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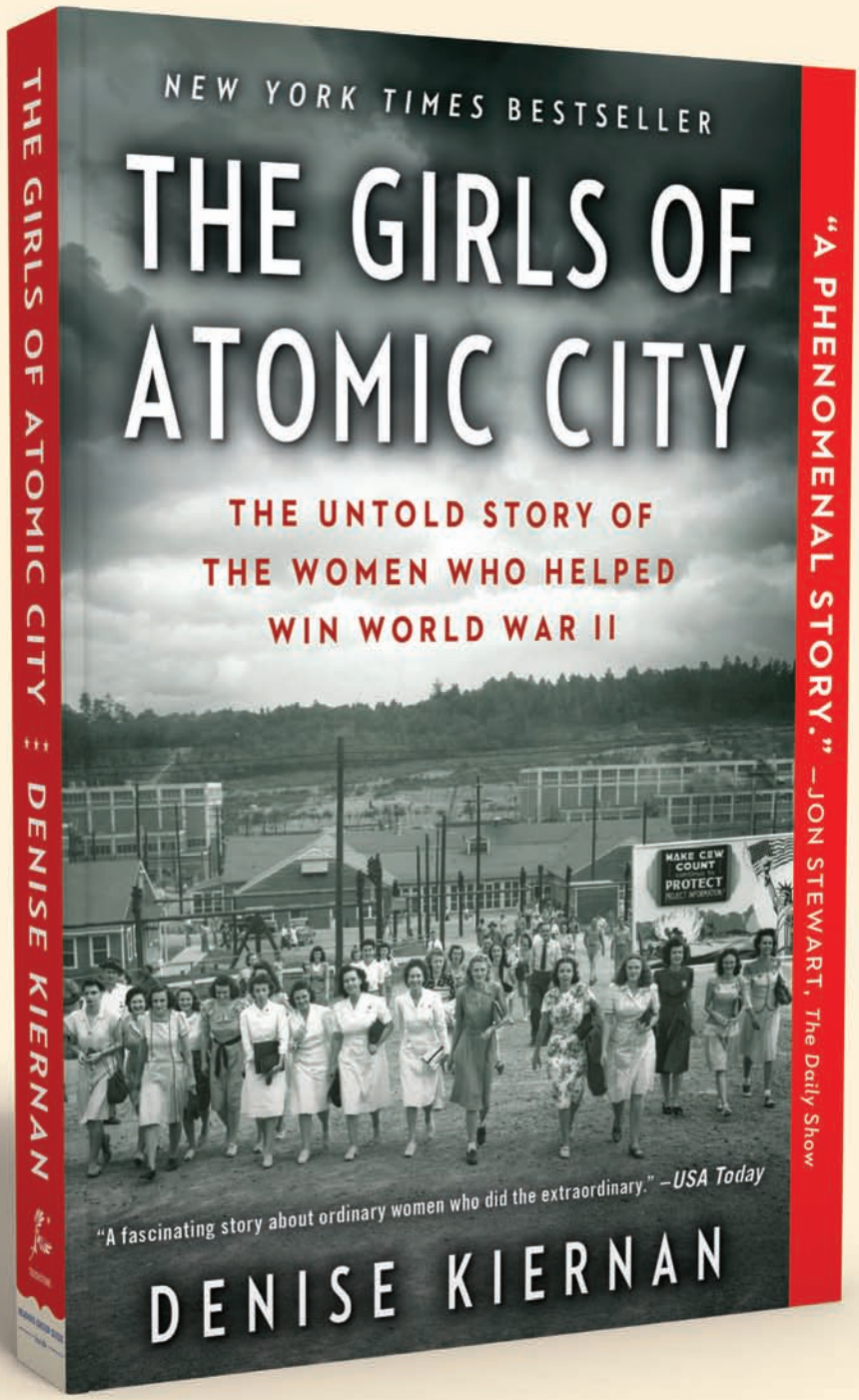

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COVER: American paratroopers hook up and wait for the signal to exit their transport plane over Normandy during the D-Day invasion of France, June 6, 1944. See story page 30. Photo: Time & Life Pictures/ Getty Images

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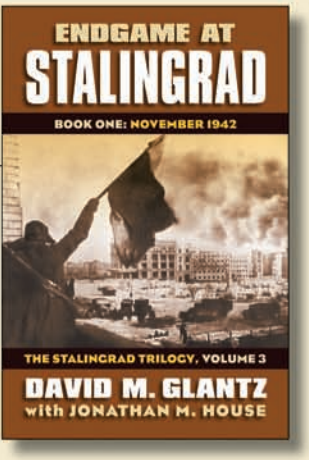

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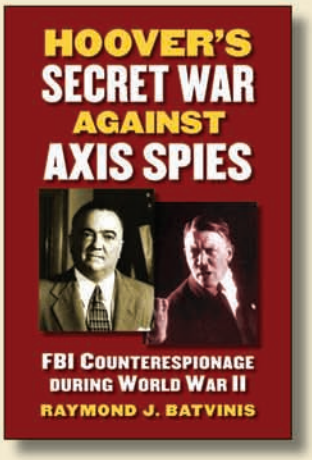

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Serendipity ... and the Rest of the Story

WE RECENTLY RECEIVED several interesting communiqués from our readers. I'll share three of them with you.

From Dan Paschen: "There I was, thumbing through your magazine (Fall 2013) at Barnes & Noble ... and on page 6 was a photo of my uncle, Lt. John H. "Jack" Coyne. I could not believe it! After reading the article, I realized how lucky I was to have found it.

"Along with my brother and sister, in 2002 we attended the ceremony dedicating a stone memorial in Jack's honor at Cabrières, France. Somewhere between 300 and 400 people attended.... Later, our family was taken to the spot where Jack's plane crashed. We also met the man who found his body. At a smaller dinner for us, we were shown parts of his F6F-5 Hellcat. My siblings and I were given an impeller gear from the plane's engine, part of the cockpit, and some of his parachute cords as mementos.

"The entire weekend was an unbelievable experience. My siblings and I were humbled by the participation and reverence of the folks from this extremely tiny village honoring my uncle after 57 years.... I just wanted to thank you on behalf of my family for writing that story."

Another letter, this one from Phil Johnson of New Orleans: "It takes me a while to get through an issue of your magazine because I read every article. Your Summer 2013 issue is outstanding. Especially pleased with the scholarly piece on Soviet refugees and the one on camouflaging West Coast defense plants.... I believe you have the best military history magazine on the market."

And a third, from Robert H. Spielman of Roseburg, Oregon: "When the Fall 2013 issue showed up, the Guadalcanal story caught my attention immediately. My (our) cousin, Platoon Sergeant Merrit Cecil Walton, USMC, was awarded the Navy Cross, posthumously, for extraordinary heroism there. His citation reads, 'As member of a parachute battalion in action against Japanese forces on Gavutu, Solomon Islands, on 7 August 1942 ... fully aware of his personal danger, Sergeant Walton voluntarily reconnoitered a hostile machine-gun nest which threatened his platoon's right flank. After spotting its location, he participated in a daring attack which silenced the deadly weapons before he was wounded.'

"The USS *Walton*, DE-361, was named in honor of him.... The *Walton*'s keel was laid on 21 March 1944. Two months later, she was launched. During the duration of the war in the Pacific, the *Walton* did escort duty for the supply and transport lines. In January 1947, the *Walton* was placed out of commission.

After the outbreak of Korean hostilities, the *Walton* was reactivated and commissioned.... After Korea, the *Walton* remained in commission and operated as a regular component of a destroyer-escort squadron. She was decommissioned in September 1968. Three days later she was stricken from the Navy list, then was sunk as a target off the California coast.

"Now here's a very interesting note: She was sunk on 7 August 1969—EXACTLY 27 YEARS TO THE DAY that Merrit died on Gavutu, 7 August 1942! This era of history is so interesting as this is what we grew up knowing. Thanks for a very good publication."

Have a comment, complaint, correction, or a compliment? We'd like to hear from you. Contact me at WWIIQuarterly@gmail.com.

—Flint Whitlock, Editor

WWII Quarterly

Volume 5 ■ Number 3

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ROBERT F. DORR is a U.S. Air Force veteran, a retired senior American diplomat, and a prolific author who has written 70 books and numerous articles on international affairs, military issues, and the Vietnam War. He writes the weekly "Back Talk" opinion column for the *Air Force Times* newspaper and the monthly "Washington Watch" feature of *Aerospace America*. He is also the technical editor of *Air Power History,* and is co-author of *Hell Hawks,* a history of a P-47 Thunderbolt fighter group in combat. "Bombs Over Berlin" was adapted from his book, *Mission to Berlin,* published by Zenith Press.

