthermore, Kesselring told him that regardless of whether the Tenth Army defeated its opponent it was to begin gradually withdrawing toward Rome. Nevertheless, Vietinghoff was still free to try one more time to dislodge the Allies from Salerno.

Having been given one more opportunity to try to defeat the Fifth Army, Vietinghoff decided to use the 26th Panzer Division in an attack northwest from Battipaglia to Salerno while Panzer Division Hermann Göring advanced from Vietri to Salerno. Because of these new orders, the brunt of the German attacks of September 15 fell on the British 46th Division. These were not as intense as on the previous days, but the British were at times hard pressed.

National Archives

U.S. infantry moves through the square at Acerno after breaking out from the beachhead. The tenacious defense shown by the Germans at Salerno was no match for the overwhelming resources of the Allies.

Two battalions from the 26th Panzer Division lost 90 men killed and wounded in an advance that gained only 200 yards. The 3rd Panzergrenadier Division maintained close contact while the 16th Panzer Division was ordered to continue the assault that night. When it did renew its attacks on the morning of September 16, the fighting was as brutal as any that occurred during the battle. The 9th Panzergrenadier Regiment launched its attack in the Battipaglia region against units of the 56th Division. The British and Germans fought hand to hand on the British perimeter, but the strength of the British defenses and the overwhelming Allied firepower drove the panzergrenadiers back.

After seeing the results of the fierce fighting, Vietinghoff realized on September 16 that he could not vanquish the U.S. Fifth Army. He therefore asked Kesselring for permission to withdraw; it was granted on September 17. Orders to leave the Salerno area were issued soon afterward, and Germans units began withdrawing from their positions the following day. The Germans left small units behind to ward off any enemy pursuit. The bulk of the German Tenth Army shifted to its right and headed for the Volturno River, where it entrenched and waited for the Allies.

The week-long Battle of Salerno had cost the British and Americans a total of 2,349 killed, 7,366 wounded, and 4,100 missing. The Germans lost 840 killed and 2,000 wounded. A large number of the German casualties were the result of Allied field artillery and naval gunfire.

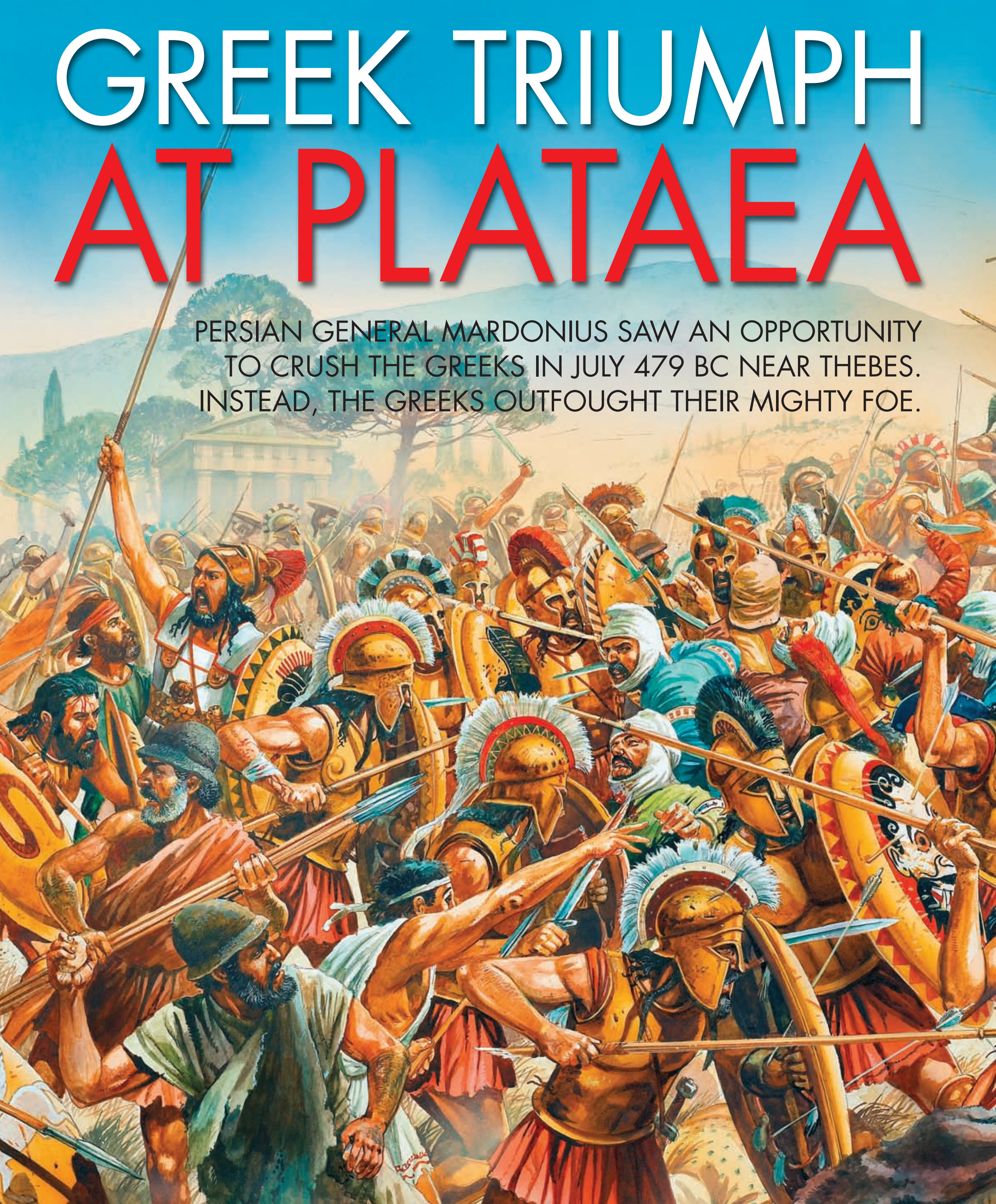
For the Allies, Operation Avalanche had been a success despite the fact that American troops often lacked that measure of aggressiveness shown by their adversary. German commanders pointed out that the U.S. troops in particular displayed hardly any tactical imagination and missed opportunities to exploit weaknesses in their opponent's situation. But the Allied troops, clumsy and lacking finesse, fought tenaciously on defense and exploited their immense artillery and air assets.

As for the Germans, they had fought well in every respect throughout the Salerno Campaign. During the battles around the Allied beachhead, the Germans had undertaken a series of impressive moves. They responded rapidly to threats, conducted lightning-fast maneuvers, and carried out concentrated attacks and timely counterattacks, despite the massive artillery and air superiority enjoyed by their enemy.

The fight around Salerno in September 1943 initiated a brutal, 19-month battle for control of Italy. The tenacity shown by the Germans was no match for the overwhelming resources of the Allies. Despite the tactical awkwardness of the Allied forces engaged at Salerno, they had managed to establish themselves in force on the Italian mainland. More hard fighting loomed ahead, but the Allies were determined to defeat the Germans, even if it meant a heavy price in casualties. □

GREEK TRIUMPH AT PLATAEA

PERSIAN GENERAL MARDONIUS SAW AN OPPORTUNITY TO CRUSH THE GREEKS IN JULY 479 BC NEAR THEBES. INSTEAD, THE GREEKS OUTFOUGHT THEIR MIGHTY FOE.



BY ERIC NIDEROST

PERSIAN KING XERXES I "The Great" was a man who liked to solicit different opinions before he made a decision on any important matter. He was in the midst of a campaign to conquer mainland Greece in the fall of 480 BC, but his fleet had been savagely mauled in September at Salamis. It was a stunning defeat, made even more distasteful because Xerxes had personally witnessed it while sitting on a golden throne.

The Persian monarch was a handsome man with curly hair and a long black beard, and he was elegantly dressed in a long-sleeved kafkan-style robe. The senior commanders, many of them warriors of distinction, filed in and respectfully waited for the conference to begin. The king wore a tall, jewel-studded headdress, a symbol of his status, but Xerxes did not need the trappings of royalty to assert his authority.

Mardonius was one of the first to speak. He was Xerxes' cousin, but military talent, not nepotism, made him a general in the king's host. If we are to believe the Greek historian Herodotus, Mardonius was one of the chief promoters of this campaign, urging Xerxes to deal with the troublesome Greeks once and for all.

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The Greek settlements in Ionia along the eastern shores of the Mediterranean were already controlled by Xerxes, but they were a rebellious lot. They were encouraged by the Greek city-states on the mainland, particularly Athens. Mardonius argued Athens must be punished, and the conquest of Greece would remove a thorn from Xerxes' side. The Ionian Greeks would have nowhere to turn if they wanted to revolt again.

Xerxes invaded Greece with an army of 200,000 men. At first, the Persian avalanche was successful, and as the mighty host proceeded Greek cities in the north were quick to offer earth and water in token of submission.

But other Greeks were made of sterner stuff. Led by King Leonidas and his Spartans, an Allied Greek army heroically held the pass at Thermopylae. When the Persians learned of a way through the mountains, the main Greek army was forced to withdraw to avoid encirclement. Leonidas and a handful of Greeks stayed behind and fought to the last man in August.

Xerxes marched on to Athens, forcing its population to evacuate to Salamis Island. The Persian king took his revenge in a spectacular fashion, burning the city and destroying the temples on the Acropolis. It looked as if he was on the cusp of total victory. As Thermopylae was being fought, the allied Greek fleet met the Persians at Artemisium. The Greek triremes held their own and achieved some local success, but the sheer weight of the Persian fleet began to tell. The Greek fleet withdrew to the south.

The Spartans counterattack, driving back the Persians at Plataea in a modern painting by Peter Dennis. The lighter armed Persians lacked the tactical skill of the Spartan hoplites and were unable to check their advance.

The naval battle at Salamis tipped the scales in favor of the Greeks. The Persian fleet lost about 200 triremes, and many more were damaged in the fight. Even more important, the Greeks had gained a psychological, as well as a physical, victory over their opponents. The Persian fleet comprised ships from many different subject peoples. The fleet lacked a unity of purpose, and no doubt most of the ship crews were serving under duress. Fear of the king's wrath was their chief motivation.

Despite the unexpected defeat, the Persian fleet still vastly outnumbered the Greek fleet, but surviving crews were badly shaken. Morale was low, and few wanted to renew the contest. Ships could be repaired, but what little enthusi-

asm the king's sailors had for the campaign died with their comrades in the deep blue waters of Salamis, which was filled with debris, broken oars, blood, and corpses.

The Greek victory at Salamis, while significant, was not as decisive as it seemed. In some respects the triumph was more apparent than real. Xerxes was the master of northern and central Greece, and his army was large, intact, and undefeated. Only the Peloponnese, the homeland of the Spartans, was as yet unoccupied and still defied the Persian king. From the Persian point of view, Salamis might be only a temporary setback.

That is why Mardonius urged his cousin to press on with the campaign. The Peloponnese was in effect a giant peninsula, connected to the mainland by a narrow neck of land at the Isthmus of Corinth. That neck had been blocked by a hastily erected wall, but there was still enough of a Persian fleet, demoralized or not, to contain the Greek triremes.

If the Greek ships could be held at bay, a mole or bridge of some kind might be constructed, in much same way as the Hellespont had been crossed earlier in the campaign. Once the isthmus was outflanked, Xerxes' army would march in and the Peloponnese would fall. That, at least, was the heady scenario that Mardonius was confidently predicting.

Wikimedia

Persian King Xerxes I with attendants. He sent his army deep into Greece, determined to crush it once and for all.

After some further debate, Xerxes dismissed all his officers and officials and sent for the one person he had grown to rely on above all others. That individual was Queen Artemisia of Caria. She was that rarity in the ancient world, a woman whose courage and brains were valued over her beauty or desirability. Artemisia held her own in a male-dominated world, and she was respected for it.

Herodotus was awed by her because she actually commanded the Carian naval contingent. Artemisia was far from a good general; for example, at Salamis she actually rammed and sank a friendly trireme in an effort to escape pursuing Greeks. But on land she was much more valuable, contributing a keen intelligence to the Persian cause.

Although Mardonius favored attacking the Peloponnese, he also suggested an alternative: Xerxes might go home with the bulk of the army while he would stay on with a substantial force. Winter was fast approaching and with it the end of the campaigning season. Mardonius would winter in Greece and resume the offensive in the spring.

Artemisia arrived, and Xerxes laid out the two courses of action being considered. He asked her which she favored. The queen pondered the alternatives. She advised the latter course: Mardonius would stay in Greece and in the spring would complete the conquest. If the campaign was successful, it would be to Xerxes' credit, Artemisia said. But if Mardonius was defeated "it would be of no great loss, because you and the affairs of your house will survive," she said.

To clinch the argument, Artemisia continued, "Should Mardonius suffer some disaster, it will be of no account. The Greeks will win no victory if they destroy only your slave [Mardonius]. You, on the other hand, will be returning after burning Athens, the object of your campaign."

Xerxes was pleased and decided to take her counsel. He was too far from the Persian capital of Persepolis from which he could monitor his vast kingdom. He wanted to return to Persia. Only time would tell whether Ahura Maza, the Zoroastrian deity of the Persians, would prevail over Zeus, the god of the Greeks. If Mardonius wanted to accept responsibility for the campaign, let him. He could be a convenient scapegoat if things turned out badly.

The king's massive army began a withdrawal from Attica, continuing on through Phocis, Boeotia, and Thessaly. Once in Thessaly the army divided, with Xerxes taking some troops with him back home and the remainder staying with Mardonius. Ancient figures are almost always misleading, but the king's cousin probably had upward of 100,000 troops with him.

Just before Xerxes went home he met with a Spartan herald, who formally demanded compensation for the death of King Leonidas at Thermopylae. Xerxes laughed and pointed to his cousin. "This is Mardonius, and he will pay the Spartans the compensation they are owed!" said Xerxes.

After Salamis the Greeks fully expected to fight another sea battle the very next day. They were happy to have won a victory against the odds, thanks to hard fighting and the *metis* of the Athenian leader Themistocles. *Metis* was a concept of the mind that used cunning, invention, and intelligence to achieve its ends.

Themistocles, wily and resourceful, had sent a secret message to Xerxes saying that many ships in the Greek fleet were about to desert. Enraged at this betrayal, Themistocles said the Athenians were ready to switch sides and join the forces of the Persian king. But he also added that if the Persian fleet entered the Straits of Salamis, they could cut off the retreat of the other Greek triremes.

It was all a ruse, of course, a trick to lure the Persian fleet into narrow waters where their numerical advantage would be neutralized. The Persian king was no match for Themistocles and his Athenian *metis*. Yet after the battle the Persian fleet's Egyptian contingent was largely intact, a nucleus that, with the survivors of Salamis, could still outnumber the Greeks. Luckily, the psychological damage inflicted on the Persian fleet was even greater than the material damage. It would play little or no part in the next campaign.

The battered Persian fleet withdrew to the island of Samos, mainly to keep an eye on Xerxes' troublesome Greek subjects in Ionia. While it was clear the Persian fleet would not stage a major offensive, its mere presence was a thorn in the Greek side.

With winter approaching Mardonius' army bivouacked in Thessaly to await the coming of spring. The ships in the Greek fleet dispersed to their home ports, and the Spartans and other units from the Peloponnesus withdrew to their defensive line at the narrow neck of the Isthmus of Corinth. The spoils of Salamis were distributed, and the Greeks made dedications to their gods and erected commemorative monuments and memorials to their heroic dead.

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The Persian cavalry charged the Megarians in waves, showering the Greeks with their arrows and javelins before turning away. To assist them, Pausanias sent a unit of archers from the Athenian contingent.

The Athenians returned to their devastated city, which had been heavily damaged in places. But homes and temples could be rebuilt, of course, and the Athenians were pleased that they were free of the Persian yoke. While they were rebuilding, the Athenians stumbled upon Xerxes' golden footstool atop the hill where he had watched with anger and dismay as his navy was defeated at Salamis. This was a special prize, and it was dutifully carried up to the scorched Acropolis and dedicated to the city's patron goddess, Athena.

The ruined city once more pulsed with life, and the Athenians celebrated their deliverance from the Persian yoke with song and dance. One of the dances was led by a talented teenager named Sophocles, who eventually would become one of Greece's most talented playwrights.

Chilling autumn winds lashed Attica, heralds of the rains that soaked the earth and watered the crops. Naturally quarrelsome and stubbornly independent, the Greeks had a hard time keeping their alliance strong and intact. Part of the problem was centered on geography. The Spartans wanted to essentially abandon central Greece, which included Athens.

