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MILITARY HERITAGE

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FALL 2021



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U.S. Marines in action 1953 Korea
 Photo: Ed M. Dotten



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#ARM13



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Roman Lorica Armor Set

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#ARM10-SET



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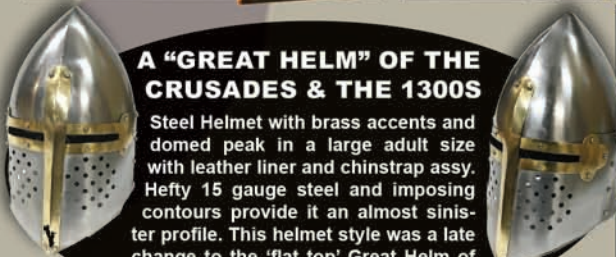
Uhlan Lance

Original type rope wrapping

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German WW2 M39 Egg Grenade
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#MISC464



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Napoleonic Flag

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German Imperial WWI Flag

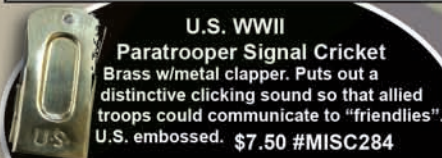
Classic German Imperial Flag that adorned Battleships, Army, and Headquarters installations from the late 1800s through 1918. Befitting that we can offer this classic war flag in 3 x 5 feet cotton 100 years after it flew during the War to End all Wars! \$18.95 #FLAG27

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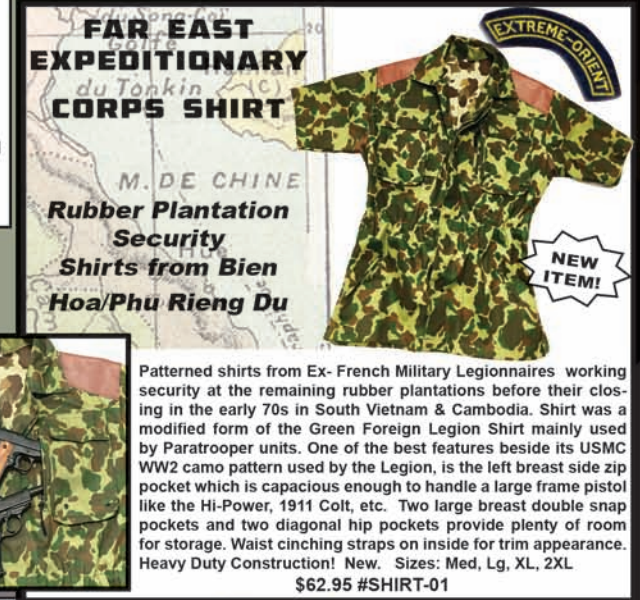
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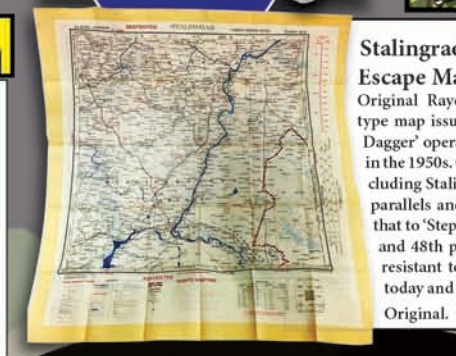
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Large 27 inches \$50.00 #MISC372



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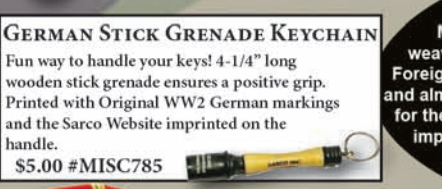
U.S. Pineapple Grenade (inert)
Inert cast iron body with inert US GI fuse lends authenticity to this iconic staple of the American serviceman in the last century. Introduced in WW1, the original designed grenade progressed through evolutions to serve in WW2, Korea, and beyond to retirement @1969. A very deadly grenade due to its girth and castellated body which reminded GIs of a Pineapple. Comes with WW2 era, (1943) 'overpaint Yellow' band and O.D. green body. \$16.50 ea, 3 for \$39.99 #AM026
(Some States may have restrictions on ownership of INERT grenades. Check your local & State laws)



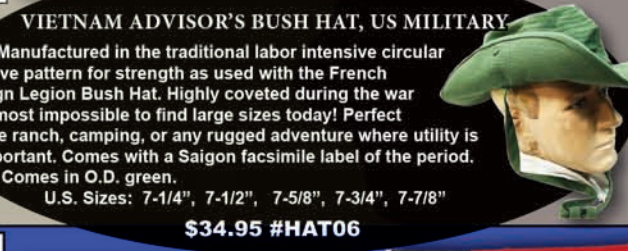
Stalingrad Regional Aircrew Escape Map
Original Rayon fabric escape & evasion type map issued to aircrews and 'Cloak & Dagger' operators behind the iron curtain in the 1950s. One side covers the region including Stalingrad from the 48th to 52nd parallels and the other directly south of that to 'Stepnoy' region between the 44th and 48th parallels. Easily foldable and resistant to water damage. Very scarce today and very limited. Size@22"x23.5" Original. \$45.00 #MISC952



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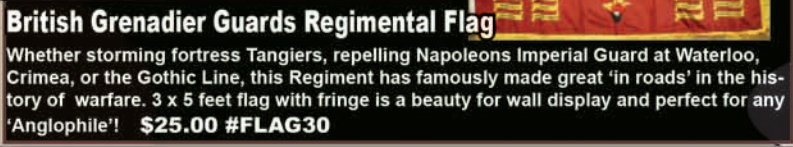
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British Grenadier Guards Regimental Flag
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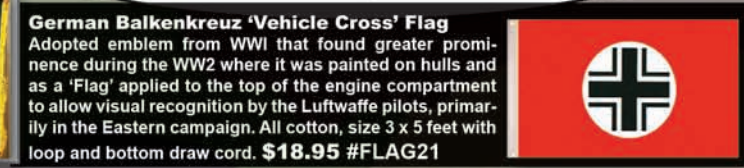


1928 Thompson Display Gun
Well-made wood and metal replica and has a cocking mechanism that moves back and forth and trigger that allows the bolt forward. Magazine catch also works. Comes with steel 50rd. display drum. (non-firing) \$249.95 #REP01

REMEMBER THE MOVIES ZULU & ZULU DAWN? HERE IS THE REGIMENTAL FLAG OF THE BRITISH 24TH WARWICKSHIRE REGIMENT
2nd Battalion, 24th Foot Colors with their battle honors is a beautiful tribute to their sacrifices from clashing with Napoleon at Talavera, charnel conflagration at Chillianwallah, and the truly legendary stand of their unit at Rorkes Drift, South Africa where against all odds and with stellar leadership, a Company of the 24th defended against an attack by over 4,000 Zulu warriors. A beautiful wall hanger. Size 53" x 33". 2 grommets for use on pole. \$29.95 #FLAG32



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German Balkenkreuz 'Vehicle Cross' Flag
Adopted emblem from WW1 that found greater prominence during the WW2 where it was painted on hulls and as a 'Flag' applied to the top of the engine compartment to allow visual recognition by the Luftwaffe pilots, primarily in the Eastern campaign. All cotton, size 3 x 5 feet with loop and bottom draw cord. \$18.95 #FLAG21

MILITARY HERITAGE

Fall 2021

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By Victor Kamenir

The Germans launched a massive offensive against Soviet forces in the Kursk bulge in July 1943 in an all-out bid to regain the initiative on the Eastern Front.

34 COVERED IN GLORY AT LEUTHEN

By Joshua Shepherd

Prussian King Frederick II squared off against Austrian Prince Charles of Lorraine at Leuthen in 1757. The outcome would determine whether Prussia would keep Silesia or lose it to Austria.

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George H. Thomas made a rearguard stand at Chickamauga in September 1863 that saved the Union Army of the Cumberland from destruction in the face of superior Confederate forces.

54 TO HELL AND BACK

By William E. Welsh

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By Eric Niderost

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74 ZENOBIA'S BLOODY WAR OF INDEPENDENCE

By Glenn Barnett

The warrior queen of Palmyra conquered Egypt and Asia Minor in A.D. 270 and broke off from Rome. Roman Emperor Aurelian marched east determined to restore the status quo.

82 TRIUMPH OFF FLAMBOROUGH HEAD

By Eric Niderost

John Paul Jones sought to raid British ports in 1779 with a small naval task force. Running headlong into the British frigate HMS *Serapis* in the North Sea, he embraced the opportunity for a bloody duel on England's doorstep.



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Cover: A soldier of the 21st Ohio Volunteer Infantry, armed with Colt's revolving rifle, at the Battle of Chickamauga. The unit fought with troops under General George Thomas defending Snodgrass Hill. See story page 44. Painting © Don Troiani, www.DonTroiani.com



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AFTER KURSK, SOVIETS FAVORED BROAD-FRONT OFFENSIVES TO RETAKE TERRITORY

“THE BIG DEFEAT at the Kursk bulge was the beginning of a fatal crisis for the German army,” said Marshal Aleksandr Vasilevsky, the Soviet Chief of the General Staff. Indeed, the Red Army’s victory at Kursk ushered in lasting change to the course of the war on the Eastern Front. From that point forward, the Germans found themselves on the defensive.

As early as the winter of 1941-1942, German intelligence had noted that Stavka (Soviet High Command) was no longer making the amateurish errors in judgment and strategy that had cost the Red Army so dearly at the outset of Operation Barbarossa. Stavka had learned to acknowledge its mistakes and taken steps to correct them. By the time the Red Army launched the Uranus offensive in November 1942 that sealed the fate of the German Sixth Army at Stalingrad, it had made great strides in the capabilities and sophistication of its armored and mechanized forces.

In the wake of their great strategic victory at Kursk in July 1943, Premier Josef Stalin and Stavka had to find the most effective way for large Soviet military formations, known as fronts, to carry out offensives against the Germans. The principal goal of the Red Army at that time was the recovery of territory rather than the destruction of enemy forces. Stavka struck upon a general framework for military offensives that fit the Red Army’s unique set of circumstances and was in sharp contrast to the strategic methods used by the Germans as they swept deep into Russia in the heady days that ended abruptly with their defeat at Stalingrad.

For this and other reasons, the Soviets did not strive to carry out blitzkrieg tactics in which armored columns achieved deep penetrations and sought to achieve double envelopments that would result in the destruction and capture of large number of enemy forces. Blitzkrieg warfare had certain requirements in order to succeed. First, it required tight coordination and leadership competence at all levels from army headquarters down to the platoon level. Second, it required logistics capabilities to support deep penetrations; for example, the delivery of fuel to keep the armored columns in motion. The Red Army lacked such capabilities in 1943.

Stavka, acutely aware of the deficiencies of the Red Army, instructed its senior commanders to undertake multiple thrusts of limited depth across on a broad front that could be supplied from multiple railheads. This meant that when launching an offensive, the Red Army forces did not have to concentrate as heavily as the Germans did in preparation for their offensives.

In the face of the German army’s Citadel offensive, the Red Army bided its time. The Soviet forces put in an exemplary performance on the defensive at Kursk, showing that they had become proficient in the basic tenets of defensive warfare. They not only constructed deeply echeloned defenses that blunted the German armor, but also used their mobile reserves in a skillful fashion to plug breaches in their defenses.

Stavka drew up plans for offensives that the Soviet fronts would conduct once the Germans had depleted their manpower and armored resources at Kursk. Stavka envisioned multiple offensives that would allow them to retake territory at the expense of the German army groups. “Stavka planned to conduct a general offensive on a front from Velikii Luki [in the Pskov region] to the Black Sea,” Vasilevsky said.

This time it would be the Germans who had to construct deeply echeloned defenses.

—William E. Welsh

MILITARY HERITAGE

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WEAPONS

THE SHALLOW DRAFT OF THE LONGSHIP OPENED UP THE INTERIOR OF EUROPE TO VIKING RAIDERS AND ENABLED THEM TO MAKE SWIFT GETAWAYS LADEN WITH PLUNDER.

By John Spindler



Photo: Viking Nilsson

In the first week of October 844, Emir Abd ar-Rahman II of Cordoba learned disturbing news: Vikings had captured Seville. From the accounts he heard, the emir gleaned that they were the *al-Madjus*. The Moors described the western Vikings with that name, which translated to “fire worshippers.” A month earlier, the emir had received a dispatch from the governor of Lisbon about raiders from the sea who had seized that city, as well. The emir wondered if these were the same men.

The Vikings had sailed from their base at the mouth of the Loire River that summer to raid the northern coast of Iberia. Having plundered coastal towns and monasteries, the warriors continued pillaging along the Iberian coastline. They occupied Lisbon for 13 days in the late summer.

Keenly aware of the great wealth of the Muslims, the Viking raiders eventually sailed up the Guadalquivir River to Seville. They knew that the

The Norwegians who constructed the clinker-built replica Viking longship, *Draken Harald Harfagre*, in 2012 used traditional techniques. Longships enabled the Vikings to transport their armies throughout Europe and conduct amphibious assaults in estuaries and navigable rivers.

city’s great mosque would contain vast amount of treasure, much of which would be crafted from gold. For six weeks the Vikings occupied the city, but they eventually withdrew in the face of superior forces.

The key that enabled Vikings to be able to carry out swift raids was the longship. The longship made it possible for Vikings to navigate a wide range of maritime and riverine locations, including seaports, shallow coves, and navigable rivers. Strong, slender, and flexible, the longboat’s most crucial characteristic was its very shallow draft, even when fully laden with troops, equipment, and plunder. From the coasts of Europe to rivers across the continent, the longship became the feared symbol of the Vikings.

The Viking Age is generally considered to have begun with the raid on Lindisfarne in 793 and ended at the Battle of Hastings in 1066. The development of the longship allowed for the accomplishments of the Northmen during this era. Until the mid-18th century, the longship was only known from literary sources, coins, pictures, and stones. One of the most elaborate depictions of it is on the Bayeux Tapestry, the 230-foot-long embroidered linen strip that depicts the Norman Conquest of England.

An early Viking ship was unearthed in a bog in 1920. Known as the Kvalsund ship and built around 700, the ship possessed a rudimentary keel, an important characteristic, for it improved the ship’s strength and stability. The ship appears

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Left: Viking Ship Museum, Oslo

tened with iron nails. Viking shipbuilders hewed these planks by axe to provide maximum strength. By following the natural grain of the wood, the builders increased the flexibility needed to bend the plank during the ship's final phase of construction.

The Vikings preferred oak for their longships. They used pine to for the mast and rowing oars needed for their longships. The Vikings perfected the art of having the hull, mast, and rigging function as a single unit. In addition to lumber and iron nails, the large square sail was made from wool. They used animal hair, hemp, or wool soaked in pine tar to stuff in the strakes' overlaps to ensure water tightness.

The Vikings made efficient use of all available room aboard their narrow longships. Instead of rowing benches, Viking oarsmen sat upon their sea chests. They hung their shields on the ship's sides so they did not take up precious room inside the vessel.

The Vikings did not establish formal standards for their construction techniques. Instead, master shipbuilders passed down to their apprentices by word of mouth the proper construction techniques for longships.

Viking longships used both sail and oars for propulsion. Under sail with a good wind, replica ships have reached 20 knots. When the weather did not cooperate or while they were in close-quarters in combat, the Vikings used oars. A good crew using its oars could sustain six knots for a short period of time. The Vikings lowered their masts and sails when approaching the coast to make them less visible to people on shore whose homes or villages might be the targets of a raid. When maneuvering in the shallows along the coast, they used their oars.

In contrast to the karvi, Viking shipbuilders in the 10th century constructed their longships with a length-to-breadth ratio of 7:1. This ratio furnished better speed, flexibility, and maneuverability than earlier designs. Among the class of ships that were constructed with the 7:1 length-to-breadth ratio was the *snekkja* (snake). Though they were among the smallest longships employed in warfare, they were the most common. With a minimum of 20 rowing benches, giving a crew of at least 41 men, a typical *snekkja* was around 56 feet long, slightly more than eight feet wide with a draught of just 18 inches.

A *snekkja* could be beached for the night instead of having to use a port. The light weight also allowed it to be portaged. Archeologists recovered a *snekkja* in 1962 near Skuldelev in Denmark's Roskilde Harbor. Vikings had sunk that ship and four others to form a defensive barrier in Roskilde Fjord that made it possible for them to control the sea routes to what was one of Den-



TOP: The 9th-century Oseberg ship in the Viking Ship Museum in Oslo was excavated in the early 20th century from a burial mound in southern Norway. The karve-style, clinker-built ship with its broad hull is made almost entirely from oak. **ABOVE:** The 11th Bayeux Tapestry depicts Duke William of Normandy's army crossing the English Channel in longships. **OPPOSITE:** The Vikings assembled 200 ships and 8,000 men besiege the fortified Île de la Cité during the siege of Paris in 885.

to mark the transition from a vessel propelled solely by rowing to one that had a keel and could also be powered by wind using a sail. At some unknown point in time, the Vikings began to build all of their ships with a mast and sail.

By the close of the 8th century, Viking longships could be used for raids beyond the Scandinavian littoral. Called *karvi*, these vessels had between six and 16 rowing benches and were between 55 and 75 feet long.

With a length-to-width ratio of 9:2, longships

were multipurpose vessels used for trade, fishing, and raiding. At the Oseberg farm in the Vestfold, Norway, archeologists excavated a *karvi* from a burial mound in 1904. This ship was about 70 feet long and 16 feet wide and possessed a T-shaped keel that allowed for a sail.

Like its Kvalsund predecessor and its subsequent successors, the *karvi* used clinker-built construction. In this type of ship, the hull was built with a series of overlapping strakes; that is, the planks used for the vessel's sides, which were fas-

mark's great royal cities.

Regional differences existed among longships. A Danish-built ship tended to have shallower draught than those built in Norway, which was undoubtedly influenced by Norway's deep bays and fjords. Swedish vessels generally were of smaller size due to their mainly being used on the major rivers in Russia.

Larger longships have been given their own classifications. While maintaining the 7:1 length-to-breadth ratio, one type of these, known as a *skei* or *skeide*, had at least 30 rowing stations. This enabled it to accommodate at least 61 men. A 120-foot-long *skeide*, estimated to have been built around 1025, was found in Roskilde Fjord in 1997 and had room for a crew of 100.

The massive *drekar* or *drakkar* (dragon) is known primarily from historical sources, given that only has never been found.

These enormous vessels were used only by the wealthiest Vikings. Modern historians and shipwrights calculate the *snekkja* found in Skuldelev took 27,000 man-hours to hew the planks, forge the metal components, weave the sail, and complete other time-consuming tasks. A *drakkar* or a *skeide* would have required an even higher quantity of man-hours. Though as large as the longest *skeid*, the *drakkar* has been described as more ornately decorated and possessing a dragon or serpent as a masthead.

Longships were ideally suited for the sea-faring needs of the Norse. Vikings could easily beach their vessels in order to conduct quick hit-and-run raids on vulnerable coastal trading centers and monasteries in search of slaves, gold, and other valuables. The vessels then could be launched quickly when the raid was finished or if the local defenses proved too strong. Major inland cities that otherwise normally felt safe from foreign invaders experienced the wrath of the Norsemen. Among such places were London on the Thames, Paris on the Seine, Dorestad on the Rhine, Seville on the Guadalquivir, and Pisa on the Arno.

Scandinavian Vikings, known as Varangians, traveled by land and up rivers into Russia in the 9th and 10th centuries. Rurik, a Varangian prince, founded the Rurik Dynasty in 862. The Varangians built a successful trade route using the river network from the Baltic Sea through Kiev to the Black Sea and the city of Constantinople. The light weight of Viking longships, including the *snekkja*, allowed them to be portaged between navigable rivers such as the Dnieper, Don, and Volga.

In addition to being a critical part of their success in raiding the coastlines of Europe, Vikings used the *snekkja*, *skeid*, and *drakkars* in naval battles against rival Vikings and foreign foes alike. Unlike the warships of the ancient Greeks and

Romans, archeological evidence so far has shown the longship did not possess a ram to sink an enemy vessel, even though northern sagas speak of them. Rather, the Vikings used similar tactics in naval clashes to those they employed in land battles.

When the opposing fleets came within range, Vikings hurled spears and fired arrows at their enemy. Once the two sides closed for battle at sea, the two opposing sides lashed their ships together to form a floating platform. However, a few independent ships took up positions on the flanks. Typically, the flagship was placed in the middle of the floating platform. This was because it was taller, and its gunwales were higher than the other vessels.



The attacking fleet would then throw grappling hooks to secure to the enemy vessel, usually focusing on those with lower gunwales. Next, the Vikings would fight their way aboard the enemy ships. They would then form shield wall, as they would on land, and assail their enemies with their axes, spears, and swords. The attackers kept their assault going from ship to ship until the outcome was determined. Due to their value and construction cost, Vikings sought to capture ships of all types, not just longships, rather than trying to sink or burn them.

Figures specifying the types of ships, as well as the number of ships and men involved in sea battles, are scarce, as few contemporary accounts sur-

vive. In the largest naval battle in Norwegian history, the Battle of Nesjar in 1016, no primary source accounts exist, although it is believed to have been a severe fight with heavy casualties.

At the Battle of Svolder, fought in the western Baltic Sea on or about 1000 between Norway and an alliance of Denmark, Sweden, and the Jarls of Lade, the Norse sources report the Norwegian fleet at 11 ships arrayed against as many as 82 warships of the alliance. No exact losses are given for the alliance, but all Norwegian ships were captured and both sides suffered heavy casualties.

The Varangians were drawn to Constantinople by tales of that city's wealth. They made several attempts to capture the city. In a naval engage-

ment in 941 AD, for example, a Byzantine fleet of 15 Byzantine galleys, known as *dromons*, defeated a larger Rus fleet. In their encounters with the Byzantines, the Vikings were shocked by Greek fire, a weapon they had not encountered before, which used by the crews of the *dromons*.

The Vikings would not have been able to make their mark on lands outside Scandinavia without the longship. Taking careful note of the versatility of the longship, other kingdoms such as Anglo-Saxons and Normans adopted it as a model for their fleets. The Viking longship design was so successful that it remained widely used until it was replaced by the cog beginning in the 13th century. ■

UNIFORM

17TH CENTURY OTTOMAN JANISSARY MUSKETEER

HEADGEAR: A Janissary wore a tall, felt, Uskuf cap, also known as a bork, which was introduced by the Bektasi dervish sect. The white hat worn by janissaries distinguished them from the rest of the army which wore red hats. The hat's long tail protected their neck from the hot sun.

MUSKET: Musketeers carried the deadly "trench gun," which was feared by their enemies. A musketeer used his cloth belt to secure his bullet pouch, powder horn, and priming flask.

UNIFORM: The well-paid janissaries wore brightly colored, unique, and exotic uniforms that reflected their Asian heritage. They consisted of a long tunic, a wide cloth belt, and a cape for protection against the elements.

SWORD: Musketeers carried several types of long, curved swords the most common of which were the Kilij, Pala, and Yatagan. They were light and greatly admired for their ease of use in battle.

DAGGER: The body of the dagger was occasionally single-edged, but most often double-edged. It featured wide grooves and was a reliable weapon for close combat. They were made of steel and approximately 15-inches long. The daggers often had gold or silver inlay inscriptions and floral motifs.

The Ottoman janissary corps was recruited from military slaves. These slaves were either prisoners captured by Ottoman armies during the course of war or boys and young men conscripted from occupied Christian populations.

The Ottoman state was founded at the close of the 13th century as a society that would serve as a refuge for soldiers, peasants, and townspeople from the Mongols. The roots of the Ottoman janissaries can be traced to their predecessors, the Seljuk Turks, who relied heavily on urban militias.

Although the janissary corps may have been established as early as the reign of Sultan Orhan in the early 14th century, it became the core of the Ottoman army during the reign of Sultan Mehmet II in the late 15th century. By that time they were used almost entirely for campaigns in Europe. ■

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JOHN L. CANLEY LED A MARINE COMPANY ON A HARROWING MISSION TO RELIEVE THE SIEGE OF THE U.S. ADVISORY COMPOUND IN HUE AT THE START OF THE TET OFFENSIVE.

By William E. Welsh

National Archives; Inset: Wikimedia



U.S. Marines endure heavy fire from North Vietnamese in well-concealed positions in Hue's 19th-century citadel. First Sergeant John L. Canley, left, played a crucial role in the Marine Corps' reactionary force sent into the city to contain the well-orchestrated North Vietnamese attack.

The crackle of small-arms fire on the night of January 30-31, 1968, alerted the South Vietnamese troops at an outpost three miles south of Hue City that the enemy was nearby. They were hearing a firefight between friendly regional militia and the vanguard of two North Vietnamese battalions moving into position to invade the city. The several-dozen South Vietnamese soldiers manning the outpost reported the enemy troop movement at 2:00 AM. The firing of North Vietnamese rocket launchers in the mountains to the west of the city ninety minutes later heralded the communist attack on the sleeping city.

On the north bank of the Perfume River lay the

sprawling citadel of Hue, with high walls and moats built by the French military and the Vietnamese emperor in the 19th century. The headquarters of the 1st Division of the Army of the Republic of Vietnam (ARVN) was on the north bank, and so was Tay Loc airfield, which doubled as the base camp for the elite Black Panther ARVN ranger company.

Situated on the south bank of the river was the residential sector of Hue, where a U.S.-run Military Assistance Command Vietnam compound was located. The NVA had sent substantial

forces, the equivalent of an entire division, to capture Hue and overrun the ARVN-U.S. forces in the city.

The ARVN outpost had seen about a quarter of the North Vietnamese Army forces that would be participating in the surprise attack on the city at the start of the Vietnamese Lunar New Year holiday, known as Tet. What made it difficult for the U.S. forces to grasp was that all Vietnamese—those of the communist Democratic Republic of Vietnam, as well as the pro-Western Republic of Vietnam—regarded Hue as a sacred city that

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ABOVE: An M48A3 Patton tank with its 90mm gun moves down a street in Hanoi. Tank crews drew heavy fire and suffered substantial casualties as a result. **LEFT:** A Marine on the south bank of the Perfume River fires towards the citadel on the north bank. After securing the MACV compound, Canley and his fellow Marines had to pry heavily armed North Vietnamese soldiers from buildings in the residential sector.

embodied the spirit and heritage of their beloved nation. ARVN and U.S. intelligence forces deemed it unlikely the North Vietnamese would launch a full-scale attack on one of Vietnam's most revered cultural centers.

Barrages of 122mm rockets slammed into the U.S. Military Assistance Command Vietnam compound in the early-morning hours, blowing eight-foot-wide holes in the ground. When the rocket barrage stopped, soldiers of the 804th Battalion of the 4th Regiment of the North Vietnamese Army assaulted the compound.

North Vietnamese troops, some of whom carried satchel charges, stormed the front gate of the compound, firing their AK-47s wildly as they advanced. The gate had been opened just before the attack in preparation for daytime operations. Some of the communist assault team hurled satchel charges through the gate, while others fired rocket-propelled grenades at strongpoints protecting the gate.

The 200 U.S. military and technical personnel inside the compound at the time of the attack, as well as some Australian troops billeted there, grabbed their weapons and manned the compound walls and balconies of the three-story buildings. The Americans succeeded in stopping the onslaught, but the North Vietnamese, who controlled the streets of the new city on the south bank, wasted no time digging in for an extended battle. They moved into houses around the compound and set up machine-gun nests



and mortar positions. It would be up to the Marines to pry them out one block at a time in the coming weeks.

John L. Canley, who would play a leading role in the relief of the compound, was born in Caledonia, Arkansas, in 1938, not far from the Arkansas-Louisiana line. Inspired to join the Marines after watching actor John Wayne play Marine Sergeant John Stryker in the 1949 war film *The Sands of Iwo Jima*, Canley enlisted in 1953 in the U.S. Marine Corps. "It was about 21 days before I was 16," Canley said in a 2018 interview. "I took my brother's birth certificate. On

my birth certificate it says J. L. My brother's name was L. J. so I was able to switch it around and convince the recruiter to let me take the test."

At the time of the attack on Hue, First Sergeant Canley had flown by helicopter as part of a routine redeployment with his fellow Marines into Phu Bai Combat Base from Quang Tri just a few hours earlier. His unit was Alpha Company of the 1st Battalion, 1st Marines (1/1).

Brig. Gen. Foster LaHue, the commanding officer of Marine Task Force X-Ray at Phu Bai Combat Base nine miles south of Hue on Highway 1, received orders that morning from the III Marine Expeditionary Force to send Marines into Hue to support the beleaguered defenders of the compound. LaHue, who commanded the 1st and 5th Marine regiments, decided to send Batcheller's understrength company into Hue in trucks. Alpha Company was the first of a number of units from Phu Bai that LaHue would feed in a piecemeal fashion into the battle in the days that followed.

The troops were trying to sleep when orders came to saddle up. The understrength company fielded 75 men rather than its full strength of 150. Protecting the convoy en route were two trucks outfitted with quad .50 caliber machine guns, one at the front and one at the back of the convoy. They convoy rolled out of Phu Bai in a thick fog at 8:30 AM.

After a delay attempting to rendezvous with an ARVN battalion that never showed up, the convoy headed north on Highway 1. Alpha Company must have had good karma, because their convoy crossed paths with four M-48 tanks of Alpha Company, 3rd Tank Battalion, 3rd Marine Division. The tank platoon initially was headed to a Navy LCU ramp for transport to redeploy to the DMZ, but the major commanding the tank battalion decided to accompany Alpha Company into Hue.

A short time later they were joined by Lt. Col. Edward LaMontagne, who was the officer in charge of overseeing the transfer of the tanks. Although he did not take command, he accompanied the column and furnished valuable advice. The convoy headed towards the bridge over the Phu Cam Canal that divided the village of An Cuu from the southern half of Hue.

The convoy took sniper fire while passing through the village, but it continued without stopping. After crossing the canal, Batcheller ordered the men to climb aboard the tanks. The two quad .50 vehicles continued on with the tanks.

LaMontagne advised that the convoy should move as fast as possible. The convoy roared through an area along the highway with wooden structures on each side. The soldiers on the tanks blazed away with their weapons, and the quad .50s chugged out heavy suppressing fire as well. The communists returned fire with AK-47s, light machine guns, and B-40 rockets.

When the head of the convoy reached a traffic circle, the Marines collected their wounded. What followed was a running battle that lasted several hours as the convoy proceeded northwest on Duy Tan Street towards the compound. The convoy endured a steady gauntlet of enemy fire from both sides of the road as it pressed forward.

The convoy soon entered a causeway through rice paddies. Enemy troops were in two buildings, one on each side of the road, pouring fire into the convoy. Batcheller ordered the Marines to dismount. Some advanced behind the tanks and others through a muddy ditch alongside the road. The tanks swung their guns around and blasted the buildings.

Although the enemy in the buildings had been silenced, a communist machine gun in another location fired on the column. As Batcheller was dragging a wounded Marine to safety, he was

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ABOVE: A Marine fires the M-60 machine gun from a makeshift trench. Canley's Medal of Honor citation noted the dynamic leadership and courage that he exhibited during the savage battle. **LEFT:** A Patton tank fires on a North Vietnamese position as Marines take cover from an enemy sniper.

struck in several places by an enemy machine gun. He had been hit in his forearm and both legs. In a severe blow to command, Batcheller was taken back to Phu Bai with other badly wounded Marines. Canley immediately took over. His job was to get Alpha Company to the MACV Compound with as few casualties as possible.

In response to a request from the embattled company for reinforcements, Lt. Col. Marcus Gravel, the battalion commander of 1/1, organized a reaction force at Phu Bai consisting of Golf Company from the Second Battalion, 5th Marines (2/5) to reinforce Alpha Company.

When Gravel arrived with Golf Company, he saw that Gunny Canley had firm control of Alpha Company. Canley was fearless and led by exam-

ple. While others crouched to fire from cover, he strode around shouting commands.

"He stood up in the middle of firefights, [when the rest of us] would be hugging Mother Earth," said John Ligato, who served under Canley at Hue. "His reputation was that he never ducked, and never crawled." Canley ordered one of the trucks to take Batcheller and the other badly wounded Marines back to Phu Bai.

Canley's Medal of Honor citation states that the gunnery sergeant braved "fire-swept terrain" to retrieve casualties that fateful day. When Batcheller was severely wounded, Canley "reorganized his scattered Marines, moving from one group to another to advise and encourage his men," continues the citation. "Although sustaining shrapnel wounds during this period, he nonetheless established a base of fire which subsequently allowed the company to break through the enemy strongpoint."

LaMontagne reached the compound first with the tanks, while the dismounted Marines were still bogged down on the causeway. He organized a group of volunteers in trucks from the compound to assist the Marine grunts who were pinned down on the causeway. With one of the tanks furnishing covering fire with its 90mm gun, the Marines and their wounded were taken in trucks

to the compound.

The two Marine companies reached the compound in the early afternoon. Cheers arose from the small number of Marines and soldiers inside the compound who had been waiting for relief. Gravel, Canley, and the other Marines surveyed the damaged walls that had been breached in several places by continued communist attacks throughout the morning.

Canley stayed at the compound for a week. He commanded the company for four days until Lieutenant Ray Smith, who commanded Alpha's second platoon and had been left behind at Quang Tri with the other half of the company, arrived to take command of Alpha Company on February 4.

Canley and Sergeant Alfredo Gonzalez of the Alpha Company's Third Platoon led the company on February 4 in a determined assault to clear 100 communist soldiers from the buildings of the Joan of Arc High School and Church near the compound. Since enemy fire swept the streets and paths around the complex, the Marines systematically blasted their way from one room to the next using C-4 explosives and M72 LAW rocket launchers. Once a wall was breached, a fire team cleared the room.

When the Marines stormed the church, enemy soldiers hiding in the rafters dropped grenades on them from above. Forced to withdraw temporarily, the Marines called up a tank to blast the roof. In a subsequent assault, Gonzalez was killed by enemy rocket fire. He received the Medal of Honor posthumously. At one point during the assault, Canley knocked out an enemy strongpoint using a satchel charge.

Canley again helped Alpha Company succeed in a difficult assault on February 6 against a strongly held South Vietnamese government building in Hue. On two occasions during the assault, he leapt over a wall and retrieved Marine casualties while exposed to enemy fire.

Canley was awarded the Navy Cross in 1970 for his action during the Battle of Hue City, but this was upgraded in 2018 to the Medal of Honor. It was presented to him during a White House ceremony on October 17 of that year.

The citation notes the "dynamic leadership, courage, and selfless dedication" he furnished not only while serving as the acting commander of Alpha Company, but also in the bloody assaults conducted on February 4 and February 6.

Of his experience in the Battle of Hue, Canley said in press interviews that he was never fearful during the firefights in which he participated. "My Marines, because they believed in me, would follow me to death," he said. "Knowing that my Marines were 100 percent behind me, fear never existed." ■

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MATTHEW RIDGWAY RALLIED THE DEMORALIZED EIGHTH ARMY IN KOREA, REVERSED THE COMMUNIST TIDE AND LIBERATED SEOUL.

By John Walker

Top: U.S. Army Art Collection; Inset: National Archives



U.S. troops fire on Chinese during Battle of Chipyeong-Ni, which marked the high tide of the Chinese counteroffensive in the Korean War. The Chinese attacked at night to take full advantage of their superb infiltration tactics. RIGHT: General Matthew Ridgway, who arrived to take command of the U.S. Eighth Army in Korea in December 1950, counterattacked the overextended Chinese the following month.

As Lt. Gen. Matthew Ridgway boarded a flight to Tokyo, Japan, on December 23, 1950, on his way to a meeting with General of the Army Douglas MacArthur, he was not fully aware of the depth of the crisis still unfolding on the frozen Korean peninsula, where American-led United Nations forces and their South Korean allies, who were seemingly on the verge of complete victory in North Korea, were now suddenly on the brink of collapse and perhaps outright defeat. MacArthur, the commander-in-chief of U.N. forces fighting in Korea, had hand-

picked Ridgway to assume command of U.S. Eighth Army after its commander, Lt. Gen. Walton Walker, was killed in a traffic accident.

When they met three days later, MacArthur painted a bleak picture of the situation in Korea. MacArthur apparently had no idea how to stop the tens of thousands of advancing Chinese Communist troops who had halted, then routed, his end-the-war offensive north of the 38th Parallel to the Yalu River. Nevertheless, MacArthur assured Ridgway of his support. “The Eighth Army is



yours,” he told Ridgway. “Do what you think best.”

Chairman Mao Zedong, the leader of the People’s Republic of China, had decided to aid beleaguered North Korean Premier Kim Il-sung beginning in mid-October 1950 by sending more

than 300,000 Chinese soldiers across the Yalu River into North Korea. They crossed the frontier unhindered, for MacArthur’s chronically ineffectual intelligence services had failed to detect their presence.

Ridgway flew to South Korea that afternoon. Although he had distinguished himself in World War II commanding the 82nd Airborne Division at Normandy and the XVIII Airborne Corps during Germany’s Ardennes Offensive, Ridgway



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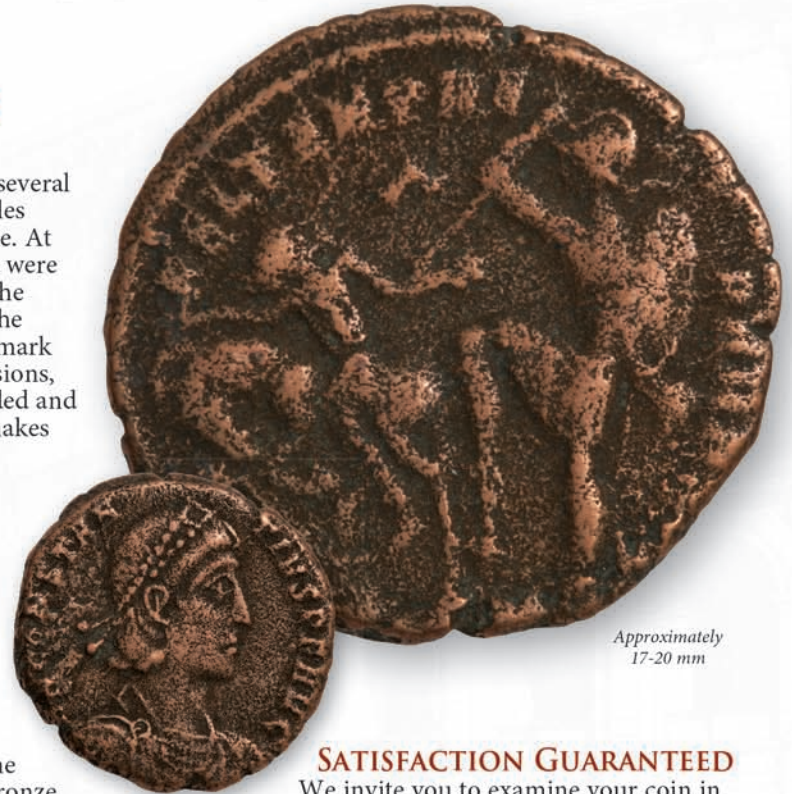
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TOP: Marines engage an enemy sniper in Seoul.
RIGHT: Ridgway tours the front lines in March 1951. When President Truman removed General Douglas MacArthur from command of the U.N. forces in April 1951, he replaced him with Ridgway.

knew little about Asia, and even less about Korea.

Upon his arrival, Ridgway found Eighth Army a demoralized force with more than a few shaken officers talking openly about evacuating the entire peninsula. Unconventional Chinese tactics and behavior had inflicted a severe psychological blow upon enlisted men and officers alike. These tactics consisted, for the most part, of seemingly endless human-wave attacks at night.

After abandoning massive amounts of food, weapons, and ammunition to the enemy, Eighth Army's humiliating month-long flight from the Chongchon River in northwest Korea had finally ended well below the 38th Parallel. The 1,250-mile retreat was the longest of its kind in the annals of the U.S. military.

The U.S. X Corps' performance on the northeastern front—especially the 1st Marine Division's epic fighting withdrawal from the frozen Chosin Reservoir—had been far more respectable, but nonetheless all U.N.-ROK forces had been driven from North Korea by Christmas 1950. Although Chinese Marshal Peng Dehuai had shocked the world with his triumphant month-long winter counteroffensive that began on November 24, 1950, it had cost the attackers 80,000 casualties, one-fourth of their total strength.

As he toured the front for three days in an open jeep in freezing weather, meeting with his corps and division commanders, and ROK division commanders as well, Ridgway told them the same



thing he had told South Korean President Syngman Rhee. "I've come to stay," he said.

Finding the Communists had temporarily halted their advance along a line just above the 38th Parallel on December 24, 1950, awaiting much-needed supplies of food and ammunition, Ridgway thought about organizing a quick counterattack but reconsidered when he reached the front.

"I discovered our forces were simply not mentally and spiritually ready for the sort of action I had been planning," he said later. "The men I met along the road, those I stopped to talk to, all conveyed to me a conviction that this was a bewildered army, not sure of itself or its leaders, not sure what they were doing there. The leadership I found in many instances sadly lacking, and I said so."

With his trademark grenade and battle dressing attached to his shoulder straps at all times, Ridgway set about restoring Eighth Army's morale, quickly dismissing the idea of evacuating Korea. A proponent of defense-in-depth, Ridgway put his engineers and several thousand local laborers to work erecting a deep defensive zone

south of the Han River. It consisted of four successive fortified lines dug and prepared on an unprecedented scale, each with a trench system, concertina wire, bunkers, mines, artillery emplacements, and radio communications.

Ridgway issued orders instructing commanders from regiment-sized units on up to stay off the roads and fight their way through the hills, where the enemy was holding the high ground. The new commander demanded speed and aggressiveness: If an enemy appeared on a unit's front, he called for immediate deployment of troops to protect the flanks and prevent breakthroughs. Ridgway showed no hesitation relieving officers who failed to meet his high standards of combat performance.

Studying the terrain as he flew over the front, Ridgway knew the Communists would resume their offensive soon. He not only took steps to contain the advance; he adopted war-of-attrition tactics to inflict maximum punishment upon the enemy. Ridgway knew he would have to give up key ground, including Seoul, but he was convinced the Communists were nearing the end of their long and fragile supply line.

Supremely confident after the stunning successes won in the last two months of 1950 and hoping to force the U.N. forces to abandon South Korea, Chairman Mao had decided, against the objections of his military command, to widen the conflict by crossing the 38th Parallel and expelling all UN forces from Korea. His *Third Phase Offensive*, launched on December 31, 1950, was the first test for Eighth Army's new commander but lasted, surprisingly, little more than a week.