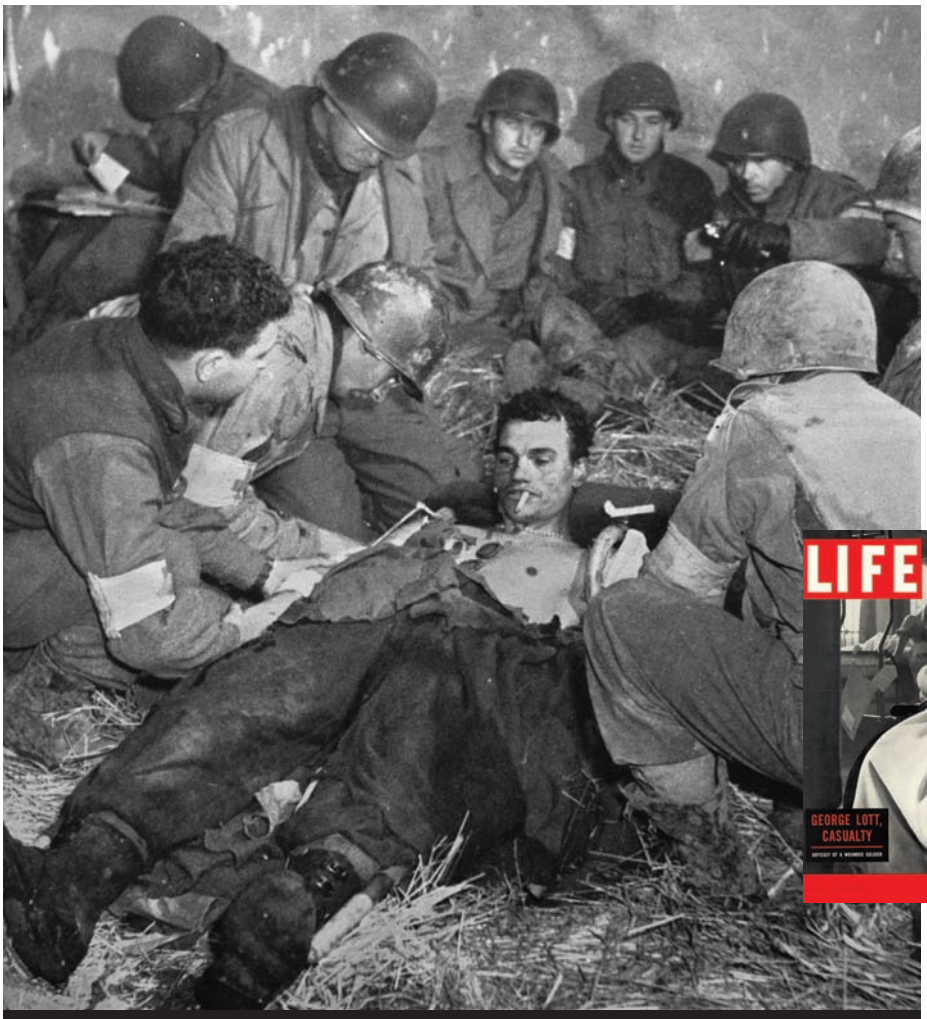
LIFE magazine war correspondent and photojournalist Ralph Morse captured some of the war's most iconic moments on film.

IN AN AGE BEFORE television and instant communications, Americans wanted to see what was going on in the world's "deadliest conflict in human history," and *LIFE* magazine was making a name for itself as THE war magazine during World War II. The news weekly did its part by filling its pages with top-notch photography.

LIFE magazine's youngest war correspondent and photojournalist in the Pacific Theater at that time was 24-year-old Ralph Morse. His wasn't a household name yet, but his war photographs would soon be on newsstands and in homes throughout America.

Growing up in the Bronx, New York, with humble roots, Morse wanted to be a newsreel cameraman but when he realized he couldn't afford to join the union, he decided to take every free photography class that the City College of New York offered in the late 1930s. When it came time to look for work, he opened a New York business directory and started working his way through the alphabet. He landed his first job when he reached "P"—with photographer Paul Parker. Morse's life became a Horatio Alger rags-to-riches photographic success story.

All images: Time & Life Pictures / Getty Images



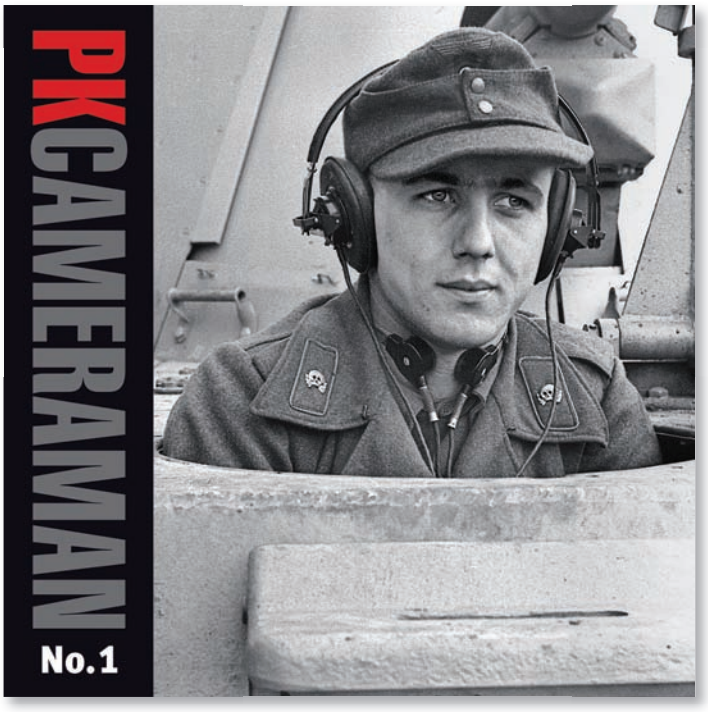
ABOVE: *LIFE* magazine photographer Ralph Morse's photo of George Lott, a dazed, wounded medic being attended to by medical personnel at a forward aid station located in a French barn. Morse followed Lott from the time he was wounded, through his surgeries, and his recovery. INSET: The cover of *LIFE* magazine, January 29, 1945, featured Ralph Morse's photo of a recuperating George Lott.

After working for Parker, Morse exhibited early on his knack for being in the right place at the right time. While working in a photo lab as a printer with coworker Cornell Capa (a future war correspondent and brother of famed *LIFE* photographer Robert Capa) at the New York photo bureau, PIX, Morse's picture-taking prowess caught the eye of one of the bureau's owners, Alfred Eisenstaedt, the legendary *LIFE* photographer who took the famous image of a soldier and nurse kissing on V-J Day in Times Square.

Morse recalled what turned out to be the launch of his career: "My friend Cornell Capa, who worked in the lab at PIX, said we need another lab guy, so they hired me. That Sunday I went out to Jones Beach and took Cornell's 35mm camera. I saw some guy playing with a kid on the beach, throwing him in the sky and I took pictures. When I showed the photos to the salesman at PIX the next morning, he said, 'I'll sell these in a half hour.' He sold them 30 times the first day and then he says, 'You better just read *The New York Times* and cover things and we'll sell [the pictures].' In the meantime, Eisey [Morse's nickname for Eisenstaedt] kept saying to Wilson Hicks, the photo editor at *LIFE,* 'You better meet this new young brat we've got.' Finally they called me."

In 1940 or 1941, *LIFE* offered Morse, who was then just 22 years old, a part-time job—10 days a month. Then, when war broke out, *LIFE* hired him full time in February 1942. Immediately Morse was thrown into the combat action.