The Spartans and other Greeks lost no time in building a wall across the isthmus.

The Athenians wanted to confront the Persian host as far north as possible but they were going to need a lot of luck and employ a large dose of *metis* to get their way. Curiously, the Persian general Mardonius actually helped the Athenians in this regard.

Mardonius may not have been as cunning as Themistocles, but he knew the Greek alliance was shaky. Perhaps Persian gold in the form of bribes would accomplish more than Persian spears ever could. Above all, the Persian general realized that Athens and Sparta were the pillars of the Greek alliance. The Spartans were considered dull and unimaginative, stupid in everything except the art of war, but if luck and Ahura-Mazda favored them, the Athenians might rise to the bait.

The Persian general began his verbal offensive in the spring of 479 by sending Alexander, King of Macedon, as a special emissary to the Athenians. If the Athenians switched sides, Xerxes would offer them freedom, probably a form of autonomy, within the Persian Empire. To sweeten the deal, there would be new lands in the offing, and the Athenian temples, mostly in ruins, would be rebuilt with Persian gold.

The Athenians' response was typical of them at their best. It was well thought out and subtle. First, they sent messages to the Spartans informing them of the king's offer. If the Spartans were afraid the Athenians might leave the alliance, they might abandon their plans to stay in the Peloponnese. After the messengers were dispatched the Athenians sent a message of defiance to Mardonius. "So long as the sun holds its present course, we will never agree to terms with Xerxes."

No doubt angered and disappointed by their response, Mardonius moved south on Athens. Once again, as after Thermopylae, the entire population was evacuated to the island of Salamis. This time the Persians spared nothing; they torched nearly every house, temple, and public building. Only a few houses were spared to temporarily house some Persian officers. The rest was laid waste.

When the Spartans still hesitated to march north, the Athenians issued an ultimatum: Join us or we will accept the Persian offer. This was a message even the thick-headed soldiers of Sparta could understand. The Spartans and their Lacedaemonian *perioikoi* (affiliated communities) would come to the aid of the Athenians. Approximately 5,000 Spartan hoplites would be the core of this contribution. Each Spartan would be accompanied by several *psiloi,* servants, or attendants who doubled as light troops.

When he heard the Spartans and other Greeks were coming, Mardonius decided to abandon Attica and withdraw to Boeotia. There were sound strategic reasons for this. Boeotia's plain would give him ample room to maneuver, and it would be favorable to his cavalry. Persian cavalry was excellent; the Greeks had no cavalry to oppose them. If the Persians went to Boeotia they also could use Thebes as a base of supply. The Thebans already had sided with the Persians.

The Spartans and the other Greek allies linked up with the Athenians at Eleusis. In the meantime, Mardonius entered Boeotia at Tanagra and eventually set up a fortified camp at the north bank of the Asopus River, not far from the town of Plataea at the foot of Mount Cithaeron.

On the Greek side it was decided that Pausanias, a nephew of the heroic Leonidas of Thermopylae, would assume overall command of the allied Greek forces. Aristides and Xanthippus were co-commanders of Athenian forces. A rival of Themistocles, Aristides later worked with him. Xan-

thippus is famous for being the father of the great Athenian statesman Pericles.

The allied Greek army crossed through the mountain passes but did not enter the plain; instead, it formed a defensive line facing north in the foothills of Mount Cithaeron. This placed it on higher ground ideal for defense against cavalry, and rocky spurs protected its flanks. It was the height of summer, and the heat at that time of year can be suffocating. Water was essential, especially for a hoplite who wore a heavy bronze helmet and bronze body armor. Initially, at least, the Greeks had access to the Gargaphia Spring. But they could not venture near the Asopus River because of Persian archers.

The Greek left was anchored by the Spartans, Lacedaemonians, Tegeans, and Thespians, totaling 30,000 men. The center was held by another 30,000 men representing a score of Greek states, including the Corinth, Arcadia, Mycenae, and Styria. The left was where 20,000 Athenians, Plataeans, and Megarians took their places.

As might be expected, the Persian army under Mardonius was much more polyglot, drawn from the four corners of their vast empire. The core of the army was 60,000 Medians and Persians. This included 1,000 Immortals, who formed Xerxes' famous bodyguard.

The Persians wore colorful tunics and trousers, which the Greeks felt were effeminate. They wore a flapped headdress or turban called a *kurbasa,* and very few wore armor. At best, a few might

Wikimedia

ABOVE: A Greek hoplite is shown locked in combat with a foe in a period sculpture. Hoplite tactics included othismos, which called for the front line to push the enemy back with their shields. OPPOSITE: Persians with wicker shields were no match for tightly packed ranks of Greek hoplites. The Persians at Plataea grabbed the spears of the Greeks and broke them in an effort to neutralize their offensive power.

wear light scale armor, but most had no body protection at all. Their shields were made of wicker, which was a decided disadvantage when dealing with Greek swords and spears.

Also with Mardonius were the Bactrians, people from the area between the Parmir Mountains and the Hindu Kush in the northeast regions of the Persian Empire. They made excellent cavalry. Indians were also present, inhabitants of what the Greeks considered the edge of the known world. The best cavalry, except for the Persians, was the Sacae, which history generally knows as the Scythians. These hard-riding nomads were experts with the Asiatic composite bow.

Herodotus says the Egyptian marines were the best armed and armored of the non-Greek forces. They had a variety of weapons at their disposal, including naval pikes, axes, and large swords. They also wore plaited helmets and cuirasses.

And last, but certainly not least, were the medized Greeks, the Hellenes fighting on the Persian side. As might be expected, they were heavily armored warriors with arms and equipment similar to the allied Greeks on the opposing side. Because they would be fighting in phalanx fashion, they would be a formidable foe in battle.

For several days there was a standoff. The Greeks were not about to be lured down into the plain, and Mardonius was not going to be foolish enough to attack a phalanx formation on high ground. Eager to break the impasse, Mardonius sent in his cavalry to attack the Greek left. There seemed to be a weak point in the Greek line in that area, where the Megarians were positioned.

The 3,000 Megarian hoplites were posted near an area of flatter ground on a spur in the foothills of Mount Cithaeron, which was the geographical boundary between Boeotia and Attica. This made it somewhat easier for the Persian horsemen, who attacked in multiple waves. This was the highly mobile, hit-and-run tactic in which the Persians excelled. Swarms of Persians would gallop near the Megarian line and send showers of arrows into their ranks. After discharging a few missiles, the riders would retire, only to be replaced by yet another swarm of fresh cavalrymen.

The Persians, some of whom apparently spoke Greek, added psychological warfare to their lethal wasp stings. The horsemen shouted that the Greeks were women, hoping to goad them into a rash advance. The Megarians stood their ground, but the constant missile attacks were wearing them down.

Encouraged by the small victory over some of the Persians' best men, the Greeks decided to advance to the northeast, closer to the river, though it was still some distance away. The ground was undulating and still favored the defense, though perhaps it was not as promising as their previous position. In any case, the two armies once again became inactive. For the next eight days, the opposing forces just looked at each other from a distance.

Both Pausanius and Mardonius consulted the gods. Seers with each army sacrificed animals and examined the entrails for signs and portents. The gods seemed to favor a static, defensive posture. The divine message appeared to be the following: If either side crossed the Asopus River and attacked, there was a risk of catastrophic defeat.

Mardonius probably hoped that he could starve the Greeks into submission. The area where the Greeks encamped had been stripped bare of resources by the Persians. Greek soldiers normally carried only a few days rations on campaign; after that they were expected to live off the land by plunder or purchase. As the days dragged on the Greek army became dependent on long supply trains through the mountains.

Sanitation must have also been a problem. Many thousands of Greeks were more or less living in the same spot, and human waste was

Eon Images

probably an issue after a few days. Torrid temperatures, flies, and excrement would bring a terrible stench and the threat of disease. By contrast, Mardonius' supplies were dwindling, but he was better off than the Greeks.

Mardonius decided to stage a bold raid behind the Greek lines. A large cavalry force slipped out under the cover of darkness and positioned itself near the entrance of the pass that cut through the mountains. The raiding party surprised a Greek supply column of 500 transports, probably pack animals and carts pulled by lumbering oxen.

The Persians were in their element, freely using arrows, spears, and swords to finish off the supply train personnel, mainly slaves, servants, and attendants who were helpless noncombatants. The Persians slaughtered without mercy, even killing many of the oxen and pack animals. Some have interpreted this as not mere bloodlust, but a sign of their mounting frustration and sheer boredom of a campaign that seemed endless.

The loss of the supply train was a serious blow to the Greek cause. Eventually more supplies could be brought up, but the process took time, and no doubt the Greeks felt the pinch in the short run. Curiously, Mardonius did nothing to follow up this successful raid. Perhaps he was hoping that hunger would further weaken the bonds that held the Greek alliance together. There was always the hope, albeit an increasingly forlorn one, that some of the Greeks would come over to the Persian side.

Three days after the Persian raid, King Alexander of Macedon made a clandestine appearance under the cover of night. He warned the Greeks of an impending Persian attack but advised them to stand fast. This change of heart on the Macedonian's part has never been fully explained. The allied Greeks prepared for a possible Persian thrust the very next day.

Alexander's intelligence proved correct. The Persian cavalry advanced, once again lobbing arrows and javelins into the Greek ranks. But this harassment was only the beginning of Greek troubles. Some of the Persian horsemen rode over to the Gargaphia Spring, fouled it, and immediately afterward blocked it up for good measure.

Here was the real crisis of the campaign. The spring had been the only source of water for the whole Greek army, and there was almost no food left. The Greek leadership decided to fall back to a position in front of the town of Plataea. It had fresh water, and the Greeks could guard the mountain passes.

The retreat was to be conducted at night so the Persians would not detect any movement. But the withdrawal plan fell apart, and the various Greek units became somewhat scattered. The Spartans were the last to move off, partly because of an argument between Pausanius and one of his Spartan subordinates, Amompharetus.

Amompharetus thought that any withdrawal, regardless of how tactically sound it might be, was tantamount to cowardice. He refused to leave the original Spartan post, which put Pausanius in a difficult position. If he left Amompharetus and his division behind, chances were that they would be cut off by the Persians and annihilated. Pausanius also did not want to be accused of abandoning fellow Spartans.

The two Spartans started yelling at each other, and the argument grew more heated. In the meantime, the Athenians were still on or near the original left flank. They were fully prepared to depart but were puzzled by Spartan inaction. The Athenians sent a horseman as a messenger to find out what was going on.

When the Athenian courier arrived, the two Spartan commanders were still arguing. Pausanius did stop long enough to assure the Athenian messenger that the Spartans were indeed going to withdraw, appearances to the contrary. A smear of light appeared on the horizon, harbinger of what the Greeks called "rosy fingered dawn." Originally the intention had been for the Greeks to retreat under the cloak of darkness, but now, thanks to the arguing commanders, the Spartans would have to march in daylight.

Continued on page 65

American soldiers repulse a night attack atop Pork Chop Hill in a modern painting by eyewitness James Dietz. The U.S. 7th Infantry Division faced a battle-hardened foe.

The climactic struggle for control of Hill 255 in July 1953 pitted hordes of determined Chinese infantry against gritty U.S. soldiers in an around-the-clock, five-day battle.

INFANTRYMAN'S WAR ATOP PORK CHOP HILL

BY PHIL ZIMMER

© James Dietz

THE TENNIS-SHOED SOLDIERS EMERGED from the darkness on July 6, 1953, like a "moving carpet of yelling, howling men [with] whistles and bugles blowing, their officers screaming, driving their men" against the Americans as they swept up Hill 255, recalled Private Angelo Palermo.

The lead elements of the Chinese infantry were loaded down with grenades, but they carried no rifles or submachine guns in their assault on the nondescript hill made famous by the 1959 film *Pork Chop Hill,* which was based on military historian S.L.A. Marshall's book. They were trained to pick up and expertly use weapons dropped by their enemy as they rushed relentlessly forward like a large wave to engulf and overpower everything before them. Palermo and his U.S. Army buddies in Company A were outnumbered four or five to one by the Chinese assaulting the Americans' recently shored-up trenches.

The Chinese knew what they were doing and were determined to advance over the covered trenches separating the 1st and 2nd Platoons and make a beeline toward the company's command post located just east and below Pork Chop's highest point. Near that point they would enter the open trenches and cut the defenses in half just below the two high points on the hill.

Once in the covered trenches, they could continue their rapid-fire advance to the command post and seize the secondary crest while the largest group of fighters, estimated to be a company strong, would take the hill's crest. Two more Chinese platoons would roll over the crest, one intending to penetrate the rear and the second running to take the evacuation landing zone.

The Chinese had done their homework during the 10 weeks the Americans had taken to reconstruct Pork Chop Hill's defenses since the failed April attempt to take the hill. The Communists under General Deng Hua, deputy commander of the Chinese People's Volunteer Army in Korea, were the experienced and well-trained 141st Division of the 47th Army and the 67th Division of the 23rd Army. The battled-hardened Chinese knew how to conduct fierce, head-on infantry assaults and were well versed in mountain warfare. They were pitted against Maj. Gen. Arthur G. Trudeau's fairly equal-sized 7th Infantry Division of 19,000 men, which included a battalion of armor and six battalions of artillery. Both sides knew the coming battle might influence the peace discussions that appeared nearing conclusion.The Chinese knew what and where the obstacles were, and they had come well prepared with bazookas, satchel charges, automatic weapons, hand grenades, and flamethrowers. Some in the assault force even came equipped with sulfur sticks to create acrid fumes to force the Americans from their bunkers.

Private Harvey Jordan and his machine gun crew survived a direct-fire round, either from a recoilless rifle or from a Soviet-built T-34 tank, which struck an adjacent bunker, killing two Browning automatic riflemen and severely wounding their squad leader. Both heavily fortified bunkers partially collapsed as the squad leader continued to scream in pain.

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Wounded Americans from the 31st Regiment, 7th Infantry Division are evacuated from the front. The bloody, hand-to-hand fighting that characterized the battle produced significant casaulties.

As the air cleared, Jordan checked his weapon and attempted to fire at the oncoming red tide. It spit out one bullet and then the machine gun stopped, damaged by the explosion. Jordan and his South Korean ammunition bearer started throwing grenades in a desperate effort to ward off the attackers. An incoming hand grenade knocked the American across the floor, spraying him with shrapnel and wounding one eye. He was saved by his body armor, but his Korean helper lay dead. By now the Chinese were on them, spraying the bunker's walls and floor with their burp guns from the lip of the trench before Jordan fell unconscious.

In a nearby bunker, Private George Sakasegawa and his squad leader held their fire until the oncoming Chinese tide was nearly on them. Then they let loose with everything they had as the enemy hurled grenades, one exploding near Sakasegawa and causing shrapnel wounds to his buttocks and legs. The Chinese continued forward in their saturation attack, quickly dividing and isolating the defenders on Pork Chop Hill. Simultaneous diversionary attacks were occurring at outposts Snook, Arsenal, and Arrowhead.

Company A on the right shoulder of Pork Chop Hill came under severe mortar and artillery attack as the Chinese swarmed into the trenches in the center between the two high points of the hill. That isolated the 1st and 2nd Platoons as a major force of the enemy swept over the crest toward the rear slope, heading toward Company A's command post.

Lieutenant David Willcox of the 2nd Platoon headed out of the command post toward bunkers 53, 54, and 41, which were under heavy attack. He became separated from the two troopers with him and Willcox found himself engaged in the fight of his life. He came well prepared to the fight. He had emptied his .38 and .45 caliber pistols, killing a dozen of the enemy at close range, when another Chinese soldier came at him before he had time to reload. Willcox grabbed one of three knives he had on him and killed his opponent, who turned out to be a fresh-faced teenager.

Willcox made it to Bunker 53 and took cover there with a handful of others. Although wounded in the back, Willcox stationed himself at the bunker's entrance where he tossed grenades at the advancing enemy. An incoming grenade wounded him in the leg. He was helped inside by his men, and they sandbagged the entrance and successfully held off repeated enemy assaults over the course of the next two and a half days.

The Americans on the hill had a difficult time fending off the enemy's steady attacks. Several bunkers and trench systems already had been taken by the enemy in bloody hand-to-hand combat between individuals and small groups of soldiers.

