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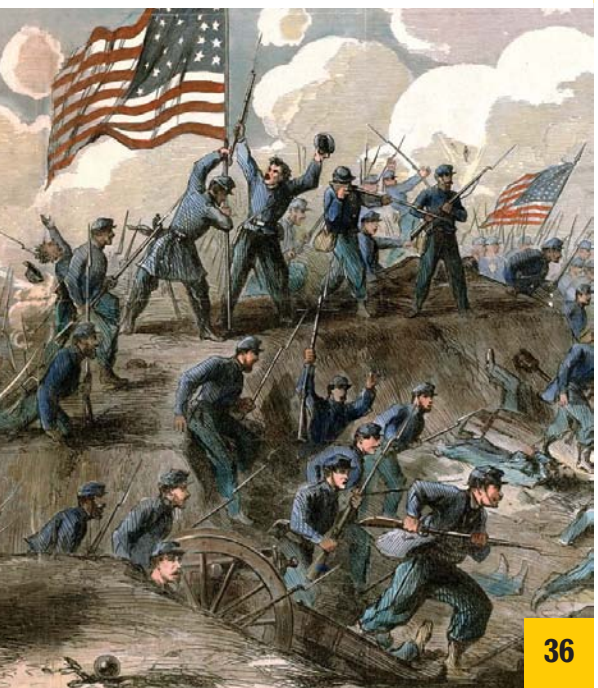

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COVER: General George S. Patton Jr. led the U.S. Third Army across France at lightning speed, including the 4th Armored Division, which took on the Germans at Luneville, France, in September 1944. See story page 20. Photo: National Archives.

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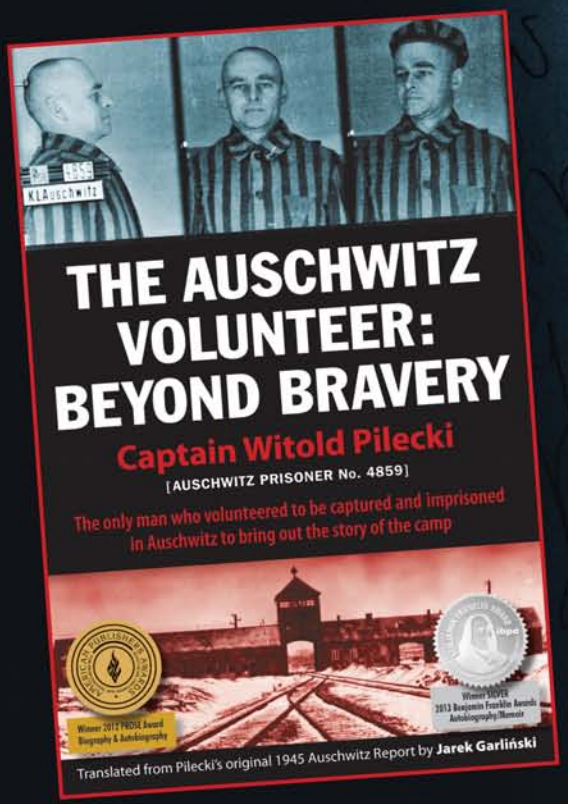

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Twilight of the Teutonic Order

IN ONE OF THOSE IRONIES WITH WHICH HISTORY ABOUNDS Polish Duke Conrad of Mazovia in 1226 invited the German Roman Catholic military order known as the Teutonic Knights to assist him in subjugating the unruly, pagan Prussians who were raiding his lands. If they assisted him, he pledged to give them Kulmerland in southern Prussia for their new base. The Teutonic Order had left the Holy Land in 1211 for Hungary, but Hungarian King Andrew II expelled them from the Burzenland region of his kingdom in 1225. With no other options, they accepted the offer. By the end of the 13th century, the Teutonic Knights had conquered all of Prussia. The irony is that the Poles would play a central role in the demise of the Teutonic Order by defeating them soundly at the Battle of Grunwald in 1410.

Crusading in the Baltic region was as different from crusading in the Holy Land as night is from day. Annual campaigns against the Prussians, Livonians, Lithuanians, and others were conducted in a harsh climate and rugged landscape consisting of a tapestry of rivers, streams, and marshes. Like all crusades, they were expensive expeditions that required wealthy patrons. For that reason, the Teutonic Knights, whose numbers were relatively small, recruited assistance from the West. The Teutonic Order feted the visiting knights with great feasts within the strong walls of their fortress at Malbork on the Nogat River.

The Poles fought the Teutonic Knights with words as well as swords. At the Council of Constance convened in 1414, they argued that the Teutonic Order failed to bring about lasting conversion of the pagan peoples they subjugated. The Teutonic Order had justified its territorial acquisitions in Prussia and Livonia on the grounds that they were necessary to carry out conversion. This did much to denigrate the reputation of the northern order. "[We want to] be baptized with water and not with blood," testified one Samogitian witness. Indeed, the Poles held that the majority of Prussians remained pagan. In the end, though, the council did not take any action against the Teutonic Order; however, there was diminished enthusiasm for the crusaders afterward.

The Teutonic Order did not help itself in the 15th century by allowing bickering between northern and southern Germans. Northern Germans seemed to believe that they were more worthy than those from the Rhineland, Bavaria, or Swabia, and this further eroded support at a time when every financial contribution or new recruit counted. Several years after the defeat at Grunwald, the Order tried to remake itself by refocusing its crusading efforts. The knights discussed crusades against the Russians, Hussites, or the Ottoman Turks. The Teutonic Knights did assist King Sigismund of Hungary-Bohemia against the Bohemian Hussites, but that did them more harm than good as the Bohemians became staunch allies of the Poles in the 1430s, raiding deep into Prussia.

The Thirteen Years War of 1454-1466 served as the death knell for the Teutonic Order. In that conflict, a group of Prussian cities banded together into a confederation that allied itself with the Polish crown to defeat the Teutonic Order.

But before it was over, the Teutonic Knights enjoyed one last great victory at the Battle of Konitz in 1454. Besieged at Konitz, the Teutonic heavy cavalry unsuccessfully tried to fight its way out. The Polish mounted knights then charged a Teutonic wagon fort outside the city. The Teutonic infantry manning the fort held up long enough for the Teutonic garrison to launch a sortie against the Poles striking them from behind. Although the Poles fought valiantly, they suffered heavy casualties.

But lack of funds could not change the overall situation. As a result of the Second Peace of Thorn in 1466, the Teutonic Order became a fief of the Polish Crown.

—William E. Welsh

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By William F. Floyd, Jr.

Dismounted knights clad in full suits of armor took the field during the Wars of the Roses, forcing dramatic changes in battlefield weapons.

THE MEN OF BRIDPORT ON THE COAST OF SOUTHWESTERN ENGLAND kept extra weapons on hand to deal with the raids endemic during the Hundred Years War that preceded the Wars of the Roses. Just four years after the last great battle of the Hundred Years' War was fought at Castillon, a muster was held at Bridport at the outset of the Wars of the Roses during which the town's four principal officials, two constables and two bailiffs, assessed the equipment of individuals who presented themselves for inspection for wartime duty. One commoner in particular stood out from the rest for he had brought enough to equip himself and others. Besides two helmets and two padded jacks, he had three bows and sheaves, two poleaxes, two glaives, and two daggers. This man, unlike many others, would not be subjected to the requirements others would have to meet if they were short of the required equipment. If that were the case, they would be told to acquire the additional equipment within a fortnight or pay a fine.

The three wars that constituted the Wars of the Roses had periods of peace that separated them. The name of the wars derived from the badges used by the two cadet branches of the Plantagenet dynasty: the white rose of York and the red rose of Lancaster. Supporters of the two branches shed a large amount of blood in a contest for control of the English crown.

Both houses laid claim to the throne as descendants of the sons of Edward III. The Lancastrians had been on the throne since 1399 and may have remained there indefinitely were it not for the anarchy throughout the kingdom that began in the middle of the 15th century. When Henry V died in 1422, the country endured the fractious minority of Henry VI during which England was managed by the king's council, a predominately aristocratic body.

The arrangement was not maintained without trouble. The council soon became a battleground for those attempting to gain power. Great magnates with private armies controlled the English countryside. Lawlessness became rampant, and

Knights, men-at-arms, and billmen engage in a melee at the Battle of Bosworth in a modern painting by Graham Turner. The troops wield a variety of pole weapons, including the poleaxe, halberd, and billhook.

Osprey Publishing / AKG Images

ABOVE: Longbowmen engage each other in a period image of the Wars of the Roses. Since both the Lancastrians and the Yorkists had longbowmen, neither side gained a clear advantage from their use. RIGHT: A flanged mace delivered greater force than the sword. It would have been highly useful in combat against a knight clad in plate armor.

the people began to be overtaxed.

When King Henry VI lapsed into insanity in 1453, Richard Plantagenet, 3rd Duke of York, was installed as protector of the realm. When Henry recovered from his illness in 1455, he re-established authority, forcing York to take up arms for self-protection. Queen Margaret, who controlled her weak and mentally unstable husband, subsequently drove York from the royal court. In response, York rebelled against Henry VI.

Armed conflict broke out at St. Albans on May 22, 1455. The Lancastrians eventually killed York, who was slain in the Battle of Wakefield in West Yorkshire on December 30, 1460. His eldest son, Edward, 4th Duke of York, however, vanquished the Lancastrians at the Battle of Towton fought March 29, 1461. After the battle, the victorious duke became King Edward IV.

The second war lasted from 1469 to 1471 and its events centered on the expulsion from power of Edward IV by a military coup led by his former ally Richard, Earl of Warwick. Warwick was slain in the Battle of Barnet in 1471. The third war involved Edward's brother Richard Plantagenet, who usurped the crown in the wake of Edward's death in 1483. That conflict ended with the victory of Henry Tudor, the future Henry VII, over King Richard III at the Battle of Bosworth in 1485.

The 15th century brought major tactical changes and advances in metallurgy and armor that had a profound influence on the types of weapons deployed on the battlefields of the Wars of the Roses. The vulnerability of French heavy cavalry to the English longbow in famous battles of the Hundred Years War, such as Crécy, Poitiers, and Agincourt, proved that armored cavalry was highly vulnerable to missile fire by highly skilled bowmen. For their part, the English knights and men-at-arms had fought on foot throughout the Hundred Years' War, and this preference for fighting dismounted continued into the Wars of the Roses. Indeed, the English proved that the most effective way to do battle was with dismounted infantry supported by archers armed with the devastating longbow. Typically, the wealthy knights were clad in suits of armor, men-at-arms were clad partially in armor, and levies wore leather jerkins or padded jacks.

Another seminal change that differentiated warfare in the 15th century from the previous one was the refinement of plate armor. The renowned armor craftsmen of northern Italy and Germany had the requisite metallurgical skills to fashion magnificent suits of armor from steel. By the time of the Wars of the Roses, knights and men-at-arms who could afford these suits went into battle encased from head to foot in plate armor. Plate armor negated the need for shields but required offensive weapons that could punch through or tear the armor of the wealthier combatants.

The English longbow, which most likely was an outgrowth of the ordinary wooden bow, played a substantially less important role in the Wars of the Roses, not only because there was no enemy cavalry to decimate, but also because the use of fluted plate armor for the most part negated the effect of arrows. Other forms of protection, such as leather jerkins or padded jacks, blunted the effect of the arrows. It was common for the archers to duel with each other at the outset of a battle and then fall back to a supporting position. Moreover, since both sides had longbowmen during the Wars of the Roses, neither side gained a clear advantage from their use.

The longbow consisted of a six-foot bow usually crafted from a single piece of yew. The longbow projected arrows up to 820 feet by elasticity in the form of a spring. As the bow was drawn, energy was transformed into kinetic energy as the string was released, thus transferring energy to the arrow.

A typical longbow archer carried from 60 to 72 arrows at the time of battle. A skilled English longbowmen could fire 10 to 12 arrows a minute. Archers would place their arrows either point down in the ground in front of them or through their belt to grasp them for firing in battle.

In one noteworthy instance, the use of longbows did not cancel each other out in battle. At the Battle of Towton on March 29, 1461, Yorkist and Lancastrian archers engaged in an archery duel at the outset of the battle. Because the wind was at their backs, the Yorkists won the contest. Yorkist archers shot approximately 750,000 arrows in less than 10 minutes, resulting in the death or wounding of hundreds of Lancastrian troops. In this way, the Yorkist archers succeeded admirably in softening the opposing ranks before foot soldiers on both sides clashed.

The primary weapon of the period for cavalry remained the lance. The word "lance" is a catchall term for a variety of different pole weapons based on the spear. The name is derived from "lancea," a Roman auxiliaries' javelin. The lance was designed for mounted

troops. Medieval guilds manufactured both the heavy lance and the light lance. They usually were a solid shaft made of ash, cedar, or poplar.

The heavy lance was 10 to 12 feet in length and was used more or less as a shock weapon. Before tactics changed in the 15th century, the purpose of the heavy lance had been to enable charging cavalry to break the enemy's front line.

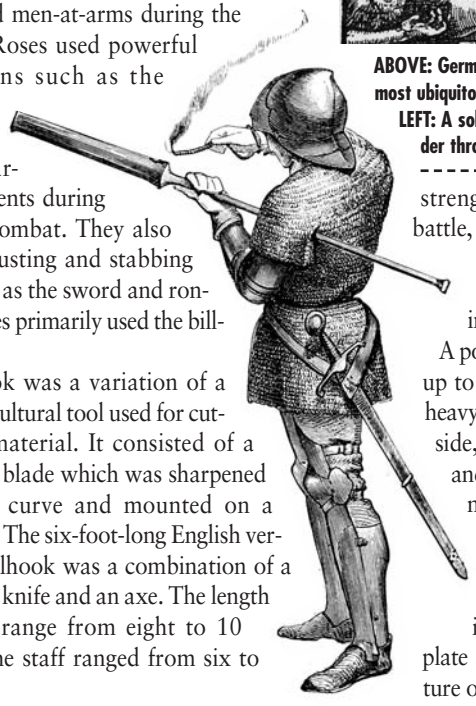
A hand guard was added to the heavy lance in the 14th century. The most effective way to use a heavy lance was to hold it 30 degrees away from the centerline of the horse on either side of the neck. Two versions, one light and one heavy, were available to the mounted man-at-arms.

The light lance ranged from six to 10 feet in length and had a narrower diameter than the heavy lance. Unlike the heavy lance, the light lance was designed to be either thrown like a javelin or stabbed like a spear using an overhanded thrust.

ABOVE: German peasants fight with a wide variety of staff weapons derived from agricultural tools. In England, the most ubiquitous of these was the billhook, which had a hooked metal blade that was sharpened on the inner curve.

LEFT: A soldier fires a so-called hand-gonne consisting of a short tube mounted on a stick. He ignited the gunpowder through a touchhole using a hot coal or piece of slow match.

Dismounted men-at-arms during the Wars of the Roses used powerful staff weapons such as the poleaxe and mace for battering their armored opponents during dismounted combat. They also employed thrusting and stabbing weapons such as the sword and rondel. Local levies primarily used the billhook.



The billhook was a variation of a common agricultural tool used for cutting woody material. It consisted of a hooked metal blade which was sharpened on the inner curve and mounted on a wooden shaft. The six-foot-long English version of the billhook was a combination of a broad, curved knife and an axe. The length of the blade range from eight to 10 inches, and the staff ranged from six to eight inches.

The "bill," as it was sometimes called, was a versatile close contact weapon that gave the foot soldier the ability to reach and engage a cavalryman. Using the hook, a foot soldier could hook a cavalryman and pull him to the ground. A blow from a billhook blade could inflict serious injury even to a knight protected by armor.

The poleaxe was a brutal assault weapon that was used with regularity on the 15th century battlefield, rather than sporadically as it had been used in the previous century. The poleaxe provided a way to offset the advantages afforded by fluted plate armor. Requiring strength and two hands to wield in battle, poleaxes were swung in a cleaving motion like the battle axes used by Normans and Vikings in previous centuries.

A poleaxe consisted of a wooden staff up to six feet in length topped with a heavy, razor-sharp curved blade on one side, a claw-like point on the other, and a sharp spike at the top. Alternate versions had a hammer on the front end and a sharp hook on the back end. The poleaxe was intended to deliver a bone-crushing blow and also to cut through plate armor, depending on which feature of the weapon was used.

Whether a knight or man-at-arms used a poleaxe against an armored or unarmored opponent, the result could be lethal. The thick blade was capable of severing limbs and the sharp point that capped the poleaxe was useful for puncturing armor.

A mace was a weapon with a heavy head that might also have flanged or knobbed additions on the end of the handle. The mace generated far greater force than a sword when swung. The weapon could be mounted on either a long shaft measuring up to five feet or on a short shaft measuring one foot in length. The mace was an armor-fighting weapon designed for close combat that could be used by a man-at-arms fighting on foot or on horseback.

A major advantage of the mace was that it was cheap and easy to make, which made it more numerous on the battlefield. Its primary use was for bludgeoning an opponent, and it was particularly effective against an enemy wearing plate armor. The flanged mace in particular was designed to penetrate armor.

The flail, which is sometimes referred to as a mace and chain or a ball and chain, was similar to the mace. It featured a chain or strap so it could be swung with great force. In previous centuries when soldiers used shields, a soldier who was skilled with a flail could wrap the chain around an enemy's shield and pull it away.

Another staff weapon used during the Wars of the Roses was the halberd. Halberds sported a spiked axe head on a staff of similar length to the billhook. The foot soldier wielding a halberd swung at his opponent as he would a two-handed axe. Yet another staff weapon was the glaive, which featured a slender axe-like blade attached to a six-foot pole. Some versions of the glaive had a small hook on the reverse side used to unhorse cavalrymen.

For close-quarter combat, the 15th-century man-at-arms carried a sword designed either for cutting or thrusting. Many sword designs of this period originated from those developed

during the Viking and migration periods dating back to the type of iron swords wielded by prehistoric Celts. Length was the most critical factor in how a sword would be used in combat. Single-handed swords were usually 2½ feet long, and double-handed swords were usually 3½ feet long. Men-at-arms usually wore their sword in a scabbard on one side and a rondel dagger on the other side.

In some cases, a knight would be considered "undressed" without his sword even when not in armor. Swords normally weighed only two or three pounds. A sword that was too heavy could not move fast enough to precisely strike a moving opponent and would not be controllable once it began to swing. During their manufacture, swords were carefully balanced, according to the purpose for which they were designed. Swords intended for thrusting had long, narrow blades and long hilts.

The rondel dagger takes its name from the cylindrical hand guard and disc-shaped pommel and cross-guard that were equal in size. The weapon was introduced at the turn of the 14th century, and its forerunner was the knightly dagger of the two previous centuries. The rondel dagger might be, for example, 25 inches long with a 10-inch handle and a 15-inch blade. Rondel dagger handles usually were made of wood plated with metal or of metal, although wood, horn, and bone models existed, too.

Rondel daggers were not meant for slashing. They featured a slender, triangular blade made of steel with a tapering point. The rondel dagger allowed the user to deliver a fatal wound to an incapacitated or pinned knight. To finish off an adversary with a fatal puncture wound, the rondel dagger was thrust through a seam or joint in a suit of armor or even through the eye slit in a helmet.

Hand-held firearms were introduced in the 15th century, although they were crude and inaccurate and for the most part ineffective. These "hand-gonnes" consisted of a short tube mounted on a stick.

The gunpowder was ignited with a hot coal or a piece of slow match. Typically, a two-man team operated a 15th-century handgun. One man aimed the weapon and the other applied the ignition. Hand-held firearms were not refined until the following century.

Even though the Wars of the Roses lasted for three decades, pitched battles were infrequent. When fighting did take place, however, it was extremely brutal. For example, it is estimated that the combined casualties of approximately 28,000 from the Battle of Towton constituted one percent of the total population of England at the time.

The Wars of the Roses are remembered for the large number of high-born males who were killed in battle or later executed. With the exception of crude gunpowder weapons and the longbow, combat was conducted at close quarters. In order to kill or wound an opponent with one of the hand-held weapons of the day, an attacker had to be as close as two to three feet to inflict a lethal blow. Unless a fighter was wearing heavy armor, one blow or stab from a poleaxe or sword could prove fatal or at the very least disable an enemy fighter.

The number of participants involved in any given battle during the Wars of the Roses is difficult to determine, and casualties are even harder to ascertain. Battles tended to be bloodier just by the violent nature of the combat. Defeated armies rarely retreated in any organized manner, making retreating troops an easy target for enemy cavalry.

The Wars of the Roses marked the beginning of the end for medieval warfare. Great changes were afoot, particularly in regard to gunpowder. The introduction of effective cannons made stone castles obsolete. Likewise, the introduction of hand-held firearms eventually made edged weapons obsolete. □

By John Walker

Geronimo was a ruthless Apache warrior whose methods bedeviled the U.S. cavalry and frustrated many of his people.

National Archives

Geronimo and his followers are shown escaping from the San Carlos Reservation in a modern painting by William Ahrendt. INSET: Geronimo in 1887 after his surrender.

ON MARCH 5, 1851, A GROUP OF MEXICAN SOLDIERS FROM Sonora plundered a lightly guarded Apache camp outside the village of Janos in the northern Mexican state of Chihuahua 75 miles south of the U.S.-Mexican border. Janos was a well-known location at which the Mexican locals traded with the Apaches. In the process, the Mexicans slaughtered 21 Apache women and children at the camp.

The next morning, a Chiricahua Apache named Goyahkla, meaning "one who yawns," returned to the camp and found the corpses of his aged mother, wife, and three children, all scalped and lying in pools of blood. From that moment forward, vengeance against Mexicans, innocent or guilty, became Goyahkla's driving passion. He participated in countless raids in northern Mexico for more than three decades afterward. The more familiar English name by which Goyahkla became known, Geronimo, is believed to be based on the Mexicans' appeal to Saint Jerome for succor. In their terror, the Mexicans cried out, "Jeronimo!"

Geronimo was a skilled and battle-hardened fighter who possessed superb knowledge of the terrain both in northwestern Mexico and the southern portion of the New Mexico Territory to the north. Geronimo's unyielding pursuit of armed resistance in the face of overwhelming odds confounded not only his Mexican and American adversaries, but also many of his fellow Apaches.

To his supporters, Geronimo was the embodiment of proud resistance and the defender of the old Chiricahua way of life, while to many whites he was the perpetrator of unspeakable, savage cruelties. Geronimo thought nothing of torturing Mexican soldiers to death and committed atrocities against noncombatants on both sides of the border.

Beginning in the 1870s, when the Apaches were forcibly relocated to reservations far from their tribal homelands, many Apaches concluded that the white man's path was their only viable road to peace and survival. For that reason, they regarded Geronimo as a stubborn troublemaker who had become unhinged by his seemingly unquenchable thirst for revenge. They firmly believed that his actions would bring down the enemy's wrath on his own people.

Geronimo was born into the Bedonkohe band of the Chiricahua Apache in 1829 near the headwaters of the Gila River in Mexico. His father was Taklishim, "the gray one," and his mother was Juana. The Bedonkohe band, along with the Chokohen, Nedhni, and Chihenne, constituted the four bands of the Chiricahua.

There was no Apache nation, but several tribes scattered across the southwest region of the modern-day United States. The Apaches are believed to have settled in the southern and southwestern parts of modern-day Arizona and New Mexico,

Painting © William Ahrendt, www.williamahrendt.com; Courtesy Booth Western Art Museum

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Geronimo (far right) and some of his relatives in 1886. White settlement and mining on their native lands sparked hostilities between the Chiricahua Apaches and the U.S. Army.

respectively, and the northwestern region of Mexico arounf 1,500 BC after migrating southward along the face of the Rocky Mountains, following the great buffalo herds. The Spanish called this area Apacheria.

The Apaches were confronted by the fierce and more numerous Comanches, an aggressive tribe that was expanding into the western Great Plains. The Comanches forced the Apache further westward into the mountain ranges west of the plains.

When Francisco Vasquez de Coronado encountered them in northern New Spain in 1541, he described the Apache as "proud, fierce, and independent, but gentle if left alone." Their mobility and knowledge of the terrain was unrivalled and became the key to their survival. The Apaches adapted and thrived in the harsh terrain in which they lived. The Apaches moved to the lower valleys to hunt during the winter. Although they were nomads, they grew beans, corn, and melons on small tracts.

Even though he was a grandson of the revered Bedonkohe chief Mahco, Geronimo's bloodline did not secure him a position as a chief. Like other youths of his band, his entire boyhood was a long and arduous apprenticeship. He learned hunting, horsemanship, and warfare skills from experienced warriors. Although Geronimo was not a hereditary chief, his reputation grew to great heights among Chiricahua because of his skill and the bravery he exhibited in countless actions against the Mexicans and Americans. The Apaches eventually came to regard him as a shaman.

After the U.S.-Mexican War ended in 1848, the subsequent influx of Anglo-American miners, ranchers, settlers, and soldiers into Apacheria disrupted Chiricahuan ways of life that had been in place for almost three centuries and made conflict inevitable. Geronimo bitterly rejected the notion that Mexico had the right to cede his people's homelands to the victorious Americans.

The Gadsden Purchase of 1854 had a direct influence on Apache life. Through the treaty, the United States paid Mexico $10 million for approximately 30,000 square miles of Mexico south of the Gila River. The treaty furnished the land needed for the southern transcontinental railroad. The affected area lay in the heart of Apacheria.

The two greatest Chiricahua chiefs, Mangas Coloradas of the Mimbreno band of the Central Apaches and Cochise of the Chokohen band of the Chiricahua, initially held no animosity toward the American newcomers. They actually preferred the Americans to the Mexicans. Mangas Coloradas informed American scout Kit Carson in 1846 that he was willing to join the Americans in the war against their common enemy, which was the Republic of Mexico. In later years, the two prominent chiefs would attempt to reach accommodations with the Americans that would put an end to hostilities between their two peoples and allow the Apaches to continue raiding into northern Mexico with impunity.

Initially, the Apache refrained from raiding American property. The Apaches had attacked the town of Tubac, Arizona, throughout the early 1840s when it was held by the Sonoran Mexicans, but when an American exploring and mining company was established at Tubac the following decade, the Apaches left it alone. Apache raiders also left unmolested the Americans residing at Fort Buchanan near Tucson. The post, which was a collection of adobe houses without an enclosed stockade, was abandoned in 1861 when U.S. forces stationed there fell back to New Mexico.

The Apache chiefs and their warriors "were men of noticeable brain power, physically perfect and mentally acute—just the individuals to lead a forlorn hope in the face of every obstacle," wrote Lieutenant John Bourke, a U.S. Army cavalry officer.

The Bascom Affair, an incident in 1861 between the Apaches and a U.S. force under Lieutenant George Nicholas Bascom, destroyed the tenuous standoff that had developed between the whites and Chiricahuas. The incident, in which an inexperienced junior officer was given the authority to act in any way he saw fit, was the spark that ignited 35 years of raids and reprisals between the Americans and Chiricahuas in what became known as the Apache Wars.

After Cochise of the Chokohen band was falsely accused of being involved in the theft of a rancher's livestock and the kidnapping of his mixed-blood stepson, Bascom arrested Cochise and several of his family members. Cochise escaped, but his family members did not. Cochise joined forces with Geronimo, Mangas Coloradas, and various members of the White Mountain and Chihenne Apaches in raiding the Butterfield Stage Line and other targets.

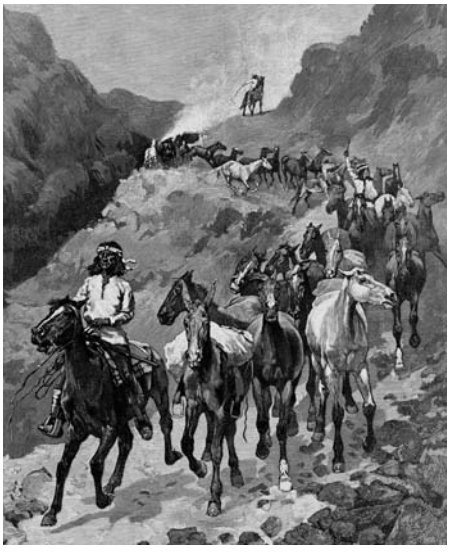
Bascom retaliated by executing six Apache men, including Cochise's brother, which drove Cochise to seek revenge. After this trouble, all the Indians agreed not to be friendly with the white men anymore..

In January 1863, Brig Gen. Joseph West, commander of the Department of New Mexico's southern region, invited Mangas Coloradas to peace negotiations at Pinos Altos. When the chief arrived, the soldiers killed him and mutilated his body. The act was "the greatest of wrongs," said Geronimo.

The Apache raids continued unabated. Geronimo often rode on the raids with Juh, his longtime friend, ally, and cousin by marriage. When Geronimo and Juh needed sanctuary, they crossed into northern Mexico and camped in the Sierra Madre Mountains.

The Apaches were able to obtain rifles by ambushing soldiers, miners, or ranchers or through illicit trading with Americans. They also picked up rifles and ammunition after skirmishes and battles. The Apaches occasionally were able to capture U.S. Army pack mules

Both: Library of Congress



TOP: U.S. Army General George Crook and Geronimo meet in Mexico's Sierra Madre Mountains. Having escaped three times from the reservation, Geronimo in 1886 was sent as a prisoner of war to Florida. RIGHT: Geronimo and his war band after a raid in northern Mexico. Tracking Geronimo was an exhausting experience and required the pursuers to accustom themselves to the Apaches' way of warfare.

laden with reserve ammunition packs intended for U.S. cavalry detachments operating in Apacheria. Geronimo was a superb marksman, and he is known to have preferred the Springfield 1873 "Trapdoor" rifle and the Winchester 1876 rifle.

A key incident occurred in April 1871 at Camp Grant north of Tucson when Aravaipa Apache Chief Eskiminzin's warriors arrived and surrendered their weapons. A vigilante force of fearful Tucson residents, believing raiders were present, attacked the camp and killed more than 150 noncombatants, most of whom were women and children. U.S. President Ulysses S. Grant was so enraged that he sent a peace delegation to the Arizona Territory, after which a reservation system was established for the Apache with four agencies in Arizona and one in New Mexico.

By the 1870s, American occupation of their territory had forced the Chiricahua to accept the hard lesson that some degree of accommodation with the newcomers was necessary for their survival. Hoping their children might enjoy the benefits of peace while retaining their traditional ways of life, the Chiricahuas agreed to settle on two reservations located in their tribal homelands.

After 12 years of hostilities, Cochise signed a peace treaty in October 1872 with Brig. Gen. Oliver O. Howard that established the short-lived "Chiricahua," or "Apache Pass" reservation. The reservation included Sulphur Springs Valley, the Dragoon Mountains, and the San Pedro Valley of the southeastern Arizona Territory. Seven hundred Chokonen, Nehnhi, and Bedokohe settled on the Chiricahua reservation, while another 544 Chiricahuas settled at the Tularosa reservation in the New Mexico Territory.

The population of the four Chiricahua bands, which had steadily declined between 1850 and 1870 from a high of between 2,000 and 2,500, had dwindled by that time to 1,244 men, women, and children. In the immediate aftermath of the establishment of the reservations, the Chiricahuas hunted and gathered peacefully off the reservation as specified in the 1872 peace treaty.

The U.S. government adhered to Howard's peace treaty for only four years. In 1876, the U.S. government reneged on its agreements and announced that all Chiricahuas would be relocated to the San Carlos Apache Indian Reservation. Unlike the Chiricahua reservation, the San Carlos reservation consisted of barren land where the Apache were confined under deplorable living conditions. Apache and whites alike called it "Hell's Forty Acres."

This action, which opened Chiricahua homelands to white settlement and mining, sparked a new round of hostilities. "It was an outrageous proceeding, one for which I would still have blushed if I hadn't got over blushing for anything the U.S. government did in Indian matters," said U.S. Army Lieutenant John Bourke of the forced removal to the San Carlos reservation in 1876.

Anxious for peace at almost any cost, about a third of the Chiricahuas agreed to move to the San Carlos reservation under military escort. The other two thirds, who preferred the uncertain life in the Sierra Madre Mountains of northern Mexico to that on the reservation, resumed their raiding ways. Geronimo led approximately 400 Chiricahuas into Mexico. The U.S. government branded them hostiles. "His only redeeming traits were courage and determination," U.S. Cavalry Lieutenant Britton Davis said of Geronimo. "His word, no matter how earnestly pledged, was worthless."

After John Philip Clum, the Indian Agent for the San Carlos Apache Indian reservation, captured Geronimo and a group of his followers through deceit in 1877, Geronimo was taken in chains to the San Carlos reservation for the first time.

Geronimo and other Chiricahuas did not get along well with Apaches of other tribes. After he was released months later, Geronimo and Chief Victorio of the Warm Springs band of the Tchihendehs, who led the Warm Springs subgroup of the Chihenne band, became the two foremost warriors leading Indian resistance to reservation life. Victorio led his followers in a war lasting from 1877 until 1879. Geronimo's final resistance took place from 1881 until 1886.

In October 1880, Victorio was slain by Mexican troops, and Geronimo offered to lead a war party back to San Carlos to free his Warm Springs followers there, which by then were led by Loco, a chief of the Mibreno band. His motivation was to free as many warriors as possible, which would give him more manpower to kill Mexicans; the women and children were just a corollary. When some of Loco's people hesitated to flee, Geronimo raised his rifle and proclaimed, "Take them all. No one is to be left in the camp. Shoot down anyone who refuses to go with us."

Loco despised Geronimo, and he blamed him for the subsequent sufferings of his people.

Continued on page 65

By Phil Zimmer

The surprise attack on Pearl Harbor on December 7, 1941, benefited from the firsthand observation of spies on Oahu.

YOU ARE PROBABLY THE NEAREST TO WAR THAT YOU'LL EVER BE without actually being in it," said Commander Harold M. "Beauty" Martin as he addressed his men on the morning of December 6, 1941, at Kaneohe Naval Air Station on Mokapu Peninsula, located less than 15 miles east-northeast of Pearl Harbor. "Keep your eyes and ears open and be on the alert to every moment," said the well-respected commander.