During Morse's years covering both the



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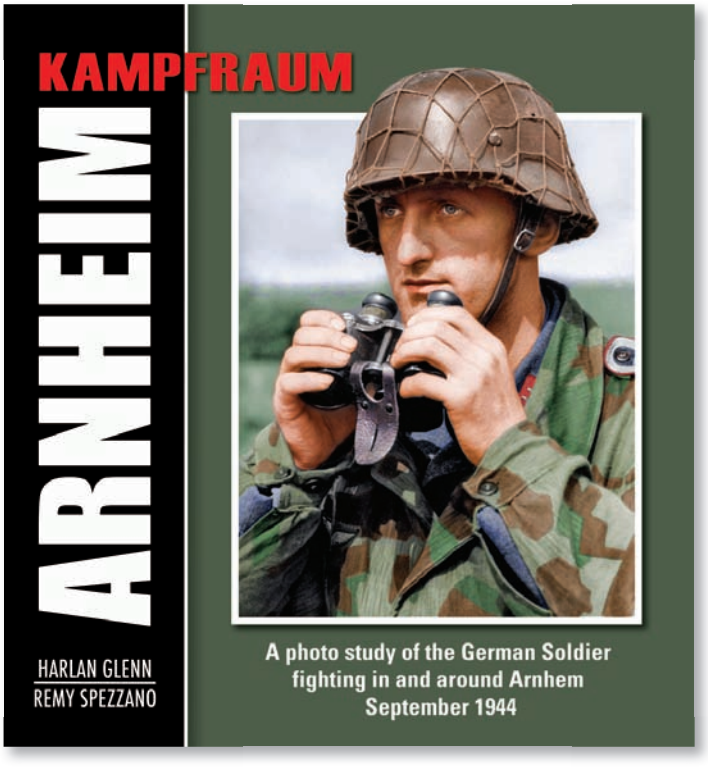

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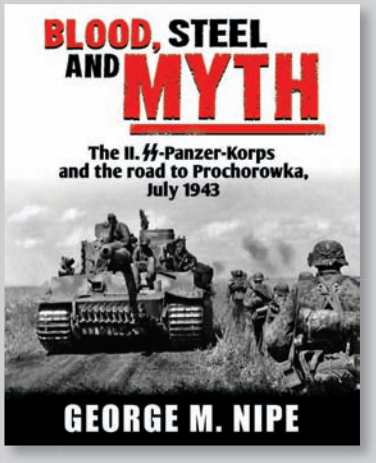

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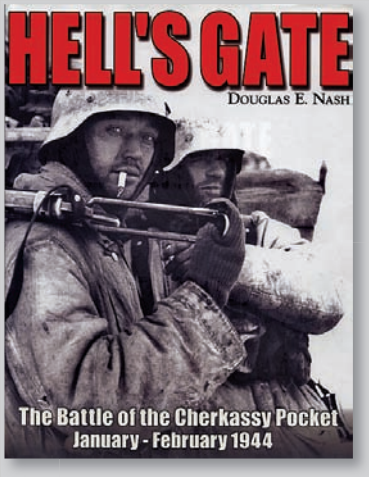

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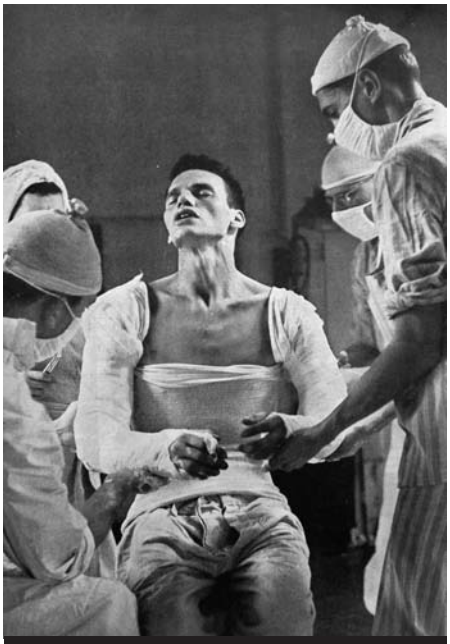
Pacific and European Theaters and the postwar reconstruction of Europe, he embodied a "Kilroy was here" presence [the graffiti character popular with GIs in the 1940s]. Like Kilroy, Morse "made his mark" wherever he was sent. He "was there" for Jimmy Doolittle's 1942 take-off for the raid on Japan, the Marines' landings at Guadalcanal, the Battle of Midway, the Normandy invasion, Patton's drive across France, the liberation of Paris, the surrender of the German armies to Eisenhower, Nazi Party leader Hermann Göring's war-crimes trial at Nuremberg, and the list goes on. Morse was as much a part of history as the history he documented.

During the decades in which Morse took pictures, he captured some of mankind's most important moments through his lens, and his habit of "being there" followed him well into his civilian photography. He was there in 1948 to capture the cancer-stricken Babe Ruth's last day in a Yankee uniform; in 1955 to immortalize the moment when Jackie Robinson stole home in the World Series (using a missile-tracking camera to fire a hundred feet of film at 10 frames per second); and in 1958 at the beginning of the American space program, which he went on to cover for the next 30 years, becoming especially well known for his technical innovations. Morse worked as a staff photographer for *LIFE* from 1942 until 1972, and then at *Time* magazine from 1972 through 1988 covering everything from sports to space.

Although over 70 years have passed since the onset of World War II, the 96-year-old Morse, in his exuberant, still-youthful voice, brought the past to life with his vivid recollections of his war correspondent days in a recent interview exclusively for *WWII Quarterly*.

"When World War II started, I was going down to Fort Rucker, Alabama. Of course, when I got to the airport and heard the Japanese had bombed Pearl Harbor, I just cancelled my plane and went back to New York.

"In the office was a member of the Secretary of the Navy. He wanted to form a task force led by Cecil B. DeMille [by then a well-known Hollywood movie director].



Morse caught Lott grimacing in pain as Army surgeons applied plaster casts to his injured body and arms back in the States. BELOW: Photographer/war correspondent Ralph Morse in naval aviation uniform on assignment in 1954.

He said, 'You guys will be made petty officers and go anywhere we send you to do a history of the war on film.'

"I spoke to Wilson Hicks, the managing picture editor of *LIFE,* and I said, 'This is fine, except one thing: someone could tell us what to do. I said I should think about this.' Hicks said, 'No, I think you should become a war correspondent. You've been covering the build-up of the military and therefore you have all the credentials needed to be a war correspondent,' and [he said] you have to join *LIFE*'s staff. In those days war correspondents were staff people. So that's what I did and that's how I became a war correspondent.

"My first trip, I got on a plane and went to Pearl Harbor, got a hotel room, a Hertz car, money in the bank from *LIFE* magazine, all the things you had to do. And then, when I reported in at Pearl Harbor, they said, 'You can go on the next task force.' I said, 'Sure, that's what I'm here for.' I left Pearl Harbor on the carrier *Enterprise* with Admiral [William F.] Halsey and didn't know where we were going or what we were doing.

"About two days out, Admiral Halsey made the announcement that 'Tomorrow morning you're going to see the *Hornet* [aircraft carrier] with a bunch of Army bombers on deck. We are not delivering bombers; we are going to take these as close as possible to Japan, and they are going to try to bomb Tokyo.' And that's how I got onto the Doolittle Raid."

Morse remembers his next assignment aboard the heavy cruiser USS *Vincennes* at Guadalcanal and the Battle of Savo Island:

"We were going south but they don't tell you where you're going or what you'll be doing. So we pull into Pago Pago and the harbor is full of troop transports. I ask the captain of the *Vincennes*, 'Can I go over to the Marine general,' and he says yes. So I go over there, tell the general who I am, and that I'd like to go and land wherever they are going. He says, 'Do you have the proper clothing,' and I say no, I have nothing. In the Navy you have a pair of khaki pants, and sneakers, and t-shirt and a life preserver. I said I do not have landing equipment. He says, 'Don't worry about it, the Marines will supply you the high shoes, clothing, the gas mask, water bottle; the supply guy will give you everything.' I stayed on the ship to Guadalcanal and landed with the Marines in the third wave.

"Our objective the first day on Guadalcanal was to take the airport and we [did]. Afterward I went back to the beach to go [and get a ride] out to my ship, because the *Vincennes* was out in the harbor there. It had all my film, all my clothing; everything was on the ship, because you can't land with it.

"So I had the Navy take me back out and the captain said to me, 'Well, go get yourself a shower. We can't send you back to the beach tonight because of the fact that we are not sure in the dark what part of the island we own. I will get you back ashore first thing in the morning.'

"I gave the chaplain on board the film and said, 'When you get to San Francisco, take this to the Presidio, and ask for censorship; I don't know how long it will be before I get out of here; you'll be there in four days.' But I never got the shower or food. We went to general quarters, and that was the battle of Savo Island and that is where we got sunk.

"The Japs came around the island and fired 8-inch guns directly at us. By the time we got organized to fire back, we had pieces of our boat missing. We might have got hit by a torpedo too, but that is not what sunk us [the *Vincennes*]. We were sunk just by 8-inch guns. I was in the water for six hours waiting to be rescued. My film of the landing of the Marines went down with the ship.

"Back in Pearl Harbor, I asked Admiral [Chester] Nimitz about returning home to get equipment. He said, 'You realize you will be the only one except the War Department and President who knows about that sinking.' So he said, 'Let me think.' About an hour later he says, 'You can do it, but you have to promise you won't tell anyone about it,' and he gave me orders to go back home.

"When I got to the *LIFE* offices, they said, 'What you are doing here?' I said I need new cameras. They asked what happened; I said, 'I can't tell you.' This went on with my draft board, too. They asked, 'Why should we give you orders to go overseas again?' Then one morning I walk into *LIFE,* expecting another day of being told no, and they said to go over to Brooks Brothers to buy clothes and order camera equipment.