"We were killing them by the thousands, but they just kept coming," said Ridgway. After several ROK divisions on the flanks, which were ill-trained, ill-equipped, and ill-led after suffering horrific losses earlier in the war, completely collapsed, Ridgway abandoned Seoul on January 4, 1951, and withdrew south of the Han River.

Eighth Army and X Corps withdrew 40 miles to the defensive line that had been prepared for them "as a fighting army, not as a running mob," Ridgway said. There, thanks to the lavish use of artillery and air power, the U.N.-ROK front stabilized and held. The Communists had indeed outrun their logistical capability and for the time being were unable to press beyond Seoul.

Finding the Communists had abandoned their most advanced positions, Ridgway ordered Eighth Army to conduct a reconnaissance-in-force beginning on January 25, 1951, which became Operation *Thunderbolt*, the first U.N. counterattack of the year, a show of force meant to dislodge enemy units from the south side of the Han River, threaten Seoul, and instill confidence within U.S. 2nd Infantry Division's ranks. With the entire front line

moving northward as one from each phase line to the next, backed by heavy artillery and air support, the advance concluded with friendly forces reaching the south bank of the Han River in strength by early February.

On February 11, though, the resupplied and reinforced Communists, some 200,000 strong, launched their *Fourth Phase Offensive*, a massive attack southeastward from Seoul across the waist of the country. The initial assault against X Corps near Hoengseong drove two U.N. divisions back, leaving 2nd Infantry Division's 23rd Regimental Combat Team, along with a French infantry battalion, surrounded at the strategic crossroads town of Chipyeong-ni, 50 miles east of Seoul and 40 miles south of the 38th Parallel.

After the X Corps' commander, Maj. Gen. Edward Almond, ordered 23rd RCT's commander, Colonel Paul Freeman, to fall back 15 miles to the south, Ridgway countermanded the order. The Eighth Army commander had decided to gamble and, against daunting odds—Freeman's 4,500 men squared off against 20,000 Communists—to stand their ground and fight.

In some of the war's most savage fighting, the 24th RCT and its French allies beat back massed ground attacks over three nights beginning on February 13, supplied by air-drops and supported by UN artillery barrages and bombs, bullets, and napalm dropped by U.N. bombers upon advancing enemy formations. Short of essential supplies and with their casualties mounting, the Communists began withdrawing northward, having reached the high-water mark of their advance into South Korea. The defeats at Chipyeong-ni and the Third Battle of Wonju in the middle of February left the enemy withdrawing across the entire front. Although the sizes of the forces involved were relatively small, the twin victories marked a huge turning point in the war. Having failed to drive U.N. forces into the sea, the Communists were now themselves being driven back.

As the enemy began pulling back from Chipyeong-ni in mid-month, Ridgway kept the pressure on. He started with Operation *Killer* on February 21. The operation was a full-scale attack northward by seven divisions, designed for the maximum exploitation of firepower to kill as many Communists as possible.

A follow-on operation, known as *Ripper*, began on March 6. The new operation was a large-scale, ambitious effort to drive the enemy back to the 38th Parallel through another series of so-called phase lines. After *Ripper* opened with the largest artillery barrage of the war, U.N.-ROK units pushed north and encountered only light resistance as tens of thousands of Communists headed north to escape the deluge of shells. The advancing troops retook Seoul on March 14. After



Troops of the U.S. Army's 187th Regimental Combat Team prepare to assault a ridge held by the Chinese in May 1951. By summer 1951 the war had become a stalemate with each side launching new offensives only to influence peace negotiations.

changing hands four times over a year, the once-vibrant capital now lay in ruins, most of its buildings leveled, its population down to 200,000 from a pre-war high of 1.5 million, most suffering from disease and severe food shortages.

Attempting to stem the surging U.N.-ROK tide, Peng marshaled the manpower of three field armies, a staggering 700,000 men, for a massive Spring Offensive that began on April 22. He sent 340,000 troops in 27 divisions against the U.S. I and IV corps along a 40-mile front north of Seoul.

After a week of heavy fighting at the crucial battles at Kapyong and the Imjin River, the enemy's advance was halted at the so-called No-Name Line north of Seoul by the end of April. By this time, tens of thousands of Communists were fleeing north and thousands more, many of whom were sick, starving, and frostbitten, surrendered to the U.N.-ROK forces. After the crushing defeats of late winter and spring 1951, the Chinese gave up any hope of unifying Korea under Kim's rule, and the conflict degenerated into an ugly war of attrition along the 38th Parallel, while negotiations to end the fighting began in July 1951.

A letter MacArthur had written to a U.S. Congressman that advocated the use of Nationalist Chinese (Taiwanese) troops in Korea surfaced on April 5. This new controversy again unsettled Tru-

man and his Western allies.

The most unpalatable part of MacArthur's strategy for victory was his belief that it was acceptable to use atomic weapons to defeat world communism. Truman was adamantly opposed to the use of nuclear weapons for such purposes, and the president made every effort to keep the conflict confined to the Korean peninsula.

The conflict between Truman and MacArthur had finally reached the tipping point. Truman relieved MacArthur on April 11, replacing him with Ridgway. Truman then appointed Maj. Gen. James Van Fleet to command the Eighth Army.

Maintaining their "war of attrition" tactics, Ridgway and Van Fleet found time not only to build the South Korean army into a formidable fighting force, but also to integrate African-American soldiers into previously segregated units in the Far East Command, a policy soon matched throughout the American armed forces.

Having largely turned against the war, Americans welcomed the July 1953 armistice, which allowed for the cessation of hostilities and the exchange of POWs. But because Kim Il-sung and Syngman Rhee never signed a formal peace agreement, the two Koreas remain in a state of war to this day. None of this, though, detracts from Ridgway's grand achievement leading the Eighth Army to victory on the Korean Peninsula. ■

THE GERMANS LAUNCHED A MASSIVE OFFENSIVE AGAINST SOVIET FORCES IN THE KURSK BULGE IN JULY 1943 IN AN ALL-OUT BID TO REGAIN THE INITIATIVE ON THE EASTERN FRONT.

By Victor Kamenir

Soviet machine-gunner Mykhailo Petrik and his platoon comrades lay in their makeshift bunker on the open steppe land 30 miles northwest of Belgorod awaiting the enemy's advance on the first day of the titanic clash at Kursk. He and his comrades were situated in the path of XLVIII Panzer Corps of German Army Group South. Petrik was armed with a 7.62mm gas-operated DP-27 Light Machine Gun. With



Last Lunge in

its pan magazine perched on top, it was light enough to fire from a hip but had far greater accuracy when fired from a bipod.

"We were targeted by dive bombers, artillery, and tanks," he recalled years later. "But then it stopped as the [German] infantry rushed forward, and was replaced by the drilling sound of German machine guns and the explosion of mortars." With their ammunition and

grenades in easy reach, Petrik and his fellow soldiers braced themselves for a fight with the veteran German infantry that followed the German panzers and tank hunters. "We did not expect to survive, and we knew death was arriving, and I could not catch my breath," he recalled. When the German infantry reached them that day, they would experience a firefight like never before.

After the Russian offensives known as opera-

tions Star and Gallop in winter 1943 and the German counteroffensive known as the Donets Campaign in February 1943 had run their respective courses, an operational pause settled over the Eastern Front. When active operations on the front died down in March, a large Soviet salient developed around the city of Kursk, which was situated 325 miles south of Moscow. This bulge was sandwiched between smaller German salients at



the East

A Tiger tank of Waffen SS division Das Reich goes into action against Soviet forces in the southern part of the Kursk salient. Its 88mm gun could penetrate the armor of a Soviet T-34 at 1,800 yards.



ABOVE: German armored vehicles struggle across a river during Operation Citadel. RIGHT TOP: Field Marshal Gunther von Kluge (left) and Colonel General Walter Model confer during Operation Citadel. Model, who led the Ninth Army in the northern pincer at Kursk, failed to act decisively. RIGHT BOTTOM: Soviet soldiers prepare defenses in the Kursk bulge. Hitler delayed the operation for two months, allowing the Red Army ample time to improve its positions.

Orel and Belgorod-Kharkov.

Beginning in March 1943, each side began planning for its summer campaign. The German Wehrmacht, which was deeply concerned about a possible Allied invasion of Western Europe, planned a limited offensive by which they would seek to reduce the Kursk salient. Codenamed Operation Citadel, the German plan called for a pincer strike against the base of the salient. The main objective was to encircle and destroy the Russian forces trapped within.

The German initially scheduled their offensive for early May, but they postponed it several times because of difficulties encountered in assembling enough troops, vehicles, and supplies for the offensive. This proved to be a major challenge, for many units were depleted as a result of previous campaigns on the Eastern Front. Despite their best efforts, the German divisions earmarked for the operation averaged just 80 percent of their nominal strength on the eve of the campaign.

German leader Adolf Hitler met with his senior commanders in Munich on May 4 to discuss the plan for Operation Citadel. Hitler and his generals could not achieve a consensus. Some of the field commanders favored the offensive, while others did not. Generaloberst Heinz Guderian, the Inspector General of Armored Troops, and Albert Speer, the Minister of Armaments, were

both against the offensive. They feared a major battle against the best forces of the Soviet Union would result in a catastrophic loss of panzers. Moreover, they held that the Wehrmacht could not afford the possible loss of hundreds of tanks with an Allied invasion of Western Europe looming on the horizon. Hitler ordered the offensive to proceed regardless of their objections. He scheduled it for July 5 to allow enough time for newly produced armored vehicles to reach the panzer divisions at the front.

The German plan called for Generaloberst Walther Model's Ninth Army of Army Group Center to strike south from Orel, while Generaloberst Herman Hoth's Fourth Panzer Army and General der Panzertruppe Werner Kempf's Detachment of Army Group South would attack north from the Belgorod-Kharkov sector.

While Model and Hoth would spearhead the main pincer attacks, Generaloberst Hans von Salmuth's Second Army of Army Group Center would launch a heavy diversionary attack to pin down Russian forces along the western face of the salient.

If the Germans succeeded in destroying the Soviet forces in the Kursk salient, they would have an opportunity to follow up their victory in one of two ways. In one possible scenario, they could swing north from Orel to carry out a deep encir-

lement of Moscow. In another scenario, they could turn south to encircle the Soviet forces deployed along the Donets River.

To crush the Soviet forces in the Kursk salient, the Germans planned to mass their armor. The Germans fielded an impressive array of new armored fighting vehicles for the campaign. Their newest panzers were the medium Panzer V Panther and the heavy Panzer VI Tiger. The Nashorn and Elefant, new tank destroyers armed with 88mm cannon, would furnish additional mobile firepower. Lending their firepower from the rear of the advancing forces would be two new self-propelled howitzers, the Wespe and Hummel, which mounted, respectively, the 105mm and the

150mm main guns.

Altogether, the Germans would have 900,000 troops, 2,700 tanks and assault guns, thousands of artillery pieces and mortars, and 2,000 combat aircraft for Operation Citadel. Each side had approximately 2,000 combat aircraft.

Having gained invaluable experience fighting the Germans for the past 24 months, the Soviet High Command, known as Stavka, planned in early 1943 a far-ranging offensive that would crush German army groups Center and South; and in so doing, liberate left-bank Ukraine. The liberation of the region was of critical importance, for its Donbass area was rich in natural resources needed for the Soviet war effort. The envisioned offensive would involve several Soviet fronts (the rough equivalent of German army groups) deployed in the center of the Soviet line on the Eastern Front.

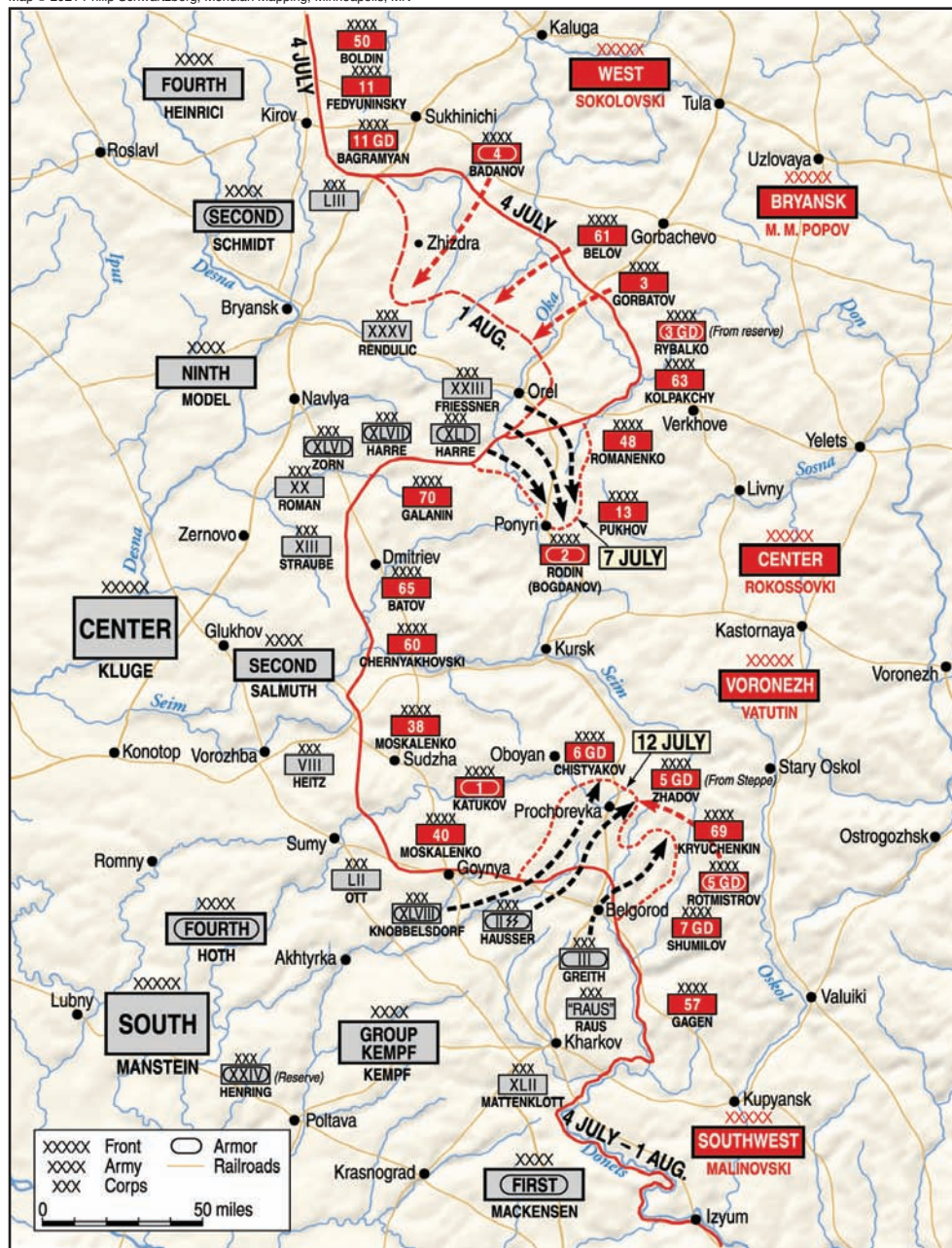
Like the German high command, Stavka also experienced strong differences of opinion regarding whether it was best to remain on the defensive or switch to the offensive in summer 1943. Unlike Adolf Hitler, Soviet Premier Josef Stalin deferred at that stage of the war to his senior commanders' opinions while maintaining overall authority.

Marshal Georgy Zhukov, who was the Soviet deputy supreme commander, believed that the Red Army should remain on strategic defensive and only attack after the Germans had exhausted themselves. "I consider it inexpedient for our forces to go on the offensive in the coming days in order to forestall the enemy," he wrote after the war. "It would be better if we exhaust the enemy on our defenses, knock out his tanks, and then, by introducing fresh reserves and going on a general offensive, we will decisively finish off the main enemy group of forces."

Marshal Aleksandr Vasilevsky, the Soviet Chief of the General Staff, agreed with Zhukov. Although Stalin and some of his aggressive front commanders favored an offensive in the early summer to keep the Germans off balance and regain territory lost to the Germans in the Donets Campaign counteroffensive, he eventually saw the wisdom of strategic defensive that would lay the groundwork for the counterstrokes that would follow.

Members of the General Staff therefore began not only drawing up plans for the strategic defensive, but also for two counteroffensives that would follow the battle once the German forces had exhausted themselves. A planned northern counteroffensive codenamed Operation Kutuzov would seek to destroy German forces in the Orel bulge, while a southern counteroffensive codenamed Operation Rummyantsev would seek to crush German forces in the Belgorod-Kharkov bulge.

General Konstantin Rokossovsky's Central Front defended the northern half of the salient,



Field Marshal Von Kluge's Army Group Center fought desperately for six days against the Soviet Central Front in the northern part of the Kursk bulge, while Field Marshal Erich von Manstein's Army Group South assailed the Voronezh Front for nine days in the southern part. Soviet forces counterattacked the exhausted Germans on July 12.

and General Nikolai Vatutin's Voronezh Front defended the southern half. General Ivan Konev's Steppe Front deployed behind the two fronts as the reserve. Stalin dispatched Zhukov to oversee the operations of the Central Front, and he tapped Vasilevsky to do the same for the Voronezh and Steppe fronts.

In April Soviet forces within the salient began fortifying its 340-mile-long perimeter. Combat engineers directed the construction of mine fields, barb-wire emplacements, and antitank ditches. To prevent the Germans from achieving a blitzkrieg

breakthrough, the Soviets planned a defense in depth consisting of seven fortified belts. The defenses were 190 miles deep and included 2,600 miles of trenches.

The combat engineers oversaw the construction of some of the most formidable defenses along likely axes of advance. In these sectors, they planned additional anti-tank ditches and anti-tank strongpoints. Armored and mechanized units deployed to support the anti-tank strongpoints.

Taking into account the concentration of German forces south of Orel, senior commanders of



ABOVE: A German self-propelled gun lies crippled in a Soviet mine field. Soviet air strikes and artillery power substantially weakened the German attack. BELOW RIGHT: German tanks advance cautiously through the Russian steppe into the teeth of Soviet defenses. The Russians planted thousands of mines in the ground over which the Germans advanced.

the Central Front believed the main German effort would most likely unfold along the Olkhovatka-Ponyri axis of advance. Accordingly, Rokossovsky's forces intended to focus heavily on obstructing German progress through this corridor. The Central Front fielded 700,000 men, 1,607 tanks and self-propelled guns, and 11,000 artillery pieces and mortars.

Vatutin's Voronezh Front defended the southern face of the salient. Expecting the main German threat to come from Belgorod, the general concentrated his main strength on his left flank. The Voronezh Front fielded 625,000 men, 1,700 tanks and self-propelled guns, and 8,500 artillery pieces and mortars.

Konev's Steppe Front was tasked with plugging any German breakthroughs, furnishing reserves as needed to the other two fronts defending the frontline, and being ready to conduct counterattacks as needed. Konev had under his command 573,000 men, 1,630 tanks and self-propelled guns, and 9,000 artillery pieces and mortars.

Model's Ninth Army faced the Central Front. It was organized into 22 divisions, of which six were armored and one was mechanized. Generaloberst Walter Weiss's Second Army, which had seven infantry divisions, would support the Ninth Army. Model concentrated the bulk of his forces on a 40-kilometer-front opposite the Soviet 13th Army and right flank of the 70th Army.

Hoth's Fourth Panzer Army and Kampfgruppe Kempf faced the Voronezh Front. They fielded a combined total of 24 divisions, among which

were eight armored and one motorized.

The Soviets enjoyed numerical superiority in men and materiel. Moreover, they had sufficient quantities of reserves to conduct offensive operations.

Despite German attempts at deception in spring 1943 in the weeks leading up to Operation Citadel, the Soviet command knew that the offensive would start the first week of July. On the evening before the attack, Soviet intelligence confirmed that it would unfold on July 5.

German battalions began reconnoitering Soviet positions on July 4. The aggressive German units probed enemy defenses and drove back Soviet forward outposts in preparation for the morning attack. Under cover of darkness, German combat engineers carefully began removing Soviet mines that lay in the projected path of the attacking forces.

Several German prisoners captured on July 4 said that the attack would come at dawn. With this information in hand, both Zhukov and Vasilevsky authorized pre-planned artillery strikes. The Soviet heavy guns began shelling German positions at 1:10 AM and continued firing for little over an hour.

Despite massive expenditures of ammunition, the Soviet artillery strikes had little effect on the combat capabilities of German panzer and infantry forces. Red Army intelligence units had failed to identify German pre-attack staging areas, and the artillery bombardment began prematurely, while the Germans were still in their shelters.

In many cases, therefore, the Soviet artillery

strikes were not sufficient to disrupt German preparations. German units suffered only minor losses and re-formed up for battle with virtually no difficulty. Meanwhile, Soviet ground-strike aircraft dispatched to bomb German airfields ran headlong into swarms of German fighters and heavy anti-aircraft fire. Thus, the Soviet air strikes were also largely ineffective.

The German Ninth Army attacked after conducting an artillery bombardment and air strikes at dawn. Model's strategy for breaking through the Soviet defensive belts called for his infantry divisions to make the first strike. Heavy tanks and assault guns, supported by artillery and aviation, followed on the heels of the infantry. After the panzer divisions punched through the Soviet defenses, they had orders to push on in the direction of Kursk.

Generalleutnant Joachim Lemelsen's XLVII Panzer Corps, reinforced by 505th Heavy Panzer Tiger Battalion and two Stug. III assault-gun battalions, constituted the armored punch of the Ninth Army's attack. Generalleutnant Hans Zorn's XLVI Panzer Corps, reinforced by a regiment of Elefants, advanced on its left.

Lemelsen's troops attacked all along the 30-mile front of the Lt. Gen. Nikolai Pukhov's 13th Army and the adjoining flanks of the 48th and 70th Armies. The XLVII's main push struck the left flank of the 13th Army in the direction of Olkhovatka.

Throughout the day, German panzer divisions acted like a giant battering ram. The Tiger tanks advanced in the vanguard. Their thick frontal armor sheltered the medium and light tanks, assault guns, and self-propelled artillery that followed behind them. In some places the Soviet infantry fell back, but the integrity of Soviet defenses remained intact. The vaunted Tiger tanks failed to make an impression on Soviet defenses, largely because Rokossovsky continually fed reserve units into the fray.

During the first day, the Germans penetrated



Ullstein Bild

the defenses of the 13th Army up to six miles, but they were brought up short of Olkhovatka. Unable to break through at Olkhovatka, the Germans shifted toward Ponyri, a strongpoint in the second line of Soviet defenses located astride a highway and a railroad line Orel-Kursk. The XLVI Panzer Corps reached Ponyri but was also unable to break through. While the ground fighting raged, hundreds of aircraft from both sides swarmed over the battlefield.

“When our squadron arrived above the front line, the sky was already crammed, and more and more German aircraft were approaching the battlefield,” recalled Ivan Kozhedub, a Soviet fighter pilot. “At the [time] there were 250 to 300 aircraft. Flying in separate groups, the Germans formed a multi-tiered battle formation.”

Kozhedub said that the Stuka dive bombers were at the bottom of the multi-tiered air formation, diving on targets from 1,500 meters. Detachments of Focke-Wulfs raced through the sky above them. In dense formations above the Focke-Wulfs were twin-engined Junkers-88s fast bombers and twin-engined Heinkel-111 medium bombers. Flying patrol for the twin-engined bombers were the latest versions of the Messerschmitt fighters.

“This whole armada of enemy aircraft was heading east to break through our air patrol line,” Kozhedub continued. “Its purpose was to strike at our defenses and thereby clear the way for its ground forces.”

The advance of the XLVII Panzer Corps in the direction of Olkhovatka renewed in the morning of July 6, landing a hard blow on the 15th Rifle Corps of the 13th Army. Heavy fighting flared up for Ponyri, as well.

The Germans “failed to suppress the resistance of our 75th Division,” Lt. Gen. Ivan Liudnikov, commander of the Soviet 13th Rifle Corps, wrote afterwards. “Sending in new tanks, changing the direction of the attack on the move, they tried to bypass the village of Buzuluk. We responded to

this enemy maneuver with one of our own: enemy tanks were met with fire from two antitank regiments from corps reserve.”

The fighting raged for three hours, according to Liudnikov. The Soviets succeeded during the savage encounter in knocking out 35 German tanks. He said that although there was plenty of time left in the afternoon, the Germans halted their attack for the day after sustaining considerable losses.

At the same time, Rokossovsky ordered the 17th Guards and 18th Guards Rifle Corps, as well as 2nd Tank Army and 19th Tank Corps, to counterattack. But due to poor coordination, only the 16th Tank Corps of the 2nd Tank Army, which had 200 tanks, went into action against the Germans.

The 16th Tank Corps ran headlong into the Tiger tanks of the 505th Heavy Tank Battalion. Instead of probing for the flanks of the advancing Germans, the Soviet tanks launched a frontal assault. It proved a bad idea, for the Tigers’ 88mm gun and thick frontal armor gave the Germans a distinct advantage. Having lost 69 tanks, the 16th Tank Corps fell back to positions of the 17th Guards Rifle Corps in the area of Olkhovatka.

During the next three days, beginning on July 7, the Ninth Army battled for Ponyri and Olkhovatka. The Germans succeeded on the first day in capturing part of Ponyri after hard fighting, but they were ejected from the village the next day by fresh Soviet reserves.

The savage fighting at Ponyri and neighboring Hill 253.5 devoured men and machines on both sides. A particularly strong push on July 10, which was delivered by large numbers of German tanks and assault guns, failed as well. The farthest German penetration of the 13th Army’s defenses was eight miles, and it was achieved at an appalling cost. Model switched to the defensive the following day.

On the southern face of the salient, Hoth’s Fourth Panzer Army went on the offensive on July 5. Generalleutnant Otto von Knobelsdorff’s

XLVIII Panzer Corps and SS Senior Group Leader Paul Hausser’s II SS Panzer Corps attacked toward Oboyan with their Tiger tanks leading their attack. In an attempt to establish bridgeheads across the Psel River, XLVIII Panzer Corps unleashed a powerful attack northwest of Belgorod against the 22nd Guards Rifle Corps of Lt. Gen. Vasily Chistyakov’s 6th Guards Army.

Facing withering direct artillery fire, the Germans also had to contend with the numerous muddy streams and marshes that crisscrossed the area. A regiment of Panther tanks of Generalleutnant Walter Hornlein’s Grossdeutschland Panzer Grenadier Division became hung up for a time when it ran headlong into minefields. Even though by day’s end the XLVIII Panzer Corps had torn a three-mile gap in the first line of the Soviet defenses, their second line of defenses remained intact.

On the right flank of the XLVIII Panzer Corps, Hausser’s II SS Panzer Corps advanced against Chistyakov’s 23rd Guards Rifle Corps. Soviet defenders disputed every inch of ground, but by nightfall the leading Tiger tanks had succeeded in penetrating up to 12 miles into the first line of Soviet defenses. Still, the Soviet second line held fast.

On the right flank of the Fourth Panzer Army, Kampfgruppe Kempf attacked in the direction of Korochi. It fell to Lt. Gen. Mikhail Shumilov’s 7th Guards Army to check the assault.

Generalleutnant Hermann Breith’s III Panzer Corps had made a wide and deep penetration of Soviet defenses by the end of the day on July 5. The Panzer troops had sliced a four-mile-wide breach in the Russians’ first defensive belt, but the panzer troops’ advance ground to a halt at the Soviet second defensive belt. Vicious fighting occurred as the tenacious German panzer troops engaged their Soviet counterparts. All the while, German bombers pounded the Soviet defenses.

Upon Vatutin’s orders, General Mikhail Katukov’s 1st Tank Army, which was composed of





Soviet infantrymen crouch as they rush past the mangled wreckage of German tanks. The soldier at right carries a heavy antitank rifle, which was woefully ineffective against German medium and heavy tanks.

two tank corps, together with the 2nd Guards and 5th Guards Tank Corps, took up supporting positions behind Chistyakov's hard-pressed forces.

Machine-gunner Petrik's account of his experiences at Kursk is a good example of the hard fighting conducted by infantry forces on both sides. Petrik and his fellow platoon members fought tenaciously against the Germans on the first day of the battle. Although he knew from experience that his DP-27 light machine gun was prone to overheating, he found himself firing it as fast as possible to fend off his attackers.

His platoon kept the Germans at bay for a time, until the intrepid Germans began pounding their trenches with mortar fire. Knocked unconscious by the mortars, Petrik came to that night long after the Germans had swept past their position. His partner lay dead next to him.

"Clearly the Germans had passed by thinking us both dead." That evening he walked north over the battle-scarred steppe and reached the safety of Soviet lines, where he proceeded to collapse from a shrapnel wound to his neck. Despite his debilitating injury, he would survive the battle.

That night, Katukov received orders to conduct a counterattack on the morning of July 6. He proceeded to carry out his orders, although he had serious reservations about the ability of Soviet tanks to go toe-to-toe with the newly fielded German tanks and tank hunters.

"It was no secret that the 88mm guns of the Tigers and Elefants could pierce the armor of our tanks from the distance of two kilometers," he said afterwards. "It is unlikely that in this case our T-

34s will be able to win a tank-on-tank fight, but the enemy heavy tanks also have a drawback, which is poor maneuverability. This flaw [could] be perfectly exploited from ambushes."

His fears came true. When the 1st Tank Army engaged the German heavy tanks on July 6, it suffered heavy tank losses. "Already the first reports from the battlefield near Yakovlev showed that we were doing the wrong thing," Katukov said. "As expected, brigades suffered heavy losses. With heavy heart, I saw from the observation post the burning and smoking T-34s."

Throughout the day, the XLVIII Panzer and II SS Panzer Corps tried to batter their way to Oboyan. "It was half past four in the afternoon, but it felt like a solar eclipse," Katukov recalled. "The sun disappeared behind clouds of dust. And ahead, in the twilight, flashes of shots were visible, the earth crumbled, engines roared and tanks clanged."

The German counterattack decimated the 5th Guards Tank Corps of the 1st Tank Army. Soviet commanders called off a counterattack when the Germans succeeded in penetrating the second defensive belt in several places where it was defended by the 6th Guards Army.

The XLVIII Panzer and II Panzer Corps linked up at the end of July 6. Their combined presence posed a palpable threat to Soviet forces at Oboyan. With some serious gaps finally beginning to appear in the Soviet second defensive belt, Vatutin kept feeding fresh tank and antitank-artillery regiments into the fray to shore up the deteriorating defenses.

Germans Fielded an Armored Menagerie at Kursk

After the invasion of the Soviet Union on June 22, 1941, the Germans realized that some Soviet armor surpassed German panzer capabilities. The need to counter the Soviet threat sparked a new generation of German armored fighting vehicles, which were rushed through the design-and-testing phase and into production as quickly as possible.

Reflecting on the German penchant for naming their combat vehicles after animals, the new combat vehicles included the Panther medium tank, the Tiger heavy tank, the Elefant and Nashorn (Rhinceros) tank destroyers, and the Wespe (Wasp) and the Hummel (Bumblebee) self-propelled howitzers.

The Panzerkampfwagen V Panther was intended to be the answer to the 26-ton Soviet T-34 medium tank. Although classified as a medium tank, the 45-ton Panther was very nearly a heavy tank. Despite being plagued with mechanical problems, the Panther was one of the best tanks of World War II. This was because the Panther's sloping frontal armor gave it excellent protection, and its superb 75mm L/70 long-barreled main gun packed a deadly punch.

The 57-ton Panzerkampfwagen VI Tiger heavy tank was the counterpart of the Soviet 45-ton KV-1 heavy tank. The Tiger boasted 100mm frontal and turret armor. Its 88mm KwK 36 guns could knock out a T-34 at 2,000 meters.

Mounted on the Panzer II chassis, the Wespe 105mm self-propelled howitzer gave the artillery battalions of German panzer divisions increased mobility. Although highly vulnerable owing to thin armor—less than 30mm—and its open crew compartment, the Wespe nevertheless was a valuable asset on the battlefield.

The Hummel, with its 150mm howitzer, was a larger and more lethal version of the Wespe. It was mounted on a chassis that featured elements of both the Panzer III and IV, but it suffered the same vulnerabilities as the Wespe. Like the Wespe, the Germans also assigned the Hummel to artillery battalions of panzer divisions.

Making their first appearance on the battlefield at Kursk deployed in tank-hunter companies, the Nashorn and Elefant *jagdpanzers* (tank



Tiger



Panther



Elefant



Nashorn



Wespe



Hummel

destroyers) mounted the same 88mm Pak 43 antitank gun used on the Tiger. In a tribute to its designer Ferdinand Porsche, the early models of the Elefant were named the Ferdinand.

While the newly fielded self-propelled guns and tank destroyers adopted battle-tested and reliable chassis of existing panzer tanks, the Pan-

thers and Tigers tanks themselves were plagued with a slew of mechanical and design problems.

The two new panzers were expensive and difficult to manufacture. The steadily diminishing German industrial capacity, which suffered from the sustained strategic-bombing campaigns by the Americans and British, could not keep up

with the high rate of attrition among the two types of panzers. Despite its shortcomings, the menagerie of late-war German armored fighting vehicles posed a lethal threat to Allies fighting the Germans in the last half of World War II in Russia, Italy, and France.

—Victor Kamenir

At first light on July 7, the Germans continued their advance towards Oboyan. To reach their objective, they battled elements of the 1st Tank Army, 2nd Guards Tank Corps, and 5th Guards Tank Corps, as well as various depleted infantry divisions. Despite being punctured in several places, the second defensive belt remained largely intact.

“The fighting was ferocious, death roamed the battlefield, but there was no panic. For the first time we met the notorious Tigers,” wrote Evgeniy Ivanovskiy, the chief of intelligence for the 2nd Guards Tank Corps. “Their shells, fired from distances exceeding capabilities of our T-34s, presented a threat to T-34’s armor. Our crews quickly adapted to operate against the Tigers by maneuvering to hit their side armor, tracks, and other vulnerable spots.”

Ivanovskiy said he saw a destroyed Tiger that had succumbed not to Russian tanks, but to being

the Germans attacks were met by savage Soviet counterattacks. The death toll mounted steadily on both sides.

Field Marshal Von Manstein chose a new path of attack when his forces were unable to break through the Soviet defenses in front of Oboyan. He shifted his axis of advance 20 miles southeast towards the village of Prokhorovka.

When Vatutin discerned Manstein’s maneuver, he sent the 69th Army and the 35th Guards Rifle Corps to Prokhorovka. To assist the hard-pressed Voronezh Front, Stavka issued orders to Steppe Front General Ivan Konev to commit his three armies, as well as the 5th Guards and 5th Guards Tank armies, to the spreading battle. Stavka also instructed Vatutin to stage a large-scale counterattack on July 11 using five of his six armies.

But Soviet plans for a counterattack were disrupted when the Germans captured the areas where the Soviets intended to stage their forces.

sions had been well-rested and well-equipped on the eve of the campaign. In the center of German dispositions was the 1st SS Panzergrenadier Division Leibstandarte Adolf Hitler. The SS troops of Leibstandarte entrenched during the night. The tank crews placed their Tigers in a hull-down position so that only the turret was exposed. Their line was studded with antitank artillery.

The 1st SS Panzergrenadier Division advanced that morning in the center, with the 3rd SS Panzergrenadier Division Totenkopf and 2nd SS Panzergrenadier Division Das Reich, respectively, on its left and right. The three SS Panzergrenadier divisions numbered 292 tanks and 58 assault guns. Only 15 of their tanks were Tigers, though. The III Panzer Corps from Kampfgruppe Kempf, which was to attack toward Prokhorovka from the south, had 100 tanks and 19 assault guns. Thirty of its tanks were Tigers.

The Soviet plan of attack at Prokhorovka called for the three Guards armies and two tank armies to destroy the II SS Panzer Corps; however, the bulk of these forces became bogged down in defensive fighting. They were therefore unable to launch a concerted counterattack that day as planned.

On the morning of July 12, a 15-minute Soviet artillery barrage began the largest tank battle in history. Soviet armored forces at Prokhorovka numbered 789 tanks and 37 self-propelled guns. With their engines revving, the Soviet armor lumbered menacingly towards Yakovlevo that morning. Advancing on a narrow, six-mile front were a rifle corps from the 5th Guards Army, two tank and one mechanized corps from the 5th Guards Tank Army, and the 2nd Tank and 2nd Guards Tank Corps.

By that time, though, the Germans already were on the move. They met the Soviet forces head on. The heaviest fighting took place west of Prokhorovka. In this sector, the main body of the 5th Guards Tank Army clashed with the II SS Panzer Corps and Generalleutnant Walter Schilling’s 17th Panzer Division, brought up from Manstein’s reserve. A second clash flared up in the area of Rzhavets, 10 miles southeast of Prokhorovka. In that fight the 5th Guards Tank Army squared off against Breith’s III Panzer Corps of Kampfgruppe Kempf.

“It turned out that the Germans and we went on the offensive at the same time,” Rotmistrov wrote. “I was surprised at how close to each other ours and enemy tanks were gathering. Two huge tank avalanches were moving toward each other. The sun rising in the east blinded the German tankers and brightly illuminated the outlines of the fascist tanks for us.”

As the two armored waves drew closer to each other, the qualitative edge of German tanks

Bundesarchiv Bild 1011-732-0135-22; Photo: Göttert



ABOVE: Panzergrenadiers of the elite Grossdeutschland Division assigned to Army Group South go into action. When the division's armor breached the Soviet frontline at Cherkasskoye on July 5, the grenadier battalions had the daunting job of clearing the Russian trenches. OPPOSITE: Russian infantry advance behind T-34 tanks during the counterattack that began on July 12, one day before Hitler called off the attack. From that point on, the strategic initiative shifted irreversibly to the Soviet Union, and by the end of the year they had liberated the Ukrainian capital of Kiev.

“pecked to death by infantry.” He said there were numerous dents in the destroyed tank. The death blow to the Tiger had come in the form of an anti-tank munition that had struck the engine compartment and set the iron behemoth on fire. “Destroyed Tigers emitting black smoke were scattered everywhere tank battles took place,” he said.

Hoth’s Fourth Panzer Army and Kampfgruppe Kempf continued their push along the Belgorod-Oboyan highway. For the next three days

Only by committing four rifle divisions and two tank brigades from Lt. Gen. Pavel Rotmistrov’s 5th Guards Tank Army were the Soviets able to halt the advance of the German forces, less than two miles from Prokhorovka. The engagement at Prokhorovka was about to begin.

By the end of July 11, the II SS Panzer Corps, which was deployed northeast of Yakovlevo, was ready for the renewed push to Prokhorovka. All three of Hausser’s veteran SS panzergrenadier divi-



quickly became apparent. The German guns, which had a longer reach, began knocking out tanks from the advancing Soviet formations.

Armor-piercing shells from the Tigers' 88mm guns could easily defeat the T-34's 45mm frontal armor at ranges of up to 2,000 meters, while long 75mm gun on the Panzer Mark IV could achieve the same results at up to 1,500 meters.

Painfully aware of their vulnerability, the Soviet tank crews hurried to close with the Germans. The T-34s needed to come to within 1,000 meters for their 76mm guns to be effective against a Panzer Mark IV and much closer to have a chance against a Tiger. The Soviet crews of the T-70 light tank, with its 45mm gun, and the British Lend-Lease Churchill III tank, with its 57mm gun, had to be practically on top of the lighter German tanks in the second echelon to knock them out.

The two onrushing formations collided and their tanks became intermixed. Artillery crews on both sides held their fire for the fear of hitting their own armored vehicles. "The battlefield was swirling with smoke and dust and the ground shook with powerful explosions," Rotmistrov wrote. "The tanks crashed against each other and, grappling, could no longer disengage, fought to the death until one of them burst like a torch or halted with broken tracks."

Rotmistrov said that the crews of the disabled Soviet tanks, if their main guns were still operational, continued to fire on the Germans. The tanks circled around as if caught in a giant whirlpool, he recalled. "The T-34s, maneuvering, dodging, shot Tigers and Panthers, and were dying themselves, disabled, burned, falling to direct hits from enemy tanks and self-propelled

guns," he wrote. "Shells ricocheted off armor, tracks were torn to pieces, rollers blew out, and explosions inside the machines tore off and flung aside tank turrets."

Unable to reach Prokhorovka head on, the Germans committed the reserve 11th Panzer Division from the XLVIII Panzer Corps. The 11th Panzer Division bypassed the right flank of the 5th Guards Tank Army and crashed into the flank of the 33rd Guards Rifle Corps. By early afternoon the enemy tanks were able to punch through the Soviet defensive positions and reached the area of Veselyi-Polezhayev, but their attack was blunted by Rotmistrov's reserve 5th Guards Mechanized Brigade.

After neutralizing the new threat, Soviet tanks began pushing the Germans to the south. The Germans gave up ground grudgingly, counterattacking at every turn, forcing Rotmistrov to halt his offensive by the evening. After the day of incredible carnage, neither side accomplished its mission. The Germans were not able to break through to Prokhorovka to break into operational maneuver space. In turn, the Soviets were not able to destroy the II SS Panzer Corps in the vicinity of Yakovlevo.

The Allied invasion of Sicily, which had begun shortly after the battle began, distracted the German High Command. Hitler flew to confer with Manstein and Field Marshal Gunther von Kluge, the commander of German Army Group Center, on July 13 to discuss halting Operation Citadel. With the Ninth Army temporarily unable to continue offensive operations, Von Kluge suggested withdrawing to the starting line; however, Manstein advocated a continued advance of Army Group South towards Kursk. But when the Red

Army launched its Mius-Donets offensive on July 17, the Germans abandoned any further offensive operations.

Soviet forces also went on the offensive further north. The previous day, just as the fighting at Prokhorovka had begun in earnest, Soviet forces in the northern sector of the Kursk salient launched their pre-planned offensive known as Operation Kutuzov. Conducted by the forces of the Western, Bryansk and Central fronts, their objective was the destruction of the German forces at Orel.