One fellow who was keeping his eyes wide open that day was Japanese spy Takeo Yoshikawa. He closely observed the Pacific Fleet at anchor in Pearl Harbor on the south side of Oahu late in the afternoon from vantage points at Aiea Heights and the Pearl City Landing. Later the same day he sent a coded report to Tokyo noting that the U.S. Army had ordered equipment for barrage defense balloons, but none was yet on scene, and he opined that torpedo nets probably were not in place to protect the battleships at anchor in Pearl Harbor. "I imagine that there is considerable opportunity left ... for a surprise attack," he added, as the clock continued ticking.

Meanwhile, Commander Martin's somber, cautionary message earlier in the day was being widely debated by the American sailors, a number of whom belittled the racial and intellectual capabilities of the Japanese, especially their ability to handle fast-moving aircraft. Some even argued that any aggressive Japanese actions against the United States would be quashed within two weeks.

But within 24 hours those men and their American compatriots at Pearl Harbor would be in the fight of their lives against two waves of incoming Japanese bombers and fighters. Within 90 minutes of the first attack early on December 7, the Japanese had sunk four battleships and damaged another four of the large ships, three cruisers, and three destroyers and consigned nearly 200 American aircraft to the scrapyard. Worse yet, more than 2,400 Americans were killed and more than 1,175 wounded in the surprise attack.

Those at the Kaneohe Naval Air Station were among the first to face the enemy onslaught that Sunday morning. The nimble Mitsubishi A6M Zeros came in at 7:48 AM, strafing a small utility plane and fanning out over the station and firing promiscuously. The officer on duty called nearby Bellows Field requesting help, but his message was treated as a joke. Kaneohe contractor Sam Aweau called both Bellows and Hickam airfields, but his warnings also were met with disbelief.

Commander Martin, for his part, was gulping a cup of coffee in his quarters and preparing hot chocolate for his 13-year-old son when the youth reported seeing the Japanese planes maneuvering above. Once Martin spotted the Rising Sun emblem for himself, he quickly tossed his uniform on over his blue

The USS *Shaw* explodes after a direct hit by a Japanese bomber. Japanese spies furnished regular and comprehensive updates on deployments to the U.S. naval base at Pearl Harbor, as well as information on key ship arrivals and departures.

All photos: Naval History and Heritage Command

silk pajamas and dashed for the car. Screeching through the still-quiet residential neighborhood at upward of 50 miles per hour, Martin managed to park near his command post and run toward it amid a hail of bullets.

The first parked plane was already in flames when Martin arrived at Kaneohe, and soon the Japanese bombers joined the fray. He was proud of how his men responded, many of whom were newcomers to the service. "There was no panic," he said. "Everyone went right to work battling back and doing his job."

Unfortunately, Kaneohe had no antiaircraft guns. Sailors and marines fired their pistols and rifles at the low-flying aircraft without success. Once the first wave of attackers disappeared, the men dashed to the hangars and planes. The ordnance staffers began issuing rifles and machine guns and disbursing ammunition from locked storage areas.

Aviation Chief Ordnanceman John W. Finn positioned both a .30-caliber and a .50-caliber machine gun on the parking ramp for the Consolidated PBY Catalinas (PBY) and began dueling with the Japanese Zeros as they strafed Kaneohe. Finn moved back and forth between the two weapons, but he spent most of his time at the .50 caliber. As he fired, he was assisted by sailors who replenished his ammunition. Finn's steady firing damaged several Zeros. No one knows for sure whether it was Finn or someone else, perhaps an ordnanceman named Sands, who fired the rounds that struck flight leader Lieutenant Fusata Iida's aircraft.

The nine Zeros led by Iida were beginning to reassemble to head back to the carrier fleet when Iida motioned to his wingman that he had sustained damage to his fuel tanks and would not be able to make the return flight. He therefore decided to make a kamikaze run on Kaneohe's armory. As he lined up and flew toward the armory, more ground fire struck his aircraft. The plane missed the armory and crashed into the ground.

By the time the fighting was finished at Kaneohe, the Japanese had destroyed or damaged 33 PBYs, killed 19 servicemen, and caused major damage to the installation. Despite the great risk they took, the Japanese suffered few losses in the audacious attack against the home of the U.S. Pacific Fleet.

Much of the credit goes to spies like Yoshikawa, a youngish looking naval reserve ensign who had only arrived in Hawaii nine months earlier. He was employed as a cover by the Japanese foreign ministry using an alias while actually working for the Imperial Japan-

ese Navy. He had been providing continuous and rather thorough updates on U.S. Navy deployments, arrivals and departures from Pearl Harbor, centerpiece of U.S. naval operations in the Pacific. Yoshikawa was scrupulously careful, carrying no camera, maps, or documents with him and never jotting down notes on what he observed on his outings around Hawaii.

In many ways, Yoshikawa was the perfect man for the mission. He had a solid naval background, having graduated in 1933 from the Japanese Naval College as well as from torpedo, gunnery, and aviation programs in the Imperial Japanese Navy. He also had served as a code officer aboard a cruiser. He then had worked three years in Tokyo with the Imperial Japanese Navy's British affairs section before expressing an interest in working abroad as an agent. That led to his assignment in Hawaii working for Japan's foreign ministry as a cover.

Yoshikawa did not have diplomatic immunity, and he was not officially linked to the Imperial Japanese Navy when he arrived in Hawaii. Otherwise, he would have been known to the American counterintelligence officials nearly immediately. Only Nagao Kita, the new consul in Hawaii, and Vice Consul Okuda, who had done some prior spying in Hawaii, were aware of Yoshikawa's true role in providing Japan with updates on the U.S. Navy.

American security had tightened before Yoshikawa's arrival, in part due to deteriorating relations between the two countries. The deteriorating relations were a result of Japan's continued aggression in China and concerns about future potential moves against such Western interests as Hong Kong, Singapore, Malaysia, and the oil-rich Dutch East Indies.

Two Japanese spying incidents on the American mainland in the 1930s had put the United States on alert. One involved former Navy Yeoman First Class Harry T. Thompson who had been discharged from service for problems relating to alcohol, overspending, and "an appetite for attractive young men," according to one source. His services were retained by the Japanese, and he used a chief yeoman's dress uniform, purchased at a tailor shop near a base, to gain entry to American bases and ships, thanks to his uniform, lax security, and fast talking. He managed to obtain gunnery manuals and reports on the 8-inch guns carried by the USS *Pensacola,* the first of a new class of cruisers capable of 32 knots and costing Japan its previous technical advantages in the cruiser category.

Toward the end of 1934 Thompson was able to board a number of ships stateside where he obtained important quarterly schedules of

TOP: Japanese spy Takeo Yoshikawa was the main spy on Oahu (left) and U.S. Commander Harold M. Martin oversaw Naval Air Station Kaneohe Bay where PBY-type patrol aircraft were maintained. BOTTOM: A fallen sailor on the beach at Kaneohe Bay. The Japanese inflicted major damage on the naval air station, killing 19 men and damaging or destroying 33 PBYs.

employment for battleships and cruisers, as well as information on main batteries, torpedoes, and related intelligence. He boarded the USS *Mississippi* in December and managed to abscond with a 230-page U.S. Navy gunnery school publication from a confidential file. He reboarded the ship the next month and purloined reports on the main gun batteries and torpedoes.

His former live-in boyfriend exposed Thompson's homosexuality to Navy officials. Officials followed Thompson for a while, gathered additional evidence, and questioned him about his suspicious activities. At that point, Thompson confessed to working as a spy for the Japanese. When efforts by the Office of Naval Intelligence to have Thompson cooperate as a counterspy failed, he fled using funds supplied by the Japanese. He was apprehended and in mid-1936 was found guilty of espionage and sentenced to 15 years in federal prison.

Even more troublesome for U.S. officials and perhaps the American public was the case involving John S. Farnsworth, a 1915 graduate of the U.S. Naval Academy who had been selected for postgraduate work at Annapolis as well as postgraduate work in aeronautical engineering at the Massachusetts Institute of Technology. He had commanded Marine Observation Squadron Six, Aircraft Squadrons' Scouting Fleet, before being relieved of command in 1927 and court-martialed. He was cited for drinking, gambling, and borrowing money from an enlisted man and refusing to pay it back as well as submitting falsified affidavits regarding the matter.

That resulted in a six-year downward spiral of drinking that led to his spying for the Japanese using an American-owned business as cover. His efforts to obtain classified aeronautical information caused suspicion among the tight-knit community of Naval Academy graduates who ran the U.S. Navy in the prewar years, especially because of his earlier court-martial. The head of naval intelligence got wind of Farnsworth's snooping efforts and sent a cautionary bulletin out, effectively cutting him off from information that would prove useful to Japanese intelligence.

Farnsworth's drinking increased substantially, and he became more desperate as his money problems escalated to the point where he appeared at his former business partner's Washington office in an effort to get a place to sleep. In mid-1936 he contacted a Hearst-owned news service with a scheme to sell his tell-all story for $20,000 while he was also working his Japanese contacts to obtain another $50,000 for past and future services.

Both the Office of Naval Intelligence and the FBI were on his tail by then and he was picked up on July 13. He signed a confession admitting to some of his espionage and was found guilty and sentenced to four to 12 years in federal prison. His Japanese contacts were conveniently out of the country, having been transferred home.

Despite increased American security measures, the Japanese continued efforts to obtain information both on the American defense industry and bases in the continental United States and Hawaii. It was probably because of the Japanese military's experiences with Farnsworth and Thompson that they began to rely more heavily on homegrown spies like Yoshikawa.

Yoshikawa, for his part, was exceptionally security conscious. In sallying forth from the consulate, he dressed casually and conscientiously refrained, for the most part, while associating with Japanese Americans, with the exception of his two trusted drivers. They drove him around Oahu in their personal vehicles rather than in consulate cars to avoid unwanted attention.

The drivers, especially Richard M. Kotoshirodo, who had been born in Hawaii and who

Sailors rush to save a burning PBY at Naval Air Station Kaneohe Bay. Construction work at the facility caught Yoshikawa's attention, and he went to great effort to reconnoiter the facility for the Imperial Japanese Navy.

had received his early education in Japan, proved exceptionally reliable. Kotoshirodo was coached by Yoshikawa so he was able to correctly identify ships by their silhouettes and conduct surveillances by himself. This effectively added another set of skilled and trustworthy eyes to his spying effort.

One of their favorite haunts became the Pan American Clipper Landing at Pearl City near the moorings for the U.S. carriers. Yoshikawa also liked to visit Eto's Soda Stand adjacent to the Pearl City Landing, a popular transit point for Ford Island and ships' personnel going or returning from leave. He and his drivers arrived at the landing dressed as workmen and blended with the workers to pick up tidbits of useful information and observe work in the East Lock where the aircraft carriers were provisioned and fueled. They also counted the number of vegetable trucks at the landing to determine the projected upcoming timing of departures for maneuvers and the length of time planned at sea.

They also went to Aiea Heights, located just north of the harbor, for a panoramic view of the area. From this vantage point, they were able to monitor all of the U.S. naval and aircraft assets in Pearl Harbor.

Yoshikawa often took in the view from the Shuncho Ro Japanese Teahouse on the heights that conveniently had a second-floor telescope for viewing the harbor. And the teahouse was owned by a friendly Japanese woman born in the same region as the intrepid spy. Yoshikawa also befriended a waitress there who he often brought along to provide cover while on espionage trips around the island.

He even took a sightseeing flight in the early fall over Oahu, bringing a geisha along as cover. While the flight was not permitted over Pearl Harbor, he was able to tally the airplanes and hangars at Wheeler and Hickam airfields, and see the battleship anchorages. He was also able to calculate air turbulences and currents along the route, which was crucial information for the Japanese pilots who would participate in the attack.

He found that Hickam Field, located just southeast of Ford Island, was difficult to observe from afar. He solved that by attending an August 6 open house to observe the Curtiss P-40 Warhawks on the ground and in the air. He took note of the hangars and the length and width of the multiple runways at Hickam Field.

Commander Martin's air station at Kaneohe also drew Yoshikawa's attention with its PBY reconnaissance aircraft and recent construction work there. He took a number of commercial tourist boat trips around Kaneohe and used a nearby elevated roadway for an additional view of the base.

Yoshikawa's increasing and detailed reports proved exceptionally useful to his employers in Japan, who had also developed a stay-behind agent in Hawaii named Bernard Otto Kuehn. A German national who arrived in Hawaii in 1935, Kuehn was already employed as a spy for Nazi Germany. Although initially believed too nervous for the assignment, the Japanese did bring him on board in the late 1930s, providing him with a small radio transmitter with a range of 100 miles. He was to use it to relay messages on ship movements and construction to Japanese submarines which, in turn, would relay them to Tokyo.

It was vital that he remain well below the radar of American intelligence officials, but his spending habits, lack of employment, and careless pro-Nazi comments had brought him to the attention of the Office of Naval Intelligence.

Continued on page 66

ARMORED CLASH IN LORRAINE

BY ARNOLD BLUMBERG

American tanks and artillery wreaked havoc on newly created German panzer formations during the Battle of Arracourt in September 1944.

Scouts for the U.S. Third Army on foot and in armored vehicles cautiously approached the town of Luneville on the east side of the Moselle River in the rolling hills of northeastern France on September 15, 1944. As the lead M8 armored car of C Troop, 42nd Cavalry Squadron reached the outskirts of the fog-shrouded town, a shell fired from a German 88mm gun slammed into it. The startled Americans quickly fled the area. Although no one knew it at the time, the shot heralded the beginning of the Battle of Arracourt, an 11-day armored fight between U.S. Lt. Gen. George S. Patton's Third Army and German General of Panzer Troops Hasso von Manteuffel's Fifth Panzer Army.

Over the next four days, the 4th Armored Division of Maj. Gen. Manton Eddy's XII Corps fought against Generalleutnant Eberhard Rodt's 15th Panzergrenadier Division for control of Luneville. On September 16, the Americans vigorously attacked the town from the south, fiercely opposed by panzergrenadiers who had been reinforced a day earlier by six tanks and an equal number of antitank guns. The Germans were forced from the town, and the Americans formed a defensive cordon around the city.

On September 17, the Germans made a concerted effort to reclaim Luneville. Their efforts were thwarted by the cavalry troops and tanks and armored infantry from Combat Command R, U.S. 4th Armored Division. The fight for the town heated up on September 18 as two battle groups from Colonel Heinrich von Bronsart-Schellendorf's 111th Panzer Brigade, supported by units from Generalleutnant Edgar Feuchtinger's 21st Panzer Division, attacked Luneville from the southeast. At the same time, Colonel Erich von Seckendorf's 113th Panzer Brigade struck the Americans from the northeast. By 12 PM, reinforcements from Combat Command A, 4th Armored Division in the form of Task Force Hunter, which comprised a company of tanks, infantry, and tank destroyers, arrived and drove the Germans from Luneville and the surrounding area. However, fighting for the town continued on September 19 when the 15th Panzergrenadier Division returned to cover the withdrawal of German forces from the town.

In the struggle for control of Luneville, 1,070 Germans were either killed or captured and 13 armored fighting vehicles were destroyed. American losses amounted to several hundred GIs dead and wounded, and the loss of approximately 10 armored fighting vehicles. With Luneville secured, Patton's Third Army planned to use the entire 4th Armored Division as its spearhead in a rapid advance toward the German frontier.

At U.S. Third Army headquarters, the American reaction to the German attack at Luneville in mid-September was one of little concern. The enemy effort was so weak and disjointed that the Americans believed it was merely a poorly coordinated local counterattack. Although Third Army intelligence knew of the presence of the 111th Panzer Brigade in the area, it did not know of the 113th Panzer Brigade's whereabouts, nor did it have any hard evidence that a large enemy armored attack was planned for the immediate future.

Activated in April 1941, the 4th Armored deployed to France in July 1944 and was commanded by Maj. Gen. John S. Wood. The division's main fighting units were three brigade-sized formations known as Combat Command A, B, and R (which stood for reserve). Each was organized around a single tank battalion composed of 53 Sherman M4 medium tanks and 17 Stuart M5A1 light tanks, an armored infantry battalion of three companies totaling 1,000 men transported on M2 and M3 armored half-tracks, and an armored field artillery battalion with 18 self-propelled 105mm guns. The 4th Armored Division was augmented by the independent 704th Tank Destroyer Battalion. This unit controlled three companies with a total of 36 M18 Hellcat tank destroyers. A divisional reconnaissance squadron composed of four troops in 48 M8 armored cars gave the American armored divisions a solid scouting asset, which by 1944 was better than the much-diminished reconnaissance battalions attached to German panzer and panzergrenadier divisions.

Although the Americans were unaware of it, the 4th Armored Division's intended advance over the next 11 days would be disrupted and blocked by a German armored counterattack that was second only to the Battle of the Bulge in December 1944 as the largest armored contest between U.S. and German Armies in the European Theater of Operations. The Lorraine armored battles proved to be classic meeting engagements where both sides were simultaneously conducting offensive maneuvers with neither side possessing any significant numerical or distinct defensive advantage. The U.S. Third Army commanders did not realize, as the third week of September began, that

A camouflaged U.S. M4 Sherman tank lies in ambush for German armor in northeastern France. The inexperience of German tank crews late in the war made it easier for the Americans to defeat them in battle.

All photos: National Archives

ABOVE: An assistant gunner replenishes tank shells. The 4th Armored Division proved equal to the task of taking on newly created German panzer regiments with PzKpfw V Panther medium tanks. RIGHT: Captain J.F. Brady, commander of Company A, 35th Tank Battalion received the Silver Star for his valor during Arracourt. Unlike the Germans at Arracourt, he and his fellow tankers were well supported by organic artillery, logistics, and engineering units.

the fight for Luneville put up by the Germans occurred because that was where the German offensive in the Lorraine was supposed to be launched.

The prolonged armored battle in Lorraine followed the collapse of Wehrmacht resistance in France and Belgium and the resultant swift advance of the Western coalition forces across the breadth of France following Patton's breakout from the Normandy bridgehead on July 30. While the overall Allied pursuit of the German Army toward the western margin of the Reich was most impressive, the Supreme High Command of the German Army (Oberkommando des Heeres, or OKH) was most concerned about the lighting speed of Patton's Third Army.

Despite crippling fuel shortages that periodically retarded its progress, the Third Army managed to drive 400 miles from Normandy to the west bank of the Moselle River. The enemy forces defending Lorraine along the Moselle line belonged to General of Panzer Troops Otto von Knobelsdorff's First Army, which comprised six infantry and three panzergrenadier divisions. For the most part, these divisions had been replenished with underequipped and poorly trained replacements. First Army possessed fewer than 200 armored fighting vehicles of all types. The Luftwaffe units supporting the First Army had only 110 aircraft.

While operating in Lorraine, Patton's Third Arm was composed of Eddy's XII Corps, Maj. Gen. Walton Walker's XX Corps, and Maj. Gen. Wade Haislip's XV Corps. The Third Army brought to the Arracourt fight eight well-equipped divisions, including three armored and four attached tank battalions. The Third Army had 933 tanks, of which 672 were M4 Sherman medium tanks and 261 were M5A1 Stuart light tanks. In addition, the U.S. Army Air Corps backed up Third Army with 400 fighters and fighter bombers from its XIX Tactical Air Command.

In compliance with the wishes of the Supreme Allied Commander General Dwight D. Eisenhower, Patton was directed to liberate Lorraine and then breach the Siegfried Line defenses guarding Germany's western frontier. Once those daunting objectives were achieved, Third Army was to cross the Rhine River and capture the cities of Frankfurt and Mannheim. This fatal stab into Germany would ensure the Allied capture of the Saar Region, which furnished coal and steel for the Hitler's war machine.

Patton ordered his 4th Armored Division toward the German border on September 19. In accordance with that plan, the division's CCB was to push on from the Delme-Chateau-Salins area, 16 miles north of Luneville, to the city of Saabrucken, while CCA was to advance from its location at Arracourt, which was situated 10 miles north of Luneville, and capture the German city of Saareguemines.

To deal with the threat posed by Patton's Third Army, Hitler ordered Manteuffel to launch a bold counterattack. Manteuffel had proven his skill at handling panzer forces on the Eastern Front where he commanded the 7th Panzer Division of Army Group Center during its advance toward Moscow in 1941. Manteuffel's attack, which had a tentative start date of September 5, was to originate west of the Vosges Mountains and drive across the Langres Plateau toward the Moselle River. However, this proved impossible since Fifth Panzer Army's headquarters was not able to redeploy from the northern sector of the front in the Netherlands to Strasbourg until September 9. Moreover, Manteuffel had the enormous task of assembling his three panzer and three panzer grenadier brigades from a variety of different regions. This was a complex task given that some of them were deployed on the front lines. Because of Patton's swift advance, the German attack ultimately was pushed back to September 15.

Frustrated by the series of delays, Hitler ordered the offensive to begin regardless of whether all of the allotted forces had arrived at the staging area. Fully realizing the unrealistic time table for the attack and the inadequate forces to be committed to it, Manteuffel was deeply skeptical that his attack would succeed.

With so few battle-worthy panzer divisions in the Lorraine sector of the Western Front, the German attack on the U.S. Third Army would have to depend on the new panzer brigades that had been formed in the late summer of 1944. Nearly all of the Third Reich's tank production during that time had been diverted to equip the new armored formations. Many of the new panzer brigades were slated for service on the Eastern Front. Indeed, Hitler had established the panzer brigade program in an effort to keep pace with the Soviet Union's robust tank production. However, the concept of these new panzer formations on which Hitler placed such great hope was deeply flawed.

Rather than a balanced combined arms unit, such as that fielded by the German Army's panzer divisions deployed at the outset of World War II, the new panzer brigades con-

tained mostly tanks and panzergrenadiers. They sorely lacked sufficient artillery, engineer, and logistical assets. Designed for quick counterattacks, they were ill suited for sustained periods of frontline combat.

The first of these brigades were numbered 101 to 110. They actually were similar to a regiment in strength and had only one tank battalion. Their armor included 36 PzKpfw Panther medium tanks and 11 Pz IV/70 tank destroyers. These brigades' infantry component consisted of 2,100 panzergrenadiers in six companies transported in SdKfz 251 half-tracks that mounted 20mm cannons.

In response to the shortcomings of the first series of panzer brigades, a second series designated 111 to 119 was fielded in August 1944. These contained two battalions of tanks, one of which had 36 Pz.Kpfw V Panthers and the other of which had 36 Pz.Kpfw IVs. The infantry complement was expanded to a regiment of two panzergrenadier battalions of three companies each, as well as a heavy weapons company. In addition, each brigade had one armored reconnaissance company, assault gun company, and engineer company. Due to the shortage of SdKfz half-tracks, most of the 4,800 troops in these brigades had to travel in trucks, which severely limited the cross-country capability of the brigade.

Manteuffel, tasked with using Panzer Brigades 106, 111, 112, and 113 in the attack against Patton's forces in Lorraine, was particularly concerned about the combat reliability of these units. He had little confidence in their fighting ability due to the absence of any artillery in the brigades, a lack of radio equipment for communications, and insufficient armored recovery and maintenance services. He also pointed out that the men in the new panzer brigades had not been trained in combined-arms tactics.

Lieutenant General Walter Kruger, who led LVIII Panzer Corps, was deeply critical of the battle worthiness of the new panzer brigades. "Panzer Brigades 111 and 113 ... were makeshift organizations," he wrote. "Their combat value was slight. Their training was just as incomplete as their equipment. They had been given no training as a unit and they had not become accustomed to coordinating their subunits." His disgust for the caliber of troops sent to the front from rear-echelon formations was evident in his description of them as "barrel-scrapings." The concerns of the senior panzer leaders involved in the forthcoming mission about the usefulness of the panzer brigades to be employed did not bode well for its success.

Knobelsdorff was so alarmed in early September by the approach of Patton's Third Army to the Moselle River that he wanted to launch an immediate spoiling attack against Walker's XX Corps before it could cross the river. Knobelsdorff intended to send Colonel Franz Bake's 106th Panzer Brigade against Maj. Gen. Raymond McClain's 90th Division on the extreme left flank of Third Army. But before he could send the 106th Panzer Brigade into action, Knobelsdorff had to promise Hitler that he would return it to First Army's reserve within 48 hours.

The 106th Panzer Brigade, which was organized in two groups, moved under cover of darkness on the night of Sept. 7-8 toward the American flank. With the arrival of darkness, the attack groups split up at Audun-le-Roman. The first attack group drove northeast toward Landres, and the second attack group turned southeast toward Trieux.

Having failed to reconnoiter the enemy's position, at 2 AM the first attack group rumbled past McClain's headquarters, which was situated on a wooded hill south of Landres. Curious as to the nature of the traffic, a member of the crew of a Sherman tank guarding the headquarters realized after an hour that it was a German column. He alerted nearby artillery crews. The Americans knocked out a half-track, but one of the German Panthers blew up the Sherman. A number of American artillerymen were killed in the sharp firefight. The first attack group disengaged and continued south. McClain immediately issued orders to his infantry battalions to engage the Germans. The U.S. 712th Tank Battalion started up its Shermans and they caught up with the back of the first attack group column and fired on it. Meanwhile, U.S. bazooka teams from a tank destroyer platoon prepared to engage the Germans at first light.

Much to the consternation of the Germans, the Americans stood their ground rather than retreating. A battle unfolded at dawn when the first attack group split up to attack the town of Mairy from two directions. The town was vigorously defended by the 1st Battalion, 58th Infantry, which had 3-inch antitank guns. Additionally, the Americans were supported by 105mm howitzers. The panzergrenadiers attacked into the town on halftracks, but they could not dislodge the Americans.

After nearly three hours of hard fighting, the Germans began to disengage. One half of the attack group was able to retire, but the other half was targeted by the U.S. artillery where it was positioned in a sunken road west of Mairy and completely destroyed.The sec-

ON SEPTEMBER 19, MANTEUFFEL FINALLY UNLEASHED THE ARMORED OFFENSIVE IN LORRAINE THAT HITLER HAD BEEN DEMANDING SINCE LATE AUGUST.

Bundesarchiv Bild 101-301-1955-18A; Photo: Bernhard Kurth

A German Panther carries panzer grenadiers into action at Bures south of Arracourt. Newly established panzer brigades were committed piecemeal in Lorraine against General George Patton's Third Army only to be mauled by the Americans.

Bundesarchiv Bild 101I-301-1958-22; Photo: Genzler

The German Panther outclassed the American Sherman tank in nearly every respect except speed. Introduced in 1943, the Panther boasted a high-velocity 75mm gun and its thick, sloped frontal armor stopped rounds from Shermans and M18 Hellcat tank destroyers.

ond attack group pushed west from Trieux toward Avril, but the Americans were at Avril in force. They used their antitank guns to repulse a half-hearted attack by the Germans probing their positions. The defeat of the 106th Panzer Brigade in the Battle of Mairy left it badly crippled and of limited use during the forthcoming Battle of Arracourt.

Four days later, elements of Brig. Gen. Holmes E. Dager's CCB, 4th Armored Division and infantry from the 35th Infantry Division crossed the Moselle south of the railroad hub of Nancy. The following day, September 13, Combat Command Langlade, named after its commander French Colonel Paul Girot de Langlade, part of Haislip's XV Corps, foiled a spoiling attack at Dompaire by Panzer Brigade 112.

After its defeat at Dompaire, the 112th Panzer Brigade was in no shape to engage in combat for the time being. In addition, the 107th and 108th Panzer Brigades were withdrawn from Lorraine and placed in reserve to help defend the German city of Aachen against an imminent attack by the U.S. First Army. These events would seriously weaken the offensive Hitler had envisioned to serve as a hammer blow to Patton's Third Army.

Not only were the forces marked to participate in Manteuffel's main attack altered, but the scheme itself was changed just before it was to be launched. With Patton's tanks in control of Luneville and the German forces assembled northeast of the town, Manteuffel aimed his assault against the American southern flank toward the town of Arracourt, which lay 10 miles north of Luneville. Hitler's ambitious panzer attack of mid-September had devolved from its ambitious objectives of striking Patton in the flank, cutting his lines of communication, and destroying him to the much lesser goal of eliminating the spearhead of the U.S. Third Army.

On September 14, the foot soldiers of the 80th Infantry Division of the XII Corps spilled over the river to the north of the city. That same day, 4th Armored Division's CCA, led by Colonel Bruce Clarke, reached the east bank of the Moselle just below Nancy. Eddy asked Clarke if he felt it was safe to cross his CCA to the east bank. Clarke passed along the query to Lt. Col. Creighton W. Abrams, who commanded the 37th Tank Battalion attached to CCA. "That is the shortest way home," said Abrams, pointing to the east bank.

Clarke approved the order and Abrams' tank battalion crossed the river. Once across it continued its lightning advance and by nightfall had driven 20 miles into the German rear. The American advance beyond the Moselle threatened to create a breach between the German First Army and General of Infantry Friedrich Wiese's Nineteenth Army to its south. This would enable Patton's tanks to race across the German border and into the Saar Basin. OKH realized that the unrelenting pressure from Patton would require an immediate and vigorous counterstrike against his army.

By mid-September 1944, Wood's 4th Armored Division had a complement of 163 tanks supporting its 15,000 troops. The well-trained division, which had only been in combat since late July, had been fortunate not to have sustained heavy casualties. The 4th Armored Division had encountered few German tanks since it broke out of Normandy and sped across France. This was because it had not faced determined German panzer units until it reached Lorraine. As a result, the 4th Armored's troops had no real experience facing German tanks.

On September 19, Manteuffel finally unleashed the armored offensive in Lorraine that Hitler had been demanding since late August. The morning of the attack dawned as it had the last several days with intermittent rain and thick fog in the low-lying areas. The terrain around Arracourt was agricultural, with gently rolling hills and tracts of woods. While the hills were not particularly high, some of them offered good vantage points for surveying the surrounding farmland. These vantage points would play an important role in the coming fight.

Fifth Panzer Army's strike on September 19 took the form of two simultaneous thrusts. One thrust consisted of the 113rd Panzer Brigade advancing northwest from the town of Bour-

donnay along the Metz-Strasbourg road toward Lezey-Moyenvic. The other thrust involved the 111th Panzer Brigade striking the Third Army's center by way of the Parroy-Arracourt axis.

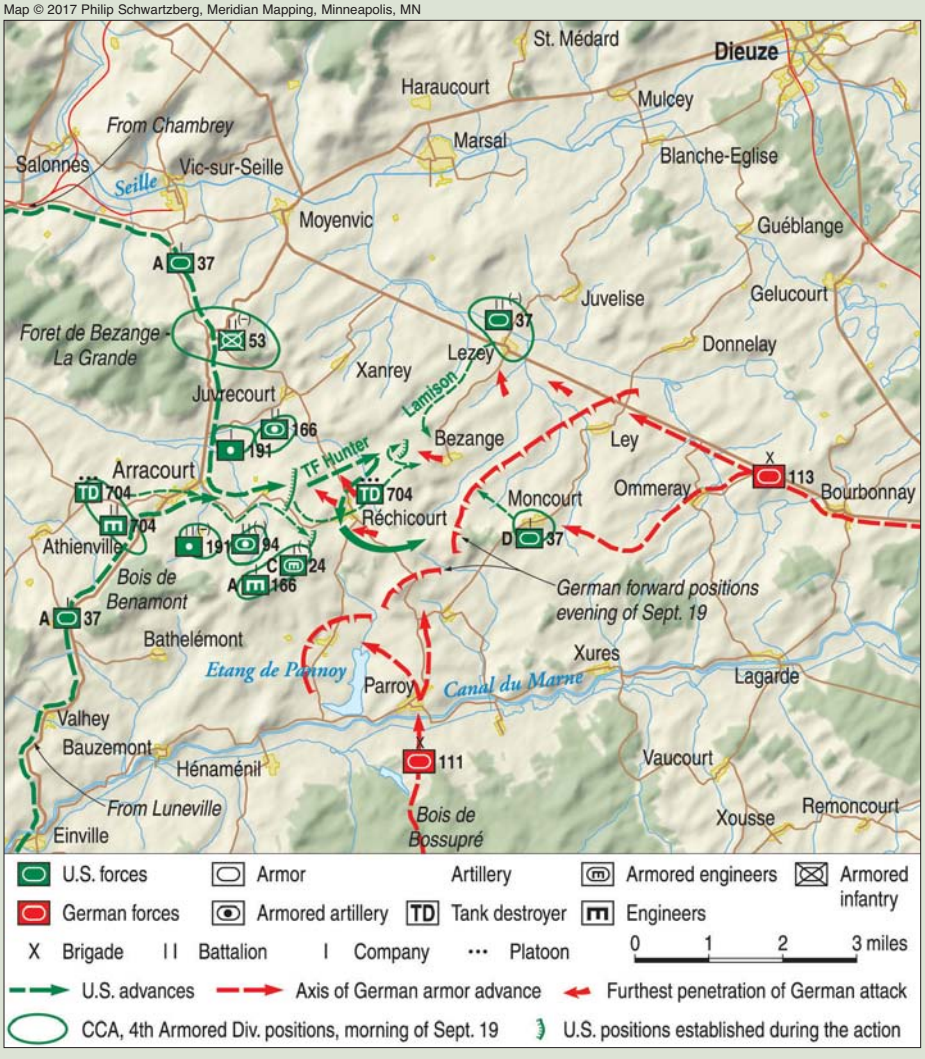
The objective of the operation was to link-up with Colonel Enrich von Loesch's 553rd Volksgrenadier Infantry Division north of Nancy at Chateau-Salins, thus closing the breach the Americans had previously opened between the German First Army and the Nineteenth Army to its south. Barring the Germans' way was Clarke's CCA, which had deployed in 4th Armor's southern sector around Arracourt. The division's northern zone near Chateau-Salins was covered by CCB.