Lieutenant Dick Inman of Baker Company rounded up his troopers in an effort to reach the 2nd platoon's supply bunker near the command post where they could find a fresh supply of much-needed ammunition and grenades. The Americans fought their way along the trench, dodging enemy grenades while throwing their own and firing their weapons at close range as they advanced. They came to a stop near Bunker 54, which had been seized and was heavily defended by the Chinese. Two efforts to retake the bunker proved futile, and many of the weapons carried by Inman's men had jammed, grenades had been depleted, and ammunition was running desperately low.

The situation was nearly beyond desperate at that point. Inman took the men with operating weapons and divided them into two groups in a continued effort to get through to the supply bunker. Two men, one armed with a Browning Automatic Rifle, were to run on the upper side of the trench to lay down covering fire as they ran past Bunker 54. Inman, with a carbine in hand, and a soldier with a rifle were to make a similar dash along the lower side of the trench.

The Chinese had other thoughts. Their heavy fire injured and forced the two men back from the upper side. Inman, on the other lip of the trench, took a round to the head. Sergeant Alfredo Pera and Corporal Harm Tipton made a fateful decision to retrieve Inman under fire and carry him toward safety. An enemy grenade exploded, wounded both rescuers, and forced them to leave the mortally wounded Inman behind as they staggered dazed and wounded downhill to a supply point where they were treated and evacuated.

For the men on the hill, the Chinese kept coming, isolating them from their units and leaving them in a desperate struggle often with jammed weapons or no ammunition. Men on both sides often resorted to knives or fists in the swirling, confusing melee on the darkened hill. Communication with the outside world was often impossible because of damaged radios, cut field telephone lines, and heavy rain that shorted out equipment.

American soldiers yelled at each other to take cover because U.S. artillery fire with proximity fuse shells had been called on the position. This kind of artillery fuse was set to explode in deadly air bursts above the fighting, covering the area with red-hot shrapnel. Only those in the bunkers or covered trenches would survive this type of artillery shell, which was coupled with a close-in curtain of fire around Pork Chop to protect the defenders from additional waves of incoming Chinese troops.

The bitter struggle over Pork Chop Hill was part of a larger effort of the so-called Battles of the Outposts that ran roughly from July 1951 until the armistice that halted the fighting in the Korean War was finally signed in late July 1953. This was a comparatively static phase of the war with bitter regiment-sized or battalion-sized attacks limited in scope by key tactical terrain along a front that had been stabilized north of Seoul.

During the Battles of the Outposts, both sides maintained sizable opposing forces behind their outposts and along their respective main lines. The extensive use of heavy artillery and mortar barrages was reminiscent of World War I, and the relatively static situation stood in sharp contrast to the first year of the war, which had been characterized by the sudden sweep southward by the North Koreans followed by the push north to the Yalu River by U.S. and United Nations forces

and the enemy's subsequent push southward with the assistance of the Red Chinese.

The outpost battles, including the struggle for Pork Chop Hill, were often exceptionally fierce and bloody with nearly half of America's 140,000 casualties occurring during that time period. The heavy fighting was fostered, in part, by an earlier understanding that the peace line would be drawn along the fighting line when the final agreement took effect.

In the fighting that occurred on Pork Chop Hill in mid-April 1953, hundreds of Chinese were killed and thousands wounded in a failed attempt to take the hill. Seventy-three Americans lost their lives during the two-day battle in April that did not draw much attention, probably in part because it was largely an artillery duel between the two sides.

Following that successful defense, American engineers and others were brought in to reinforce the bunkers and strengthen the trenches on Pork Chop Hill. One of the men, Private James Reardon, was called in to help manhandle large ammunition crates into position in the deepened bunker system. The work took its toll on the men, including Reardon, who suffered triple hernias and was evacuated to Japan for a painful round of operations. That may have saved his life because he missed the far more deadly July battles on Pork Chop Hill and only managed to return to Korea after the armistice.

The Chinese meant business in the July 6 attack. Despite the proximity fuse artillery fire throughout the night, nothing stopped the determined offensive. By 11 PM, only minutes after the initial attack, the enemy fire was striking the evacuation point near Able Company's command post and its supplies. The Chinese had reached the rear of the defensive system, temporarily cutting off Pork Chop from friendly forces. Within another few minutes the enemy was around the command post and on the crest of the hill above it.

The determined Americans fought on, sometimes singly and at other points in small groups. Master Sergeant Howard Hovey, a World War II veteran who was soon to go home to retirement, ran to the trenches near Able Company's command post to direct fire against the oncoming Chinese. Hovey twice left the relative safety of the trenches to use his carbine and grenades to turn back the enemy before dying under fire. His aggressive actions enabled the Americans to evacuate the command post and set up another one near the evacuation landing zone.

Although attacks occurred all along the Americans' main lines that night, the focus was clearly on Pork Chop Hill. Fortunately, Baker Company had been kept in reserve nearby and was called into action shortly after 11 PM to reinforce Company A. Despite the noise and artillery, the troopers coming to the rescue had no idea how desperate the situation was on the hill.

Company B approached the rear slope and fought onto the hill by 12:30 AM but at first was not able to make contact with the men of Company A who were close enough to see the Chinese silhouetted on the crest against the flame-lit sky as the enemy worked feverishly to gain control of the trench and bunker system.

Company B commander Lieutenant William J. Allison, unaware of the enemy's approach from the west and their seizure of the hill's east crest, ordered an immediate attack. Meanwhile, American artillery continued to lash the hill with fierce curtains of fire while sending counterbattery fire on Chinese artillery and mortar positions. Allison and his men had marched into the jaws of death that would grip them and the others over the course of the next grueling, life-threatening 40 hours.

Allison learned that the Chinese had taken the crucial trench between the two sectors of the American defense system on Pork Chop Hill. Ordering his men forward up the hill, he could see the enemy sweeping over the crest from the back portion of the hill. They put heavy fire on the Chinese, but as their ammunition diminished he ordered the men in his company back to hold the main supply bunker. They used their time wisely, caring for the wounded and resupplying themselves with ammunition just before Allison was struck and killed by a sniper's bullet.

Company B eventually made contact that night with Company A as they fought to regain bunkers held by the Chinese. By 3:30 AM on July 7, they were calling for reinforcements to man the bunkers that had been cleared of the enemy. A bit later the company swept over the hill, retook eight or nine bunkers on the left sector, and cleared the central part near Company A.

The Chinese still held a good hand; they commanded three bunkers on the rear slope in the right sector and were in good position to rake the evacuation area and the access road with heavy

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Two views of Pork Chop Hill reveal the rugged terrain in which the battle was fought. As the battle progressed, the Chinese gained control of the crest and directed automatic weapons fire downhill.

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machine-gun fire. Acting platoon leader Tony Cicak safely threaded his way from the trenches down to the access road, took temporary command of an American T-18 armor personnel carrier with its mounted .50-caliber machine gun, and directed it toward the Chinese guns. He managed to fire off three or four rounds before the gun jammed and the crew hurriedly backed the vehicle from the scene.

Company E had been on standby, and shortly after 4 AM on July 7, its first platoon had arrived on the hill. They reported that more infantrymen were needed to hold the cleared bunkers and to evacuate the dead and wounded. Once that was accomplished, the remainder of Company E reinforced the hill by 5:30 PM.

The battle for the hill became, in many respects, a campaign dominated by artillery, mortar fire, and tactical air strikes. Within the first few hours of the July 6 attack, the enemy had lobbed approximately 20,000 artillery rounds onto Pork Chop and the surrounding hills. Not to be outdone, U.N. forces resorted to similar weapons along with tank and recoilless rifle fire, antiaircraft weapons, and lead poring forth from quad .50-caliber machine guns.

The Chinese held the higher ground around Pork Chop Hill and could drop fairly precise heavy fire on the besieged hill and its environs. And once they had gained the hill's crest, the enemy artillery and mortar rounds became even more deadly for the Americans. The Chinese were not averse to raining heavy fire down on their own soldiers if their positions were on the verge of being retaken by determined American troops.

The Chinese had learned Soviet *maskirovka,* or deception tactics, used effectively in World War II against the Germans. They employed extensive camouflage and night movement and rolled artillery back into deep and well-hidden caves after firing. Much of their artillery and other heavy equipment had been brought south over Soviet-designed invisible bridges, constructed so the bridge surface was approximately one foot below the water so that it could not be spotted by U.N. aircraft.

The heavy artillery and mortar pounding contributed to the turmoil on Pork Chop Hill. Gravely wounded and dying men from both sides littered the hillside while small groups of men struggled for survival in hand-to-hand combat on the exposed, rain-swept terrain and in the covered trenches and bunkers. Some of the wounded Americans moved to the evacuation landing during lulls in the fighting. On the desperate east shoulder of the hill, the injured huddled together, often cut off from the others, pinned down by Chinese snipers.

Early on the morning of July 7, Lieutenant Dick Shea, Company A's acting commander, was in the trenches when Chinese soldiers rushed forward, seemingly out of nowhere. He shot down four or five of the enemy, and when he ran out of ammunition pulled his knife, killing two more of the attackers, causing the others to flee. He rallied his men and led them down the trench line, forcing the Chinese back even farther. Their courageous efforts netted the defenders a better view of enemy-held areas and improved fields of fire.

Reinforcements came that morning with the arrival of Lt. Col. Rocky Read, 1st Battalion commander, and a platoon from Company E, which set up a command post in reinforced, two-room Bunker 45, located on the hill's reverse slope.

The remainder of Company E was brought up as the dead and wounded were taken from the hill. Lieutenant Macpherson Connor's platoon was assigned to hold the engineers' tunnel, Pork Chop Hill's crucial main trench. A series of trenches radiated from the tunnel, and there were vertical shafts leading topside where the Americans could hear Chinese voices. Connor and his men desperately set about reinforcing the tunnel, using sandbags to block trenches that had been taken by the Chinese. They also dug recessed positions along the tunnel walls in case the enemy gained access and started firing down the trench line.

At noon the Chinese made a bold attempt against the north end of the tunnel and were forced back by Connor's men. He rallied his troopers and counterattacked to drive the Chinese away from the command post. The fighting was chaotic and confusing with the Americans holding the eastern and part of the central sector while the Chinese tightened their grip on the western sector. The Americans did retake several bunkers but could advance no farther without additional men.

Hand-to-hand fighting continued throughout the day as both sides filtered reinforcements onto the hill. The armored personnel carriers continued to resupply the hill and evacuate the wounded. Lt. Gen. Arthur Trudeau arrived for a personal look around noon on July 7 and came away convinced the hill could be held if the men received additional ammunition and communications equipment.

Rather than face a daytime counterattack in full view of enemy observation and artillery, the Americans opted for a surprise nighttime attack to sweep the Chinese from the bunkers on the highest points of the hill. The enemy had plans of its own and at dusk attacked nearby Hill 200 and the evacuation landing zone, using the attacks as diversions as they worked to reinforce their position atop Pork Chop Hill.

The Americans previously had made plans for the men on Pork Chop Hill to take part in a counterattack that would be supported by the 32nd Infantry's Company F. The latter would sweep down from nearby Hill 347, cross the valley with its swollen, waist-deep stream, and then work its way up the south slope of Pork Chop Hill in the surprise counterattack to retake the hill's crest. It would be an exceptionally dangerous nighttime effort, with Fox Company crossing unfamiliar wet and steep

Two G.I.s assist a fellow wounded soldier. The battle for Pork Chop Hill in many respects was a fight dominated by artillery, mortar fire, and tactical air strikes.

National Archives

terrain, but the audacity itself would add to the surprise. The night of July 7-8 would prove to be a very long one for those men.

As Company F reached the hill and started to move upward, the Chinese worked to infiltrate the American positions from atop Pork Chop Hill, getting on top of the American-held bunkers and tossing hand grenades inside. Exhausted from slogging five hours to reach the western trenches, Company F, still undetected, then received new orders. It was to sweep and seize Pork Chop Hill's crest. The Chinese fought back furiously, throwing grenades, mortars, and artillery at the advancing Americans. A second Chinese battalion reinforced existing units throughout the night.

Fox Company regained some trenches but was not able to force the determined Chinese from their fiercely held positions at the crest. Company F was ordered to pull back at 4:25 AM July 8 and fight toward the evacuation landing zone, taking its wounded along under exceptionally heavy enemy artillery fire. Upward of five enemy artillery rounds per second were striking near the crest at that point, according to one American officer.

Against tremendous odds, the remnants of Company F dodged the artillery and enemy hand grenades to make it off the hill safely. Armored personnel carriers loaded with wounded took them to a collection point behind Hill 200. One injured trooper made it off the hill using his arms and one good leg to move slowly backward down the hill. Another reported seeing an American standing shell shocked near the stream with both eyes blown from the sockets and dangling on his cheeks.

Fox Company's failed attack did manage to foil the Chinese effort to take the crucial evacuation landing zone and its connecting road. That would have isolated the defenders of Pork Chop Hill and prevented them from receiving badly needed ammunition, supplies, and reinforcements. The 13th Engineers, in a little noted heroic effort, managed to keep the supply road open with a 60-foot long Bailey bridge constructed and put in place at night over the swollen stream despite significant enemy opposition.

The Americans now recognized that it would take more than a solitary rifle company to reinforce and fully retake Port Chop Hill, which stood in the way of a Chinese breakthrough to the American main lines. Plans were quickly made for a two-company daytime counterattack shortly before 4 PM on July 8.

It would be a rather complicated combined attack preceded by heavy artillery and mortar fire to dampen resistance and knock out enemy mortar and artillery positions. Company G of the 2nd Battalion was to take the high ground on the east side of Pork Chop and Company E was to follow the streambed, attack up the western side of Pork Chop, and link up with Company G on the hill's high ground. Plans were also made to remove Companies A and B from the hill before the attack.

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The fighting atop Pork Chop Hill was confusing with American and Chinese troops intermixed in the dense warren of bunkers and trenches.

The situation on the hill was confusing with American and Chinese troops intermixed in the dense warren of bunkers; each side was struggling to ward off attacks and maintain their tenuous hold on the hill. The Chinese continued to possess the high ground near the crest, lobbing hand grenades and directing automatic weapons fire on anything that moved their way.

By mid-afternoon, Company E had moved into position and relieved the two companies that then vacated the hill. Company G moved downward from Hill 200 and toward the back slope of Pork Chop Hill, where it planned to consolidate on the hill and attack west. Ideally, the two companies would link up once the Chinese were swept from the crest and cleared from the bunkers and trenches.

The fighting became reminiscent of World War I. Company G went over the top of the trench and started toward Pork Chop as enemy machine-gun fire cut down the advancing troops. The shellfire was intense on both sides as the men made their way through the barbed wire on their way toward Pork Chop Hill. Chinese observers on the higher surrounding hills continued to call down artillery and mortar rounds on the advancing Americans.

Those who made it that far started climbing the hill, heavily loaded with equipment and ammunition, as the incoming fire further intensified. They were forced to move west through the trench line, caved in in many places by the heavy artillery fire. It was a grisly scene with American proximity fuse shells exploding above them as they crawled along the trenches, littered in many places with several layers of the dead.

Men all over the hill had become separated from each other and their leaders as the struggle degenerated into small insolated groups desperately fighting similarly struggling groups of the enemy. The bunkers presented difficulties as well; those held by the Chinese were well manned and bristling with machine guns. The bunkers were well built, too, and the incoming artillery and mortar fire made it difficult for American sappers to get near those held by the enemy.

Corporal Dan Schoonover, a demolitions specialist in Company A's 13th Engineers, overpowered one Chinese-held bunker by dashing forward, hurling grenades into an aperture, and then running to the doorway and emptying his pistol to silence the opposition. Despite all efforts on the part of the two companies, the attack had stalled by 6 PM. Company G had suffered the loss of most of its officers and nearly half its enlisted men with the survivors isolated and largely leaderless on the battlefield.

Company A's 2nd Platoon remained isolated and bone weary after nearly 44 hours of fighting on Pork Chop Hill. And nearly 80 percent of those able to fight were wounded to boot. Shea realized those men could not be rescued unless Company G's survivors rallied and took the pressure

off the beleaguered platoon. He swung into action and led a number of successful attacks to take the pressure off the 2nd Platoon. As daylight approached on July 9, Shea led a bold attack from above the trenches to force the Chinese from the bunkers and trenches they had seized.

As he and his men rushed forward the Chinese repositioned for the counterattack and overwhelmed Shea and his exposed men. The Chinese continued to infiltrate, reinforced their positions, and apparently prepared to launch a counterattack of their own. And the Americans were laying plans to launch Company F of the 17th into the battle at 1 PM on July 8 to reinforce the elements already in place on the hill. The Chinese relished shelling the fresh troops during their four-hour march toward the hill, causing 40 casualties. The Americans climbed aboard armored personnel carriers for the final run at 6 PM to Pork Chop Hill. The Chinese responded quickly to the assault on the south side of the hill, welcoming the intruders with a hail of grenades and machine-gun fire.