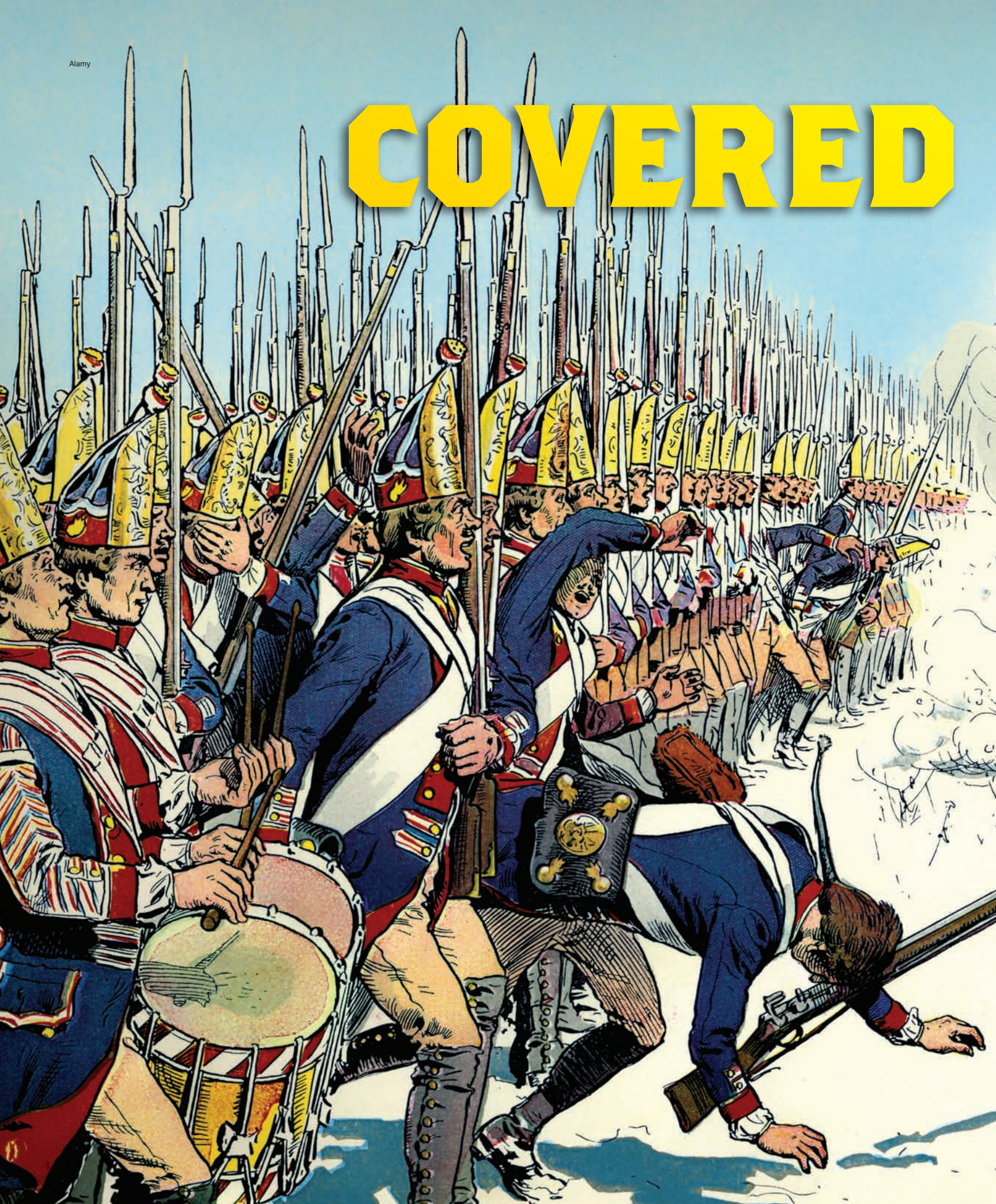
By the end of the day on July 13, the Red Army had succeeded in breaching the German defenses. On July 26 the Germans began to withdraw their forces from the Orel salient. Even though the German Second Panzer Army and Ninth Army had been bled dry, they remained intact and retreated to a second line of defense east of Bryansk. Jubilant Soviet forces entered Orel on August 5.

In the south, the Voronezh and Steppe fronts switched over to the offensive on July 18. Their offensive operations heated up in early August with the formal launch of Operation Rumyantsev, which had as its goal the elimination of the German salient at Belgorod-Kharkov. The Red Army captured Belgorod on August 5, the same day it occupied Orel. Soviet forces liberated Kharkov on August 23; this achievement marked the end the Battle of Kursk.

Even though the Soviet forces achieved minor penetrations in German defensive lines at Orel and Belgorod, they were not able to break through and push back the Germans. Entrapping and destroying German formations was not some-

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COVERED



IN GLORY *at Leuthen*



Prussian grenadiers advance at Leuthen. After his victory at Rossbach, Frederick the Great sought to drive the Austrians from Silesia.

Prussian King Frederick II squared off against Austrian Prince Charles of Lorraine at Leuthen in 1757. The outcome would determine whether Prussia would keep Silesia or lose it to Austria.

By Joshua Shepherd

IN the early afternoon of December 5, 1757, the men of Prussia's 26th Infantry Regiment were drawn up in assault formation just south of the Silesian village of Leuthen. Snow blanketed the ground, but the skies had cleared to reveal brilliant sunlight. Despite the cold, the men in the ranks, among the best disciplined troops in Europe, remained motionless. The ranks of the 26th Infantry consisted of seasoned veterans who were under no illusions about the grim nature of their assignment. Within minutes, they were scheduled to spearhead an assault against a numerically superior Austrian army.

Without warning, a commander abruptly trotted along their front rank, only to draw rein in front of the regimental standard. Stooped in the saddle and wearing a plain blue coat, he made a distinctly unimpressive appearance. To the soldiers in the ranks, his arrival was nonetheless a heartening sight. It was none other than Frederick II of Prussia, the ascetic warrior-king known affectionately to his men as "Old Fritz."

True to form, the monarch issued brief and straightforward orders. "You must march against the abatis, but do not advance so quickly that the army cannot keep up with you," he said. Promising to follow closely on their heels with the entire army, Frederick exhorted the men to "go for them with the bayonet and run them out." Yet in the coming struggle there could be no turning back for the Prussians. "It's a case of do or die," said the king. "You've got the enemy in front, and all our army behind. There is no space to retreat and the only way forward is to beat the enemy."

The desperate battle that unfolded on the fields of Leuthen stemmed from a long-standing dispute over the province of Silesia, as well as the Prussian monarch's unbounded ambition. Assuming the Prussian throne in May 1740, the young



Austrian cavalry counterattack at Kolin. Frederick bungled his infantry attack at Kolin and was forced to withdraw from Bohemia.

Karl von Blaas

king quickly demonstrated that he was determined to confront the oldest dynasties of Continental Europe.

Within months of his ascension, Frederick conceived the unthinkable, launching an invasion of the Austrian province of Silesia. In a whirlwind campaign that took the courts of Europe by surprise, the upstart Prussian king annexed Silesia in December 1740. Frederick owed his victory in 1742 in the First Silesian War, which secured almost all of Silesia for Prussia, to his superb generals and his well-trained troops. When he became aware of a secret coalition involving Austria, England, and Saxony against him to deprive him of Silesia and his inheritance, Frederick invaded Bohemia, sparking the Second Silesian War in 1744. The Treaty of Dresden the following year confirmed his possession of Silesia. But his naked aggression in Silesia ensured nearly perpetual war with Austria's Hapsburg dynasty during his reign.

Frederick the Great, as he eventually would be known for his military acumen, was a skilled musician, poet, and patron of the arts; he preferred to converse in French rather than German. In an age of oft-brutal absolutism, Frederick was regarded as an enlightened monarch who hoped to elevate the status of the Prussian state, which had long been considered a backwater kingdom of northern Europe.

Despite his predilection for enlightened pursuits, Frederick also was a thoroughgoing soldier. He stretched the means of the state to recruit,

train, and equip a modern army that became capable of confronting in battle the major powers of Europe. A proponent of rigid discipline, he continued the military reforms that had been begun by his father and endeavored to foster native production of war materiel. By the 1750s, Frederick had increased his army to 154,000 troops, but his perfidious conduct with the Allies put his kingdom in increasing danger.

His expansionist policies were bound to elicit the resentment of rival monarchies. In 1756, Prussia faced a diplomatic and military crisis of the first order. Frederick found himself allied to Great Britain but facing a hostile coalition of continental powers that included Austria, France, Russia, Sweden, Saxony, and Bavaria. Despite the mounting power of the Prussian military machine, such an overwhelming alliance bent on bringing Frederick to heel threatened the very existence of an independent Prussia.

Matters only worsened in 1757 as the Third Silesian War, a regional theater of the larger Seven Years' War, heated up following Frederick's invasion of Saxony in 1756. Frederick suffered an embarrassing and costly defeat at Kolin on June 18 of that year in Bohemia at the hands of the Austrians. The French routed an English-Hanoverian army at Hastenbeck on July 26. Then, a Prussian army attacked a Russian invasion force in East Prussia, only to be defeated at the Battle of Gross-Jagersdorf on August 30. In the wake of their success at Kolin, the victorious Austrians countered Prussian aggression by invading Silesia.

Facing reversals on nearly every front, Frederick gambled big. Mustering all available troops that could be reasonably spared, the king marched west to face the combined forces of France and the Reichsarmee, the erstwhile forces of the Holy Roman Empire. After weeks of jockeying for position, the two sides clashed near Rossbach in Saxony on November 5. With just 22,000 men, Frederick was badly outnumbered by 42,000 French and Imperial troops. In a shocking afternoon of hard fighting, Frederick smashed his opponents. At the cost of only 169 men killed, the Prussian army inflicted casualties totaling 3,000 killed and 5,000 captured on the Franco-Austrian army.

Rather than resting on his laurels, though, Frederick turned his attention eastward, where a powerful and determined Austrian nemesis still threatened the Prussian kingdom's heartland. The destruction of the French menace at Rossbach "merely set me free to seek new dangers in Silesia," Frederick later said. The Prussian king struck camp on November 13 and put his army in motion.

But he was already too late to stem the tide of mounting disaster. Fully exploiting the weakened state of Prussian defenses in Silesia, the invading Austrians overran half of the wealthy province. The skeleton Prussian field army in Silesia, under the command of August Wilhelm, Duke of Bevern, was badly outmatched. The provincial capital of Breslau surrendered to the Austrians on November 25. The Austrians captured Bevern shortly thereafter during a personal reconnaissance.

Intent on a final humiliation of the nettlesome Prussian monarch, the Austrians had assembled a formidable army. With 66,000 men, the Austrians would easily double the size of any army the Prussians could field at the time. Overall command of the Austrian army, though, went to Field Marshal Prince Charles of Lorraine. Brother-in-law to Holy Roman Empress Maria Theresa, Prince Charles possessed a less-than-stellar record as a field commander and owed his appointment to army command to political considerations rather than military merit.

The Austrian second-in-command, Field Marshal Leopold Graf Daun, was of far different makings. Daun was an experienced field commander of lengthy service and regarded as an officer who remained cool under pressure. Daun had been in command of the Austrian army at the Battle of Kolin and had already proved that he could, under the right circumstances, best the Prussian monarch on the battlefield.

When Frederick reinforced the remnants of Bevern's army on December 2, he was at the head of a moderately sized army of 38,000 men. Two-thirds of Frederick's army was composed of Bevern's former troops, who were badly demoralized after a string of embarrassing drubbings at the hands of the Austrians. The other one-third consisted of veterans of Rossbach, a core of seasoned troops with soaring morale after their shattering victory over the French. Their contagious enthusiasm, paired with the personal presence of the king himself, was just the tonic that the army needed.

Frederick opted for an uncharacteristically genial approach to discipline in the hopes that a softer hand would engender much-needed esprit-de-corps in his field army. The Prussian king increased rations of food and alcohol, then spent time personally circulating through the army's camps, cementing a vital rapport with the common soldiers who would wage the coming fight. For an austere monarch widely regarded as an aloof commander, the sudden reversal of leadership technique seems to have worked. As Frederick readied for a major clash with the Austrians, he led a well-fed and enthusiastic army.

Having prepared his enlisted ranks as best he could, Frederick turned his attention to his officer corps on December 3. That evening, the king invited the army's regimental and battalion commanders to his headquarters. The gathering was a spectacle of 18th-century military finery: infantry officers in cocked hats and laced uniforms, dragoons in gleaming breastplates, and hussar officers garbed in elaborately trimmed jackets.

When Frederick joined them, his appearance was a study in anachronism. The old warrior was dressed in a plain and dirty blue uniform, and Frederick was obviously exhausted from incessant campaigning.

Deviating from his accustomed French, the king addressed his officers in German. He announced his intentions to attack the numerically superior Austrian army near Breslau. He said the risk involved with being outnumbered was unavoidable.

"I fully recognize the dangers attached to this enterprise, but in my present situation I must conquer or die," he told them. "If we go under, all is lost. Bear in mind . . . that we shall be fighting for our glory, the preservation of our homes, and for our wives and children." As his voice grew weak, Frederick made a final appeal to honor.

During the frigid pre-dawn hours of December 4, the Prussians broke camp and were on the move by 4:00 AM. Marching toward the presumed location of the enemy entrenchments outside of Breslau, the Prussians advanced in four columns. Out in front was a screening detachment of hussars, personally accompanied by the king. It did not take long for the Prussians to enjoy a bit of good luck. When the cavalrymen approached the village of Neumarkt, locals revealed that the town

was still garrisoned by 1,000 Croats who were guarding the Austrian army's field bakery.

Frederick quickly pounced at the opportunity. Sending a mounted detachment to the heights beyond the town in order to cut off the enemy's retreat, Frederick unleashed his hussars against Neumarkt. The cavalrymen battered in the town's gates, then quickly routed the disorganized garrison.

As the Croats scattered beyond town, they were easily run down or captured by Prussian horsemen. The morning's developments proved an unexpected boon to the Prussians. The field bakery, including precious stockpiles of flour, had been captured intact. Neumarkt's hapless Croat garrison had suffered badly: 120 were dead on the field, another 569 taken prisoner.

Frederick gathered a vital bit of intelligence. On the heights beyond the town, the Prussians had discovered an enemy engineering detachment clearly engaged in laying out a new position. It was now apparent that the Austrians, rather than staying put in the relatively secure entrenchments outside of Breslau, had come out in the open for a fight.



Both: Wikimedia

ABOVE: Frederick the Great is depicted in what is believed to be a scene from Leuthen in the company of his brother, Prince Henry, and other commanders in a painting by Hugo Ungewitter. **LEFT:** Austrian Prince Charles of Lorraine (left) and Count Leopold Joseph von Daun. Although confident and tenacious, Charles was no match for Frederick, but Daun had proved at Kolin that the Prussians could be defeated.

Frederick was only too pleased to oblige. After setting up his headquarters for the night in Neumarkt, the king sent out mounted detachments to locate the enemy's whereabouts. His cavalry returned with promising news. The Austrians were in the open. Although their lines stretched for five miles and straddled several villages, they had not taken pains to construct any substantial field fortifications. Without a second thought, Frederick ordered preparations for a general advance early the next morning.

The Prussians were on the move at 5:00 AM in two columns of infantry and heavy flanking columns of cavalry. Frederick, as was his usual custom, rode with the advance guard, which included a mixed bag of irregulars, riflemen, and hussars. The day dawned clear but exceedingly cold. A light snow covered the ground, which had frozen solid overnight. The hard ground facilitated the army's march, but the low temperatures occasioned grumbling in the ranks. When one soldier complained of the cold conditions, the king told him that it would be hot soon enough given that a major fight was in the offing.

As the Prussians groped their way forward, they discovered an Austrian forward post at the village of Borne. The forward position was held by an unusually large detachment consisting of three full regiments of veteran Saxon infantry, two regiments of Austrian hussars, and a contingent of Croat irregulars. Friedrich Moritz, Graf von Nostitz-Rieneck, who commanded the detachment, was caught unprepared by the sudden appearance of the Prussians.

Unfortunately for Nostitz, the weather seems to have worked against him. A dense fog shrouded the landscape that morning, concealing the full extent of the approaching Prussian forces. By the time Nostitz realized he was facing a substantial enemy force, it was too late.

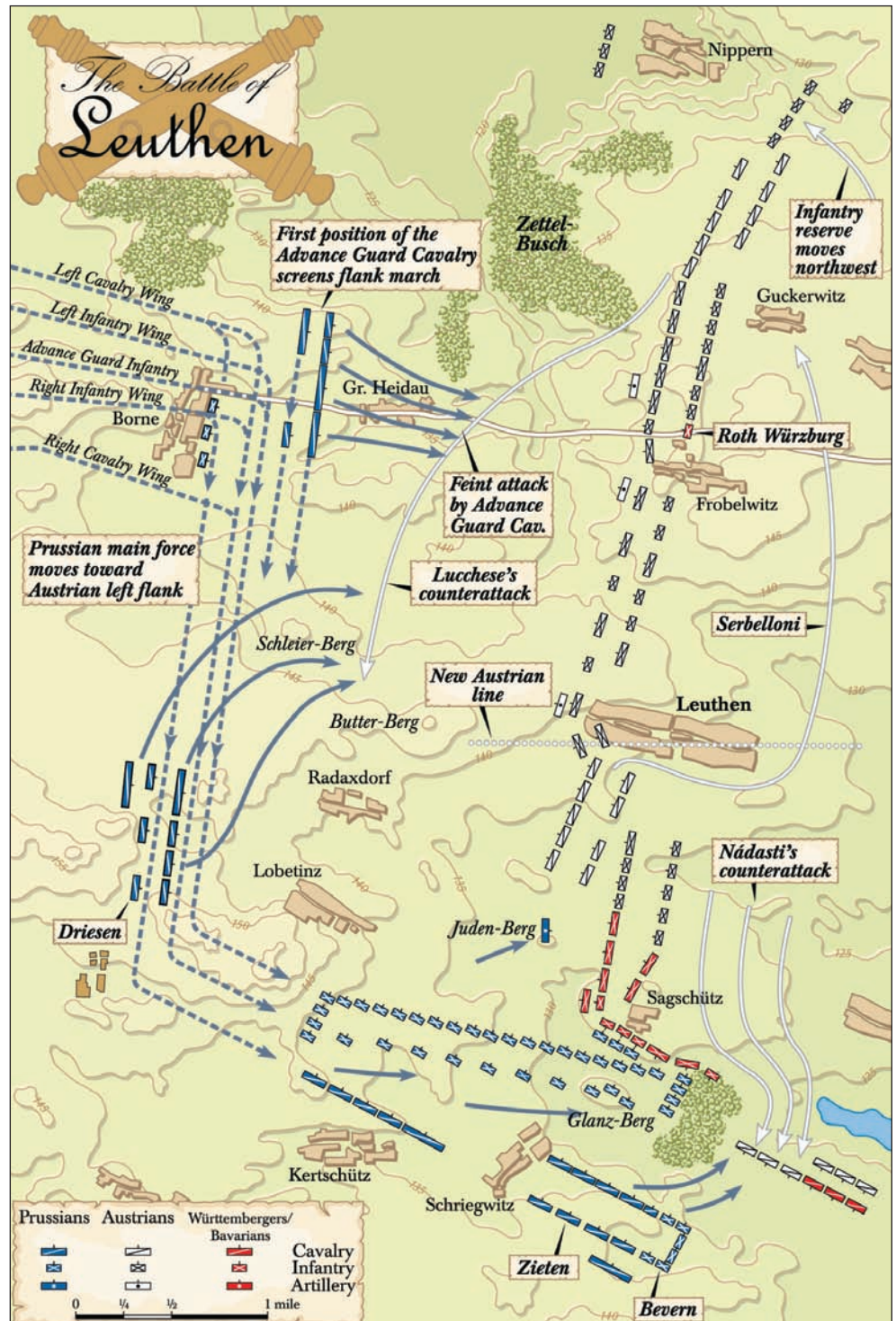
Nostitz ordered his men to make an orderly withdrawal, but Prussian mounted units were simply moving too fast. Although the bulk of the Austrian cavalry escaped the field, the Saxon infantry was less fortunate. Prussian hussars swarmed to the rear of Borne, cutting off the escape routes from the village. Hundreds of panicked Saxons were snapped up as prisoners of war, while the remnants of their regiments trudged back to the safety of Austrian lines.

As soon as Borne was cleared of the enemy, Frederick mounted the heights east of the village for a better look at the Austrian position farther east. Prince Charles and Daun had chosen their ground reasonably well, taking advantage as best they could of rising ground and small villages that flanked the primary thoroughfare to Breslau. From the village of Nipperrn on the right to Sagschutz on the left, the Austrian line stretched for five miles.

In an effort to make their flanks less accessible to a Prussian turning movement, the Austrian commanders had placed their men in three ranks, rather than the customary four ranks. Although such a move did indeed seem to place the Austrian flanks beyond Prussian reach, it left the Austrian

lines longer and thinner than normal. In the event that troops would have to be reshuffled to reinforce threatened sectors, the Austrians would be at a decided disadvantage. Moreover, the Austrian left fell far short of boggy ground that could have anchored that flank. South of the Austrian posi-

BELOW: The main body of Frederick's infantry at Leuthen formed in two lines diagonally against the southern end of the Austrian line. Known as the oblique order of attack, the tactic allowed the Prussians to gain local superiority in numbers. **OPPOSITE:** A single determined battalion of the veteran Roth Würzburg Regiment of the Austrian army fought off the initial Prussian assault from its fortified position in Leuthen's Roman Catholic church.



Map © 2021 Philip Schwarzberg, Meridian Mapping, Minneapolis, MN



A BLOODY CLOSE-QUARTER MELEE BROKE OUT IN THE CHURCHYARD. WHILE THE TRAPPED WURZBURGERS SCRAMBLED TO ESCAPE THE KILLING GROUND, THEY WERE SHOT DOWN OR BAYONETTED BY VENGEFUL PRUSSIANS. THE FIGHT FOR THE CHURCHYARD WAS A BLOODBATH.

tion, there was sufficient room for the maneuver of infantry.

From his vantage point on the high ground east of Borne, Frederick sized up his enemy's dispositions. Indeed, the Prussians were quite familiar with the ground, having conducted maneuvers in the area the previous autumn. The king quickly realized a potential weakness in the Austrian position. To the east and south of Borne, the ground consisted of decidedly rolling terrain that could mask Prussian troop movements. True to form, Frederick opted for a grand turning movement against the Austrian left.

To distract the Austrian commanders, Frederick developed an audacious feint against his enemy's right. Prussian cavalry deployed east of Borne, seemingly in preparation for a direct attack on the Austrian lines. On the Prussian left, Frederick ordered a series of pointless but noisy marches and

countermarches, then deployed decoy units of his infantry in full view of the enemy.

The flurry of harmless activity nonetheless worked miracles. The commander of the cavalry on the Austrian right, Lt. Gen. Count Joseph Lucchesi d'Averna, became convinced that the full weight of the Prussian army was about to fall on him. He dispatched a desperate plea for reinforcements to Prince Charles and Daun. Both officers were observing the field from the vantage point of a windmill just north of the village of Leuthen in the Austrian center.

Although they initially demurred at Lucchesi's request, they soon became convinced that Frederick intended to turn their right. They issued orders at midday for the army's reserves under the command of Lt. Gen. Leopold d'Arenberg to reinforce the right wing.

In short order, d'Arenberg had his reserves, including eight battalions of crack German,

Dutch-Walloon, and Hungarian troops, positioned to support the Austrian right. For his part, Daun eventually left the windmill in the army's center in order to personally supervise defenses farther north. Prince Charles, who was increasingly convinced that the action would unfold on the right, stripped even more troops from his left by transferring that wing's cavalry, under the command of Lt. Gen. Johann Baptist Graf Serbelloni, to the right wing.

Unfortunately for the Austrians, they had completely misread the Prussian king's intentions. While Prince Charles prepared for an epic fight on his right, Frederick was making preparations to smash his left. Using the rolling terrain south of Borne to his advantage, Old Fritz marched his men south and east in a massive turning movement that would place the bulk of his army off the exposed Austrian left flank.



Anton Hoffmann

Frederick ensured his musketeers had sufficient ammunition at Leuthen by ordering the wagons laden with ammunition to follow closely behind the advancing infantry.

Although much of the flank march would be hidden from view, the Austrians nonetheless became aware that Frederick's army was quitting its position in the vicinity of Borne. Under the firm belief that Frederick had initially intended to strike his right, Prince Charles simply could not entertain the notion that Frederick was seeking a fight elsewhere. Confident in his army's superior numbers, Charles was delighted to discover that the Prussians were marching off to the south. Convinced himself that Frederick had been intimidated into quitting the field, Charles brushed off the Prussian movement. "Our friends are leaving, let them go in peace," he said.

For the Austrian army, such misplaced confidence was a recipe for disaster. From his vantage point on the Austrian left, Lt. Gen. Franz Leopold Graf Nadasdy grew increasingly alarmed by the Prussian movements. With a better view of the field than his commanders, Nadasdy realized that,

far from retiring from the field, the Prussians were preparing to attack his position. Nadasdy dispatched repeated requests for reinforcements, warning of an impending attack. Prince Charles, apparently considering Nadasdy's warnings as little more than the unlikely fears of a hysterical subordinate, failed to act. In any event, the Austrian reserves had already been sent farther north.

The Prussians began arriving at midday at their assigned positions opposite the Austrian left. By making his approach march in two columns, Frederick would simply have to turn his troops left before launching his attack. Far on the Prussian right were six battalions of infantry, intended as flank security. To their left were 53 squadrons of cavalry under the command of an aggressive commander of horsemen, Lt. Gen. Hans Joachim von Zieten. The main body of Frederick's infantry formed in two lines at an oblique angle to the Austrian flank. Additional cavalry was positioned on

the left flank, with other horsemen positioned behind the army's center as a general reserve.

The veteran Prussian infantry, under the command of Lt. Gen. Prince Moritz of Anhalt-Dessau, would provide the main thrust of the attack. Frederick's front line consisted of a densely packed twenty battalions intended to provide a smashing blow against the Austrian flank. The second line was made up of a supporting eleven battalions who would exploit any potential breakthroughs. The attack would unfold en echelon from right to left. It would begin on the right with each battalion stepping off 50 paces ahead of its neighboring battalion to its left. The en echelon tactic ensured that as the attack developed it would gather increasing momentum against a weakened enemy.

In front of his main body, Frederick had placed the troops who would spearhead the assault. This force, commanded by Maj. Gen. Karl Heinrich von Wedel, consisted of some of the best troops in the Prussian army. Three battalions, two from the 26th Infantry and one from the 13th Infantry, were positioned ahead of the right front of the

Prussia's 'Soldier King' Created Fearsome Army

Next to Prussian King Frederick II "The Great," the man most responsible for transforming Prussia into one of Europe's greatest military powers was his father, Frederick William I. Assuming the throne in 1713, Frederick William inherited a minor European state that was united by language but divided by geography. As the Elector of Brandenburg, Frederick William owed ostensible homage to the Holy Roman Empire. As the King of Prussia, he was considered an independent monarch whose domain was nonetheless cut off from the rest of Germany by Swedish and Polish territory.

A frugal monarch who eschewed war, Frederick William did more than any other man to make Prussia's military conquests in the 18th-century possible. By dramatically cutting costs of an extravagant royal court, the king set a personal example of economy that would support greater military expenditures.

Although he greatly expanded the army, he had the good sense not to squander it. Frederick William's sole military conquest of Swedish possessions in Pomerania helped geographically link Brandenburg with Prussia.

Perhaps the king's greatest contribution to the Prussian military state was the establishment of the canton system, by which troops were raised for the army. Introduced in 1733, the system divided the king's domains into districts, which provided men for a specific regiment. Each district was further subdivided into cantons, which reliably provided men for each company. Subjected to the rigid training and discipline that was the hallmark of the Prussian army, such troops constituted the backbone of the formidable Prussian army.

The king who so assiduously avoided dragging his nation into war would become known as the "Soldier King," maintaining a lifelong fascination with military affairs. Famously, the king preened his own pet regiment, the Potsdam Grenadiers, for his own amusement. Made up entirely of well-built soldiers each more than six-feet two-inches tall, the regiment drilled for the king's entertainment nearly every day. Known to the Prussian people by the affectionate sobriquet "long fellows," the king never risked the largely ceremonial regiment in battle.

The Prussian army under the Soldier King was modernized into a fearsome war machine. When Frederick William assumed the throne in 1713, he inherited 38,000 soldiers. At the time of his death in 1740, the king left his son an imposing force of 83,000 well-trained men and a bulging war chest of more than 8,000,000 thalers. Over the course of his reign, Frederick the Great would wield those resources with considerable strategic brilliance, geographically consolidating his domains and rendering Prussia a first-rate European power.



King Frederick William I (above) left his son Frederick a well-trained army. RIGHT: Russian Tsar Peter the Great sent Private Schwerid Rediwanoff to serve in the elite Potsdam Guards in exchange for gifts to adorn his summer palace.

—Joshua Shepherd



Deutsches Historisches Museum

Prussian main line. The 26th Infantry was a Pomeranian outfit containing a good number of Slavic-speaking Wends with a reputation as fierce fighters. The 13th Infantry, recruited from Berlin, was a rigidly disciplined unit that had earned the nickname "Thunder and Lightning Regiment."

Despite the Prussian predilection for wielding the bayonet, Wedel's lead troops, who received 60 rounds of ammunition per man, were expected to deliver heavy fire as they advanced. As the troops readied themselves, Frederick rode to the front of Wedel's three assault battalions to offer final instructions and a few words of encouragement. It was obvious that the lead troops would suffer heavy casualties. The pleasantries were interrupted by Prince Moritz, who was anxious to get moving. Moritz said that the winter sun would set quickly and that only a few hours of daylight remained to defeat the Austrian army.

Frederick gave the order to advance at 1:00 P.M. Wedel's three battalions, in the well-dressed lines that were the hallmark of the Prussian infantry, angled toward the Austrian left. Their initial objective was a slight hill, known as the Kiefernberg, which was situated near the village of Sagschutz. In front of the hill was a drainage ditch that would impede the Prussian assault.

Awaiting the Prussian onslaught, General Nadasdy had grown increasingly frustrated by the lack of support from the Austrian high command. The fiery Hungarian nobleman was widely regarded as the best cavalry commander in the Austrian service, and he did the best he could to prepare for a toe-to-toe infantry fight.

Unfortunately, the troops at his immediate disposal, the army's Reichstruppen, were considered below par. The Reichstruppen, imperial regiments raised from smaller German states allied to Austria, had far less interest in fighting the Prussians than the native Austrian regiments. The troops positioned astride the Kiefernberg, 13 battalions of Wurttembergers, were supported on their right by 10 battalions of Bavarians.

As Wedel's vanguard marched forward in crisp ranks, Austrian guns opened up with solid shot, tearing gaps in the Prussian line. True to form, Frederick's tightly disciplined veterans closed ranks and pressed forward. Closing to musket range, the Prussians were greeted with a hail of musketry but kept moving, pausing only to unleash volleys of their own.

The inexperienced Wurttembergers traded a few volleys, but in the face of the determined assault, they began to drift away from the field. Sensing an opportunity, Wedel's troops pressed through the gap. With Prussians pouring through the hole left by the retreating Wurttembergers, the Bavarian battalions on their right were forced to

give way. In just 15 minutes of sharp fighting, the Austrian left collapsed.

Wedel, whose blood was up after overrunning the enemy so quickly, pushed his three battalions north in an attempt to maintain pressure on the enemy. Confused Austrian and Hungarian troops, caught up in the pell-mell retreat, fled north until reaching better ground. Rallying across the rising hill of the Kirchberg, the Austrians reformed to stem the tide of the Prussian advance.

The momentum of the Prussian attack, paired with robust artillery support, was proving unstoppable. The initial Prussian assault had gone remarkably well. It proved so successful that Frederick was forced to order Wedel to slow down in order to allow the main body to catch up. The king also ordered up artillery support to keep pace with

the infantry. The Brummers, Prussian 12-pounders, were brought up to high ground from which they could bombard the new Austrian position atop the Kirchberg. With a storm of iron falling on their position and Prussian infantry lashing around their flanks, the Austrians were forced to retreat north for the next possible defensive position, the village of Leuthen.

Despite the stunning success of the initial Prussian breakthrough, Wedel's three battalions had suffered heavy casualties during their attack. The heavy musketry also had depleted cartridge boxes, and some of the men were running out of ammunition. Eager to get the main body into action, Prince Moritz arrived at the front and encouraged Wedel's men to fall back and make room for fresh troops. "Boys, you've won honor enough," he

shouted to Wedel's troops. "Fall back to the second line!" Wedel's exhausted shock troops, disinclined to give up the field, simply ignored the order and shouted for more ammunition.

Nadasdy was far from resigned to defeat. He had hoped to use the Austrian cavalry for a strike against the flank of the advancing Prussians. The Austrians, reinforced by Nostitz' Saxon cavalry, swung around the Prussian right, but were badly hampered by the terrain east of Sagschutz. The ground was broken with a number of woodlots and thickets, which rendered large-scale cavalry maneuvers difficult.

A stern Prussian defense made matters worse. As the Austrians charged forward, they were greeted by a sheet of musketry from six Prussian infantry battalions which had been posted on the far right as flank security. The Prussian cavalry, under the command of Lt. Gen. Hans Joachim von Zieten, mounted a countercharge, and a swirling, confused cavalry fight developed. Wildly swinging his saber, Nostitz was in the thick of it and sustained 14 wounds. Left reeling in the saddle, the Austrian general was finally overpowered and captured by Prussian horsemen.

A brutal back-and-forth fight unfolded as each side temporarily gained the upper hand. At one point, Nadasdy's hard-charging hussars worked their way around the Prussian flank and pitched into the rear of the Prussian 2nd and 11th Dragoons. Initially meeting with success, the hussars were driven off after a countercharge mounted by the 1st and 4th Prussian Dragoons secured the flank.

The Prussians finally gained the upper hand when the Cuirassier Brigade under the command of Maj. Gen. Robert von Lentulus charged across the field, clearing the ground of the exhausted Austrian cavalry and snapping up fifteen enemy artillery pieces. Austrian horsemen fled the field, leaving the ground open for Prussian cavalry to operate with impunity. Frederick's horsemen fell on the rear of the demoralized Wurttemberg infantry, which was still in full retreat for the north. Unable to escape the deadly trap, 2,000 of them were captured.

With his left flank shattered, Prince Charles finally realized that the main Prussian thrust was coming from the south, not the north, and frantically scrambled to reform his entire army to confront the threat. Shuffling reinforcements to the left would be a difficult process, and the prince desperately needed to buy time. For the salvation of his entire army, he turned to the reserve cavalry.

He was nearly left in the lurch. Rather than risk his cavalry against massed Prussian infantry, Serbelloni pulled his command to relative safety behind Leuthen. But sensing the impending peril to the Austrian army, Brig. Gen. Adolf Nikolas, Baron Buccow, threw his men into the fight.



ABOVE: Austrian cavalry counterattacked Prussian infantry at Leuthen, but Prussian cuirassiers and dragoons intercepted them before they could do much damage. **OPPOSITE:** Prussian soldiers grateful for their victory at Leuthen sing the Protestant hymn "Now Thank We All Our God" at the end of the battle. Leuthen was Frederick's greatest tactical triumph.

Charging forward with a scratch force of cuirassiers, dragoons, and carabineers, Buccow succeeded in slowing down the Prussian steamroller. But with his command badly chewed up in the face of overwhelming infantry and artillery fire, Buccow was forced to quit the field. The high cost in casualties bought precious time for the Austrians.

Mass confusion reigned as the Austrian regiments arrived piecemeal at the hastily formed new Austrian position. D'Arenberg's reserves, which had just marched to the right flank, were compelled to execute a forced countermarch in the opposite direction. As the troops arrived south of Leuthen, they ran into Prussian infantry units and were badly outmatched during a fierce exchange of musketry. Two Austrian units, disoriented and confused, experienced an unfortunate friendly-fire incident east of the town. Superior Prussian artillery, which had unlimbered on high ground in preparation for a renewed assault, wreaked havoc on the disorganized Austrian formations.

Prince Charles had used the narrow window of time to full advantage. The prince formed a new line, about two miles in length, just north of Leuthen. The Austrian left was now anchored on the forest known as Leuthener Busch, and stretched west to the main highway to Breslau. Additional units had been thrown forward into Leuthen itself, in the hopes that a stern infantry defense of the town would serve to break up the momentum of a renewed Prussian attack. Although the new line had been formed just in time to face the enemy, it was a badly disorganized position that left much to be desired. In some places confused Austrian infantrymen milled about in ranks 100 men deep.

Despite an overall Austrian numerical superiority, Frederick had succeeded in concentrating a preponderance of his highly disciplined army against a badly weakened Austrian flank. By 3:30 PM he was fully prepared to exploit the advantage. With soaring morale after a highly successful afternoon of battle, the Prussian infantry, reorganized in two lines for a fresh assault, marched forward to finish off Prince Charles' army.

The Austrian infantry stationed in Leuthen, locked in a desperate fight for survival, gave a good accounting of themselves. Fighting fiercely from behind homes, fences, and outbuildings, the Austrians poured heavy fire into the ranks of the oncoming Prussians, who were forced to make their approach over open ground. Thrown back by sheets of well-directed musketry, the Prussians repeatedly reformed and went forward again. Ultimately the sheer weight of numbers began to tell, and as Prussian troops worked their way into the village, the Austrians began to lose their grip.

One outfit of diehards maintained a tenacious grip on the center of the village. A single deter-



THE MAGNITUDE OF THE DISASTER FOR THE AUSTRIANS WAS ENORMOUS. THE HUMAN COST OF THE FIGHTING WAS SIMPLY STAGGERING. AUSTRIAN LOSSES AMOUNTED TO 3,000 KILLED, 7,000 WOUNDED, AND 12,000 CAPTURED. SINCE ITS FIELD ARMY WAS NO LONGER EFFECTIVE, AUSTRIA HAD NO CHOICE BUT TO ABANDON SILESIA.

mined battalion of the Rot-Würzburg Regiment was positioned in the yard of Leuthen's Roman Catholic church. As their name implied, the Würzburgers wore distinctive red uniforms and had the honor of their homeland at stake. More importantly, the Catholic churchyard, surrounded by formidable stone walls that sported round turrets in each corner, constituted a ready-made fortress. Well protected by a veritable masonry stronghold, the Würzburgers were intent on exacting a heavy toll on the advancing Prussians. Their resolution would transform the holy ground of the churchyard into a scene of hellish fighting.

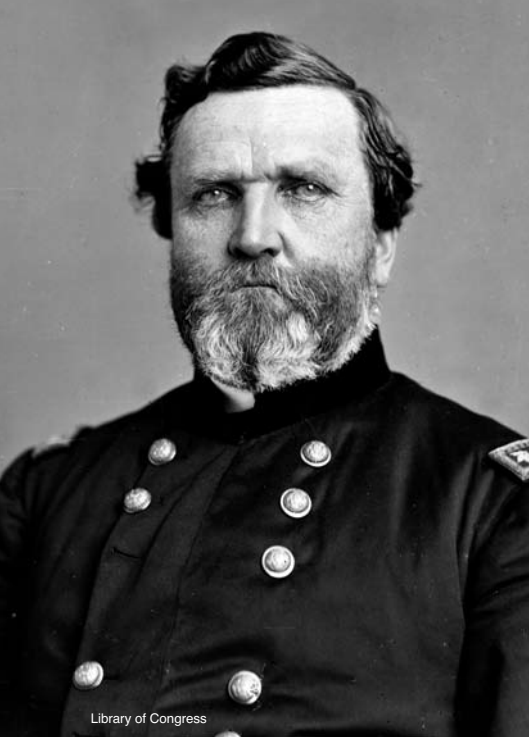
The Prussian 10th Infantry Regiment, which led the initial attack against the Würzburgers, was badly mauled for the effort. Advancing into heavy fire that poured over the walls of the churchyard, the regiment faltered, broke, and made for the rear. The Prussians reformed and advanced again, but could make no headway against the occupants of the churchyard, who enjoyed excellent protection behind the stone walls. Demoralized and badly bled, the 10th Regiment was forced to fall back.

During the day's fighting, the regiment suffered 700 casualties.

Next to assault the churchyard were elements of an elite guard outfit, the Second and Third Battalions of the 15th Regiment. With a regimental reputation to uphold, the Prussians likewise suffered badly as they struggled to gain entrance into the churchyard. Repulsed with heavy losses, the two battalions reformed and attacked yet again. Finally making headway against the exhausted Würzburgers in the churchyard, the Prussians succeeded in forcing their way behind the walls. While the third battalion scrambled through a hole in the front wall that had been opened by artillery fire, members of the second battalion forced their way into the churchyard through a side gate.

A bloody close-quarter melee broke out in the churchyard. While the trapped Würzburgers scrambled to escape the killing ground, they were shot down or bayoneted by vengeful Prussians. The fight for the churchyard was a bloodbath. The

Continued on page 98



Library of Congress

Amid the fog of powder smoke in the north-Georgia forest, the frayed remnants of the Union's Army of the Cumberland faced determined Confederate troops who sensed an impending victory. In one of the most disastrous days to befall Union troops west of the Appalachian Mountains, an ill-fated order from Maj. Gen. William Rosecrans had led to the quick rout of half of his army on September 20, 1863. What remained of the Army of the Cumberland on the battlefield of Chickamauga was led by Virginia-born Maj. Gen. George H. Thomas, the commander of one of Rosecrans' three corps.

Threatened by two corps of Confederate troops, now perhaps twice in number to his XIV Corps, Thomas anxiously pondered reports of fresh troops approaching from the north. Were they the Union's reserve brigades? If not, they might be those of Confederate cavalry officer Brig. Gen. Nathan B. Forrest, seeking to cut off the escape of Thomas' embattled army. Thomas waited apprehensively to see whether the approaching troops were Union or Confederate.

Although the Battle of Gettysburg in early July 1863 dashed Confederate hopes for a successful invasion of Pennsylvania, the pause in the campaigns in the Virginia Theater offered an opportunity for two divisions under Lt. Gen. James Longstreet from the Army of Northern Virginia to travel by rail to reinforce the Army of Tennessee.

The Confederate Army of Tennessee, commanded by General Braxton Bragg, was struggling with little success to hold the state of Tennessee. Earlier in the war, Union control of

“We Will Hold It or DIE HERE!”

George H. Thomas made a rearguard stand at Chickamauga in September 1863 that saved the Union Army of the Cumberland from destruction in the face of superior Confederate forces.