When the German tanks began to roll on the morning of September 19, CCA's main components were the 25th Cavalry Squadron, 37th Tank Battalion, and the 53rd Armored Infantry Battalion. CCA was understrength since Task Force Hunter, amounting to one third of the combat command's strength, had been detailed the day before to aid the fight for Luneville. Clarke's command post was at the Riouville farm a half mile east of Arracourt. Guarding the command post was a platoon of Hellcats, two battalions of M7 105mm self-propelled howitzers, and a battalion of tractor-drawn 155mm artillery pieces.

CCA's left flank was shielded by B Company, 37th Tank Battalion and C Company, 10th Armored Infantry Battalion. This small task force linked CCA with CCB to its west. CCA's center consisted of the balance of the 53rd Armored Infantry Battalion, which was deployed on the southeast ridge of the Bezange Forest overlooking Moyenvic. The right margin of the combat command consisted of the unit's headquarters company and C Company, 37th Tank Battalion, which held the village of Lezey. At the village of Moncourt, on the eastern portion of CCA's zone, stood a platoon of Stuart tanks belonging to D Company, 37th Tank Battalion. Screening CCA's front was a line of outposts manned by the troopers of the 25th Cavalry Squadron. Near the center of CCA's position was the 166th Engineer Battalion.

The first contact CCA had with the enemy near Arracourt occurred at 7 AM when fire from a Stuart light tank destroyed a German halftrack near Moncourt. Shortly afterward, five Panther tanks emerged from the fog and forced D Company to retreat to the main 37th Tank Battalion assembly area near the hamlet of Bezange-la-Petite. The Americans spotted another column of German armor moving along the Metz-Strasbourg road.

Notified of the enemy's advance, Colonel Clarke ordered Captain William Dwight, 37th



Under continued pressure from his superiors to halt Third Army's advance, German Fifth Panzer Army commander Hasso von Manteuffel ordered Panzer Brigades 111 and 113 to launch a two-pronged attack toward the town of Arracourt on September 19. Poor reconnaissance and map reading by the Germans contributed heavily to the failure of the attack.

Tank Battalion's liaison officer, to take a platoon of tank destroyers and establish a blocking position on Hill 246 approximately 800 yards from the village of Rechicourt-la-Petite. It was 7:45 AM when Dwight, with four M18 Tank destroyers under Lieutenant Edwin Leiper, reached the summit of Hill 246. No sooner had the crews assumed firing positions than they saw a single German tank emerge from the woods at the base of the hill.

The lead tank destroyer, commanded by Sergeant Stacey, opened fire, striking the enemy tank with its first shot. More German tanks were seen, and Stacey destroyed a second target in quick succession. A third German tank hit Stacey's Hellcat, which caused injuries to the crew, but it was able to move under its own power back to Arracourt. Another Hellcat destroyed the Pz IV that had disabled Stacey's gun. Two more German tanks were knocked out as they tried to reverse into the wood.

As the German armor withdrew, so did Leiper's three remaining M18s, which rumbled onto a neighboring height. Leiper noticed a string of German tanks on a road running along the hills between Rechicourt and Bezange-la-Petite. The Americans unleashed a fusillade of armor-piercing shells at the new target. To make sure the tanks were completely destroyed, they called in an artillery strike from nearby M7 105mm guns. The torrent of American artillery shells destroyed five Pz IV tanks.

The fog and occasional rain had thus far prevented American airpower from coming into play; however, some help from the sky was forthcoming. Major Charles "Bazooka Charlie" Carpenter, the head of the 4th Armored Division's reconnaissance aircraft detachment, was flying in the area. He dove in his L-4H single-engine reconnaissance airplane on German tanks trying to work

their way around Leiper's position. Although he was unable to hit the tanks with his 2.36-inch rockets, he alerted Leiper to the threat to his rear.

Reacting to the German threat, Leiper pulled one of his vehicles around and hit two German tanks. But a third German tank destroyed two Hellcats in quick succession. Leiper withdrew toward Arracourt with his remaining Hellcat. As he did, he was joined by three Sherman tanks sent by Abrams. While mopping up an enemy infantry platoon, one was hit by a panzergrenadier armed with a panzerfaust.

As Leiper battled south of Arracourt that morning, farther north C Company, 37th Tank Battalion, commanded by Captain Kenneth Lamison, engaged German armor along the Metz-Strasbourg road. In the initial contact, Lamison and his fellow tankers disabled three Panthers that emerged from the thick fog. Recoiling from that loss, the Germans withdrew south of the highway.

Lamison hurriedly sent a platoon of Shermans to a commanding ridge near Bezange-la-Petite to trap the retreating foe. The American tankers sprung the ambush. From a flanking position, they knocked out four enemy tanks. Then, the Shermans hid on a reverse slope before their opponent could return fire. Due to the fog, the Germans could not pinpoint the origin of the fire. As they looked around anxiously, the Shermans popped up over the crest of the ridge and finished off the four remaining Panthers.

As the action on the ground escalated, Bazooka Charlie again entered the fray, this time successfully striking two German tanks with his rockets from an altitude of 1,500 feet.

At 9:30 AM another German tank column approached CCA's command post. CCA's command center had ordered B Company, 37th Tank Battalion to shift to CCA's command center. B Company arrived at its destination 45 minutes later. To deal with the developing threat, C Company, 37th Tank Battalion deployed on a ridge 500 yards from the command post. Sending salvos of 75mm armor-piercing shells at their antagonists, the Shermans knocked out several enemy tanks.

A German force of 14 tanks neared CCA's headquarters at 12 PM. This was the southernmost assault of the day. Although it is not known exactly which German unit made the assault, it likely was the 111th Panzer Brigade. In a series of quick engagements, the platoon of Hellcats assigned to shelter the headquarters knocked out eight Panther tanks. The remaining Panthers withdrew rapidly.

At mid-afternoon, A Company, 37th Tank Battalion, which was part of Task Force Hunter sent to Luneville the day before, returned to Arracourt. Clarke and Abrams immediately paired A Company with B Company. "Dust off the sights, wipe off the shot, and breeze right through," they instructed the company leaders. The two tank units then swept across the zone east of Arracourt. Leaving a single tank platoon from A Company to guard CCA's command post, Hunter formed up southwest of Rechicourt with 24 Shermans and Dwight's Hellcats.

Within minutes, the American tankers were hitting the remaining enemy armor in the area from front and flank, resulting in eight German tanks knocked out and approximately 100 German infantry casualties. The Americans lost three tanks. This was the last major engagement of the day. The U.S. forces engaged reported losing a total of five Shermans, three Hellcats, and six killed and three wounded.

As night fell, the 113th Panzer Brigade withdrew to Moncourt having suffered the loss of 43 tanks, mostly Panthers, and approximately 200 infantry. Due to its late disengagement at Luneville on September 18, coupled with its late arrival at its staging point for the attack on Arracourt on the following day, the 111th Panzer Brigade played virtually no part in the battle on September 19. As a result, the 113th Panzer Brigade attacked alone and unsupported. Nevertheless, OKH ordered Manteuffel to continue the attack the next day.

Although outnumbered 130 tanks to 45, Manteuffel instructed Kruger's 58th Panzer Corps to attack from Arracourt toward Moyenvic on September 20 using the 111th Panzer Brigade. If repulsed, the Germans were to draw the Americans back to the Marne-Rhine Canal where flak guns and tanks from Panzer Brigade 113 awaited them.

American opposition on that day included not only the 37th Tank Battalion and some tank destroyers, but also the 35th Tank Battalion, 10th Armored Infantry Battalion, 53rd Armored Infantry Battalion, and three field artillery battalions.

On the morning of September 20, in accordance with Patton's orders of the previous day, 4th Armored Division advanced toward the German border. The Americans advanced in the early morning in two columns. Abrams led the 37th Battalion and Lt. Col. Charles Odems led the 35th Tank Battalion.

Trailing the American columns was Clarke's command post, which was attacked by the lead elements of the 111th Panzer Brigade. The threat was relieved by the lively fire from the towed guns of the 191st Field Artillery Battalion, which fired its 155mm howitzers at a range of only 200 yards. After two tanks were hit, the rest of the German force withdrew. U.S. forces sent to assist the headquarters destroyed five Panther tanks that day.

THE END OF SEPTEMBER 1944 FOUND THE FIGHTING IN LORRAINE AT A STALEMATE. DEPRIVED OF SUPPLIES, PATTON COULD NOT SWITCH TO THE OFFENSIVE.

A U.S. infantryman fires a .50-caliber machine gun at Germans on a rural French farm. The tenacious resistance of U.S. infantry throughout the battle stunned German panzer troops, who believed they could easily overrun U.S. infantry lacking close armor support.

By late morning, the two U.S. task forces had traveled six miles from their start line. Fearful that more German forces were in the Parroy Forest sector and might attack the division's rear, Wood returned both task forces to Arracourt to clear that region of the enemy.

After returning to his launch point, Abrams sent a team composed of tanks and armored infantry to the north of the Parroy Forest. When C Company, 37th Tank Battalion crested a rise near the town of Ley, it was met by a German ambush containing tanks and 75mm Pak 40 antitank guns. The first German volleys destroyed six Shermans. In return, the Americans knocked out seven German tanks and three enemy antitank guns.

Later in the day, A Company, 10th Armored Infantry Battalion and A Company, 37th Tank Battalion took Moncourt. They did this by initiating the assault with tanks and following up the armored attack with an infantry assault. By day's end, the Germans had lost 16 tanks, 257 dead, and 80 captured. The 111th and 113th Panzer Brigades had only 54 tanks left from the 180 with which they started the offensive. The U.S. 4th Armored Division lost 18 Shermans.

The 4th Armored Division rested on September 21, and the Germans reinforced their strike force at Arracourt with elements of Generalleutnant Wend von Wietersheim's 11th Panzer Division from the Alsace area. Unfortunately for the Wehrmacht, the 11th Panzer Division, to which the 111th Panzer Brigade was attached, had a tank strength of just 40 Panthers and Panzer IVs.

In the predawn hours of September 22, the 11th Panzer began its mission to seal off the 4th Armor's penetration by gaining control as far west as the Bezange Forest-Arracourt Blois de Benamont area. The attack was redirected to seize the village of Juvelize and then push north through Lezey. A supporting thrust was to be made by the 113th Panzer Brigade toward Ley.

The first encounters of the day occurred around 9:15 AM in thick fog between light Stuart tanks of the screening D Troop, 25th Cavalry Squadron and German panzergrenadiers aided by 12 tanks, which quickly destroyed four American Stuarts. Hellcats from B Company, 704th Tank Destroyer Battalion, responded to the German assault and knocked out three Panthers before withdrawing. In response, B and C Companies of the 37th Tank Battalion deployed between Juvelize and Lezey and beyond the latter town.

By noon, elements of 111th Panzer Brigade had occupied Juvelize, while the 113th reached Lezey. During their advance, American ground attack aircraft struck both panzer brigades. To block the enemy's move any farther south, Abrams established a defensive line consisting of tanks from two of his companies, supported by infantry, on Hill 257 just northwest of Juvelize. As German armor continued to advance, American tanks on Hill 257 fired on them at ranges from 400 yards to 2,000 yards, destroying 14 tanks and effectively stopping the enemy's attempt to reinforce the town. Abrams then ordered his B Company, together with A Company, 10th Armored Infantry Battalion, to take the town. They successfully achieved their objective. The 111th Panzer Brigade subsequently withdrew from the area.

German casualties at Juvelize amounted to 16 tanks, 250 men killed, and 185 captured. The U.S. forces engaged lost seven killed and 13 wounded. As for equipment, the Americans lost seven Stuarts and one Sherman tank.

On September 23, the Germans licked their wounds and waited for the remainder of the 11th Panzer Division. As for the Americans, Patton's desire to continue his advance toward Germany was frustrated by a lack of supplies, which were being funneled to the Allied forces engaged in Operation Market Garden in Holland. As a result, Eisenhower ordered Patton to switch to the defensive.

On September 24, the 11th Panzer Division advanced on the lightly defended town of Moyenvic. Over the next few hours the Germans conducted small battalion-sized probes supported by a few tanks against the Americans, but each probe was repulsed. The Germans lost 10 tanks and 300 troops.

The following day, the 11th Panzer Division made a minor attack from Moyenvic. Larger assaults were made at Juvelize, Lezey, and Ley. By this time, the 4th Armored was in the process of shortening its defensive line by pulling back to Rechicourt-Arracourt. That day, CCA and CCB reported destroying 10 enemy tanks and killing 300 enemy soldiers, while suffering 212 casualties. The fighting on September 26 was limited due to bad weather. However, the two sides exchanged artillery fire.

The tempo picked up on September 27 when Manteuffel sought to secure Hills 318, 265, and 293 on the southern flank of 4th Armored guarded by CCB. These hills overlooked the German positions in the Parroy Forest and placed any German movement there under the threat of American artillery and tank fire.

The 224 men of A Company, 10th Armored Infantry Battalion, who were deployed between Hills 265 and 318, put up a spirited defense of their position that day. They held their ground in the face of repeated assaults by tanks and infantry from the 11th Panzer Division throughout the long day.

Meanwhile, the 110th Panzergrenadier Regiment supported by tanks from the 11th Panzer Division attacked C Company and a platoon of tank destroyers holding Hill 265. A German

Continued on page 65

In the final days of Arracourt, American armored crews received assistance from P-47 D-25 Thunderbolts proficient in tank hunting. The Germans called them Jabos for jager-bomber, which means fighter-bomber.

The Teutonic Knights struggle to contain the onslaught of the Polish heavy cavalry in a 20th-century painting by Polish military artist Wojciech von Kossak. Tatar foot, shown in the foreground, fought with great ferocity.

SHOWDOWN

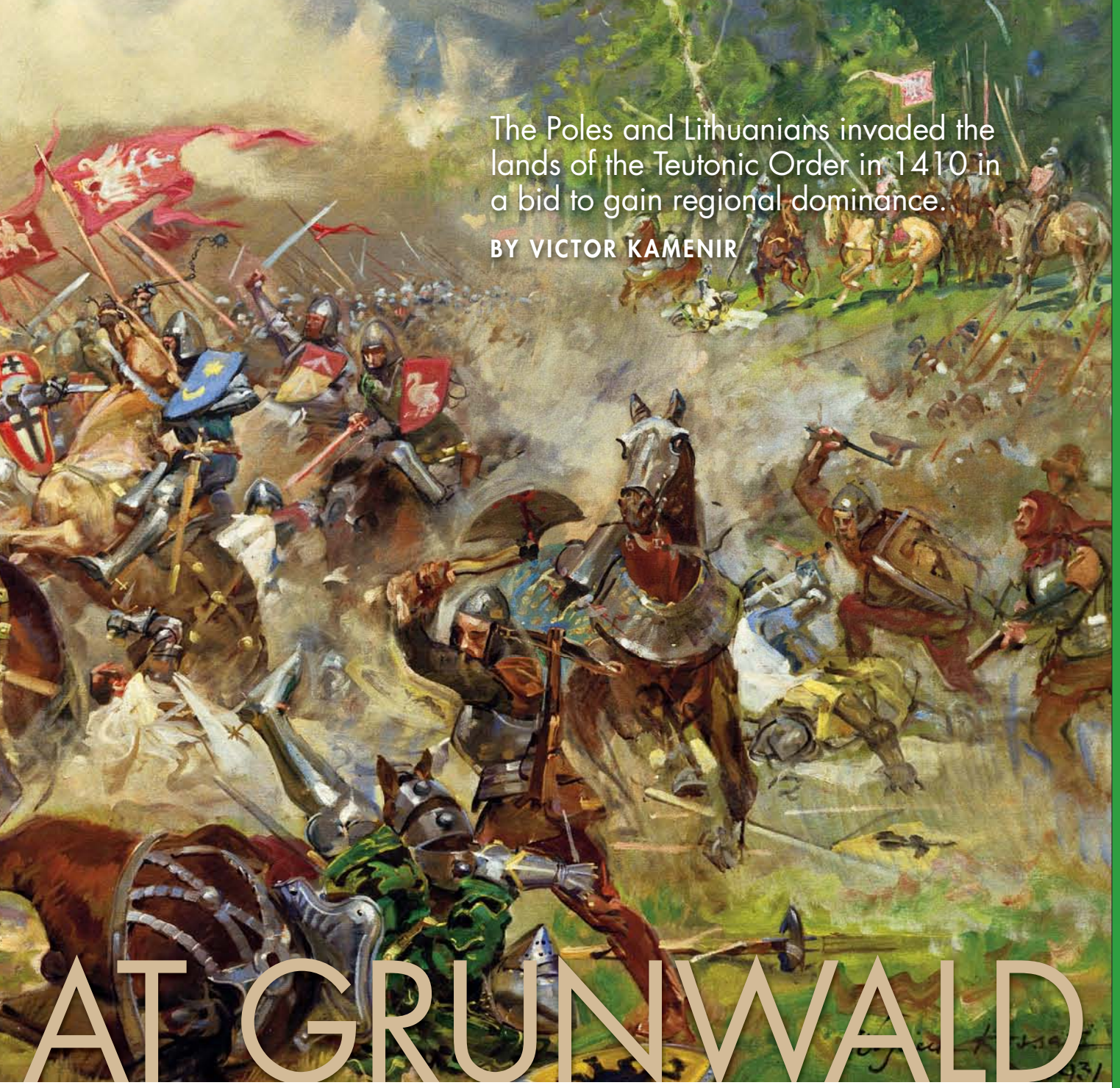
FROM HIS POSITION opposite the left wing of the Teutonic Knights, Lithuanian Grand Duke Vytautas watched closely as the Teutonic Order redressed its lines at mid-morning in the already sweltering summer sun. Spotting a weakness in the enemy's line, Vytautas signaled for his fast-moving Tatar cavalry to sweep forward from the hills west of the Marozka River.

Emerging from the treeline, Vytautas saw that some of the Teutonic Order units were still maneuvering as they redressed their lines. Intending to catch the enemy flat footed, Vytautas launched the Tatar cavalry under Jelal al-Din at the left flank of the Teutonic Knights.

The Tatar riders on their small, shaggy horses quickly covered the distance between the opposing armies. Either because the morning rain dampened the gunpowder or due to the speed of the Tatar charge, the Teutonic Knights had time to fire two cannon volleys before the Tatars were upon them. The desultory artillery fire emptied a few saddles but not enough to adversely influence the charge. The steppe riders quickly sabered the gunners and their infantry supports. They then focused their full attention on Grand Marshal Friedrich von Wallenrod's Teutonic banners.

For almost an hour, the lightly armed Tatars darted back and forth around the Teutonic ranks attempting to detect and exploit a weakness. They peppered the Prussians with arrows and used lassos to dismount a few knights; however, the solid ranks of heavy Teutonic cavalry remained unbroken.

Because Vytautas's initial assault had not dented the wall of Teutonic Knights, he had no choice but to feed his own troops into the battle. As the morning wore on, troops on both sides became engaged along the entire length of the battle line.



AT GRUNWALD

The Poles and Lithuanians invaded the lands of the Teutonic Order in 1410 in a bid to gain regional dominance.

BY VICTOR KAMENIR

At stake under the broiling sun that day was the prestige and power of the Teutonic Knights. The Poles and Lithuanians were determined to become the dominant power in northeastern Europe, and the only way to achieve that objective was to vanquish the Teutonic Knights on the field of battle.

At the close of the 12th century, a group of German crusaders in the Holy Land established a military order to provide aid and protection for German pilgrims. Established as the the Brothers and Sisters of the German House of St. Mary in Jerusalem, the organization became commonly known as the Teutonic Order.

As the age of the crusades in the Holy Land came to an end, Pope Honorius III in 1217 declared a crusade against the Slavic Old Prussian pagans in northeastern Europe. Eagerly responding to the call, by the end of the 14th century, the Teutonic Order carved out its own state in northeastern Europe. In addition to the knight-brothers of the Order, guest crusaders and mercenaries from as far away as France, England, and Scotland participated in campaigns against the pagans.

In conjunction with the thorough and ruthless process of extermination and conversion of the pagan Old Prussians, the Teutonic Order imported German peasants to repopulate the conquered territory. So thorough were the Germanization efforts that the word *Prussian* itself became virtually synonymous with the word *German*.

The expansionist desires of the Teutonic Order brought it into a conflict with two powerful neighbors, the Kingdom of Poland and the Grand Duchy of Lithuania. In the west, the Order conquered the Polish district of Pomerania and waged brutal campaigns in the Lithuanian province of

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Left to right above are Polish King Wladyslaw II Jagiello, Grand Duke Vytautas of Lithuania, and Teutonic Order Grand Master Ulrich von Jungingen. OPPOSITE: The Teutonic Order launched frequent crusading campaigns against the pagan tribes in the lands along the Baltic Sea. The expanding Polish and Lithuanian states to the south and east threatened Teutonic hegemony.

Samogitia. At the turn of the 15th century the Grand Duchy of Lithuania was the largest country in Europe. Stretching from the Baltic Sea to the Black Sea, it encompassed all of modern-day Belarus, the majority of the Ukraine, and a significant part of western Russia. In the process of its expansion, it dynastically connected to all the ruling houses of Eastern Europe.

Between 1381 and 1392, two descendants of the Gedeminas dynasty, first cousins Jagailla and Vytautas, fought two civil wars for the throne of Lithuania. The struggle resulted in Jagailla firmly securing his position as the Grand Duke of Lithuania.

Thirty-five-year-old Jogailla converted to Christianity in 1386 and married 12-year-old Jadwiga, the reigning Queen of Poland. While jointly ruling Poland with her as King Wladyslaw II Jagiello, he retained the title of the Grand Duke of Lithuania as well, bringing the two states into a personal union. The two cousins reconciled in 1392, with Vytautas becoming the Grand Duke of Lithuania, while Jagiello received the nominal title of Supreme Duke. Jagiello formally granted Vytautas independence in 1401.

Reconciliation between Poland and Lithuania was viewed with extreme concern by the Teutonic Order. The two states were hostile to the Order, and Lithuania's conversion to Christianity removed the reason for the Order's crusade against the pagans.

When an uprising against the Teutonic Order flared up in Samogitia in May 1409, both Vytautas and Jagiello overtly and covertly supported the Samogitian cause. A small number of Lithuanian warriors operated among the Samogitian forces, while the Polish crown provided funds to purchase weapons for them. Teutonic Grand Master Ulrich von Jungingen frequently questioned the sincerity of Vytautas' and Jagiello's conversion to Christianity and considered them secret pagans. Vytautas being a vassal of Jagiello, the grand master haughtily demanded that Jagiello put a stop to Vytautas's interference, threatening to attack Lithuania. Jagiello replied that any attack against Lithuania would result in a Polish attack against Prussia. Precipitously, the Teutonic Grand Master declared war on Poland and Lithuania on August 6, 1409.

Neither side was ready for war. After sporadic fighting in the Dobrin District and Samogitia, an armistice was signed on October 8. Mediated by King Wenceslas VI of Bohemia and King Sigismund of Hungary, the armistice was to continue until St. John's Day, which fell on June 24, 1410.

The opponents used the time to prepare for war and gain allies, an endeavor in which the two cousins were much more successful. King Jagiello secured the assistance of Mazovian dukes, while Vytautas obtained promises of neutrality from his son-in-law Duke Vasily I of Moscow. The Duchies of Moldavia and Pskov, as well as the Republic of Novgorod, promised military help. In contrast, despite von Jungingen's best efforts, he was able to obtain only vague promises of military help from Kings Wenceslas and Sigismund and had to rely on guest knights and mercenaries to supplement his forces.

In December 1409, Jagiello and Vytautas held a secret meeting where they developed plans and goals for the upcoming campaign. Instead of fighting separate campaigns on two fronts, the objective of the campaign was to unite the two armies and strike for Marienburg Castle, the heart of the Teutonic Order, which was located in northern Prussia. To divert attention of the Order from the direction of the main thrust, small detachments of Lithuanians were to operate in Samogitia in the northeast while the Poles would make moves toward Pomerania in the west.

Taking into consideration the history of hostility between Jagiello and Vytautas, von Jungingen was doubtful that the alliance between the two cousins would hold. He completely misjudged the sincerety of the reconciliation between the two offspring of the Gediminas dynasty. Unsure of the direction of the main threat, the grand master garrisoned the border castles and staged the Order's field army in a central location at Schwetz ready to rapidly shift to any point on the border.

On June 27, 1410, the army of the Polish Crown under King Jagiello arrived at the staging area at Czerwinsk on the Vistula River, roughly 30 miles northwest from Warsaw and 50 miles east of the Prussian border.

Neither Poland nor Lithuania had a standing army, and once the war was declared, noblemen, clergy, and some municipalities were obligated to provide armed contingents equipped at their own expense. The main building block of the Polish-Lithunian military, as well as that of the Teutonic Order, was a banner, similar in size and function to a modern battalion.

A total of 18,000 men fighting under 51 banners gathered under Jagiello's direct command. Twenty-six were raised by prominent noblemen and clergymen of the kingdom, 18 banners were territorial, three banners were composed of Czech mercenaries from Bohemia and Moravia, three banners were from the Mozovian duchies, and one banner was from the Duchy of Moldovia. The majority of this force consisted of cavalry levy from the nobility, with infantry typically supplied by municipalities.

While the combat quality of individual Polish banners varied, three of them could be classified as elite. Two of the elite were the royal banners, the Nadworna (Household) and the Goncza. The former banner was composed of the members of the royal court. The latter banner, which was composed of young knights and derived its name from the Polish word *gonitwa*, meaning chase or pursuit, had the mission of acting as army's vanguard, opening the battle and conducting pursuit. Another exceptional banner, the Great Banner of Krakow, included some of the best knights in Poland.

Individual banners were made up of 50 to 120 lances. Each lance was composed of a lance-carrying armored knight and three to seven armed retainers, armed and equipped at the knight's expense. The quality of the arms

and armor depended on a knight's income. The number of men in a lance and the number of lances in a banner varied. With Jagiello's 18,000 men organized into 51 banners, a common Polish banner appeared to have averaged approximately 350 warriors. Not all banners being equal in size, they were balanced out by combining smaller banners into one. On campaign, each knight was responsible for providing his own supplies, and the large number of wagons required slowed the progress of the army. However, during the battle these wagons typically formed a *wagenburg*, a mobile fortress, to protect the camp in the rear of the fighting lines.

After inspecting and organizing his forces, Jagiello crossed the Vistula River on July 2. In a carefully timed and executed maneuver, Grand Duke Vytautas joined him with the Lithuanian army later the same day with 40 banners. Thirty-seven of Vytautas's banners were composed of Lithuanians and Ruthenians with a small number of Samogitians. The remaining three banners consisted of Russians from the Duchies of Smolensk and Pskov and the Republic of Novgorod. The men of Novgorod were led by Lengvenis, Jagiello's younger brother. Vytautas's banners, totaling roughly 11,000 men, averaged approximately 275 soldiers each. In addition, the exiled Khan Jelal ad-Din of the Golden Horde brought close to 2,000 Tatars riders, seeking Lithuania's support in his struggle to regain his throne.

On July 3, the combined Polish-Lithuanian army moved north toward the Prussian border. The Tatars and Lithuanians, not knowing they were still in friendly Polish territory, began looting, killing, and burning.

The allies crossed the vaguely defined Prussian border six days later. Moving through Prussia like a swarm of locusts, the progress of the advancing army was marked by smoke rising from destroyed settlements. Barbaric Tatars were commonly blamed by Polish historians, but the Poles and Lithuanians share responsibility for the atrocities. Jagiello attempted to rein in the wholesale carnage. In Lautenburg, the king ordered two Lithuanian looters to build a gallows and then hang themselves in front of their comrades. Still, the outrages continued.

Teutonic Grand Master von Jungingen soon understood the allied maneuver toward Marienburg. Knowing the territory, he determined that the most likely location to cross the last river obstacle, the Drewenz River, on the way to Marienburg was at the village of Kauernik. Leaving 3,000 men under Magistrate Heinrich von Plauen at Schwetz to guard against the Polish forces at Bydgoszcz, the grand master rushed to Kauernik with his main army.

Von Jungingen arrived at Kauernik in plenty of time to fortify the fords by building stout wooden stockades to protect the beachheads on both sides of the river. With a strong castle on the nearby hill, the obstacles were defended by infantry, and cannons were positioned on the hills above the river crossing.

The force gathered by the grand master numbered approximately 20,000 men organized in 50 banners, averaging 400 men to a banner. A lance of the Order was composed of one knight and up to seven men, typically mounted crossbowmen. Roughly half of the force consisted of soldiers of the Teutonic Order and those of the lay knights living in the lands of the Order, but not members of the Order themselves. The other was composed of guest knights and mercenaries. King Sigismund of Hungary sent a token force of 200 fighting men and several hundred Genoese mercenary crossbowmen. Similar to the Polish-Lithunian army, the majority of the Order host was cavalry.

After conducting several probes, Jagiello called for a military council. Weighing their options, the members of the council decided not to attempt a river crossing in the face of such a strong position. Instead, on July 11 the allied army turned east toward the headwaters of the Drewenz River, intending to bypass the difficult terrain.

The Order army moved east as well, shadowing Jagiello's forces along a parallel route. Even though Jagiello's army consisted largely of cavalry, the advance along the narrow roads leading through dense forests was slow owing to the large number of supply wagons.

On July 13, the Polish-Lithunian army destroyed the Teutonic garrison at Gilgenberg then sacked and burned the town "[Jagiello] went toward Gilgenberg and took that city and burned it, and they struck dead young and old and with the heathens committed so many murders as was unholy, dishonoring maidens, women, and churches, cutting off their breasts and torturing them, and driving them off to serfdom," wrote Prussian chronicler Johann von Posilge. They also desecrated the churches.

The blood of the innocents demanded vengeance, and the Teutonic grand master chose the village of Grunwald as the location to exact retribution from the invaders. Arriving there in the afternoon of July 14, the grand master studied the area. The battlefield chosen by von Jungingen was a roughly triangular area of approximately two square miles, hemmed in by woods and thevvillages of Grunwald, Tannenberg, and Ludwigsdorf. Its rolling, sparsely wooded terrain was bisected by a shallow valley with a small creek running at the bottom of it. Whichever side intended to attack

ABOVE: The mixed nature of the allied army is conveyed in this romantic depiction of the meeting of Polish, Lithuanian, and Tatar commanders before the battle. Jagiello showed great caution on the morning of the battle, whereas Vytautas was eager to attack. OPPOSITE: With their Golden Lion banner held high aloft, three banners from the newly annexed Kingdom of Rus emerge from the edge of the woods and charge the enemy. The Rus knights, who were part of the Lithuanian army, deployed on the left of the Lithuanian line.

would have to descend into the valley, cross the boggy field, and charge uphill.

The allied army arrived in the evening of the same day and set up three separate camps less than four miles away near Lake Lubian. The Polish camp was near the southern edge of the lake by the village of Faulen, the Lithuanians in the middle, and the Tatars to the north of the lake. With the opposing pickets keeping a wary eye on each other, the night passed uneventfully.

The sun came up shortly after 4 AM on July 15, and the day promised to be a hot one. After an early mass, the army of the Teutonic Order arrived on the field at approximately 6 AM and deployed on a northeast-southwest axis in three distinct bodies along a roughly southwest-northeast axis.

On the Teutonic right, behind the village of Ludwigsdorf, were 20 banners under Grand Commander Kuno von Lichtenstein. On the Teutonic left, anchored on the village of Tannenberg, were 15 banners under Grand Marshall Friedrich von Wallenrod. Grand Master Ulrich von Jungingen established his command post on the hill behind the center of the Order's deployment with 15 banners in reserve. The fortified camp was located farther back near Grunwald.

The forces directly under von Jungingen and von Lichtenstein were the best disciplined troops of the Order. Grand Marshall von Wallenrod commanded forces of lesser quality, composed largely of banners of mercenaries, guest knights, lay knights, and Polish vassals such as Duke Casimir V of Pomerania. To compensate for the qualitative weakness of von Wallenrod's command, the majority of the Teutonic Order's small number of artillery pieces and infantry seemed to have been deployed on the left flank where they were screened by detachments of heavy cavalry.

It is possible that knowing the locations of the allied camps, von Jungingen assumed that the allied forces would take to the field relative to their camp sites, the Polish to the south and Lithuanians and Tatars to the north. Therefore, he deployed his best troops against Jagiello and his less reliable ones against Vytautas.

The banners of the Teutonic knights and soldiers presented a rather uniform appearance, their unit cohesiveness and discipline strengthened by monastic vows of obedience. Professional warriors of the Teutonic Order were divided into three classes. The noble-born knight-brothers, wearing their distinctive white capes with plain black crosses, were the shock troops of the Order, equipped with full plate armor and mounted on heavy war horses. The principal weapon of a knight was a heavy lance, supplemented by swords and maces. Of all the forces of the Order at Grunwald, only 250 were full knight-brothers.

The half-brothers, also noble-born, were those not willing to take the full long-term monastic vows of the knight-brothers. Equipped and armed similar to the knight-brothers, they wore light-gray capes with a black Greek capital letter Tau (T) combined with a family coat of arms.

The sergeant-brothers, who were of humble birth, wore light gray capes with a black Greek capital letter Tau minus the coat of arms. Typically equipped with chainmail armor, they were the light cavalry of the Order. A banner of the Teutonic Order itself would have the Order lances as its core, rounded out by lay knights, town levies, and mercenaries.

In contrast to the core banners, additional troops of the Order presented quite a colorful and varied appearance, greatly varying in quality and quantity within a banner. The lay knights were the nobility living in the lands of the Order but were not members of the Order. The quality of their arms and equipment, as well as the number of armed retainers, varied greatly based on their income. The lances of guest knights, as well as the mercenary ones, varied in quality. According to the records of the Order, 1,237 mercenary knightly lances, with at least three men per lance, were present at Grunwald.

Rounding out the forces of the Teutonic Order were the town and village militia and native levies, typically all infantry armed largely with crossbows and polearms. While some could afford good arms and armor, the overwhelming majority of them were lightly or poorly armed.