"I go over to my draft board and they said here are your papers. I had my orders. When I got back to Pearl Harbor, they said Admiral Nimitz wants you. I went in and said, 'I didn't talk,' and he said, 'I know. We deal with Commander Adams; he is Naval Intelligence. He was with you the whole time and he saw what they were doing to you. You couldn't talk so he shut them up.'

ABOVE: Morse followed repatriated Frenchman August St. Andre on his journey home after five years in Nazi slave-labor camp. BELOW: August St. Andre, photographed with his daughter upon his return home.

After getting new equipment, Morse returned to Guadalcanal because, as he said, "I wanted to get back to the island to photograph the boys on their first Christmas away."

It was during a patrol when Morse came across a Japanese skull propped up on a tank. His image of an incinerated, severed Japanese head—one of the most horrific photos ever published—appeared in *LIFE*'s February 1, 1943, issue, and is considered the first gruesome picture released by the Office of War Information's censors. [In September 1943 another horror image followed with George Strock's image of

three dead American soldiers on Buna Beach.] Morse recalls the story behind the skull incident on Guadalcanal:

"We went on patrol. This was with the Army. It was right at Christmas time. The Marines had pulled out so the Army took over. The patrol was up through the woods. The brush was so thick, if you lost sight of the man's foot in front of you, you were lost. Now we came across this opening in the middle of this wooded area. There on a tank was a dead Jap's skull.

"The sergeant in charge of the patrol said, 'Look, nine out of ten chances this is a booby trap. The Japanese probably have mortars aimed here for American soldiers to come in and kill them.' So he says we've got to be careful. 'The men here are all going to run like hell and get through it. You, come up, take your picture, and run like a son of a bitch back to us.'

Morse then contracted a bad case of malaria at Guadalcanal, so he was sent home to a New York hospital. After recuperating, he was assigned to Europe to cover Patton's Third Army in 1944.

"I was with Patton crossing France. He was in the news so much that I did a cover on Patton for *LIFE* [January 15, 1945].

"Then a most unusual assignment came from *LIFE* headquarters: The next week I get a telegram from New York saying, 'We'd like you to be with a guy when he gets hurt [and then] stay with him all the way till he gets back to the States.' I read this thing and thought, an ambulance only holds four people; they're not going to let me go.'

Morse remembered the necessary strings that needed to be pulled to accomplish this six-week-long, 4,500-mile assignment:

"I walked over to Patton's office and asked, 'Can I see the general?' They said, 'Of course.' Patton said, 'Look Ralph, no one is going to let you do this story. There is only one way. Tell *LIFE* to go to the Surgeon General of the Army and give you a set of orders that you are a wounded man equal to the man you'll be with; that gives you the right to be with him at all times.'

"Then later on Patton called me in and said, 'I got this message from Washington and they have agreed to this story; they like the idea. I will inform all the military hospitals in the whole area so that everybody knows about you and your story when you pick the guy. I'm going to send out 30 sets of orders and I will court-martial anyone who gets in the way.' That is how we did the George Lott story."

Morse's shocking photo of a burned, severed Japanese head propped up on a Japanese tank at Guadalcanal was one of the most horrific images published during the war.

Ralph was on the scene minutes after George Lott, a 22-year-old American medic, was wounded in both arms by German mortar fire on a battlefield in northeastern France. Morse snapped a series of photos—from Lott being evacuated from the field, to the field hospital, to his surgery, and back in the United States for further treatment and eventual recovery. The story appeared in *LIFE*'s January 29, 1945, issue.

Morse gained a reputation for doing whatever it took to get the picture—whether it was following a wounded man from the battlefield to the hospital or sleeping on the floor for two days at the Supreme Headquarters of the Allied Expeditionary Forces in Reims, France, while waiting for the Germans to sign the surrender documents. He recalled:

"I went across Europe with Patton and covered the surrender of the German Army to Eisenhower. I was a civilian photographer doing it for the whole world; there

were military people, but I was the only civilian. Then I went on to Nuremberg to cover [Hermann] Göring [at the War-Crimes Tribunal]."

While Morse's images most often exposed the brutality that came from battle, there were moments off the battlefield where Morse captured some of war's tender moments. Here he recalls the one photo he considers the most beautiful, which he writes about in his self-published memoir, *The 8th Astronaut*:

"I have no answer to the question of what is my favorite picture, but, for sure, my photo of the French prisoner of war walking home is the most beautiful shot I've ever taken. In 1944, I was sent to a labor camp in Germany to choose a prisoner and follow him home. I chose a most friendly Frenchman, August St. Andre, a railroad worker from a small French town, isolated from his family for five years, who had been forced to work on German jeep motors.

"Transportation proved to be the technical challenge of this story. Even though I accompanied him on his route from the German camp to his French village by train, bus, and foot, my car full of camera equipment needed to be dragged along, necessitating my backtracking every couple of hours to bring forth the auto.

"However, all our efforts to capture his long journey home were in vain. Instead, *LIFE* started the printed story with his homecoming, leading with the exquisite photo of his walking the last leg home after we exited the bus. The story showed his daughter Marie Louise's running a kilometer down the road to greet her father, and then moving her father to tears singing him a sentimental song.…"

More than seizing the history of the moment and the news of postwar Europe, this picture with its cobblestone street, horse-drawn carriage, and converging trees is a most beautiful piece of art. Enveloped in this one photo was St. Andre's return from an ordeal—and his entire homeward trek.

After Morse started working for *LIFE*, photography became his life and a dream come true. Following the war years, he began covering the fledgling U.S. space program in 1958 and continued for the next several decades. His intense coverage of the Mercury 7 astronauts earned him the moniker, "The Eighth Astronaut," a nickname bestowed upon him by astronaut John Glenn, the first American to orbit Earth. Morse's inventiveness really took flight in 1962 when, with the help of NASA, he mounted cameras on everything from rocket tails to umbilical towers. Along the way his cameras were sometimes smashed, incinerated, and "unofficially" launched.

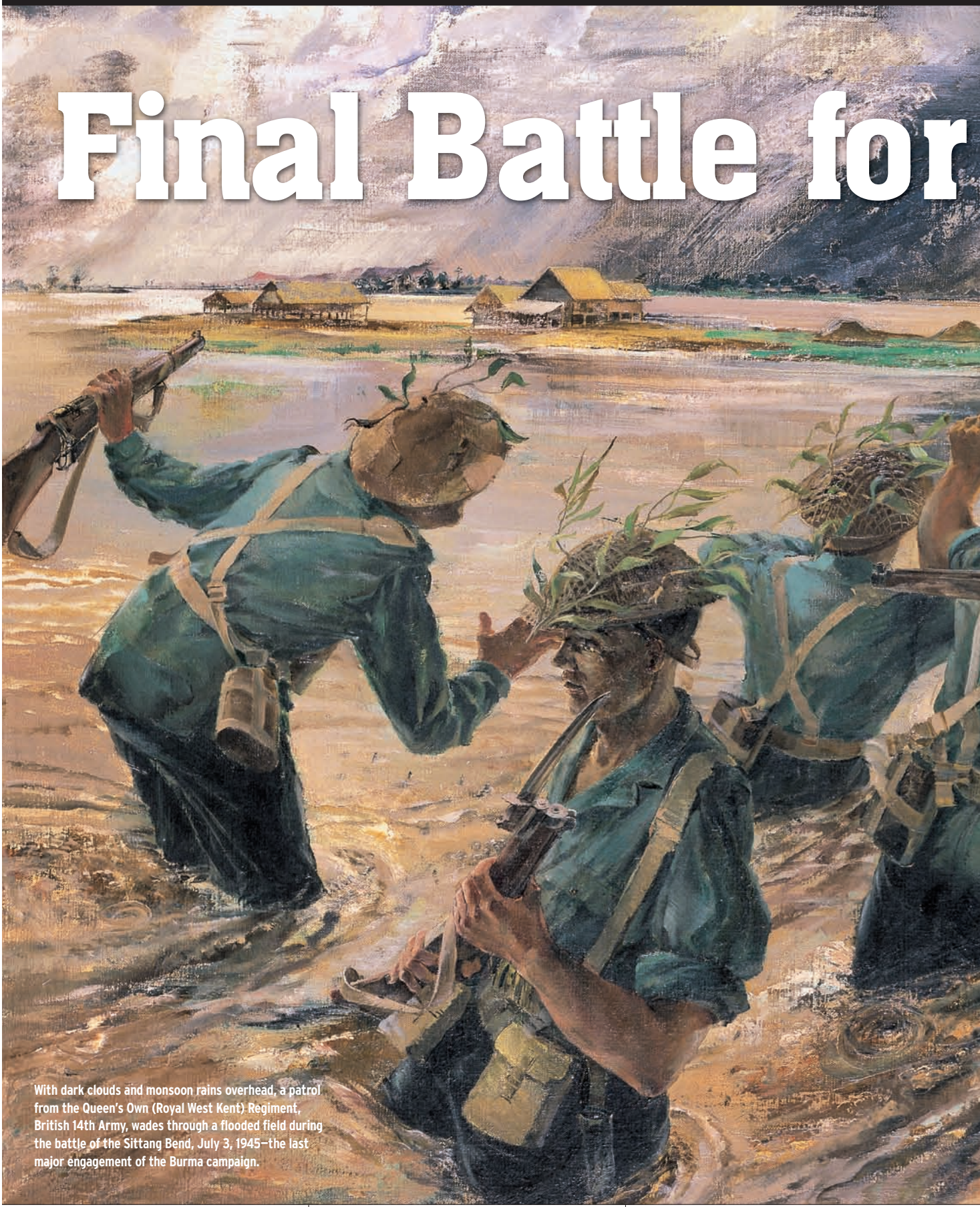
In 1969 Morse filmed the launch of the Apollo 11 mission—the first mission that landed humans on the moon, and in 1998 he was on scene to shoot Glenn's return to space. Morse recalled, "On John's second space flight, I did not have cameras; I hadn't taken a picture in eight years." Morse, who was 81 at the time and long since retired, remembered telling his editor that he no longer owned a camera. "*LIFE* said to me, 'Nobody knows John Glenn except you; we'll send you down the equipment.'"