Despite the fireworks, the Americans advanced and took a crucial bunker before reaching the crest. Ammunition was running low as dusk fell and the Americans could see additional enemy fighters coming over the north slope, lobbing hand grenades as they advanced. The remnants of Fox Company formed a defensive perimeter and remained in place until morning when they were ordered off the hill.

The Americans were not done yet and had already laid plans for another counterattack by the 3rd Battalion's 17th Regiment. The plan called for the unit's Companies K and I to attack south to north over Pork Chop's crest. The Chinese struck first, creating further havoc on the hill for Companies E and G still positioned there. The Chinese moved forward, battalions strong on the west shoulder of the hill during the evening of July 8, despite the combined heavy artillery, mortar, and small arms fire from the Americans.

Over the next several hours of darkness, the area became a living hell for everyone on the hill. Friendly and enemy forces were intermixed on Pork Chop Hill as both the Americans and Chinese pummeled the hill with heavy artillery and mortar fire. The Chinese continued to heavily reinforce the hill, burrowed deeper into the terrain for cover, cut or jammed American communications, lobbed hand grenades into the covered American trenches, and infiltrated snipers into the rear. All the while the enemy continued to maintain its strong grip on the north slopes and Pork Chop's crest throughout the night of July 8-9.

Throughout this stage of the battle, the American commanders were faced with trying to figure out how best to bring additional men into the battle without weakening the main line positions located behind Pork Chop Hill. Causalities were climbing and ammunition was running low, creating logistical difficulties for the Americans at both aid stations and resupply points.

Company K started for Pork Chop at 3 AM July 9, headed toward the east shoulder of the hill, followed shortly thereafter by Company I, headed farther west to assist Fox and Easy Companies. The Chinese spotted the advance and brought intense artillery and mortar fire down on the exposed Americans. They made it to their positions on the hill. Heavy fighting renewed at sunrise as the combined American units made an effort to force the heavily defended and determined Chinese from the hill's crest. That effort, too, came to naught when the enemy inflicted heavy causalities on the advancing Americans. Those on the scene noted that by this time the American bodies were lined up like cordwood at the evacuation zone, awaiting a final ride from the fighting.

The American commanders, observing the battle from afar, believed that bringing an additional company to bear might break the will of the Chinese atop the hill, who had faced three solid days of close-in fighting and heavy pound-

An M-46 Patton tank strengthens the American line atop Pork Chop Hill. After five days of hard fighting, the Americans pulled out quietly so that the Chinese would not take advantage of their withdrawal to attack them while they were most vulnerable.

National Archives

ing from American artillery and mortar fire. These additional Americans made little impact in the face of continued Chinese reinforcement and renewed attacks, and the night of July 9-10 was little different than those that came before. The Americans remained on the hill, isolated in the dark, struggling moment to moment to remain alive in the hell of the artillery and deadly fighting that engulfed them.

Early on the morning of July 10, the call went out for further American reinforcements, and an additional two companies were moved into position for entry into the battle for Pork Chop Hill.

The Americans had another card to play as the continuing peace talks started to take on a life of their own. Trudeau argued that a surprise battalion-sized force taking nearby Old Baldy would relieve pressure on Pork Chop Hill and force the Chinese to divert their manpower and artillery. And the Chinese would no longer have their observation posts atop Old Baldy to call in artillery on the shorter Pork Chop Hill. This, in turn, would further block Chinese efforts to penetrate the American main line of resistance just as the peace talks were starting to show promising signs of a potential breakthrough.

Trudeau's bold plan was disrupted by renewed Chinese counterattacks atop Pork Chop Hill and hindered by more timid officers above him in the chain of command. His superiors reluctantly gave the go ahead, but with only one rifle company to be called into play. Trudeau knew that even if the single company did manage to take Old Baldy at rather great odds it could not hold the objective against the sizable nearby enemy forces without substantial follow-on American reinforcements. He did not want to commit a single company to such an objective, knowing that even if successful it would have to pull off Pork Chop Hill in a potentially deadly fighting withdrawal. With a heavy dose of realism and some disappointment, Trudeau called off the planned assault.

Back at Pork Chop early on July 10, Company I of the 3rd Battalion, 32nd Infantry prepared to relieve the east portion of the hill, while its Company K made it onto the hill. Among those coming off the hill was Company K of the 32nd with only 12 men remaining among the 188 that had fought themselves into position only 36 hours earlier. Similarly, a platoon from Company H came back with 15 to 18 men, out of the 50 active when the platoon hit Pork Chop Hill.

The evacuation was completed by evening with Companies I and K of the 32nd well in position on Pork Chop. The Chinese sent a welcoming committee at 8:50 PM with a fiery attack against Company K on the west shoulder of the hill. The attackers were beaten back in a 40-minute fight, and Company L was called into position as possible reinforcement. Shortly after 3 AM on July 11 a battalion-sized Chinese force struck Company I and overran two platoons. Company L was called to assist in successfully retaking of many of those positions.

Battalion Commander Lt. Col. Royal R. Taylor was with the men throughout the ordeal, including when an incoming enemy phosphorous round set off an ammunition storage area near the command post. He ordered his men out, helped wounded soldiers to safety, and quickly reestablished a new command post. He exposed himself repeatedly to enemy fire to support and protect his men and directed counterattacks. When the sun rose, there was again a need to evacuate the dead and wouned, and then start resupply in preparation for yet another night of onslaughts by the Chinese.

The struggle for Pork Chop Hill had raged nonstop for five days. The Chinese had committed at least a full division to the taking of Pork Chop Hill with two battalions occasionally assigned to a single assault. The Americans, commanded overall by Lt. Gen. Maxwell Taylor, met to weigh the pros and cons of continuing the fight for the outpost. After much hesitation and debate, the decision was made to pull the troopers from Pork Chop Hill in a daytime withdrawal.

OVER THE NEXT SEVERAL HOURS OF DARKNESS, THE AREA BECAME A LIVING HELL FOR EVERYONE ON THE HILL. FRIENDLY AND ENEMY FORCES WERE INTERMIXED ON PORK CHOP HILL AS BOTH THE AMERICANS AND CHINESE PUMMELED THE HILL WITH HEAVY ARTILLERY AND MORTAR FIRE.

The decision was based on the notion that an armistice was near and that additional bloodshed was not warranted, in part because the enemy had committed such large forces to the effort to seize the hill and suffered 4,000 casualties in the process without pause in sending more men forward toward death. The Americans on the hill were somewhat dumbfounded yet relieved by the decision to give up the tactical advantage of holding Pork Chop Hill after suffering so many losses. They had taken 243 killed and 916 injured compared to an estimated 1,500 Chinese killed and 4,000 injured in the July fighting.

In reality, the brass contended, there really was not much to save at the outpost, which would be given up anyway according to agreements reached before the armistice. The bunkers and trenches that had been painstakingly rebuilt after the April battle were now nearly in ruins thanks to the five-day, around-the-clock battering taken from exceptionally heavy artillery and mortar fire from both sides.

The Americans planned the pullout in a meticulous manner to deceive the Chinese about their intentions and thereby avoid a possible massive enemy attack on the exposed soldiers as they moved back toward the American main lines. American artillery fire was planned for protection during the delicate maneuver, armored personnel carriers were called into action, and tanks from the 73rd Tank Battalion were moved into position to help cover the withdrawal and make the operation look like an attack. Volunteers from the 13th Engineers were pressed into service to mine and booby trap Pork Chop to ensure that it would be a useless prize for those taking possession.

The carefully planned effort worked out with the Chinese led to believe that the hill was being reinforced in preparation for yet another American counterattack. Rather than reinforce the positions, the covered armored personnel carriers were used to pull the American troops off Pork Chop Hill, and the withdrawal was completed by late evening on July 11 without the loss of a single soldier.

As additional Chinese began filtering onto the hill, they triggered the booby traps left by the Americans. Once the Chinese were fully on the hill, the Americans opened fire with all the artillery they had at hand, using thousands of proximity fused rounds and heavier rounds to destroy the remaining bunkers and trenches. The rounds had a devastating effect and were supplemented with bombs dropped by U.N. aircraft. Capping it off was a large timed explosion set earlier by the engineers.

With the July 27, 1953, signing of the armistice, the war officially ended. The U.S. and U.N. troops had thwarted the naked thrust of communist aggression in Korea; in the end, South Korea remained free. □

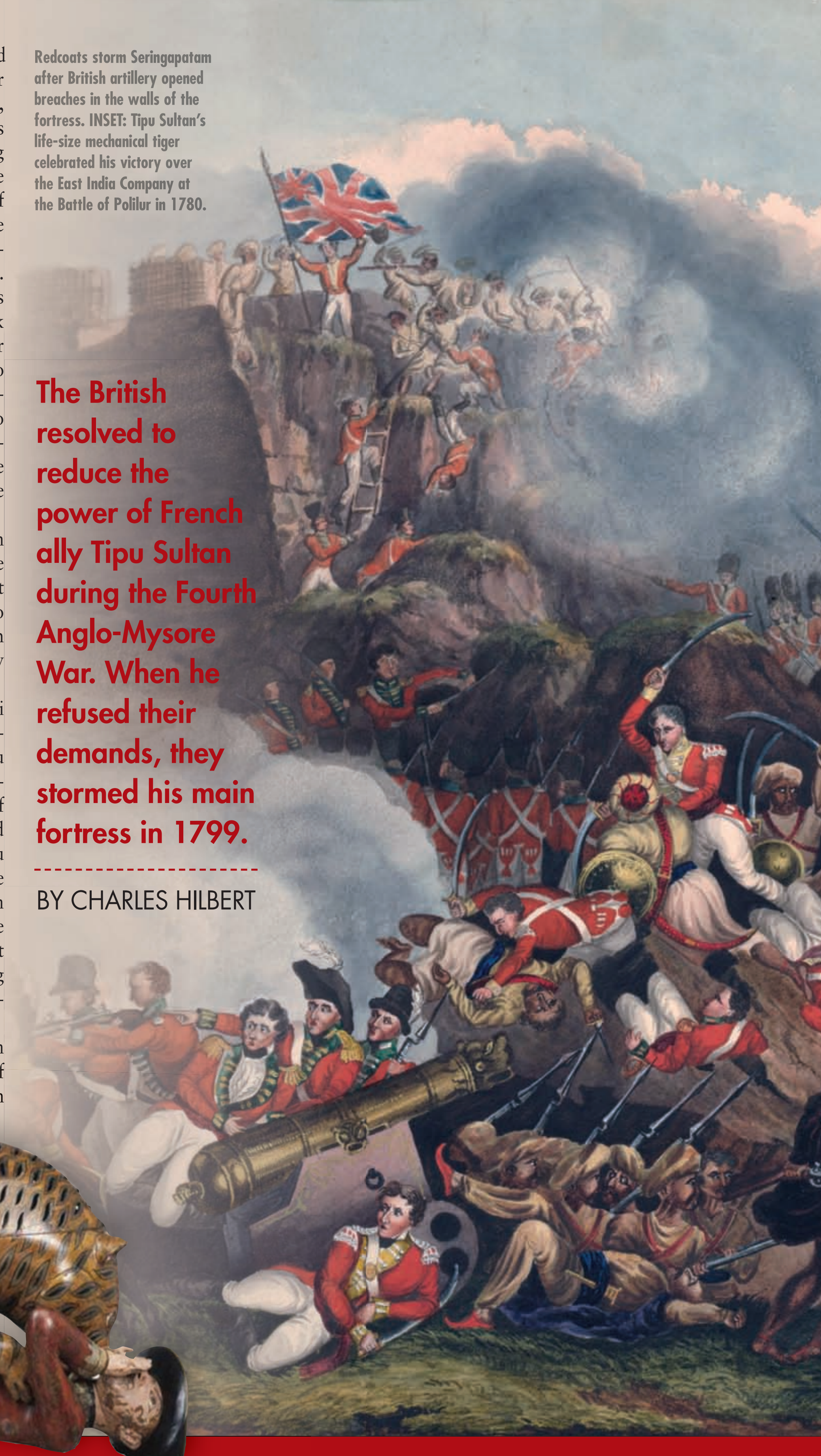
AS CONVERGING COLUMNS of British and native infantry surrounded the inner palace of his capital, Seringapatam, Tipu Sultan did not hesitate. Around him all was chaos: the crack of muskets, the screams of dying men, the exultant shouts of their conquerors, the acrid smell of black powder, the confused mob of fugitives milling around the mounted sultan in the confined space between the inner and outer ramparts, all under the blazing heat of the Indian sun.

It would have been easy for him to spur his charger forward through the outer defenses to seek safety in the darkness of an impenetrable jungle, or he could have declared himself and surrendered to the approaching troopers. But the transient existence of a hunted fugitive was not acceptable to the Tiger of Mysore, nor was the notion of an honorable captivity. Without a second thought, he rode toward the Water Gate and the inner palace, there to make his last stand.

Tipu hated the British. He had been fighting them for 30 years. As a young cavalry commander in the army of his father, Hyder Ali, during the First Mysore War, he had led a lightning raid right up to the gates of Madras, capital of the Carnatic, which caused the panicked British governor to hastily embark on a short cruise in a rather small boat.

That war had ended favorably for Hyder Ali with a return to the prewar status quo, but animosities remained, and by 1779 Hyder and Tipu were again at war with the British East India Company. In 1780, they annihilated a contingent of 3,500 sepoys and Englishmen at Polilur, and though Hyder died of cancer two years later, Tipu fought the company to a standstill, signing the treaty of Mangalore in 1784, which once again restored the prewar status quo. To commemorate his victory at Polilur, Tipu made himself the present of a life-sized, mechanical, wooden tiger savaging a supine sepoy, complete with a bellows that produced roars and screams of pain.

Tipu experienced a serious setback in 1792 when Lord Charles Cornwallis, governor general of India, surrounded Seringapatam and forced him



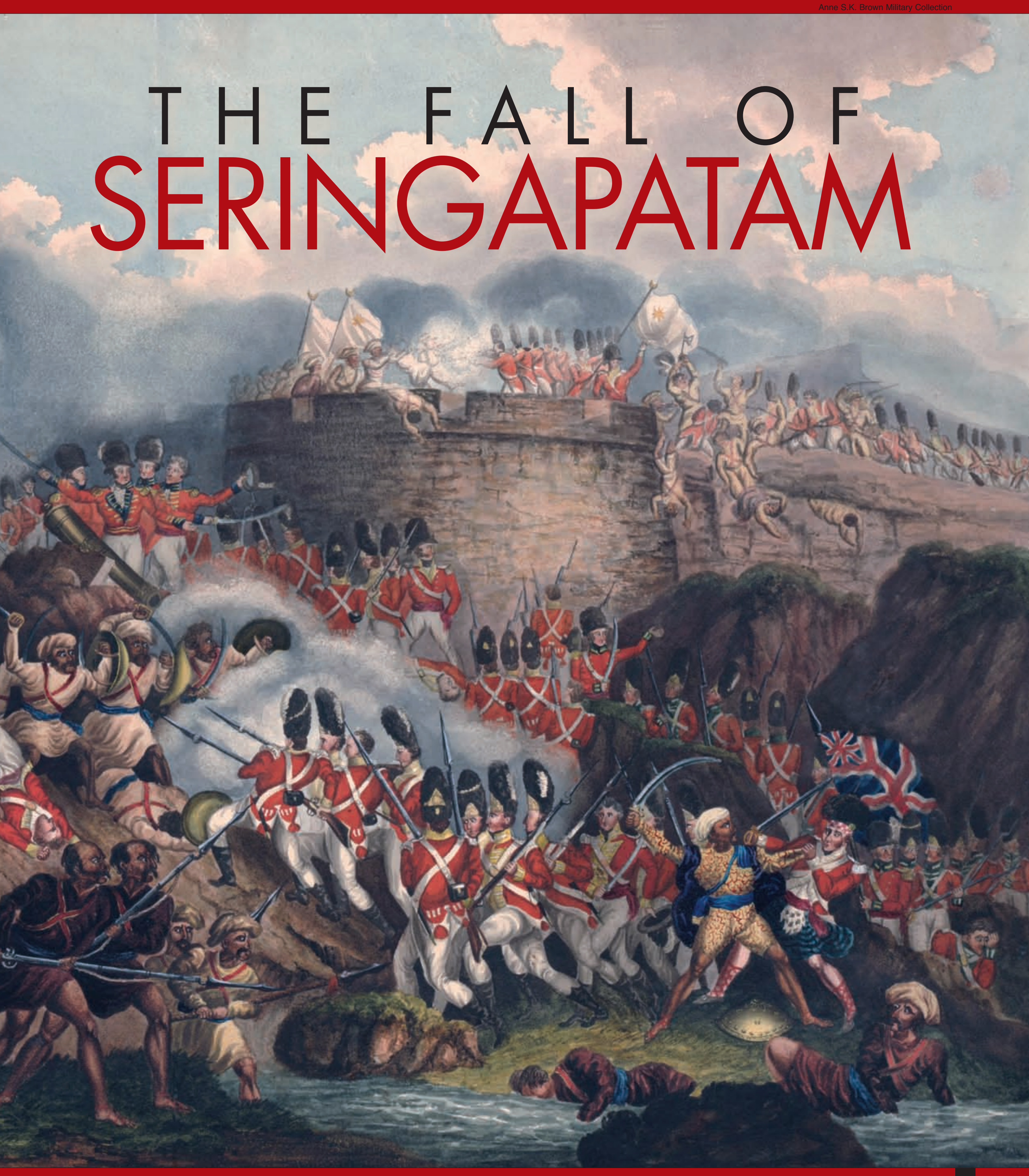
Redcoats storm Seringapatam after British artillery opened breaches in the walls of the fortress. INSET: Tipu Sultan's life-size mechanical tiger celebrated his victory over the East India Company at the Battle of Polilur in 1780.