The professional Teutonic knights were confident of victory, justly considering themselves the best warriors of Christendom. The knightly banners were deployed not in continuous lines, but lines of columns with wide spaces between the columns. Each column was headed by a wedge of heavily armed and armored knights. Nicknamed "the boar's head," the wedge had three knights in the first rank, five in the second, seven in the third, nine in the fourth, and 11 in the fifth and the following ranks. The standard bearer, protected by picked warriors called *antesignani,* was placed in the first rank of the column behind the wedge.

As the sun climbed higher in the morning sky, the allied army remained in its camps. A brief and intense rain was followed by rising temperatures, and the Teutonic army, standing under arms and in full armor since 6 AM began to feel the effects of the heat.

Advised by their scouts that the Teutonic army was in the field, the two allied commanders reacted differently. Jagiello, a careful, intelligent, politically astute sexagenarian and a sincere convert to Christianity, attended a mass. In contrast, his fiery and energetic younger cousin Vytautas, who was the more experienced soldier, wanted to immediately deploy for battle.

But Jagiello would not give the command to proceed. In vain, Vytautas appealed to him in person and through messengers, requesting permission to exit the woods and attack the enemy. Finishing one mass and starting another, Jagiello gave orders to advance the army only to the edge of the woods on their side of the valley. Only

after attending the second mass, did Jagiello don his armor and go forward into battle.

Arriving at the edge of the forest, Jagiello saw that the Order forces were deployed too close to his treeline. Exiting from the forest in disorder and attempting to maneuver to form battle lines so close to the enemy would have been inviting disaster. Still procrastinating, Jageillo began a lengthy process of knighting several hundred of his warriors.

In order to goad Jagiello into action, von Jungingen sent two heralds to him. Approaching the king under the flag of truce, the heralds threw down two naked swords, sticking them into the ground. A sword presented as a gift was delivered sheathed in its scabbard. To deliver a naked sword was a challenge to a fight. Impaling a naked sword into the ground in front of the recipient meant a fight to the death.

"The Grand Master sent two swords to us with the following announcement: 'Know you, King and Vytautas, that at this time we will fight you," wrote Jagiello. "For this, we are sending you two swords to assist you.' We replied: 'We accept the swords. You are sending them to us in the name of Christ, before him your obstinate pride must bow, we will give you a battle.'"

As soon as the two heralds had returned to their side of the valley, the Teutonic battle line moved back several hundred feet. The move unmasked their cannons. Only at that time did Jagiello give his forces the order to exit the woods and form battle lines. The Polish banners formed the left flank of the allied line, near the village of Ludwigsdorf. The three elite banners, the Nadworna, Goncha, and the Great Banner of Krakow, took their place on the right center of the line. The three banners of Czech mercenaries formed the right flank of the Polish line. Jagiello, with his retinue, positioned himself on a knoll in the rear of the center of the allied position. A Polish reserve was farther to the rear near the village of Faulen.

Lithuanian forces deployed on the right of the allied line near the village of Tannenberg and effectively separated from the Polish banners by Jagiello's hill. The three Russian banners, part of the Lithuanian forces, deployed on the left of the Lithuanian line and the Tatars under Khan Jalal al-Din deployed on the extreme right.

The armies lined up on the opposite sides of the shallow valley appeared remarkably similar. Since a majority of Polish nobles purchased armor imported from the Germanic states, the opposing knights looked the same, differentiated mainly by heraldic symbols. Difference in armor depended on an owner's wealth, not national characteristics. Many of the heraldic symbols, due to the large number of ethnic Poles in the Order's forces, were similar in color schemes and designs. Jagiello ordered his warriors to tie bunches of straw to their arms to differentiate the opposing sides.

The wealthy knights wore full plate armor or flexible brigandine armor made from small armor plates riveted to leather. The head was protected by a basinet helmet with a face guard. The most common of these was the hounskull helmet, which gets its name from the visor's resemblance to the protruding muzzle of a hound. Less prosperous knights and men-at-arms wore mail with a helmet in the shape of a brimmed hat.

Due to eastern influences, Lithuanian and Russian warriors sported conical helmets worn with scale or lamellar armor over a mail hauberk. The Tatars commonly wore only padded jackets.

Just like its opponents, the Polish-Lithunian army was confident of victory. It had enjoyed a successful campaign so far and was well rested and supplied. The night before the battle Polish sentries saw patterns on the moon, which they interpreted as the good omen of the king striking down a monk.

Vytautas's attempt to catch the Teutonic knights flat-footed with his initial assault failed despite the best efforts of the Tatars. Wallenrod ordered a counterattack by several banners. The heavily armored Teutonic Knights easily overwhelmed the Tatars, who broke and retreated in an apparent panic.

Vytautas sent forward several Lithuanians banners and they were disordered in turn by the

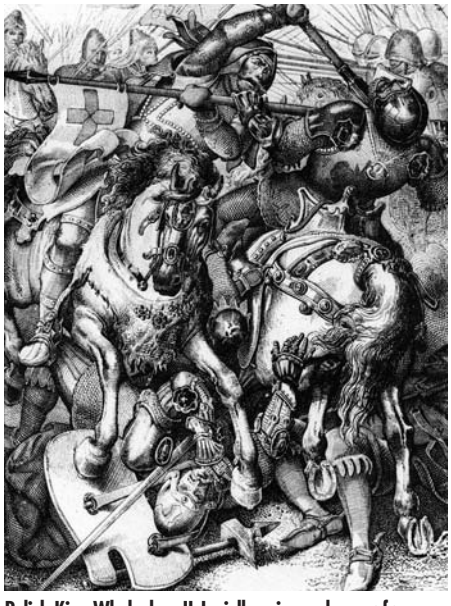
heavy cavalry of the Order. Both Wallenrod and Vytautas fed more and more banners into the fray. During the heavy fighting a vassal banner of the Teutonic Order gave ground and began to retreat, but it rallied. The grand master ordered the regrouped troops to join his reserve, which raised it to 16 banners.

However, the lightly armored Lithuanians and Tatars could no longer withstand the press of the Teutonic knights. The whole of Vytautas's wing collapsed in a flight, hotly pursued by nine of Wallenrod's banners. Only the three Russian banners maintained cohesiveness and began edging left to link up with the Czech banners of the left wing under pressure from Wallenrod's remaining five banners. One of the Russian banners was cut off, surrounded, and annihilated, while the remaining two were able to link up with the Czechs.

The retreat of the Lithuanians and Tartars is variously interpreted as a panicked flight or a tactical retreat, largely depending on the nationality of the historian. The Polish historians largely interpret this as the wholesale collapse of the Lithuanian army. The Lithuanian scholars interpreted it as a feigned retreat.

Both versions have merit. The feigned retreat was a long-honored tactic of steppe peoples such as the Tatars. A portion of the total force would retreat, intending to draw the enemy into a pursuit. When the impetuous pursuers were disordered by the chase, they would be hit by fresh forces lying in ambush, while the fleeing Tatars wheeled around and hit the pursuers in their flanks. Vytautas was well familiar with this tactic, having barely survived a similar Tatar ambush in 1399 at the Battle of Vorskla River.

Most likely, the truth lies somewhere in the middle. It is quite likely that the Tatars attempted a feigned retreat, but the Lithuanian banners were not able to properly execute the ambush, leading to the collapse of the whole wing.



Polish King Wladyslaw II Jagiello seizes a banner from a Teutonic knight during the height of the battle.

Pursuing the retreating Lithuanians all the way to their camp, many knights of the Order, including the majority of the guest knights, impetuously became scattered and disorganized while looting the Lithuanian camp. "The pursuing enemy, assuming that they gained victory, separated too far from their banners, but soon the roles reversed and they became pursued themselves," writes the anonymous author of the *Chronica Conflictus*. When they tried to return to their own lines, the king's men cut them off, killing some and taking the rest prisoner.

At approximately the same time as the Lithuanian wing started to give way, the first Polish line of 17 banners moved forward under the Grand Marshal of the Polish Crown Zyndram of Maszcowice. He was opposed by 20 banners under Grand Komtur Kuno von Lichtenstein.

This was a clash of evenly armed and armored opponents. A suit of plate armor weighed approximately 55 pounds, not much different than a combat load of a modern infantryman. Its weight was evenly distributed over the whole body and its articulated joints allowed a knight the freedom of movement. Wielding heavy weapons while wearing heavy armor, the men quickly became fatigued. A battlefield commander had to be a diligent choreographer to rotate units in and out of the front line.

At approximately 2 PM, Grand Master von Jungingen saw the hard-pressed and depleted Czech mercenaries and the Russian banners on the Polish right flank begin to give way. Judging the moment had come, von Jungingen led forward his reserve banners.

In a wide flanking maneuver, they looped through the battlefield debris of the abandoned positions of the Lithuanian army. Approaching from the right rear of the Polish position, the Teutonic counterattack was aimed directly at the hilltop position of the Polish king. The Polish, seeing units approaching from the rear, mistook them for returning Lithuanians. However, they were soon disabused of their mistake when the Prussians cut into their rear ranks. After a short, desperate fight, the Poles were able to turn their rear ranks to face the new threat and the balance was again restored.

A desperate fight flared up around Jagiello's position. The standard bearer of the Great Banner of Krakow was cut down and the great flag fell to the ground. This gave a momentary infusion to German morale, but the flag was quickly picked up by another Polish soldier and raised high.

The king's retinue circled Jagiello, and his personal banner was furled to hide his position. One Teutonic knight, Lupold von Kokeritz, suddenly recognized the king and fought through his bodyguards to get to him. Jagiello bared his sword, ready to meet the attacker, when his unarmed secretary Zbigniew Olesnicki picked up a broken lance and knocked the Prussian knight off his horse. The king's bodyguards arrived just in time and finished off von Kokeritz.

At this high tide of the Teutonic attack, the Grand Duke Vytautas brought the rallied Lithuanian banners back to the field. The 16 banners around von Jungingen became pinned between the Poles and the Lithuanians. Seeing a new threat, the Prussian banners under von Lichtenstein began to edge back. With the noose tightening around him, the impetuous von Jungingen refused to retreat. Grimly, the senior officers of the Teutonic Order and the remnants of reserve banners closed ranks around their grand master. With his men cut down around him, the grand master received wounds to his face and chest but continued fighting. However, he could not escape. He was mortally wounded by the thrust of a lance through his neck.

Seeing the grand master fall, the Teutonic banners still maintaining cohesion began falling back to their camp, intending to set up defenses around the *wagenburg*. However, the apparent security of the *wagenburg* became a death trap. The allied forces surrounded the surviving troops of the Order and methodically cut them down. It is believed that more of the Teutonic troops died in the camp than in any other location on the battlefield.

Following his jubilant troops, Jagiello entered the Order's camp. As the king kneeled to give thanks to God for the victory, his victorious troops began looting the camp. A cheer went up when a large cache of wine barrels was discovered and the troops began breaking them open to celebrate their victory. Concerned that his men would drink themselves senseless and fearing a possible German counterattack, Jagiello ordered the wine barrels destroyed.

Some of the banners not engaged in the fight at the Order's camp pursued the fleeing survivors, capturing and cutting down thousands of them. The pursuit lasted for 10 miles, ending with nightfall.

On the morning of July 16, the bodies of von Jungingen and other senior commanders of the

Teutonic Grand Master Ulrich von Jungingen, astride his white horse at left, is slain with a lance thrust into his neck in a 19th-century painting by Polish artist Jan Matejko. After he was slain, the Teutonic forces withdrew for a last stand at their camp.

Teutonic Order were found. They were cleaned and sent to Marienburg where they were interred three days later. The bodies of nobles were buried in the church yard near the battlefield, while the commoners of both armies were buried in mass graves on the battlefield.

The losses of the Teutonic Order were staggering. Along with von Jungingen, four out of five senior officers of the Order lay dead on the battlefield. The fallen commanders were Grand Marshal Friedrich von Wallenrod, Grand Komtur Kuno von Lichtenstein, Grand Treasurer Thomas von Merheim, and Chief Administrator Albrecht von Schwartzburg.

Of the approximately 250 knight-brothers of the Order, 203 were killed and many more wounded and captured. Only 1,427 warriors returned to Marienburg, according to the Order's pay records. More than 8,000 lesser knights, soldiers, mercenaries, and foreign volunteers perished and approximately 14,000 were taken prisoner. Those too poor or insignificant to merit ransom were released, but the prominent captives were held for ransom.

The allied losses were significant as well, with 5,000 killed and 8,000 wounded. These numbers are proof that, despite the disaster that befell them that day, the soldiers of the Teutonic Order gave a good account of themselves.

On July 17, the allies set off toward Marienburg. They advanced cautiously, expecting to be confronted again. But the majority of the Teutonic castles and towns surrendered without resistance.

Arriving in front of Marienburg on July 26 and expecting it to surrender, Jagiello discovered the strongest Teutonic Order castle was prepared for a long siege. Receiving news of the disaster at Grunwald, the Magistrate of Schwetz Heinrich von Plauen rushed to Marienburg with 2,000 men. He discovered a city in panic. The ragged survivors of the battle brought news of the slaughter and tales of allied atrocities. The only surviving senior officer, the Grand Hospitaler Werner von Testsingen, was in shock after the battle and did not wish to take command. Von Plauen, elected as the pro-tem grand master, energetically began preparations for the siege.

The slow progress of the Polish-Lithunian army gave von Plauen the crucial time to prepare for defense. He restored morale and discipline. He also issued orders for supplies to be stockpiled and weapons to be distributed to local levies. In addition, outlying garrisons were ordered to pull back to a safer location. The suburbs surrounding the fortress were burned and pulled down to deny the besiegers cover.

After an unsuccessful siege, the Polish-Lithunian forces withdrew in mid-September. Once the allied forces retreated, von Plauen took the offensive and quickly recaptured a majority of the territory. The two sides signed a peace treaty in February 1411.

Despite achieving significant success in battle, the allies gained very little territory. The Dobrzyn district was returned to Poland. Samogitia reverted to Lithuania, but only for the duration of Jagiello's and Vytautas's lifetimes. More damaging for the Teutonic Order was the cripplingly large reparation it was obligated to pay. The loss of the bulk of its army forced the Order to increasingly to rely on expensive mercenaries. New taxes and confiscation of wealth from churches needed to pay the reparation steadily undermined the capability, prestige, and power of the order. The wound delivered at Tannenberg was fatal to the Teutonic state, although it did not appear as such at first.

The Battle of Grunwald plays a significant role in the national identities of three modern countries. In Lithuania, now a sliver of its former great state, it is referred to as the Battle of Zalgiris and the Grand Duke Vytautas, dubbed Vytautas the Great, is the national hero. The Germans call it the First Battle of Tannenberg, the second one being the annihilation of the Russian Army in 1914, a vindication for the defeat 500 years earlier. In Poland, the Battle of Grunwald is a revered symbol of Polish patriotism. The two swords haughtily delivered by the Teutonic heralds to King Jagiello and Grand Duke Vytautas became the royal insignia of Poland. □

ULYSSES S. GRANT ALTERED THE COURSE OF THE WAR IN THE WEST FOR THE UNION ARMY IN FEBRUARY 1862 WITH THE CAPTURE OF FORTS HENRY AND DONELSON.

DISASTER AT FORT DONELSON

BY MIKE PHIFER

A SIGNAL ROCKET set off by Confederate pickets streaked skyward in the damp early morning of February 4, 1862. The Rebels had spotted Federal troops beginning to disembark from transport steamers on the east bank of the rain-swollen Tennessee River at Itra Landing near the Kentucky-Tennessee border. The Federals, who belonged to Brig. Gen. John McClernand's division of Brig. Gen. Ulysses S. Grant's District of Cairo Army, had come to capture the Confederate Fort Henry, which lay eight miles away.

Grant, who had arrived on one of the last steamers, wanted his men landed closer to the key Rebel fort, past Panther Creek 2½ miles north of Fort Henry. The problem with landing south of Panther Creek was that his transports and men might be in range of the Confederate

Chicago History Museum

guns. To determine the accuracy and range of the Rebel guns, Grant boarded the ironclad *Essex,* one of the gunboats escorting the transport fleet, and ordered Captain William Porter to take the vessel upriver toward Fort Henry and draw enemy fire.

As the *Essex* steamed past Panther Creek, Rebel guns opened up from the fort. The shots fell short of the gunboat. Grant was confident that he could land his troops south of the creek. Then a shell whistled as it arced over the gunboat and exploded on the bank, splintering some trees. A second shell barely missed Grant and Porter as it crashed into the stern deck, through the captain's cabin, and out of the other side of the gunboat.

A shaken Grant changed his mind about landing his troops south of the creek. When Grant returned to Itra Landing he ordered McClernand and his men to climb back aboard the steamers and move to Bailey's Ford, which was three miles from the fort but still on the north side of Panther Creek. When the troops disembarked, the steamers puffed black smoke from their stacks as they headed 65 miles downriver to Paducah, Kentucky, to collect the rest of the troops. The investment of one of two key Rebel forts that helped defend the Confederate heartland was about to begin.

In September 1861, Confederate President Jefferson Davis ordered General Albert Sidney Johnston to take command of Confederate Department No. 2, the western theater of operations in the Confederacy. Of particular importance to the South in this theater was Tennessee with its mineral wealth, food supplies, and its water and railroad links to other parts of the Confederacy.

Tennessee Governor Isham Harris previously had sent engineers to select sites on the vital Tennessee and Cumberland Rivers where fortifications could be built. If the Confederacy failed to guard the vulnerable waterways, then Union gunboats could sail upstream on the Tennessee River to northern Alabama or up the Cumberland River to Nashville. The engineers chose the village of Dover, situated on the west side of the Cumberland River atop 100-foot bluffs, as a suitable site for what would become Fort Donelson.

Brigadier General Ulysses S. Grant on horseback directs the Union attack on Fort Donelson. His double victory capturing two forts earned him a promotion to major general, making him second in seniority in the West.

On the Tennessee River, the engineers found no good areas within the State of Tennessee in which to construct a fort. Governor Harris eventually chose a site on the east bank of a bend in the river 12 miles west of the one chosen on the Cumberland. The fort at that location would be called Fort Henry.

The site chosen for Fort Henry, located a few miles north of Kirkman's Landing, was low lying, marshy, and dominated by bluffs across the Tennessee River, although it did offer a clear view of the river for a few miles. Moreover, the site was often flooded by the Tennessee River. Because of the drawbacks associated with the site, Confederate leaders also decided to fortify high ground on the opposite side of the Tennessee River from Fort Henry. They named this third site Fort Heiman.

On September 4, 1862, the situation in Tennessee changed when Brig. Gen. Gideon Pillow, acting on orders from Maj. Gen. Leonidas Polk, invaded Kentucky and seized Columbus, a key town on the Mississippi River. The move broke Kentucky's neutrality, and it no longer served as a buffer for Confederate forces in Tennessee. The Federals quickly responded two days later when Grant occupied Paducah, taking control of the confluence of the Tennessee and Ohio Rivers. Grant also sent troops to take Smithland at the mouth of the Cumberland River.

Johnston, who arrived in Nashville on September 14 to assume his new command, reinforced Columbus, intending to make it the "Gibraltar of the West" and use it to block enemy movement on the Mississippi. He ordered Brig. Gen. Simon Bolivar Buckner to occupy Bowling Green, Kentucky, while another smaller force was sent to hold the Cumberland Gap located in the mountains near the borders of Kentucky, Virginia, and Tennessee. With a 450-mile line to defend, Johnston believed he had covered all likely routes of Federal attacks. But Johnston desperately needed more troops.

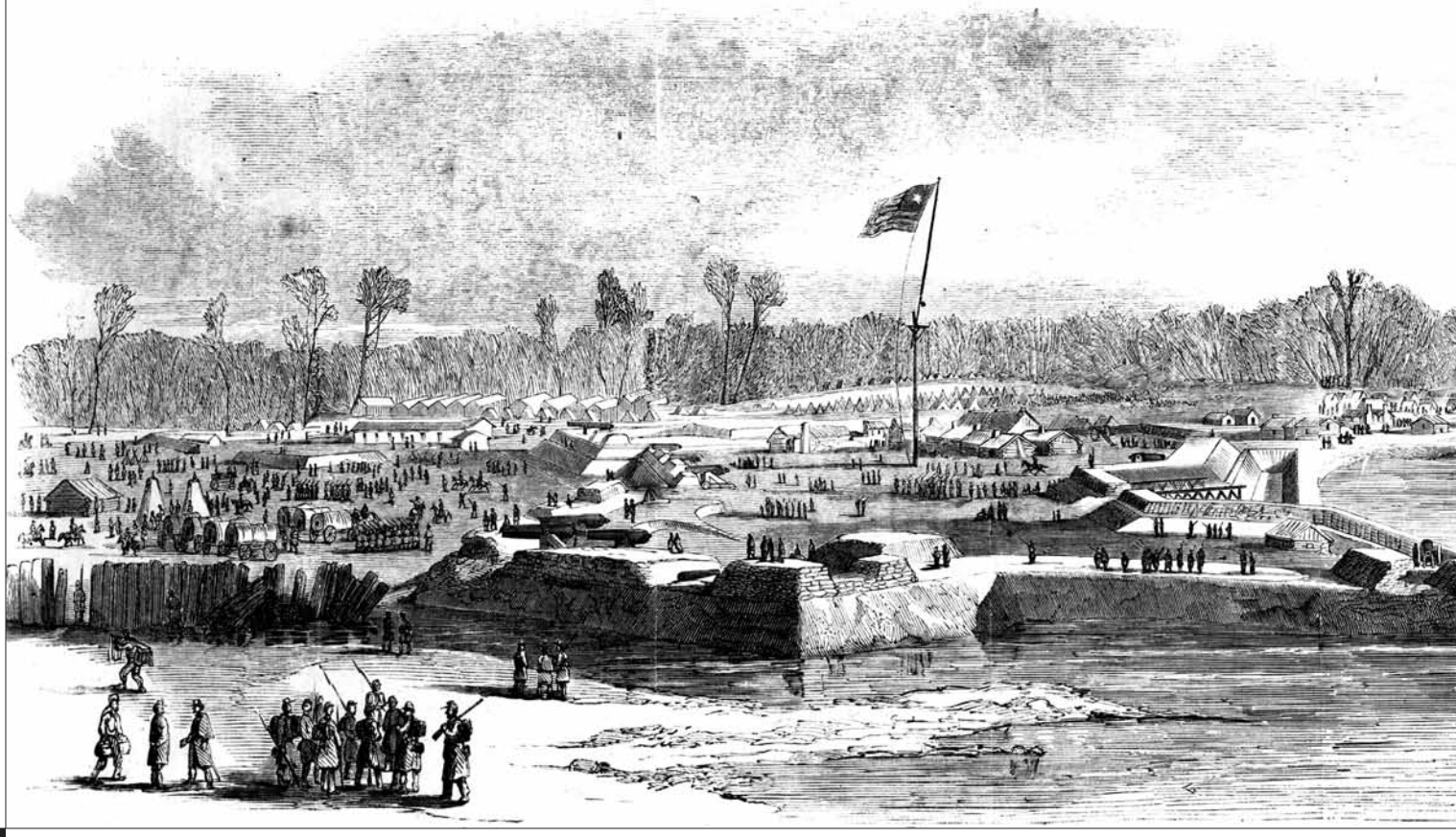
Forts Henry and Donelson were another matter as they were far from complete due in part to a shortage of manpower. The Confederates realized it was imperative to complete the forts when a Federal gunboat steamed within view of Fort Henry on October 12. Johnston put Brig. Gen. Lloyd Tilghman in charge of the forts with orders to complete them as quickly as possible.

Tilghman was shocked when he saw the site selected for Fort Henry. "The history of military engineering records no parallel to this case," he said. "Powerful steps must be taken to strengthen not only the two forts in the way of work, but the armament must be increased materially in number or pieces of artillery as well as in weight of metal," he informed Polk on December 2.

Tilghman began to receive reinforcements as more artillery and troops arrived along with 500 slaves. By the end of January 1862, Johnston had received additional reinforcements that raised the total number of troops in Kentucky and Tennessee to 45,000 men.

Meanwhile, Federal General-in-Chief George McClellan ordered Maj. Gen. Henry Halleck, commander of the Department of the Missouri, to make a demonstration toward Murray in western Kentucky. Halleck passed the orders on to his subordinate Grant, commander of the District of Cairo, who advanced on January 15. Grant's District of Cairo Army comprised three divisions under Brig. Gens. John A. McClernand, Charles Smith, and Lew Wallace. Grant ordered McClernand and Smith to advance south. As they did so, they were to block Rebel troops at Columbus, Kentucky, from shifting east to support Union forces in eastern Kentucky.

Grant and McClernand's wet and muddy troops returned to Cairo on January 20. Smith, meanwhile, boarded the gunboat *Lexington* and steamed up the Tennessee to within a couple of miles of Fort Henry to get a look at the Confederate works. After firing a few shells at the fort and receiving none in return, Smith had seen enough and returned downriver. Upon returning to Paducah, Smith did not waste any time in sending a message Grant, his former West Point student and superior officer. He told Grant that he believed only two ironclad gun-



boats would be required to reduce Fort Henry. Grant agreed.

On January 23, Grant visited Halleck at St. Louis to urge a move up the Tennessee River to take Fort Henry. Halleck dismissed the whole plan as preposterous.

Grant returned to Cairo crestfallen, but the plan of capturing Fort Henry was far from over. On January 28, Grant sent a telegraph to Halleck stating that if permitted he could take and hold Fort Henry. Flag Officer Andrew Hull Foote, who had arrived at the end of August 1861 to take command of the growing brown-water navy, was in agreement with Grant and sent a similar message to Halleck. The next day Grant sent another message. If something was not done soon the Rebel defenses "on both the Tennessee and Cumberland rivers will be materially strengthened," wrote Grant.

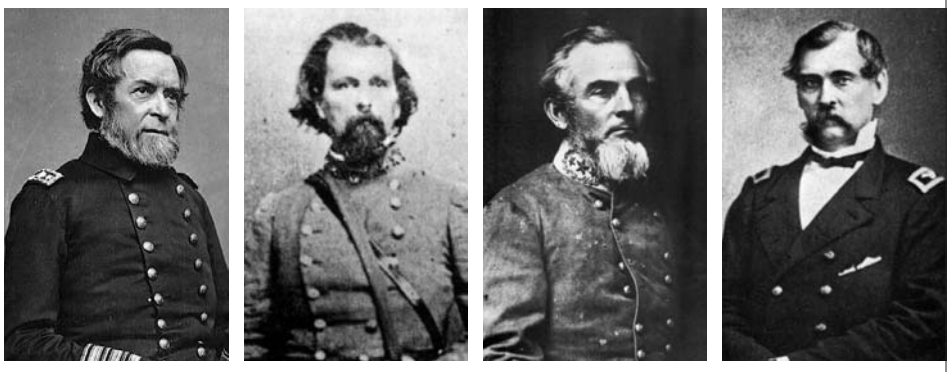
Halleck actually was thinking along the same lines, but he was not keen on having Grant suggest it to him. Others such as Charles Whittlesey, chief engineer of the Department of Ohio, had earlier suggested an advance up the Cumberland and Tennessee Rivers. Halleck received an incentive to take action when U.S. President Abraham Lincoln on January 27 issued General War Order No. 1 that "the 22 day of February, 1862, be the day for a general movement of the land and naval forces of the United States against the insurgent forces."

On January 29, Halleck received a telegraph from McClellan informing him that General Pierre Gustave Toutant Beauregard was ordered west from Virginia with 15 regiments to support Johnston. While it was true that Beauregard was headed to help Johnston, he had no reinforcements with him. The rumor motivated Halleck to order Grant to capture and hold Fort Henry the following day.

Library of Congress

It was the news Grant had been waiting for, and he hurried to get his men moving before Halleck changed his mind. As the roads were too muddy to march over, Grant's 17,000 troops would be divided into two divisions and moved by steamboat. Supporting the transports would be gunboats both ironclad and timberclads. Timberclads were wooden side-wheel steamers converted into gunboats by arming them and strengthening them with five inches of oak siding.

On February 2, McClernand's division departed Cairo headed for Paducah to join Smith's division. As not all of Grant's army could fit on the steamers, most of Smith's division was forced to wait at Paducah while McClernand's men steamed up the rain-swollen Tennessee River to Fort Henry, reaching it at 4:30 AM on February 4.



All: National Archives

ABOVE: Among the many generals who played important roles in the Tennessee campaign were (left to right) Union Flag Officer Andrew H. Foote, Brig. Gen. Lloyd Tilghman, Confederate Brig. Gen. Gideon J. Pillow, and Union Brig. Gen. Charles F. Smith. OPPOSITE: Fort Henry, a five-sided earthen fort on a bend in the Tennessee River, is shown in a period sketch by Henri Lovie. The Tennessee River was in flood at the time of battle, and parts of the low-lying site were awash with two feet of water.

With the decision made as to where to land his army, Grant headed upriver with the returning steamers to oversee the movement of Smith's division. Two of the timberclads searched for torpedoes the Confederates had placed out in the channel but had come loose due to the fast-rising waters of the Tennessee. McClernand's division, meanwhile, moved inland and began setting up camp around 3 PM. Elements of Smith's division began arriving in the late afternoon with the rest coming throughout the rainy night and the next day.

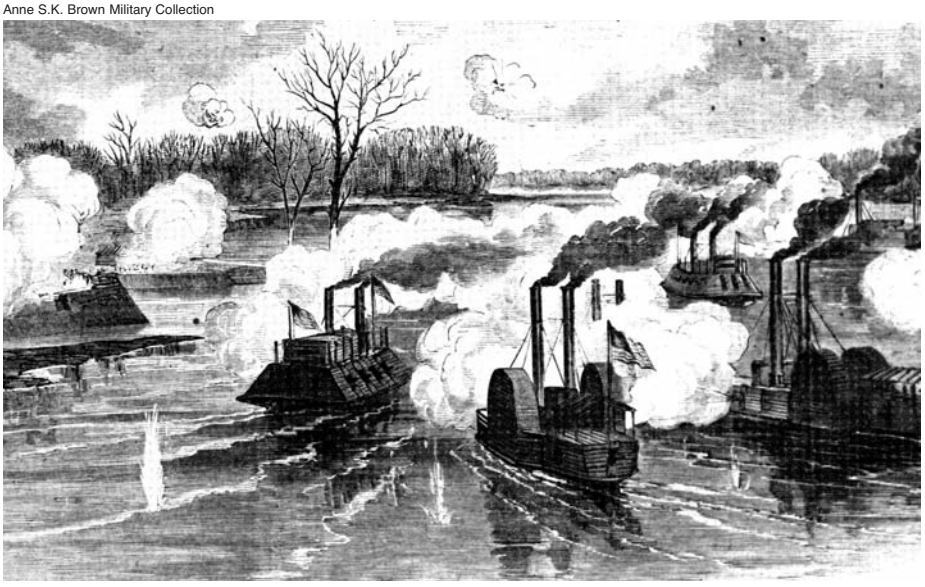
While the Federals were coming ashore, a Confederate dispatch rider from the works at Fort Henry rode east to Fort Donelson to warn Tilghman. The dispatch rider reached Donelson around 4 PM and informed the Confederate commander of the Federals' presence. Tilghman, who had heard the Confederate artillery engage the *Essex*, rode back to Fort Henry with an escort from the 9th Tennessee Cavalry.

By 11:30 PM Tilghman was back at Fort Henry. To face the Federals, Tilghman had 2,600 poorly armed men. The fort was a five-sided earthwork. Beyond its ramparts were outer entrenchments designed to repulse a land attack. Tilghman had 17 guns, consisting of eight 32-pounders, two 42-pounders, five 18-pounders, one 6-inch rifled gun, and a 128-pounder Columbiad rifled gun.

Tilghman quickly ordered two regiments on the west side of the Tennessee holding the unfinished Fort Heiman to abandon it and cross over to Fort Henry. A couple of companies of Alabama cavalry and a Kentucky spy company were left on the west side of the river to harass the Yankees. In addition to the nearby Federal army, Tilghman also was faced with flooding. The river had begun to rise, and water was flowing into Fort Henry. By the morning of February 5, there were two feet of cold water inside the fort.

While Smith's troops continued to arrive on February 5, Foote's gunboats traded a few shells with the Confederate gunners to little effect. That evening Grant laid out his plans for the next day. The attack was to begin at 11 AM. McClernand's division was to move east of Fort Henry to take up a blocking position on the route between the Rebel works and Fort Donelson. When Grant gave the order, they were to storm Fort Henry. Two of Smith's brigades, which had landed on the west side of the river, were to capture Fort Heiman and place guns on it. Then, the bulk of the infantry was to cross the river by steamer and join in the attack on the fort. Smith's third brigade was to remain on the east side of the Tennessee and help McClernand if needed. The gunboats, meanwhile, were to steam upriver and attack the fort.

Anne S.K. Brown Military Collection



ABOVE: Flag Officer Andrew H. Foote's gunboats engaged the Confederate batteries at Fort Henry. Foote had ironclad and timberclad vessels, the latter of which were wooden side-wheel steamers armed with cannons and strengthened with five inches of oak siding. OPPOSITE: Grant captured two forts in a two-week period in a combined land and naval campaign that established him as one of the Union's most promising generals. The surrender of 15,000 Confederates at Fort Donelson deprived the South of troops that were badly needed to defend the sprawling Western Theater.

With no reinforcements coming and the Federal army expanding, Tilghman realized he could not hold Fort Henry. After a meeting with his subordinates, he decided the garrison would abandon the fort and join the troops at Fort Donelson. To buy precious time for the retreating troops, a detachment of gunners from Company B, 1st Tennessee Artillery was to fight a delaying action for one hour.

At 10 AM on February 6, the Confederate garrison retreated from Fort Henry to Fort Donelson. Tilghman accompanied his men for part of the way. He then swung his horse around and returned to join Captain Jesse Taylor, who commanded the artillery at Fort Henry. The Confederate forces braced for the Federal naval attack.