In 1995 Morse received the Joseph A. Sprague Memorial Award, the highest honor in the field of photojournalism, according to the National Press Photographers Association, and in 2010 he received the Briton Hadden Lifetime Achievement Award for his World War II photography. During a speech honoring Morse for his 30-plus awards, George P. Hunt, *LIFE*'s managing editor from 1961-1971, said, "If *LIFE* could afford only one photographer, it would have to be Ralph Morse."

To single out just one of the magazine's celebrated photographers was an extraordinary statement but Ralph Morse was an extraordinary photographer. Looking back on his career as one of the leading photojournalists, the 96-year-old Morse said from his Florida home:

"You have to remember I covered so many events in World War II because you could do it if you were a war correspondent. You couldn't do it if you were a member of the military because someone could say you can't go there if you're in a uniform and he's a higher rank. But if I'm in a war correspondent "uniform" and they say you can't go; then you say go to hell and just do it; that's the important difference." □

Final Battle for



With dark clouds and monsoon rains overhead, a patrol from the Queen's Own (Royal West Kent) Regiment, British 14th Army, wades through a flooded field during the battle of the Sittang Bend, July 3, 1945—the last major engagement of the Burma campaign.

BY WILLIAM STROOCK

Burma

In February-March 1945, the ferocious fight for central Burma led by General William Slim and the 14th Army turned into a decisive British victory.

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By the beginning of February 1945, the British 14th Army was on the banks of the Irrawaddy River and poised to strike into central Burma. The officers and men of the 14th Army were tired but triumphant. The year before they had fought an epic battle against the Japanese on the plain of Imphal, stopping a Japanese drive on Imphal proper and slugging it out with Japanese forces trying to outflank them to the north at Kohima.

Farther east, British forces, commanded by the bizarre and eccentric Brigadier Orde Wingate, had flown behind Japanese lines in conjunction with Joseph Stilwell's Sino-American force and cleared Japanese troops out of northern Burma. In late 1944 and early 1945 the British pushed the Japanese away from Imphal, southeast across the Schewbo Plain. Now the Japanese Army, badly battered and demoralized, waited on the banks of the Irrawaddy for the 14th Army's next offensive.

William Slim and the 14th Army

The architect of 14th Army's victory was General William Slim. Because of his success in the Middle East and his knowledge of the British Indian Army, he was asked by the British Commander in Chief in India, Sir Archibald Wavell, to take command of British forces there. Slim arrived in early 1942 and presided over the British defeat in Burma. Under Slim's command,

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ABOVE: British troops, their truck, and boxes of ammunition cross the Irrawaddy River on a raft, February 14, 1945. The British had assembled 120 boats and 17 rafts for the crossing and despite difficulties, most of 33rd Brigade was transferred to the east bank by the end of the day. LEFT: Admiral Lord Louis Mountbatten, Supreme Allied Commander in South East Asia, chats with Lt. Gen. Sir William Slim, commanding the British 14th Army in Burma.

BurCorps, as the British Army in Burma was called, fought doggedly but was outnumbered and unprepared for the tenacity of Japanese forces and their infiltration tactics. Time and again outflanked, British commanders in the field kept pulling back, only to be outflanked again at the next action.

That Slim was able to extricate his forces from Burma at all is testament to his skills as an organizer and commander. Unlike his more aristocratic counterparts in the Army, Slim had come from a humble background and had risen through the ranks. He had served many years in India and commanded a British Indian Army division during the Iraq campaign of 1941 and later in Vichy Syria and in Persia. After the war he wrote an outstanding memoir of the Burma campaign, *Defeat into Victory.* In his book, Slim comes across as serious and professional, but also affable and kind.

In the hills of eastern India, Slim remade the 14th Army, turning it into a force capable of beating the Japanese. He started a vigorous training program that eschewed static lines and instead emphasized small bases protected by aggressive patrols. Slim drove home to his commanders the idea that they were not to withdraw when Japanese units got around and behind them. Instead they were to hunker down and call in reinforcements, for in Slim's mind it was the infiltrating Japanese who were then surrounded. Slim also saw the potential of aerial resupply, which was realized during Orde Wingate's foray into northern Burma in which five British brigades were resupplied through the air. Slim made aerial resupply an integral part of his central Burma campaign.

Slim's 14th Army was a polyglot affair, a mixture of troops from across the British Empire. A British Indian Army division comprised three infantry brigades, each of three battalions; two of these battalions were Indian—mixed Hindu, Muslim, Sikh, or Gurkha—while the third was from Britain.

Three divisions, the 11th, 81st, and 82nd, were from Africa. By 1945, the 14th Army had become highly specialized with tankers, sappers, airborne troops, long-range penetration brigades, and a host of other military job descriptions.

The new 14th Army, forged into a potent weapon in the jungles and hills around Imphal, had spent late 1944 and early 1945 chasing the Japanese across central Burma to the mighty Irrawaddy River. In truth, Slim had hoped that the new Japanese commander of the Burma Area Army, General Heitaro Kimura, would mount a typically fanatical defense of the Schewbo Plain, allowing 14th Army to surround and annihilate Japanese forces there.

Seeing what had happened to the Japanese 15th Army around Imphal, where it had attacked and fought beyond all hope of victory, Kimura decided to fight a delaying action on the Schewbo Plain and instead gathered his strength on the Irrawaddy. He

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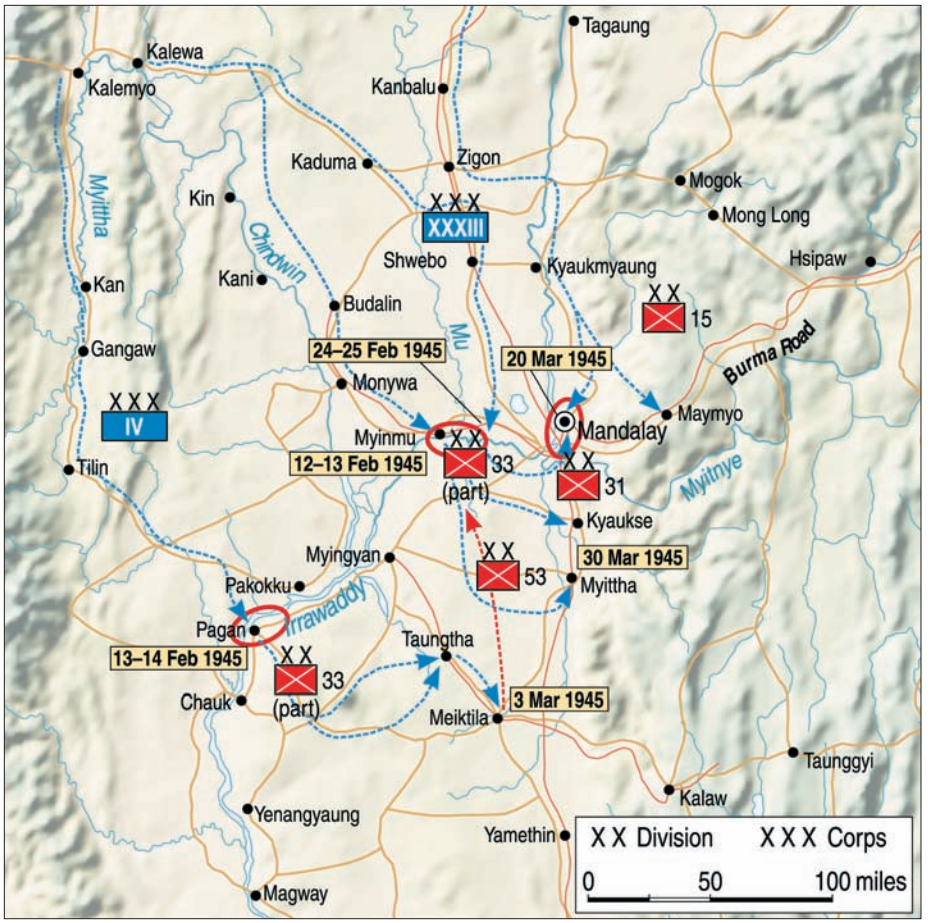

LEFT: Advancing from the north, 4 and 33 Corps strike Japanese forces at Pagan and Myinmu before continuing on to take Meiktila and Mandalay. ABOVE: From Mandalay, 4 Corps would push south toward Rangoon while elements of the British 15th Corps would make an amphibious assault on the city.

would fight for the west bank but believed the primary battle should take place along the east bank of the river. Kimura's tactics were unusual for a Japanese commander, but they were sound.