The British resolved to reduce the power of French ally Tipu Sultan during the Fourth Anglo-Mysore War. When he refused their demands, they stormed his main fortress in 1799.

BY CHARLES HILBERT

Anne S.K. Brown Military Collection

THE FALL OF SERINGAPATAM



to give up half his territory. But the Sultan of Mysore was no quitter. He tried to arrange alliances with various Indian powers and with the French under King Louis XVI, and then Napoleon Bonaparte. This last bit of diplomacy alarmed the new governor general, Richard Wellesley, Lord Mornington, who had imperialistic plans of his own.

Tipu and Mornington spent the fall and early winter of 1798 exchanging letters, the former expressing his friendship for the English and hatred of the French, the latter his desire for peaceful relations between the company and Mysore. At the same time, both prepared for war. On February 3, 1799, Mornington ordered his forces to move against Mysore.

He had prepared a two-pronged attack. The Madras, or Grand Army, under the command of General George Harris assembled at Vellore, 100 miles west of Madras and less than 200 miles east of Seringapatam. The Bombay Army, commanded by General James Stuart, was marshaled at Cananore, about 100 miles to the west of Tipu's capital.

Cornwallis's campaign against Tipu eight years before had been plagued by supply problems. This time the English were taking no chances. When the 21,000 men of the Madras Army marched out of Vellore on February 11, they were accompanied by a crowd of camp followers 10 times their number, leading a noisy menagerie of more than 100,000 oxen, horses, donkeys, and elephants carrying supplies, ammunition, and ordnance. They did not make good progress. On February 13, Lord Mornington received a letter from Tipu asking him to send an ambassador to Mysore to discuss the situation. He dispatched his answer to Harris with orders to send it on to Tipu when the Madras Army crossed the boundary of Mysore.

Two weeks later, Harris was still plodding along when the Bombay Army, 6,500 men under Stuart, left Cananore. Expecting the British to attempt a repeat of their 1792 invasion, Tipu took up a position east of Seringapatam at Madur on the road to Bangalore, sending out raiding parties that devastated the countryside, burning anything that could be of use to the enemy.

The Nizam of Hyderabad, Tipu's neighbor to the northeast, having lately allied himself with the English, sent 16,000 men to join the Madras Army. This detachment was under the command of the Nizam's son, Meer Alum, but really took its orders from Lord Mornington's 29 year-old brother, Arthur Wellesley, the future Duke of Wellington. They met the Madras Army at Karimungalum, not far from Tipu's eastern border, on February 28. On the same day, apprised by his spies of the advance of the Bombay Army, Tipu left Madur and marched west to attack Stuart.

Stuart's advance post, commanded by Colonel John Montresor, was at Seedasere, about seven miles west of Periapatam and about 50 miles west of Tipu's capital; the main body of his army was stationed at two towns, eight and 12 miles to the rear of the advance force. While Tipu was advancing on Stuart, Harris reached Ryacotta at the border of Mysore on March 4, from whence he dispatched Mornington's letter to Tipu, which informed the potentate that his future correspondence should be addressed to Harris, who had full powers to negotiate a settlement.

The next day, Stuart's scouts observed the arrival of Tipu's army, which encamped between Periapatam and Seedasere. Stuart sent a battalion of sepoys to reinforce Seedasere. That same day, Harris crossed the Mysore frontier and began to capture various hill forts.

On the morning of February 6, barely visible through the mist and the thick woods that sur-

Victoria & Albert Museum

ABOVE: Richard Wellesley,left, and Tipu Sultan. LEFT: A soldier of the Mysorean army is shown using his rocket as a flagstaff. He wears typical clothing of Tipu's army, including a purple wool jacket, a turban and matching sash. The Mysorean troops fought the British with great determination. BELOW: Cavalry officer Maj. Gen. John Ford.

British Empire

Anne S.K. Brown Military Collection

The protracted conflict between the Kingdom of Mysore and the British East India Company is depicted in a work of art showing a mythical Indian figure battling British soldiers. Pressed with fresh demands by the British, Tipu Sultan stressed that he had adhered firmly to existing treaties.

rounded Seedasere, 12,000 of Tipu's men gradually took up positions around the town. At 10 AM, they simultaneously attacked the front and rear of Montresor's position. Led by their British officers, the company's sepoys fired disciplined volleys that cut down the advancing Mysore troops. By 2:30 PM, Stuart had reached the battlefield and attacked the rear of the force that had attacked the rear of the advance post. After a 30-minute firefight, the Mysoreans withdrew, and Stuart advanced to relive Montresor. By 3:20 PM, Tipu was retreating, and Stuart withdrew to Seedapore, 12 miles to the rear of the advance post, to secure his line of supply. "I myself saw at least Three Hundred men killed or mortally wounded laying on the Road and in different parts of the Jungle, where a great slaughter of the Enemy took place," wrote Major Lachlan Macquarie, one of Stuart's staff officers. Tipu returned to Periapatam. He left on February 11 and marched toward Seringapatam.

Harris's huge army was advancing slowly, making many stops on the way. On March 14, his troops encamped within sight of Bangalore. Fearing that the British would make this their base of operations, as they had done in the previous war, Tipu's cavalry commander ordered his men to burn the town and the surrounding villages. But Harris had other plans. He turned south on March 16 and took the road to Kaunkanully. Tipu, expecting Harris to take the northern and more direct road to Seringapatam, again took up position at Madur on the Bangalore road and laid waste the countryside along that route; however, he neglected to do the same to the southern road, upon which Harris was now marching. Learning of Harris's southward movement, Tipu turned to his right and took up a strong position on the west bank of the Madur River on March 18. A detachment of the Madras Army arrived at Kaunkanully, a few miles east of Tipu's army, on March 21, just in time to prevent Tipu's men from draining the local reservoirs, or tanks. Two days later, Tipu inexplicably left the Madur River and made camp at Malavelly, about 30 miles east of Seringapatam. The next day, Harris crossed the river and camped on the ground lately vacated by Tipu. On March 26, the Madras Army halted in sight of Malavelly.

As the sun rose on the morning of March 27, Harris's advance guard, five regiments of cavalry under Maj. Gen. John Floyd, came in sight of Tipu's cavalry on the right, about a mile in front of Malavelly. Tipu's infantry was drawn up on the high ground behind the town. Floyd could see them dragging cannons into position on their right.

Wellesley and Floyd were ordered to advance against Tipu's right, while Harris led the rest of the army through Malavelly against the center of the Mysore line. As Wellesley advanced, supported by Floyd's cavalry, Tipu's gunners and infantry withdrew to another ridge in the rear of their original position. Seeing this, Harris ordered his quartermaster general, Colonel John Richardson, to prepare the day's encampment. At this moment, Tipu's guns opened fire at a range of 2,000 yards. Richardson carried on, and Colonel John Sherbrooke was ordered forward to take a village in front of the left of the enemy line. Sherbrook left the 25th Dragoons in the village to keep an eye on a large detachment of Tipu's cavalry that threatened the British right. Harris then formed line of battle with Wellesley and Floyd on the left and Maj. Gen. David Baird on the right.

As the advancing British line crossed the first ridge, a gap opened between Baird and Wellesley. Hoping to exploit this tactical opportunity, Tipu immediately led his cavalry forward in two columns to the left and right of Baird's position. The left column reached Baird first. He ordered three companies of the 74th (Highland) Regiment of Foot to fire and fall back, but after they fired they impulsively charged instead.

With the 74th out in front, the right column of Tipu's cavalry charged their exposed flank. Baird spurred his horse and rode out between the lines to halt their impetuous advance. As Baird reformed the 74th, the 12th and the Scots Brigade on his right halted the advance of Tipu's troopers.

Most of the Mysore cavalry wheeled to their left and rode along the front of the British line, exposed to the fire of the company's sepoys; a few galloped through the interval between Baird and the brigade to his right. They charged straight at Harris and his staff, somewhat to the rear of the British line, and the Mysore troopers and British officers fired on each other with their pistols.

At the same time, approximately 2,000 of Tipu's foot soldiers advanced in column against Wellesley and the Nizam's troops. At 60 yards, Tipu's men fired. Wellesley charged with the bayonet, and Floyd led a cavalry charge. The sudden impetus compelled the Mysore column to retreat. Harris did not pursue. The company lost 61 men killed, while Tipu left behind a thousand dead, scattered across the field of battle.

Back in 1792, Cornwallis had approached Seringapatam on the north side of the River Cauvery and camped at the village of Arakery on the north bank of the river. Expecting Harris to do the same, Tipu withdrew in the direction of Arakery. But Harris intended to approach Tipu's capital from the southern side of the Cauvery. Once again he took the southern route, which, since Tipu expected him to take the northern and more direct road to Seringapatam, remained untouched and provided food and forage for the Madras Army.

Marching out of Malavelly on March 28, Harris sent a force to reconnoiter the ford over the Cauvery at the village of Sosilay, some miles to the southwest of his position and 15 miles southeast of Seringapatam. They returned that night and reported that the ford was practicable. The British reached Sosilay the next day and, after reassuring the locals that no harm would come to them, began crossing the wide Cauvery via a ford where the water was only three feet deep. It took two days for Harris to move the large column to the southern bank of the Cauvery, while Tipu waited for him on the wrong side of the river. When Tipu learned that he had been outmaneuvered, he assembled his whole staff. "We have arrived at our last stage; what is your determination?" "To die with you," was the unanimous reply.

"A SUDDEN, SWEEPING FIRE FROM THE INNER WALL CAME LIKE A LIGHTNING BLAST, AND EXTERMINATED THE LIVING MASS. OTHERS CROWDED FROM BEHIND, AND AGAIN THE FLAG WAS PLANTED."

Tipu sent his infantry and artillery into Seringapatam and, on March 31, crossed to the southern bank of the Cauvery with his mounted troops. The huge Madras Army lumbered on, making about seven miles a day. Tipu shadowed them with his cavalry. He watched from a hilltop as they made camp five miles from his capital on the evening of April 2.

Tipu ordered his infantry and 20 guns to cross the river and join him, intending to occupy some high ground four miles south of the city. Something changed his mind, and he withdrew to Seringapatam, built on an island in the middle of the Cauvery River. Tipu's gardens, including the tomb of his father, Hyder Ali, formed a triangle at the eastern end; the town lay in the center, and his fortress and palace occupied the western point.

For the next two days, the large column crawled eastward across the heights lately vacated by the Sultan of Mysore. On the evening of April 4, the column halted. Before it was a small grove of betel nut trees known as the Sultanpettah tope. The betel nut being an important ingredient in certain religious ceremonies, great care was taken to irrigate the trees, so the Sultanpettah tope was crisscrossed by wide ditches. Concealed among the tall, bamboo-like palms and irrigation ditches was a large body of Mysorean troops, including rocket men. Baird was ordered to clear the tope, and at 11 AM on April 4 he advanced. Tipu's men withdrew. Baird returned to camp, the rocket men returned to the tope, and Tipu's infantry took up posts in a ruined village to the left of the tope.

On April 5, the army marched by the left, keeping under the ridges to the south and west of Sultanpettah to avoid the topes, which afforded cover for the enemy's rocket men and from whence a number of rockets were thrown without effect. After a short march, the army took up its ground opposite the west face of the fort of Seringapatam at the distance of 3,500 yards.

The army encamped facing east, its right anchored on high ground, its left protected by an aqueduct that lay between the army and the city and curved around behind the rear of the encampment, affording an extra defense against any surprise attacks by a desperate enemy.

That night, Harris ordered Wellesley to clear out the tope once and for all. Colonel Robert Shaw was directed to take the ruins of a village northwest of the tope and 40 yards short of the aqueduct. At sunset Wellesley and Shaw advanced. Shaw carried the village but was fired upon by enemy infantry covered by the aqueduct. Wellesley's company advanced into the black night, highlighted from behind by the lights of the British camp. Disordered by the deep irrigation ditches and dense vegetation as rockets exploded and musket balls slapped into the foliage around them, a dozen men wandered into the enemy's position and were taken to the fort to be strangled later. The future Duke of Wellington got lost. After several hours of stumbling in the dark, he returned to camp.

At 9 AM the next day, as Major Alexander Beatson relates, "Colonel Wellesley, with the Scotch brigade, two battalions of sepoys, and four guns, advanced to the attack of the tope; from which the enemy fired.... Their fire was returned by a few discharges of grape from the field pieces ... parties were detached to take the enemy in flank, which soon threw them into confusion, and obliged them to retire with precipitation." At the same time, Shaw advanced from the village and cleared the aqueduct in his front while another detachment under Colonel William Wallace secured the rest of the line of the aqueduct to Shaw's left, causing the enemy to withdraw from their forward positions. Tipu's cavalry left the island and took the road to Periapatam.

The next day, Harris sent Floyd and half the army to link up with Stuart at Periapatam. Tipu fortified a powder mill on the south bank of the Cauvery a little to the west of the end of the island, and he built entrenchments from the powder mill to the Periapatam bridge, which was near the southwest angle of the fort.

Two days later, Harris received a letter from Tipu, "I have adhered firmly to treaties. What, then, is the meaning of the advance of the English armies and the occurrence of hostilities?" Harris informed him that, in accordance with the terms offered in Mornington's last letter, the price of peace would be half his kingdom, four of his sons as hostages, and a large indemnity.

On April 10, Floyd rendezvoused with Stuart at Periapatam and the next day set out for Seringapatam. "About 5,000 of the Enemy's Horse made their appearance soon after we marched, within about half a mile of our Line on our Right Flank," wrote Major Lachlan Macquarie. "They threw some Rockets at the Nizam's Horse but did not attempt to attack them; they however hung the whole of our march on our Flanks and Rear."

For the next two days the Bombay Army marched slowly, dragging its artillery pieces over rough ground. On April 13, the army found itself hard pressed by the enemy, which attacked the rear guard as it negotiated a narrow pass. Mysorean cavalrymen brazenly rode up to the rear guard and fired musket rounds while rockets burst among the sepoys.

Anne S.K. Brown Military Collection

Redcoats and Sepoys fight at close quarters during the height of battle at Seringapatam. Colonel John Sherbrooke leads his men in a fresh attack as Lt. Col. James Dunlop with bandaged hand watches.

Marching at dawn on April 14, the combined forces arrived at Seringapatam in the early evening. "We encamped immediately in the Rear of the Grand Army," wrote Macquarie. "We were harassed during the whole of this Day's march as usual by the enemy's Horse." On April 16, the Bombay Army crossed the Cauvery and took up a strong position on the north side of the river about 1,800 yards from the fort at Seringapatam. The Bombay Army's right was anchored on the river, and its left extended to high ground facing east toward the fort. Floyd and his men got little rest, now being sent off to cover foraging parties.