While Grant's progress was slowed by muddy roads, swollen creeks, and thick woods, the gunboats commenced the attack alone. Closing to within 1,700 yards of Fort Henry, Foote's ironclad flagship, *Cincinnati,* fired the signal shot around 12:30 PM for the rest of the ironclads to begin firing. Upon hearing this signal, the gun crews aboard the *Essex, Carondelet,* and *Cincinnati* began shelling the target. *Essex* Second Mate James Laning recalled Foote telling the crew the previous day, "Every charge you fire from one of those guns cost the government approximately eight dollars. If your shots fall short you encourage the enemy. If they reach home you demoralize him, and get the worth of your money." When the first three shots from the *Cincinnati* fell short, Laning said, "There was $24 worth ammunition expended."

The Confederates soon returned fire. Taylor instructed his gun crews to pick a specific target and keep hammering it. The ironclads continued to fire as they closed to within 600 yards of the Rebel works. The more vulnerable timberclads, such as the *Lexington, Conestoga,* and *Tyler,* kept their distance, lobbing shells into the fort. Rebel gunners scored multiple hits on several vessels. The *Essex* was hit 14 times. One shell ripped into her middle boiler producing a blast that resulted in a "chasm for the escape of scalding steam and water," wrote Laning. Thirty-two Union sailors aboard the *Essex* were killed or injured, including Porter. The *Essex* dropped out of the fight and drifted downstream where another vessel towed her to safety.

The Confederate gunners on shore were suffering casualties as well. With only four guns still firing, the water inside the fort continuing to rise, and the Federal gunboats within 200 yards, Tilghman decided it was time to surrender. He had bought time for the troops from his garrison to escape. At 1:50 PM, he ordered his men to hoist a flag of truce above the parapet. Dense smoke hid the white flag from the Federal gunboats. The fort continued to receive naval fire, so Tilghman ordered the Confederate colors lowered from the main flagstaff. The Union gunboats had won the battle and captured the fort.

By the time McClernand's troops arrived in position the battle was over and most of the Rebel garrison had escaped. McClernand dispatched cavalry detachments in pursuit of the retreating Confederates. The Federals captured 38 men and two guns before darkness made further pursuit impossible. Afterward, Grant sent off a message to Halleck informing him of the gunboat victory. He advised Halleck that he expected to capture and destroy Fort Donelson on February 8 after which he would return to Fort Henry.

The addition of the Confederate troops who escaped from Fort Henry raised the number of defenders at Fort Donelson to 6,000. Heiman was in temporary command of Fort Donelson. The fort and surrounding earthworks covered 15 acres. The Confederates immediately began improving the defenses of the half-built fort. Over the following five days, they felled trees to improve fields of fire, constructed abatis, and excavated entrenchments and rifle pits. They managed to complete crescent-shaped outer works that covered the fort and the town of Dover to the south. The unfinished north section of the fort was protected not only by a swamp, but also by a flooded creek.

Colonel Johnston arrived from Nashville to replace Heiman as the commander of Fort Donelson on February 7. Senior Confederate commanders—Johnston, Beauregard, and Maj. Gen. William Hardee—met in Bowling Green, Kentucky, to discuss the loss of Fort Henry and the anticipated followup attack by the Federals on Fort Donelson. Despite Beauregard's suggestion that they concentrate all their troops at Fort Donelson to fight a decisive battle with Grant, Johnston decided that the Confederates would temporarily withdraw from Kentucky and form a new defensive line south of the Cumberland River.

Johnston's plan required the evacuation of Bowling Green and Columbus. Fort Donelson also would have to be evacuated. For the time being, though, Johnston would reinforce it to delay the Yankees so that Confederate troops retreating from Bowling Green could reach Nashville. At that time, Johnston hoped that the large force at Fort Donelson could slip out and rejoin the army. Despite the importance Fort Donelson was to play in Johnston's plan, he did not visit the fort. Instead, he oversaw the withdrawal from Bowling Green while Beauregard headed to Columbus to oversee the evacuation there. The defense of Fort Donelson fell to Brig. Gen. Simon Buckner, Brig. Gen. Gideon Pillow, and Brig. Gen. John Floyd. Floyd was the senior general and therefore the overall commander. He commanded not only the forces at Fort Donelson, but also those posted nearby on the Cumberland River.

Floyd, a Virginian, had served as Secretary of War under President James Buchanan. He

had tendered his resignation because he disapproved of Buchanan's decision to allow Major Robert Anderson to continue to occupy Fort Sumer. He had held the cabinet post amid rumors of wrongdoings that resulted in congressional investigations. He had vacillated over where the Southern states should secede from the Union. Initially, he adamantly opposed secession, and then he just as adamantly supported it. This was also the way he ruled troops in the field. He was irresolute most of the time, to the great detriment of the men he led in battle.

Pillow, a Tennessean and veteran of the Mexican War, was the sort who looked out for his own interests at the expense of everyone else. He was vain, quarrelsome, and an ineffective commander. Pillow arrived at Fort Donelson with reinforcements and took command on February 9.

Kentuckian Buckner was the most able of the three commanders. He hailed from Hart County in central Kentucky. He did not own slaves and he did not support secession but nevertheless decided to fight for the South. As a dashing young officer, he had served with distinction in the Mexican War. He showed his mettle at Churubusco, where he was breveted first lieutenant, and at Molino del Ray, where he was breveted captain, and at Chapultepec and the Belen Gate. After the war, he served a stint as assistant instructor of infantry tactics at West Point.

As more troops and supplies arrived, work accelerated on the fort's outer defenses. Artillerymen drilled on the fort's dozen guns in the two water batteries that were well positioned to cover the river approach to the fort. The disparate cavalry companies at the fort were consolidated under Lt. Col. Nathan Bedford Forrest, who arrived with his 3rd Tennessee Cavalry on February 11. The competent Forrest established routine cavalry patrols in the direction of Fort Henry.

Floyd and Buckner did not like the idea of having their troops besieged in Fort Donelson. Instead, they wanted to leave a small force at Donelson and march the bulk of their forces against Grant's supply line. Pillow did not like their plan. He did not believe it adhered to Johnston's orders. Pillow therefore refused to release Buckner's division stationed at Fort Donelson. Leaving Buckner, who had arrived on February 11, temporarily in charge of the fort, Pillow visited Floyd at Clarksville on the morning of February 12 to explain his view. By that time, it did not matter because Grant's forces had arrived outside Fort Donelson.

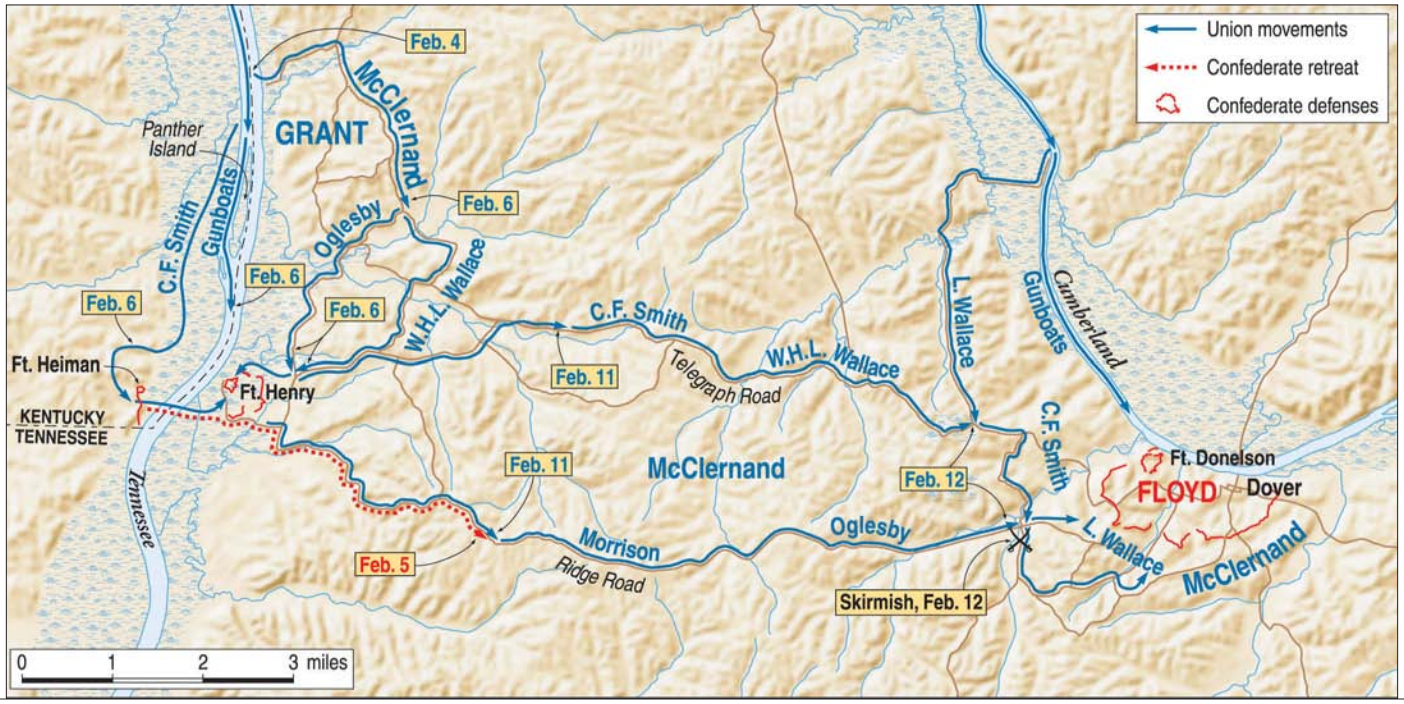
Rain, sleet, and muddy roads had kept Grant from marching for six days after the capture of Fort Henry. While some of Foote's gunboats returned to Cairo for repair, the timberclads under Lieutenant Ledyard Phelps set off on a raid that took them 150 miles up the Tennessee River to Florence, Alabama.

Grant had 15,000 men in three divisions. He sent McClernand's division on the road to Fort Donelson on February 11; the rest of the troops set out the next morning. The weather was improving to the delight of the soldiers. The Federals marched without tents and baggage, which made it easier to enjoy the sunny winter day. "We took nothing with us but our blankets and haversacks, three days rations of crackers and boiled pork; our muskets and cartridge boxes with forty rounds of cartridges," wrote Sergeant F.F. Kiner of the 14th Iowa of Smith's division. Many of the men tossed their overcoats to the side to lighten their load. They would soon regret doing so.

Scattered shots rang out that morning as Forrest's troopers engaged elements of McClernand's division. The Rebels soon fell back to the protection of the earthworks. Grant deployed McClernand's division on the right and Smith's division on the left.

The gunboat *Carondelet* arrived and let her presence be known by firing on the fort. Based on information from captured Confederate pickets, Grant slightly overestimated the number of Con-

"WE FORMED THE LINE OF BATTLE EXPECTING ONLY A SLIGHT SKIRMISH, BUT WHEN WE CAME TO THE BROW OF THE HILL WE SAW OUR MISTAKE FOR WE COULD SEE THEM COMING IN COLUMNS OF REGIMENTS AND THE FIRING WAS TERRIFIC."



federates at Fort Donelson. He believed there were as many as 20,000 men defending the outerworks and the fort.

The temperature plummeted that night and both sides endured sleet. On the morning of February 13, McClernand ordered his troops to extend their line toward the Cumberland River. Meanwhile, Smith's troops reconnoitered the Confederate right. Both division commanders were under orders not to bring on a general engagement because Grant was waiting for reinforcements to arrive. He sent word to General Wallace, whose division had been left behind at Fort Henry, to come at once with his men.

Both Floyd and Pillow returned to Fort Donelson with additional troops. Troops continued to arrive throughout the day, bringing the total to 17,000 men. Pillow took command of the left wing opposite McClernand, and Buckner took charge of the right wing opposite Smith.

To create a diversion for McClernand and Smith, the *Carondelet* began firing on the Confederate water batteries. The Confederate gunners returned fire with their two long-range guns. During the artillery duel, a 128-pound shell from a Rebel Columbiad hit the *Carondelet,* wounding six sailors. Having suffered damage to its engine, the *Carondelet* withdrew downriver. After transferring its wounded to the steamer *Alps,* the gunboat returned to action.

While the batteries and the gunboat traded fire, Smith ordered Colonel John Cook's brigade, which was composed of Illinoisans and Indianans, and Colonel Jacob Lauman's brigade, made up of Iowans and Indianans, to advance against Buckner's two brigades, which were mostly composed of Kentuckians and Tennesseans. The Federals encountered thick abatis that slowed their advance. When Confederate artillery began shelling the Federals entangled in the obstructions, they pulled back.

McClernand's men were under heavy fire from a battery positioned in a salient near the center of the enemy lines. McClernand ordered his guns to silence it. Then, at 1 PM, he ordered two regiments from Colonel William Morrison's brigade and a regiment from Colonel W.H.L Wallace's brigade to storm the Rebel battery known as Redan No. 2. The Confederates repulsed the attack. The heavy artillery fire ignited fires in the forest, endangering Union soldiers too badly wounded to escape. In an act of mercy, Rebels went into the woods to rescue some of these men from the horrible fate that awaited them.

Snow fell throughout the night of February 13-14, increasing the suffering of the men on the front lines. Foote arrived at 12 AM with three ironclads, two timberclads, and steamers bearing more Federal reinforcements. Grant hoped that he could compel the Rebels at Fort Donelson to surrender by employing heavy naval bombardment as he had at Fort Henry.

Early on the morning of February 14, Floyd met his generals at Dover to discuss the situation. They agreed to evacuate Fort Donelson. The plan called for Pillow to attack the Federal right, which would open a retreat route to Nashville, while Buckner's troops served as the rear guard. As it turned out, there would be no breakout. Pillow's men, who did not get into position until 1 PM, had hardly started out before Pillow called off the attack. He did so on the grounds that it was too late in the day. The Confederates resolved to try to break out the following morning.

Meanwhile, more Federal troops arrived. General Wallace's command arrived at 12 PM. Grant ordered him to deploy his troops between the divisions of Smith and McClernand. McClernand was still unable to stretch his line all the way to the Cumberland River even when Colonel John McArthur's brigade from Smith's division reinforced him.

At 3 PM Foote ordered his ironclads to shell Fort Donelson. In response, the *Carondelet, Pittsburgh, Louisville,* and Foote's flagship *St. Louis* moved into position. The timberclads *Tyler* and *Conestoga* followed to furnish additional firepower.

As the ironclads steamed around a bend in the river, a Confederate 10-inch Columbiad opened up. When the gunboats got to within a mile of the batteries they returned fire. Foote's gunboats closed to within 400 yards of the batteries, taking a pounding from the Confederate guns. The *Louisville* was heavily damaged and drifted downstream. The *St. Louis* was struck 59 times; a shot through the pilothouse injured Foote. The Confederates hit the *Carondelet* 54 times. Both the *Carondelet* and *Pittsburgh* took on water. A cheer erupted from the Confederate soldiers as the Federal gunboats withdrew.

Despite their victory over the gunboats, Floyd, Pillow, and Buckner met again to discuss breaking out of Fort Donelson the next morning. The plan they agreed on was basically the same as that of the night before. Pillow would attack McClernand's division, pushing it to the west to open up an avenue of escape via Wynn's Ferry and Forge Roads, which were the principal routes Nashville. With a regiment from the garrison left to face Smith, Buckner would move to the center and strike McClernand's troops in the flank and rear. Buckner's troops would then fight a rearguard action until the bulk of the Confederate forces had escaped. The retreating Confederates would then make their way to Nashville.

After enduring another bone-chilling night on February 14-15, the Confederates shifted their troops shortly after dawn. Pillow and Johnson attacked the Federal right flank with 14 regiments. The troops on the Federal right braced for the Confederate attack. "We formed the line of battle expecting only a slight skirmish, but when we came to the brow of the hill we saw our mistake for we could see them coming in columns of regiments and the firing was terrific," wrote Lieutenant W.D. Harland of the 18th Illinois of Colonel Richard Oglesby's brigade. The combatants fought furiously in the snow-covered woods, ravines, and roadways. After some hard fighting, the Confederates successfully pushed the Federals to their left.

Buckner's troops joined the battle at 7 AM, striking Colonel Wallace's brigade in the center

of McClernand's line near Wynn's Ferry Road. However, the Federals repulsed the attack.

McClernand was in desperate need of help and sent a staff officer to Grant's headquarters located in a farm house in Smith's sector. He did not find the commanding general at that location because Grant had gone to confer with the wounded Foote on his flagship. McClernand also sent a request to General Wallace for assistance. Wallace was reluctant to send help because he had been ordered to hold his position and not to do anything to bring on an engagement. Wallace therefore sent an officer to get clarification from headquarters. Grant, of course, was not there, but one of his aides, Cap-

tain William Hillyer, went to find the commander. Although he had not received orders to do so, Wallace nevertheless sent Colonel Charles Cruft's brigade to the aid of McClernand's hard-pressed right.

Wild fighting turned the snow red and shrouded the battlefield in gun smoke as the Confederate attack continued throughout the morning. The troops of McArthur, Oglesby, and Cruft ran low on ammunition and took heavy casualties. Just as the Confederates had planned, they were being steadily pushed west. The Confederates launched a ferocious assault on Colonel Wallace's brigade. They screamed the Rebel yell as they rushed at Wallace's men. With no reinforcements coming, Wallace ordered his men to withdraw.

Hearing the roar of battle all morning, General Wallace rode over to see for himself what was happening. Wallace met retreating Federals who shouted as they fell back that they needed cartridges. He soon came upon Colonel Wallace and asked how close the Confederates were. They were very close, the colonel said. General Wallace formed the remainder of his division to withstand the attack. For the next hour, his troops repulsed three Confederate assaults.

The Confederate advance was halted, but by early afternoon the Rebels had opened up their escape routes to Nashville. As Buckner's men, carrying their knapsacks and rations, prepared to hold open the escape route, they were where shocked to see Pillow's men heading back toward their lines. Pillow believed the plan was for the troops to fall back to their lines, get their gear, and prepare for the evacuation. Buckner protested that they must get out right away. Pillow instead ordered Buckner to fall back as well. When Floyd arrived on the scene, he initially agreed with Buckner but then changed his mind and agreed with Pillow. The Confederate troops turned and headed back to their lines. It would be a costly mistake.

By this time Grant was on the field. Hillyer had told him of the Rebel attack on his lines. Arriving at the place where General Wallace had made his stand he found Wallace and McClernand conversing. "Gentleman, the position on the right must be retaken," Grant said when informed of the dire situation. The Union commander rode among the Federals and told them to refill their cartridge boxes and reform for battle. He meant to do everything possible to prevent the Rebels from escaping.

Grant believed that the Confederates must have weakened their right to make their all-out attack on the left. "The one who attacks first now will be victorious," Grant told an aide, adding, "The enemy will have to be in a hurry to get ahead of me." At 2 PM Grant ordered Smith to attack.

Lauman's brigade of Smith's division led the assault with Colonel John Cook's brigade attacking on their right flank. "Come on you volunteers. Come on!" shouted Smith as he led the attack. "This is your chance. You volunteered to be killed and now you can be!" Pushing up a slope through brush and over logs, Smith's men overran the 30th Tennessee, which was the lone regiment holding the line for Buckner, and captured their breastworks and rifle pits. Buckner's returning men prevented Smith from pushing any farther. By 3 PM the Federals controlled the Tennesseans' earthworks.

Union Brig. Gen. Charles F. Smith's troops storm Fort Donelson, overrunning a battery and breaching part of the defenses on the Confederate right flank. Union morale ran high throughout the campaign.

Anne S.K. Brown Military Collection

General Wallace also launched an assault. He recaptured ground lost to the Rebels in the morning. He was aided by troops from McClernand's division who had regrouped and by nightfall had retaken much of the lost ground. In the day's fighting the Confederates lost 2,000 killed and wounded while the Federals suffered 2,800 casualties. Grant's losses were replaced that evening when more reinforcements arrived by steamer.

Buckner, Pillow, and Floyd met again in the early morning of February 16 in Dover to determine what to do next. Rebel scouts reported that they saw enemy campfires in previously held Confederate positions. The Confederate generals asked Forrest to send out scouts to see if the troops could escape. He returned with news that road near the river was open, but it was flooded for approximately 200 hundred yards in one place. He doubted if infantry could get through, but he was confident that cavalry could make it through the flooded section.

Buckner did not want to risk the lives of his men by fording the frigid water. He doubted they

Continued on page 64

Brigadier General Robert Craufurd's Light Division inflicts heavy casualties on the French 66th Line Infantry as it tries to force a crossing of the Cao River on July 24, 1810, in the runup to the Battle of Bussaco. The bridge funneled and compressed the attackers, exposing them to fire from the front and flanks.

CARNAGE AT BUSSACO

FRENCH BRAVERY WAS NOT ENOUGH TO OVERCOME UNINSPIRED TACTICS IN A BLOODY CLASH IN JULY 1810 BETWEEN MARSHAL MASSENA AND VISCOUNT WELLINGTON DURING THE PENINSULAR WAR.

BY SIMON REES

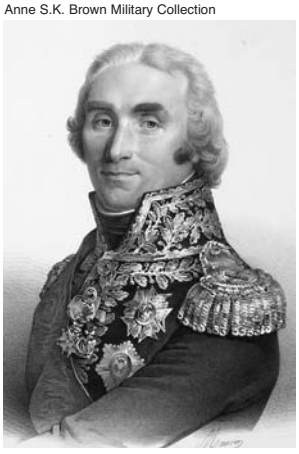
TIRED, BATTERED, AND BRUISED, THE Spaniards had put up a brave fight, but the enemy had proven too powerful. More than 5,000 had defended the fortress town of Ciudad Rodrigo, holding out for 10 weeks until resistance ended on July 10, 1810. Approximately 1,800 civilians and soldiers had been killed and thousands more wounded as Governor Andres de Herrasti sought terms. There was little more he could do as the fortress' walls were now breached. Marshal Andre Massena, commander of the French Army of Portugal and Herrasti's opponent, congratulated the governor for his men's stout-hearted defense and granted them full honors in surrender. Massena's force would soon grow to 65,000 men, and it was a step closer to invading Portugal with the goals of seizing Lisbon and crushing an Anglo-Portuguese army along the way.

Lieutenant General Arthur Wellesley, the Viscount Wellington, commanded this Allied force and had avoided relieving Ciudad Rodrigo because the French both outnumbered and outgunned him. With the exception of some skirmishing probes, his forces had remained beyond French striking distance. Wellington also knew Massena would have to take Almeida, another fortress town, to secure the main arterial route from Spain into Portugal. That was important because buying time was his most pressing concern as hundreds of engineers and pioneers, along with thousands of civilians, were busy constructing the Lines of Torres Vedras around Lisbon. These defenses would ensure there was no rerun of the grim Battle of Corunna fought on January 16, 1809, when the British held off the French and evacuated northern Spain by sea after a grueling retreat. Massena knew nothing of the lines or how they were influencing Allied behavior.

The Repulse of the 66th Grenadiers, from an oil painting by © Christa Hook

Wellington Museum, Apsley House, London

Anne S.K. Brown Military Collection



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Left to right are Lieutenant General Arthur Wellesley, the Viscount Wellington; Marshal Andre Massena, and Marshal Michel Ney. BELOW: A soldier from the 19th Portuguese Regiment. The green regiment checked and routed the French 32nd Light Infantry, earning spontaneous cheers from nearby Allied troops.

Massena and his ambitious subordinates clashed repeatedly in the French camp, which had a detrimental effect on the army's effectiveness. His apathetic speech on taking command two months earlier had hardly helped. "Gentlemen, I am here contrary to my own wish," he said. "I begin to feel myself too old and too weary to go on active service. The Emperor says that I must and replied to the reasons for declining this post that I gave him by saying my reputation would suffice to end the war." These were hardly words to inspire victory, let alone confidence. Massena had demonstrated his talents as a corps commander during Napoleon's campaigns in central Europe the year before, particularly during the Battles of Aspern-Essling in May and Wagram in July. Indeed, Napoleon had conferred on him the title Prince d'Essling in recognition of his efforts. Nevertheless, this time Massena was undertaking an independent command thatcame with far greater challenges.

Born in 1758, Massena had served in the old royal army and then raced through the ranks of Revolutionary command during the mid-1790s. He had successfully campaigned across some of the Continent's toughest terrain, scoring notable victories along the way. Gruff and direct, he was also avaricious. Napoleon had to censure him twice for egregious looting and expropriation in Italy. He had been blinded in the left eye, although not because of enemy action. According to Jean-Baptiste Marbot, an aide-de-camp, Massena had joined Napoleon and his entourage on a hunt, during which the emperor took a poor shot or misfired. Some of the pellets struck Massena's face and, although left writhing in agony, he saved the emperor from further embarrassment by blaming Marshal Louis Berthier. Marbot's memoirs offer a unique window on events, but it is important to note he was often biased against Massena, whom he thought played out by 1810.

Wellington responded to Ciudad Rodrigo's fall by ordering most of his forces to retire west of the River Coa in the Portuguese frontier region with Spain. Brig. Gen. Robert Craufurd's Light Division was kept on the eastern side to act as a screening force and thwart any potential coup de main against Almeida. But any action would probably be limited in scope and most likely involve a quick withdrawal given the expected size of the approaching enemy. "I am not desirous of engaging in an affair beyond the Coa," wrote Wellington to Craufurd on July 22, underlining his view that battle was best avoided. However, the Allied commander left the final decision to an experienced subordinate whose primary concern had to be Almeida's initial safety.

The Light Division was deployed on a northeast-southwest axis for several miles, starting with a half battalion from the 95th Foot deployed south of Almeida. The regiment was composed of specialist skirmishers famed for their Baker rifles and nicknamed the Green Jackets because of their dark green uniforms. The center was held by battalions from the 43rd Foot and the Portuguese 1st and 3rd Cacadores, while the 52nd Foot held the southwest and was closest to the Coa. Craufurd had 4,200 infantrymen with several hundred cavalrymen and a fair number of guns in support. The terrain was latticed with earthen walls that marked various rural boundary lines, while a road ran behind Allied positions before passing a bridge over the river. The Coa has precipitous sides and it was in full flow on the night of July 23 because of torrential rains, rendering its small number of fords unusable the next day.

Reconnaissance units from the French VI Corps arrived on July 24 and soon reported back to their commander, Marshal Michel Ney, who correctly guessed his enemy had little room to maneuver or retreat. With typical vigor, he ordered squadrons from the French 15th Chasseurs and 3rd Hussars to push forward and pin any Allied units near Almeida. Two divisions under the respective leadership of Maj. Gen. Louis Loison and Brig. Gen. Claude Ferey would follow, striking the Light Division's center and aiming for the bridge. Enemy units that failed to cross would then be destroyed at leisure. The French outnumbered Craufurd more than two to one and a withdrawal should have been initiated as the scale of opposing forces became apparent. Nevertheless, Craufurd decided to hold his ground, a failure in judgment with fateful implications for many Allied soldiers that day.

The weight of the initial attack fell on the 95th, with one of its companies caught in the open and badly cut up by French cavalry, while another contingent suffered friendly fire when Almeida's defenders mistook their uniforms for those of the enemy's. It took support from the 43rd to create a temporary stalemate. Craufurd issued belated orders to retreat over the bridge,

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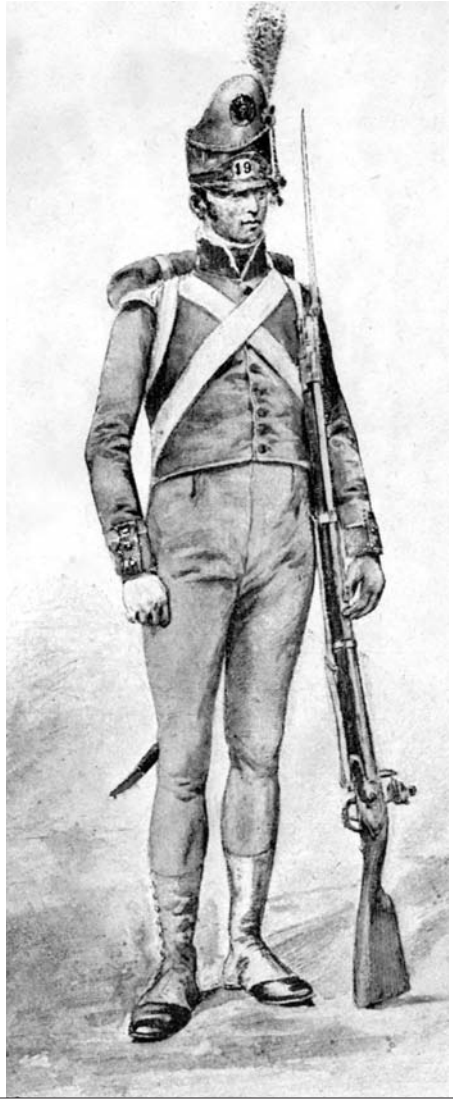

with Allied cavalry and artillery instructed to move first. But the withdrawal was poorly organized and the Portuguese 1st Cacadores reached the crossing first, causing a bottleneck behind. The bridge was constructed almost as a hairpin in the road, which was fine for lazy rural traffic but a nightmare for hundreds of soldiers and animals. Matters were made more difficult by an artillery caisson overturning on the approach and taking up precious road space.

The French were advanced in force, and a strong screen of their tirailleurs and voltigeurs, both of which were light infantry used for skirmishing, were harrying the defenders as they pulled back, although both sides were slowed by the earthen walls. Fortunately for Craufurd, the difficulties at the bridge were soon resolved and his units started crossing and deploying on the western side at a steadier pace. On the east side, the 95th and 43rd were holding a nearby hillock and covering the withdrawal until they were also ordered to retire. That was a mistake as five companies from the 52nd had yet to reach safety and were soon spotted racing along the river bank toward the bridge just as French units were closing in on them. Riflemen and units from the 43rd rushed back over and, with the help of the 52nd, managed to create another momentary stalemate. The remaining Allied forces then crossed, although the final rear guard was less lucky and many of its men were shot down in the last dash for safety.

The Light Division had escaped by the skin of its teeth, and Ney was keen to further harry Craufurd's men. He ordered the French 66th Line Infantry to force the crossing, resulting in a slaughter as the bridge both funneled and compressed the attackers, exposing them to fire from the front and sides. Three efforts were made by various contingents and included a 10-minute period when an estimated 240 casualties were inflicted. A truce was eventually called to gather the wounded, with Ney bringing the battle to a close shortly afterward. "It was a piece of unpardonable butchery," Captain Jonathan Leach of the 95th Rifles wrote of the 66th's attack. He was impressed by their bravery, but appalled by the wanton order to attack an almost impossible position.

Ney reported 530 casualties, leaving Massena both annoyed and concerned that the losses were too large to merit the results obtained. His official communiqués redacted some of the numbers and dwelled instead on a victory achieved so soon after Ciudad Rodrigo.

The Allies' response was to stress the virtue of cool heads in a crisis. "The retreat was so well covered and protected by the excellent disposition of the troops forming the rearguard

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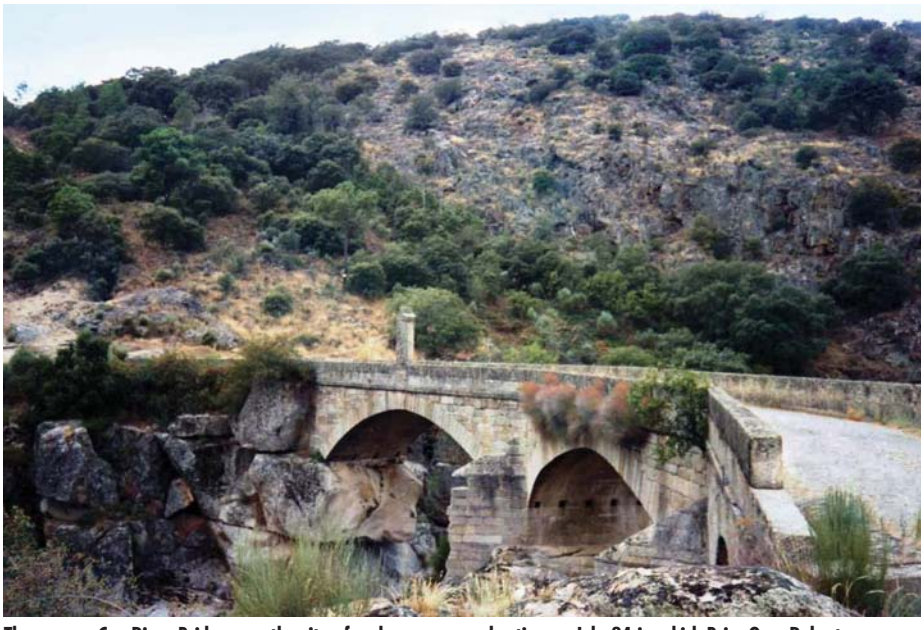


The narrow Cao River Bridge was the site of a sharp rearguard action on July 24 in which Brig. Gen. Robert Craufurd's Light Division narrowly escaped disaster. Nevertheless, they inflicted severe casualties on Marshal Ney's troops before it was over.

that we may, without being accused of vanity or bravado, look back upon it as a day of glory and not of defeat," Leach wrote. That is a deceptive analysis, for the battle was nearly a disaster for the Light Division, which tallied rather conservative losses at 36 killed, 273 wounded, and 83 missing. The French recorded 300 Allied dead, 500 wounded, and 100 prisoners, while the imperial mouthpiece Le Moniteur beefed this up to hundreds captured, 60 Allied officers dead, and 1,200 other ranks killed or wounded. Craufurd was lucky not to suffer a severe reprimand as Wellington was a good judge of capability and knew when to extend the benefit of the doubt. Others were less sure and the Light Division's commander took the somewhat unusual step of defending himself in *The Times*. He also gave the impression that his men had fought off the bulk of Ney's 24,000-strong VI Corps, neatly highlighting how this was also a war of propaganda.