By David A. Norris

the Mississippi and Tennessee rivers allowed Northern gunboats to shield army moves and protect steam transports ferrying troops and supplies. By mid-1863, Tennessee's secessionist western and central regions were mostly under Union control, while the Confederates kept a shaky grip on the mountainous eastern part of the state. In eastern Tennessee, pro-Union sentiment was strong, spurring enlistments in loyalist Federal regiments and stirring up guerilla warfare.

Further complicating the Confederacy's efforts in Tennessee was Richmond's choice of army commander. Bragg, who was born in 1817 in Warrenton, North Carolina, graduated from West Point in 1837. He was a competent administrator who toiled to keep his men fed and supplied. Although he could not help being unlucky against superior Federal forces, he did himself no good with his prickly and quarrelsome demeanor. His generals came not only to dislike him personally, but also to hold him in such contempt as to openly disobey his orders and secretly conspire to trigger his dismissal by the Confederate States War Department in Richmond, Virginia.

Opposing Bragg was Maj. Gen. William Rosecrans and the Army of the Cumberland. In late June 1863 Bragg gathered his forces to defend the strategic rail junction of Chattanooga in southeastern Tennessee. Rosecrans, feeling in need of reinforcements, continued a slow campaign of maneuvering. Early in August, he crossed the Tennessee River 30 miles west of Chattanooga. Next, Rosecrans moved well south of Chattanooga toward Lookout Mountain, aiming at the Western & Atlantic Railroad. If that important rail line was cut, Bragg would receive no supplies in Chattanooga from the south. On September 6 Bragg chose to abandon the city and save his army by withdrawing south across the Tennessee-Georgia border.

Bridgeman Art Library





OPPOSITE: Maj. Gen. George H. Thomas, who had served in all three branches of the U.S. Army before the war, possessed a keen understanding of military tactics. ABOVE: Thomas (right) greets Maj. Gen. William S. Rosecrans, the commander of the Army of the Cumberland, at Chickamauga. Rosecrans entrusted Thomas with command of the Union left, which was posted at Kelly Field at the start of the battle.

Aden

Alarmed at the deteriorating situation west of the Appalachian Mountains, Confederate President Davis wanted Bragg to make another advance into Tennessee. To augment his resources, Maj. Gen. Simon Bolivar, who was in charge of Confederate forces in eastern Tennessee, was placed under his command, as were the divisions of Major Generals John C. Breckinridge and W. H. T. Walker from the Army of Mississippi. Most unusual of all, Longstreet would bring the divisions of Maj. Gen. John Bell Hood and Maj. Gen. Lafayette McLaws by rail from Virginia.

Rosecrans took the risky step of dividing his army as he pushed southward to cut off Bragg's retreat. The Army of the Cumberland was composed of the XIV Corps under Thomas, the XX Corps under Maj. Gen. Alexander McCook, the XXI Corps under Maj. Gen. Thomas L. Crittenden, and the Reserve Corps under Maj. Gen. Gordon Granger.

Born in 1816 in Newsoms, Virginia, Thomas graduated from West Point in 1840. Afterwards, he compiled a long record of service in the War with Mexico and antebellum Indian wars. Unlike most of his fellow Southern-born officers, he stayed with the U.S. Army in 1861.

Thomas' loyalty served the Union well at key battles in 1862, including Shiloh, Perryville, and

Stone's River, and propelled him to the rank of major general and to the command of the XIV Corps. Little did the Virginian know that before long, in the dark and tangled woods on the eastern slopes of Missionary Ridge, he would find himself the de facto commander of the Army of the Cumberland.

After Army of the Cumberland crossed the Tennessee River, Crittenden's corps was the northernmost, crossing Missionary Ridge south of Chattanooga. McCook's corps was more than 30 miles south of Crittenden heading through Winston's Gap, and Thomas' corps was marching for Stevens' Gap, halfway between the other two corps.

Had Bragg a bit more luck and a functional working relationship with his subordinates, Rosecrans might have been handing his army to the Confederates on a silver platter. The Confederates prepared to strike the isolated Union detachments. But poor coordination and the contempt Bragg's generals had for him and his orders led to a long series of mistakes and missed opportunities that allowed Rosecrans to reassemble his forces. The Yankees regrouped at West Chickamauga Creek, a dozen miles south of Chattanooga and about four miles south of the Tennessee-Georgia border, on the night of September 17-18.

On Friday, September 18, sharp skirmishing by

Union cavalry and mounted infantry delayed the Confederate crossing of West Chickamauga Creek for several hours. Companies and regiments clashed in the shady woods surrounding the creek, amid such lavish vegetation that their officers could scarcely see the enemy or even all of their own men.

The land was "undulating and covered with original forest timber, interspersed with undergrowth, in many places so dense that it is difficult to see 50 paces ahead," wrote Thomas. The brushes with the enemy that day were a prelude to two days of far-more intense fighting that would unfold over the next two days in the dark, densely forested land.

On the evening of September 18, Rosecrans held part of the southern stretches of Missionary Ridge. Roughly 10 miles long, the ridge arose southwest of West Chickamauga Creek and stretched past the Tennessee boundary, running as far as the edge of Chattanooga. The ridge's name went back to 1817, when the Brainerd Mission was founded to proselytize among the Cherokees, who lived in the region before their forced expulsion to the Indian Territory in the late 1830s. From Missionary Ridge, the eastern slopes rolled downwards toward West Chickamauga Creek, which meandered in a northerly direction





ABOVE: Lt. Gen. James Longstreet's troops, who arrived by train from Virginia, hastened to the battlefield upon their arrival. General Bragg split his army into two wings, entrusting Longstreet with command of the left wing. **OPPOSITE:** Confederate artillery opens fire on Union cavalymen attempting to dismantle Reed's Bridge over West Chickamauga Creek. Once the Confederates began crossing at that location, Thomas rushed forward some of his units to check their advance.

toward South Chickamauga Creek, a tributary of the Tennessee River. Chickamauga is said to mean "River of Death" in the Cherokee language, reflecting the grim memory of a smallpox epidemic decades before the war.

Much of the Union line followed the Lafayette Road, which ran south toward the town of Lafayette, 15 miles distant. Amid miles of what seemed like primeval forest, a couple of dozen farms stood on what would become the battleground. Carved from the tree cover, most farms had a cleared field and a handful of sheds or other outbuildings. By the time of the battle, the cornfields had been harvested and cleared, and some fallow fields not yet overgrown also provided some widely scattered clear spaces. Worm fences bound some of the fields; these fences would prove a deadly hindrance to charging Confederate troops and a boon to Union troops, who saw them as furnishing ready-made materials for hastily built field works.

The field owned by the Kelly family, well over half a mile long and a quarter of a mile wide, rested on the eastern side of the Lafayette Road. The Poe family had cleared a large field half a mile south of Kelly's field, and the cabin and clearing of the Widow Glenn was another mile and a quarter south of Poe's field.

On Saturday, September 19, Brig. Gen. John

Brannan's division moved toward West Chickamauga Creek, where it was confronted by dismounted soldiers of Forrest's cavalry. Firing intensified, and nearly all the Union and Confederate units were sent piecemeal into the battle. Floundering almost blindly amid the thorny thickets and heavy brush in the undergrowth of the tree-covered terrain, some regiments and companies suffered deadly losses. Battle lines stretched across as much as six miles of land, but neither Rosecrans nor Bragg had a precise knowledge of their own deployments, much less those of the enemy. Saturday's chaotic clashes sputtered out with only inconclusive results.

After a tedious and roundabout journey on the Confederacy's overworked railways, Longstreet's men had begun arriving at Chickamauga on September 18. Neither Bragg nor his staff extended the courtesy of sending anyone to meet Longstreet when the distinguished general, known in the East as General Robert E. Lee's "Old War Horse," got off the train while the battle was underway on September 19. He had received his nickname after the Battle of Antietam, when Lee had greeted his reliable corps commander affectionately by saying, "Ah! Here is Longstreet, my old war horse!" Longstreet's steadiness in the turmoil of battle, which Lee valued highly, might serve Bragg well on the second day, provided the army comman-

der took full advantage of it.

Gingerly finding their way to the battlefield in the dark, Longstreet and his staff brushed past enemy pickets and arrived safely at Bragg's headquarters at 11:00 PM. Bragg reshuffled his command structure to accommodate the arrival of Longstreet and his troops. He split the army into two wings, giving the right wing to Maj. Gen. Leonidas Polk and the left wing to Longstreet.

Many of the reinforcements from the Army of Northern Virginia were still on their way, but five brigades with 9,000 men were on hand for the fighting on September 20. The new arrivals brought the Confederate army up to 68,000 men, enough to outnumber the Yankees by 10,000. Chickamauga was one of the rare instances when the Confederate army outnumbered the Union army.

Rosecrans ordered his men to fortify their positions. In the Confederate lines "the ringing of axes could be heard all night in our front," wrote Lt. Gen. Daniel Harvey Hill, who commanded a corps in Polk's right wing.

"It was a cold night and the ground was white with frost," recalled a soldier of the 75th Indiana. "No fires were permitted to make coffee," wrote another soldier in the 35th Ohio, who added, "Fires would point out to the enemy the position of our lines."

Despite their discomfort, the bluecoats could



TOP: Farmer George Brotherton's log cabin was typical of the hardscrabble farms of heavily forested north Georgia. Longstreet employed his son Tom, a soldier who knew every trail through the woods, as a scout. **ABOVE:** Confederate infantry goes into action at Chickamauga. The undergrowth in the thick woods made it impossible for officers to see the enemy, much less all of their own men.

regard the previous day as reasonably successful. Over the last several days Bragg had been unable to pounce on and crush any of the isolated detachments of the Union Army, which would have been too far apart for mutual aid. Now, their forces were united, and they held off the Rebel army in the first day's fighting. West of the Appalachians, Union soldiers could look back on more successes and victories than failures, and it was understandable if they felt like victory would be theirs on the second day of the Battle of Chickamauga.

At the Widow Glenn's house, the Union brass

held a long late-night war conference. Assistant Secretary of War Charles Dana, who was then with the Army of the Cumberland, noted that the XIV Corps commander, whom his soldiers affectionately called "Pap Thomas," dozed off several times during the meeting. Thomas and his fellow generals had gotten little sleep in the last couple of days. Dana noted that Thomas' contribution to the discussions was only to say, "I would strengthen the left," before the tired general dozed off again. Whether or not this was true, it neatly summed up the importance of Thomas' role in the next day's battle.

Soldiers of Thomas' wing of the army awoke well before dawn. They shuffled across the frosty ground into the battle line before eating a breakfast of hardtack and raw bacon. Details sent to find water had no luck in refilling their empty canteens. Bragg's men held West Chickamauga Creek, which still ran deep with ice-cold water. After a spell of hot and dry summer weather, though, the brooks, branches, and springs in Union hands offered little more than muddy trickles.

The Union line was shaped like a question mark. At the top of the question mark, the line held by four divisions (those of Brig. Gen. Absalom Baird, Brig. Gen. Richard Johnson, Maj. Gen. John Palmer, and Maj. Gen. Joseph Reynolds) formed a salient pointing east from the Kelly House.

Brig. Gen. John Turchin's Brigade of Reynolds' division was the rightmost element of the arc forming the salient. From there, the remainder of Reynolds' division stretched southward along the Lafayette Road. Connecting with them, the left of Brannan's Division touched the Lafayette Road, while its right was 200 yards west of the road. Next, Maj. Gen. James Negley's division was arrayed past the Dyer Road, overlooking the cleared lands of the Brotherton Farm. Maj. Gen. Phil Sheridan's division and Colonel John Wilder's mounted infantry brigade, whose troops were armed with Spencer repeating rifles, were near Rosecrans' headquarters at the Widow Glenn's house. In reserve, the divisions of Brigadier Generals Horatio Van Cleve, Jefferson C. Davis, and Thomas Wood waited north of the headquarters and in the rear of the right-flank divisions.

Bragg planned to send his rightmost units to attack first, beginning with Breckinridge's division. Each division in Polk's wing then would move in succession at intervals, giving Longstreet some final minutes to complete his dispositions before throwing his troops against the Union right. Here again, Bragg's dysfunctional command structure undid the potential for a sharp start to the second day's fighting; Polk never relayed Bragg's orders to his subordinate Lt. Gen. Daniel Harvey Hill, who was in charge of the divisions of Major Generals John Breckinridge and Patrick R. Cleburne. Hill, for his part, did nothing to seek instructions, and Breckinridge therefore stayed put as Bragg waited for something to happen.

Anticipating that the heaviest attacks would be aimed at him, Thomas pleaded for reinforcements. Rosecrans thought that Negley's division was in reserve and sent him to join Thomas; however, it turned out that Negley was in line of battle and not in reserve. Wood's division, which was in reserve, was ordered forward to take Negley's place. It seems that Wood did not move quickly

Union Army of the Cumberland

Maj. Gen. William S. Rosecrans

Ohio-born William S. Rosecrans graduated fifth among 56 graduates in the West Point Class of 1842. Although an intelligent and insightful commander and gifted administrator, he was prone to be indecisive and overcautious.

His procrastination as a corps commander at the battles of Luka and Corinth in 1862, where he failed to carry out Maj. Gen. Ulysses S. Grant's orders, resulted in the Union army failing to make the most of their victories.

Although he succeeded as an army commander in repulsing a powerful Confederate attack at Stone's River, his deplorable performance on the battlefield at Chickamauga resulted in the War Department excluding him from any further significant commands.



Maj. Gen. George Thomas

Virginian George Henry Thomas graduated 12th among 42 graduates in the West Point Class of 1840. Thomas was a superb commander and excellent administrator. Naturally modest and unwilling to seek personal glory, his considerable achievements have not been given the appreciation they deserve. The Virginia-born general served as second in command of the Army of the Ohio at Perryville in October 1862. After that, he served with distinction as the Union XIV Corps commander at both Stone's River and Chickamauga.

He then received command of the Army of the Cumberland. His veteran troops played a key role in the Union victory at Chattanooga. When General John Bell Hood made his desperate attack on Nashville in December 1864, Thomas galvanized units from an assortment of commands into a cohesive army that destroyed the Confederate Army of Tennessee.

Maj. Gen. Gordon Granger

New York native Gordon Granger graduated 35th among 41 graduates in the West Point Class of 1845. Although a martinet who was dis-

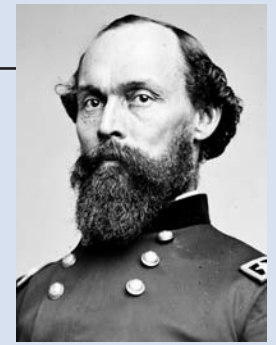
liked by his soldiers and his fellow generals, he was a capable commander.

While serving on the staff of Colonel Franz Siegel at Wilson's Creek in August 1861,

Granger was cited for gallantry for various deeds, including reconnoitering enemy positions and helping direct artillery fire. Promoted to brigadier general, he commanded the Cavalry Division of the Army of the Mississippi at the Siege of Corinth in spring 1862.

In September 1862 Granger received his second star, after which he commanded the Army of Kentucky. After that, he led the Reserve Corps in the Army of the Cumberland.

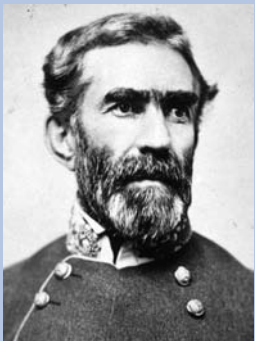
He marched his command on September 20 to the assistance of Maj. Gen. George Thomas' XIV Corps. He stayed on Snodgrass Hill with Thomas to assist him in his rearguard action. His command contributed substantially to saving Rosecrans' army from destruction at Chickamauga.



Confederate Army of Tennessee

General Braxton Bragg

North Carolinian Braxton Bragg graduated fifth among 50 graduates in the West Point Class of 1837. A strict disciplinarian, his effectiveness as a commander was severely hampered by his inability to get along with his subordinate commanders.



As a major general commanding the II Corps at Shiloh in April 1862, his superb direction of Confederate forces on the right flank produced most of the Army of the Mississippi's gains on the first day. His

strong capabilities as a planner, administrator, and leader catapulted him to full general.

Maj. Gen. William S. Rosecrans not only blunted his attack at Stone's River, but afterwards drove his army into northwestern Georgia. After the Confederate victory at Chickamauga, Bragg failed to press his advantage on the Union army at Chattanooga, and he was subsequently routed by a superior Union army under Maj. Gen. Ulysses S. Grant. Afterwards, Bragg served as an advisor to Confederate President Jefferson

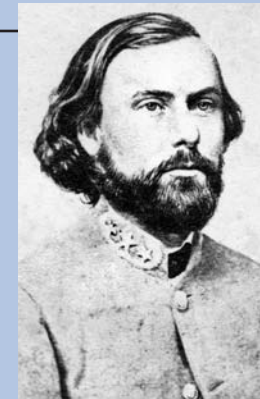
Davis and held various minor commands.

Lt. Gen. James Longstreet

South Carolinian James Longstreet graduated 54th among 56 graduates in the West Point Class of 1842. Longstreet performed so well during the Seven Days Battle that General Robert E. Lee gave him command of the I Corps of the Army of Northern Virginia. He performed superbly at Second Manassas, Antietam, and Fredericksburg, showing he had a knack for both offensive and defensive warfare.

Longstreet's disagreement with Lee over the best strategy at Gettysburg has long been a subject of heated debate. His detractors maintain that he sulked and was slow to execute Lee's orders, but to his credit he led a powerful attack on the second day of the battle that nearly captured Little Round Top.

Although Longstreet performed superbly at Chickamauga, leading the powerful attack that swept part of the Union army from the battlefield, he did not perform well afterwards as an independent commander in East Tennessee. Severely wounded by friendly fire in the Wilderness in May 1864, he returned to command in late 1864. Despite his differences with Lee at Gettysburg, Longstreet remained loyal to him to the very end.



Maj. Gen. Thomas Hindman

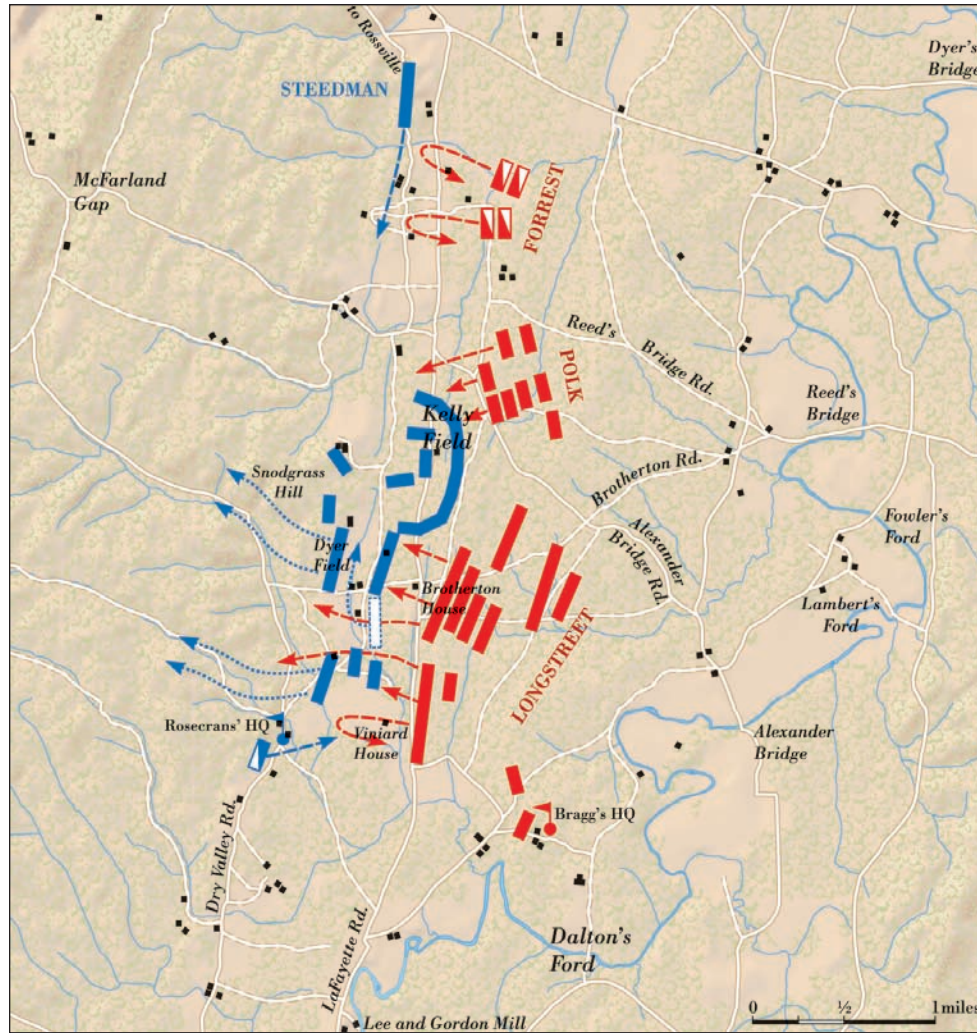
Thomas Hindman lacked a West Point education, but he volunteered for the Mexican War, where he served as a junior officer.

As a resident of Arkansas at the outbreak of the war, he organized and led the 2nd Arkansas Infantry.

Receiving his first star on September 28, 1861, he commanded a two-brigade division at Shiloh. His competent leadership and bravery under fire at Shiloh resulted in his receiving his second star after the battle. After a stint in the Trans-Mississippi Theater, he received command of a division in the Army of Tennessee in 1863.

Although he was part of a Confederate force that failed to trap and destroy two divisions of the Union XIV Corps at McLemore's Cove 10 days before the clash at Chickamauga, he performed well in the battle. His three brigades made a series of valiant assaults against the Union troops on Horseshoe Ridge.

—William E. Welsh



ABOVE: Lt. Gen. James Longstreet's sledgehammer attack shattered the Union right wing at Chickamauga, sending the remnants of the Union XX and XXI corps scurrying west to escape through McFarland's Gap in Missionary Ridge. Meanwhile, Thomas' XIV Corps fell back in good order to Snodgrass Hill. **OPPOSITE:** Brig. Gen. James B. Steedman's division of the Union Reserve Corps arrives to reinforce Thomas. Its 4,000 fresh troops helped Thomas hold Snodgrass Hill in the face of determined Confederate assaults.

enough to suit Rosecrans, and he drew a sharp rebuke from his superior.

In lower ground than the Union positions, and closer to the waters of West Chickamauga Creek, the Confederates waited in the chilly, misty morning. Longstreet listened intently for the sound of gunfire, which would signal him to send his men forward. But as the sun rose higher and time slipped past, he heard nothing and so stayed in place.

In the Union lines, Lt. Col. Henry V. Boynton of the 35th Ohio waited in what he saw as "the painful quiet of that Sabbath morning" as the two armies drifted closer together until "there was scarcely any point the length of a tiger's spring between them."

Realizing from the continued quiet that something was wrong, Bragg sent fresh orders for all of

his generals to attack at once. "At 9 o'clock that Sabbath service of all the gods of war began," wrote Boynton. "It broke full-toned with its infernal music over the Union left, and that morning service continued there till noon."

Polk's attacks were delivered bit by bit, usually no more than a brigade at a time. Breckinridge charged Thomas' works at midmorning. The Union fortifications around the Kelly Farm, rushed to completion during the previous night, were described in great detail by William F. G. Shanks, a war correspondent for the *New York Herald*. "General Thomas had wisely taken the precaution to make rude works about breast-high along his whole front, using rails and logs for the purpose," wrote Shanks. "The logs and rails ran at right angles to each other, the logs keeping parallel to the proposed line of battle and lying upon

the rails until the proper height was reached. The spaces between these logs were filled with rails, which served to add to their security and strength. The spade had not been used."

Without a doubt, piling up stones, stumps, and logs was far easier for Union soldiers worn out by long marches than digging around the forest trees and through their networks of tangled roots.

In front of the Union line, forested land offered little visibility and no room for effective maneuvering of battle formations. Charging Confederates might see little more of the enemy than the powder smoke floating amid the tree cover.

"[The] breastworks, behind which we felt so secure, consisted of three pine logs, two on the ground, close together, while the third one was placed on top of these, and made a defense of two and a half or three feet high, according to the size of the logs," wrote regimental historian Charles C. Bryant, then a lieutenant in the 6th Indiana. "By getting down behind these logs, only our heads, or perhaps our heads and shoulders, would be exposed, and then I want to tell you that these logs are mighty good things to stop bullets."

Breckinridge tried to move around the Union left flank to reach the rear. Some of his men crossed the Lafayette Road, but were unable to break through to the interior of Thomas' salient.

Next, Maj. Gen. Patrick Cleburne's division struck the Union line. As the Confederates pressed forward, their alignment was disrupted by the tangled brush. Their advance also was disrupted by heavy fire from enemy troops who were nearly hidden from them. Cleburne's men reeled back 400 yards to a wooded ridge. Brig. Gen. James Deshler, who commanded a brigade in Cleburne's division, surveyed the ammunition supply in preparation for the next attempt to storm the enemy works, but was struck dead by a Yankee shell. The Confederates on the ridge did not charge again, and the two sides settled into a brisk exchange of fire.

Earlier that morning, the 6th Ohio of Palmer's division spent an hour and a half building some breastworks as Rebel snipers and cannon occasionally fired into them. After their labor, they were pulled back to form a reserve behind and to the left of two of their division's brigades that were in the front line.

In Thomas' tightly pressed salient, being in reserve offered little safety. In a letter written after the battle, an unidentified officer of the 6th Ohio saw four columns of Confederates, who were probably some of Breckinridge's men, assembling 200 yards in their front, "with two generals riding along the lines encouraging their men," the officer said. The officer said that he sent "two men—splendid shots, both of them—to go forward, and, if possible, pick off the officers that I



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had seen riding up and down the rebel lines.”

Colonel William Grose, who commanded a brigade in Palmer’s division, sent two guns of the 4th U.S. Artillery to aid the Ohioans. “The Confederates opening a battery on us simultaneously, the firing became brisk,” wrote Grose. “Another battery to the rear of our line got excited, and began playing upon us with canister, apparently mistaking us for the enemy. We were thus under a heavy fire from both the front and rear, and naturally hugged Mother Earth very closely.... The battery continued to play on us, notwithstanding our color-bearers bravely rose up and waved our flags to show the artillerists who we were.”

Before a courier ordered the Yankee gunners to shift their fire, “a number of men and officers were hit,” continued Grose. “Our regiment was much demoralized by this; they said they could stand the rebel fire, but when it came to being shot by our own men, they were played out.”

The morning’s attacks gained the Confederates nothing and shattered one brigade after another. By midday, Polk’s futile assaults had slowed; the horrendous toll of casualties had not dented the Union lines around Kelly’s Farm.

As Polk wore down his troops in the desperate charges, Union staff officer Captain Sanford C. Kellogg rode to Rosecrans’ headquarters and reported that Reynolds’ flank was left in the air by a large gap in the lines. Under the mistaken impression that General Wood was placed nearby on Reynolds’ right, Rosecrans ordered Wood to shift to his left, instructing him to “close up and

support Reynolds.”

But it was not Wood who occupied the ground to the right of Reynolds. In truth, Reynolds’ flank was amply protected by Brannan’s division, and there was no significant gap between them. The abundant foliage completely hid Brannan from Kellogg’s gaze. Wood actually was well away from Reynolds on Brannan’s right, and moving his division as ordered would open a space between Brannan and the divisions of Davis and Sheridan. But Wood took no chances of a further reprimand. He started his men moving, and they slipped behind Brannan to regroup with Reynolds.

As fighting along Polk’s front ebbed, Longstreet sent his men toward the Federal lines. The divisions of Maj. Gen. Alexander P. Stewart, Brig. Gen. Bushrod Johnson, and Maj. Gen. Thomas C. Hindman formed the front line, arranged from north to south beyond the Lafayette Road. Intense fire coming from Brannan’s division, hidden by the trees and their field works near the Poe House, stalled Stewart’s advance.

Johnson’s troops, in the center, pressed toward the Brotherton Farm and its cleared field, just beyond the Lafayette Road. They took heavy fire on both flanks. But, no bullets came at them from their front, as they faced the stretch just vacated by General Wood.

With no enemy troops in their front, part of Johnson’s division pushed straight through the woods behind the Brotherton Farm and burst into the clearings of the Dyer Farm. Another section swung to the right to strike Wood’s withdrawn reg-

iments and Brannan’s flank and rear. Brannan’s line collapsed. Behind them, Van Cleve’s men were surprised and quickly broke as well.

Davis and Sheridan moved to fill the widening gap, but Hindman’s troops surprised and scattered them. On the tip of the Union right, Wilder’s mounted brigade held on and drove back a charge of Manigault’s brigade. Near the Widow Glenn’s house, Brig. Gen. William H. Lytle, who commanded a Union brigade in Sheridan’s division, lost his life in a valiant but doomed stand that slowed Bushrod Johnson’s troops, at the cost of much of his brigade. Elsewhere, Rosecrans’ right was shattered and driven back from their positions.

Dana, who was an experienced journalist, left colorful accounts that shaped perceptions of Chickamauga on the day of the battle and in post-war histories. He left a dramatic glimpse of Rosecrans when it seemed the Army of the Cumberland was dissolving into chaos.

“The first thing I saw was General Rosecrans crossing himself—he was a very devout Catholic,” recalled Dana, who added, “If the general is crossing himself, we are in a desperate situation.” Dana said that Rosecrans warned him, “If you care to live any longer... get away from here.” Just then, Dana witnessed the flight of the shattered right-flank soldiers, flying away, in his words, “[like] leaves before the wind.” When he reached Chattanooga some hours later after a frantic ride, Dana sent an alarming telegram to Washington, warning of the unfolding disaster.

Rosecrans and his chief of staff, Brig. Gen.



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James A. Garfield, were swept along with the mobs of fleeing soldiers pushing toward McFarland's Gap. They could hear little of the battle, and Rosecrans and his aide even placed their ears to the ground in an attempt to hear the vibrations of the battle. In the confusion, they had received no news of Thomas.

Garfield talked Rosecrans out of risking a ride to Thomas to direct the remnants of the army. The chief of staff believed it was far better that Rosecrans avoid capture and focus his efforts on organizing a last-ditch defense of Chattanooga with the surviving fragments of the Army of the Cumberland.

But the situation was not nearly as grim as it looked to the soldiers in the broken regiments cascading toward McFarland's Gap. Wilder's brigade was detached from the main army, but they were on the prowl to disrupt Confederate movements. A few miles to the rear, Granger's reserves were available. Brannan's division had swung back to join Thomas, who also collected soldiers from the broken divisions of Wood, Negley, and Van Cleve.

Thomas arrayed the new arrivals at a right angle to his old line. They held a spur of Missionary Ridge known as Snodgrass Hill after the farming family who owned the land. Perched on that high ground, the soldiers protected Rosecrans' retreat and kept the Confederates from turning Thomas'

right. If Longstreet's men broke, though, they could destroy the only force capable of preventing a determined Confederate advance to the banks of the Ohio.

Initially, Snodgrass Hill had been unoccupied, as it was well out of the way of Polk's troops. There were pros and cons to defending it. On the one hand, there were no existing defenses on it, so the soldiers had to pile up barricades in between Longstreet's onslaughts. On the other hand, its natural formation afforded good protection. Snodgrass Hill was "admirable for defense, the ridge proper, and the spurs, sloping off toward the enemy in all directions, forty-five degrees, and covered with oak and other trees. Up these heights the enemy must charge," wrote Lt. William Wirt Calkins of the 104th Illinois.

Among the Union defenders were Colonel Charles G. Harker and his brigade of Wood's division. Thomas rode through his command to encourage the men. "This hill must be held and I trust you to do it," he warned Harker. "We will hold it or die here," Harker replied. Shortly thereafter Thomas met with one of Harker's regimental commanders, Colonel Emerson Opdycke of the 125th Ohio. "This point must be held," Thomas said. Opdycke told him, "We will hold this ground, or go to heaven from it."

When Lt. Col. Judson W. Bishop reported to

Thomas with the 2nd Minnesota, the general told Bishop that he "was glad to see us in such good order." Bishop's regiment shored up the right flank just as the Confederates massed for another assault.

With Brig. Gen. Joseph B. Kershaw, an experienced commander from the Army of Northern Virginia, taking over the division of the wounded Hood, Johnson and Hindman joined them for another surge. Polk's wing was exhausted by the costly and futile attacks of the morning. Bragg would not commit them to aid Longstreet, so they played only a minor role in the afternoon's fighting.

"Ranks followed ranks in close order, moving briskly and bravely towards us," wrote Bishop. "It was theirs to advance, ours, now, to stand and repel. Again the order was passed to aim carefully and make every shot count, and the deadly work began. The front ranks melted away under the rapid fire of our men, but those following bowed their heads to the storm of bullets and pressed on, some of them falling at every step, until, the supporting touch of elbows being lost, the survivors hesitate, halt, then turning, start back with a rush that carries everything with them to the rear."

The storm of bullets was "as deadly in the wild retreat as in the desperate and orderly advance," continued Bishop. "This was all repeated again and again, until the slope was so covered with

dead and wounded men that looking from our position we could hardly see the ground.”

Shanks noticed that the mounting stress affected the usually unflappable Thomas. The strain “cast a visible cloud over the general’s spirits, and excited his nerves to an unusual degree,” wrote Shanks. Early in the afternoon, Thomas and his staff officers could see from their saddles a growing cloud of dust arising in the distance several miles to the north. “If it dissolved to reveal friends, then they were doubly welcome,” Shanks wrote. But for all they knew, it might be more Confederate infantry. Even worse, it might be Forrest’s dreaded cavalry.

According to Shanks, General Wood offered some reassurance. “Don’t you see the dust rising above them ascends in thick misty clouds, not in spiral columns, as it would if the force was cavalry,” Wood said to Thomas. “Take my glass, some of you whose horse stands steady [and] tell me what you can see,” said Thomas. Peering through his field glass, Shanks said that he was positive that he could see the United States flag.

Thomas dispatched Captain Gilbert Johnson, a staff officer, to identify the approaching troops. Johnson had a dangerous ride, dodging shots from Rebel sharpshooters, until he neared the approaching column and saw the Stars and Stripes waving over the heads of the troops.

Tension mounted on the hill, as Captain Johnson was gone for some time. Suddenly he reappeared, riding out of the willow trees that lined a small stream some distance to the rear. The staff heard rifle shots, and Shanks wrote that they saw Johnson spur his horse and “disappear in a thick wood in the direction of the coming mass of troops still enveloped in clouds of dust. In a few minutes he again emerged from this timber, and following him came the red, white, and blue crescent-shaped battle-flag of Gordon Granger.”

Granger had arrived with the two brigades of Brig. Gen. James B. Steedman’s First Division of the Reserve Corps. The 4,000 men also brought 100,000 spare rounds of ammunition. After Steedman and Granger shook hands with Thomas, the commander was again his stoic self. The new arrivals were sent to the right of Bishop’s embattled 2nd Minnesota, along a rocky elevation west of Snodgrass Hill that was later known as Horseshoe Ridge, even though it was not shaped like a horseshoe.

At 2:30 PM Longstreet and his staff paused for a brief lunch of sweet potatoes, which seemed a small luxury as they were scarce in Virginia. A courier arrived, with orders for Longstreet to report to Bragg. Longstreet was enthusiastic about their progress. He believed 60 guns were taken, and spoke of capturing masses of prisoners and supplies. But Bragg saw the battle very differently.

Nothing at all had impressed him other than the staggering losses endured when so many of Polk’s men were slaughtered in vain that morning. According to Longstreet, Bragg refused to provide reinforcements stating that “there was no more fight in the troops of Polk’s wing.”

Longstreet was puzzled by Bragg’s decision to pull his headquarters back some distance to Reed’s Bridge on West Chickamauga Creek. It gave the impression that “Bragg thought at 3:00 PM that the battle was lost,” Longstreet wrote afterwards to Daniel Harvey Hill, who had served alongside him at Antietam.

Colonel William H. Stoughton commanded a Union brigade during the attacks on Snodgrass Hill. “Our ammunition became exhausted during

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ABOVE: Brig. Gen. Absalom Baird's division of the XIV Corps included a brigade of U.S. regulars that helped cover the XIV Corps' eventual withdrawal to Chattanooga. When President Abraham Lincoln removed Rosecrans, he gave Thomas command of his army. OPPOSITE: Thomas, shown with staff on Snodgrass Hill, was unsure of the identity of a large body of troops advancing towards his position, so he sent Captain Gilbert Johnson to identify them. Johnson returned at the head of a column of reinforcements that brought with it ammunition to replenish the units engaged.

the fight and every cartridge that could be found on the persons of the killed and wounded as well as in the boxes of the prisoners were taken and distributed to the men,” Stoughton recalled.

The ammunition scrounged from the casualties and prisoners could carry the regiment only so far. Lieutenant William D. Whitney of the 11th Michigan knew by 5:00 PM that they were running out of cartridges. “The enemy [was] about 100 yards in our front, preparing for another charge,

and their sharpshooters were firing at every man who showed his head above our light works,” wrote Whitney. “The dead and wounded lay in great numbers, right up to our works.”

“They were armed with Enfield rifles of the same calibre as our Springfield rifles,” continued Whitney. “I don’t know what prompted me, but I took my knife from my pocket, stepped over the works, and, while my company cheered and the Confederates made a target of me, I hurriedly passed along the front, cutting off the cartridge boxes of the dead and wounded, and threw them over to my company. Thus I secured a few rounds for each of my men. The enemy made one more charge and was again repulsed.” Lieutenant Whitney became one of nine soldiers awarded the Medal of Honor for

their conduct at Chickamauga.

An hour earlier, at 4:00 PM, Garfield rode from Rosecrans with a message for Thomas. Rosecrans feared the collapse of Thomas’ remnant of the army and suggested that they withdraw. Knowing that leaving the field as Confederate attacks continued would invite disaster, Thomas waited until the approach of darkness before slipping away from Bragg. First to pull out were the divisions

Continued on page 98



»» TO HELL
By William E. Welsh
AND BACK ««



A supersonic Air Force F-111 Aardvark destroys a North Vietnamese ordnance bunker in March in 1968 in a painting by Jack Fellows.

U.S. aircrews achieved remarkable success in Operation Rolling Thunder despite a daunting air-defense network constructed by the North Vietnamese.

AN armada of U.S. Air Force strike aircraft roared through the sky toward the North Vietnamese ammunition storage depot at Xom Bang, 10 miles north of the DMZ, on March 2, 1965. More than two dozen F-105 Thunderchiefs and F-100 Super Sabres arrived first to suppress the enemy air defenses. They fired clusters of rockets and Gatling-style miniguns against the AAA batteries. Startled guards fired their AK-47s into the air while crews of 12.7mm, 37mm, and 57mm antiaircraft artillery scrambled to their guns, determined to down the incoming aircraft.

Sweeping in behind them came 25 F-105s and 20 B-57 Canberras. They saturated the sprawling ammunition dump with 250-pound bombs, 500-pound bombs, and cluster bombs, which sprayed the area with steel pellets. After releasing their munitions at just under 10,000 feet, the Thud pilots exited the target area at supersonic speed climbing rapidly to 24,000 feet to escape the AAA fire.

The F-105s and some of the F-100s had flown from the Korat and Takhli air bases in Thailand,

while the remaining F-100s and the B-57s flew from Da Nang and Tan Son Nhut in South Vietnam. Based on an aerial reconnaissance afterwards, Air Force officials reported that three-quarters of the 49 buildings on the site had been obliterated. On the same day, South Vietnamese airmen successfully bombed the North Vietnamese naval base at Quang Khe, 65 miles north of the DMZ. Six aircraft were lost on the two strikes.

The Xom Bang strike constituted the first time that U.S. aircraft had operated alone against a North Vietnamese target without the inclusion of South Vietnamese aircraft. The two strikes marked the beginning of Operation Rolling Thunder.

U.S. pilots had been flying ground-support missions in Southeast Asia since 1962 in support of South Vietnamese forces. Three days after the Gulf of Tonkin incident of August 2, 1964, in which the destroyers *Maddox* and *Turner Joy* engaged North Vietnamese torpedo boats, attack aircraft from the carriers *Ticonderoga* and *Constellation* retaliated by flying 64 sorties against four

enemy torpedo bases as part of Operation Pierce Arrow. A-1 Skyraider Pilot Lieutenant Richard Sather lost his life when his plane was shot down, and A-4 Skyhawk Pilot Lieutenant Lt. Everett Alvarez became the first downed U.S. pilot to be held as a prisoner of war in North Vietnam.

In spring 1964 the U.S. Joint Chiefs of Staff, which was led by Army General Earle Wheeler, established a working group to compile a list of targets in North Vietnam for a strategic air offensive to cripple the communist country's ability to support the guerilla insurgency in South Vietnam. The working group evaluated 451 potential targets, which it narrowed to a preliminary list of 99 targets.

The targets were divided into three categories. The first category contained 30 military targets that the group believed would bring about an immediate reduction in North Vietnam's ability to support Viet Cong forces in South Vietnam. These were airfields; road networks; military barracks and headquarters; and ammunition and supply dumps.



Navy airmen flew missions over North Vietnam with the two-seat F-4B, F4J, and RF-4B, while Air Force pilots flew missions with the F4-C, F-4D, and RF-4C. While the pilot in the front seat flew the plane, the weapons-system officer in the backseat handled navigation, radar, and weapons.

U.S. Navy

The military targets on the list were mostly located along North Vietnam's frontier with Laos. A second category consisted of 61 other targets deeper inside North Vietnam, and a third category was made up of eight major factories and industrial plants that supported the communist war effort. The JCS submitted the list, which it narrowed to 94 targets, to Secretary of Defense Robert McNamara on August 24, 1964.

Air Force and Navy aircraft soon began operating from airfields in South Vietnam. As the U.S. Air Force and Navy built up their air assets in the region following the Gulf of Tonkin incident, the Air Force began basing large numbers of fighter-bombers in Thailand at the allied country's royal airbases. As for the U.S. Navy, it had three carriers operating in the Gulf of Tonkin by spring 1965.

Following a major Viet Cong attack on a U.S. helicopter base at Pleiku in the Central Highlands of South Vietnam on February 7, 1965, the Air Force and Navy received orders to conduct retaliatory air strikes above the DMZ. The two sets of airstrikes were designated Operation Flaming Dart; on February 7, U.S. and South Vietnamese aircraft carried out 49 sorties as part of an operation codenamed Flaming Dart I.