Nineteenth-century tactics required that a breach be made in the fortifications of a walled city for infantry troops to make an assault. This was achieved by a slow advance of artillery batteries through a series of parallel trenches connected by zigzag trenches. According to Beatson, the southwest wall of the "north-west angle of the fort ... a line nearly five hundred yards in length ... exposed to a destructive enfilading fire from the north side of the river ... totally exposed to breaching batteries from the westward," would be the site of the breach, the Cauvery at that point being easily fordable.

On the night of April 17, the British established a battery of six 18-pounders 800 yards from the southwest angle of the fort. Tipu sent men down into the mostly dry bed of the Cauvery. From the cover of the bank they fired upon their enemies, who replied with grape shot, canvas bags full of lead balls that turned their two 6-pounders into giant shotguns. After an hour of this rather uneven conflict, the Mysorean infantry withdrew into the fort. The long-range firefight resumed the next day, Tipu's snipers firing from the riverbed and his cannons from the fort, while the British continued to rake their enemies in the Cauvery with grape. During the day, Floyd returned to the camp, having rounded up quantities of grain and cattle. As the 18-pounders were being wrestled into position that night near the south bank of the Cauvery, Tipu's cavalry and rocket men attacked the rear of the Bombay Army and were driven off by grape shot.

Dawn of April 19 saw the 18-pounders in action against the southwest bastion of the fort. The following day these cannons were turned against Tipu's men in the powder mill, and by early evening the position was taken and work begun on the first parallel trench. That night Harris received another letter from Tipu offering to negotiate. Two days later, Tipu received Harris' reply, reiterating his demands for hostages and the payment of a large sum of gold within 24 hours.

To position an enfilading battery that would be able to fire on the walls of the fort from the northwest, from which position their shot would travel the inside length of the walls, exposing the defenders to fire from their right, Montresor led the 74th Regiment of Highlanders against the village of Agarum, close to the north bank of the Cauvery. The fighting there was intense. The 74th carried the village but was driven out by a heavy fire of grape from the fort, followed by a general attack on the position; they returned, drove out the defenders, and spent the rest of the night warding off their relentless foes. By daybreak the attacks petered out, and the rising sun revealed numbers of the enemy dead lying close to the British position, among them several Frenchmen who had led the attacks. Tipu had long employed French mercenaries, and there were about 450 present at the final Battle of Seringapatam. During the night, the British emplaced a six-gun battery at the mill.

The next three days saw more attacks on the rear of the Bombay Army, while the 18-pounders and the enfilading battery kept up a heavy fire against the fort, which was answered just as enthusiastically by Tipu's artillery. The artillery duel continued, with the British adding more cannons, and the firing from the fort slowly slackening as the British advanced their approach trenches, adding howitzers that threw shells over the walls into the fort.

Anne S.K. Brown Military Collection

On April 26, the picquets of the Bombay Army were attacked at 4 AM by a fire of muskets and rockets. By dawn, their attackers were driven away, and the bombardment of the fort continued. That evening, troops of the Madras Army took Tipu's advance positions south of the Cauvery in front of the southwest wall of the fort. Saturday saw more harassing attacks on the Bombay Army, while Tipu's infantry attempted to retake the positions lost the day before, without success. The British emplaced more artillery batteries. A severe bombardment was opened on the fort, which was returned, and for the next three days the British and Mysorean artillery slugged it out. On April 29, Tipu wrote to Harris one last time, offering to send ambassadors. Harris replied that he was "prepared to reject any ambassadors who did not come fully prepared to agree to all the conditions of the treaty, and bring the money with them." As Tipu continued his ineffectual correspondence, the British trenches inched closer and closer to the fort.

By May 1, with more British batteries emplaced almost daily, the fort's guns near the intended breach were silenced. Fifty-two guns opened on the fort on May 2. "By Noon a very large Gap was made in the Wall and every shot striking the bottom of it brought part of it down ... by Sunset a very large Breach was made in the South West Curtain," wrote Macquarie.

On May 3 the breach in the southwest angle of the wall was deemed practicable. The order to attack the next day was given to Maj. Gen. David Baird, who was cranky and ill tempered at the best of times, and who had spent several years as Tipu's prisoner, having been captured at the Battle of Polilur in 1780. The passage of time had not diminished his implacable hatred of the Tiger of Mysore. That night Lieutenants James Farquhar and John Lalor waded the Cauvery, jamming stakes in the river bottom to mark the path that the attacking columns should take. The troops destined for the assault were stationed in the trenches before daybreak. Baird was among them, assuring those who had been captured with him years before and had suffered alongside him in Tipu's dungeons that they would soon be able to settle old scores.

Starting at dawn the next day, the breach was blasted again. At 10 AM, a detachment of Tipu's cavalry attacked the rear of the Bombay Army, but was driven off. A general bombardment of the town and fort at Seringapatam was begun. Beatson mentions that Tipu's astrologers had warned him that May 4, 1799, would be "an inauspicious day." As his cavalry was attacking the Bombay Army, Tipu was distributing largesse among the Brahmins as a spiritual defense against the ill-omened day. His spies and several of his officers, including Syed Goffar who commanded near the breach, informed him of a large number of the enemy in the trenches. For some reason, Tipu considered this unlikely and went off to have lunch.

Baird had divided his force into two columns, which would separate once they had entered the breach: the left, under command of Lt. Col. James Dunlop, would take the northern rampart; the right, commanded by Colonel Sherbrooke, would advance along the southern wall; they would meet at the eastern rampart and thus surround the inner town and palace.

As recorded in the Regimental History of the 73rd (Highland) Regiment of Foot: "At 1 PM by Baird's watch, the huge Scot stood, his sweat-soddened uniform stuck to him as he climbed out of the trench; he drew his regimental claymore and bellowed, 'Now, my brave fellows, follow me and prove yourselves worthy of the name British soldiers!'" Approximately 2,000 Europeans and 1,800 sepoys clambered out of the trenches and rushed the breach, the leading companies ordered to use the bayonet and refrain from firing unless it was absolutely necessary. Each column was preceded by a forlorn hope composed of a sergeant and a dozen Europeans. They were greeted by an intense fire of rockets and muskets.

Baird had decided to lead the left column, but the heavy fire of the enemy caused this column to incline away from the marked ford. The soldiers stumbled into deeper water under the high bank of the river, which protected them from the flaming rockets and spattering bullets. Baird, impatient to get to grips with his old enemy, leaped into the Cauvery and headed straight for the breach while leaden musket balls whizzed and splashed around him. He was hot on the heels of the forlorn hope. The warriors of Mysore met their attackers head on.

Macquarie tells how Dunlop, at the head of his troops, crossed swords with one of Tipu's officers. He parried his opponent's cut "and instantly making a cut with his sword at the Sirdar across the Breast, laid it open, and wounded him mortally." Striking back as he fell, the Sirdar nearly cut off Dunlop's right

ABOVE: British soldiers pursue Tipu Sultan as he retreats to the tunnel-like passageway known as the Water Gate that led to the inner fortress. The Mysore leader chose to fight to the death rather than surrender. OPPOSITE: Maj. Gen. David Baird, who had once been Tipu Sultan's prisoner, looks on as the Mysorean leader's body is identified and recovered among the pile of slain soldiers that filled the Water Gate. He is revered as a martyr.

hand. Spouting blood, the colonel gained the top of the breach while his men bayoneted the recumbent and moribund Sirdar.

Six minutes after the commencement of the assault, the British colors waved in the breach, but only for a moment. "A sudden, sweeping fire from the inner wall came like a lightning blast, and exterminated the living mass," wrote Lieutenant Richard Bayly. "Others crowded from behind, and again the flag was planted."

"Colonel Sherbrooke was knocked down by a spent musket ball as he mounted the breach, but quickly recovered," recalled Macquarie. Company troops now filled the 100-foot space between the ruined walls. After a moment's delay in crossing an unexpected water-filled ditch, Baird ordered the columns forward. He led the right along the southern rampart while Dunlop, having collapsed from loss of blood, was carried off the field.

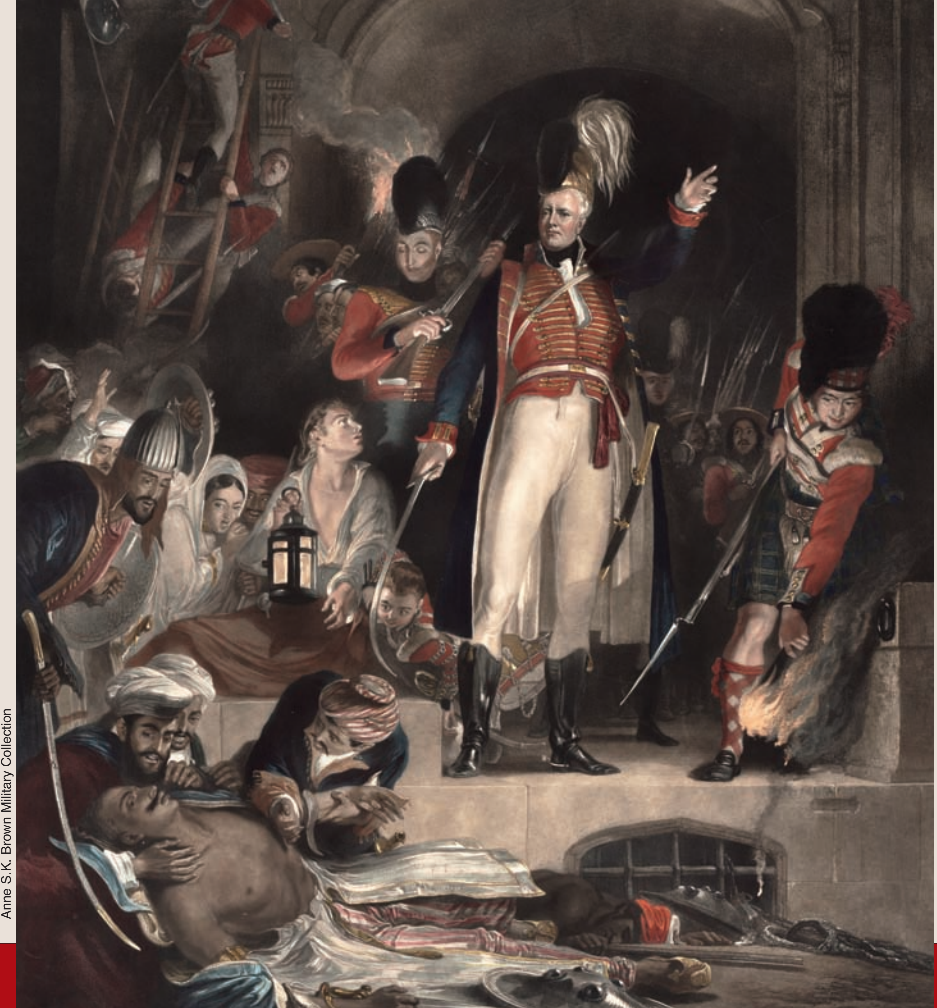
Tipu was having lunch in a small gateway under the northern rampart, which had been walled up years before, where he had been headquartered for the last two weeks. Hearing the sound of fighting, he left his unfinished repast and called for his sword and fusils. As he was strapping on his sword, someone ran up to him and told him that his friend Syed Goffar had been killed at the breach. Noting that Goffar was never afraid of death, the sultan instructed that Mahommed Cassim should take command of his division. Then, followed by four men who carried his fusils and by a fifth who carried a blunderbuss, Tipu mounted the northern rampart and headed toward the breach.

Many transverse walls obstructed the advance of the left column. Although the light infantry, led by Captain Thomas Woodhall, had penetrated into the town and was now flanking the transverse walls, the fighting was heavy, and all the officers of the left column were either killed or wounded. Lieutenant Farquhar took command and was immediately shot dead.

Tipu stood behind one of these transverse walls and fired at the advancing company troops as his servants loaded for him. Three or four Englishmen fell by his hand, but the rest came on relentlessly. Faced by the advancing troops and flanked by the light infantry, those of Tipu's men who had not fallen began to flee. Unable to rally them, Tipu had no choice but to retreat, fighting from one transverse wall to the next with a small group of his most determined adherents. "A short fat officer" defended every traverse, according to the Regimental History of the 73rd (Highland) Regiment. The officer himself kept firing loaded weapons that were handed to him by his hunting servants. One of those who fell by this accurate fire was Lalor of the King's 73rd. This description matches the observations of Allen, who would later be involved in the search for the sultan. Tipu "was of low stature, corpulent," he wrote.

The right column led by Baird encountered less resistance, possibly because the Mysorean soldiers there did not have the encouragement of their sultan's presence to inspire them. "We had a distinct view of every movement," wrote Beatson. "The enemy retreated the moment our men advanced upon them with the bayonet ... many of the fugitives in attempting to escape from the fort, by lowering themselves down with their turbans from the walls ... were dashed to pieces on the rocky bottom of the ditch."

Reluctantly retreating along the northern rampart, Tipu mounted his horse and rode eastward atop the rampart. As he rode down a ramp near the Water Gate, he was struck in the right side by a musket ball. This he seems to have barely noticed. To his right the Water Gate led to the inner town and his palace, where his family awaited the outcome of the battle. He headed toward the gate, which was crowded with fugitives. As he attempted to pass through, the left column caught up with him and at the same time the light infantry reached the interior of the gate. Tipu was now trapped between two hostile forces. The British opened fire; the close-packed soldiers and civilians of Seringapatam stumbled and fell as clouds of smoke rolled over them. Bullets ripped through Tipu's fine garments. The gate was immediately filled with dead and dying. Tipu's last remaining servant, Rajah Cawn, advised him to announce himself and be taken alive. "Are you mad? Be silent!" shouted the wounded sultan. Another burst of fire and Tipu's horse was hit, and Rajah Cawn took a bullet in the leg. Horse, sultan, and faithful servant collapsed onto a pile of writhing bodies.



Anne S.K. Brown Military Collection

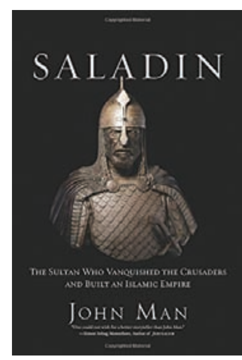
The Tiger of Mysore lay in the gateway upon a heap of the slain. As the British soldiers entered, one of them approached him and reached forward to despoil him of his rich accouterments. The bleeding, moribund sultan struck with what remained of his strength, cutting open the Englishman's knee with his sword. The soldier stepped back, took aim, and shot him in the head.

The left and right columns met at the eastern rampart. The city had fallen. "The fortress now became one wild scene of plunder and confusion," wrote Bayly. "The troops had filled their

Continued on page 66

By Christopher Miskimon

The Arab world's most famous warrior was a complex individual whose personal story continues to challenge stereotypes.



Saladin's defeated a crusader army at the Battle of Hattin in July 1187. The Kurdish-born leader's humanity set him apart from other Muslim leaders.

ON OCTOBER 2, 1187, THE POPULATION OF JERUSALEM AGREED TO terms for the surrender of the city to Saladin and his army. Each citizen would pay a ransom in dinars or be sold into slavery. When 7,000 of the city's people failed to produce the amount stipulated, a Christian leader named Balian offered to pay a lump sum for their freedom. Saladin, ever courteous, agreed.

Similarly, Saladin showed mercy toward various women and children of the city, even the widows of knights his army killed in earlier fighting.

Saladin could have easily been merciless in his treatment of Jerusalem's defenders. Christian knights and leaders had visited numerous cruelties upon Muslims in the region in the preceding years. Mistreatment of civilians, executions of captured soldiers, rape, and pillage were but some of their actions. Although the Arabs were not completely innocent, Saladin generally fought with a sense of chivalry that equaled that of any Christian knight.

Still, Saladin's mercy had limits. At the Battle of Hattin in July 1187 an entire Crusader army had been annihilated. Saladin's strategy had been to draw the Europeans out and string their forces out as they tried to reach a source of water. A few Crusaders escaped, but the bulk of their force was surrounded and defeated, and many prisoners were taken. Among them were Guy of Lusignan, King of Jerusalem, and the knight Reynald of Chatillon. Although Guy raised no particular ire in Saladin, Reynald was a different story. He was known among the Arabs as a barbarous villain. Saladin had twice sworn to kill Reynald. In the aftermath of Hattin, Saladin fulfilled his vow. Both were brought to Saladin's tent. The Sultan of Egypt and Syria spared Guy but raised his sword and beheaded Reynald.