As for Slim, an all-out Japanese defense on the Schewbo Plain would enable British mechanized units to envelope enemy forces, who would be pinned in the open and bombarded from the air.

Battered and Beaten: The Japanese

Besides, at Imphal, the Japanese 15th Army had lost its edge. The 15th, 31st, and 33rd Divisions, at the very end of a long line of supply, had been impaled against British defenders who were dug in, could count on regular air support and aerial re-supply, and were commanded by General Slim, who absolutely refused to consider the possibility of defeat in the battle for Imphal.

These Japanese divisions were now at about half strength, with the remaining troops wracked by malnutrition and dysentery. Morale was low. Three other divisions—the 2nd, 49th, and 53rd—were also on hand. Reinforcements might be found among the Japanese 33rd Army to the north, then battling the Americans and Chinese, and the Japanese 28th Army at Arakan in the south. There were also scattered units of Subhas Chandra Bose's Indian National Army fighting on the Japanese side.

The key to Kimura's position was Meiktila, about 50 miles south of Mandalay. The town was a road and rail hub through which Japanese supplies to the north must flow. Without Meiktila, Kimura's position in Mandalay and central Burma was untenable.

Slim understood that Kimura and the Japanese 15th Army would have no choice but to mount a fanatical defense on the Irrawaddy line, and he was happy to fight them there—only he did not intend to simply batter his way through Japanese defenses. Slim's plan, Operation Capital, concentrated on Meiktila.

In the north, 33 Corps would drive down the east bank of the Irrawaddy to Mandalay and pin Japanese forces in the central Irrawaddy River area. This was just a feint. The real thrust—the "vital thrust," as Slim called it—would occur south at Pakokku. Here, 4 Corps would cross the Irrawaddy and then dash 50 miles east to Meiktila. They would be tethered to the rest of 14th Army via aerial resupply, and therefore capturing a pair of airfields northeast of Meiktila was a key objective.

Wrote Slim, "If we took Meiktila while Kimura was deeply engaged along the Irrawaddy about Mandalay, he would be compelled to detach large forces to clear his vital communications." Thus, Slim hoped the Japanese would once more impale themselves on British defenses, this

time in the jungle around Meiktila.

The able General Frank Meservey commanded 4 Corps. Meservey had seen extensive action in Africa, Ethiopia, Libya, and Egypt before being sent to India in 1942. He commanded the 7th British Division during the failed Arakan offensive of 1943 and during the battle of the Admin Box, where he was surprised and badly mauled but held on tenaciously until Japanese forces withdrew. For Slim, he was the only man to command the dash to Meiktila. He wrote that Meservey "had the temperament, sanguine, inspiring, and not too calculating odds that I thought would be required for the tasks I designed for 4 Corps."

The corps comprised Meservey's 7th British Division, the Leshai Brigade, the 14th East Africa Brigade, the 255th Armoured Brigade, and the 17th Indian Division. The 17th Indian Division was commanded by General David "Punch" Cowan. To him fell the task of taking Meiktila (the 255th Armoured Brigade would swing north and then east to the airstrips) and then holding the town against the expected determined Japanese counterattacks.

Across the Irrawaddy

The first step was to get across the river. The British 7th Division would open Operation Capital by crossing the Irrawaddy and establishing a bridgehead on the east bank. The 33rd Indian Brigade would be the first across while to the north and south the 28th East African and 114th Brigades would make noise and otherwise distract the Japanese. Prior to the actual attack, the brigades trained for a night crossing. An impressive flotilla of 120 boats and 18 rafts was assembled. These would ferry the 33rd Brigade across one battalion at a time.

The operation began in the early morning hours of February 14. Even though the crossing ran into myriad problems—units becoming lost in the dark, boats drifting downstream, and heavy fire once the Japanese and Indian National Army troops realized they were under attack, most of the brigade was ferried to the east bank of the Irrawaddy by the end of the day; the nearby village of Nyaungu was in British hands.

Japanese forces around Nyaungu and to the north and south pulled back, leaving the eastern bank of the river to the British. Meservey ordered the 17th Indian Division and 255th Armoured Brigade to be brought across. It took a week to bring these forces to the east bank and to accumulate supplies.

But Meservey and 4 Corps had time because the Japanese seemed paralyzed. As the operation unfolded before them, there was considerable disagreement among the Japanese high command as to British intentions. It was not until 4 Corps took Thabutkon and pushed east that Kimura determined the British were mounting a major effort against Meiktila.

The city and its environs were commanded by General Tomekechi Kasuya. He had

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ABOVE: A British convoy from the 63rd Motorised Brigade advances from Myingyan toward Meiktila, March 1945. RIGHT: Maj. Gen. David T. Cowan, commanding the 17th Indian Division, confers with some of his officers. The British recapture of Burma saved India from Japanese invasion. OPPOSITE: British soldiers move quickly past a dead Japanese soldier in an overrun Japanese position near Yindar, 12 miles from Meiktila, May 1945.

more than 12,000 men under him, but these were mostly rear echelon troops and independent defense battalions. However, as the crisis worsened, Kimura rushed reinforcements to the area, including two line infantry battalions, an artillery regiment, and an antitank company. Contrary to British expectations, Meiktila would be well defended.

The Vital Thrust to Meiktila

By the time Kimura figured out what Slim's intentions were, 4 Corps was ready to advance. Before them was open country and an old British imperial road suitable for large mechanized columns.

Slim's plan called for an advance in stages. The 4 Corps advance was directed about 20 miles east to Taungtha. From there the units could pivot northeast toward Mandalay, 35 miles away, or southeast to Meiktila itself, 20 miles distant. The advance would be under the direction of General David Cowan, as his 17th Indian Division would be in the lead.

The drive to Meiktila began on February 21. Until this point the campaign had gone smoothly, but now 4 Corps and 14th Army were threatened when Generalissimo Chiang Kai-Shek demanded the return of all Chinese forces in Burma, including supporting transport aircraft. Those aircraft were vital to Slim's aerial resupply. "The loss of the aircraft would have been fatal to my operations," he wrote.

Admiral Louis Mountbatten, the Supreme Allied Commander in South East Asia, personally intervened, both with Chiang and with U.S. Army Chief of Staff General George Marshall, and while they could not stop the withdrawal of Chinese forces, a move that would free up Japanese troops to come south, the American transport aircraft were saved from Chiang.

The first phase of the advance went well. The Japanese were in full retreat and could not possibly stand against a British mechanized attack through open country, though they did leave behind the usual booby traps, snipers, and suicide squads. The 4 Corps troops advanced on a two-brigade front with the 48th Brigade in the north and 255th Armoured Brigade in the south. They took Hinawdwin on February 23 and Taungtha on the 24th. General Cowan left the 48th Brigade at Taungtha, where it was resupplied by air. The 4 Corps spearhead raced south and the 48th Brigade now brought up the rear as the 99th Brigade was flown into Taungtha.

On February 27, they encountered a Japanese position at Ledaingzin, but Cowan ordered the 63rd Brigade to hook north around it. On the 28th they were five miles from Meiktila.

Meiktila is wedged between a pair of man-made lakes, one in the north and one in the south, so any assault on the town would have to be launched on an east-west access. As such, Cowan split his force in three. The 48th Brigade remained on the main road to Meiktila. At the same time,

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the 63rd Brigade split south about four miles across the eastern rail spur to the road leading southwest out of Meiktila. Meanwhile, the 255th Armoured Brigade executed a long left hook around Meiktila and the northern lake, nearly 10 miles in all, cut the north and northeastern roads out of town, and established itself on the eastern edge of the town on March 1.