When the Viet Cong subsequently bombed a U.S. enlisted personnel billet in Qui Nhon on February 11, which killed 23 individuals, the U.S. Navy received orders to conduct another retaliatory attack under Flaming Dart II. Carrier-based aircraft from the *Ranger*, *Hancock*, and *Coral Sea* struck North Vietnamese targets on February 11.

A short time later, the JCS and defense secretary forwarded a proposal for an eight-week bombing

campaign against North Vietnam, to be known as Rolling Thunder, to U.S. President Lyndon Johnson for his approval. Johnson initially envisioned the operation as a strategic air campaign that would consist of "measured and limited air action." The air strikes "might come about once or twice a week and involve two or three targets on each day of operation," he said.

Senior military commanders responsible for air operations in Southeast Asia wanted Johnson to allow the two military services to conduct strikes against North Vietnamese factories, airfields, and command-and-control facilities in and around Hanoi and Haiphong, but Johnson initially saw an all-out air offensive as too heavy-handed an approach. With Johnson's approval, the JCS issued orders for air strikes against selected military targets to begin on February 20; however, bad weather precluded the first strike from occurring until March 2.

What began as a short and limited air campaign would grow to become the longest strategic-bombing campaign ever undertaken by the U.S. military. Instead of lasting just two or three months, Operation Rolling Thunder eventually lasted almost four years.

Johnson hoped that a sustained bombing campaign, rather than tit-for-tat retaliatory strikes, would not only raise the morale of South Vietnamese forces, but also compel Hanoi to stop supporting the communist insurgency in South Vietnam overseen by the National Liberation Front. The NLF was a political organization whose goal was to overthrow the South Vietnamese government and reunify North and South Vietnam. NLF leaders issued orders to the Viet Cong to conduct

an insurgency that would erode the military capability of South Vietnam and the will of its people.

Johnson and McNamara maintained a tight control over Operation Rolling Thunder throughout its long duration. When it failed to produce results in the short term, they gradually expanded the scope of the targets and prolonged the operation. The communist government in Hanoi, which was headed by North Vietnamese President Ho Chi Minh, repeatedly refused Johnson's overtures to negotiate a peace settlement between the two Vietnams throughout the long bombing campaign.

The conveyance of the directions for the Rolling Thunder missions went through a long chain of command before they reached the air wings deployed in Southeast Asia. The civilian leadership and the JCS in Washington passed along their orders to Admiral U.S. Grant Sharp, the commander-in-chief of the United States Pacific Command, based in Honolulu, Hawaii. Sharp passed along instructions to the U.S. Air Force's 2nd Air Division, which was headquartered at Tan Son Nhut Air Base near Saigon, and to the aircraft carrier strike force of Task Force 77 deployed at Yankee Station in the Tonkin Gulf. The top-level commanders in-theater then issued orders to the air-wing commanders.

Admiral Sharp divided up the bombing responsibilities between the Air Force and Navy during the operation into route packages. The Air Force handled missions nearest the Thailand bases from which it flew—in route packages V and VIA—while the Navy took responsibility for route packages II, III, IV, and VIB on the coastal regions of North Vietnam, near where their aircraft carriers were deployed in the Tonkin Gulf. As for route

package I, just north of the DMZ, that fell under the control of General William Westmoreland of the Military Assistance Command Vietnam, who ordered strikes directly above the DMZ to be conducted by U.S. aircraft based in South Vietnam.

The tropical weather in the panhandle of North Vietnam, where the air strikes of the first phase of Rolling Thunder were concentrated, frequently disrupted the schedules. During times of inclement weather, in-theater Air Force and Navy commanders directing the strikes were allowed to pick the best day of the week for the mission.

The Navy's first alpha strike under Operation Rolling Thunder unfolded on March 15. The objective was the expansive North Vietnamese ammunition depot at Phu Qui, 100 miles south of Hanoi and 40 miles from the Laotian border. The mission involved 94 Navy aircraft, which launched from the carriers *Ranger* and *Hancock* at Yankee Station in the Gulf of Tonkin. The 64 A-4 Skyhawks and A-1 Skyraiders that constituted the strike package dove through heavy cloud cover into the teeth of heavy AAA fire to unleash their iron bombs and cannon fire on the complex's 21

buildings. Eight F-8 Crusaders flew in advance of the bombers to suppress enemy AAA with rockets, while 20 other aircraft guarded the strike aircraft from MiG interceptors. Like the strike against Xom Bang, reconnaissance aircraft confirmed that three-quarters of the buildings had been destroyed.

Following approval from Johnson and McNamara, the Air Force and Navy conducted alpha strikes the week of March 26, in which they knocked out nine North Vietnamese radar installations. Some of the radar sites were easier to destroy than others; one of the toughest to knock out was the Bach Long Vi, better known to the Americans as "Nightingale Island," 120 miles into the Gulf of Tonkin. The Nightingale Island radar facility, which was heavily defended by AAA batteries, gave the North Vietnamese early warning of Navy aircraft coming in for a strike from Yankee Station.

When 70 aircraft from the carriers *Coral Sea* and *Hancock* failed to knock out the main antenna on the first strike on March 26, the Navy sent 70 more aircraft against it three days later. This time, the Navy's aircraft successfully

destroyed the troublesome radar installation. Among the strike aircraft employed on the second sortie were six 35-ton A-3B Skywarriors from the *Ranger's* heavy-attack squadron.

Commanders in-theater had to send requests for target approval up the chain of command all the way to Washington: The commanders of the U.S. Air Force's 2nd Air Division in Saigon and the U.S. Navy's Task Force 77 at Yankee station submitted recommendations for weekly targets to CINCPAC headquarters in Honolulu. Sharp's staff then consolidated the requests and forwarded them to Washington. At that point, McNamara, and National Security Advisor McGeorge Bundy, and Johnson himself conferred over the recommendations and decided which to approve.

For its strike packages, the Air Force primarily used the F-105 Thunderchief, F-100 Super Sabre, and F-4 Phantom. As for the Navy, it conducted alpha strikes mostly with A-1 Skyraiders, A-4 Skyhawks, A-6 Intruders, and F-8 Crusaders. In addition to the alpha strikes, U.S. aircraft also conducted secondary armed-reconnaissance missions against other authorized targets.

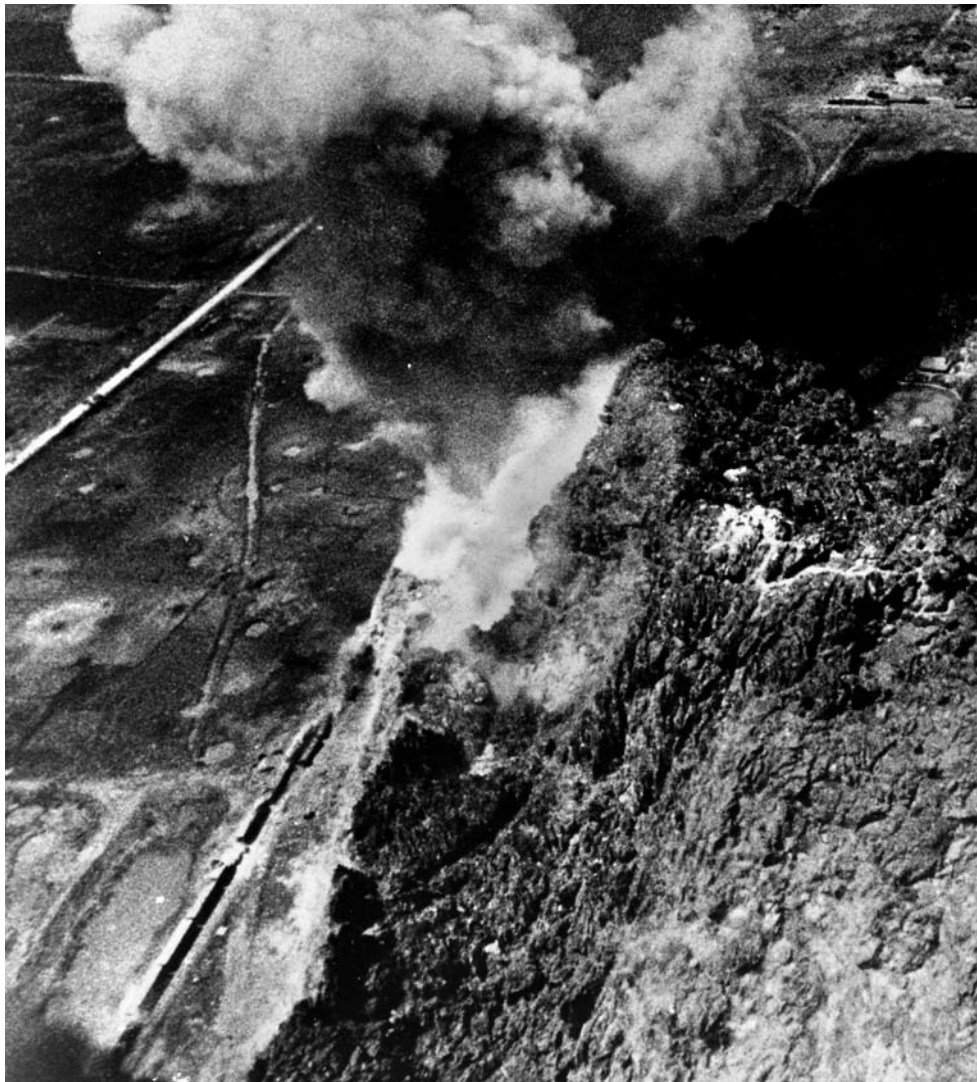
Phase one took place from March 1965 and lasted through May 1965. During this time, Air Force and Navy aircraft targeted ammunition dumps, barracks, and radar sites. On April 1, the air commands received instructions also to target rail and transport networks. These attacks were initially confined to targets below the 20th parallel in the North Vietnamese panhandle to avoid civilian casualties in the more densely populated northeastern part of the country.

In the first week of April 1965, the Air Force and Navy carried out dramatic attacks against railway and highway bridges that were major choke points on the North Vietnamese supply line. Sixty-two Navy aircraft attacked the Dong Phoung Thoung railway and highway bridge near Thanh Hoa on April 2. They dropped 184 bombs and fired 2.75 folding-fin aerial rockets. Reconnaissance aircraft confirmed that they succeeded in destroying the center span.

The following day, 46 1F-105Ds and 21 F-100Ds participated in an alpha strike against the Thanh Hoa Bridge, known as the Dragon's Jaw, which spanned the Song Ma. They used 250 lbs., Bullpup air-to-surface missiles, and 750 lb. general-purpose bombs but failed to inflict any tangible damage to the structure. A follow-up attack by the Air Force on April 4 resulted in light damage.

The Bullpup, one of the earliest precision-guided weapons, was guided by the pilot with a joystick. The Bullpup was used by air crews flying a variety of aircraft, including A-4, F-100, F-4, F-8, A-6, and F-105. The pilot guided the Bullpup manually to target using a small toggle in the cockpit. It marked an important milestone in

U.S. strike aircraft attack railway facilities in September 1966 at Ninh Binh 60 miles south of Hanoi. With the route-package system implemented in December 1965, Navy aircraft attacked targets in the coastal regions and the Air Force struck targets further inland.



Navy History and Heritage Command

precision missiles, even though it was only accurate to within 33 feet of its target. But pilots disliked having to manually guide the missile to target because it required more time over the target, which meant greater exposure to flak and the threat of surface-to-air missiles.

Both military services found it almost impossible to heavily damage or destroy major bridges with unguided conventional bombs. The Air Force tried throughout Operation Rolling Thunder to knock out the Thanh Hoa Bridge and never succeeded. The bridge would not be destroyed until laser-guided bombs were available during Operation Linebacker II in 1972.

Sharp advocated extending the bombing campaign north of the 20th Parallel after just three weeks of alpha strikes in order to cripple North Vietnam's logistics and transportation networks. He also wanted permission for Navy aircraft to bomb the port facilities at Haiphong and major industrial plants on the outskirts of Hanoi. McNamara categorically rejected Sharp's accelerated schedule.

The admiral clashed frequently with McNamara, who he believed was sabotaging the success of the strategic-bombing campaign. McNamara "consistently discarded the advice of his military advisers [and] gave the enemy plenty of time to cope with our every move," Sharp said.

The members of the JCS had a better handle on what might be acceptable to Johnson, McNamara, and Bundy. They recommended to McNamara on March 22 a 12-week bombing campaign that would restrict strikes to lines of communication, supply routes, and choke points (i.e., bridges and ferries) south of the 20th Parallel.

While the Americans negotiated among themselves regarding rules of engagement, the North Vietnamese consistently improved their air-defense networks. At the start of the conflict in 1964, before the U.S. began its sustained strategic-bombing campaign, North Vietnamese air defenses consisted of 1,425 light, medium, and heavy AAA guns. These included 12.7mm and 14.5mm heavy machine guns, rapid-fire 37mm and 57mm light cannon, and even some radar-guided 85mm and 100mm heavy flak guns. The North Vietnamese radar inventory at that time included 22 early-warning radars and four fire-control radars.

Although North Vietnam lacked a well-integrated air-defense network in 1964, the communist country's air defenses would undergo a dramatic improvement with the enthusiastic and generous support of the Soviet Union. Russian General Secretary Leonid Brezhnev, who came to power in October 1964, was a steadfast supporter of the North Vietnamese government. The Soviet

Union supplied one billion dollars' worth of MiGs, SAM launchers and missiles, and radar equipment to North Vietnam.

By the start of Rolling Thunder in March 1965, North Vietnam had increased the number of its AAA sites to 5,000. The first 70 SAM launchers arrived in North Vietnam in April 1965. By the end of 1965, North Vietnam boasted a dynamic air-defense network consisting of AAA batteries, SAM sites, and MiG interceptors. Although the North Vietnamese initially had to get by with subsonic MiG-15 and MiG-17s, they eventually received MiG-21s from the Soviet Union.

Soviet-supplied SAMs posed a deadly and terrifying threat to U.S. aircraft pilot. The first SA-2 Guideline, also known as the S-75 Dvina, SAM systems arrived in Hanoi in May 1965. The S-75 was a 35-foot-long missile that could strike targets 17 miles away. If a SAM missile detonated within 20 feet of an aircraft, it could bring it down.

SAM sites were hard to find and difficult to destroy. While under construction, they were off-limits to American pilots under U.S. rules of engagement, but once they were active, they could be attacked and destroyed. SAMs were most dangerous to U.S. aircraft flying at 20,000 feet or higher; however, if the aircraft flew under 20,000 feet, they were more vulnerable to a barrage of AAA fire.



SAM SITES WERE HARD TO FIND AND DIFFICULT TO DESTROY. WHILE UNDER CONSTRUCTION, THEY WERE OFF-LIMITS TO AMERICAN PILOTS UNDER U.S. RULES OF ENGAGEMENT, BUT ONCE THEY WERE ACTIVE, THEY COULD BE ATTACKED AND DESTROYED.



Air Force F-105 Thunderchiefs conduct a bombing run over North Vietnam in February 1966. The enormous "Thuds" were the Air Force's workhorse during Rolling Thunder and as a result suffered heavy losses.

When the People's Army of Vietnam received its first SAMs, it went to work immediately training its technicians in the Red River Delta to use the systems with the assistance of Soviet advisors. The North Vietnamese, as might be expected, deployed the majority of their air-defense resources around Hanoi and Haiphong in the Red River Delta, where most of their industry was located. This area became "the center of Hell with Hanoi as its hub," wrote Colonel Jack Broughton, an Air Force F-105 flight leader.

The North Vietnamese typically deployed four or six SAM mobile launchers in a circle around the Spoon Rest radar unit and a Fan Song control van. Each mobile SAM launcher required five crewmen. The Fan Song was a trailer-mounted fire-control, tracking, and fire-director radar. The launchers pointed outwards and were protected by an earthen berm. The truck-mounted Spoon Rest search radar acquired the target and passed its range, bearing, and altitude to the Fan Song guidance radar, which had the capability to simultaneously track six targets. The Fan Song control van housed the three radar operators, one controller, and a battery commander.

Two Air Force pilots of an F-4 Phantom were the first victims of a SAM battery on a mission over North Vietnam. The North Vietnamese SAM crews fired three missiles, one of which exploded beneath the aircraft's wing. Captain Richard P. Keirn and weapons-systems officer Captain Roscoe H. Fobair were part of a flight of four F-4s furnishing top cover for F-105 Thunderchiefs bombing a weapons production facility northwest of Hanoi on July 24, 1965. Although Fobair was killed, Keirn ejected and was captured.

The North Vietnamese took full advantage of the restrictive U.S. rules of engagement, which prohibited Wild Weasel formations, in which specially modified attack aircraft targeted SAM sites, from attacking SAM batteries in Hanoi and Haiphong, as well as in the Johnson administration's off-limits buffer zone on the frontier of Communist China. The communists deliberately deployed some of the SAMs defending those two major cities right in their downtown areas to avoid the Wild Weasel strikes.

By the end of 1965, the Air Force and Navy aircraft had flown a total of 25,408 sorties as part of Rolling Thunder. During those sorties, the Air Force and Navy lost a total of 170 aircraft to North Vietnamese air defenses. Of those losses, 50 were the result of MiG interceptors and the remainder from AAA and SAMs.

The limited nature of the Operation Rolling Thunder campaign was designed to force the North Vietnamese into concessions at the peace table while avoiding acts that might have triggered an intervention by communist China. With that



TOP: Carrier Air Wing 9 aboard the nuclear-powered USS *Enterprise* (CVAN-65) conducted 13,000 combat sorties during its deployment at Yankee Station in 1965-1966. **ABOVE:** President Lyndon Johnson, shown with top advisors, hoped over the course of the 44-month bombing campaign to compel Ho Chi Minh to enter peace talks, but the North Vietnamese leader steadfastly refused to negotiate.

goal in mind, Johnson periodically ordered a bombing halt, at which time the United States would diplomatically approach North Vietnam.

Johnson called a five-day halt to the bombing on May 12, 1965, in the hope that the North Vietnamese were ready to negotiate, but Ho Chi Minh remained defiant. They North Vietnamese, who enjoyed the support of the Soviet Union and China, had no intention of negotiating.

Johnson and his closest advisors authorized an expansion of Rolling Thunder in June 1965 that marked a strategic shift in the air campaign. In this second phase, Air Force and Navy strike aircraft would also strike transportation and infrastructure targets. In early December 1965 Johnson began allowing strikes against selected industrial targets in the vicinity of Hanoi, as well.

The North Vietnamese Air Force enhanced its interception capabilities in January 1966 when it received its first batch of MiG-21s “Fishbeds” from the Soviet Union. For the most part, though, U.S. fighter pilots deemed the nimbler subsonic MiG-17 “Fresco” a greater threat than they did the MiG-21. This was because the MiG-21 suffered from numerous design flaws; for example, it had an unstable gunsight, its single cannon held only 60 rounds of ammunition, it lacked self-sealing fuel tanks, and it did not have enough armor

to protect its most vital components. Nevertheless, the MiG-21 was armed with the highly accurate, heat-seeking Atoll missile.

While flights of MiG-17s would make hit-and-run attacks in which they would fire one or two missiles before streaking away, MiG-21s used a different tactic: To evade F-4 Phantom radar, MiG-21s often approached U.S. aircraft formations at low altitude. They would then pop up behind the formation. The Fishbed pilots would then roar through the American formation at Mach 1., firing a single missile before flying off. Although these pop-up attacks might not generate many kills for the North Vietnamese, the threat they posed often compelled U.S. pilots carrying bomb loads to jettison their ordnance before reaching their intended targets.

As for air-to-air combat against the MiG interceptors, the principal fighter aircraft for both services was the F-4 Phantom, although the Navy also relied heavily on the F-8 Crusader for combat air patrol. Originally designed for the U.S. Navy, the Phantom was eventually built for the Air Force, as well. Early on, air crews of the two-seater F-4 Phantom had to engage MiGs with either AIM-7 Sparrow or AIM-9 Sidewinder air-to-air missiles because the Phantom lacked a mini-gun for close-in dogfighting. But this deficiency

was corrected with the deployment of the F4-E version in 1968, which came equipped with an autocannon. As for the F-8 Crusader, it was hailed as the “Last of the Gunfighters” because it was equipped with four 20mm autocannons housed in its lower fuselage.

To further protect U.S. formations against MiG interceptors, the U.S. military deployed two EC-121D “Warning Star” early-warning and control aircraft to the Gulf of Tonkin in April 1965. Another EC-121D was deployed shortly afterwards to the skies over Laos to protect U.S. Air Force aircraft flying from Royal Thai airfields against targets in North Vietnam.

Three carriers were always on the line as part of the U.S. Seventh Fleet’s Task Force 77 at Yankee Station during Operation Rolling Thunder. A carrier would serve a six-month tour of duty at Yankee Station and then be replaced by another carrier. Altogether, 14 carriers served at Yankee Station at various times during the Vietnam War.

The Navy was able to bring the full weight of its air power against North Vietnam partly because, unlike the Air Force, it did not have to commit as many of its air assets to supporting U.S. and South Vietnamese ground troops in South Vietnam. In December 1965, the Navy deployed the nuclear-powered carrier *Enterprise*,

An Air Force KC-135 Stratotanker refuels a flight of F-105 Thunderchiefs on their way to strike targets in North Vietnam. Refueling operations in the Vietnam War peaked during Operation Rolling Thunder.

U.S. Air Force



the largest warship in the world at the time, to Yankee Station in the Tonkin Gulf. At that time, the *Enterprise* joined the *Kitty Hawk* and *Ticonderoga*. The *Enterprise* set a record for most carrier-launched sorties in a single day when it sent 165 aircraft aloft on December 3, 1965.

Still determined to bring the North Vietnamese to the peace table, Johnson on December 24 ordered another bombing halt. This time it lasted 37 days, until January 31, 1966. The North Vietnamese, though, continued to rebuff U.S. peace overtures. The long bombing halt allowed the North Vietnamese to move men and equipment without fear of attack from the air. Additionally, the long bombing hiatus allowed them to continue to improve their air defenses.

In the third phase of Rolling Thunder beginning in February 1966, Johnson expanded the scope of the operation to include attacks on petroleum, oil, and lubricant (POL) storage facilities. Because nearly all of North Vietnam's POL storage facilities were located near Hanoi and Haiphong, U.S. aircraft had fly into the teeth of the communist country's air defenses. The Air Force 355th and 388th Tactical Fighter Wings, as well as Carrier Air Wing 9 on the *Constellation* and Carrier Air Wing 14 on the *Ranger* began conducting POL alpha strikes on June 29. Although Sharp urged Johnson and McNamara in summer 1966 to authorize attacks against the North Vietnamese airfields at that time, the president would not authorize attacks against MiG airfields until spring 1967. After that, the North Vietnamese moved most of their MiGs to Chinese airfields, from which they continued their attacks against U.S. aircraft formations.

Another method for U.S. forces to interdict the flow of supplies from North Vietnam to South Vietnam was to have B-52 Stratofortresses conduct strikes, codenamed "Arc Light," by which they saturated an area with conventional bombs. The first of the Arc Light strikes on North Vietnamese territory occurred on April 12, 1966, when Strategic Air Command B-52s hammered Mu Gia Pass, the principal point of entry from North Vietnam onto the Ho Chi Minh Trail. Johnson restricted the use of the B-52 in North Vietnam to the staging points of the Ho Chi Minh Trail and to the panhandle north of the DMZ.

In phase four, from October 1966 to May 1967, the Johnson administration increased the pace at which it bombed industrial facilities and power-generating plants. Whereas there were only five attacks on power plants in 1965, the Air Force and Navy struck such targets 39 times in 1967. The fifth and final phase—from May 1967 through October 1968—focused on what remained of North Vietnam's industrial infrastructure. The Air Force and Navy also continued

SAM HUNTERS RISKED DEATH OR CAPTURE TO PROTECT STRIKE FORMATIONS



The two-seat F-4G Wild Weasel Phantom is armed with AGM-45 and AGM-78 anti-radiation missiles designed to home in on North Vietnamese SAM radar equipment.

National Archives

AT the outset of Operation Rolling Thunder in spring 1965, U.S. Air Force and U.S. Navy commanders overseeing the alpha strikes against North Vietnam realized that jamming by electronic countermeasure aircraft alone was insufficient to suppress enemy fire-control radar used to direct SA-2 surface-to-air missiles. What was needed was an aircraft with special capabilities that could physically destroy the Fan Song fire-control and tracking-radar van that directed a SAM battery.

The services set to work immediately modifying specific aircraft for the SAM-busting missions. The Air Force first used the two-seat F-100, but it proved too slow and vulnerable for such a mission and was replaced by a specially modified F-105. The two-seat F-105G ultimately became the Air Force's workhorse for the SAM-suppression operation code-named Wild Weasel.

For its part, the Navy first experimented with a modified A-4, but eventually used the A-6S Intruder. The backseat airman of a Wild Weasel aircraft had at his disposal special equipment to fix the location of an active SAM site.

Military technicians outfitted Wild Weasel aircraft with antennas on the nose and tail to detect the Fan Song radar. The aircraft were armed with AGM-45 Shrike anti-radiation, air-to-ground missiles that homed in on a SAM radar beam and followed it back to the transmitting antenna on the Fan Song control van. The Shrike missile, though, was not widely used until 1966, so aircrews relied on conventional bombs, rockets, and autocannon in the interim.

The Navy conducted the first SAM hunter-killer mission on October 26, 1965, when an A-6A Intruder led a formation of four A-4E Skyhawks from carriers at Yankee Station against a SAM site near Hanoi. Commander Harry B. Southworth led the Wild Weasel strike. His strike team not only knocked out the Fan Song radar, but also several missile launchers.

The Air Force's first Wild Weasel mission unfolded on December 22, 1965, when Pilot

Captain Allen Lamb and backseater Captain Jack Donovan flew an F-100 that led a flight of single-seat F-105Ds on a mission that successfully knocked out a Fan Song radar unit of a SAM battery. Alerted by his aircraft's vector-radar warning scope that the enemy ground radar was tracking him for a launch, Lamb climbed from 2,500 feet, inverted his aircraft, and then swept down on the target. He rolled upright just in time to fire two pods of 2.75-inch rockets. Although the rockets fell short, Lamb was able to strafe the Fan Song van with his 20mm cannon. The flight of four Thuds directly behind his aircraft destroyed the Fan Song van with rocket fire.

The overall effort by both services to knock out radar-directed AAA fire and radar-directed SAM batteries was of such importance that it became an operation itself, known as Iron Hand. The operation took its name from the need to have nerves of steel and an iron hand to successfully carry out such dangerous missions.

The Air Force eventually established a standard in which a Wild Weasel formation consisted of four aircraft: two F-105Gs armed with four Shrike missiles and two F-105s armed with either 500 lb. or 750 lb. iron bombs. One or two of these four-aircraft flights participated in an alpha strike to protect the aircraft tasked with bombing the principal target. During the final year of Operation Rolling Thunder, Air Force and Navy Wild Weasel aircraft fired 1,146 Shrike missiles, resulting in the destruction of 370 Fan Songs fire-control vans.

The Wild Weasel flights entered the target area five minutes before the aircraft assigned to bomb the target. They were the first to arrive, and the last to leave. On the average they were exposed to enemy fire for 30 minutes. The pilots and their backseat operators had to have a superb sense of timing, for if they were seconds off, it might mean that one or more aircraft in the bombing formation would be shot down.

—William E. Welsh

to bomb all of the military, logistics, and transportation targets that the Johnson administration had previously approved.

McNamara came out strongly against Operation Rolling Thunder as early as autumn 1966. The air campaign had not “significantly affected infiltration [of South Vietnam] or cracked the morale of Hanoi,” he told Johnson. McNamara wanted a different approach to interdicting the flow of supplies from Hanoi to the Viet Cong and North Vietnamese forces fighting on the ground in South Vietnam.

The secretary of defense proposed a new approach to interrupting the flow of men and materiel from North Vietnam into South Viet-

nam in November 1966. He proposed a physical barrier that would run along the DMZ and into northern Laos. This barrier would consist not only of physical barricades, but also of an electronic sensor field. When there was evidence of a major threat from North Vietnamese ground forces, he proposed having quick reaction forces engage them.

As for the continued bombing of North Vietnam, McNamara sought a stabilized level of bombing rather than the continuing escalation characteristic of Operation Rolling Thunder. Not surprisingly, the senior military officials vehemently objected to McNamara’s attempt to limit the scope of the bombing.

McNamara became even more entrenched in his opposition to Rolling Thunder in the months that followed. In spring 1967 he went so far as to come out against any further bombing of North Vietnam. Wheeler and Westmoreland immediately decried the defense secretary’s proposed curtailment of tactical and strategic air strikes against targets inside North Vietnam. Westmoreland went so far as to tell Johnson that he was appalled that the administration would even consider halting Rolling Thunder.

But by that time, Johnson was questioning the entire war effort himself. When the CIA told Johnson in 1968 that Operation Rolling Thunder had neither decreased North Vietnam’s morale nor its war capabilities, the president began to doubt whether he could bring the war to a successful conclusion.

McNamara tendered his resignation on November 28, 1967, although he stayed on through February 28, 1968. Arguably the most egregious of McNamara’s decisions during Operation Rolling Thunder were his prohibitions against attacking SAM sites under construction and his refusal to allow the bombing of airfields at the start of the conflict.

Despite the political turmoil, by October 1967 Air Force and Navy planners had begun to hit the North Vietnamese where it hurt with attacks against high-priority military targets such as MiG airfields. An attack against Kien An Airfield by Carrier Air Wing 19 flying from the *Ticonderoga* involved A-4 and F-8 fighter-bombers, F-8 Iron

Hand Escorts to suppress the SAMs, F-8s to suppress the conventional flak batteries, and other F-8s to fly target combat air patrol against MiG interceptors.

Johnson’s announcement on March 31, 1968, that he would not run for re-election ultimately doomed Rolling Thunder. The Vietnam War had escalated throughout his presidency, and he had proven unable so far to get the North Vietnamese to engage in peace

talks. Moreover, the bloody and chaotic Tet Offensive, which had erupted on January 31 and in which the North Vietnamese and Viet Cong had launched a series of attacks on over 100 cities and outposts across South Vietnam, had shown that the United States was not winning the war with its current ground and air strategies. As the Johnson administration wound down, Rolling Thunder drew to its inevitable close on October 31, 1968.



ABOVE: North Vietnamese MiG-21 pilots approached U.S. formations cautiously. They preferred to conduct hit-and-run attacks in which they flew at Mach 1, fired their missiles, and continued through the U.S. formation. **RIGHT:** A SAM missile downs an F-105 over North Vietnam. The 11-foot missiles could achieve speeds of Mach 3.5 and reach altitudes of 60,000 feet. **BELOW:** North Vietnam air-defense troops receive instruction in the use of the S-75 Dvina SAM system.



Sputnik



Entering service in July 1965, the elusive Navy A-6A Intruder was the best all-weather, night-and-day attack aircraft of its time. Its high-tech bombing and navigation avionics enabled it to hit targets with point-point accuracy.

ANOTHER METHOD FOR U.S. FORCES TO INTERDICT THE FLOW OF SUPPLIES FROM NORTH VIETNAM WAS TO HAVE B-52 STRATOFORTRESSES CONDUCT STRIKES, CODENAMED "ARC LIGHT," THAT SATURATED AN AREA WITH CONVENTIONAL BOMBS.



At the conclusion of the 43-month strategic-bombing campaign, Air Force and Navy officials overseeing the air strikes said they believed that the most effective phases of the operation were those in 1967 and 1968 that targeted North Vietnam's logistics and infrastructure.

One of the most devastating consequences of Operation Rolling Thunder for the U.S. military was the large number of pilots who became prisoners of war in Hanoi. Over the course of the entire conflict, 771 Americans became POWs. Of those, 113 died in captivity; 65 were tortured to death as their interrogators sought to gain their cooperation for propaganda purposes. These POWs endured horrific, barbaric conditions without medical care.

Over the course of the 43-month operation, U.S. airmen flew 304,325 tactical sorties in which they dropped 643,000 tons of ordnance. In addition, the Strategic Air Command flew 2,273 Arc Light missions. Yet the Rolling Thunder sorties constituted only 28 percent of all air strikes flown during the period when the number of sorties conducted in South Vietnam and Laos are taken into account.

Rolling Thunder had built up considerable momentum in 1966, but it truly peaked in 1967. During that year, the Air Force and Navy bombed 1,923 AAA sites, 236 SAM sites, 807 bases and airfields, 140 POL targets, 39 power plants, and 6,485 trails and roads.

Altogether, U.S. military forces in Vietnam lost 881 aircraft over the course of the operation. Using 1967 as an example, of the 372 aircraft lost that year, 205 were lost to conventional AAA fire, 62 to surface to air missiles, 25 to MiG interceptors, and 37 to pilot error, mechanical breakdown, and unknown causes.

Despite the interference of Johnson, McNamara, and many of the president's other top advisors, the aircrews who conducted the alpha strikes and armed reconnaissance attacks showed extraordinary heroism and ingenuity in the face of a tightly woven fabric of air defenses constructed by the North Vietnamese with the assistance of the People's Republic of China and the Soviet Union.

Although U.S. aircrews successfully bombed their target objectives throughout Operation Rolling Thunder, their efforts had little long-term effect on the course of the war. As a testament to their proficiency, these airmen succeeded in knocking out 65 percent of North Vietnam's fuel-storage capacity at the peak of the long war.

Operation Rolling Thunder had a lasting and positive influence not only on air operations conducted during the Nixon administration, such as Linebacker II, but also on U.S. air doctrine in future conflicts. The legacy in terms of tactical and military innovations is impressive. The U.S. military experienced dramatic advances in technology in the years immediately following Operation Rolling Thunder. The most notable of these

was the introduction of the highly accurate precision munitions known as "smart bombs." By the early 1970s, the U.S. was using Paveway laser-guided bombs in the skies over Indochina. The widespread use of smart bombs greatly improved the number of targets an aircraft or strike force could destroy on an air mission. After the war, the U.S. military also stepped up its research-and-development efforts in electronic warfare, infrared sensors, and anti-radar missiles.

Rolling Thunder ultimately led to beneficial changes in U.S. air strategy. The U.S. Air Force moved away from its Cold War obsession with developing long-range bombers toward a more balanced fleet of aircraft that included more tactical bombers. This enabled both the U.S. Air Force and U.S. Navy to make great strides in improving their air-to-air combat capabilities in the post-Cold War era. The U.S. military also began fielding stealth aircraft in the post-Vietnam era, which were far less vulnerable to AAA and SAM batteries than their Vietnam forerunners.

Advances in these areas, as well as a new-found willingness among post-Vietnam-era U.S. presidents to allow senior military officials to manage strategic and tactical air strikes with little interference, led to great achievements. These technological and doctrinal changes in the application of U.S. airpower were on full display in Operation Desert Storm, which was the first major test of U.S. forces after the Cold War. ■

Bloody Revenge at Sluys

Philip VI sought to inflict the first blow of the Hundred Years' War on England, but Edward III launched a pre-emptive naval strike in 1340, ambushing the French fleet at Sluys.

By Eric Niderost

IT was late afternoon on June 24, 1340, when the English fleet arrived off the Flanders coast, just short of the Zwin estuary, reputed to be the finest harbor in Europe. King Edward III was aboard his flagship *Cog Thomas Beauchamp*, looking at the distant shoreline and noting every detail with the keen and discerning eye of the professional soldier. Flat and almost featureless, the shore was a sandy streak across the horizon. The monotony was relieved only by the few patches of wind-buffeted grass and stunted shrubs that clung to the dunes.

But suddenly a forest came into view, a cluster of trees that seemed even taller when contrasted with the flat sand dunes that surrounded it. On closer inspection, it was not a forest at all, but the masts of hundreds of ships that were blocking the entrance to the estuary. The king was not surprised, for this was the quarry for which he had been looking. Nevertheless, he wanted confirmation, so he turned to *Cog Thomas'* master, who was dutifully standing by his monarch's side.

"What ships are those?" the king asked, receiving the reply he expected: "Sire, they are [French] sent here by the French king," replied the ship's master. "They burnt Southampton and took your great ship the *Christopher*." Edward was pleased by the response. Already a seasoned warrior on land, the coming fight would be his first experience at sea. "Ah, I have long wanted to fight with the Frenchmen," he said, "and now I shall fight some of them by the grace of God and St. George, for truly they have done me many displeasures, that I may be revenged."

The English king was a striking figure as he stood in armor with his legs braced against the gentle, yet persistent, swaying of the ship as it cut through the wind-dappled waters of the English Channel. His beard and mustache were neatly trimmed, and he was wearing a conical bascinet helmet that featured a curtain of mail riveted to it that hung down and gave protection to the neck and shoulders. This was a transitional age when mail was gradually giving way to plate armor.

But what was most noticeable was Edward's surcoat, a colorful tunic that boldly displayed his coat of arms. The design featured three lions, which in formal heraldry actually were leopards, on a red field. But those lions were quartered with the traditional lilies of France. Here, in tangible form, was the outward expression of Edward's political quest. He intended to assert his claim as the rightful king of France.

To the medieval mind "may God defend the right" was no empty slogan, but a day-to-day article of faith in divine power. For Edward, his first sea battle would be a trial by combat. If the English king's cause was just, he reasoned, God would grant him victory.

This seemingly quixotic quest for a foreign throne had its roots in the death of his uncle, Charles IV of France, who passed away in 1328 without leaving a direct male heir. The closest living male relative was Edward, through his mother, Isabella, Charles' sister. In that male-oriented age no one seriously considered a woman as sole ruler, especially in France. But could she be a bridge that would make her son a prime candidate? Opinions were divided. While the lawyers argued, the mag-

nates of France took action by choosing Philip of Valois. Philip was the late monarch's cousin, so at least on paper Edward had the stronger claim. The idea of candidacy through a woman was a stumbling block, but probably not insurmountable.

Feudalism was a system of land tenure by which, at least in theory, a person of higher status granted territory to one of lower status. The lower-status individual became the grantor's vassal, owing him loyalty and service. Feudalism depended on hierarchy and a system of mutual duties and obligations between suzerain and vassal; one's nationality was of secondary importance. Nevertheless, the spirit of nationalism—of allegiance to one's culture, ethnic identity, and language—was increasing. Edward was probably rejected because he was a foreigner. In the 1330s, there had been some half-hearted attempts to advance Edward's candidacy to sit on the French throne, but eventually the matter was dropped, at least for the time being.

The contest for the French throne was only the latest expression of a rivalry that dated from the Norman Conquest in 1066. Edward III was, like

English longbowmen shower the French with arrows from a forecastle at Sluys. The longbow, with its rapid rate of fire and superior range, proved more valuable than the French crossbow at Sluys.



his predecessors, the Duke of Aquitaine, a fertile region in southwestern France. When Duke William X of Aquitaine had died in 1137, his expansive duchy went to his 15-year-old daughter Eleanor. When she subsequently wed the French dauphin, her inheritance fell under the direct control of the French crown. But when her marriage ended in annulment, she once again received control of the duchy. Her marriage to Henry of Anjou and Normandy in 1152 transferred control of Aquitaine to the English crown when Henry ascended to the throne two years later. As Duke of Aquitaine, King Henry of England was a vassal of the French king. The fact that he owed his loyalty and obeisance as a vassal to the Gallic monarch implied an inferior position.

When a vassal formally took possession of his lands, he first had to acknowledge his liege-lord's generosity by paying him homage in a formal ceremony. A teenaged Edward of Windsor reluctantly

agreed to pay homage in 1329, two years into his reign as King of England, but offended King Philip VI of France by wearing a crown and carrying a sword. When Philip demanded Edward go bareheaded and unarmed, as befitted a humble vassal, Edward refused. The matter blew over, and there was relative peace for a few more years, but it was obvious the two kingdoms were on a collision course over Gascony, a geographical term that was often used interchangeably with Aquitaine.

The English had other grievances, too. One of the most critical was the matter of Scotland. Scotland and France had first entered into a treaty of mutual support in 1295 that would become known as the Auld Alliance. Scottish King John Balliol, who needed allies given that his relations with England were rapidly deteriorating, had approached the French for the purpose of enlisting their aid. It was the beginning of strong military and political ties between the two countries.

The initial agreement between France and Scotland was renewed in 1326. The Franco-Scottish pacts set forth—open for all to see—that the two countries would help each other against England, which was their mutual neighbor and frequent foe. If the French invaded by sea and the Scots by land, then English forces, caught between these two forces, might well be defeated in detail.

Gascony would prove to be Edward's Achilles' heel, and Philip well knew it. It had been the policy of French kings for more than 100 years to consolidate their holdings, in effect uniting the patchwork quilt of feudal territories under the real, not nominal, rule of the French crown. That meant the French crown had to seize territories when opportunities arose; if not, it had to at least nibble way at coveted lands in its corner of continental Europe until it controlled all of them. Philip's obvious goal was to take over Gascony by whatever means he had in hand.

For his part, Edward was just as determined to hold onto his continental possessions. Wool and wine were the two chief pillars of English prosperity in the 14th century, and the latter came from Gascony's rich soil and abundant vineyards. Edward III was perpetually in debt, but the revenues he received from the wine industry kept his government afloat and functioning. The king's income was only about one-third that of his French rival, roughly between 18,000 to 33,000 pound a year, in addition to 13,000 pounds from Gascony. As the figures demonstrate, the wine trade was often nearly equal to all other sources of the Crown's income combined; the loss of Gascony and its imported wines would be a severe blow to the English economy.

It was therefore inevitable that a war would commence after King Philip assembled a Great Council in May 1337, that declared Edward was in breach of his obligations as the French king's vassal. As a result of the English king's alleged transgressions, his lands in Gascony were forfeit, and he was no longer Duke of Aquitaine.

Now that the die was cast, both Edward and Philip sought allies. Edward found his in the semi-independent Flemish mercantile towns, such as Bruges, Ghent, and Ypres. They were natural allies because these cloth-producing centers needed English wool for their hundreds of looms. Edward offered each of them generous commercial privileges, including free trade for Flemish cloth in English markets.

The pact was signed in late 1339, but the Flemings demanded one thing in return: They wanted Edward to declare himself the king of France. The residents of the Flemish cities despised Philip of Valois but had no wish to be branded traitors and rebels. The French king was their nominal over-

The French captured the two royal vessels, the *Christopher* and *Cog Edward* (pictured), in a raid in 1338. The English retook them from the French at Sluys. INSET: King Edward III of England (left) and King Philip VI of France.