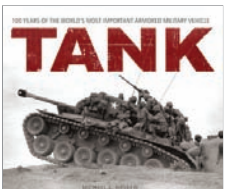
Warrior, governor, hero to the Islamic world; Saladin filled many roles during his life, consolidating the Muslim world so it could face the Crusades. He had a unique ability to unite the disparate factions in the region, who may have shared the same religion but nevertheless often fought among themselves. The life of this singular man is told in this new biography, ***Saladin: The Sultan Who Vanquished the Crusaders and Built an Islamic Empire*** (John Man, Da Capo Press, Boston MA, 2016, 320 pp., maps, illustrations, notes, bibliography, index, $34.99, hardcover).

As a young man Saladin had extensive real-world training for his future work. He was born in Tikrit in modern-day Iraq. His father was governor of the city after inheriting the position from his own father. His family moved to Damascus when he was a teenager. In 1164, he accompanied his uncle, General Asad al-Din Shirkuh, to Egypt, where he gained valuable military experience and was eventually appointed vizier in 1169. Over the next five years he

took control of Egypt and later Syria, thus fulfilling his desire to unite the Muslim world against the Frankish rulers of the Crusader States. At that point, he directed his resources against the Franks, defeating them at Hattin and continuing the fight against them throughout the Third Crusade.

Today Saladin is known across the Middle East as one of Islam's greatest heroes. Statues abound, movies have been made about him, and currency bears his image. Arabs and Kurds argue over his ethnicity, each claiming him. Even in the West he is acknowledged for his courtesy and mercy. Many scholars point to him as morally superior to the Crusaders, who tended toward ill treatment of their enemies and a willingness to commit barbaric acts in the furtherance of Christianity. Certainly his chivalric behavior made him stand out among his contemporaries.

Although many in the West know Saladin's name, few have more than a cursory knowledge of his life and his chief accomplishments. This new work gives an interesting account of Saladin's life in detail sufficient to give the reader a sense of the man without bogging the narrative down with too much information. The author is a noted travel writer as well as a historian and his knowledge of place works well into the story he tells. The author relates historic occurrences to modern locations. He also includes small but fascinating details during the course of his narrative. The effects of the Crusades and Saladin's successful struggles against them echo through time to the present, giving this work relevance and scope.

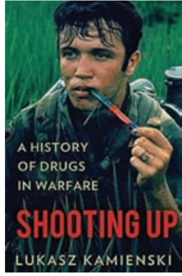


Tank: 100 Years of the World's Most Important Armored Military Vehicle (Michael E. Haskew, Zenith Press, Minneapolis MN, 2015, 239pp, photographs, index, $40.00, hardcover)

The tank was one of the most groundbreaking weapons of the 20th century and is still with us today. Tanks are a vital symbol of military strength; one sign of a nation's status as a major power is whether it has the ability to produce its own armored vehicles. They had an unsteady beginning as a breakthrough weapon designed to end the deadlock of the trenches in World War I. Despite their shortcomings, which were due to the newness of the technology, they proved to be a tough replacement for the horse cavalry, which was woefully vulnerable in an era of machine guns and artillery.

As time went on the tank evolved into the brute-force weapon system it is today. It began as a slow, ponderous infantry-support vehicle, but men of vision helped it become an arm of decision, able to punch through enemy lines and pour into their rear areas, sowing chaos, and defeat. As technology improved, the tank became faster and better armed. Armor protection grew as well, making it progressively harder for infantry to counter them with handheld weaponry. Modern tanks are careful blends of firepower, mobility, and protection. Their place as the most fearsome vehicles on the battlefield is assured for decades to come.

This newly updated edition offers a thorough look at the tank and its history, including development, technical detail, and battlefield performance throughout the wars of the 20th and early 21st centuries. The author supplies excellent detail on the major tank battles of the two world wars and subsequent conflicts. Numerous photos help illustrate key points in the text.

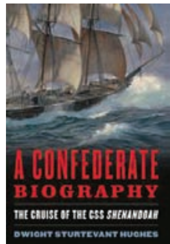


Shooting Up: A Short History of Drugs and War (Lukasz Kamienski, Oxford University Press, Oxford, UK, 2016, 408 pp., notes, bibliography, index, $29.95, hardcover)

In November 1943 Gerd Schmuckle was fighting with the 7th Panzer Division near Zhytomyr in the Ukraine. The attack was over for the moment and it was time to rest, but sleep eluded the young German. He had taken too much Pervitin. The drug, a form of methamphetamine, made him feel confident, oblivious to danger. He and his fellow soldiers were dependent on it. The Nazi war machine ran on Pervitin and similar drugs, in line with their belief in power, endurance, and superiority. Indeed, part of the myth of German military ability was actually pharmaceutical in nature.

Although often unmentioned outside of anecdotal evidence, drugs have played a large role in the conduct of warfare since antiquity. Warriors of the ancient world routinely used opium and hashish. In today's world, for example, Somali soldiers use the stimulant khat. Drugs have been used by soldiers throughout military history to increase aggression and inspire fearlessness. In recent times, drugs such as the painkiller morphine result in addiction that has a lasting effect on soldiers and society.

The author provides a detailed general overview of drug use in combat throughout the ages. Stories of military drug use are common, but this new work gives the reader a well-organized, closely documented history replete with examples. The book also gives the background information on how governments encourage drug use and at times even issue intoxicants to enable their troops fight with greater intensity. A final section discusses the future of drug use within today's modern armies.



A Confederate Biography: The Cruise of the CSS Shenandoah (Dwight S. Hughes, Naval Institute Press, Annapolis MD, 2016, 272 pp., maps, illustrations, notes, bibliography, index, $41.95, hardcover)

The Confederate Navy was limited in what it could accomplish against the larger Union fleet, but one area in which it stood out was commerce raiding. Fast-sailing warships could be fitted for this duty and sent out to wreak havoc on Yankee trade. One such ship was the CSS *Shenandoah*. It is not the most famous of the Confederate raiders, but the ship's voyage was as unique and daring as those of any of the more famous vessels. The ship's journey spanned the globe, sailing through the South Atlantic Ocean, around Africa, through the Indian Ocean, and on to Australia. After a stopover in Melbourne, the *Shenandoah* sailed through the Northern Pacific Ocean, wreaking havoc among American whalers in the area. Unfortunately, the crew of the ship did so even after the war ended. Indeed, the crew did not learn of the conflict's cessation until August 1865.

The author blends a number of personal accounts of the *Shenandoah*'s voyage to produce a great read. Much of the work's material is drawn from the experiences of the crew, making it read at times like a journal. The book includes detailed drawings and illustrations of the ship.

Imperial Roman Warships 27 BC–193 AD (Raffaele D'Amato, Osprey Publishing, Oxford, UK, 2016, 48 pp., illustrations, bibliography, index, $17.95, softcover)

Rome is famous for its legions, but its navy played an equally important role in securing the empire. The Roman Republic had used large galleys to defeat

 By Joseph Luster

VALKYRIA CHRONICLES REMASTERED POLISHES AN ALREADY SHINING STRATEGY GEM, AND GEOPOLITICAL SIMULATOR PREPARES FOR POWER & REVOLUTION.

VALKYRIA CHRONICLES

At first glance—especially for those who aren't too familiar with Japanese games—it might be hard to imagine Sega's *Valkyria Chronicles* as a hardcore wartime strategy game. Its setting may be fictional and its art style may be colorful, but this game is serious business. Now those who never got a chance to check out the 2008 PlayStation 3 original can give it a spin on PlayStation 4 with *Valkyria Chronicles Remastered*. Whether it's a return visit to the continent of Europa or a first attempt, this is a demanding but satisfying trip well worth taking.

PUBLISHER SEGA
GENRE STRATEGY
SYSTEM(S) PLAYSTATION 4
AVAILABLE NOW

The beginning of the story finds players in the role of Welkin Gunther, his head buried in a notebook as he dutifully researches and sketches flora and fauna. Unfortunately, this isn't exactly a time of peace, so it's understandable when town watch captain Alicia Melchiott stumbles upon Welkin with great suspicion. Initial impressions aside, the two quickly find a common bond, and Welkin even boasts some seriously impressive military heritage. It turns out he's the son of the country's hero, General Belgen Gunther, and it won't be long before he ends up being dragged into a battle of his own.

After some quaint, charming character introductions, the Gallian border town of Bruhl finds itself under attack. Forces from the East Europan Imperial Alliance make their way toward our heroes, serving up the perfect opportunity to teach players the art of war. Even if you've played countless strategy games over the years, it's doubtful you've touched any quite like *Valkyria Chronicles*. Battlefield action is a mix of direct control over your characters and strategic placement, like pieces on a board game that you dash and weave through a firefight. Command Mode gives you a certain amount of opportunities to select your characters from an overhead map at the expense of Command Points, after which you will zoom down and strategically exhaust Action Points through movement. Once you have an enemy, or a group of enemies, in your sights you can fire away and brace yourself for a counterattack.

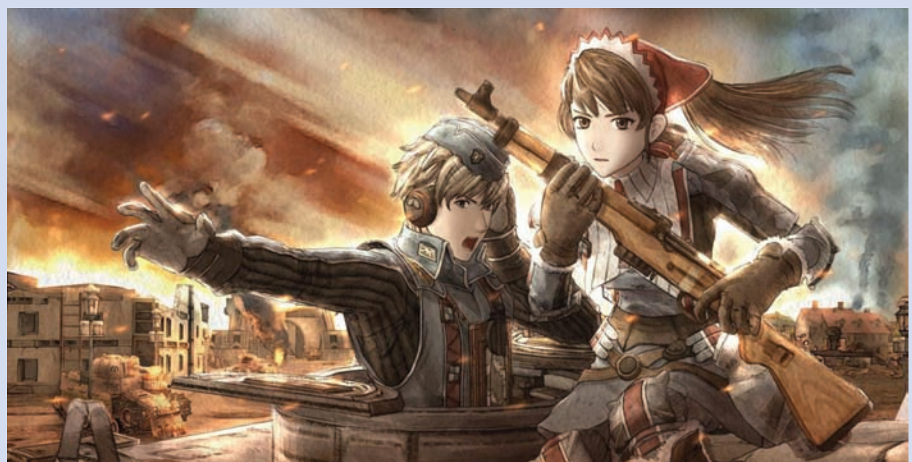
This is the (simplified) gist of the BLiTZ (Battle of Live Tactical Zones) system that makes up the juicy meat of *Valkyria Chronicles*. It's a nice way to not so subtly scratch the itches of both action and strategy fans, but don't let that fool you into thinking you

preview

POWER & REVOLUTION: GEOPOLITICAL SIMULATOR 4

PUBLISHER EVERSIM
GENRE STRATEGY
SYSTEM(S) PC
AVAILABLE NOW

Independent developer Eversim is back with more geopolitical, economic, and military simulation in *Power & Revolution: Geopolitical Simulator 4*. This time around players will be able to play as opposition on both sides of the legal line, staging media interventions, manipulating politics, participating in election campaigns (including a scenario based on the 2016 elections in the United States), launching protest movements, and raising an army. That means



can play *Valkyria Chronicles* like an action game. While the first mission or so eases you into the battle system nice and gently, it doesn't take long for the difficulty and tension to ramp up generously. Even the early missions that have you attempting to both defend and escape an invaded Bruhl are no cakewalk, making every single step you take one of tremendous consequence. Did you opt to get too aggressive in the first turn? You'll be a sitting duck for those shocktroopers that were concealed right around the corner. Accidentally spend too many Action Points such that your character is stuck in a slightly more vulnerable spot than you would have liked? Get ready for a punishing enemy turn.

It sounds overwhelming, and it can be at first, but *Valkyria Chronicles* knows what it's doing. There's a save option on the tactical menu for a reason, after all. Once you get in the habit of saving after pretty much every remotely successful turn, you'll start learning from your mistakes and making more headway throughout each mission. Before you know it you might actually have the hang of the whole BLiTZ system, but don't worry, the Imperial forces will stay a few steps ahead of you to make sure you never get too comfortable.

Valkyria Chronicles was already a very pretty game, even if its textures and models aren't the most detailed. The visuals succeed because of the cel-shaded, almost painterly aesthetic, and that holds true in *Remastered.* The style makes battles and environments very clear and readable, leaving you open to worry more about the battle at hand and not which items you can interact with. The only real visual issue I had was kind of my own fault. If you're not paying close attention to the map and where restricted areas fall, you can easily end up wasting Action Points as you run right into invisible borders.

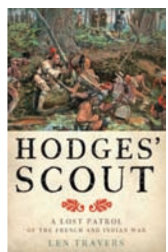
Whether you played the original or haven't heard of it before, *Valkyria Chronicles Remastered* is a solid addition to any PlayStation 4-owning strategy fan's library. It has its frustrating moments, but it's easy to see why fans still celebrate the series to this day.

cities experiencing uprisings or armed conflicts will also trigger tactical war phases that mix up the style of play.

In the tactical war portions of *Power & Revolution,* players will be tasked with controlling elements ranging from protestors and armed extremists to police units, including helicopters and armored vehicles. Simulated conflicts in areas such as Syria, Iraq, Libya, Ukraine, Nigeria, Yemen, and so on are broken down into frontline operations, territory occupation, and beyond. With over 20 playable scenarios, it looks like we're going to have our hands full when we dig into the full version of *Power & Revolution: Geopolitical Simulator 4.* It's currently available on PC as a standalone release and as an upgrade from *Masters of the World.*

Carthage, but these were no longer as useful in the imperial period. Rome had to secure the Mediterranean Sea so it could reap the benefits of trade from the three continents that bordered it. To do so it used smaller, faster ships. These ships were equally useful along the coast of Gaul and on the rivers of the European interior to help patrol Rome's border areas.

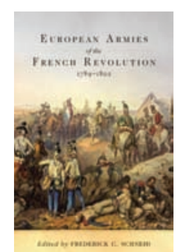
Part of Osprey's popular New Vanguard Series, this book gives the reader a general understanding of the Roman Navy, its tactics, and organization. It is well illustrated with original art and period illustrations. The author draws from both academic and ancient sources, providing an easy to read, detailed study of the Roman Empire's naval power.



Hodges' Scout: A Lost Patrol of the French and Indian War (Len Travers, Johns Hopkins University Press, Baltimore, MD, 2016, 320 pp., maps, illustrations, notes, bibliography, index, $29.95, hardcover)

In autumn 1756, a band of 50 American soldiers marched into the New York wilderness on a reconnaissance patrol, seeking sign of their French enemies. What they found was a deadly ambush by a combined group of French troops and their Native American allies. Most of the group was lost, with a mere handful escaping the trap to return home. Years later, as the war drew to a close, another group of survivors came out of the forests, relating a grim tale of capture and abuse at French and native hands.

Few such personal stories of the French and Indian War are known today. This volume widens that knowledge with a gripping story of a small unit and its harrowing experience. The author uses period correspondence, records buried in archives, and surviving official reports to bring the story of the patrol to vivid life. He also rounds out the book with information on the daily lives and trials of the soldiers, providing a close look at life during this turbulent period in North American history.

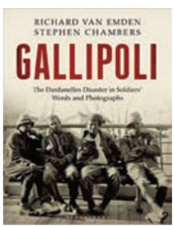


European Armies of the French Revolution 1789-1802 (Edited by Frederick C. Schnied, University of Oklahoma Press, Norman, 2016, 280 pp., notes, index, $34.95, hardcover)

The French Revolution took the continent of Europe into a swirling, chaotic time of warfare, where old ideas were

being struck down while long-standing dynasties sought to preserve the status quo. Republican France proved an upstart to both military and social order. This book looks at the major armies on the Continent, including France, Great Britain, Prussia, Austria, Russia, Spain, the Ottoman Empire, Italian states, and German principalities. Each is analyzed by an expert on the period, paying close attention to their organization, training, composition, tactics, strategies, and battlefield practices.

The result is a book which delivers expert assessments of all the major players during the Revolutionary Period. The way in which these armies were raised, led, and fought each other had great influence on the wars that immediately followed it. Their success or failure similarly affected Europe's development for decades to follow. This work fills a gap in the study of the era, taking a critical look at the military organizations of a critical period in world history and does so in a clear and concise way.