The French then laid siege to Almeida, with Massena worrying about his supply lines and increased guerrilla activity. His difficulties were compounded by missing matériel or sub-standard rations because of fraud among the quartermasters and corrupt contractors, which meant more foraging was required. That was often a euphemism for seizing local produce and leaving the inhabitants who remained in the war zone to face starvation. Frenchmen captured by partisans or the Portuguese militia, the Ordenanza, were tortured or killed because of this suffering. The French carried out various kinds of violent counterreprisals, including arbitrary executions, although Massena tried to maintain the façade of popular liberation. "We enter your territory not as conquerors. We do not come to make war on you, but to fight those who force you to make it," he bombastically proclaimed.

Almeida was defended by Colonel William Cox, who commanded 4,000 Portuguese troops. The heart of the defense was a medieval castle used to store the munitions and powder, while ample rations were held in locations across the town. Massena's men started constructing siege works from mid-August, with the full weight of bombardment beginning on August 26. No one could have predicted what happened next: the defenders' powder and a huge volume of cartridges blew up the following evening. Speculation is rife as to the cause, with some wondering if a French cannonball had ricocheted into the magazine and sparked some loose powder. Bricks, beams, smashed tiles and other detritus were hurled through the air, even killing some of the besiegers. Fires were ignited, creating an inferno that burned in the town's heart into the following day.

Approximately 800 defenders were killed along with hundreds of civilians. It would have been impossible to fight beyond a day or two without the necessary ammunition, so Cox capitulated on August 28. The bulk of Almeida's stores and consumables had survived and were promptly seized. To the disgust of their officers, a large number of defenders volunteered to join the French, although they were probably the canny ones as most deserted in the following weeks and promptly rejoined the Allied ranks. The others were marched off for years of grim captivity. Almeida's fall

Anne S.K. Brown Military Collection

was a major blow for Wellington, who had hoped it would resist for at least 90 days, disrupting Massena's schedule and forcing him to consider advancing over poor roads in autumnal weather. It also would have given him more time for completing the Lines of Torres Vedras.

The French spent several weeks preparing for the next phase of the invasion, with all units finally underway by September 15. Approximately 2,000 men had already been lost to the campaign and approximately 6,000 men were recorded sick, although these numbers were not unexpected because disease and lengthy recovery times were the norm during the Napoleonic wars. It was the atrocious state of the maps that shocked them most as they were a generation out of date and littered with mistakes. Marked roads often proved to be dusty tracks, while hills suddenly became mountains. The artillery and supply units suffered most as their horses and mules heaved guns, caissons, and carts along poorly chosen routes over increasingly rugged terrain.

The Allies fell back and believed the French would advance by using the main route southwest from Celorico to Coimbra. Scouts reported the enemy seemed to be aiming for Viseu to the northwest, which appeared counterintuitive because the French would have to overcome atrocious ground to reach the town. The British had to discern whether the movement was perhaps a powerful and cunning feint. Concerns in that quarter were laid to rest on September 17 when intelligence definitively reported the French Army of Portugal marching on Viseu. Massena's decision was prompted by a combination of factors, including the desultory maps, poor reconnaissance, and a desire to find improved foraging opportunities. "Worse roads could not be found," he rued shortly afterward. "They bristle with rocks. The artillery and wagons have suffered severely."

FOY ATTEMPTED TO RALLY HIS MEN AS THEY STARTED TO WAVER, A TASK MADE MORE DIFFICULT AFTER BEING SHOT IN THE ARM. "AT THIS MOMENT A BALL WENT THROUGH MY LEFT ARM, BREAKING IT," HE SAID. "I WAS SWEPT AWAY IN THE FLIGHT."

French misery was compounded by surprise attacks. This included an audacious strike by Colonel Sir Nicholas Trant and his Ordenanza units on September 20 against the French artillery train no less. The French repulsed the attack, but it underlined the need to properly protect the guns and ancillary units, all of which added to Massena's logistical headaches. His army straggled into Viseu over a 48-hour period beginning on September 18, finding it deserted and stripped of supplies. The artillery and cavalry reserve had still not reached the town by the time Ney's VI Corps moved forward on September 22, while Massena decided to halt his exhausted headquarters staff. Salacious gossips noted that Madam Leberton, his accompanying mistress, was playing a particularly important role in his rest and recuperation. The army was fully on the march by September 25, heading west-by-southwest just as Ney's vanguard units approached Bussaco ridge, where they discovered a strong Allied force waiting to give battle.

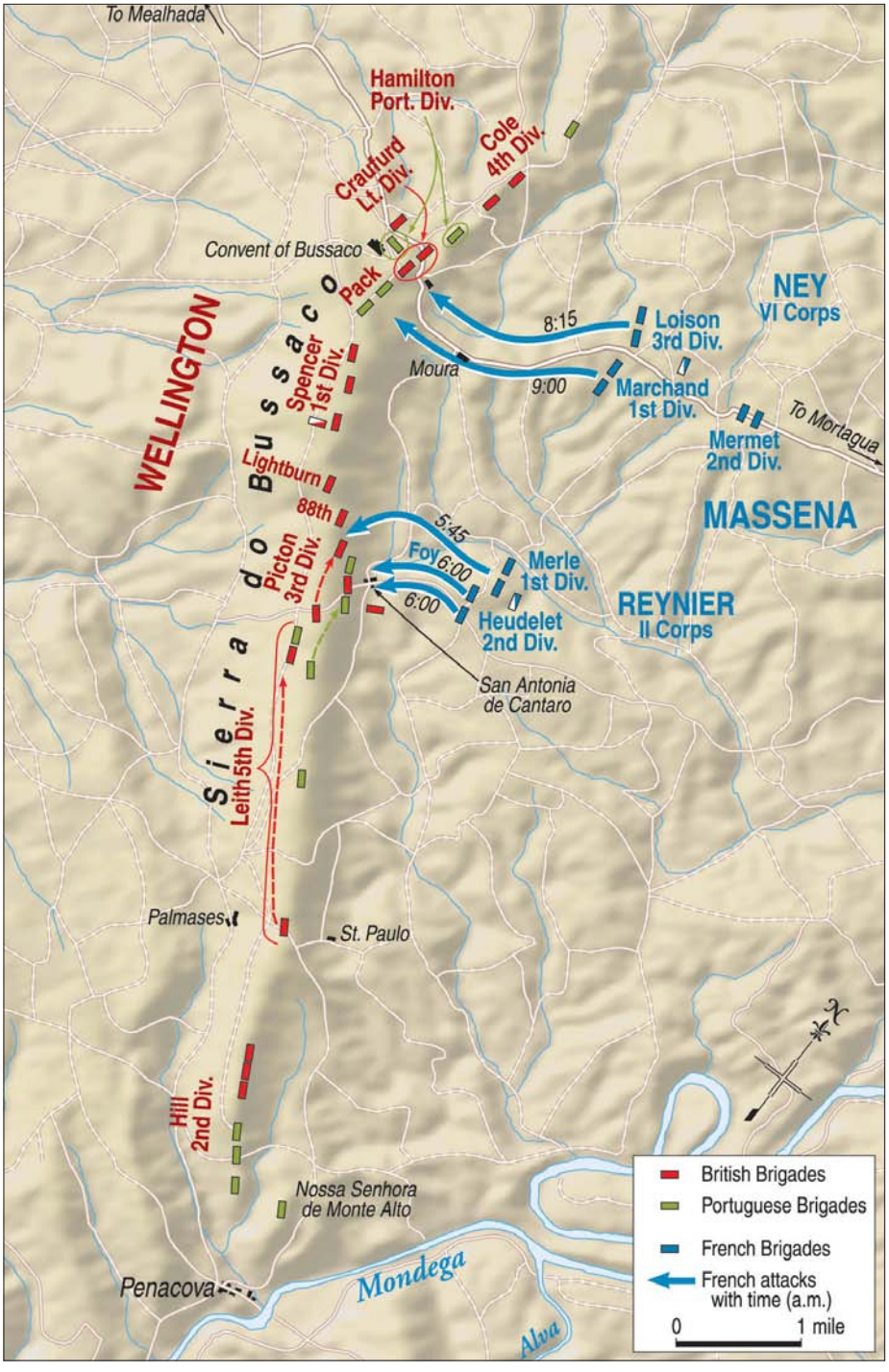
The French saw nearly the entire Anglo-Portuguese army arrayed before them. Wellington noted in correspondence on September 21 that Bussaco was a particularly strong spot for defense. "We have an excellent position here in which I am strongly tempted to give battle," he wrote. Today the area is called Serra do Buçaco, a wooded ridge that peaks at 1,800 feet and is topped by a fairly broad plateau. It extends south to north and then northeast for several miles, with plenty of rocky outcrops in between. In 1810 there were far fewer trees and much clearer vistas. It was also a more sparsely populated location, with a Carmelite religious house located to the center north. Two roads crossed Bussaco ridge, the most important of which ran close to the village of Sula in the north, the other via San Antonio in the center. Several routes also led from the

hamlet of Moura, just southeast of Sula, although most of these seemed fit only for muleteers or goat herders.

The Allied army totaled 50,000 men, with both Britain and Portugal contributing roughly equal numbers. Most of the Portuguese soldiers were untested but eager to fight, having undergone a comprehensive training program directed by Marshal William Beresford. British officers were also recruited into Portuguese units to further assist and quicken Allied integration. The French continued to discount these men based on previous engagements that had shown them poorly led and prone to breaking. There was also a strong German presence in the Allied ranks, including a brigade of the King's German Legion in the 1st Division and some artillery contingents. Wellington had 66 guns of various calibers that he spread out in small batches to cover the areas Massena was most likely to attack. Engineers and pioneers had also built a rudimentary road along much of the plateau to enable unengaged forces to move up in support.

Two squadrons of dragoons were positioned on this road. Officers had ordered the rest of the cavalry to stand down because the craggy terrain precluded their deployment. An 820-man battalion from the Loyal Lusitanian Legion was positioned to the south to watch over the Mondego River, a natural barrier that protected the southern flank. Maj. Gen. Rowland Hill's 2nd Division of 10,700 men was positioned to their immediate north followed by Maj. Gen. James Leith's 5th Division of 6,500 men. Maj. Gen. Thomas Picton's 3rd Division held the center with 4,700 soldiers and Maj. Gen. Brent Spencer's 7,000-strong 1st Division controlled the north center. Three independent Portuguese brigades of 8,400 were nearest the convent, with Craufurd's Light Division of 3,800 positioned in between and slightly ahead. Maj. Gen. Lowry Cole's 4th Division of 4,700 anchored the ridge's northeast end, while militia forces screened the areas beyond.

French efforts to guess Allied numbers were thwarted by the topography and a strong skirmish line that kept their reconnaissance units at bay. Wellington also banned the lighting of camp fires as their glare could help reveal the scale of his forces. That was a wise decision as the French were soon underestimating their opponent's strength, with Loison guessing the Allied army numbered approximately 30,000. Ney arrived on the evening of September 25 and sent an aide-de-camp to request Massena's urgent presence. He also conferred with Maj. Gen. Jean Reynier, the commander of II Corps, announcing he would have liked to attack what he initially believed to be a strong rear guard.



ABOVE: The weight of Marshal Massena's frontal attack fell on the Anglo-Portuguese left and center. Despite the drubbing the French took at Bussaco, Massena still had more than enough men to continue his invasion of Portugal. OPPOSITE: Wellington's forces cross the picturesque Mondego River on their way to the Bussaco ridge. The river lies at the southern end of the 10-mile-long ridge.

But most French forces were still arriving and needed time to prepare, while many other units would not reach the area until the following day. Left stewing for most of September 26, French commanders present became both frustrated and enthusiastic in equal measure, requesting Massena to order an attack almost immediately after his arrival later that afternoon.

Massena refused and announced battle would be given the following morning. The plan he formulated was relatively simple. Reynier's II Corps would attack first, striking the ridge via the San Antonio route and then pushing north along the plateau toward Bussaco Convent. He ordered the deployment of strong rear guards to thwart any Allied relief efforts from the south. Ney's VI

Corps would attack the center and north with two divisions on seeing II Corps progress, leaving a third division in immediate support. VIII Corps, comprising two divisions and under the command of Maj. Gen. Jean-Andoche Junot, would act as a general reserve. Its artillery would also assist Ney's guns, although the high angles involved would make accurate fire almost impossible. Massena decided not to deploy his cavalry because of the rugged terrain. Orders were issued for the battle columns to form up 4:00 AM.

The plan seemed unimaginative to some of Massena's staff officers. Why not use the remainder of September 26 to conduct further reconnaissance and find the Allies' weak spots? Better yet, why not flank the Allies to the northwest and force them into a hurried realignment or retreat? Aide-de-camp Marbot recorded how he and chief of staff Brig. Gen. Joseph Fririon held a conversation positing this question loudly enough for the marshal to overhear. They wanted to draw him away from Major Jean-Jaques Pelet, a trusted aide-de-camp whose opinions were usually heeded above others, much to their chagrin. Massena took the bait, ambled over, and joined the discussion. He seemed to agree with Fririon and ordered the north reconnoitered in more detail, with Marbot writing that he and some others discovered a road that appeared suitable for a wide flanking maneuver.

Marbot hurried back with the good news and Fririon presented the findings to Massena. But Pelet interjected that no roads were marked on the maps and that he had examined the area by telescope and seen no evidence of them. In addition, Ney had not reported any worthwhile routes, despite being in the vicinity for some time. "In vain did General Fririon beg the marshal to accept this offer," Marbot wrote. "All was useless." Increasingly frustrated by the entreaties, the French commander's final retort was typically bluff. "You come from the old Army of the Rhine, you like maneuvering; it is the first time that Wellington seems ready to give battle, and I want to profit by that opportunity," Massena said. He apparently voiced regret to Fririon some hours later, admitting he should have considered further reconnaissance to at least confirm the road's value. But it was too late, and the battle would have to go ahead as planned.

The early hours of September 27 were misty, offering useful cover as Reynier's two divisions formed into columns under the respective commands of Generals Pierre Merle and Etienne Heudelet. Their advance started at 5:45 AM with artillery firing blind at suspected targets over the lead columns. Little damage was done as Allied forces hunkered down in defensive positions or waited behind reverse slopes. Heudelet's 8,000-strong division used the route from San Antonio, its skirmishers clashing with enemy light companies from Allied 3rd Division's 45th, 74th, and 88th Foot Regiments. Picton sent over additional men from the 45th and some from the 8th Portuguese Regiment to support the 88th as the firing intensified nearest its front. The French found the approach tiring. Their difficulties were compounded by the odd British cannonball careening down the slopes to crush, mutilate, or knock men over like rag dolls.

The French 31st Light Infantry closed in on the Allies first, finding themselves opposed by men of the 74th Foot and 21st Portuguese Regiment. The Portuguese soldier not only stood his ground but also let the French come in close before delivering steady, well-fired volleys. Somewhat bemused their enemy was not wavering or retreating as he had so often done in the past, the French also struggled to hold formation because of the uneven ground and incoming musket balls, the damage from which could be horrendous to the human frame. The same resistance was met elsewhere along this stretch of the Allied line and few troops could withstand such a beating for long. Heudelet's men were no exception and withdrew out of small arms range.

Other fighting had erupted as Merle's force of 6,500 men came into range less than a mile to the north. The conditions and mist now worked against the French as the attackers were disoriented during their approach. Many of them fell away from the main body, including a large group of men who inadvertently found themselves on the ridge's crest having marched between the 45th and the 8th Portuguese. It was too good an opportunity to waste and the French soldiers clung on, limpet-like, while causing a supporting Portuguese militia unit to flee. Colonel Alexander Wallace from the 88th noted the threat and raced over with three companies. It was essential to push the French back or their comrades behind would come up in support and threaten a breakthrough. "Don't give them the false touch but push home to the muzzle!" Wallace shouted, urging his men to make full use of the bayonet when charging.

Men from the 45th's left flank had joined the 88th in their charge against the French 36th and 70th Line Infantry Regiments. The subsequent hand-to-hand fighting was fiercely contested, although Allied troops had the benefit of being comparatively fresh and being in tighter formation. "All was now confusion and uproar, smoke, fire, bullets, officers and soldiers, French drummers and drums knocked down in every direction," wrote William Grattan, an ensign with the 88th. The enemy broke with the 45th, 88th, and some of the 8th Portuguese hot on their heels until they came within French artillery range and retired back up the ridge. "I have never witnessed a more gallant charge," said Wellington, who rode up to Wallace after the units had returned and congratulated him.

It was a good start for the Allies but there was plenty more fighting ahead. Reynier ordered French Brig. Gen. Foy to attack and seize another foothold. The soldiers of the French 17th Light Infantry and the 70th Line Infantry formed up and pressed forward with their commanding officer in the lead. They reached the crest to find the battalions of the 8th and 9th Portuguese Regiments waiting for them, supported by elements of the 45th Foot. The weight of French numbers was telling here and they started to push the Allies back. However, fortune continued to favor Wellington as General Leith had decided to move his 5th Division northward on hearing the sounds of battle in Picton's vicinity. Men of the 1st, 9th, and 38th Foot Regiments struck into the rear and left flank of the French not long after they had secured their position.

Foy must have thought he was prying open the doors to victory until Leith's men slammed it shut. "[The enemy] on our left made a movement and we were overwhelmed with battalion fire," he recalled. "Upon our front the enemy, hidden behind rocks, assassinated us with impunity." Foy attempted to rally his men as they started to waver, a task made more difficult after being shot in the arm. "At this moment a ball went through my left arm, breaking it," he said. "I was swept away in the flight." The Allies had charged after several volleys, breaking the French will to resist and sending them running pell-mell down the slopes. Again Anglo-Portuguese troops pursued until coming within range of the French guns, whereupon they retired to rejoin the Allied lines. Reynier's corps had been mauled, with more than 2,000 casualties taken, the dead and severely wounded littering the ground.

It was now Ney's turn. He had spotted Merle's column closing on the ridge and thought Reynier's corps was now working its way northward as planned. Loison's division was promptly unleashed to attack Sula and the slopes beyond, while Marchand's division aimed for Bussaco Convent using a small road out of Moura. The units were separated by a steep ravine, with Marchand's men having the better ground. They came under Allied artillery fire just beyond Moura, the lead elements also having trouble from 4th Cacadores sharpshooters firing down from some nearby pine

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French Brig. Gen. Edouard Simon shown on horseback was badly wounded in the jaw during the fierce fighting on the French right.

trees. The lead brigade under Brig. Gen. Antoine de Maucune eventually came face to face with the 1st and 16th Portuguese Regiments, which also held firm and delivered solid volleys. Maucune was wounded at this point and his unit ground to a halt, with Brig. Gen. Pierre-Louis de Marcognet's brigade behind doing likewise. There seemed little option now but to wait for the Allies to crack elsewhere.

Loison's corresponding advance had faced difficulties from the start. The ground was decidedly rough. French skirmishers also found it hard to dislodge their enemy counterparts, the Light Division men from the 95th and the 3rd and 4th Cacadores. Indeed, such was the opposition that Loison sent line infantry to assist. Sula was taken soon afterward, with Allied artillery fire starting once French forces moved beyond. The gradient steepened considerably, exhausting the men who were struggling to maintain formation. It took an immense amount of stamina and courage but Loison's troops had crested a smaller ridge and noted the main heights were now tantalizingly close. Many of them were aiming for a windmill just ahead, the enemy skirmishers seemingly bested and some nearby guns looking ripe for the taking.

It was at this point that 1,750 troops from the 43rd and 52nd of the Light Division suddenly rose up from concealed positions in a nearby sunken road. Craufurd was waving his hat as a pre-arranged signal for this maneuver and the men now steadied themselves to fire. "Now 52nd, avenge the death of Sir John Moore!" he shouted. Craufurd was referring to the Battle of Corunna in which Moore, the British commander at that time, had been mortally wounded. Moore had also helped convert the 52nd into light infantry in 1803 and was a fondly remembered leader and mentor. The enemy's front ranks were lacerated by the initial volley, with the soldiers behind becoming jumbled and disorganized in the frantic effort to form their own firing line. Some of the French had pushed forward instead, including a contingent led by Brig. Gen. Edouard Simon who was badly wounded in the jaw during the fighting.

Craufurd's men extended their line to create a greater frontage, with men from the 3rd Cacadores and the 95th Rifles assisting. Loison's division withstood the murderous fire for a few minutes but fled when the Allies charged. "It was a carnage not a conflict," wrote a British artillery officer. They chased the French as far as Sula before pulling back, with General Simon having been found and captured by a private from the 52nd. A notable side incident to this attack involved the 2nd Battalion of the French 32nd Light Infantry, which had become separated in the advance. It was checked and then routed by a battalion of the 19th Portuguese Regiment, the latter pursuing its foe and then reforming with almost parade ground precision. The movement was carried out with such aplomb that some nearby Allied units spontaneously cheered this proof of growing professionalism.

Loison lost 21 officers killed and 47 wounded, with an estimated 1,200 casualties in total. Marchand's division had taken 1,150 casualties by the time it was ordered to withdraw by Ney, who realized further attacks would be futile. Massena was in agreement and ordered all units to disengage shortly afterward, having spent most of the battle watching events unfold from a windmill near Moura. The French tallied 522 killed, 3,612 wounded, and 364 missing from II and VI Corps, with approximately 100 casualties from other units. The damage may have been much greater. The Allies reported 200 dead, 1,000 wounded, and 50 missing, with the casualties roughly half British and half Portuguese and, to some extent, reflecting the levels of integration within Wellington's army. Despite the drubbing, Massena still had more than enough men to continue the invasion and he was soon using the northwest route Fririon had urged on the eve of battle. The French reached Sardao by September 28. From Sardao, they turned south toward Coimbra.

Marbot bitterly regretted Massena's failure to heed Fririon, although Ney should share some

Continued on page 66

IRONCLAD CLASH AT LISSA

Narrowly avoiding a fatal blow from the Italian ironclad ram *Affondatore*, Commodore Anton von Petz, commander of Austrian wooden-hulled ship of the line *Kaiser,* came under fire from the heavy rifled guns of another enemy ironclad, the *Re di Portogallo*, on July 20, 1866, near the Dalmatian island of Lissa in the Adriatic Sea. This time, instead of evading the other vessel, Petz brought his ship on a collision course with the enemy's armored hull. The 92-gun *Kaiser* supplemented a full set of sails with a two-cylinder steam engine. Gathering speed and momentum from her boilers, one of Europe's last wooden ships of the line was seconds away from ramming one of Europe's first ironclad warships in a history-making naval encounter of the Third Italian War of Independence.

For centuries Italy had been a collection of divided and rival independent monarchies, some of them under foreign control. The post-Napoleonic political order left much of Italy under the rule of Austria's Hapsburg dynasty. Three wars were fought to unite Italy and win its independence. Each of these wars placed the Austrians against the Italian forces and their allies. Dominant among the Italian states, the

THE AUSTRIAN AND ITALIAN NAVIES FOUGHT A DESPERATE BATTLE IN THE ADRIATIC SEA IN 1866. ALTHOUGH OUTNUMBERED, THE AUSTRIANS PREVAILED WITH A BOLD ATTACK.

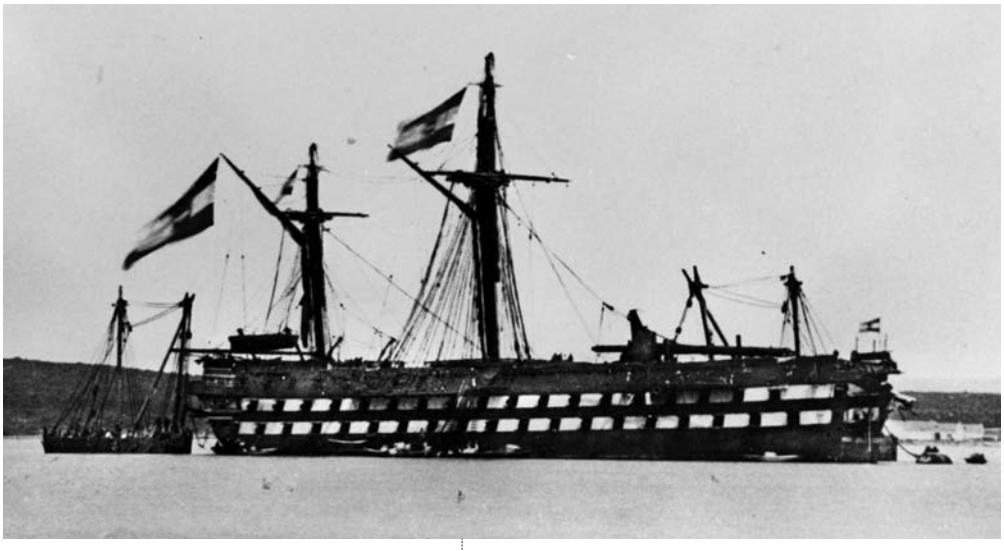
BY DAVID A. NORRIS

The Austrian ship *Kaiser* is surrounded by Italian ironclads as steam-powered ironclads in the background go into action off the Dalmatian Coast. Lissa was the last great clash of ships specifically designed for ramming.

Kingdom of Sardinia grew as it annexed the Austrian territory of Lombardy, the Kingdom of the Two Sicilies, Tuscany, and several smaller principalities after the second war in 1859. In 1861, the combined nation was proclaimed the Kingdom of Italy. King Victor Emanuelle of the Sardinia-Piedmont became the new country's first king. Unification was not yet complete. French troops still garrisoned the remnants of the Papal States around Rome, and Austria still controlled Venice.

Ironclad warships like those participating in the Battle of Lissa had three primary characteristics: an armored hull, steam propulsion, and guns capable of firing exploding shells. An early version of the ironclad was first used during the Crimean War when the French employed floating ironclad batteries against Russian coastal fortifications on the Kinburn Peninsula in October 1855. It was an impressive debut. Despite receiving fire from Russian batteries, the ironclad batteries in concert with wooden warships destroyed the Russian forts in just three hours.

Naval History and Heritage Command



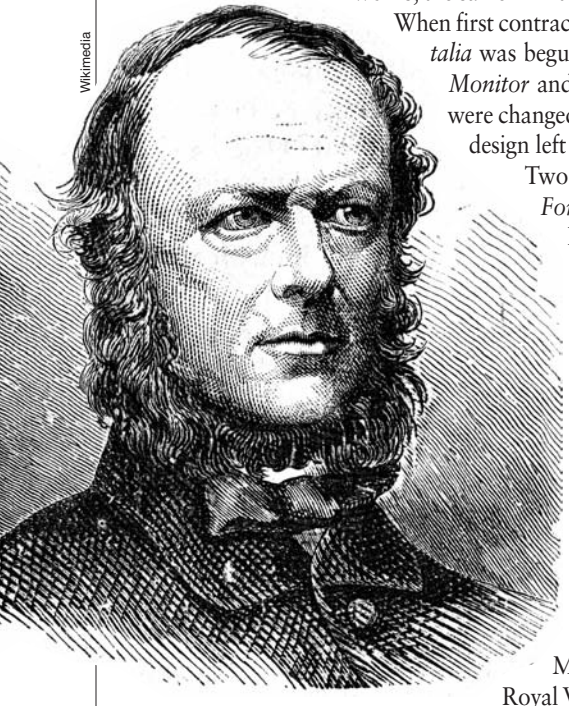
ABOVE: Austrian ship *Kaiser* undergoes repairs after the battle having suffered damage after ramming an enemy vessel. BELOW LEFT: Italian Admiral Carlo Pellion di Persano made a disastrous decision to shift his flag from the *Re d'Italia* to the ironclad *Affondatore,* which opened a large gap in the Italian fleet's line of battle.

Seven years later, Union and Confederate ironclads clashed at Hampton Roads during the American Civil War on March 8-9, 1862. The battle on the Eastern Seaboard of the United States marked the first true naval combat between vessels built of iron rather than wood. Union and Confederate ironclads saw more action during the conflict, and European naval officers and ship designers eagerly studied accounts of these encounters. However, no battle between fleets of ironclads occurred during the four-year conflict. That landmark event occurred about a year after the end of the war when approximately 20 ironclad ships of the Austrian and Italian navies fought at Lissa.

By European standards, the navies that clashed off Lissa were both new. Italy's navy, the Regia Marina, was formed in 1861. It was predominantly a combination of the navies of Sardinia-Piedmont and the Kingdom of the Two Sicilies with contributions from smaller states. Count Carlo Pellion di Persano, a veteran officer of the old Sardinian navy, commanded the united maritime force of the new kingdom. Persano had joined the Sardinian navy in 1824 and advanced rapidly through the ranks. He commanded the *Daino* during the First Italian War of Independence in 1848-1849 and a decade later participated in naval actions as a rear admiral during the Second War of Italian Independence for which he was promoted to vice admiral. In 1862 he became Italy's Minister of Marine and afterward rose to full admiral.

With part of their country still under Hapsburg rule, the Italians saw Austria as their most likely adversary in a new war. In a major expansion and modernization program, two oceangoing ironclads were ordered from New York shipbuilder William H. Webb. The Webb vessels were the armored frigates *Re d'Italia* and the *Re di Portogallo*. At 5,700 tons each and plated with 4.5-inch armor, both ships carried impressive batteries of heavy rifled and smoothbore guns.

The *New York Times* reported that the engines of the *Re d'Italia* were built at the Novelty Iron Works, the same firm that built the distinctive turret of the USS *Monitor*. When first contracted by the Italian government in 1861, the *Re d'Italia* was begun as a wooden steam frigate. After the ironclads *Monitor* and CSS *Virginia* fought at Hampton Roads, plans were changed to include armor plating for the *Re d'Italia*. The design left the propellers and rudder unprotected by armor. Two smaller ironclads, the 2,700-ton iron corvettes *Formidabile* and *Terribile,* were purchased from France. An armored turret ship, *Affondatore,* was built in England. Essentially a double-turret monitor, the *Affondatore* carried only two pieces of artillery, both 10-inch Armstrong guns.



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The Austrian Empire arose from the landlocked interior realms of the Continent, and for centuries its Hapsburg rulers paid little attention to naval affairs. In the 1797 Treaty of Campo Formio, the Hapsburgs swapped the Austrian Netherlands with Revolutionary France in exchange for Venice and the Adriatic coastal regions of Istria and Dalmatia. With Venice came a ready-made navy for the Hapsburgs.

Twenty-two-year-old Archduke Ferdinand Maximilian was placed in charge of the Imperial and Royal War Navy in 1852. Despite his youth, the archduke was an excellent choice as commander-in-chief. He had spent a few years at sea in the navy. His royal status gave the imperial sea service a much-needed advocate. A forward-looking reformer, Maximilian modernized the Austrian navy. When the archduke left his post in 1861, his navy was well on its way to world-class status. In the early 1860s, the Austrians began acquiring up-to-date ironclad steam warships, all of which were built in their own Adriatic shipyards.

Beside a trend toward ironclad war vessels, the navies of Austria and Italy had another factor in common: their crews spoke several different languages. Austrian officers gave their commands in German, the official language of the navy. However, many of the crewmen spoke Croatian, and many others spoke Italian dialects. When Austrian officers gave orders in German, petty officers had to translate for most of the crew.

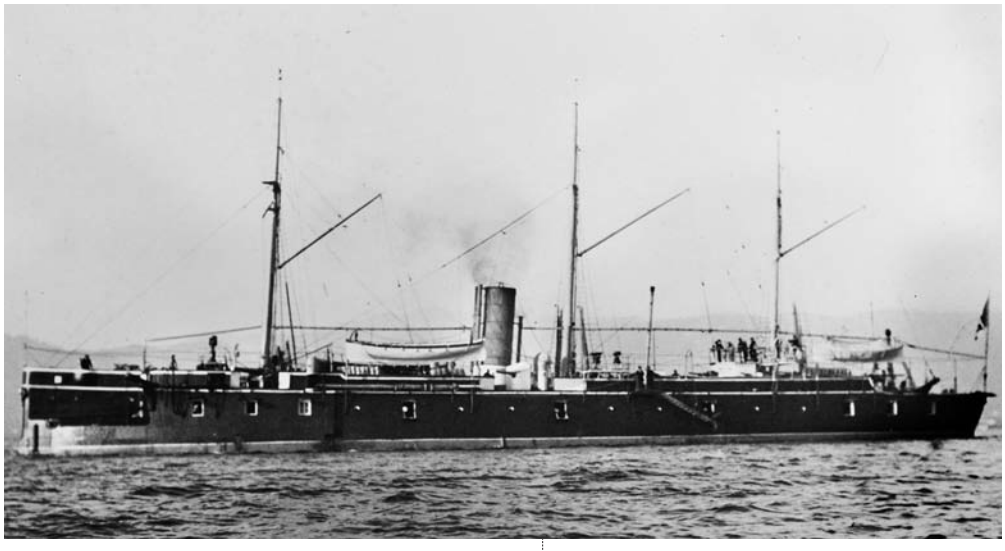
At the time of unification in 1861, the great majority of Italians spoke regional dialects rather than standard Italian. Adding to the language differences were rivalries between the former officers of the old navies of the Italian states.

War broke out between Austria and Prussia on June 14, 1866. This conflict, the Seven Weeks' War, would determine whether the German states united under the wishes of Prussia or the Hapsburgs. Prussia's ally Italy declared war on Austria on June 19. The Prussians wanted the Italian army and navy to distract the Austrians as much as possible.

Before the outbreak of the war, Admiral Persano took stock of the state of the navy. He had well-armed modern ships but was short of trained gunners, engineers, and warrant officers. He warned the naval ministry on May 21 that the fleet was unprepared for war. "It would take three months to make it tolerably ready," he told the ministry.

Rear Admiral Wilhelm von Tegetthoff took

Naval History and Heritage Command



ABOVE: The Italian ironclad *Formidable* was a wooden-hulled vessel plated with iron. It boasted a battery of 20 guns in a broadside arrangement. BELOW: Austrian Rear Admiral Wilhelm von Tegetthoff had superb command skills and exhibited tactical ingenuity. He advised his captains to rely on ramming as well as their heavy guns.