The French decided to strike the first blow of the war at sea. Philip knew of Edward's financial difficulties and decided to wreck the English economy by raiding English ports and disrupting its maritime trade.



Edward's fleet attacked the French fleet, augmented by Spanish and Flemish ships, drawn up in the inlet of Sluys in Flanders. The English found the sides of the Gallic ships built up and their bows and sterns fortified with timber.

lord, and they could more easily save face if they merely switched allegiance to Edward. Edward may have had no real desire to be king of France; but the need for allies, as well as political expediency, ultimately forced his hand.

The French decided to strike the first blow of the war at sea. Philip knew of Edward's financial difficulties, his perpetual need for money, and decided to wreck the English economy by raiding English ports and disrupting its maritime trade. England depended heavily on revenues gleaned from the wool and wine trade. If Philip were to disrupt these crucial revenue streams, he believed

he could cripple the island nation. English penury would overwhelm English pride, and Edward might sue for peace.

King Philip ordered Nicholas Behuchet, his new Admiral of France, to begin the sea campaign early in 1338. A French fleet descended on Portsmouth, which lacked a protective wall and was taken by surprise. The French ruthlessly sacked the vulnerable town; in the process, they either slaughtered its inhabitants without mercy or took them as slaves. The French raiders torched the town's homes, stores, and docks until there were nothing left but smoking ruins.

A Gallic raid at Walcheren caught English vessels unloading cargo, and no less than five large

English cogs were seized before they could escape. Two of these ships, *Cog Edward* and *Cog Christopher*, were royal vessels, personal possessions of the English king, and their capture was a blow to the royal pride. The French raiders, whose numbers included some Italian and Spanish mercenaries, were particularly brutal to English crews. The hapless mariners were all executed without mercy.

The French then attacked Southampton on October 5, 1338. Several thousand raiders attacked the port from both land and sea. The terrible scenes that Portsmouth witnessed were repeated, and perhaps with even more fury. English merchants who had the misfortune of falling into raider hands were hanged, often just outside

of their homes. The French carried off goods or simply destroyed them. As they departed, they razed the port to the ground.

Meanwhile, the first land campaigns against Philip had proved embarrassing fiascos. Edward and his allies marched through French, or French-allied, territory putting everything of value to the torch. In so doing, the English king hoped to draw Philip out and lure him into a decisive battle, but the French king refused to rise to the bait. A deeply frustrated Edward was forced to withdraw into friendly Flanders.

Yet again Edward suffered financial embarrassment, and he was forced to borrow from rapacious Italian bankers at high interest rates. The spendthrift king would later default on these loans, triggering a financial crash that sent ripples of woe up and down the Italian peninsula. But in the short term, Edward realized he needed to go

back home and prepare for the next campaign.

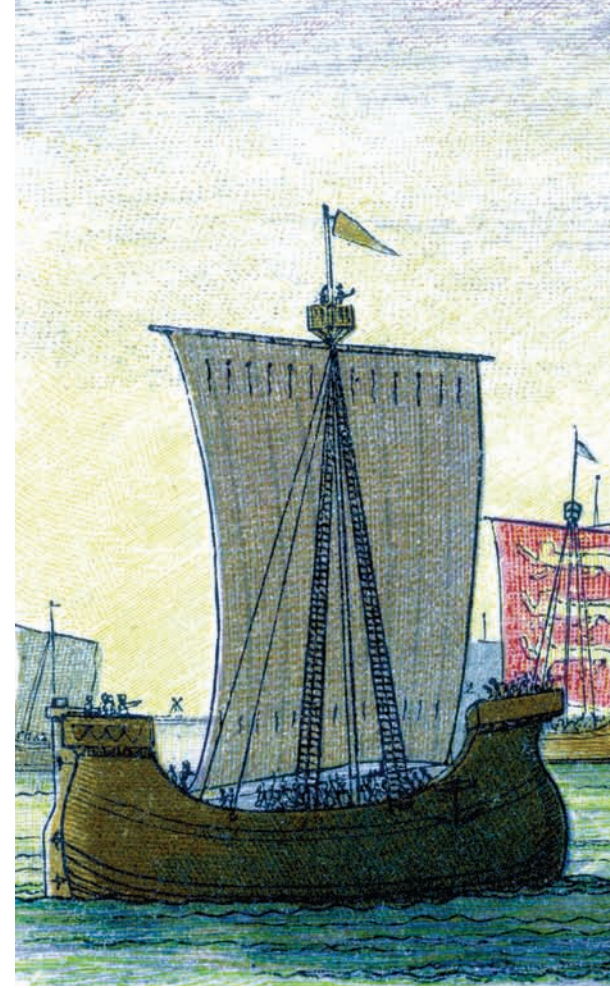
The king owed money to the Flemings, too. Bribery was an accepted mode of diplomacy in those days, and the cash-strapped monarch needed to pay up, lest he lose his hard-won allies. Edward left the continent and returned home, staying in England from February 21, 1340, to June 22, 1340. But in exchange, the king had to leave his wife, Queen Philippa; his two sons; two earls; and other high-ranking hostages to ensure that he would return to Flanders.

England had no purpose-built navy, and one of Edward's chief concerns during the war was the building of a fleet that could protect the realm, safeguard English trade in time of war, and transport English troops to the continent. But there was a major problem: Such a fleet would be ruinously expensive to maintain.

As it was, King Edward possessed only a hand-



Map © 2021 Philip Schwartzberg, Meridian Mapping, Minneapolis, MN

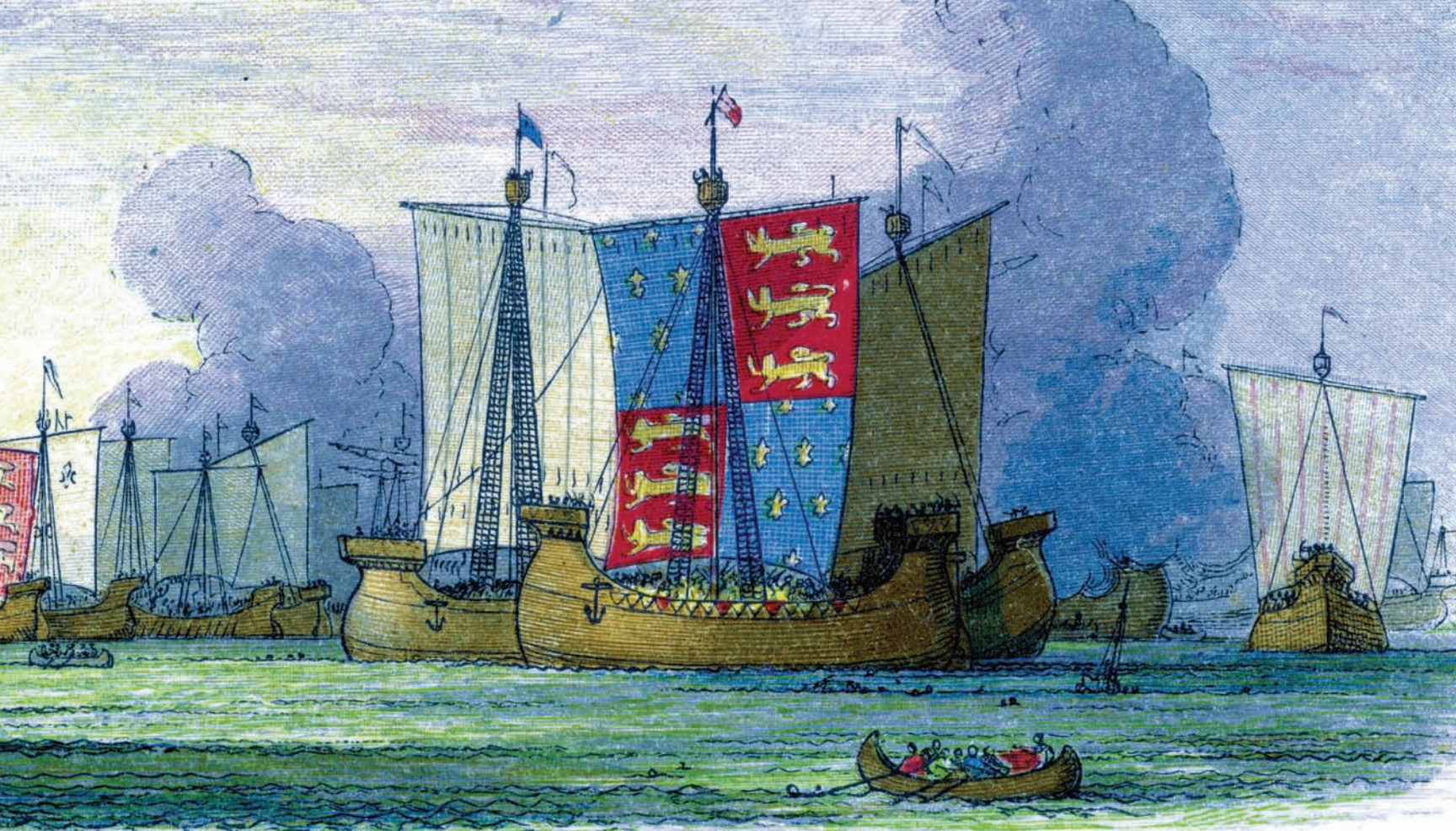


LEFT: At the time of the Hundred Years' War, the English crown held substantial territory on the continent. King Edward III, whose mother Isabella of France was the daughter of the late French King Charles IV, believed he had a legitimate claim to the French throne. **ABOVE:** The close quarters fighting at Sluys became desperate given that the soldiers could not flee their vessels. Once the English had defeated the ships in the front line, the Flemish sallied forth from the town and attacked the French from behind.

ful of ships; at one point, he owned only three vessels. This small nucleus was augmented in time of war by drafting merchant vessels into temporary service, a practice known as "arresting."

Arrested ships were not merely seized, however; they were taken only after a contract had been signed with their owners. The captain, or master, and the crew were also deemed to have been drafted to serve for the duration of the campaign or war. Under such arrangements, masters were entitled to six pence a day, while ordinary seaman received three pence.

Early in 1340, with Edward still making preparations in England, the allies were surprised by a French land offensive towards Cambrai in Hainault. It was decided that Edward would return to the continent, and, once his army was landed, would march on French-held Tournai. But that



was easier said than done because there were numerous delays in mustering a fleet. Some ships had been siphoned off to join a wool convoy, and there were further problems because Edward's Admiral Morley had arrested neutral ships in port that had no part in the war. As if that were not bad enough, Morley and his assistants were helping themselves to merchants' goods, too busy with clandestine plunder to mind what was going on.

Many ships were also avoiding service altogether, because they knew the contracts that they signed with royal agents simply might be not worth the paper they were written on. The English king, like most medieval rulers, was a poor paymaster, and there was no guarantee they would ever see money they were contractually promised. Those feelings also were likely shared by many, if not all, shipbuilders ordered to either build a ship from scratch or covert a cog to a warship.

Edward originally wanted to sail in mid-March, but delay after delay kept postponing his departure date. The King's Council decided on June 4, 1340, that the naval expedition would go with the naval vessels it already had, which amounted to about 40 ships. It was possible that additional ships might join the fleet later. But there were French spies in England, and they quickly transmitted this information back to King Philip and French authorities.

With such intelligence in hand, the French

made a bold move. They mobilized quickly, assembling a large fleet that they called the Grand Army of the Sea, and set sail for Sluys, which was situated at the Zwin estuary. The estuary was one of Europe's great harbors and was Edward's entryway to the continent. Once he landed at Sluys, Edward could travel a few miles up the Zwin to his ally, the great mercantile city of Bruges, and then besiege Tournai.

The French intended to block the entry port, and, if fortune favored them, do even more. Philip hoped that French naval forces would catch the English out in the open waters of the English Channel and utterly destroy them. No holds would be barred; indeed, there was even hope that Edward III himself would be killed in the action. In this Gallic dream scenario, the English throne would then go to Edward's young son, also named Edward and only nine years old. In the feudal age, having a minor as King of England would be potentially disastrous, creating a power vacuum the French could exploit to their advantage. If the French captured Edward, he could be held for a huge and economically crippling ransom.

The Grand Army of the Sea was indeed an impressive force of 171 ships, four galleys, and 25 barges. They were manned by 20,000 sailors, but curiously had only about 500 crossbowmen and 150 men-at-arms aboard. Accounts maintain the Genoese and Norman French sailors were tough,

inured to hardship, and used to armed conflict.

The galleys, if used properly, might tip the scale in favor of the French, especially since they were manned by professionals from Genoa. It took time and training to produce seasoned galley oarsmen, a luxury that other nations like the English simply did not have. But the Genoese galleys in French service were much reduced in number. The English had succeeded in destroying 18 galleys in the harbor at Boulogne during a raid, and there was also a separate pay dispute with King Philip VI.

The French king imprisoned 15 Genoese, but the disciplinary action refused to cow them. Most of the galley mercenaries went home to Italy, and it was said that English bribes helped keep them there. The remainder was a skeletal force of possibly as many as six galleys commanded by Pietro Barbanero. Barbanero was a tough old sea dog who was said to have dabbled in piracy.

The English had an efficient spy network, and King Edward received word that the French Grand Army of the Sea was now in full possession of the Sluys estuary. This was troubling, because the door to the continent and his ally Bruges was now slammed shut. But Edward was also prescient enough to be worried about the growing threat of French sea power. The French armada was huge; its very size seemed to indicate that Philip was poised to invade England.

The matter was urgent enough to summon

Edward III's Victorious Fleet

The ship of choice for both peace and war during the era of the Hundred Years' War was the cog. It was a large vessel with a single mast for a single square sail. It was clinker-built, a process by which grooves were notched into the ship's ribs, allowing the hull planks to overlap. The arrangement eliminated the need for caulking. Cogs were sometimes called roundships because they had high fore and aft sections.

The all-important wine trade was a major factor in the building of an English fleet, because ideally warships needed to be large vessels, and wine cogs were among the largest afloat. This was because it was a long voyage to Bordeaux and back, sometimes taking months, and businessmen wanted to carry as much as they could to maximize profits and get a generous return on their investments.

A ship's cargo capacity was based on how many tuns, which were wine casks, it could carry in its holds. Thus, the royal vessel *Cog Edward* was a ship of 240 tuns, an average size for its time. Yet even smaller cogs could be useful in war. It has been estimated a cog of 90 or 100 tuns could carry a compliment of around 100 crew, archers, and men-at-arms into battle.

It was a relatively simple matter to convert a merchant ship into a warship, provided a shipbuilder had the lumber available and the skilled craftsmen needed to do the work. Fortified platforms were built that were raised above the prow and the stern of the vessel. These platforms featured wooden parapets that were crenellated—that is, had gaps at regular intervals. These made them look like little sea-going castles, giving rise to the terms "forecastle" and "aftcastle." In fact, "forecastle" has survived in modern ship terminology as "focsle."

Such conversion work was done by special craftsmen called castlewrights. They alone had the skill and the knowledge to create these little wooden fortresses. In addition to the forecastle and aftcastle, the warships usually also had a fighting top, which was like a crow's nest and added onto the ship's towering mast.

Even after a cog's war service was done and it went back to the merchant voyages, the ship's castles were usually not removed. It was too costly, and one never knew when one's ship would be called back into active duty.

English King Edward III's fleet also included galleys. These were large vessels propelled primarily by oars. Galleys had been a mainstay of Mediterranean naval warfare since the ancient Greeks, but to modern eyes they seem strange, even an anachronism, in northern waters. Yet in medieval times they did occasionally serve a useful purpose. Fleet commanders considered them swift and maneuverable, which made up for their relative instability in storm-tossed northern seas.

English records sometimes referred to galleys as barges, but there were small differences between the two types. The barge was a single-decked ship with a single mast and sail, but whose main propulsion came from oarsman. An oared barge built at Hull in 1298 had 28 seamen and carried 128 oars. The fact remained, though, that these oared barges constituted only a tiny fraction of the Edward's naval command.

Edward seems to have grasped the importance of sea power, at least to the extent of personally supervising, as much as he was able, the construction of a fleet. For example, William de la Pole was ordered to build a barge at Hull for the growing royal navy. To help him in his task, the Prior of Blythe in Nottinghamshire was directed to deliver to William 40 oaks. Once that was set in motion, Edward wrote to William de Kelm, the king's carpenter, informing him that "the King has caused the galley to be begun in confidence of receiving that timber."

The English had to modify other merchant cogs to carry horses, men, or supplies, and that required not just common laborers but skilled carpenters who knew what they were doing. Some ships, for example, would have special holes cut into their sides to enable them to board and transport horses. Extra weapons and armor took up space in cargo holds, as well. It is recorded that Edward's ship *Philippe* took aboard "30 padded shirts, 21 pieces of plate armor, 30 hauberks, 30 crossbows, 30 sheaves of barbed arrows, 200 cords for the bows, 200 quarrels, and eight banners."

—Eric Niderost

The English converted merchant ships into warships by constructing fortified platforms with wooden parapets that served as protected fighting positions for their soldiers.





The style of naval fighting at Sluys consisted of having ships moor alongside each other with hooks and grappling irons so that the crews and soldiers aboard the ships might fight each other as infantry.

Edward's top advisors, including his chancellor, Robert Stratford, the Archbishop of Canterbury, Edward wanted to sail as soon as possible, even though only 40 ships had been mustered. The archbishop felt this was madness, a suicide mission, and plainly told the king so. Tempers started to flair, and finally Stratford rose from the table and stormed out. He immediately tendered his resignation as chancellor, declaring he was too old to be arguing with such a robust and forceful monarch.

Edward next turned to his admiral, Sir Robert Morley, and Morley's assistant Jack Crabbe. Crabbe was a colorful character whose past included episodes of outright piracy. He was useful to the English because he knew the English Channel and North Sea waters intimately. Both Morley and Crabbe agreed with Stratford and insisted that crossing over to Flanders would be a

bad move that would lead to disaster.

Once again Edward vehemently disagreed, and the conference deteriorated into a shouting match between the two men and their king. Edward, boiling with rage, accused them of either conspiring with the archbishop, or of being cowards. Morley and Crabbe fired back, saying they would lead the expedition immediately as ordered, even though it was going to lead to certain death.

Edward soon calmed down, especially when it was pointed out that the winds were unfavorable at for a channel crossing. He could be gracious, and he was big enough to recognize when he lacked knowledge and to apologize when he was wrong. The king attempted to make amends with Archbishop Stratford, but the prelate refused to return to his former position as chancellor.

Edward eventually pulled off a minor miracle

and was able to set sail on June 22 with a respectable force of approximately 200 ships. The fleet carried 10 earls, 50 bannerets (knights who led their own companies of men), 600 knights, and 12,000 mariners. But most important of all, the English ships carried 7,000 archers, whose longbows were on the verge of making history.

As soon as the English fleet arrived off the Flemish coast, Edward ordered a halt and ordered all of the vessels to anchor for the night. The king used the time to send Reginald Cobham, Sir John Chandos, and Stephen Lambkin to scout and reconnoiter the French fleet. Shielded by the cloak of darkness, they were able to get close without detection and gleaned valuable information about the foe.

The French were thrown into considerable consternation at the sight of such an enormous English fleet, for they thought that Edward possessed far fewer ships. The two French admirals, Hugh Quieret and Nicholas Bechuhet, decided to adopt a strictly defensive posture, a posture of such

strength the English would find it impregnable.

The Italian mercenary Barbanero urged that they reconsider these arrangements, saying it would be better if the French fleet put out to sea. "My Lords, if you believe me, the whole [French] fleet ought to be moved onto the open sea," said Barbanero, "for if you remain here, the English who have the wind, the sun, and the flow of the water with them in so much that they will confine you because you will be able to help your ships only minimally."

The two admirals had no experience in sea commands. Indeed, one of them was a tax official in his previous career. Nevertheless, they looked down on the Italian as a low-born foreigner whom they tolerated because they had no other choice. Behuchet would have none of it, dismissing the advice with contempt. "He is a coward who retreats from here and does not stand ready for the onset of battle," the Frenchman flatly declared.

The physical features of the estuary seemed to favor the decision to stay put. The Zwin estuary, which is today silted up beyond recognition, was in 1340 a body of shallow water about three miles wide, bounded on the northeastern side by Cadzand Island and the west by a long dike. The estuary narrowed considerably but continued another ten miles to the great city of Bruges. The city of Sluys was an entry port to Bruges and had been given its name due to the locks, or sluices, that regulated the waters of the ship canal.

The French ships arrayed themselves in three lines that blocked the three-mile-wide main channel. Each vessel was chained to its neighbors, side by

side, with the prows facing outward and towards the enemy's presumed approach path. The ships already had forecastles and aftcastles, but these were augmented by *bretasches*, which were small wooden balconies with machicolations ("murder holes"). The overall effect was to fuse all the ships into a kind of a massive floating castle.

The first French line was the strongest, consisting of no less than 19 of the largest warships, headed by the *Cog Christopher*. This was meant to both irritate and taunt the English, because *Christopher* was once the pride of King Edward's navy. Captured with four other English vessels in 1338, she was a painful reminder of the raids the island nation had so recently endured.

Edward was no seaman, but he recognized the value of listening to people whose expertise in such matters was superior to his own. The English were ready for battle in the early morning but paused for a few hours, waiting for the tide to turn. When the tide finally did change at about 10:40 AM, Edward gave the orders for the fleet to set sail.

The French had girded themselves for battle and watched in grim anticipation as the great mass of English ships, sails billowing in the wind, drew ever nearer. But the English mariners started tacking, heaving on ropes to change the angle of the yards, until the whole fleet seemed to be turning away from the Flemish coast. It looked as if they were retreating, turning tail, and the spectacle aroused a kind of hunting instinct among some of the French.

The crafty English were escaping, or seemed to be; therefore, some of the

French ship masters cut the chains that bound them to their neighbors and went forward to give chase. But the English were

not retreating, merely circling around to get a better position with the wind at their backs. There were now gaps in the first line of the French "ship wall." The English moved quickly to exploit the gaps to the fullest extent possible.

The English got into a formation that echoed land battles to come. Each ship that was full of men-at-arms would be flanked by two ships packed with longbowmen. Men on both sides felt a sense of fear, excitement, and adrenaline coursing through their bodies. As the English approached the French, the sounds of music could be heard. It was

unmistakable and could be heard even by men whose ears were covered by mail coif or a helmet.

The French were playing a variety of drums, trumpets, and other instruments familiar to the

minstrels of the period. The concert was designed to show defiance to the enemy and to muster courage in the breast of everyone aboard the Grand Army of the Sea. Not to be outdone, the English responded with their own tunes, a kind of musical duel that foreshadowed the bloodier competition to come.

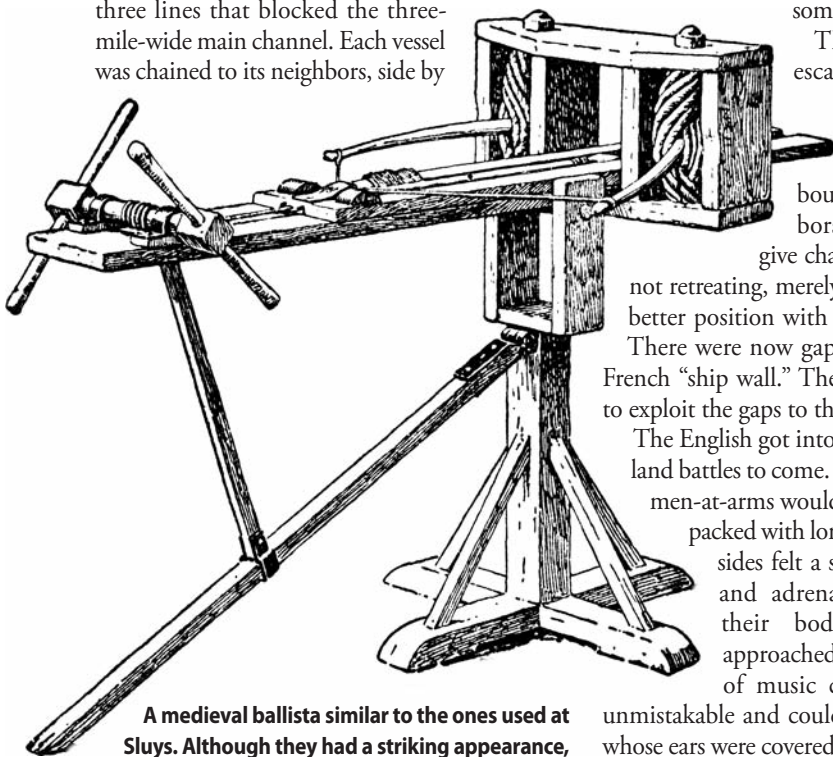
The battle opened with volleys of stone thrown by French shipboard ballistas (similar to giant crossbows), launched as soon as the rival ships were within range. They were answered, and even matched, by English springalds (similar to ballistas) throwing stones and burning pitch. Sir Robert Morley's cog was the first to reach the French ships, and soon a bloody and protracted melee was in progress.

One English galley was a little bit too swift, and it raced so far ahead it found itself alone and in the midst of enemies. Pelted with rocks and peppered by crossbow bolts, the crew was slaughtered. But in general, Edward's tactics were working well. The longbowmen sent showers of arrows into the French ships. "Our archers and our arbalesters began to fire as densely as hail falls in winter, and our engineers hurled so steadily, that the French had not power to look or to hold up their heads," stated *The French Chronicle of London*. Hundreds of lethal shafts rained down, suppressing French stones and crossbow bolts so effectively that all the French could do was seek shelter from the arrow storm and await the inevitable boarding.

The Genoese crossbowmen could only fire perhaps four bolts in a minute; in that same time, a trained longbowman could launch 10 arrows. Once the French fire was reduced, it was the job of the men-at-arms to board the enemy vessel to complete the job. Grappling hooks made sure the opposing ship could not escape. French decks became the scenes of bloody melees, brutal and intimate, where men hacked, stabbed, and grappled with each other at close quarters with savage abandon.

King Edward himself was an active participant, risking his life like an ordinary knight or man-at-arms. Men-at-arms wielding swords, axes, and polearms struck armor or other weapons, producing a terrible ringing cacophony like a thousand blacksmith forges, the din punctuated by shouts of rage and screams of wounded men. The king was struck with a crossbow bolt in the thigh. It proved to be a serious wound that dyed his lower leg and boot with blood.

The first line of French ships were defeated and taken, with the *Christopher* triumphantly back in English hands once again. The English slaughtered the French crews to the last man and flung their corpses overboard. Indeed, so many corpses floated in the estuary it was said that the waters literally turned red with blood. Medieval chroni-



A medieval ballista similar to the ones used at Sluys. Although they had a striking appearance, from a practical standpoint they were not as effective as bows in the hands of experienced archers.

“Our archers and our arbalesters began to fire as densely as hail falls in winter, and our engineers hurled so steadily, that the French had not power to look or to hold up their heads.”



As the tide of battle turned in favor of the English, they slaughtered the remaining French crews and flung their corpses overboard. Both of the French commanders were killed and 190 of their ships captured or sunk.

clers, usually far from squeamish, describe the fight as “dreadful” and “not for the faint heart.”

The fight in some cases lasted throughout the night, light being provided by burning ships. The great French vessel *La Saint James* became entangled with an English ship owned by the Prior of Christchurch, but its crew fought with stubborn valor. The next morning the English had succeeded in taking the ship, and in the process of mopping up, they flung 400 French corpses into the sea.

The second and third lines of French ships seem to have collectively lost heart when they saw the first line so decisively defeated. The fighting went on, but more and more French and Norman crews abandoned ship in a desperate attempt to save their lives. Many drowned because of the weight of their mail. Perhaps some preferred downing to the pain of stabbing or dismemberment, because in this era many sailors did not know how to swim. Vengeful Flemings, who had been watching the battle as spectators, killed those Frenchmen who tried to swim to shore.

The French admirals paid for their folly with their lives. Hugh Quieret was captured badly


wounded; the English knights wasted no time in doing away with him. They cut off his head and flung it overboard. Behuchet was taken alive and brought before King Edward aboard the flagship *Cog Thomas*. The Frenchman probably thought he was going to be ransomed, as was customary with high-status prisoners, but he was wrong. Edward was in no mood to be generous, for he vividly recalled the slaughter and destruction wrought by Gallic raids on the English coast. Edward ordered Behuchet hung, and his corpse was left to dangle from the yardarm of the king’s ship as a warning to others. Barbarero managed to extricate his galleys from the French lines when he saw all was lost, and approximately 17 other French ships escaped. The rest were captured or burned.

The casualty figures also reflected what a debacle Sluys was for French naval power. Medieval casualty numbers usually vary wildly, and Sluys is no exception. Modern conservative estimates list English losses at four knights and upwards of 600 other types of soldiers. French casualties were appalling and ran as high as 20,000. The Sluys estuary was crowded with dead bodies, and the

tide washed corpses ashore for days thereafter. A contemporary English jest maintained that if the fish in the Sluys harbor could speak, it would be in French given that they had dined on so many French bodies.

Sluys gave England undisputed control of the English Channel for a time, and fears of a French invasion were at last laid to rest. From that point forward, English armies and supplies could reach the continent without fear of being intercepted en route. In the long term, Sluys yielded fewer results: Philip VI still had enormous resources, and in time, a new fleet with a new admiral, Robert de Houdetot, would once again threaten English shipping.

Sluys stands as one of the great battles of English history, a worthy companion to more modern British naval victories such as the epic sea battles of Trafalgar and Jutland. During medieval times, it began a cycle of English victories over the French that would unfold on the battlefields of Crecy, Poitiers, and Agincourt. ■

A historical painting depicting Queen Zenobia of Palmyra. She is shown in profile, standing on a stone ledge and looking out over her city. She is wearing a white dress with a blue shawl and a gold headpiece. Her hands are bound in gold chains. In the background, a Roman soldier in a red cloak and helmet is visible, along with a cityscape featuring classical architecture and palm trees. The sky is a pale blue with a few birds flying.

The warrior queen of Palmyra
conquered Egypt and Asia Minor in
A.D. 270 and broke off from Rome.
Roman Emperor Aurelian marched east
determined to restore the status quo.

By Glenn Barnett

Zenobia, shackled in chains of gold, views her kingdom of Palmyra for the last time. At the height of her power, she controlled former Roman territory stretching from Egypt to Anatolia.

Zenobia's BLOODY WAR OF Independence

*Zenobia, one time Palmyra's queen,
As of her nobleness the Persians write
In arms was both so worthy and so keen
That none had greater fearlessness in fight
Or boasted of a lineage more bright.*

—Geoffrey Chaucer,
The Canterbury Tales
(modern translation)

The pages of history tend to dwell on the men who created empires. No matter how ephemeral may be the famed exploits of an Alexander, Caesar or Napoleon, historians have written volumes on their behalf. There is considerably less “press” for the short list of women who have built empires. One such was Zenobia of Palmyra, and this is her story.

The year AD 260 was *annis horribilis* for the Roman world. The Franks plundered Gaul while the Goths overran Greece. But the biggest threat to the empire lay in the East, where the Sassanian Persians had ended Armenia's precarious independence, occupied Mesopotamia and pillaged Syria. The emperor Valerian, though in his sixties, personally led his army to face the Sassanian “King of Kings,” Shapur I.

The armies met at Edessa, eerily close to Carrhae—where Crassus and his army had perished in 53 BC.

The results this time were the same. Shapur's larger force bottled up the Romans within hastily improvised earthworks, and when thirst, starvation and disease took their toll, Valerian and his army (estimated at over 60,000 men) were made prisoners of the ancient enemy. It was the worst disaster of Roman arms to that time.

The defeat of the Roman expedition and humiliation of the captive emperor meant that there was no organized force to oppose the Persians east of the Bosphorus. The entire eastern Mediterranean lay open to plunder. Shapur quickly ravaged Antioch and raided as far as Ankara in the middle of Asia Minor.

Bypassed by the rapacious Persians was an oasis town in the Syrian desert called Palmyra by the Greeks and Tadmor by the Arabs. Long a Roman colony, Palmyra was a caravan town for goods flowing east and west. The very arch of the fertile crescent, Palmyra owed its livelihood to the steady flow of commerce between the Mediterranean and lands as far away as China.

Here ruled Odenathus, an Arab who by virtue of wealth was a Roman senator. At his side was his remarkable wife, Zenobia. Seeing which way the wind was blowing, Odenathus dispatched a train of camels bearing gifts along with a letter offering friendship to Shapur. But the gifts were spurned by the all-conquering Persian. “Who is this Odenathus who dares write me a letter?” he raged. “Let him come before me prostrate on the ground with his hands bound behind his back.”

Odenathus did come, but with an army rather than with his hands at his back. Gathering the remnants of the shattered Romans, the garrison at Palmyra, and bands of swift horse- and camel-mounted bedouins, the Palmyrans met the bloated Persian host on its homeward journey. The Persians, bogged down by stolen treasure and prisoners, were perfect targets for hard-riding Arabs who thundered in upon the besotted invaders.

The Palmyrans were now rich on captured loot, freed hostages, and a most unique prize: Shapur's harem. Odenathus became the first westerner since Alexander the Great, six hundred years before, to capture a Persian king's harem.



When Persian King Shapur I defeated the Romans under Emperor Valerian in A.D. 260, Zenobia's husband, Odenathus, rose to fill the power void in the region while remaining loyal to Rome. The Senate rewarded him with vast authority over the Eastern Provinces.

But in this assault, Shapur had left his rear exposed, and he was soon retreating in confusion to his own country.

Odenathus and Zenobia now filled the power vacuum left by the absent Romans and chastened Persians. Valerian's son Gallienus was now emperor in Rome, and he was grateful to the Palmyran for avenging his father and saving the empire. The Senate declared him a sort of co-emperor for the east. The declaration graciously acknowledged the reality of the situation. Odenathus was now the real as well as the titular ruler of Syria, Cilicia and Mesopotamia and protector of Armenia. For the first time, the empire was divided between east and west.

In the year 266 or 267 Odenathus was assassinated by a relative who then lay claim to the Palmyran throne. But he did not count on Odenathus's widow, who was made of sterner stuff. Zenobia rallied her husband's forces and quickly squashed the nascent rebellion, executing the perpetrators.

Thus enters onto the world stage one of the most amazing women in history. In his epic *The Decline and Fall of the Roman Empire*, Edward Gibbon wrote, "Zenobia is perhaps the only female whose superior genius broke through the servile indolence imposed on her sex by the climate and manners of Asia. She equalled in beauty her ancestor Cleopatra, and far surpassed that princess in chastity and valour."

The ancient writers take pains to tell us of her

beauty. She had flashing coal-black eyes, pearly white teeth, dark Middle Eastern skin and wavy brunette hair reflecting her part-Greek and part-Arab lineage. Like Odenathus, she was born into an Arab tribe and was infused with Arabic tribal politics (Arab legends suggest that her father was killed in an intertribal dispute), but she was more than that. Her Greek lineage, she claimed, went back to the famous Cleopatra herself, which gave her claim as heir to the Macedonian dynasties of the past. She is said to have been able to speak Aramaic, Greek and some Latin as well as Egyptian. Learned and beautiful, she was poised to assume the mantle of Cleopatra.

By all accounts, Zenobia was something of a tomboy. Inured to hardships, she enjoyed the hunt—the sport of kings—much favored in Persian and Arab lands. She eschewed the closed carriage in favor of horseback and was equally at home on the back of a camel. When on campaign, she earned fame and respect by marching by the mile on foot at the head of her troops.

She was equally famous for her self-control. Her husband had been permitted to bed her only for purposes of procreation and, after a month, if the experiment had failed she would receive him again for the same purpose. Now freed of marital duties, she would soon cause Rome much consternation.

At first she ruled as regent for her minor son Vaballath (Arabic for "gift of God") but while she claimed for him all the titles that the Romans had given his father Odenathus, she went further and

claimed the same titles for herself. While her son was proclaimed *Augustus* (emperor), she styled herself *Augusta* (empress). The Romans were furious with her. It was one thing to humbly accept a title offered by the Senate and People of Rome; it was quite another thing to assume such titles for oneself.

However, there was little the Romans could do at the moment. The Goths, Franks and Alamanni kept them busy with border wars while pretenders to the throne within the empire abounded.

One of these was Victoria of Gaul. The armies of Britain, Gaul and Spain declared for her around the same time as Zenobia came to power, and for a brief moment in history, two-thirds of the Roman Empire was ruled by women.

Meanwhile, in 268, the emperor Gallienus, beset by insoluble troubles, was assassinated by rebellious generals. After the requisite power struggle he was followed to the throne by the new emperor Claudius II, himself one of the rebels. So busy was he with other threats to Rome that he acquiesced passively to Zenobia's claims.

Claudius reigned but a few months and spent all of that time in the field. Such was his prowess that he decisively defeated the Goths at the battle of Naissus (modern Nish), earning the title *Gothicus Maximus*. There wasn't time for him to consolidate his gains, however, because he died within a year, laid low by the plague that at the time was rampant along the Danube. Again a dynastic struggle ensued before one of his generals, named Aurelian, took the reins of empire.

All the while, Zenobia was building her power in the east. Inheriting her husband's lands and protectorates, she began to expand her reach throughout the eastern Mediterranean. She assisted the Armenians to throw off the Persian yoke and became their protector. She garrisoned cities as far as Mesopotamia in the east and Ankara in Asia Minor. Then she sent her army farther west to Bithynia province, across the Hellespont from Byzantium. There she tried but failed to win over the local population. Arab sources tell of her expansion into the province of Felix Arabia while Jewish sources hint of her activities in Palestine.

The Jews were one people who were not enamored with her. Traditionally they sided with the Persians against the Romans, who had evicted them from their homeland. They fought with Shapur and suffered when his armies met reverses at the hands of the Palmyrans.

It was in Egypt, however, that Zenobia was most aggressive. An opportunity presented itself when Claudius recalled the Roman garrison in Egypt to reinforce his fight against the Goths. Tenagino Probus, Prefect of Egypt (not the future emperor), sailed with his fleet to confront the



Queen Zenobia, ruler of Palmyra after her husband's murder in A.D. 267, addresses her soldiers before they go into battle against the Roman army in this painting by Giovanni Tiepolo. Some historical accounts suggest Zenobia had previously travelled with her husband during his military campaigns.

Gothic navy, which had penetrated the inner sea as far south as the island of Cyprus.

Probus left behind a militia of green local levies to guard the all-important province and breadbasket of the Roman world. Without the heavy hand of the Roman garrison to keep the peace, the factious rival ethnic and religious groups of Alexandria rioted against each other.

One Alexandrian faction led by a Palmyran sympathizer named Timagenes asked Zenobia for protection, and she was more than willing to comply. It has been suggested that she might even have masterminded Timagenes' scheme in order to provide an excuse for her invasion.

Under the command of her best general, Zabdas, who had helped her crush her husband's assassins, she sent an army of 70,000 men marching south along the Palestinian coast to the land of her ancestor, Cleopatra.

Zenobia sought to placate Roman concerns about her action by assuring them that she was only calming the situation in strife-torn Egypt in the name of Rome and her western colleague the new emperor Aurelian. As proof, she allowed the

grain ships to continue to sail as usual to the Eternal City.

She even had coins struck in Antioch and Alexandria with Aurelian's portrait on one side and her son Vaballath's on the other, indicating their corule of the empire. But the message was less than subtle. The mint mark was located under Aurelian's portrait, making his the *reverse* or backside of the coin. Her son got top billing. Aurelian minted no such coins.

The Romans were in obvious panic about this new threat to their shrinking authority. The fact that Egyptian grain was indispensable to feeding (and pacifying) the Roman populace made Zenobia's interference intolerable.

Prefect Probus, having decisively defeated the Gothic fleet as part of Rome's overall victory over the barbarian invaders, returned hurriedly to Egypt to organize the defense of his province against the Syrian interlopers. He rallied an army of 50,000—most were probably raw conscripts—and managed to cut off the Palmyrans in the delta.

Contemporary historians give a sketchy account of a see-saw campaign between the antag-

onists, but we know that Zabdas came out of Alexandria and a climactic pitched battle was fought in the desert near Suez between the armies of Rome and Syria. Local guides led a small Palmyran party to surprise the main camp of the Romans. Probus was either killed or killed himself. Zenobia's next coins would be struck with Vaballath's portrait alone.

It was during this time of conflict in Egypt that St. Anthony, first of the Christian cave-dwelling hermits, slipped into the desert to abide alone—the ancient world's most famous draft dodger. Meanwhile the victorious Zabdas left an occupation force of five thousand in country and marched back to Syria to support Zenobia in her conquest of Asia Minor.

The mystique of Cleopatra weighed heavily on the Palmyran queen. She now ruled the lands of her forebear and, like her, snubbed her nose at Rome. Further, she bought and used a set of gold plate that had once belonged to the Queen of the Nile.

Even more telling was a column erected at Palmyra in Zenobia's honor, which was inscribed with the year 582. This was a direct reference to



tunic, she dressed lavishly in purple silks and jewels in robes that clasped at her waist while leaving one darkly tanned shoulder exposed. She is said to have been chaste after the death of her husband and surrounded herself with a personal staff of aging eunuchs and young girls.

The dual nature of Zenobia and her city was due to their location between the Greco-Roman and Persian worlds. The duality is expressed on coins she had minted for her son Vaballath, which alternately refer to him as a Roman *Augustus* and by the Persian title “King of Kings.”

Meanwhile in Rome, Aurelian’s early reign was beset with worries other than Zenobia. Two separate barbarian invasions of Italy demanded his immediate attention. After expelling the invaders from the peninsula in three hard-fought battles, he commissioned the construction of new defensive walls around Rome that today still bear his name.

His next task was to subdue the Gallic pretender Tetricus, heir of the now-dead Victoria, who yet resisted his authority. When that task was complete he turned his army eastward for the long-postponed reckoning with Zenobia. At the same time, he dispatched General Probus (the future emperor, not the dead Prefect) across the sea to retake Egypt.

Aurelian’s army nickname was *Manu ad ferrum*, “hand on sword.” It was a fitting tribute to one of the greatest soldier-emperors that Rome ever produced. Of humble Illyrian birth, he worked his way up through the ranks of the army to become commander of cavalry under Claudius. The army rallied to him when he declared himself a candidate for the throne. His coins leave a portrait of a thin-faced man with a close-cropped full beard. He was 55 when he assumed the purple in 270; he would live less than five years more.