The assault on Meiktila began that day, with the 48th Brigade pressing Japanese defenses in the west. But this was just to hold them in place. The main action took place in the east where the 255th Armoured Brigade fought its way into town. The Japanese contested every block. Slim noted that there was heavy machine-gun and antitank fire. The advance was slow, and pockets of Japanese were left behind the line of advancing tanks.

As night fell, Cowan chose to pull his tanks out of Meiktila, leaving behind only strong infantry patrols, for fear Japanese suicide bombers would come out of the

rubble and assault the tanks. Though it meant they would have to fight over much of the same ground in the morning, Slim supported the decision.

The next day, Slim actually flew into Meiktila in an American general's plane (the RAF, citing safety concerns, had refused to fly him), from which he observed the battle. Once more the fighting was house to house, usually featuring a squad clearing a house with support from a Sherman tank. Slim took a few pages of his memoir to describe one such operation by a platoon of Gurkhas, concluding, "It was all very businesslike." On March 2, the 48th Brigade pushed into Meiktila proper from the west. The added pressure was too much for the Japanese and drove them to the shores of the south lake. Slim wrote, "Meiktila was a shambles, and by six o'clock on the evening of the 3rd, it was ours."

The Spear at Meiktila

Now it was time for Cowan and 4 Corps to hunker down for the inevitable Japanese counterattack. On an operational level Cowan played defense, but tactically 4 Corps went on the offensive. Cowan eschewed static defenses in favor of Slim's doctrine of loosely held lines and aggressive patrols. His troops, in the words of Slim, "struck out in all directions. Infantry and tanks went out daily to hunt, ambush and attack approaching Japanese columns … in a radius of twenty miles of the town."

British troops were greatly aided by Allied airpower, which had almost complete control of the sky. Control of the air was absolutely vital, as 4 Corps was tethered to the 14th Army by aerial resupply alone, through the airstrip northeast of town.

General Kimura was well aware of Cowan's dependence on aerial resupply. He could never hope to overpower fully supplied British forces, not with the bedraggled state of his army. As such, Kimura made the airstrip the focal point of his counterattack. On paper Kimura had powerful forces at his disposal. The elite Japanese 18th Division, which had spent the last year battling Stilwell's Sino-American force, was rushed south, save for one battalion. A regiment each from the Japanese 2nd, 33rd, and 53rd Divisions was also commandeered for the counterattack.

These were supported by the remnants of various artillery and support units, including a tank regiment. Spare infantry battalions would also be gotten from other divisions as the battle unfolded. Kimura did not direct the operation himself but instead placed General Tadakatsu Honda in command.

Honda deployed the Japanese 18th Division north of Meiktila to defend supply lines to Mandalay. With the Japanese 49th Division he planned to attack the lines of communication among British forces in Meiktila. The 49th Division would attack the Irrawaddy bridgehead and attempt to destroy it, though given the severe beating the division had taken over the last few months, it was unlikely it could overrun the bridgehead. Meanwhile, the various battalions and regiments to the east would attack Meiktila.

Over the course of the next few weeks, the Japanese 49th Division's efforts against the Irrawaddy bridgehead, defended by the 28th East African Brigade, never amounted to more than a nuisance. The division simply lacked the strength to dislodge the Africans, though it did constantly harass their positions.

At the same time, Japanese forces attacked Meiktila. There was no dramatic beginning of the battle, just a gradual building of pressure. British defenses were strong and flexible. Cowan's 99th Brigade occupied the town proper. At each of the six roads leading out of Meiktila was an infantry company. Behind these were mobile forces that would push out and engage Japanese troops as they converged on the town.

The first Japanese effort came from elements of the 49th Division, which pushed against the south-southwest sector of Cowan's lines. The attack was disrupted by British columns, which swept out of Meiktila and engaged Japanese forces on March 5. Other spoiling attacks followed. One such column was composed of two infantry companies, a troop of armored cars, an antitank battery, and an artillery battery. Launched on March 8, this column drove south to Pyabwe and cleared several villages of Japanese forces before returning to the Meiktila perimeter on the 10th.

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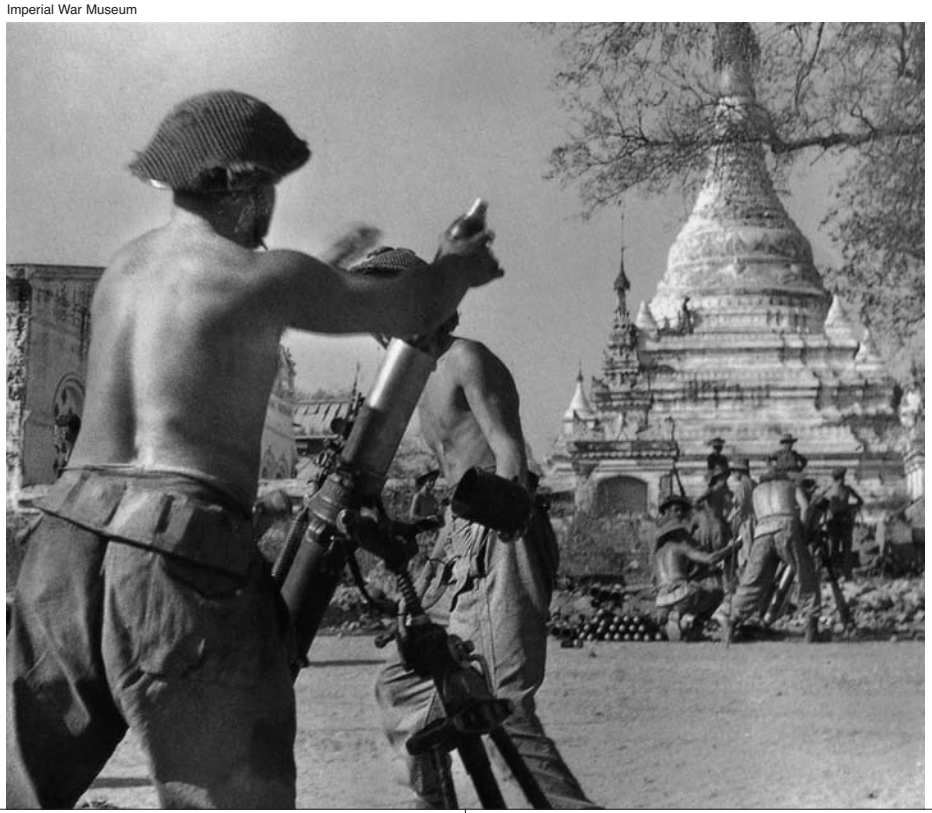

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ABOVE: Japanese dead fill a ditch after an unsuccessful counterattack at Meiktila, March 1945. OPPOSITE: With a sacred pagoda in the background, British mortarmen of the West Yorkshire Regiment (14th Army) shell Japanese positions in Meiktila, February 28, 1945.

The next week, most of the 63rd Brigade, responsible for the northern approaches, attacked up the road to Mandalay in an effort to locate Japanese artillery batteries that had been shelling the airfield. Several guns were located and destroyed, and more than 300 Japanese troops were killed.

The Japanese efforts around Meiktila were a bust, hampered by exhausted units and aggressive British tactics. Further hampering the attacks was British intelligence. In his memoirs, Slim related how British radio intercept units had busily triangulated the location of Japanese tactical and operational headquarters. "With the help of air reconnaissance and informers, we were even able to pinpoint some of the more important headquarters," he wrote.

Japanese headquarters were subject to artillery and aerial attack, and in some cases, attack by flying mechanized columns. "We followed them when they moved, and bombed and harried them when they halted," said Slim. The net effect of these operations was to disrupt Japanese communications and prevent orders being issued by commanders, many of whom were too busy simply trying to stay alive to make decisions.

Beginning on March 15, elements of the Japanese 31st Division hit the eastern airfield. The first effort was launched by a single battalion, which advanced to the jungle edge and brought the airfield under fire. For the next three nights the Japanese attacked British positions without success, though they did destroy one plane and some fuel tanks.

The last attack was pushed away from the British perimeter by a furious counterattack, which destroyed the Japanese battalion as an effective fighting force. Over the course of these three days, British and American transports were flying in reinforcements under fire, in this case the 9th Brigade, which on March 18 took over the defense of the airfield.

Two more Japanese battalions joined the attack and kept the airfield under constant fire. Japanese artillery was especially effective, accurate, and well concealed. Spotting Japanese guns, in the words of an artillery spotter named Jack Scollen and quoted by the historian Louis Allen, "required vast amounts of patience and not a little luck because their guns were almost always dug deep down under cover where they could not be seen from the air and even their flashes were difficult to spot."