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command of the Austrian battle fleet. He had a proven track record having led the North Sea fleet both in the Second Schleswig War of 1864 and the Austro-Prussian War of 1866. His performance in the former won him promotion to the rank of admiral. Stubborn and tending to offend superiors with his blunt opinions, Tegetthoff's courage, efficiency, and ability to command more than compensated for his troublesome temperament. Although strict, he was fair and considerate to his subordinates, gaining their trust and admiration. He led with a steady hand in a time of technical transformation for European navies and exhibited superb command skills and impressive tactical ingenuity.

Tegetthoff pushed to complete the unfinished ironclads *Erzherzog Ferdinand Maximilian* (known as the *Ferdinand Max*) and *Habsburg*. Their new Krupp guns had not arrived, so he armed the ships with old-fashioned 48-pounder smoothbores. He was soon ready to take the fleet to sea.

BATTLE FORMATIONS DISSOLVED INTO A MELEE AS SHIPS MANEUVERED ON THEIR OWN, SEEKING TO RAM OPPONENTS OR AVOID COLLSIONS.

On June 27, Tegetthoff's fleet appeared off the Italian naval base at Ancona, roughly 125 sea miles southeast of Venice. The ships at Ancona were coaling, and two of them were still bringing guns on board. On the *Re d'Italia,* the crew was fighting a coal fire. The *Re di Portogallo* was unserviceable because she had water in her cylinders. None of the ships was ready for battle. Tegetthoff lingered off the coast for a few hours and then steamed away.

Spurred by demands from Prussia for action, the government ordered Persano out to sea. He left Ancona on July 8, spent five days steaming through empty waters, and returned to port.

Still under pressure from the government, Persano decided to capture Lissa. Held by an Austrian garrison, Lissa was 10 miles long and five miles wide. The island's sea-going inhabitants worked the sardine fisheries in the offshore waters, and farmers produced wine, almonds, and figs. The British had occupied Lissa during the Napoleonic War, and the Royal Navy had achieved a minor naval victory near the island in 1811. After the final downfall of Bonaparte, the British returned Lissa to the Austrians.

The British left three Martello towers on the island, as well as British-built fortifications. Martello towers were small, round coastal forts that the British erected throughout their far-flung empire. In the intervening years, the Austrians augmented Lissa's defenses.

By mid-July, rumors reached Tegetthoff that negotiations were underway to transfer Venice to Italian control. He had 800 Venetians with his fleet. Concerned about the reaction of the 800 Venetians with his fleet, the admiral requested permission to put them ashore if the city was given up. "Venice not yet given up; task of the squadron unchanged," was the reply he received. This helped restore morale when Tegetthoff revealed it to his crews.

On July 16, Persano left Ancona with a fleet of 34 ships, including 12 ironclads, 14 wooden warships, five small dispatch vessels, and three troop transports. For amphibious assaults on Lissa, he could spare only 500 marines and 1,500 sailors.

On the night of July 17, the Italian fleet neared Lissa. The mountainous island had three harbors. San Giorgio, the well-fortified main harbor, was on the northeast of the island. Two smaller harbors, Comisa and Manego, were defended by forts and guns on high ground, and their garrisons were prepared to fend off naval attacks. Comisa was on the western side of the island, and Manego on the southeastern side.

Two days of bombardment damaged the Austrian forts, but the garrisons held off the ships. Persano's fleet suffered 16 men killed and 114 wounded, and several of the ships were damaged.

On the night of July 19, Tegetthoff was steaming toward Lissa. After considering how a battle

Museo del Risorgimento, Rome

ABOVE: The Austrian ship *Kaiser* (center) has just rammed the Italian ship *Re di Portogallo* (right). The *Kaiser* advanced on the extreme left wing of the Austrian wedge that steamed into the Italian vanguard. OPPOSITE: The *Ferdinand Max*'s iron ram punched through the armor and heavy timbers into the engine room of the *Re d'Italia,* leaving a gaping hole on her port side. In the mistaken belief that the *Re d'Italia* was the enemy's flagship, four Austrian ironclads descended on the unfortunate vessel.

might unfold the next day, he gave detailed action plans to all of his captains. If signals were unreadable or the admiral fell in the action, his officers would know what to do.

The Austrians were outnumbered with only seven ironclads with 88 guns against a potential 13 armored Italian ships carrying 103 guns. Overall, the Italian ships were more modern, better armored, and possessed greater tonnage and horsepower. Two Italian ships boasted a pair of menacing 10-inch, 300-pounder Armstrong guns. The ships of the fleet also had among them six 8-inch Armstrong guns and a variety of 7-inch and 8-inch guns, the majority of which were long-range rifled pieces.

The Austrian wooden warships carried a few rifled guns, but most of their armament consisted of 30-pounder smoothbores. None of their guns was larger than 48 pounds, and all were smaller than any of the guns on the enemy's main vessels. Well aware that the enemy fleet outgunned him, Tegetthoff instructed his captains to rely on ramming and gunnery against the Italian vessels.

On the morning of July 20, the garrison of Lissa saw little through the rain and mist that covered the island and the surrounding waters. They expected the landing of the enemy marines and naval infantry.

The little Italian dispatch vessel *Esploratore* appeared at 8 AM after leaving her station, signaling that the enemy was in sight. News of the approach of the Austrian fleet was a shock to the Italian officers. The fleet was scattered around the island preparing for bombardments and troop landings. Two ironclads had broken engines and another, the *Formidabile*, was engaged in transferring 50 wounded men to a hospital ship.

In the preceding weeks, Tegetthoff had emphasized gun drill with his crews, while the Italian sailors were given little training with their new rifled guns. Persano had not prepared a battle plan, and he had held no discussions about tactics with his captains. Indeed, Persano scoffed at the enemy's arrival. "Behold the fishermen!" he said.

For Tegetthoff and the Austrian fleet, it had been a rough morning. Squalls stirred up rough seas, and heavy rain lashed the ships. So violent were the waves that the smaller ironclads were compelled to shut their gun ports. For a time, it looked as if the weather might prevent the impending battle. At 10 AM, the sun burned away the mist. The Austrian soldiers in their battered fortifications cheered as they saw their fleet in the distance, steaming toward them from the northwest.

Tegetthoff arranged his fleet in three arrow-shaped divisions that bore down rapidly on the enemy. His lead division of seven ironclads was followed by the steam-powered ship of the line *Kaiser* and five wooden steam frigates, and a last division combining the smaller wooden vessels. The latter division included the *Greif,* the emperor's paddle-wheel steam yacht, which was pressed into service as a dispatch boat.

As the enemy neared, Persano had 10 ironclads present and ready for action. One ironclad, the *Terribile,* was en route from Comisa. Another ironclad, the *Formidabile,* was incapable of battle because of damage from the Austrian shore batteries on Lissa. Under Vice Admiral Giovanni Battista Albini, the wooden vessels clustered off the north coast of Lissa and took little part in the battle. Following a practice used during the American Civil War, some of the wooden ships hung heavy iron chains over their sides to give some protection to their engines and hulls.

Persano's ironclads formed a line, steaming north of Lissa in a northeasterly direction. While the enemy approached, the Italian commander made the disastrous decision to shift his flag from the *Re d'Italia* to the tenth available ironclad, the *Affondatore.* The remainder of his armored ships ended up in three divisions of three ships commanded by Rear Admiral Giuseppe Vacca, Captain Emilio Faa di Bruno, and Captain Augusto Riboty.

Halting to change flagships opened a large gap in the line of battle because the three vessels in the lead kept steaming ahead. Persano later explained that he wanted to direct the battle "outside the line in an ironclad of great speed, to be able to dash into the heat of battle, or carefully to convey the necessary orders to the different parts of the squadron." Unfortunately, the admiral had not mentioned this move to his captains beforehand, and most of them were too far away to see that the *Affondatore* was now their flagship. During the battle, most of the fleet watched in vain for signals from the *Re d'Italia.* At any rate, the *Affonda-*

tore's low freeboard and minimal array of two bare pole masts made her poorly suited for displaying signal flags.

Tegetthoff's course took his fleet nearly at a right angle toward the Italian line. Rear Admiral Vacca's flagship *Principe di Carignano,* which was first in line, opened fire at 10:43 AM. One of the first shots struck the Austrian ironclad *Drache,* killing her commander, Captain Heinrich Freiherr von Moll.

Gunfire flashed from one ship after another. Tegetthoff was in the lead aboard the *Ferdinand Max*. He steamed into battle smoke that was so thick that he initially was unaware that he was leading his division through a gap in Persano's battle line. Vacca's three ships turned to port to flank the first division of enemy vessels and to get closer to the vulnerable unarmored ships in the rear divisions. Three Austrian ironclads to port of Tegetthoff steered to block Vacca, while the three to starboard veered to confront the remaining enemy ironclads.

The *Ferdinand Max* passed completely through the enemy line then turned back to confront the enemy center. Captain Maximilian Daublebsky von Sterneck climbed halfway up the shrouds to get a better vantage point.

Battle formations dissolved into a melee as ships maneuvered on their own, seeking to ram opponents or avoid collisions. With the poor visibility, it was difficult to distinguish national ensigns. All the Italian ships were painted gray, and the Austrians were painted black, although each funnel was painted with individualized color trim. Tegetthoff sent no signals after the firing began, but his captains had their instructions, which told them to ram everything gray.

On the *Affondatore,* Persano tried to ram the *Kaiser.* With its 10-inch Armstrong rifles blazing from both turrets, the *Affondatore* hit the *Kaiser* several times with 300-pound shells. One of these huge shells dismounted a gun on the Austrian deck, and mowed down six men at the helm. But the ship of the line evaded the Italian ram and delivered two damaging broadsides.

The *Affondatore* drew off and then sped toward the *Kaiser* for another attempt at ramming but once again missed. Both vessels scraped close together. Small arms fire mortally wounded an Austrian officer, an ensign who was posted in the mizzen top. It was becoming clear that ramming an enemy vessel that was underway was not as easy as it seemed. For the ironclads, a full turn took several minutes, while most of the time a quick adjustment of the helm was enough for a potential target to change course and avoid being hit.

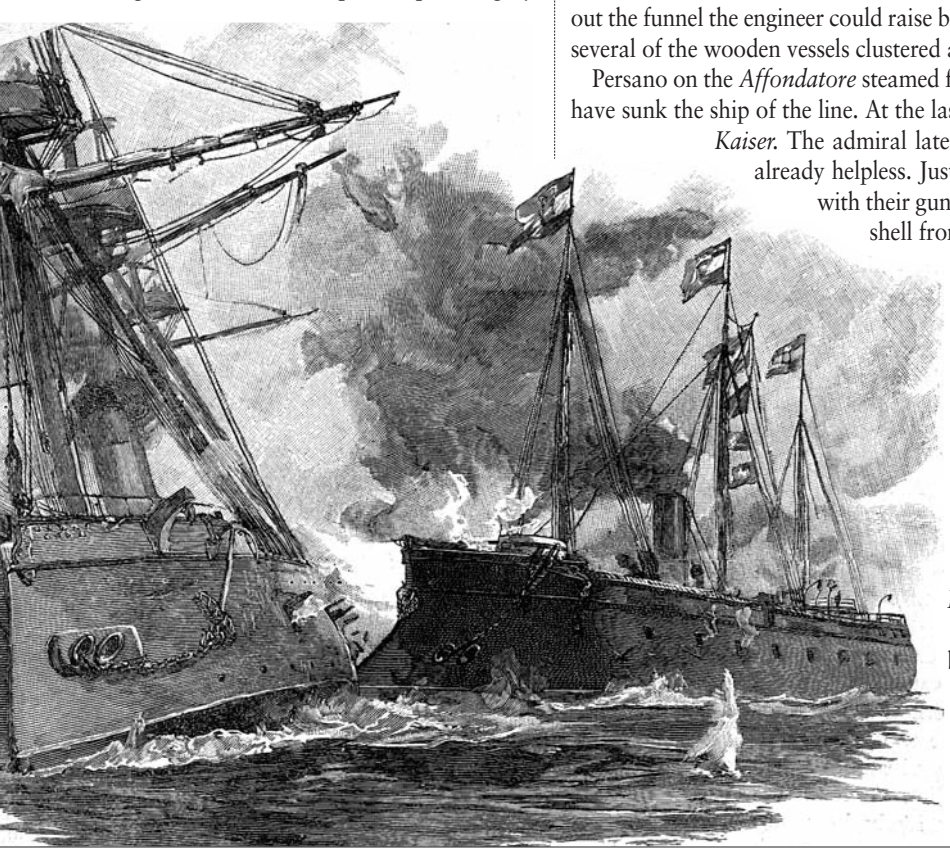
Eluding the *Affondatore,* the *Kaiser* was confronted by another ironclad, the *Re di Portogallo*. The latter, with the armored ships *Maria Pia* and *Varese,* attacked the wooden ships of Tegetthoff's second division. Some of the shells soared over the *Kaiser* and hit other vessels, and one shot killed the captain of the screw frigate *Novara*. The wooden-screw corvette *Erzherzog Friedrich* and the paddle-wheel dispatch boat *Kaiserin Elisabeth* were in danger of destruction by the *Re di Portogallo*.

No Austrian ironclads were at hand, so Commodore Petz brought the *Kaiser*'s prow on a course to ram the *Re di Portogallo* amidships. The *Re di Portogallo* altered course just in time to soften the blow inflicted by the *Kaiser*. As the ships crashed at 11 AM, the oak prow of the *Kaiser* dented the ironclad's armor. Between the sharp impact and a broadside from the Italian ship, the *Kaiser* lost her bowsprit and part of the stem. The foremast collapsed and, falling backward onto the deck, crushed the funnel. The Austrian crew hacked at the wreckage but could not prevent the tangle of wood, canvas, and rigging from catching fire. Broken off in the collision and left on the deck of the Italian ironclad was the *Kaiser*'s figurehead, a statue of Austrian Emperor Franz Joseph.

Petz inflicted some damage on the ironclad. Eleven port lids were smashed and two anchors and a field gun on the deck of the *Re di Portogallo* were knocked overboard. As the ships exchanged broadsides, several Austrian shots struck the Italian ship's hull below the armor plating.

While the wreckage of the *Kaiser*'s foremast continued to burn, more shells plowed into the ship of the line and knocked out some of the forward guns. The steering gear was damaged, and without the funnel the engineer could raise but little steam. Petz headed for safety at San Giorgio, and several of the wooden vessels clustered around to protect the *Kaiser*.

Persano on the *Affondatore* steamed forward to ram the *Kaiser.* A square hit amidships would have sunk the ship of the line. At the last moment, Persano ordered the helm turned to miss the *Kaiser.* The admiral later stated he gave the order because the enemy ship was already helpless. Just the same, the Italian vessels pounded the crippled ship with their guns until the *Kaiser* was able to draw out of range. A single shell from the *Affondatore* killed or wounded 20 men.



The *Ferdinand Max* twice tried to ram enemy ironclads. The second try yielded a trophy when the enemy's mizzen topmast and gaff snapped and fell onto the forecastle of the Austrian ship. Quartermaster Nicolo Carcovich ran forward. Under heavy small arms fire, Carcovich tugged at the Italian ensign. Finally pulling the flag free, he fastened it to a stanchion. It is believed the captured flag came from the *Palestro*.

In the apparent mistaken belief that the *Re d'Italia* was still the enemy's flagship, the Austrians targeted that vessel. Four ironclads including the *Ferdinand Max* beset the *Re d'Italia,* which in turn was assisted by the *Palestro.*

Austrian shot bounced off the plating of the *Palestro,* but only one-fourth of the vessel was armored, protecting the engine room but little else. A shell smashed through the unprotected wooden stern and set the wardroom on fire. With flames spreading close to the magazine, the *Palestro* dropped out of action to deal with the fire.

Meanwhile, the steering gear of the *Re d'Italia* was

hit and the ship steamed slowly amid the Austrian vessels. Captain Sterneck, still watching from high up in the shrouds, ordered the *Ferdinand Max* to ram the enemy vessel. When it was just a few hundred feet from the *Re d'Italia,* Sterneck ordered the engines to stop. That way the ship would be ready to reverse engines and back away from the enemy's crushed hull before the two vessels locked together. As the engineers awaited their order, momentum carried the ship ahead at 11½ knots.

Aboard the *Re d'Italia,* Captain Faa di Bruno made a fatal error as the Austrian armored frigate loomed off his port side. He was running ahead at full speed, but another Austrian ship blocked his path. Rather than push ahead and ram the ship off his bow, Faa di Bruno decided to reverse engines to elude the *Ferdinand Max*.

But there was no time to finish the maneuver. The *Re d'Italia* ceased forward motion and stopped dead in the water. Before the ship could begin backing out of harm's way, the *Ferdinand Max* struck the *Re d'Italia* amidships on her port side. The iron ram punched through the armor and heavy timbers into the engine room. An 18-foot-wide hole, half of it below the waterline, let in a flood of seawater. For a few moments, the stricken ship lurched 25 degrees to starboard, exposing to view the fatal wound in her hull. The starboard tilt stopped, and then the ship tipped back to port. Righted for only an instant, the roll to port accelerated and water rushed in through the hole.

Aboard the *Ferdinand Max*, the chief engineer reversed the engine when he felt the impact, and the vessel steamed backward clear of the enemy hull.

Aboard the doomed ship, the chief gunner saw one of the cannons on deck had been loaded but not fired. "Just this one more," he cried and fired the last cannon shot from the sinking ship. Some accounts stated that Captain Faa di Bruno then shot himself with his revolver. Conflicting accounts say he jumped overboard and was pulled down by the sinking ship.

With the deck awash, Italian marines climbed aloft into the rigging. They fired at the Austrians, hitting numerous sailors before the masts disappeared as the ship slipped downward into 200 fathoms of water. An Austrian officer who glanced at his watch was astonished that scarcely 1½ minutes elapsed between the moment of collision and the sinking of the enemy ship. By 11:20 AM nothing was left but scattered survivors swimming in the sea or clinging to bits of floating wreckage. The firing had begun only 40 minutes earlier.

Before Sterneck's crew could lower their one remaining undamaged boat to start picking up survivors, another Italian ironclad (believed to be the *Ancona*) loomed out of the smoke. Apparently unaware that scores of the crewmen of the *Re d'Italia* were still in the water, the ironclad aimed to ram the *Ferdinand Max*. The Austrians averted a collision, but the ships passed so closely together that their forward gunners could not maneuver their rammers to reload.

The Italian vessel fired several rounds at point-blank range. Although the guns flashed fire and bellowed smoke, there were no signs of any projectiles. With great relief, sailors aboard the *Ferdinand Max* wondered if the enemy had fired at them with unshotted guns. Indeed, this may have been what happened. The *Ancona*'s captain later reported that his muzzle loaders were packed with their powder charges before the gunners were told whether to load iron or steel shot. In the chaos of battle, his gunners sometimes fired without ever adding projectiles.

To avoid meeting the same fate as the *Re d'Italia,* the *Ferdinand Max* steamed away. Of the crew of 600 aboard the sunken ship, only nine officers and 159 men were saved. Most of them were picked up by Italian vessels, although 18 men survived by swimming to the shores of Lissa.

Firing and maneuvering continued, but the battle wound down as the fleets drew apart. Before the smoke cleared two of Persano's ships, the *Ancona* and the *Varnese,* collided. Damage was slight, but their rigging was entangled, and it took some time to separate themselves. Another collision between the ironclads *Maria Pia* and *San Marino* injured the latter ship so severely that it was unfit for continued fighting.

At 12:10 PM, Tegetthoff signaled his vessels to close in on his flagship. One and a half hours after the first shot, the main action of the Battle of Lissa was over.

BELOW: After the *Re d'Italia*'s deck was awash, Italian marines climbed aloft into the rigging to fire on the Austrians. They managed to kill some of the enemy sailors before the ship slipped down into 200 fathoms of water. OPPOSITE: Austrian shot set the wardroom of the *Palestro* on fire and flames ignited some shells stored outside the magazine for easier access during the battle. The ensuing explosion after the battle killed the majority of her crew.

Alamy

The *Kaiser* headed for San Giorgio with her wooden escorts. Fire still raged aboard the ship of the line, and she was menaced by the *Affondatore,* which made several attempts to ram. Enemy vessels fired from long range, but two Austrian ironclads arrived to guard the *Kaiser*. At 1:15 PM, the ship of the line was off San Giorgio and the crew redoubled their efforts to douse the fire on board.

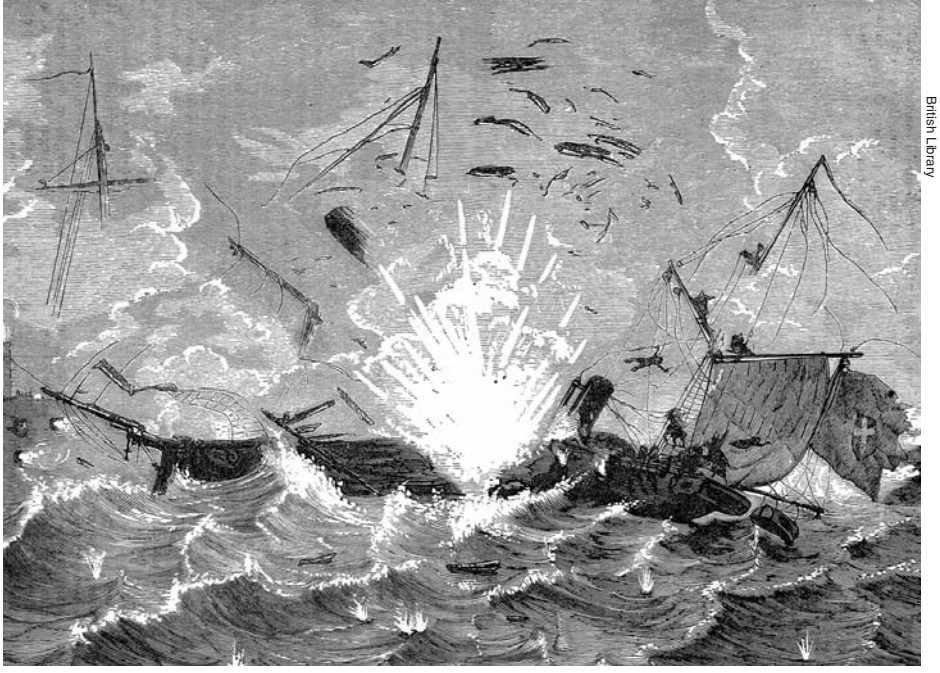
Smoke gradually drifted away from the now-silent guns of Persano's fleet. The admiral, unable to spot his old ship, signaled, "Where is the *Re d'Italia*?" Several vessels responded that it had been sunk.

Persano intended to continue the battle, and with the *Affondatore* steamed toward the division of wooden vessels off Lissa. With them was the ironclad *Terribile,* which had arrived from Comisa but lingered with the wooden ships while taking little part in the battle. In contrast with the assertive and risky roles played by some of the Austrians' wooden ships, Albini seems to have felt that his unarmored vessels had no place in such a battle. Persano sent several signals to rally his ships in pursuit of the Austrians, but few answered his call as the enemy fleet steamed away toward San Giorgio.

One more disaster was yet to befall the Italian fleet. Commander Alfredo Capellini's crew still fought the fire that broke out in the wardroom of the *Palestro*. Flames spread to some extra stocks of coal that were piled on the deck to increase the ship's cruising range. Several boats were offered to take his crew to safety. "Those who wish to go, may go; for my part, I remain," said Capellini, who refused to abandon ship. His crew followed their captain's lead, and only the wounded consented to being put aboard the boats.

In desperation, Capellini flooded the *Palestro*'s powder magazines, and it seemed that the ship was then saved. But a supply of shells had been stored outside the magazine for easier access during the battle. At 2:30 PM, the flames reached these shells, and the *Palestro* exploded. Witnesses in both navies saw fire flash out of the gun ports. Sailors and wreckage soared high into the air. A few minutes later the wreck disappeared beneath the surface. Only one officer and 19 sailors of the 250-man crew survived.

Tegetthoff's ships were in San Giorgio by sunset. Their dead and wounded were taken ashore. Four vessels patrolled outside the harbor during the night while repair work went on aboard the damaged vessels. Early on the morning of July 21, every ship other than the *Kaiser* was ready to renew the battle. But a signal station reported that the only sight of the enemy, a distant smudge of smoke to the north-northeast, had disappeared. Persano's ships, already far from the scene, anchored at Ancona later that morning.



British Library

LISSA WAS THE LARGEST BATTLE INVOLVING A EUROPEAN NAVY BETWEEN NAVARINO IN 1829 AND THE BATTLE OF TSUSHIMA STRAITS IN 1905.

Austrian losses came to three officers and 35 men dead and 15 officers and 123 men wounded. Two-thirds of the dead and wounded were aboard the *Kaiser*, which was the hardest hit of Tegetthoff's ships.

Directly from enemy fire, the Italian ships lost only five men killed and 39 wounded. It was a total far less than the cost of the bombardment of Lissa. The death toll, though, rose as high as 667 because of the sinking of the *Re d'Italia* and the explosion of the *Palestro*.

Tegetthoff was promoted to vice-admiral hours after news of the battle reached Vienna. Back in Italy, Persano tried to pass off the action as a victory. Public opinion turned against the admiral as details of the battle and the loss of two of the navy's finest ships became known. Tried by the Italian senate, Persano was found guilty of negligence and incapacity and dismissed from the service. Although he had reported Albini and Vacca for disobedience of orders for their failure to follow him to renew the battle, they were allowed to testify against him during the proceedings.

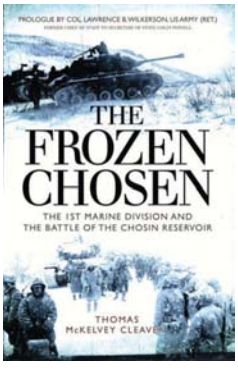
Austrian success at Lissa ultimately meant little. Prussia defeated Austria in the Seven Weeks' War, which ended in August 1866. Under pressure from the Prussians, and with French mediation, Austria was compelled to give up Venice. Rather than transfer the venerable city-state directly to Italian control, Austria transferred the territory to France, which ceded Venice to Italy. Possibly, Tegetthoff's victory at Lissa contributed to Austria's retaining control of its other Adriatic coastal possessions.

Lissa was the largest battle involving a European navy between Navarino in 1829 and the Battle of Tsushima Straits in 1905. The 1866 clash involved more ships that did the Spanish-American War actions at Manila Bay or Santiago de Cuba in 1898. Thus, in an age when naval strategists were evaluating the ironclad warship, the battle attracted considerable attention. Unlike the age of wooden warships, the heyday of the ironclads, which lasted from 1805 to 1905, passed quickly.

Had a veteran of British Admiral Horatio Nelson's fleet seen the Battle of Lissa, he would certainly have recognized the familiar sights of a forest of masts and spars rising from a thick haze of powder smoke. Yet the future of naval warfare was plainly evident with steam-powered armored vessels, large modern rifled guns, and steel projectiles. There were no boarding parties, and no prizes were taken. Symbolic of the passing of the old navies, the stalwart wooden ship of the line *Kaiser* was converted into an ironclad in 1871. For more than three decades after the Battle of Lissa, though, the fate of the *Re d'Italia* meant that warships of the world's large navies were still designed as rams and gun platforms. □

By Christopher Miskimon

American servicemen exhibited dogged perseverance in the frozen hell of the Chosin Reservoir.



PRIVATE FIRST CLASS HECTOR CAFFERATA WAS DEAD TIRED. IT WAS 1:30 AM and he was with three other Marines in a forward listening post in front of the rest of their platoon. All of them were defending a section of perimeter near the village of Yudam-ni, not far from the Chosin Reservoir in North Korea. After being relieved on watch, the Marine slipped into his sleeping bag after changing his socks and placing his boots in the bag to keep them warm. Then he settled in to get some rest. It was November 28, 1950, and it was freezing cold. Beyond the perimeter soldiers of the People's Liberation Army's 59th Division were on the move.

Hector only had been asleep a short while before he was awakened by the sounds of rifle and machine-gun fire. He leapt from his sleeping bag and grabbed his M1 Garand rifle. Chinese soldiers were everywhere. Hector shot a half dozen within a few minutes. One of his fellow Marines, a man named Benson, grabbed a Browning Automatic Rifle, but it was frozen. A grenade landed nearby and Benson threw it back just as it exploded, blinding him. Hector led Benson to a gully where they took cover with several wounded Americans.

Suddenly more Chinese were upon them. Hector initially fought them off with a shovel but then wrestled a submachine gun from one of them. He emptied it into the advancing mass of enemy troops. Benson began loading rifles and passing them to him. Hector shot as many enemy soldiers as he could, pausing occasionally to bat away a grenade with his entrenching tool.

Although wounded, he continued fighting throughout the night. Eventually Hector and Benson found themselves sheltering behind a wall of dead bodies. When dawn came, Hector was the only member of his platoon still fighting. The rest of his comrades were dead or severely wounded. Bugles were sounded in the distance, recalling the surviving Chinese. Some of them gathered downhill from Hector's position, apparently preparing for a final push.

Suddenly, eight F-51 Mustangs of the Royal Australian Air Force roared overhead. Spotting the Chinese, they roared in on strafing runs, leaving 125 of them dead on the hillside and the rest fleeing. Hector was alive, but he realized that he had fought the entire night in his socks. Badly frostbitten, he would lose all his toes. For his valor under fire, President Harry S. Truman awarded him the Medal of Honor in 1952.

The fighting around the Chosin Reservoir was a frozen hell of misery for the soldiers on both sides. U.S. marines, soldiers, South Koreans, and Chinese all struggled and suffered during the 1950 campaign. For the Marine Corps, it would become a legend of dogged perseverance in the annals of its history alongside Belleau Wood, Guadalcanal, and Khe Sanh.

U.S. Marine infantrymen engage Chinese forces who were unsuccessful in trapping the Marines at the Chosin Reservoir. Close air support throughout the fighting contributed to the success of the action.

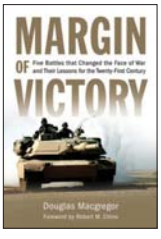
Marine Corps University

How this legendary epic occurred is recounted in detail in ***The Frozen Chosen: The 1st Marine Division and the Battle of the Chosin Reservoir*** (Thomas McKelvey Cleaver, Osprey Publishing, Oxford, UK, 2016, 296 pp., maps, photographs, bibliography, index, $28.00, hardcover).

The book is essentially divided into two parts. In the first part, the author explains how U.S. forces found themselves in Korea in the first place. The relevant history and opening moves of the war are explained in great detail. The second part covers the fighting around the reservoir itself when the Chinese took the Allied high command by surprise and dealt it a severe blow, which threatened to drive them into the sea. As it should, the sectoin focuses heavily on the Marines and soldiers who fought so desperately and bravely to stave off their enemy, allowing a fighting withdrawal despite the enemy's best efforts.

The Chosin Reservoir was a military defeat for the United States but was a triumph of American arms and character. The author's clear prose, attention to detail, and thorough research shows why this is true.

Margin of Victory: Five Battles That Changed the Face of Modern War (Douglas Macgregor, Naval Institute Press, Annapolis, MD, 2016, 288 pp., maps, notes, bibliography, index, $34.95, hardcover)



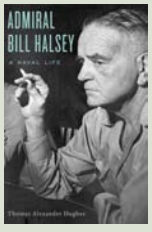
The men of Lieutenant Maurice Dease's platoon of the Northumberland Fusiliers were dying fast on August 23, 1914. Assigned to protect the Nimy Railway Bridge over the Mons-Conde Canal, Dease had to take over his section's machine gun because all his men were dead or wounded. He kept firing despite receiving an ultimately fatal wound. A private took over the unit's last remaining machine gun until he also was overwhelmed by the German assault across the river.

The Germans had successfully crossed the canal during what became known as the Battle of Mons thanks to the courage of German Private August Niemeyer, who swam the river and brought a boat back, which enabled a patrol to get across and help him swing the bridge back over the water. Within 40 minutes the attacking Germans were pushing back the British despite the defenders' valiant efforts to hold their position.

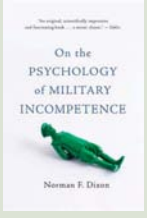
This interesting work takes five battles of the 20th century that heralded changes in warfare.

SHORT BURSTS

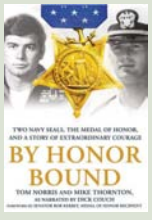
Apache Warrior vs US Cavalryman 1846-86 (Sean McLachlan, Osprey Publishing, 2016, $20.00, softcover) The struggle of the Apaches in resistance to the inexorable expansion of the United States brought the two groups into a decades-long conflict. This book examines the tactics, training, and equipment of both combatants.



Admiral Bill Halsey: A Naval Life (Thomas A. Hughes, Harvard University Press, 2016, $35.00, hardcover) William Frederick "Bull" Halsey Jr. was an aggressive, decisive leader who was known as the "Patton of the Pacific." This biography explores his exploits, shortcomings, and legacy.

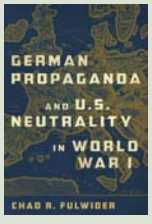


On the Psychology of Military Incompetence (Dr. Norman F. Dixon, Basic Books, 2016, $18.99, softcover) The author explores some of the biggest blunders in military history through the lens of human psychology. He seeks to show that military organizations often discourage innovative leadership.



By Honor Bound: Two Navy SEALS, the Medal of Honor, and a story of Extraordinary Courage (Tom Norris and Mike Thornton, St. Martin's Press, 2016, $26.99, hardcover) The authors are both Medal of Honor recipients for actions during the Vietnam War. Thornton saved Norris's life, marking the only time a person was awarded the Medal of Honor for saving the life of another who had the medal.