The coming of Aurelian marked Zenobia’s first reversal. Victorious until then, her forces in Bithynia recoiled before the approach of the single-minded emperor. As he traveled across Asia Minor, city after city opened its gates to him, renewing their ancient loyalties to the Roman power. Along his line of march his army grew as local detachments and auxiliaries joined his crusade against the Syrian usurper.

It has been estimated that the march from Rome to Antioch by a Roman army in full gear and hauling its equipment would take around 124 days. The army would have marched in the accustomed Roman order. First, outriders, scouts and foragers. With them would be pioneers to clear the roads of obstacles and other teams to lay out the camp for that night’s bivouac.

Then came the baggage train of the leading officers, protected by a cavalry escort. Behind these wagons would be Aurelian with his staff and per-

the Seleucid calendar and shows that Zenobia thought herself heir to the ancient Macedonian dynasties of Syria (Seleucid) as well as of Egypt (Ptolemy). These Greco/Macedonian empires predated Roman power and were at one time the most energetic enemies of Rome. There could be no doubt now that she was a serious threat to Aurelian’s authority.

Zenobia then ruled the two largest cities in the empire after Rome: Alexandria in Egypt and Antioch in Syria. She controlled over one-third of the empire’s food supply and was reaching to control the provinces in Anatolia, source of much of the Roman army manpower. It would compare today as if she reigned over Los Angeles and Chicago and everything in between.

While Zenobia’s armies were spreading her

influence ever farther afield, she beautified Palmyra, a city already rich from trade and now newly wealthy as the center of an empire. Her court combined Western tradition with the pomp of the East. Her children received a Latin/Greek education at the hands of the prominent philosopher and rhetorician Longinus, who was wooed to the desert from his prestigious post as director of the Platonic Academy in Athens. Soon his counsel made him an important adviser to the queen. Next to his friend Plotinus (they were students together in youth), Longinus was the most famous neo-Platonic philosopher of the age.

At court Zenobia’s entourage prostrated themselves before her in the Persian manner, and when not on campaign, where she wore a simple rider’s



ABOVE: Ruins of Palmyra in modern Syria, including the Temple of Bel complex and the agora. Initially spared by Emperor Aurelian, the city was later destroyed when its inhabitants again rebelled against Rome. **BELOW:** Aurelian is depicted on a period coin. He became Emperor in 270. **OPPOSITE:** This relief dating from the 3rd century is believed to depict the likeness of Queen Zenobia and her maid.

sonal guard of cavalry and infantry lancers. Behind him would march the military siege engines: ballistas, catapults, and so forth. Next, marching in columns of six on Roman roads built for the purpose, came the main body of the army. The army was followed by the pack animals, camp followers of every description, and a rear guard.

The first city to defy the Roman progress was Tyana, located just west of the strategically important “Cilician Gates.” Refusing submission to Rome, in its loyalty to Zenobia, little Tyana locked itself up within its walls.

In his anger, Aurelian vowed that, “In this town I will not leave even a dog alive.” His army, after its long march from Italy, looked forward eagerly to the plunder of the resistant city. But when the city was betrayed by a citizen and the Romans gained entrance through a compromised gate, Aurelian demurred. He did not allow his army to pillage the town. When reminded of his vow to not even leave a dog alive, he ordered that all the dogs in Tyana would be killed but the citizens left in peace.

Legend has it that Aurelian’s leniency was inspired by a dream he had of the sage Apollonius. This famous pagan teacher had been born in Tyana around the same time as Jesus in Bethlehem, and was credited with wisdom and wondrous miracles in his own right.

Aurelian lost no time in securing the only pass through the mountains of eastern Anatolia. Zenobia, like so many warriors before and after her, had neglected to secure the narrow gorge through Mt. Taurus known as the Cilician Gates. Traverse

these “gates” and the traveler enters the province of Cilicia. Easily defended by a small force, this strategic position could have held up Aurelian for weeks. As it was, he marched directly on to Antioch unhindered.



Zenobia swallowed her pride and sent urgent pleas to Persia for help against a mutual enemy. But the old nemesis Shapur was on his death bed, and his minions were far more concerned with the succession than the fate of Palmyra and the fading star of its queen.

It is not known why Zenobia abandoned Asia Minor with so little fight. Perhaps it was because of Probus being at sea. Ostensibly on his way to Egypt, the future emperor could just as easily have landed at St. Paul’s city of Tarsus, occupied those same Cilician gates, and bottled up her army in Anatolia, where it would be cut off from its Syrian base. In any event, the move into Asia Minor had left her dangerously over-extended. She now chose Antioch as the place to stand and fight, and there she waited for Aurelian.

On the march to finally come to grips with the elusive Zenobia, the emperor and his army passed through the famous Plains of Issus, where in 333 BC a determined army of Macedonians and Greeks had crushed a Persian host and opened the way for Alexander to reach India.

Zenobia’s anxiety must have been great as the Romans crossed the Orontes River upstream from Antioch. The Roman maneuver, approaching from the east, could potentially cut her off from her desert home.

Zabdas readied his men for the battle. The Palmyran forces were anchored on the armored horsemen known as cataphracts. In the heavy cavalry of the ancient world, horse and rider were protected by scaled or the newer chain-mail armor, the forerunner of the knights of the Middle Ages. Reasonably safe from most infantry-thrown spears and arrows, the heavily armored and armed cataphracts had been used effectively in the past to crush the formerly invincible Roman infantry line. These heavy hitters were supported by light archers both mounted and on foot who could take advantage of



With her army under siege in Palmyra, Zenobia escaped, hoping to reach the Persians and broker an alliance, but was soon captured by the Romans. She is shown here before Emperor Aurelian, who planned for her to adorn his Triumph in Rome.

disordered infantry.

Historians like to say that Rome won its wars with infantry and lost its wars with cavalry. Aurelian was the exception. He was a cavalry man. Marching down the eastern bank of the Orontes toward Antioch, he calmly observed the approach of the *cataphracts*. Sensing danger, he ordered his infantry to the safety of the west bank of the river and opposed Zabdas with his own light cavalry of Moorish and Dalmatian riders.

He instructed them to retreat before the charging *cataphracts* and their supporting horse archers. Soon heavy and light cavalry were chasing each other all over the dusty plains. Zenobia's heavily armored horses and riders soon tired from their heated exertion in the scorching summer sun. They also lost their tightly packed defensive formation. When the Palmyrans were thus wearied and thinly spread and their horse archers had spent their quivers, the Romans turned at a signal and easily defeated them. The Syrians turned and fled.

Zabdas feared that the citizens of Antioch would turn against Zenobia if they saw that her forces were defeated. He found a middle-aged man who somewhat resembled Aurelian, covered him in a purple cloak, and entered the city claiming victory and the capture of the Roman emperor. That night Zenobia and her army evacuated Antioch.

They retreated southward through the sacred

grove of Daphne with its laurel trees and springs of pure water that Alexander the Great had once likened to his mother's milk. Leaving a rear guard on the heights, they fled into the interior of Syria. The next morning Antioch opened its gates to Aurelian and, just like that, switched sides.

Zenobia and Zabdas made another stand at Emesa (modern Hims), the home of the former Syrian/Roman Empress Julia Domna, the wife of Septimius Severus, mother of Caracalla and great aunt to dissipated, sun-worshipping Elagabalus and his more virtuous cousin Severus Alexander. The imperial tradition was strong in Emesa, and since the defeat of Valerian the city had been loyal to its new Syrian empress.

The second battle just north of Emesa once again pitted the Syrian heavy cavalry, now reinforced with hard-riding Arab units, against the Roman light cavalry with the infantry again standing aside. Zabdas ordered the *cataphracts* to stay in their defensive formation.

As the armies came together, Roman cavalry gave way to prevent being flanked by the larger force of Palmyran horsemen. The Palmyrans, exploiting their numerical advantage, pushed hard against the crumbling Roman line and inflicted severe casualties. But once again in the heat of battle the heavy cavalry became separated and exhausted by their killing work.

Aurelian now unleashed his infantry, which ran

between the isolated *cataphracts* and brought down the heavily armored riders individually. Instrumental in this contest was a force of Palestinian "clubmen." Armed only with clubs and maces, the Palestinians (apparently resenting the rule of Zenobia) had rallied to Aurelian and now battered the otherwise impervious scaled or mailed horse and rider. Easily unhorsed by the unexpected blows of heavy clubs, the Palmyrans fell in great numbers. Panic ensued and the survivors fled into the desert.

Zenobia had nowhere else to go but back home to Palmyra. She must have felt like Cleopatra after the battle of Actium, for the same scenario was playing itself out: the long retreat followed inevitably by a victorious and ruthless enemy.

In Palmyra she hoped the vast desert would protect her from the invader who had stripped her of her empire. For Aurelian, the challenge was to move six legions (perhaps 40,000 men) with all of their equipment, siege engines and supplies across 140 kilometers of empty desert, a three-day journey. Harassed by bedouin raiders loyal to Zenobia, he nevertheless made the march and enveloped the city. Once there he had to sustain his men and animals with continuous supply trains, a logistical miracle but the kind of task that distinguished the Roman army.

Zenobia swallowed her pride and sent urgent pleas to Persia for help against a mutual enemy.

But the old nemesis Shapur was on his death bed and his minions were far more concerned with the succession than the fate of Palmyra and the fading star of its queen. Let Persia's two enemies battle it out among themselves.

No help came for Zenobia. But the siege was not easy for the Romans. The midsummer heat was stifling. Nights brought Arab raids, howling jackals and painful scorpion stings. Aurelian himself was struck by an arrow during the siege.

He wrote about his troubles to the Senate, "The Roman people speak with contempt of the war which I am waging against a woman. They are ignorant both of the character and the power of Zenobia. It is impossible to enumerate her warlike preparations, of stones, of arrows, and of every species of missile weapons. Every part of the walls is provided with two or three ballista and artificial fires are thrown from her military engines. The fear of punishment has armed her with a desperate courage."

The protracted siege was demoralizing to the city's inhabitants, as well. No more so than the day that Zenobia's Armenian allies folded their tents and suddenly shifted their allegiance en masse to Aurelian. They were allowed to leave in peace or stay and fight on the Roman side.

Food and supplies dried up quickly within the walls as the life-giving caravans were prevented from approaching. A city long used to luxury and the wealth that the whole world had once sent through her gates became impoverished and isolated. The famed palm groves which gave their name to the city were cut down by the enemy for his own purposes. The carefully cultivated and irrigated fields round about were trampled and destroyed.

Aurelian offered leniency to the citizens of Palmyra if they would turn over their queen to him. But they spurned the offer. At length, though, Zenobia and her people could no longer endure the pressure. At that point Zenobia fled rather than surrender. One night, she mounted a fast-racing camel and escaped through the Roman lines into the lonely desert beyond. She rode rapidly to the east, to Persia and freedom. When Aurelian learned of her escape he sent his cavalry after her.

After a protracted chase they finally caught up with her at the banks of the Euphrates trying to cross to safety. She was captured and returned as a prisoner to her city. At the sight of their queen in chains, Palmyra surrendered to the Romans.

Now the scene of Octavian interviewing a defeated Cleopatra was played out again in the fateful desert meeting between Aurelian and Zenobia. Like Octavian, Aurelian wanted this infamous queen, enemy of Rome, alive to adorn his Triumph. Like Cleopatra, Zenobia would rather die than be so dishonored.

In the end, they made a deal. Perhaps Aurelian offered to spare her children if she complied (or conversely, to kill them if she did not). She was marched away across the desert and displayed at the Hippodrome in Antioch astride her camel. From there she was sent on to Rome to await the pleasure of her conqueror.

In the end, her advisers and friends were the ones who paid the price for her rebellion. Many, including Longinus and Zabdas, were tried and executed. As for Palmyra, it was respected by the emperor, who only exacted tribute and left a garrison of archers within its walls before marching away.

But when, after another long march, the army reached the Bosphorus, news came that the Palmyrans had risen up and slain his garrison. Furious at the duplicity, Aurelian turned on his

enemy soldiers, their hands bound tightly behind them. But the star attraction for the neck-craning crowd was the Saracen usurper, the desert queen who thought herself to be the next Cleopatra. They gazed and shouted at her with mixed derision and pity.

After this humiliating day, Zenobia drops from history. She played her spectacular part and made her grand exit. Aurelian reportedly gave her a villa at Tivoli and arranged good marriages for her remaining children. Some say she and Aurelian became lovers. We don't know.

We do know that Aurelian's own glory was fleeting. In the following year (275) he was assassinated by his generals while on campaign in Thrace. He had restored the central authority of the emperor over the entire Roman realm but did



Most ancient accounts indicate that Aurelian paraded Zenobia through Rome and then spared her life. She may even have been granted a villa by the emperor.

heels and was upon Palmyra before the rebels were ready for him. This time the emperor allowed the long-simmering blood lust of his soldiers to be vented upon the offending city and its populace. Palmyra never recovered.

Back at Rome, the day finally came for Aurelian's Triumph. Zenobia was fettered with shackles of heavy gold and dressed in robes sewn with jewels. A slave had to help support the weight of the treasure with which she was burdened. She was made to walk in front of Aurelian's bejeweled chariot, which was pulled ostentatiously along by four stags.

The Triumph lasted from dawn till dusk and included elephants, giraffes, tigers, captured enemy chariots, looted treasure and hosts of

not live to enjoy the fruits of victory.

Zenobia's place in history is obscure, coming as it did after the glory days of the Roman Empire and a generation before Constantine. But she is one of very few women in history who had advantages and was not content to rest upon them. In a very short time, by the force of her will, she created an empire that bested Persia's and rivaled Rome's. She was reportedly admired by Catherine the Great and was ever inspirational to the short list of future warrior queens.

As for her fabled desert city, Edward Gibbon sums it up best, "Palmyra, for a while, stood forth the rival of Rome; but the competition was fatal, and ages of prosperity were sacrificed to a moment of glory." ■

Triumph Off FLAMBOROUGH HEAD

By Eric Niderost

Standing on the quarterdeck of his flagship *Bonhomme Richard*, Commodore John Paul Jones took his telescope and trained it northwards, sweeping the instrument to the left and right to see what his lookouts were reporting at midafternoon on September 23, 1779. Jones was sailing at the time along the eastern edge of England just off the Yorkshire coast. On the port side of his vessel loomed a 150-foot-high chalky fist of land that jutted into the North Sea known as Flamborough Head. The sky was hazy, making the towering cliffs almost ethereal when viewed from a distance.

But Jones was more interested in the enemy ships he saw looming on the northern horizon. The lookouts cried out when they spotted enemy sail, and as more ships appeared in the distance, they repeated their warnings again and again. The commodore was delighted, since his own observations confirmed what they saw. It was the Baltic convoy of more than 40 British merchantmen loaded with ships' stores, such as lumber, cordage, and canvas, for Britain's Royal Navy. Centuries of shipbuilding had drastically reduced Britain's forests, and by the 18th century the island nation depended heavily on the resource-rich nations of Scandinavia to maintain its vaunted navy.

Four years into the American Revolutionary War, the fledgling United States was struggling to win its independence from Great Britain, and while France was now an open ally, the outcome was still very much in doubt. Jones was an officer in the infant country's Continental Navy and knew that if he could capture the merchant fleet before him, Britain's shipbuilding efforts might well be severely compromised.

Jones' squadron comprised his 40-gun French-built *Bonhomme Richard*, the 26-gun corvette *Pallas*, the 12-

gun brig *Vengeance*, the 18-gun cutter *Cerf*, and the 36-gun American-built frigate *Alliance*. With luck, the Americans could easily capture the heavily laden British merchant vessels. Their captains were keenly conscious of the danger approaching them, and already were trying to scatter like a flock of terrified sheep. Normally, these frantic attempts at escape would be an exercise in futility, but the convoy had a Royal Navy escort to protect it.

John Paul Jones orders the USS *Bonhomme Richard's* cannoneers to fire a broadside at the HMS *Serapis* in a painting by N.C. Wyeth. The opening salvo touched off a bloody clash that lasted four hours.

The HMS *Serapis* was a new and powerful frigate. The *Serapis* was a 44-gun frigate, but it actually possessed 50 cannon. It was accompanied by the 22-gun sloop-of-war HMS *Countess of Scarborough*. The British frigate would be a hard to defeat, but Jones was confident he would emerge triumphant. The odds, and even the statistics, seemed to be in his favor. His squadron's combined firepower could hurl more than 1,000 pounds of iron in a single broadside. If Jones could maneuver his ships to get on both sides of *Serapis*, the British frigate would be pummeled into submission.

Alamy





Eager to get into action, the commodore noted the light breezes and ordered royals be set on his ship's masts, the topmost sails on a square-rigged vessel. When even those additions seemed inadequate, Jones further ordered studding sails set port and starboard. These were extra sails that stuck out from the regular ones, making a ship look as if it had sprouted large white wings. They were used to catch even the slightest bit of wind.

Even with the additional help, progress was painfully slow, perhaps only about a mile an hour. *Bonhomme Richard* originally was a merchant ship built for transporting cargo, not for speed. She was as slow as a snail even under favorable conditions. She was also running against the tide, and the continuing light winds certainly did not help her.

Jones stood on his quarterdeck, occasionally pacing in the confined space, pausing only to lift his telescope to make a sighting of the enemy. A handsome man, with his hazel eyes, dark brown hair pulled back and tied with a ribbon, prominent nose, and thin lips, Jones was the personification of confidence. Standing about five-feet-five in height, Jones may have been short, but he was a giant presence.

It took more than three hours for the *Bonhomme Richard* to close with the *Serapis*, which was ample time for Jones to ponder the upcoming engagement and recall the series of events that brought him to this day and this hour. No officer of the Continental Navy had defeated and captured a Royal Navy warship of any real size and strength. In a sense, Jones had been striving for this opportunity his entire adult life; if he won, he would gain the heroic honor and immortal fame that he so dearly coveted.

John Paul (he tacked on Jones later in life) was born in 1747 on the estate of Arbigland in southwestern Scotland. He was the son of a gardener whose work closely resembled that of a modern-day landscape architect. He went to sea at the young age of 13 and became an apprentice sailor on a merchant ship. In 1768, at the age of 21, he became master of his own ship.

In 1773, a series of events unfolded that would profoundly change Jones' life and career. He was master of the merchant ship *Betsy*, carrying a load of butter and wine from London to the West Indies. The butter went bad, and his ship was found to need urgent repairs. The maintenance work was something that he could not afford at the time.

But it was at Tobago that the real trouble started. One of the seamen, a "prodigious brute of thrice my strength," according to John Paul, became a ringleader in a mutiny. The brute demanded money so the crew could go ashore and have fun with drink and women, but John Paul refused. What money he had left was earmarked to get

BELOW: Commodore John Paul Jones. The Scottish-born naval commander's victory off Flamborough Head boosted the morale of the Patriots fighting for independence. RIGHT: The Continental Navy commissioned Jones in 1775 to serve as a lieutenant aboard the USS *Alfred*, an aging merchant vessel converted into a man-of-war.



another cargo to transport back to London.

Angry and defiant, the mutineer brute grabbed a bludgeon and advanced on John Paul, apparently intending to brain the Scotsman. Cornered near his cabin, John Paul took his sword and ran his assailant through. It was an act of self-defense, but the brute was a Tobago local, and he feared he might be charged with murder. It would be a trial by jury, and the theoretically impartial jurors might well be friends of the deceased.

Discretion being the better part of valor, John Paul fled. He arrived in Fredericksburg, Virginia, in late 1774 with just enough money to survive independently for a few months. Along the way he tacked on a new surname to cover his tracks. He was now John Paul Jones. Although he did not know it, his timing was impeccable, because the Britain's American colonies would soon attempt to win independence from the mother country.

In autumn 1775 the Continental Congress, recognizing the need for sea power of some kind, formed a seven-man Naval Committee to lay the groundwork for a fledgling navy. The committee comprised reasonable men, and certainly not fools. The British Royal Navy was the most powerful sea force in existence. Of its 270 ships, 131 were ships-of-the-line carrying more than 50 guns.

Nevertheless, a rudimentary Continental Navy soon took shape. Some ships were built, but various American vessels, mostly merchantmen, were



Both: Naval History and Heritage Command

pressed into service. There was an almost desperate need for ship's officers, and Jones lost no time in coming forward to serve. He was commissioned in December 1775 as a first lieutenant aboard the *Alfred*, yet another slab-sided, aging merchant vessel converted into a man-of-war.

The next couple of years Jones, served on several ships and eventually became master of his own vessel. He gained a reputation as a brave and resourceful sailor, but his crews did not like him. While no martinet, he was a strict disciplinarian who drove his men hard. Jones was constantly seeking to improve ship performance, and he made sure that the men did their parts in achieving that goal.

His most famous command before *Bonhomme Richard* was the sloop *Ranger*, square rigged on all three masts and carrying eighteen 9-pounders. *Ranger* was a new ship, built in Portsmouth, New Hampshire, and Jones could see she was fine-lined



and gave every promise of speed.

Those who knew Jones found him to be self-absorbed, desirous of fame, eager for advancement, sensitive regarding his honor, quick to anger, and ready to complain to higher authority about insults real or imagined. He was also a good seaman, genuinely fond of his adopted country, and prescient in his insistence that America must eventually build a powerful navy.

But all this meant little to the *Ranger's* crew, except perhaps his volcanic temper. They were New Englanders, mostly from New Hampshire and Massachusetts, who possessed a sense of independence and self-worth that typified the Patriot cause. Many of them were fishermen in civilian life, where a ship's captain was first among equals, not the authoritarian demigod who all must obey without question.

Jones planned to do as much damage to British shipping as he could. He intended to sink ocean-

going merchant craft, coastal traders, and fishing boats. He also planned to stage raids on at least one, and perhaps two, British ports. He planned to lie in wait off the ports and then strike quickly using the element of surprise to its fullest advantage. Not that he was avoiding British warships; he welcomed a fight, provided he was not outnumbered or faced with an opponent that out-gunned the *Ranger*. "I intend to go in harm's way," he vowed.

Another part of his plan involved a measure of compassion for the many American sailors languishing in fetid British prisons. He planned to take an important British hostage in the hope of exchanging his high-born prisoner for the American captives. But first, he would raid Whitehaven, a port in northwest England. He knew the waters well, for he had shipped out of Whitehaven as a young apprentice seaman many years earlier.

The Whitehaven raid was simple in concept but

dangerous in execution. Jones intended to sneak into the two forts that guarded the port and spike their cannon. Once that was accomplished, he would put to the torch all the ships that were sheltering in the harbor. At times there might be several hundred merchantmen and fishing boats in the harbor, so it was well worth his while to stage such a raid.

But first Jones had to persuade both his reluctant crewmen and their uncooperative officers to support the raid. The commodore did manage to get about 30 members of the crew to volunteer, but only after long-winded and impassioned arguments. All of this persuasion took time, and dawn was breaking when Jones and his raiders finally landed at Whitehaven.

The first phase of the operation, on April 22, 1778, was successful. The guards in the first fort were overpowered under cover of darkness without a struggle and the cannon quickly spiked.



G R E A T ENCOURAGEMENT F O R SEAMEN.



ALL GENTLEMEN SEAMEN and able-bodied LANDSMEN who have a Mind to distinguish themselves in the GLORIOUS CAUSE of their COUNTRY, and make their Fortunes, an Opportunity now offers on board the Ship RANGER, of Twenty Guns, (for FRANCE) now laying in PORTSMOUTH, in the State of New-Hampshire, commanded by JOHN PAUL JONES Esq; let them repair to the Ship's Rendezvous in PORTSMOUTH, or at the Sign of Commodore MANLEY, in SALEM, where they will be kindly entertained, and receive the greatest Encouragement.---The Ship RANGER, in the Opinion of every Person who has seen her is looked upon to be one of the best Cruizers in AMERICA.---She will be always able to Fight her Guns under a most excellent Cover; and no Vessel yet built was ever calculated for sailing faster, and making good Weather.

Any GENTLEMEN VOLUNTEERS who have a Mind to take an agreeable Voyage in this pleasant Season of the Year, may, by entering on board the above Ship RANGER, meet with every Civility they can possibly expect, and for a further Encouragement depend on the first Opportunity being embraced to reward each one agreeable to his Merit.

All reasonable Travelling Expences will be allowed, and the Advance-Money be paid on their Appearance on Board.

IN CONGRESS, MARCH 29, 1777.

RESOLVED,

THAT the MARINE COMMITTEE be authorized to advance to every able Seaman, that enters into the CONTINENTAL SERVICE, any Sum not exceeding FORTY DOLLARS, and to every ordinary Seaman or Landsman, any Sum not exceeding TWENTY DOLLARS, to be deducted from their future Prize-Money.

By Order of CONGRESS,
JOHN HANCOCK, PRESIDENT.

DANVERS: Printed by E. RUSSELL, at the House late the Bell-Tavern.

second thoughts about angering the British. Casting about for a solution, Franklin and the American commissioners decided to sell her to the French.

After many long months of waiting and disappointment, a ray of hope shined for Jones. The 900-ton French Indiaman *Duc de Duras* was for sale. The French government bought the vessel for Jones, and King Louis XVI personally provided the funds to have her outfitted. Built for trade and not war, the merchantman was sturdy and designed for the long and often-perilous voyage to the east. Pleased to get a ship after months of cooling his heels in frustration, Jones renamed the vessel *Bonhomme Richard*, which translates to "Poor Richard," in honor of his friend and mentor Franklin's famous almanac.

The ship was armed with six 9-pounders on the upper deck and twenty-eight 12-pounders on its main gun deck. But Jones knew he needed more firepower. The designation "pounder" came from the weight of the solid shot used; for example, a 12-pounder fired cannonballs weighing 12 pounds each. The Scotsman placed his hopes on the six 18-pounders, three on each side, that he was able to acquire for *Bonhomme Richard*. But they were old and unreliable, in essence rejects that no one else wanted. But beggars cannot be choosers, and therefore Jones held his tongue and kept his temper.

The ship had to be altered to accommodate the 18-pounders. Additional ports had to be cut in the ship's hull, and they were so near the waterline they could not be opened unless the sea was flat calm. There were 380 men aboard *Bonhomme Richard*, each individual reviewed by Jones himself. The sailors were a heterogeneous bunch, hailing not only from Europe and America but also the fabled lands of the Orient.

Jones succeeded in weeding out the worst of the lot, but those that remained were still far from the lighthearted "jolly tar" of 18th-century lore. "They were generally so mean that the only expedient I could find that allowed me command was to divide them into two parties and let one group of rogues guard the other," wrote Jones. The crew was a volatile stew of humanity that included not only English, French, Irish, and Scottish, but also Norwegian, Swiss, Italian, Bengali, and East Indian seamen.

But Jones had some luck, too. He had managed to negotiate a prisoner exchange, and as a result, 100 American seamen obtained their freedom. Of these, 62 signed to serve aboard *Bonhomme Richard*, giving Jones a dependable American core to his command. These men were not only Americans, but also were heavily motivated to fight. The weeks of brutality in British custody gave them an added incentive to sail with Jones.

A recruiting poster calls for volunteers to join the crew of the USS *Ranger* under Captain Jones in 1777. Jones vowed to go in harm's way to damage British shipping, raid British ports, and engage British warships if not heavily outgunned.

Jones returned safely from the fort but was astonished and dismayed when he learned that the party assigned to set the ships ablaze had not set even one vessel afire. Eventually one large collier (a ship carrying coal) caught fire. But the noise roused the citizens of Whitehaven; they rushed to the docks, where they found the collier engulfed in flames. Jones drew his pistol and sternly ordered the crowd to disperse; fortunately, it did exactly what he ordered. The second phase of the operation involved the kidnapping of Lord Selkirk, but the kidnapping was unsuccessful given that Selkirk was in London at the time. Nevertheless, a raiding party plundered the manor

house of all of its silver two days later.

Up to that point, the *Ranger's* voyage had been bloodless, but this was not to last. *Ranger* encountered the British sloop-of-war *Drake* and captured it after a short but bloody fight. Jones returned to Brest with a growing reputation. But he did not receive a new command immediately. For the next 10 months he languished in Paris, though he was lucky to have Benjamin Franklin, the American emissary to the French court, as his friend.

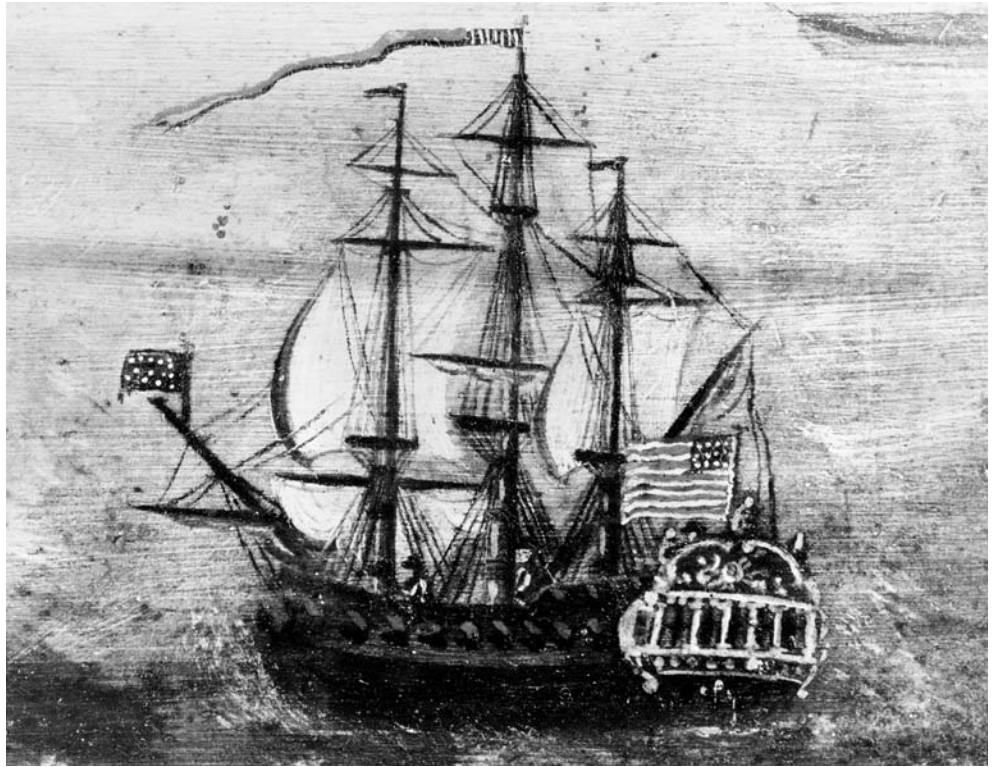
Jones' desires were subject to the exigencies of politics and war. He was promised a frigate, and one was being built for the Americans in Holland, but the Dutch were neutral at the time and had

Jones was also fortunate in his officers. For example, Richard Dale had served with Jones before and had risen through the ranks from ordinary seaman. But there was one exception: Captain Pierre Landais. A Frenchman, he had obtained an American commission and was further rewarded with the command of the frigate *Alliance*. He technically was part of Jones' squadron, but practically he did what he pleased. Because of this, he became a thorn in the commodore's side from the outset.

The 1779 cruise began in good weather, and prizes were taken. Jones captured the merchantman *Union*, which was bound for Quebec with its hold crammed with stores destined for the British army, on September 1. Over the course of the voyage, Landais occasionally would break off and sail away without informing Jones. Unfortunately, he rejoined the squadron just before the Flamborough Head fight, where he was to do more harm than good.

During the voyage Jones moved quickly to crush a potential mutiny by some of his English-born sailors before it could unfold. These sailors had been released from French jails, and they were scoundrels who had a history of surly disobedience and mutiny. Jones, who usually was humane by the standards of the day, had the ringleader sentenced to 250 lashes. He got the point across, and the crew became a surprisingly cohesive and effective fighting force.

The sun was slowly setting on the afternoon of September 23 off Flamborough Head when Jones ordered the drummers to beat to quarters. It was 5:00 PM, and the agonizingly slow journey to reach *Serapis* had already taken two hours, with at



Captain Pierre Landais, who commanded the 36-gun USS *Alliance* in Jones' squadron, inexplicably ordered his crew to fire broadsides at both the *Serapis* and the *Bonhomme Richard*.

least another hour or more to go.

But the drummers' throbbing tattoo rumbled through the ship, a signal to man battle stations, and galvanized every soul aboard *Bonhomme Richard*. Some sailors scrambled aloft, bracing the yards with chains so they would not fall on the deck below if hit by enemy fire. Gun crews reported to their assigned cannon, while marines

and picked sailors started to limb the shrouds to reach the fighting tops. Below decks, 21-year-old surgeon Laurence Brooke was preparing the cockpit for the wounded. He readied the tools of his profession, which included a variety of saws and knives for amputations, to treat the wounded that would be brought down from the deck. We do not know if he had a brazier of coals to heat his

JONES DEEPLY REGRETTED THE SACK OF SELKIRK MANSION

A key part of Commodore John Paul Jones' raid with the *Ranger* in 1778 was an elaborate plan to liberate American sailors languishing at the time in fetid British prisons. Jones intended to snatch a prominent British personage in the hope of exchanging his high-born prisoner for the American captives.

After successfully raiding the port of Whitehaven on April 22, 1778, Jones charted a northwesterly course across Solway Forth for Kirkcudbright Bay. He intended to abduct Dunbar Douglas, Fourth Earl of Selkirk, and ransom him in order to free the American sailors imprisoned in England. The Earl's estate was located at Saint Mary's Isle, which was about 20 miles from the cottage where Jones had been born.

Jones came ashore at noon on April 24 with a dozen marines on the hostage-taking mis-

sion. Upon reaching the manor house, though, he learned that the earl was in London.

Bitterly disappointed at the turn of events, Jones wanted to return immediately to his ship, but the marines would not have it. They wanted something to show for the weeks of hard work and little reward. Jones reluctantly allowed them to take the aristocratic family's silver plate.

The captain himself stayed behind, not wanting to be part of such a sordid mission. He sent two officers along with the men to ensure that Lady Selkirk was not harmed. The officers and marines, who were armed with pistols and cutlasses, set off for the manor house. No local men came to Lady Selkirk's rescue because they assumed the armed band was a British press gang. For that reason, they hid as best as they could until the armed men were gone.

A formidable woman, Lady Selkirk received her unwanted guests with real courage and pluck. After extending an invitation to dinner to Jones, which the officers declined on his behalf, she ordered her butler to turn over all of the silver in the manor house.

The marines carted off 160 pounds of silver loot. Jones subsequently wrote a letter of apology from the port of Brest, France, seeking to justify his actions to Lady Selkirk. He promised in the letter to buy back the family's silver plate at a future date and return it to the family.

When the Earl of Selkirk returned home and read Jones' letter, he wrote a reply in which he refused the American captain's offer. Jones, though, never received the letter. He therefore remained true to his word and returned the silver plate after the war.

—Eric Niderost



ABOVE: Jones' victory in the fierce, close-quarters battle was the stuff of legend. "He gave our navy its earliest traditions of heroism and victory," states the inscription on his tomb at Annapolis. **OPPOSITE:** Marines manning a fighting top on the *USS Bonhomme Richard* fire on British seamen while another prepares to hurl a grenade at the *Serapis*.

instruments, a technique used to lessen the shock of cold steel.

The fighting tops were going to play a crucial role in the upcoming battle. The *Bonhomme Richard* had three principal masts, and masts of the period usually were not a single pole, but several segments bound together. A fighting top was a platform that was located near to where the lower portion of the mast joined the upper portion. The fighting top could be quite high—as much as 50 feet above the deck—and certainly not for anyone even mildly acrophobic.

Midshipman Nathaniel Fanning was the captain of the main top, and he left a stirring account of the battle in later years. As the *Bonhomme Richard* got closer to *Serapis*, Jones called for an officer's conference to explain his battle strategy and outline their roles in the upcoming drama.

He intended for his smaller cannon, like the 9-pounders, to cut up the enemy ship's rigging and puncture its canvas sails. The object was to damage the *Serapis*' ability to maneuver.

Jones's heavy ordinance, such as his 18-pounders, would do the heavy and unglamorous work of shattering the British ship's hull while at the same time damaging its guns and killing and wounding its gun crews. Jones tried to be a sensitive ladies' man ashore and even tried his hand at poetry, but on the quarterdeck he was a hard-headed realist.

Serapis was a new frigate, only a few months from the builder's yard, and could sail circles around the old and cumbersome French Indiaman. The British ship also outgunned *Bonhomme Richard*. But if Jones could cripple the *Serapis*, he might be able to capture it.

Jones also spoke directly to Fanning and the other two midshipmen commanding the fore and mizzen tops. Twenty-four-year-old Fanning was the eldest of the trio, for the others were not yet 17 years-old. The commodore told them their first duty was to neutralize the British fighting tops. After that, they were to train their weapons on *Serapis*' exposed top decks. It was a favorite British tactic to rain down such a heavy fire from their own foretops that officers and men on the enemy vessel would be slaughtered. Jones proposed to turn the tables on the British by doing the exact same thing to *Serapis*.

Once they finished their conference with John Paul Jones, the three top captains joined their men, who were already in their high wooden eyries. Fanning had 15 marines and four sailors in his main-top command. They were armed with muskets, blunderbusses, swivel cannon, and coehorns (mortars). Biting the gunpowder-filled cartridges when loading muskets, coupled with the heat and tension of battle, often produced a raging thirst, so a cask of water was brought up to the main top. Jones also issued orders that the top men were to have a double ration of grog to steel them for the coming ordeal.

It was about 6:00 PM when the sun set. Its waning rays glowed reddish orange on the western horizon as it dipped behind the cliffs of Flamborough Head. At the moment Jones had three ships with him: the *Alliance* was ahead of the *Bonhomme Richard*, the *Pallas* astern, and the *Vengeance* trailing. Jones ordered signal flags to be hoisted: a blue flag, a blue pennant, and a blue and yellow flag. Although the signal flags called for the ships to form a line of battle, the command was almost always universally ignored. The *Pallas* decided to chase and capture *Countess of Scarborough*, the *Vengeance* just milled about, and *Alliance* took itself completely out of the brewing battle.

This left Jones to fight the *Serapis* with just the *Bonhomme Richard*. The odds of victory against a new British frigate seemed suddenly remote. When *Bonhomme Richard* and *Serapis* were within pistol-shot range of each other, which was about 25 yards, Captain Richard Pearson was not sure whether the other ship was an enemy vessel. In order to gain a slight advantage, Jones had issued orders for his crew to pretend that the *Bonhomme Richard* was a British vessel. It was a clever move on his part.

Pearson was puzzled. The *Bonhomme Richard* was flying British colors, and he could see in the gathering darkness Jones was wearing a white-and-blue uniform that looked like Royal Navy. "What ship is that?" hailed Pearson. "The *Princess Royal*," replied Jones. The British captain followed up by asking where the ship was from, but Jones ignored the question.



"Fighting Tops, 1781," by Col Charles H. Waterhouse, USMCR; National Museum of the Marine Corps, Triangle, Virginia

Both ships had their gun ports open, with the stubby black ends of cannon poking through each hole. Their crews waited for the order to fire amid mounting tension that sent adrenaline coursing through their veins. "Answer immediately or I shall fire into you!" shouted Pearson.

Jones then ordered the British ensign taken down and replaced by the American flag at the same time he ordered his crew to fire a broadside. Gouts of flame lanced through clouds of grey-white smoke as the guns roared to malevolent life. *Serapis* responded in kind. The broadsides marked the beginning of a fierce clash that was destined to last for hours.

Cannonballs smashed through the wooden hulls, killing, wounding, and horribly maiming seamen on both vessels until the decks literally ran red with blood. Any person unfortunate enough to be in the direct path of such an iron projectile might be disemboweled or decapitated. As the cannonballs crashed through the hulls, they sprayed large wooden splinters through the air. These deadly fragments lacerated flesh, producing horrible, potentially fatal wounds.

The crew of the *Bonhomme Richard* initially held its own against that of the *Serapis*. During the course of the fight, two of the American ship's aging and unreliable 18-pounders blew up of their own accord, wreaking horrible devastation on the gun room. The explosion blasted a hole in the ship's starboard side right above the waterline and

killed and dismembered the hapless gun crews. The survivors were scorched, blackened, and bloody. They lay scattered amidst the debris, writhing in agony.

Jones did not have to survey the carnage to understand what had happened. He immediately ordered that the gun room be abandoned; this meant all his 18-pounders were out of action, even the ones still apparently intact. But he could not take the chance on a further mishap. The explosion also helped him determine his next course of action.

Jones could see that the *Serapis* was faster and far more maneuverable. All Pearson had to do was keep his distance while slowly and methodically blasting to pieces the *Bonhomme Richard*. The Scotsman knew his only chance of success was to get close enough to *Serapis* to grapple and board the British frigate.

The two opposing warships maneuvered for advantage in a deadly ballet of war that must have seemed an eternity to the participants. After a while, Jones had a lucky break. "The enemy's bowsprit, however, came over *Bonhomme Richard's* poop by the mizzen mast and I made both ships fast together in that situation," he recounted. "[The] action of the wind on the enemy's sails, forced her stern close to *Bonhomme Richard's* bow, so that the ships lay square alongside each other, the yards being all entangled and the cannon of each ship touching the opponent's side."

The lower deck on the *Serapis's* starboard side was so close to *Bonhomme Richard* that the lids on the gun ports could not be raised. Because of this, the British gun crews literally had to blow them open. Some aspects of the fight, which had degenerated into a bloody, no-holds-barred contest, bordered on the surreal. To use their rammers, gun crews literally had to thrust them into the enemy's ports.

Pearson desperately wanted to free his ship from *Bonhomme Richard's* embrace, but Jones made sure scores of grappling hooks prevented such an escape. It was here that the fighting tops and marines came into their own. They engaged in a deadly eagle's-perch duel with their counterparts aboard the British fighting tops. Once they had successfully accomplished that task, they turned their attention to the upper decks of the British frigate.

The topmen poured heavy and accurate fire into *Serapis*, clearing its upper decks of any British sailor or marine who dared show his face. When British tars rushed forward with axes and attempted to chop the grappling lines, they were cut down before accomplishing their task. Pearson had to retreat from the quarterdeck and seek shelter at 8:30 PM.

By that time the moon had risen high enough that it cast its pale beams down on the warring vessels and bathed the surrounding sea in a silvery glow. As for the wind, it had died down. This

transformed the surface of the sea into what mariners call a “flat calm.”