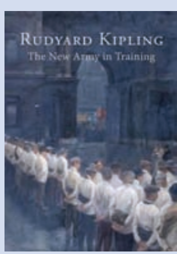


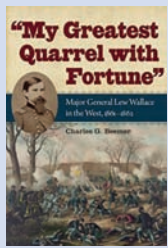
Gallipoli: The Dardanelles Disaster in Soldiers' Words and Photographs (Richard Van Emden and Stephen Chambers, Bloomsbury Press, 2015, 352 pp., maps, photographs, bibliography, index, $40.00, hardcover)

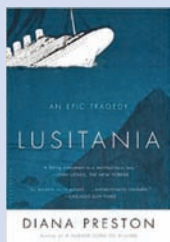
The campaign at Gallipoli in 1915-1916 was a failure, with a litany of mistakes, missteps, and miscalculations leading to disaster. A force of Commonwealth troops landed on this Turkish peninsula, hoping to achieve a masterstroke and knock Turkey out of the war. The attempt failed, leading to wasteful, difficult fighting, and pointless loss of life. British, French, and Indian soldiers all served and died there, but the battle has come to be seen as the ordeal of the Australia-New Zealand Army Corps troops. Today the battle is commemorated in Australia as an example of the nation's sacrifice in World War I.

The authors are leading experts on the Great War and Gallipoli. Their extensive knowledge and research show well in this new book. They meld official reports, interviews with veterans, and their own expert analysis to tell the story of the campaign. Importantly, the work includes both sides of the story, integrating accounts from Turkish participants and sources, too. The book includes more than 130 photographs taken by the troops themselves during their time there. The result is a thorough account of a battle that has become synonymous with tragedy.

SHORT BURSTS







The New Army in Training (Rudyard Kipling, Uniform Press, 2015, $13.95, hardcover) This is a reprint of a 1915 booklet Kipling wrote informing about the training of the volunteers for World War I. The six chapters cover 26 separate topics.

"My Greatest Quarrel with Fortune": Major General Lew Wallace in the West, 1861-62 (Charles G. Beemer, Kent State University Press, 2015, $39.95, hardcover) The book offers a close look at Wallace, the scapegoat of the Battle of Shiloh. The book asserts that there was more to his story than what occurred that fateful day.

Lusitania: An Epic Tragedy (Diana Preston, Bloomsbury Press, 2015, $20.00, softcover) The work recounts the tragic loss of the passenger liner in May 1915. The incident pushed the United States down the path to war.

Secret Science: A Century of Poison Warfare and Human Experiments (Ulf Schmidt, Oxford University Press, 2015, $39.95, hardcover) The work documents chemical and biological warfare experiments conducted by the Allied powers from World War I through the Cold War. It includes experiments done on unwitting soldiers.

Rescue Pilot: Cheating the Sea (Jerry Grayson, AFC, Bloomsbury Press, 2015, $28.00, hardcover) This is the autobiography of a decorated helicopter pilot, who began his flying career at 17. He performed numerous rescue missions while in the Royal Navy.

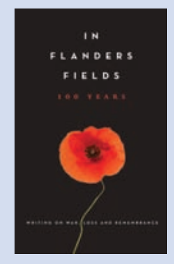
In Flanders Fields: 100 Years (Edited by Amanda Betts, Alfred A. Knopf Publishers, 2015, $35.00, hardcover) This book pays homage to the famous poem of World War I. It contains the perspectives of numerous writers on the poem's meaning.

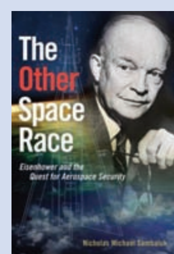
Agincourt: The Fight for France (Ranulph Fiennes, Pegasus Books, 2015, $26.95, hardcover) The author had four ancestors who fought for England in this famed battle. He also had four relatives who fought for France. He draws on their experiences to retell the battle.

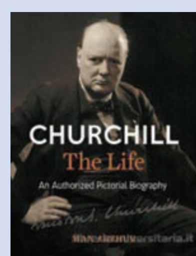
The Other Space Race: Eisenhower and the Quest for Aerospace Security (Nicholas Michael Sambaluk, Naval Institute Press, $44.95, hardcover) U.S. President Dwight D. Eisenhower wanted an unarmed reconnaissance satellite program. The Air Force wanted armed craft for eventual combat in space. This book covers the pursuit of those policies.

US Marine versus NVA Soldier: Vietnam 1967-68 (David R. Higgins, Osprey Publishing, 2015, $18.95, softcover) This work compares the strengths and weaknesses of the combatants. It compares tactics, training, and capabilities.

Churchill, the Life: An Authorized Pictorial Biography (Max Arthur, Firefly Press, 2015, $35.00, hardcover) The life of the famous British statesman is portrayed in images. The author divides his life into distinct periods.





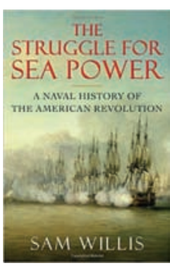


Wellington's Hidden Heroes: The Dutch and Belgians at Waterloo (Veronica Baker-Smith, Casemate Publishers, Havertown, PA, 2015, 208 pp., illustrations, notes, bibliography, index, $32.95, hardcover)

Waterloo is widely seen as a victory for Great Britain over France, and without doubt English courage abounded on that harrowing day. Proper credit is also due to the Dutch and Belgian troops who made up a full third of the Allied army at the battle. These troops are often given only passing mention at best, described as second-rate soldiers who contributed little if anything to the outcome; however, they are increasingly receiving the acknowledgement they more properly deserve, as argued in this new book.

The author maintains that these troops, commanded by the Prince of Orange, averted disaster for the Allied army at Quatre Bras and at Waterloo, thus allowing the British time to recover from setbacks. The author combines extensive research from the Dutch archives with a clear writing style to make this work a fascinating read.

The Struggle for Sea Power: A Naval History of the American Revolution (Sam Willis, W. W. Norton and Company, New York, 2015, 572 pp., maps, illustrations, notes, bibliography, index, $35.00, hardcover)



The naval side of the American Revolution is often overlooked as a sideshow to the fighting on land. While many accounts of the naval battles exist, they are mostly seen as secondary to the action, since Great Britain controlled the seas for much of the conflict. However, the fighting at sea related to the conflict spanned the globe; almost two dozen navies took part, considering that beyond the fledgling U.S. Navy, each of the 13 colonies had its own sea arm in the fight.

This book looks at the American Revolution as part of a world war that pitted vast fleets against each other on the high seas, privateers seizing merchantmen, and small craft fighting on mighty rivers. It weaves together accounts of campaigns which spanned the globe and relates them to each other in ways which are as surprising as they are enlightening. The result is a fresh look at the conflict. □

plataea

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Realizing he could delay no longer, Pausanius finally ordered the main Spartan body to march as planned. Amompharetus could not believe his eyes; he and his men really were being left behind. Pasanius and the main Spartan forces were about 10 stades, slightly more than a mile, from Amompharetus when he realized the danger and reluctantly ordered his men to catch up.

Luck was with the Spartans because the very moment Amompharetus rejoined the main body, Persian cavalry appeared on the scene. The Spartans prepared for battle, their new position being "by the River Moloeis and in an area called Argiopium where a shrine of Eleusian Demeter stands," according to Herodotus. The Spartans and the Lacedaemonians and Tegeans with them formed solid ranks, perhaps eight deep, and awaited the Persian onslaught. They probably had a substantial number of lightly armed men with them as well.

But Pausanius recognized that he was going to be hard pressed, so he immediately sent a messenger to the Athenians to come to his aid in full force or "if something has happened to make this impossible, we would be much obliged if you would send us your archers," wrote Herodotus. The Athenians were indeed on their way to support the Spartans when they were attacked by medizing Thebans.

Herodotus is strangely laconic at this point, merely saying that the "Boeotians [Thebans] fought the Athenians a long time." This would be a typical hoplite encounter, with opposing forces literally shield to shield. Each side would be armed with hoplite spears, about eight-feet long, with leaf-shaped heads that were made of iron or bronze.

Over arm thrusts were effective, and underarm thrusts could strike at an enemy's lower body and legs. When spears were broken, fresh weapons were brought up from the rear. The Greeks called this shoving tactic *othismos*. Opposing sides would mass together while fighting, a whole seething mass of densely packed humanity, thrusting, pushing, and shoving its way forward.

A hoplite battle was a nightmare for the individual Greek soldier. His bronze Corinthian helmet provided good protection, but his hearing was muffled, his vision was restricted, and above all ventilation was poor. In battle the world was transformed into a chaotic swirl of impressions that overwhelmed the senses and numbed the emotions. Screams of the wounded mixed with shrill war shouts, the thud of shield on shield, and the metallic clang of spear points and swords hammering bronze helmets and cuirasses.

Finally, the Thebans broke and ran. Once a phalanx formation was disordered, its soldiers were highly vulnerable. The men of Athens had won a great local victory, but their triumph was somewhat eclipsed by the subsequent Spartan stand against the Persian main forces. Mardonius himself arrived on the scene accompanied by the Persian infantry.

The Persians tried to soften the Spartans up by sending showers of arrows into their packed ranks. Their helmets and cuirasses afforded some protection, but so many hundreds of arrows rained down inevitably some lethal shafts hit exposed arms, legs, and necks. A lucky shot might even hit the face via the helmet's narrow front opening.

Pausanius offered animal sacrifices to the gods even as the battle raged. There was a temple of Hera in the vicinity, and Pausanius literally faced the distant building and offered a personal prayer. If must have done the trick because when fresh entrails were read the signs and portents were now favorable.

Encouraged by this, the Spartans switched to the offensive. The Persians fought with skill and courage, but their short spears, relative lack of body armor, and wicker shields put them at a disadvantage. The tide began to turn in favor of the Greeks. Then, the Greeks really got lucky. A Spartan named Arimnestus saw Mardonius himself mounted on a magnificent charger. In a maneuver reminiscent of David and Goliath, Arimnestus seized a rock, took careful aim, and flung it with all his might.

The rock hit Mardonius square in the head and killed him outright. The Persian army lost heart when its commander was killed. Whole formations began to break and run, many seeking safety in the fortified Persian camp across the river. The retreat became a rout; one of the Persian subordinate commanders, a man named Artabazus, fled with his division and took the road to Thessaly. His hope was to reach the Hellespont and home.

The Greeks briefly laid siege to the Persian camp. The Persians fought with the courage of desperation, for they knew the Greeks would take few prisoners. For a time, the Persians repulsed the Greek assaults. But eventually the Greeks scaled the fort's walls, and the slaughter commenced.

Mardonius' great army, once so powerful, was reduced to a few frightened remnants fleeing for their lives. The rest were, for the most part, dead. The Greeks had won a great victory and avoided subjugation under a foreign yoke. The golden age of Greece, with all its triumphs and tragedies, was about to begin. □

soldiers

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while Captain Albert Pfeiffer with two companies of troops pushed through from the eastern end of the canyon. Three days later Pfeiffer joined up with Carson, having met minimal resistance and captured 19 starving women and children. The next day 60 starving Navajos surrendered to Carson. Thousands more would follow. By mid-March, 6,000 Navajos had surrendered with the number eventually increasing to 8,000. In the Navajos 400-mile long walk to Bosque Redondo, many would die from starvation, disease, and exposure.

After a short stint in command at Fort Sumner overseeing the Bosque Redondo reservation, Carson again attempted to resign. Carleton again rejected the offer, instead sending him to chastise the Comanches and Kiowas who had been causing havoc on the Santa Fe Trail during the summer of 1864, attacking emigrant trains and army caravans. The attacks were so bad that the army's supply line and mail were nearly cut. Carleton ordered Carson to punish the Indians before the onset of winter. Setting out on November 12, Carson would a little over two weeks later find himself in a desperate situation at Adobe Walls.

The Comanche and Kiowa warriors returned to Adobe Wall,s being careful not to bunch up and offer themselves as targets to Carson's two howitzers. Instead, many of them dismounted and, using the tall grass as cover, skirmished with the bluecoats, while the majority of them charged across the troopers' front firing from under the necks of their horses. Carson urged his men to stay calm and direct their fire at the waves of warriors attacking them.

It was soon becoming painfully clear that Carson and his men had bitten off more than they could handle. They estimated the warriors they were now facing numbered about 3,000. Parties of warriors were spotted a couple of miles away, heading for the Kiowa village the bluecoats had earlier passed to get horses and see to the safety of their women and children.

Carson now began to fear for the safety of his supply wagons and 75 foot soldiers left to escort them. At 3:30 PM, he ordered the horses to be brought out in preparation for a retreat despite the protests of many of his officers who wanted to push on to the big Comanche village. With years of experience in Indian warfare under his belt, Carson knew it was time to get his men out.

While one trooper in four led the horses, the other bluecoats spread out as skirmishers on the flanks to protect the retreating column. The crews of the two howitzers, meanwhile, brought up the rear, blasting away at the pressing warriors who increased their attacks.

"Indians charged so repeatedly and with such desperation that for some time I had serious doubts for the safety of my rear," wrote Carson. To make matters worse, the Comanches and Kiowas lit a grass fire that swept toward the retreating column. Using the smoke as cover, some warriors got close to the column and fired into it before being discovered. To avoid the fire, Carson and his men had to climb the bluffs of the river valley. There they could better see the situation that faced them

By sundown Carson and his men had reached the Kiowa village, which they found full of Indians attempting to save their possessions. After the mountain howitzers fired a couple of shells into the village, the troopers charged. They plundered the lodges of buffalo robes and even found some white women's clothing. They then set fire to 160 lodges and some equipment the Indians had captured earlier.

The two guns, which were repositioned on a 20-foot hill, continued to bang away. Each time they were fired, the recoil sent them down the hill, where they would have to be manhandled back up again. One last parting shot from the gun into a group of 30 or 40 retreating warriors from the southern part of the village ended the battle.

By nightfall Carson and his command, exhausted from 30 hours of fighting, reached their supply wagons and escort, which were still safe. Despite the ferocity of the battle, Carson's casualties were remarkably light, with two troopers and an Indian scout killed and as 25 wounded. Three of these would succumb to their wounds. Casualties could have been much worse, and an officer serving with Carson believed the two mountain howitzers had kept the command from being wiped out. But Carson's coolness and sound judgment also played a significant role in their survival. The Comanches and Kiowas, Carson estimated, suffered 60 killed and wounded, although their losses may have been considerably greater.

Carleton called Carson's battle at Adobe Walls "a brilliant victory." Carson admitted four years later that the Indians had defeated him. But Carson's foray showed the Comanches and Kiowas that they were not safe from attack even deep in their own territory.

Carson was brevetted a brigadier general in March 1866, but his health rapidly deteriorated. He resigned from the U.S. Army the following year. The legendary soldier and scout died at the age of 58 on May 23, 1868, in Fort Lyon, Colorado. □

Seringapatam

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muskets, caps, and pockets with zechins, pagodas, rupees, and ingots of gold. One of our grenadiers, by name Platt, deposited in my hands, to the amount of fifteen hundred pounds' worth of the precious metals, which in six months afterwards he had dissipated in drinking, horse-racing, cock-fighting, and gambling."

The sultan's palace was surrounded. Baird sent Major Allen with an offer of protection to Tipu and his family if he would surrender unconditionally on the spot, or "the palace would be instantly assaulted, and every man put to the sword." Allen was admitted, and the sons of Tipu surrendered themselves, but they denied any knowledge of their father's whereabouts. Baird, although disinclined to believe them, sent them off safely to the British camp and then tore through the palace in search of his old enemy. The governor of the palace, after some serious threatening by Baird, revealed the last known position of Tipu Sultan. He led Baird, Allen, and others to the Water Gate, where a pile of approximately 300 bloodstained corpses filled the archway.

At dusk the bodies were dragged out one by one and examined by the governor. This was a lengthy process, and as the evening darkened, torches were lit. Major Allen and the governor entered the gateway and continued the search in the flickering light. They came upon Tipu's servant, who was lying wounded under the sultan's palanquin. He directed them to the spot where Tipu had made his last stand. The body was carried out and recognized as the sultan.

"His eyes were open, and the body was so warm that for a few moments Colonel Wellesley and myself were doubtful whether he was not alive: on feeling his pulse and heart, that doubt was removed," wrote Allen. "He had four wounds, three in the body, and one in the temple; the ball having entered a little above the right ear, and lodged in the cheek." The sultan's body was carried to the palace, and the next day Baird, in an effort to stop the looting, ordered that any man found doing so would be hanged. The looting stopped.

As a result of the fall of Seringapatam, Lord Mornington was made Marquess Wellesley; he appointed his brother the governor of Mysore. Baird, who was not pleased about Colonel Wellesley's new command, was shunted off to Dinapore in Bengal. Tipu's mechanical tiger (along with anything else of value) was shipped to England, where it and its unfortunate victim now silently occupy a case in the Victoria and Albert Museum in London. □

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