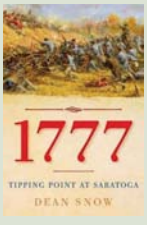
The Angel: The Egyptian Spy Who Saved Israel (Uri Bar-Joseph, Harper Books, 2016, $29.99, hardcover) Ashraf Marwan was a close advisor to Anwar Sadat and the son-in law of Gamal Nasser. This book covers his harrowing achievements as a spy for the Mossad.



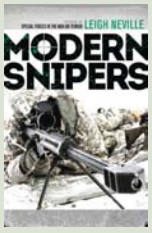
German Propaganda and U.S. Neutrality in World War I (Chad R. Fulwider, University of Missouri Press, 2016, $60.00, hardcover) Whether or not the United States would enter World War I was a decisive question for both sides. It sparked an enormous propaganda effort for Germany.

US Special Ops: The History, Weapons and Missions of Elite Military Forces (Fred Pushies, Voyageur Press, 2016, $29.99, softcover) American Special Forces have been at the forefront of the nation's wars since the War of Independence. This book delves into that history while focusing on the War on Terror.

Milvian Bridge AD 312: Constantine's battle for Empire and Faith (Ross Cowan, Osprey Publishing, 2016, $24.00, softcover) This battle marked Constantine's effort to reunite the fragmented Roman Empire under his rule. The book explores in depth the tactics associated with the epic clash.



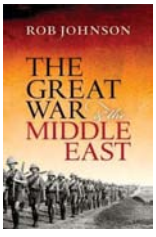
1777: Tipping Point at Saratoga (Dean Snow, Oxford University Press, 2016, $34.95, hardcover) This work focuses on the end of the Saratoga Campaign, when the British Army was handed a stunning defeat that turned the tide of the war.



Modern Snipers (Leigh Neville, Osprey Publishing, 2016, $28.00, hardcover) The sniper has been a major player in world conflict for the last two decades. The author examines how these specialist soldiers have come to be such major factors in recent conflicts.

In addition to the British holding the line at Mons in 1914, the author also analyzes the Battle of Shanghai in 1937, the Soviet destruction of Nazi Germany's Army Group Center in 1944, the Battle of Suez in 1973, and the Battle of 73 Easting in 1991. All of these were significant actions that presaged how future wars would be fought.

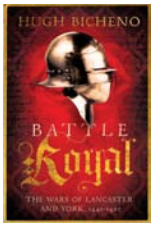
The challenge is for a nation's military system to successfully adapt to changes in warfare. Although seemingly disparate, these battles are linked together with a logical theme, which makes for an informative and thought-provoking work.



The Great War and the Middle East: A Strategic Study (Rob Johnson, Oxford University Press, Oxford, UK, 2016, 400 pp., maps, photographs, notes, bibliography, index, $34.95, hardcover)

World War I was far more than the unending trenches of Western Europe. It was truly a world-spanning conflict, one that was very important to the future of the Middle East. The British Empire fought a long and difficult series of campaigns against the Ottoman Empire, with a modicum of involvement from Imperial Russia and France. Meanwhile, the Germans gave assistance to the Ottomans, trying to divert as many Allied resources as possible away from the European continent. The result was the end of five centuries of Ottoman rule of the region and a redrawing of the area's map.

During the World War I centennial there have been many new works on the conflict, including a number on the Middle East. This book stands out from the pack through the author's in-depth look at the pre- and postwar strategies along with the actual campaigns. He also furnishes good detail on Caucasus Campaign, which usually is glossed over. The result is a successful argument that the Middle East fighting was central to the maintenance of the British Empire and its prestige among its holdings.



Battle Royal: The Wars of Lancaster and York 1450-1462 (Hugh Bicheno, Pegasus Books, New York, 2017, 416 pp., maps, tables, illustrations, appendices, bibliography, index, $27.95, hardcover)

Yorkists and Lancastrians were rival branches of the House of Plantagenet. Both branches could claim direct descendants from Edward III, leading to a confrontation that would last from 1455 and 1487. The Yorkists are associated with a white rose, and the Lancastrians are associated with a red rose. The roses were used as a part of their respective heraldry. When the feuding houses resorted to warfare, the struggle became

simulation gaming *By Joseph Luster*

WE DUST OFF OUR CRYSTAL BALL FOR A QUICK LOOK AT SOME OF THE MOST HOTLY ANTICIPATED WAR GAMES LINED UP FOR 2017.

Now that we're comfortably settled into the new year, it's time to take a look at what 2017 has in store for war gaming. At a glance it looks like we're going to have a more varied year than ever, with plenty of the usual strategy suspects on PC, some interesting newcomers, and a hopeful return to form for the dormant World War II first-person shooter genre. Without further ado, here are four of the games we're looking forward to that will be in our hands before the year is over.

FOR HONOR

PUBLISHER UBISOFT • **GENRE** ACTION • **SYSTEM** Xbox One, PS4, PC • **AVAILABLE** FEB. 14

At the time of this writing, the *For Honor* beta is getting ready to kick off, so more people will soon have a better idea of how the hack-and-slasher handles. What makes this so special, though, and why are we tackling it in the pages of this magazine? *For Honor* may not be a historically accurate experience, but it's one of those "dream scenario" games that pits soldiers from drastically different regions against one another. If you ever wanted to try your hand at defeating a samurai with a mighty Viking, for instance, your chance is almost here.

The different factions in *For Honor* are The Legion, The Chosen, and The Warborn, representing medieval knights, samurai, and Vikings. There are four classes within each faction, as well, including Vanguard, Heavies, Assassins, and Hybrids, which, as the name suggests, combine aspects of the other classes and mixes them with unique skills.

The class names vary within their respective factions, and Ubisoft plans on adding more before the full game arrives.

Class-specific melee weapons will be used to take down foes from other factions, and an "Art of Battle" tactical combat system assists in taking down some of the stronger enemies. So far one of the most exciting prospects of *For Honor* is its multiplayer, which currently has five modes: Dominion, Brawl, Duel, Skirmish, and Elimination. As long as Ubisoft continues to support *For Honor* after launch with new maps and added features, this could be a real PvP treat in 2017.

KINGDOM COME: DELIVERANCE

PUBLISHER DEEP SILVER • **GENRE** RPG • **SYSTEM** Xbox One, PS4, PC • **AVAILABLE** 2017

Speaking of medieval settings, developer Warhorse Studios is cooking up a realistic, first-person take on medieval Europe in *Kingdom Come: Deliverance*. Planned for a worldwide release this year, *Deliverance* takes place in 1403 in the Kingdom of

known as the War of the Roses.

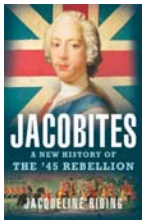
This is the first volume of a two-part series chronicling one of the most important conflicts in British history. In this edition the author delves into the causes of the conflict in the decades preceding it. He successfully navigates the intricacies of the English nobility and the politics of the period. The work includes numerous maps and tables that help explain the byzantine complexities of 15th-century England.

Panting for Glory: The Mississippi Rifles in the Mexican War (Richard Bruce Winders, Texas A&M University Press, College Station, 2016, 192 pp., maps, illustrations, notes, bibliography, index, $45.00, hardcover)

Two regiments of volunteers formed the Mississippi Rifles during the Mexican-American War. The 2nd Regiment saw very little action and served mostly on garrison duty. Denied a chance for glory, it largely has been overlooked by history. But the 1st Regiment achieved fame and glory at the Battles of Buena Vista and Monterey under the command of future Confederate President Jefferson Davis.

The Mississippi Rifles had the advantage of being issued percussion cap rifles rather than the outdated flintlocks that most other units still used. On the whole, volunteer troops had a shaky reputation during the Mexican War.

This book shows what service in these regiments was like. It captures the excitement of battle and contrasts that with the boredom of guard duty. These two units, raised in the same state from the same population, had a different wartime experience. In a time when glory in combat was a noble pursuit, an uneventful tour of duty could be almost shameful. This work effectively shows how the service of these two units exemplifies the way opportunity and chance affects what kind of war a soldier experiences.

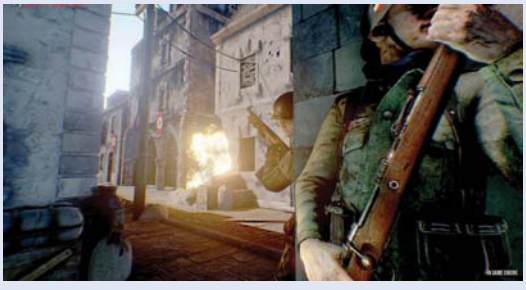


Jacobites: A New History of the '45 Rebellion (Jacqueline Riding, Bloomsbury Press, New York, 2016, 608 pp., maps, illustrations, notes bibliography, index, $35.00, hardcover)

The rebellion of 1745-1746 was a turning point in British history. Charles Edward Stuart, known popularly as "Bonnie Prince Charlie," was the grandson of James II and he sought to regain his ancestor's crown. His efforts alone would likely have come to naught, but the intervention of France elevated the conflict. With French aid, Stuart's army got within 120 miles of London before it met disaster at the Battle of Culloden on April 16, 1746. Stuart's hopes for a crown were dashed forever in the last major battle fought on British soil. Culloden

Bohemia, one of the Holy Roman Empire's Imperial States. Based on a true story, we enter the picture in the midst of an invasion, of which your character, a blacksmith's son named Henry, ends up as his family's sole survivor. Thus begins the road to redemption across a detailed 15th-century landscape, complete with castle sieges and historical battles.

Outside of battles, players will be able to use their charisma and reputation to influence people to help on quests and investigate various crimes. Having an arsenal of diplomatic skills at your disposal means you won't always have to rely on brute force to move forward. In scenarios that present combat as the sole option, *Deliverance* employs a realistic take on European sword fighting. Different fighting styles are available—as well as weapons like swords, axes, and maces—and armor plays a major role in survival. At its core *Kingdom Come: Deliverance* is an open-world RPG, so it should be interesting to see how it works its setting and historical story into that context.



GHOST RECON WILDLANDS

PUBLISHER UBISOFT • **GENRE** TACTICAL SHOOTER • **SYSTEM** Xbox One, PS4, PC • **AVAILABLE** MARCH 7

Tom Clancy's *Ghost Recon Wildlands* marks the 10th entry in Ubisoft's long-running series, but judging from the company's recent development habits, the big change in this one should come as no surprise. Yep, you guessed it, *Wildlands* is the first *Ghost Recon* game to go open-world. The setting for exploration is Bolivia, which the Ghosts have been dispatched to in order to take care of the Santa Blanca drug cartel and expose its government connections.

From the mountains to the deserts, the terrains in *Wildlands* look like they're going to live up to the game's title. A dynamic weather system and day-night cycle gives your team the opportunity to come up with timing tactics that will provide the necessary advantages for each mission. When prepping for those missions you'll be able to fully customize your character and gear, choose the appropriate loadout, customize firearms, and pick from over 60 vehicles, including motorbikes, boats, helicopters, and more.

As of right now there's a beta for *Wildlands*, but next time we cover it we should be able to provide a review of the full game. We'll see if Ubisoft Paris can successfully mix the intense tactical elements of the *Ghost Recon* series with all of these lofty open-world promises.

BATTALION 1944

PUBLISHER BULKHEAD INTERACTIVE • **GENRE** SHOOTER • **SYSTEM** Xbox One, PS4, PC • **AVAILABLE** MAY

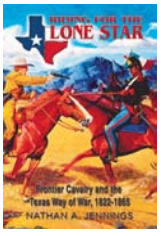
Battalion 1944 might just be the biggest question mark on this list, but it's also one of the games we're looking forward to the most. It's been a while since World War II was in the spotlight as far as big-budget first-person shooters are concerned, and so far it seems developer Bulkhead Interactive has the right mind-set to make it work.

The infantry-based shooting action of *Battalion 1944* puts an emphasis on "raw skill," to use the developer's own phrasing. They fire some not-so-subtle shots at the competition in the process, promising "No grinding, no 'exosuits,' just you and your skill as a player." Take that, *Call of Duty*! Actually, considering the lukewarm response to *CoD*'s recent foray into outer space, it wouldn't be surprising to see them follow *Battalion*'s act and return to the roots of WWII.

Bulkhead is teaming up with Multiplay to provide official servers for multiplayer, so that's going to be a major component of the final product. A focus on community-driven development will give players the opportunity to shape how it grows, as well, so it has the potential to develop a strong community. Regardless of how it turns out, *Battalion 1944*'s original Kickstarter campaign was successfully funded in just three days. If anything, that should send a message to every other developer that there's plenty of hunger out there for solid WWII shooting, so bring on as many as you can until we get full all over again.

ranks alongside Hastings and El Alamein in its importance in British military history.

This informative work is divided into a series of short chapters that quickly get to the point, giving the reader a clear picture of the events. The author takes an objective view of the subject, allowing for a dispassionate and unbiased retelling. The book is thoroughly detailed and laced with period illustrations.

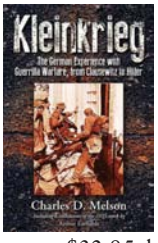


Riding for the Lone Star: Frontier Cavalry and the Texas Way of War 1822-1865 (Nathan A. Jennings, University of North Texas Press, Denton, 2016, maps, illustrations, notes, bibliography, index, $32.95, hardcover)

The horse was a vital part of early Texas frontier culture. It was only natural, therefore, that mounted soldiers would form the basis of their military system. Ranger Noah Smithwick demonstrated this during the Texas War for Independence when his company tracked a Comanche raiding party. Charging into their midst, the Texans cut down many of their foes. One of the Comanches fired at Smithwick but missed him. As the Comanche reloaded, the young cavalryman shot him down.

Frontier cavalrymen later acted as scouts during the Mexican-American War. After that, they participated in the Confederate invasion of New Mexico during the American Civil War.

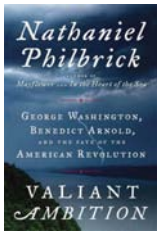
The history of Texas cavalrymen at war is thoroughly told in this work. It covers the origins of the mounted tradition in the days before Texan independence and their role in that conflict. The author covers various skirmishes that occurred while Texas was an independent nation, and he also explores in detail the Mexican-American War and American Civil War. This book is an effective study of a single region's unique military development during the frontier era.



Kleinkrieg: The German Experience with Guerrilla Warfare, from Clausewitz to Hitler (Charles D. Melson, Casemate Publishers, Philadelphia and London, 2016, 216 pp., maps, photographs, notes, $32.95, hardcover)

The German military's experience with guerrilla warfare is usually associated with World War II when they fought against partisans in France, the Soviet Union, and the Balkans. Combatting guerrillas was not limited to that conflict, though. Clausewitz dedicated a section of his influential 1832 work *On War* to the subject. During the Franco-Prussian War, German troops fought insurgents in France. Germany later fought such groups in their own small colonial conflicts in Africa and China. During World War I, German and native troops under General Paul von Lettow-Vorbeck waged their own guerrilla campaign against the British Empire after they invaded German East Africa. Nazi Germany's Wehrmacht fought a protracted struggle against resistance fighters across Europe who sought to free themselves of fascist tyranny.

Much of the material in this book is presented here in English for the first time. Thoroughly researched and well annotated, the work delves deeply into both theory and practice, delivering a German viewpoint for an age-old issue that still taxes modern militaries around the world today. The author seeks to present this material in an unbiased manner. He avoids the ideological pitfalls that abound from any study of Nazi-era methods, allowing the reader to see them with a clear eye.



Valiant Ambition: George Washington, Benedict Arnold and the Fate of the American Revolution (Nathaniel Philbrick, Viking Books, New York, 2016, 427 pp., maps, illustrations, notes, bibliography, index, $30.00, hardcover)

George Washington and Benedict Arnold are key figures in the American Revolution. Washington's leadership skills, ability to learn, and the acumen needed to rise above petty political squabbles and focus on what was needed to secure independence truly made him the indispensable man at a critical time. Arnold's bravery and skill in the early days of the war led to several British defeats, which saved the rebellion on more than one occasion. Tragically, a combination of political machination against him and Arnold's own sensitive ego and impulsive nature worked against him, denying what he thought was his rightful place and status. He lost faith in the cause and betrayed it, earning an ignominious place in American military history.

The strength of this work is in the author's ability to turn what could be a dry retelling into an emotional human drama fraught with all the complexities people caught in such times must face. The book effectively shows how real people made hard decisions, maintained their loyalty and integrity, or in turn cast such notions aside during a time of great crisis in United States history. □

fort donelson

Continued from page 43

could hold out the next day if the Federals were to attack. Believing they had bought enough time for Johnston to retreat to Nashville, the generals decided to surrender Fort Donelson; however, Pillow and Floyd did not want to be captured. Former Secretary of War Floyd feared the U.S. government might try him for treason. For that reason, he turned over command of Fort Donelson to Pillow. The cowardly Pillow in turn passed command of the fort to Buckner.

Forrest also had no intentions of being captured. "I did not come here to surrender my command," he said. Bucker agreed to allow Forrest to depart with his command as long as he left before surrender negotiations were underway.

Forrest led his 500 troopers away from the fort at 4 AM, taking some infantry with him. The infantry walked except over the flooded stretches where they rode double behind the troopers. They did not encounter any resistance on the route, and more infantry might have made it out if Buckner had not posted guards to prevent more men from leaving.

Floyd, with his four Virginia regiments and one Mississippi regiment, attempted to board two steamers that were bringing reinforcements. Word of approaching enemy gunboats caused Floyd to hurriedly depart with his Virginians on the boats, thus leaving the new arrivals and the Mississippians behind. As for Pillow, he escaped in a skiff and eventually made his way to Nashville.

A Confederate officer and a bugler took Buckner's surrender note to the Federal lines. The two Confederates were escorted to Smith, who took them to see Grant. Grant read Buckner's note in which he requested the appointment of commissioners for the purpose of agreeing upon terms of capitulation. Grant asked Smith what answer he should give. "No terms to the damned Rebels," replied Smith. Grant heeded the advice. "No terms except unconditional and immediate surrender can be accepted," Grant informed Buckner.

With no option left, Buckner surrendered and 14,600 Confederate troops became prisoners of war. With the capture of Forts Henry and Donelson, and shortly afterward Nashville and Columbus, the Federals gained control of Kentucky as well much of middle Tennessee. "Unconditional Surrender" Grant, as the Northern press dubbed him, and Foote had give the Union their first major victories of the war. □

soldiers

Continued from page 15

Loco and many of his followers would later claim that Geronimo had not rescued them, but rather kidnapped them.

"Victorio had never approved of the ways of Geronimo," Victorio's daughter said. "His way of warfare cost the lives of too many of the younger, less experienced warriors. He fought for his own glory, not for the welfare of the Indeh."

Not long after this group, which included Geronimo, Loco, and other prominent Apache warriors, reached sanctuary in the mountains on northern Mexico, they were ambushed by Mexican regulars and militia at Aliso Creek, a battle that exemplified not only Geronimo's skill in warfare but his utter ruthlessness as well.

After the Mexicans set a fire to smoke out the Chiricahuas, Naiche led 15 warriors in the vanguard while Geronimo and 30 warriors fought a rearguard action, with the women and children in the center. In heavy fighting, Geronimo and his men killed a large number of the attackers, forcing the survivors to fall back. Geronimo decided to use the smoke as a screen for an escape, and instructed the women to strangle the remaining infants so their cries would not give away their position. If they refused, he declared, he would leave them all to their fates. Geronimo had abandoned women and children three times before. He believed saving his warriors took precedence over the fate of the noncombatants.

Geronimo's cousin Fun rejected such talk. He told Geronimo that he would shoot him if he repeated it. Geronimo then vanished into the mountains. The warriors who remained behind and the women and children managed to escape. The Chiricahuas were able to regroup in the mountains that night. Altogether, they had lost 78 killed, most of whom were from Loco's band, and 33 women captured, including Loco's daughter. Most of the Chihenne blamed Geronimo for the catastrophe. They held that Geronimo had forced them at gunpoint to abandon the safety of the San Carlos reservation. "I am without friends, for my people have turned on me," said Geronimo.

Geronimo and Mangas (the son of Mangas Coloradas) participated in the final breakout from San Carlos in May 1885 that hastened the end of Geronimo's resistance. Only one-fourth of the Chiricahuas present on the agency, 34 men and 110 women and children, consented to leave. During the next 16 months the Chiricahuas raided on both sides of the border. In their wake they left dozens of dead, killed large numbers of livestock, and destroyed considerable property.

In 1882, Brig. Gen. George Crook, who had campaigned against other Apache, was sent to the Arizona Territory to quell the Apache threat. Crook issued a call for Apache scouts to help find the renegades. As many as 80 Chiricahua men answered the call. The following year, Crook led an expedition into the Sierra Madre Mountains of northern Mexico. During the expedition, Crook and his subordinates—Captain Emmet Crawford and Lieutenant Charles Gatewood—convinced Geronimo to return to the reservation, albeit only for a short time.

Three years later, Brig. Gen. Nelson Miles took command of U.S. troops in the Arizona Territory. He led 5,000 soldiers, one-fourth of the standing forces of the U.S. Army, in pursuit of Geronimo and his small band.

Captain Henry Lawton and his troops, who were based at Fort Huachuca in the Arizona Territory, doggedly tracked Geronimo and his exhausted fugitives through the desolate landscape. They finally convinced the Chiricahua war leader to surrender for the last time in September 1886. Although U.S. soldiers would face occasional problems with Apaches, Geronimo's surrender ended a struggle by the Chiricahua to hold on to their homeland that lasted more than two centuries.

Four days after meeting with Miles, Geronimo and his 27 survivors were on a train to Florida as prisoners of war. Upon their arrival in Florida, they joined 400 other surviving Chiricahuas. These were the Chiricahuas who had remained at San Carlos, including the loyal scouts, who already had been sent to Florida by U.S. President Grover Cleveland.

The Chiricahua endured a 27-year odyssey as prisoners before being freed in 1913. That odyssey took them from Florida to Alabama and then to Fort Sill, Oklahoma. At Fort Sill, they built villages around the post and farmed the land. Geronimo died in 1909 after having spent 14 years at the fort.

By 1913 only 269 Chiricahua remained. Most of those had been born in captivity. They were not allowed to return to Arizona, although the U.S. government offered them space on the Mescalero Apache reservation in southern New Mexico. Two-thirds of them opted to move, and the other third stayed in Oklahoma.

In these two locations, the Chiricahua live today, among them a few direct descendants of Geronimo and Cochise. "I should never have surrendered," said Geronimo on his deathbed. "I should have fought until I was the last man to survive." □

armored clash

Continued from page 27

battle group took Hill 318 from elements of the U.S. 51st Armored Infantry Battalion in heavy fighting, which sparked continuous fighting over the next 24 hours. The struggle for neighboring Hill 265 was almost as intense with the Americans barely holding the high ground. They were able to hold on primarily because of strong artillery support.

In preparation for a last-ditch effort to capture Hills 265 and 318, Wietersheim sent reinforcements to the German units deployed opposite CCB's positions on the two strategic hills. On September 29, the 111th and 113th Panzer Brigades, as well as portions of the 110th Panzergrenadier Regiment, made a coordinated assault on the objectives. The early morning attack, in dense fog that limited observation to a few dozen yards, pushed the 51st Armored Infantry back 500 yards. This gave the Germans control of the forward crest of Hill 318 by late morning.

In response, Clarke sent a company of Sherman tanks from the 8th Tank Battalion to retake the hill, and the fighting reached a new level of intensity. The fog lifted just in time for P-47 Thunderbolts of the U.S. 405th Fighter Group to foil the next German attack. The air strikes forced the German tanks into the clear where they were systematically picked off by American artillery and tank fire.

In the afternoon, the Germans were forced to retreat from Hill 318 after a loss of 23 tanks. At Hill 265, the Germans pushed the Americans back to the reverse slope, but the Americans held on. With no reinforcements expected, the Germans abandoned the height.

The fighting on September 29 marked the last major attempt by the Fifth Panzer Army to cut Third Army's armored spearhead near Arracourt. The failed effort of the previous four days cost the Germans 36 tanks, 700 killed, and 300 wounded.

The end of September 1944 found the fighting in Lorraine at a stalemate. Deprived of supplies, Patton could not switch to the offensive. As for the German Army, its panzer force had been so badly mauled that it was incapable of further offensive action against Patton's Third Army.

Patton's next challenge was to capture fortress Metz on Third Army's left flank. After Metz fell to the Americans on December 13, Third Army advanced toward the Siegfried Line. Before December was over, Patton's Third Army would be engaged in another great armored clash, known as the Battle of the Bulge. □

Intelligence

Continued from page 19

His wife's early 1940 trip to Japan to obtain bank funds in $500 bills and his family's flashing of crisp, new $100 bills raised eyebrows as did using cash to pay off a second mortgage on one of his houses.

The Kuehn family seemed oblivious to the need for stealth. His daughter Ruth worked as a modest hairdresser, but she paid her bills with large denomination currency. She also compared her success in collecting contributions to a local charity to her previous experience raising funds for Hitler in Germany. And the supposed need for additional family funds prompted the hapless spy to make at least three direct visits to the Japanese consulate to make a plea for funds.

Interestingly, Yoshikawa was activated on October 2 when he was sent directly to the Kuehn house to deliver $14,000 in new Federal Reserve bills along with a note that Kuehn was to test his radio transmitter. The German passed a note back to Yoshikawa saying he was unable to make the test.

Kuehn was hesitant to use the radio transmitter for fear that the U.S. military might discover and locate his signals. They then developed a system of rather strange visual signals that could use car headlights, lights flashed from the upper levels of his home, and symbols hung from Kuehn's sailboat. All would necessitate a Japanese submarine sailing rather dangerously close to shore to see the signals.

The hapless German, who had been under surveillance for years, was arrested on December 7, tried in Honolulu, found guilty of espionage in February 1942, and sentenced to death by firing squad. The evidence obtained after his arrest was rather substantial and included monies given to him by Yoshikawa, extensive binders with newspaper clippings on the U.S. fleet, its bases, and aircraft, along with an array of photographs of navy ships. Kuehn's sentence was later reduced to 50 years in prison once Yoshikawa was identified as the main spy behind the attack.

Yoshikawa, for his part, had sailed for Japan in a diplomatic exchange after the attack and well before his role was discovered during interrogations of his driver Kotoshirodo. Kuehn and his family were sent back to Germany after the war.

Japan's successful intelligence-gathering operation on Oahu in the months leading up to the attack on Pearl Harbor prompted the United States to tighten its national security efforts in the decades that followed. □

Bussaco

Continued from page 51

of the blame for the failings at Bussaco. He had from the afternoon of September 25 until the night of September 26 to achieve a more thorough reconnaissance rather than just test the Allied skirmish lines. Indeed, Ney, Junot, Reynier, and others seemed content to underestimate their enemy and wait for Massena's arrival, whereupon they urged him to attack. It was behavior that highlighted a critical French weakness: disunity at the command level as Massena kept trying to stamp his authority over a group of men who, to varying degrees, often thought they knew best. However, the ultimate decision to give battle rested solely with him. In addition, a commander of his stature should have formulated a better plan than two frontal attacks up a steep ridge against an enemy given several uninterrupted days to prepare its defense.

Wellington's miscalculation was a failure to cover the approaches on his northern flank. But he swiftly recognized the threat and ordered a westward retreat, with supplies and harvested crops destroyed along the way. The Allied commander wanted to create an artificial desert for Massena to follow him into. Civilians were also told to leave the war zone and August Schaumann, an officer in Wellington's commissary, recorded the depressing retreat. "Every division was accompanied by a body of refugees," he wrote. "Despair was written on all faces. It was a heart-rending sight." The Allies withdrew through Coimbra at the end of September, with all units reaching the near-complete Lines of Torres Vedras by October 9. It was a low point, but at least Wellington could look on Bussaco with satisfaction. The French army had been beaten and the Portuguese had proven their mettle, helping to boost national morale. "[Victory] has given them a taste for an amusement to which they were not before accustomed, and which they would not have acquired if I had not put them in a very strong position," he wrote.

Massena's men entered Coimbra on October 1 and engaged in an orgy of destruction. Many of the remaining civilians were maltreated, assaulted, or murdered, with the city's bishop estimating that almost 3,000 were killed. Even if that number was exaggerated, hundreds were almost certainly butchered, representing an indelible blot on Massena's career. The French began their final pursuit of the Allies on October 4, although Trant's forces came in behind and seized Coimbra, taking prisoner almost 4,500 wounded, service staff, and a woefully small garrison. He managed to protect these men from local vengeance and had most transported to Oporto under guard. A handful of Frenchmen were seized by angry civilians and lynched, their deaths prompting rumors that a massacre had taken place and compounding the criticism that Massena should have left more units to defend Coimbra in the first place. Nonetheless, morale remained fair as it appeared the grueling campaign was entering its final phase.

Enemy prisoners captured during the French advance on Lisbon noted the Allies were aiming for the Lines of Torres Vedras ahead of the capital, which meant nothing to Massena or his staff, who guessed these were probably hastily arranged static positions. French vanguard elements discovered the unwelcome truth on October 11. They found that the Lines of Torres Vedras was a formidable series of interlinked forts, redoubts, and shelters that stretched across the peninsula between the Atlantic Ocean and the broad mouth of the River Tagus with Lisbon safely behind them. After some sharp fighting on October 13 that went nowhere, Massena arrived and surveyed the scene on the following day. It seemed inconceivable to him as French intelligence had reported nothing approximating the Lines, while his subordinates also appeared dumbfounded. Massena's outburst said it all: "What devilry! Wellington didn't make these mountains!"

He may not have made the mountains, but Wellington had made the fortifications. Altogether he spent 200,000 pounds fortifying the approaches to Lisbon. The Lines of Torres Vedras proved its worth immediately as the French remained in the vicinity, stuck trying to find a solution to this unexpected impasse. The defenses were simply too strong to storm, while the Royal Navy and Britain's merchant fleet ensured a constant resupply for the besieged. That was in stark contrast to the besiegers who found themselves in a region without provisions, at the end of broken supply lines, and no longer in regular contact with French forces in Spain.

Massena withdrew his army to Santarem on the Tagus by mid-November, hoping to improve the situation. It was a dismal end to a campaign that was meant to have culminated in Lisbon's seizure and the thanks of a grateful emperor; instead, his forces now battled starvation and an unseasonably cold winter, with thousands succumbing to the miserable conditions. Although nobody knew it, Bussaco was the high water mark of French intervention in the Iberian Peninsula, and Massena might have changed the course of history had he flanked instead of fought. □

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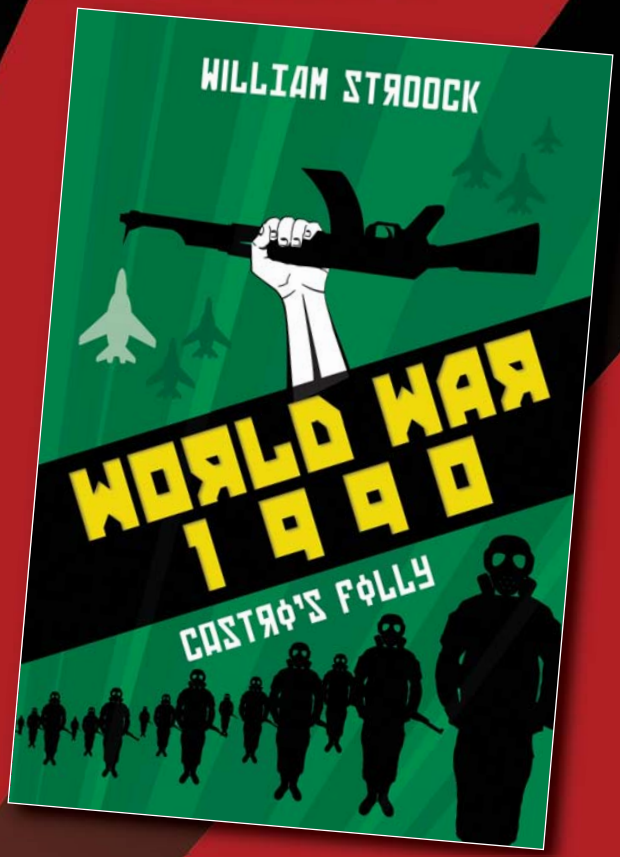

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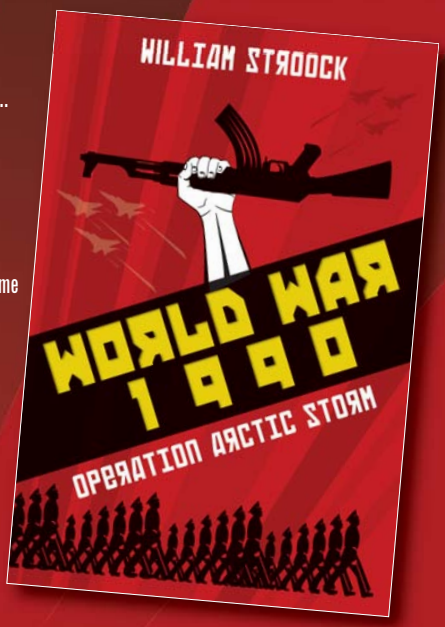

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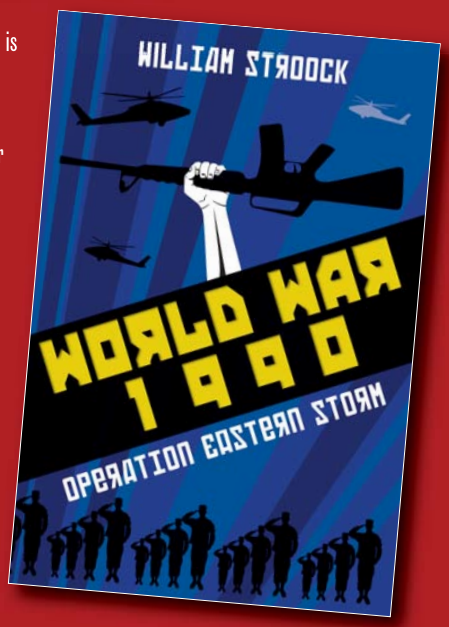

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