The *Bonhomme Richard*'s decks were a shambles, a wrecked labyrinth of splintered wood, overturned gun carriages, and the bloodied, eviscerated bodies of men. One by one Jones's 12-pounder cannon were put out of action, until all he had left were three 9-pounders on the quarterdeck. Jones took command of one of his 9-pounders, aiming it at the mainmast of *Serapis*.

But the British ship's 18-pounder battery blazed away with renewed vigor, tearing so many holes at or below the waterline of the *Bonhomme Richard* that the ship began to take on water. The pumps were manned, but within a short time the American ship's hold was filled with five feet of water. What is more, both ships were soon ablaze.

Wooden warships were extremely vulnerable to fire. Burning cartridge wads from cannons, especially from those fired at point-black range, were one of the chief culprits. The kindling was everywhere, including tarred ropes from cut-up rigging, scraps of canvas from ripped sails, and splintered pieces of wood from shattered bulkheads. The fires started below, but tendrils of flame danced up the dangling ropes and shredded canvas, leaving a fiery trail in their wake as they engulfed the spars and sails.

Fanning and his main topmen quickly realized they were in serious trouble because the spars, sails, and even portions of the fight top itself were ablaze, a conflagration that threatened to engulf them in one all-consuming inferno. Fanning used contents of the water cask he had brought up to quench his men's thirst, to douse the flames. It was not enough, so Fanning and his men removed their coats and used them to beat out the flames.

The story was the same in both ships. Both *Serapis* and *Bonhomme Richard* were aflame; the threat of death by fire or smoke was so great to both sides that fighting actually was suspended for a time. But once the fires were extinguished, or at least under control, the slaughter resumed.

In all the confusion and carnage, two members of Jones' crew sought to surrender the vessel. “Quarters!” they shouted repeatedly, using the naval term for surrender. Pearson, who heard their pleas through the murderous din of battle, went to his quarterdeck rail. “Have you struck?” he asked. “Do you call for quarters?” To haul down his colors in abject surrender was unthinkable to the doughty Scotsman.

Jones' reply to Pearson is the stuff of legend, and helped Jones achieve immortality. Jones stood up straight and proud and gave a defiant answer. “I have not yet begun to fight!” he shouted. This is actually a shortened version of what Jones actually said; the idealized version was first set forth in an 1825 biography about Jones based on First Lieu-

tenant Dale's account of the event. The *Edinburgh Advertiser* published an account of the event shortly after the battle that in all likelihood was closer to what Jones actually said: “I may sink, but I'll be damned if I strike!”

Warning shouts of alarm could be heard above the crackle of musketry and boom of cannon; a party of British sailors and marines armed with cutlasses and pistols were attempting to board *Bonhomme Richard*. Spilling over the bulwark, they ran down the American ship's gangway to the quarterdeck ladder. Jones grabbed a boarding pike and led some seamen to meet the invaders, a hand-to-hand struggle that was vicious and bloody.

Thrust, parry, and stab, the two opposing groups fought with a special fierceness, since some of the American seamen had been abused as British prisoners, and they were eager to exact revenge. The British fought well, but the Americans overpowered them. The British then retreated back to the *Serapis*.

The danger had been averted, but the *Bonhomme Richard* seemed to be in its death throes. The ship was filling with sea water, and the hull was so riddled with shot holes that it did not seem as if it could support the upper deck much longer. It seemed a real possibility at that point that the seamen on the upper deck might panic and retreat to the lower deck.

The other ships in Jones's squadron were still curiously passive. To their credit, the crew of the *Pallas* captured the *Countess of Scarborough* after a brief, but sharp, fight. At that point, Landais of the *Alliance* decided to join the fray. He inexplicably ordered his crew to fire broadsides not just into *Serapis*, but also into *Bonhomme Richard*. Unfortunately for Jones and his crew, the *Bonhomme Richard* received the bulk of *Alliance*'s attentions. Jones was incredulous. He signaled to Landais to break off his attack. Only after firing one or two more broadsides did the Frenchman obey.

As if Jones did not have enough on his hands, 100 British seamen, prisoners who had been captured from earlier vessels, were now freed from the flooding holds. It was a humanitarian gesture, but one that put *Bonhomme Richard* in jeopardy. If they had had the presence of mind, they might have overwhelmed Jones and his remaining crew. Yet in all the confusion they meekly manned the pumps. Because of this, they posed no immediate threat.

Scottish top man William Hamilton helped Jones and the *Bonhomme Richard* win the battle. It was 10:15 PM when Hamilton gingerly moved along the footropes of the main yard, carrying a leather bucket of grenades and a slow match to ignite them. The two ships were so close *Bonhomme Richard*'s main yard extended over *Serapis*' deck, making it a perfect platform to lob grenades.

A sharp-eyed Hamilton had noticed that a



Naval History and Heritage Command



LEFT: First Lieutenant Richard Dale (left) of the *Bonhomme Richard* and Captain Richard Pearson of the *Serapis*. TOP: A huge fireball rocks the *Serapis* at the climax of the battle. A grenade thrown from the main yard of the *Bonhomme Richard* rolled into an open hatchway that led to the *Serapis*' lower deck, where it ignited an explosion that crippled the British ship and forced its surrender.

hatch aboard *Serapis* was half open, and that hatch led to the frigate's lower gun deck. British powder monkeys—young lads who transported cartridges



from the powder magazine to the gun stations—were outpacing *Serapis*' exhausted gun crews. They were supplying cartridges faster than the gun crews could use them, and the surplus cartridges were piling up near the guns. Some of the cartridges had ripped open, spilling their contents. Having so much loose gunpowder on the lower gun deck was a recipe for disaster.

Hamilton began tossing grenades from his high perch about the decks, aiming for that hatch so carelessly left open. His missed the first two attempts, but then, fortune smiled. One of his grenades rolled down the hatchway into the frigate's lower deck. The resulting explosion produced a huge yellow-orange fireball that roared to malevolent life, made worse by the narrow confines of the lower gun deck.

The explosion killed 20 British tars. Some had their limbs torn from their bodies by the force of the blast. Many others lay sprawled on the ground writhing in agony. Even some of the luckier survivors must have been in a state of shock. Moreover, some of them were completely naked, for their clothes had been blown off by the force of

the blast. Only their shirt collars still hung around their necks.

Because of the blast, the odds were now stacked heavily against the *Serapis*. The horrific explosion had wreaked terrible destruction on her lower deck, and five guns were put out of action. The *Serapis*' 150-foot mainmast, whittled by the constant strikes of Jones's nine-pounder, was on the verge of collapse. What is more, the ship was on fire in a dozen places, and half of its crew was either dead or wounded.

Pearson believed he had done all required of him by the existing code of honor and that it was time to surrender. "Sir!" he called out to Jones, "I have struck! I ask for quarter!" "If you have struck," Jones responded, "then haul down your ensign." Pearson, summoning all the dignity he could muster, walked to the taffrail and took down the huge Royal Navy ensign with his own hands.

Jones had triumphed in an extremely hard-fought battle. The *Bonhomme Richard* also suffered greatly, losing about half its crew dead and wounded. But the physical damage to the ship was so great it was beyond repair. The timbers on

the lower deck were "mangled beyond my powers of description," recalled Jones. Soon the pumps were overwhelmed, and it was plain the battered old Indiaman would sink.

Jones had no choice but to order abandon ship after the wounded were transferred to *Serapis*. The gallant old merchantman slipped beneath the waves a day after the battle. Although his ship was gone, Jones' legend was secure. He became a celebrity on the continent. His fame was greatest in Holland, France, and the fledgling United States.

After the war, his fortunes were mixed. He entered Russian service for a time, but always hoped to be reemployed by his true love, the United States. He died in Paris in 1792, wracked with a form of kidney disease, and for more than a century he was all but forgotten. His body was found in 1905. President Theodore Roosevelt then ordered a squadron of 11 warships to sail to Cherbourg, France, and transport the remains to the U.S. Naval Academy in Annapolis, Maryland, where the "Father of the U.S. Navy" Jones was interred with full honors in a crypt beneath the chapel floor. ■

PARATROOPERS OF THE 101ST AIRBORNE FOUGHT A GRUELING BATTLE AGAINST THE NORTH VIETNAMESE FOR FOUR WEEKS IN 1969 AT TAM KY.

By Christopher Miskimon



On May 21, 1969, while much of the 101st Airborne Division's 1st Battalion, 501st Infantry, is engaging the enemy, Lieutenant Ed Sherwood's Third Platoon, Delta Company, is guarding rucksacks. The company's first and second platoons have advanced toward a North Vietnamese bunker complex some 100 meters north. Before deploying for their assault, they dropped their heavy rucksacks so they could move more quickly. If the enemy were to capture the rucksacks, which are laden with water, ammunition, and equipment, it would be a great prize for them, and the paratroopers of Third Platoon have been tasked to guard them. Sherwood and his three squads of riflemen can hear the battle a short distance away, but no stray fire comes their way.

The squad closest to the action, led by Sergeant Jim Littleton, believes it can assist in the fight. Without asking Sherwood, Little-

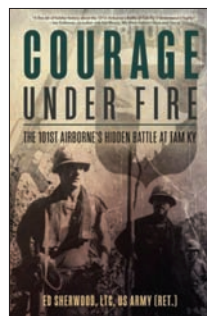
ton takes a few men and sneaks closer to the fighting. If Littleton had asked, Sherwood would have refused to let him go, so the sergeant follows the age-old credo, "it is better to beg forgiveness than ask permission." The NCO soon realizes the troops in contact are in a tough spot, so he informs Sherwood of his new position and tells his officer the squad can help in the fight. Sherwood tells him to go ahead.

One of Littleton's men, Private First Class Rob Sitek, is on point. He sees Specialist Mike Tomaszewski on a rice paddy trying to recover wounded men. Mike has already fired nine magazines through his M-16 and has grabbed more from a wounded buddy. Ironically, the extra ammunition is back in the rucksacks. Mike directs the members of Littleton's squad along a trail where they might be able to flank the bunkers. They pass a dead enemy soldier, and then see an anguished American who has just lost his two best friends.

Airborne troopers armed with M-16 assault rifles advance through heavy vegetation against a suspected enemy position. In the post-Tet phase of the war, the elite 101st Airborne reinforced the III Marine Amphibious Force in I Corps.

Bursts of fire from an RPD machine gun and an AK-47 send them all diving to the ground. A well-concealed bunker is only 20 meters away. As the paratroopers return fire, a nearby M-60 machine gun lets loose on the bunker, quickly suppressing the enemy inside. Private First Class Johnny Pilsner turns to guard the squad's rear.

The NVA often suppress the enemy from one direction and attacks it from another. Littleton moves his men forward, and soon they reach a small well. Another bunker fires on them, forcing them to ground again. Nearby soldiers are wounded, but then an American comes crawling out of the bushes. He has a 90mm recoilless rifle strapped to his back and drags several rounds of ammunition with him.



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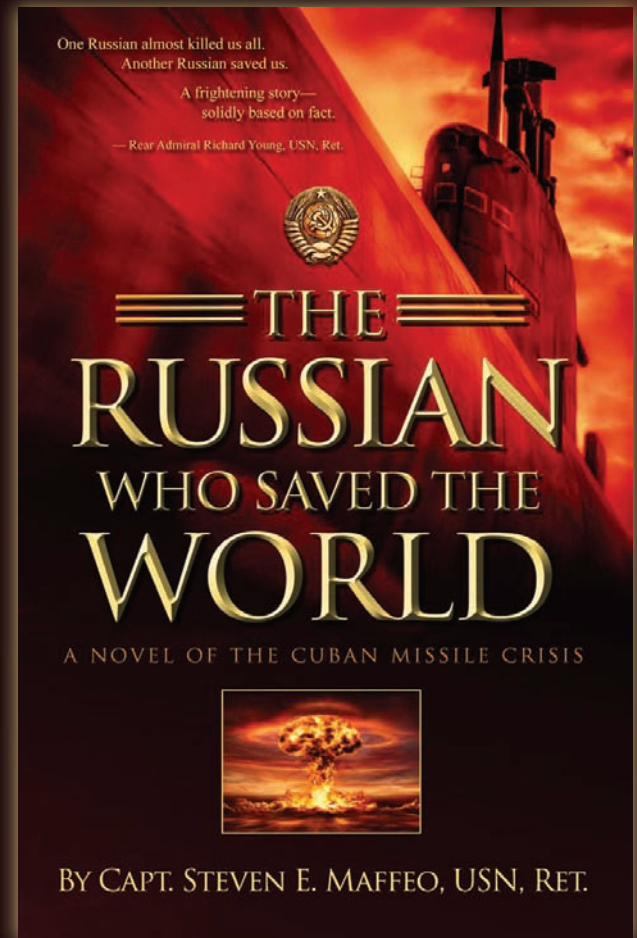
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FOCSLE
Annapolis, MD

Sitek acts as the loader for the weapon and the gunner puts several into the bunker, destroying it. Despite the small victory, company commander Captain Robert Begley realizes his small unit is overmatched and need to pull back. But first they must evacuate their wounded. Until they do, there can be no air strikes or artillery.

While part of the 101st Division fought at nearby Hamburger Hill, Delta Company and its brigade fought at nearby Tam Ky, a fight just as difficult but suppressed in the news media because the Nixon administration was already taking criticism for Hamburger Hill. These unheralded GIs fought for four weeks in tough conditions. Now their story of endurance and courage is well told in *Courage Under Fire: The 101st Airborne's Hidden Battle at Tam Ky* (Ed Sherwood, LTC, US Army (Ret), Casemate Publishing, Havertown PA, 2021, 314 pp., maps. Photographs, bibliography, appendices, glossary, index \$34.95, hardcover).

Sherwood rose to the rank of lieutenant colonel in the U.S. Army before retiring in 1988. Like many military officers, his time as a platoon leader in Delta Company remained with him. His intent in writing this account is to honor those who served and educate their families as to what their loved ones experienced. In this effort he has succeeded for the book is full of the small details of military life, field service and combat which mark an infantryman's existence. The text is above all readable, as the author effectively communicates with the reader using clear prose. Eyewitness accounts from unit veterans are mixed with official records and after-action reports to create a clear picture of the event at Tam Ky.



The Last Viking: The True Story of Harald Hardrada (Don Hollway, Osprey Publishing, Oxford UK, 2021, 368 pp., maps, photographs, notes, bibliography, index, \$30.00, hardcover)

King Harald proved easy to spot on the battlefield, green land on the bank of the Ouse River, just south of York, England in September 1066. The leader of the Norse army was 51, but still tall and proud with blond hair and a short beard. Above his head fluttered his royal banner, named Land-Waster, a field of white silk bearing a black raven, a symbol of the god Odin.

Even his name hinted at greatness, translating as army leader in Old Germanic. He was here with Tostig, the overthrown and banished former Earl of Northumbria, who sought to reclaim his position. However, at this battle his ragged force was soon driven back by English housecarls. It was a sad display but served a purpose; the English

SHORT BURSTS

British Fighter Aircraft in World War I (Mark C. Wilkins, Casemate Publishing, 2021 \$39.95, hardcover) Great Britain produced some of the best and most successful fighter aircraft of the Great War. Their design and construction are covered in this new work, along with the innovative features which made them so effective.



To Rule the Skies: General Thomas S. Power and the Rise of Strategic Air Command in the Cold War (Brent D. Ziarnick, Naval Institute Press, 2021, \$39.95, hardcover) General Thomas S. Power, commander of the Strategic Air Command from 1957 to 1964, is generally considered a hawkish follow-on to U.S. Air Force Chief of Staff General Curtis LeMay. This new biography argues against this view and show Power's depth behind the stereotype ascribed to him.



A-7 Corsair II Units 1975-91 (Peter Mersky with Mike Crutch and Tony Holmes, Osprey Publishing, 2021, \$24.00, softcover)

The A-7 served as the U.S. Navy's primary light attack aircraft for much of the Cold War. This book covers the plane's use in several small post-Vietnam campaigns through Operation Desert Storm.



Warship 2021 (Edited by John Jordan, Osprey Publishing, 2021, \$60.00, hardcover) This annual volume covers many unknown and interesting ship designs. Each chapter is from a different author with expertise in the specific area.

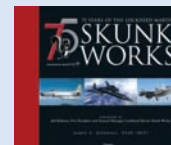


Counterinsurgency: Theory and Reality (Daniel Whittingham and Stuart Mitchell, Casemate Books, 2021, \$29.95, hardcover) Counterinsurgency is a difficult form of warfare. This work delves into its history, techniques, and effectiveness.

From F-4 Phantom to A-10 Warthog: Memoirs of a Cold War Fighter Pilot (Col. Steve Ladd, USAF (Ret.), Air World Books, 2021, \$34.95, hardcover) The author flew jets from the 1960s to the 1980s. He experienced many of the era's military hot spots.



75 Years of the Lockheed Martin Skunk Works (James C. Goodall, Osprey Publishing, 2021, \$70.00, hardcover) Some of America's most advanced aircraft have come from the famous Skunk Works. This book highlights some of its successful weapon systems.



line became drawn out, overextended and vulnerable. Harald ordered his men to advance, Land-Waster leading the way.

Harald Hardrada's story, and his life, ended soon after the Battle of Fulford, but he was one of Norway's greatest kings, nonetheless. Before becoming a ruler, he spent years as a mercenary and in the Byzantine's Varangian Guard. This new volume tells the story of this larger-than-life figure using clear and compelling prose. The author performs creditable work describing the world and people who surrounded Harald and with whom he interacted, sometimes violently. This book is worthy of its subject.

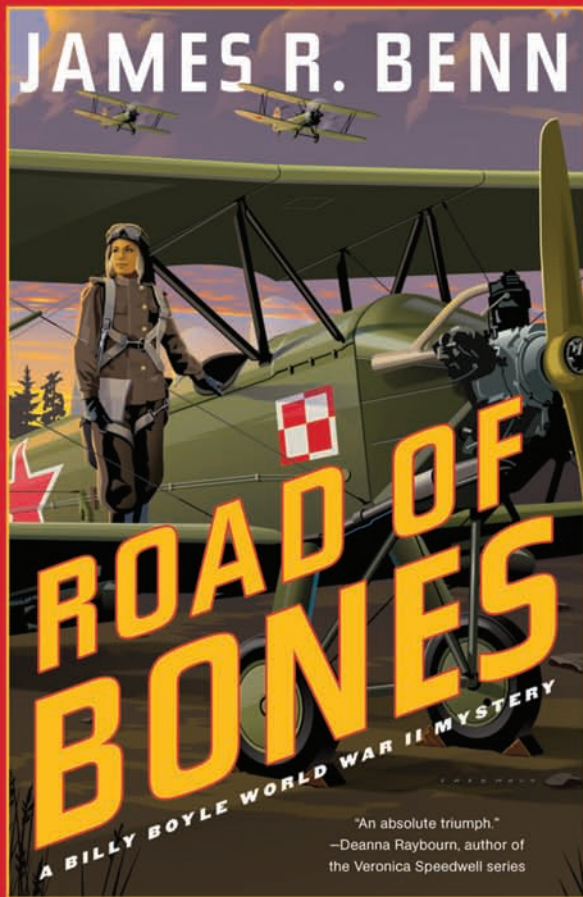
Tank Combat in Spain: Armored Warfare During the Spanish Civil War 1936-1939 (Anthony J. Candil, Casemate Publishing, Havertown PA, 2021, 240 pp., photographs, notes, bibliography, index, \$34.95, hardcover)



On October 29, 1936, a company of Soviet-built T-26 tanks, commanded by Soviet Captain Pavel Arman ran into the advanced guard of Nationalist General Francisco Franco's spearhead, moving toward Madrid. The dozen tanks went on a 10-hour raid, mostly against opposing cavalry units. They advanced 30 miles, outpacing their supporting infantry, but causing great damage to their enemy. The Soviets scattered cavalry along the road in two towns and destroyed an opposing platoon of Italian tanks. One T-26 commanded by Lt. Semyon Osadchy even rammed an Italian tank, pushing it into a ravine, the first known instance of ramming in tank warfare. Some hastily created Molotov cocktails were used to set several of the T-26s on fire, finally forcing them to retreat.

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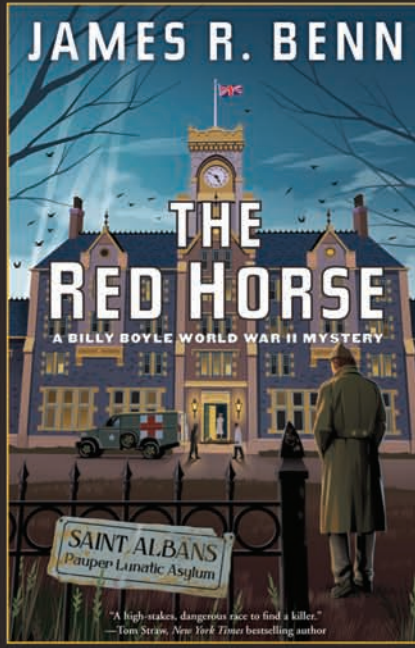
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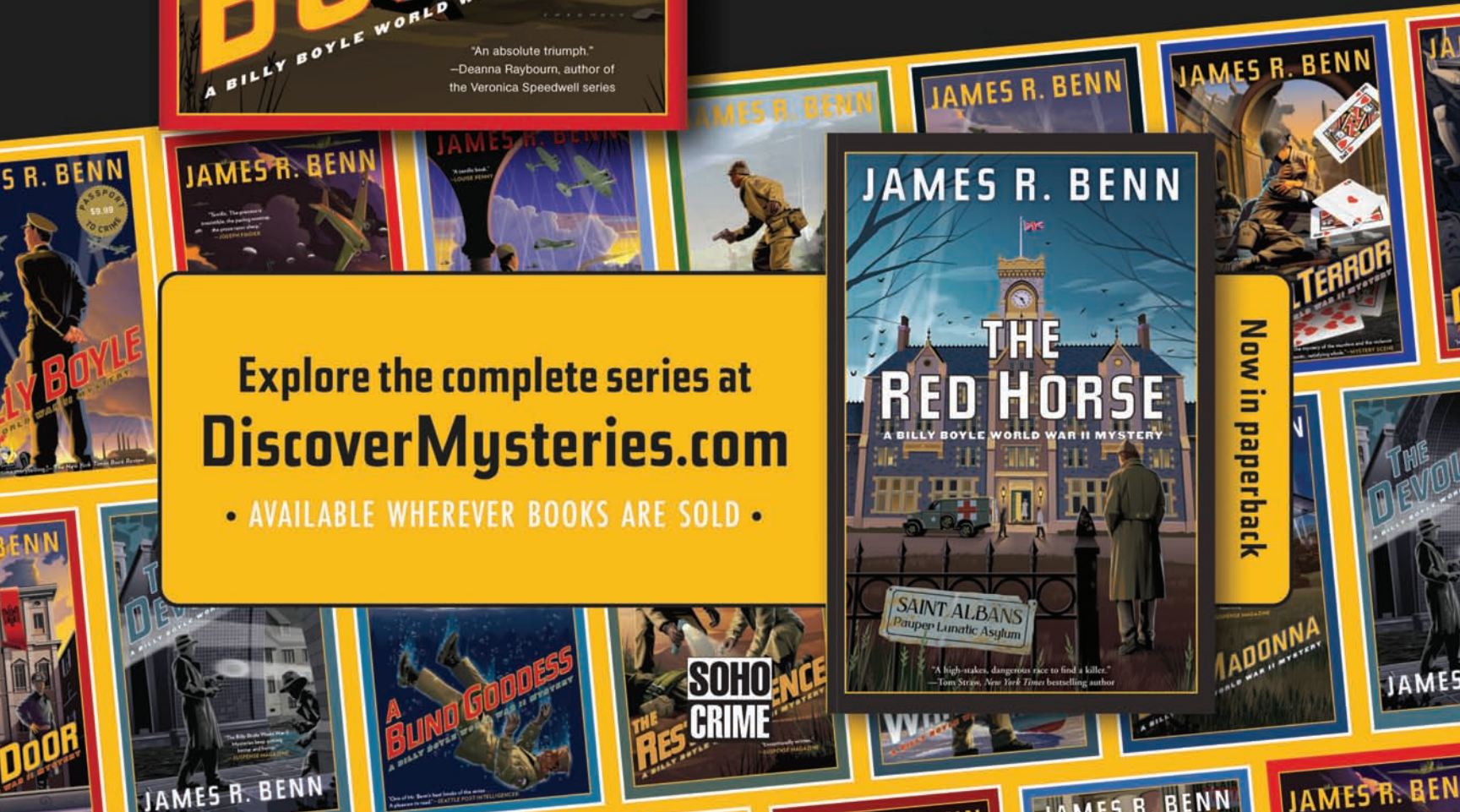
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TAKE BATTLEFIELD CREATIVITY TO A WHOLE NEW LEVEL WHILE ENJOYING PORT ROYAL SIM ACTION ON FRESH PLATFORMS

By Joseph Luster

Battlefield Portal

Genre: Action • **Platform:** PC, PS4, PS5, Xbox One, Xbox Series • **Publisher:** EA

Available: October 22

The future of *Battlefield* is upon us with *Battlefield 2042*, but the main game itself isn't the most interesting part of the package. Prior to launch, publisher Electronic Arts and developer DICE announced something truly unique for the series with the debut of *Battlefield Portal*, a community-driven tool within *Battlefield 2042* that puts the power in the hands of the players like never before.

Battlefield Portal lets players find and create new experiences from across the community, including everything from customized settings to special modes, and even a Logic Editor that allows players to develop their own spin on the tried and true *Battlefield* sandbox. The most exciting part is that you can pit different eras from throughout *Battlefield's* history against one another.

All of these different eras that can be mashed together are depicted with modern visuals, featuring the likes of *Battlefield 1942*, *Battlefield: Bad Company 2*, and *Battlefield 3*. If you've always dreamed of pitting, for example, a formation of Spitfires against today's helicopters, you can finally make it happen. Everything featured in *Battlefield 2042* and beyond can be used as tools in this dev portal, including over 40 weapons, 40 vehicles, 30 gadgets, and more from three Theaters of War.

Battlefield Portal will offer access to *Battlefield 3's* Assault, Engineer, Support, and Recon roles, and you'll be able to use them alongside *Battlefield 2042's* full arsenal of Specialists and other key components. Among the classic maps that have been reimagined and will be available at launch are Battle Of The Bulge (*Battlefield 1942*), El Alamein (*Battlefield 1942*), Arica Harbor (*Battlefield: Bad Company 2*), Valparaiso (*Battlefield: Bad Company 2*), Caspian Border (*Battlefield 3*), and Noshahr Canals (*Battlefield 3*).

With the return of all this and fan-favorite weaponry like the M1 Garand and M416—as well as classic vehicles like the aforementioned Spitfire and the B17 Bomber—both longtime fans and newcomers alike will have plenty to play with in *Battlefield Portal*. If you're not into the idea of creating these new experiences for yourself, you'll still be able to enjoy the fruits of everyone else's labor.



In fact, if you like another player's Experience enough, you can follow that player to keep track of when they're running matches so you can continue to partake in what they have to offer. Whether you're into customization or not, it's going to be really exciting to see what kind of creativity is bouncing around once *Battlefield Portal* is well established.

Port Royale 4

Genre: Strategy • **Platform:** PS5, Xbox Series

Publisher: Kalypso Media • **Available:** Now

Following its initial launch on PlayStation 4, Xbox One, and PC back in September 2020 and Nintendo Switch in May 2021, *Port Royale 4* is making a mark on new platforms. The next stop for publisher Kalypso Media and developer Gaming Minds Studios's trade simulation game is PlayStation 5 and Xbox Series X|S, on which it will deliver some upgrades to the visuals and other aspects.

In addition to 4K resolution support (1080p on Xbox Series S), the enhanced next-gen versions of

Port Royale 4 will feature cross-gen save compatibility, real-time cloud rendering and other flourishes. Both standard and extended digital editions are available—the latter includes exclusives like four lighthouses and five park blueprints—and there's also a physical Extended Edition available to purchase at retail.

For those who are new to this entry, *Port Royale 4* has you joining the colonial powers of Spain, England, France, and the Netherlands to vie for supremacy against a 17th century Caribbean backdrop. Beyond taking care of the needs of multiple cities and fulfilling tasks for your nation's viceroy in order to build up fame and unlock more features, you'll be taking part in turn-based battles that can have up to eight ships battling at once.

Those new to the series will certainly have their plates full, but don't feel left out if you already own *Port Royale 4*. If you have a copy for PlayStation 4 or Xbox One, you'll get a free upgrade to the PlayStation 5 or Xbox Series version. ■

Many theories on modern armored combat had their origin in the Spanish Civil War, where nations such as Germany, the Soviet Union, and Italy committed forces. These included tanks, giving their designers valuable experience on how to best employ them in actual battlefield conditions. This knowledge would soon be used to great effect in World War II.



Airpower in the War Against ISIS (Benjamin S. Lambeth, Naval Institute Press, Annapolis MD, 2021, 305 pp., maps, photographs, notes, bibliography, index, \$55.00, hardcover)

Captain Greg Balzhiser looked at his target in frustration. The young Air Force officer stared out from the cockpit of his F-16 fighter in 2014 at an Islamic State of Iraq and the Levant (ISIS) fighting vehicle in Barwanah, Iraq. It was a strange combination. The turret of an old Soviet-era ZU-23-4 antiaircraft vehicle mounted on the back of a Ford 250 pickup truck, and it was firing at allied Iraqis.

At this early stage of the campaign, targets had to be approved at a remarkably high level, so Balzhiser waited as the hours went by. As he waited in frustration, the target vehicle took cover in a car port. An hour later, approval finally arrived, and the vehicle broke from cover and began to withdraw. Fearing the air strike would be cancelled, Balzhiser followed the truck through the town. He put his targeting pod on it and had to switch to infrared mode; the hot gun barrels showed up nicely on the screen. From five miles away, the pilot released a 500-lb bomb, and then turned to aim his laser designator at the target. The bomb struck exactly on target, blowing the makeshift armored vehicle in half. Its remaining fuel and ammunition cooked off, leaving the truck a shattered wreck. Nine hours after takeoff, the F-16 touched down again.

Captain Balzhiser's experience highlights several points about the Allied air campaign against ISIS. First, airpower could strike heavy blows against the enemy organization and deprive them of heavy weapons, logistics and safe bases. Second, the political dimension of the war meant pilots were often frustrated by higher decision-making which prevented them from engaging the enemy in a timely fashion.

This new book summarizes the use of airpower in the war against the terrorist organization in both its military and political dimensions. It provides a thorough look at the complexity and decision-making which goes into modern counter insurgency campaigns. ■

KURSK

Continued from page 33

thing the Red Army would be able to achieve until later in the war. The Germans were masters of defensive fighting. In reality, the Red Army experienced the majority of its losses during the Battle of Kursk once it switched to the offensive.

It is difficult to arrive at accurate numbers of casualties on both sides during the Battle of Kursk, due to erratic and incomplete record keeping on the German sides and the secrecy of the Russians.

Soviet casualties totaled 863,000 killed, wounded, and captured. The Russians lost 6,060 tanks and self-propelled guns, 5,200 guns and mortars, and over 1,600 combat aircraft. German casualties came to 110,000 killed, wounded, and missing. The Germans lost 1,600 tanks and self-propelled guns and 840 combat aircraft.

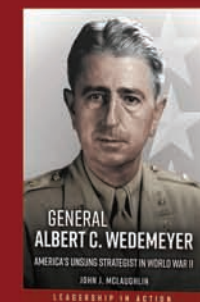
"Citadel was a complete and most regrettable failure," stated General Friedrich von Mellenthin, Chief of Staff of the XLVIII Panzer Corps, in his account of the war. "It is true that Russian losses were much heavier than German; indeed, tactically the fighting had been indecisive.... But our panzer divisions, which were in such splendid shape at the beginning of the battle, had been bled white, and with Anglo-American assistance the Russians could afford losses on this colossal scale."

Von Manstein noted that the German defeat at Kursk put the Germans on the defensive for the remainder of the war. "When Citadel was called off, the initiative in the Eastern Theater of war finally passed to the Russians," Von Manstein wrote in his memoirs. "To maintain ourselves in the field, and in doing so to wear down the enemy's offensive capability to the utmost, became the whole essence of this struggle."

Zhukov concurred with Manstein's assessment. "The specter of imminent catastrophe faced Fascist Germany," he wrote. "The defeat of the German troops forced [Hitler's generals] to transfer 14 divisions and significant reinforcements from other fronts to the Soviet-German front in the summer of 1943, thereby weakening their fronts in Italy and France.... Hitler's attempt to wrestle strategic initiative from the hand of the Soviet command ended in complete failure, and from then until the end of the war, German troops were forced to conduct only defensive battles."

The Battle of Kursk had far-reaching consequences. First and foremost, the strategic initiative shifted irreversibly to the Soviet Union. In the follow-on offensives, the Red Army liberated the left bank of the Ukraine and retook the Ukrainian capital of Kiev. A couplet from a Russian war song underscores the significance of the Soviet victory at Kursk: "From Orel and Kursk, the war took us to the very gates of the enemy." ■

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 **CASEMATE** | publishers

GLORY

Continued from page 43

two battalions of the 15th Regiment suffered at least 500 casualties in the desperate fight for the church. The Rot-Würzburg Regiment had been decimated: Just five officers and 33 men made it to the safety of the Austrian line. To their credit, the Würzburgers succeeded in escaping with their regimental colors.

West of Leuthen, the Prussian attack had gone poorly. Lt. Gen. Wolf Frederick von Retzow, one of King Frederick's favored commanders, nonetheless made little headway. Forced to send much of his own reserves to reinforce the assault on Leuthen, Restow was left short-handed for his own attack. Advancing into the teeth of heavy Austrian fire, his attack ground to a halt before his troops fell back.

On the Austrian right, the situation seemed ripe for a counterattack. General Lucchesi, anxious to get his cavalry back into the fight, observed the exposed Prussian infantry, as well as seemingly poorly defended Prussian guns atop the Butterberg, and decided to launch a full-scale attack with every horseman at his disposal. At 4:30 PM the Austrian cavalry swept down toward the Prussian flank. Lucchesi maintained the hope of crushing Frederick's left and entirely halting the Prussian advance.

Unfortunately for the Austrian general and his men, the Prussian left-wing cavalry, under the command of Lt. Gen. George Wilhelm von Driesen, lay concealed behind the rolling hills of the Sophienberg. As the Austrian cavalry swung toward the flank of the Prussian infantry, they badly exposed their own right flank. Driesen was quick to pounce. As his men charged out from the cover of the Sophienberg, they caught the Austrians completely by surprise.

The resultant cavalry clash proved a disaster for the Austrians. Lucchesi was felled in the first few moments, and his squadrons were left at a decided tactical disadvantage. Attempting to turn and fight the Prussians that had caught them in the flank, the Austrian cavalry struggled gamely but suffered heavy casualties and were slowly pushed back. Disaster struck when Lt. Gen. Eugene, Prince von Württemberg, charged into the fight with 30 fresh Prussian squadrons. Under such overwhelming pressure, the Austrian cavalry finally broke and galloped for the rear in a good measure of confusion.

Close on their heels were exultant Prussian cavalry. Sweeping forward with little opposition, the Prussians crashed into the Austrian infantry's unprotected right flank. Simultaneously, Prussian infantry on the opposite end of the field pressed forward, lashing around the eastern end of Leuthen and striking the Austrian left. After a day

of confusion, reversal, and repeated setbacks, Austrian defenses largely collapsed in the face of such a devastating double envelopment.

The field resembled a charnel house. Prussian cavalry and infantry swept the field, eliminating stubborn pockets of enemy resistance. Isolated groups of Austrian troops fought bravely, but were overrun by superior numbers. Desperate to escape the field, terrified Austrian infantry ran north in a state of panic, littering the battlefield with arms, accoutrements, and their own wounded. A handful of Austrian officers, including the unflappable Nadasdy, kept their heads, rallied frightened troops, and attempted to cover the retreat. For Prince Charles, the battle had degenerated to a complete disaster.

Only nightfall brought a respite from the killing. After darkness fell, Frederick was keen to keep the Austrians from rallying farther north. Intent on seizing the strategically vital bridge over the Wistritz River, the king, joined by a small contingent of hussars and three battalions of grenadiers, pressed forward in the darkness. Narrowly surviving an Austrian ambush, Frederick and his men succeeded in seizing the bridge just before an Austrian detachment was able to set it afire.

The Battle of Leuthen, which is widely considered as Frederick the Great's most remarkable battlefield achievement, had come at a heavy cost. Six thousand Prussian troops, which was roughly 20 percent of the Prussian army, lay dead or dying. Despite the tremendous cost in blood, Prussian soldiers remained dedicated to their seemingly invincible warrior-king. As his victorious troops marched northeast in pursuit of the Austrians, they spontaneously burst into a familiar song of thanksgiving, the Protestant hymn *Now Thank We All Our God*. Indeed, they had much for which to be thankful. In the matter of a month, the Prussians had defeated two armies, both of which outnumbered the Prussians two to one.

The magnitude of the disaster for the Austrians was enormous. Their army had lost 130 pieces of artillery and 55 battle flags. The human cost of the fighting was simply staggering. Austrian losses amounted to 3,000 killed, 7,000 wounded, and 12,000 captured. The Prussians forced the surrender of the 17,000 Austrian troops garrisoning Breslau on December 20. Since its field army was no longer effective, Maria Theresa had no choice but to abandon Silesia.

Frederick had distinguished himself as a great military commander on many fields, but Leuthen would come to be regarded as his greatest tactical triumph. No less an authority on military matters than French Emperor Napoleon would weigh in on the Prussian victory. The Prussian victory at Leuthen, asserted Napoleon, was "a masterpiece of maneuver and resolution." ■

CHICKAMAUGA

Continued from page 53

on his left, where Polk's forces remained quiet after the morning's carnage. Although Longstreet estimated that he had ordered as many as 25 attacks on Snodgrass Hill, the Federals managed to disengage themselves early in the night. Bragg made no efforts at pursuit, and Thomas and his men joined the rest of their army in Chattanooga.

Casualty lists for the Battle of Chickamauga included 18,454 Confederates and 16,170 Federals. Dead and wounded numbers were higher for Bragg's army, while the Union lost more than twice as many as missing or captured—4,757 compared to 1,468 for the Confederates. It was the bloodiest battle fought west of the Appalachians during the war.

Although a rare tactical victory for Bragg, the Battle of Chickamauga yielded no lasting gains for the Confederacy. Holding the key city of Chattanooga was far more important than anything to be gained in the woods along West Chickamauga Creek. After Rosecrans' army withdrew to Chattanooga, Bragg began an ineffective siege. Thomas replaced Rosecrans as head of the Army of the Cumberland in October. "It is not my fault that he was not in chief command months ago," Secretary of War Edwin M. Stanton wrote in a dispatch to Charles Dana.

Maj. Gen. Ulysses S. Grant came to Chattanooga in person. He organized a supply route, called "the Cracker Line," and drew in reinforcements. Grant broke the siege in a series of three battles that began on November 23 and ended on November 25. The final assault routed Bragg's army atop Missionary Ridge and sent it in panicked flight south. Bragg withdrew back into Georgia. Tennessee was lost to the South, and the stage was set for the loss of Atlanta and for Sherman's devastating march through Georgia in 1864.

Thomas died suddenly in 1870. Unlike many Civil War generals, he was not an attention-seeker, and his unassuming nature and early death prevented him from leaving a memoir. His family never forgave him for holding with the Union instead of Virginia and the Confederacy, and they were not welcoming to his potential biographers.

In 1890, a quarter-century after the end of the Civil War, the Chickamauga and Chattanooga National Military Park became one of the first national military parks. Land was set aside for the park on the condition that the U.S. Army could use the land when needed. Soldiers returned to the "River of Death" again when war was declared on Spain in 1898. The park became a large training camp for volunteer regiments and was temporarily named Camp George H. Thomas, in honor of "the Rock of Chickamauga." ■

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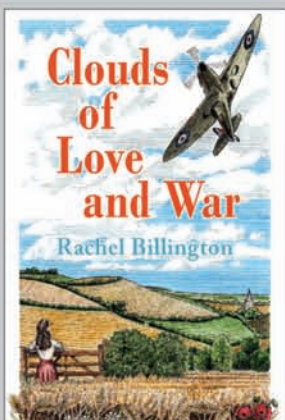
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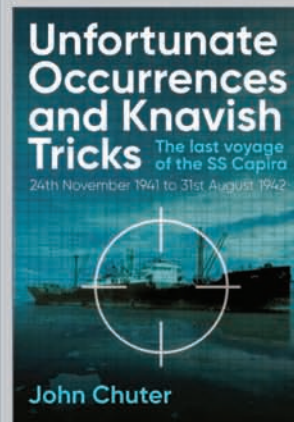
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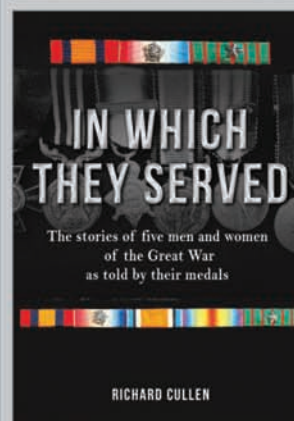
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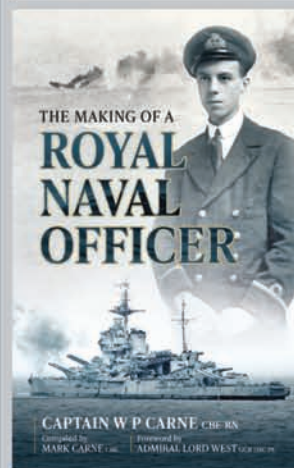
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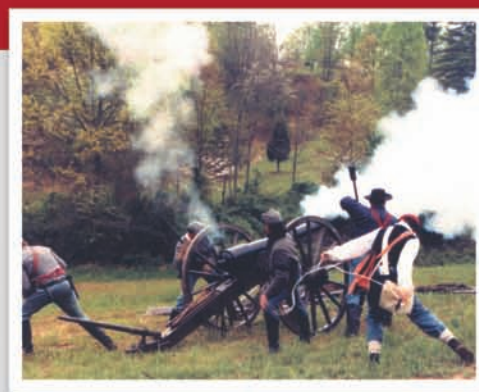
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