The guns were also effective against British tanks, several of which were inevitably knocked out with each British counterattack. Another danger to British tanks was Japanese mines—in this case, human mines—suicide soldiers who would hide in a ditch with an artillery shell and a rock and wait for a tank to drive overhead.

Thus the battle for the airfield was fought, with Japanese artillery barrages rolling across the field followed by Japanese attacks, some of which actually managed to occupy the runway for a time, followed by British counterattacks, which inevitably drove the Japanese back into the jungle. The constant fighting for the airstrip rendered it inoperable for a few days, and until it was repaired the 17th Indian Division was reliant on airdrops for its supplies.

However, the combination of British infantry, armor, and air power proved irresistible and gradually pushed the Japanese 18th Division away from the airstrip. By March 29, the Japanese, with more than 2,500 dead on and around the airstrip, realized they had lost the battle and pulled back.

While the battle for Meiktila was being won, General Meservey detailed the British 7th Division to open up a land bridge to Meiktila. This entailed the clearing of hills just off the bridgehead and the capture of Taungtha to the east.

The town fell without too much trouble, but it took the British 7th Division a week to clear the Japanese out of the hills to the north and east. To do so required taking the town of Myingyang. The division was on the outskirts of the town by March 18, but as with all Japanese units, in this case elements of the Japanese 15th Division, forces in Myingyang mounted a fanatical defense. The British 7th Division needed four days of close quarters, house to house fighting to secure the town.

To support Myingyang, Honda sent scattered Japanese and Indian National Army units against the 7th Division's

bridgehead at Chaulk, but these attacks were easily beaten back. With the Japanese cleared out of Myingyang, their counterattack at Chaulk halted, and with the town of Taungtha in British hands it was only a matter of time until Meservey opened up a land route to Meiktila.

Said Slim, "By the last week in March, the Battle of Meiktila had been won. It had been intended as the decisive stroke and I had subordinated everything to its success, yet it had been only half of the great Battle of Central Burma. That other half had been fought out simultaneously around Mandalay."

The Liberation of Mandalay

While the battle for Meiktila was being developed and fought, 33 Corps was crossing the Irrawaddy and preparing for a drive on Mandalay. The British 19th Division was 40 miles to the north, with the town of Madaya lying between it and Mandalay. The river turned west below Mandalay, and 20 miles away was the British 2nd Division. A further 20 miles west was the British 20th Division, which would cross the Irrawaddy and fight east to Kyasuke.

With Meiktila engaged and Mandalay about to be attacked, Slim felt the decisive part of the Irrawaddy campaign had arrived. "It was not Mandalay or Meiktila that we were after but the Japanese army," he wrote. The British 19th Division was commanded by Thomas Winford Rees, an experienced general who had led divisions in Ethiopia and Libya, but in Libya he had been relieved of command after clashing with his corps commander. Fortunately for Slim and the British cause in Burma, Wavell offered him command of the British 19th Division in 1942.

North of Mandalay, the remnants of the Japanese 15th Division, badly mauled in the previous months' fighting, was unable to slow the British advance. Two British brigades pushed toward Mandalay "like a rush of waters over a broken dam," according to Slim. They did not slow until March 4 at Madaya, moving to the south bank of the Chaungmagyi River. Even in this defensible position Japanese resistance was easily swept aside, and by March 8, the British 19th Division was outside Mandalay.

By attacking from the north, the British 19th Division faced two tough obstacles. The first was Mandalay Hill, a rise just outside the city topped by Buddhist temples and laced with catacombs. Elements of the 98th Brigade attacked the hill on March 9 and pushed their way up the steep slope. As usual the Japanese contested every inch, and the Gurkhas leading the assault had to clear them out with bayonets. Even after the hill was cleared, the Japanese in the tunnels below held out. British troops above mercilessly rolled gas barrels into the catacombs and set them afire.

The second obstacle was Fort Dufferin, a Buddhist temple with high, medieval-style walls and a moat. Within the fort were a large park and the palace of the last Burmese king. The British refused to bomb the fort because of its religious significance, though strafing runs were permitted, and British troops fought their way inside Mandalay and surrounded Fort Dufferin. They then set about the task of breaching the walls. Slim compared the effort to a battle in the Sepoy Mutiny.

Throughout March 18 and 19 British troops mounted forays across the moat, including a clandestine night attack in which Gurkhas tried to scale the walls, but these efforts were all repulsed. After conventional bombing attempts on the wall failed, British and American flyers then tried skip-bombing the wall, bouncing bombs off the moat and smashing them into the bricks. This opened only a small breach, and it would have been suicidal for British troops to force their way through. "I was prepared to wait," said Slim. The Japanese, however, weren't, and on the night of March 19-20, they withdrew from the fort.

The Liberation of Rangoon

Meiktila, Mandalay, and central Burma were British once more, but Slim had one more goal: Rangoon, nearly 300 miles to the south. Between Slim and his ultimate target were the Japanese 28th and 33rd Armies. The shattered remains of the Japanese 15th Army plus the 56th Division were held in reserve. The units of the Japanese 28th and 15th Armies were depleted and lacked transport and guns, but they could still fight. General Honda would once again command the Japanese defense.

Also confronting Slim and the British 14th Army was the monsoon, seven or eight

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ABOVE: During Operation Dracula, an amphibious force of elements from the 26th Indian Division moved up the Rangoon River to take the city on May 3. By then the Japanese had pulled out of the city. RIGHT: Sikh troops of the 19th Indian Division battle for Fort Dufferin. A formidable stronghold a mile square with 30-foot-tall ramparts and a 70-yard-wide moat, the fort fell after 12 days of heavy fighting. OPPOSITE: Soldiers of the 19th Indian Division pour fire into Japanese positions among the pagodas on Mandalay Hill, March 10, 1945.

weeks away. Once this arrived, central and southern Burma would turn to mush, and a drive on Rangoon would be impossible. In his orders for the Rangoon operation, Slim wrote that his goal was "the capture of Rangoon at all costs and as soon as possible before the Monsoon."

Operation Extended Capital, as it was called, fell to Meservey and 4 Corps. It was closest to Rangoon, and the 255th Armoured Brigade would be an important weapon in the push south. In conjunction with 4 Corps, elements of British 15 Corps would make a landing just west of Rangoon at Elephant Point in an attempt to take the city before the Japanese could entrench themselves there. The amphibious assault, called Operation Dracula, was planned for early May.

With the 20th Indian Division in the north and the British 7th Division in the south clearing out pockets of Japanese resistance along the Irrawaddy, 4 Corps made ready. The success of the drive would hinge on the ability of the British to move fast and keep their units supplied. There would be stiff fighting for a trio of towns from north to south, Pyabwe, Toungoo, which was the scene of heavy fighting in 1942, and Pegu. In many ways it was a race to see who could take Rangoon first, 4 Corps or 15 Corps. Slim described the Dracula project as "a hammering on the back door while I burst in at the front."

The drive began on March 30, with the 17th Indian Division and the 255th Armoured Brigade pushing south on a two-brigade front against three Japanese divisions around the town of Pyabwe. Each of the many small villages around Pyabwe was occupied by the Japanese and had to be cleared house by house. There was a particularly vicious battle for the village of Yindow, where the Japanese had concrete bunkers and antitank guns. For three days the British tried to clear it.

Finally, Slim ordered the 99th and 63rd Brigades to bypass Yindow and push south, leaving the village to the British 5th Division, which finished the job. On April 10, the 17th Indian Division was just outside Pyabwe. Meservey sent the 255th Armoured Brigade around the flank, and it entered Pyabwe from the south. By the 11th, the town was in British hands. In the course of the fighting, three Japanese divisions, the elite 18th, 49th, and 53rd, were annihilated. The entire Japanese 28th Army was destroyed.

The door had been kicked in, and the way to Rangoon lay open. "They were off!" Slim joyously wrote. The advance was taken up by the British 5th Division, which gobbled up ground a dozen miles at a time. Realizing that Honda could not possibly hold, Kimura gathered troops from all over Burma and thrust them in front of the advancing British. Japanese reinforcements were harried and ambushed the entire way by Karen guerrillas, who themselves loathed the Japanese and were assisted by British and American advisers. These reinforcements were not able to stem the tide of the advance. Some units tried to sever British supply lines, but these efforts were easily

Imperial War Museum

stopped by Rees and 33 Corps, which was holding the line east of Meiktila.

The British had plenty of transport, tanks, and air support and were in flat, open country. On April 22, the 5th Division fought its way into the town of Toungoo, where Honda kept his headquarters. The British captured the headquarters, but Honda escaped, though he was incommunicado for several days. British forces were now a mere 160 miles from Rangoon. The next day, the 5th Division advanced a staggering 30 miles south to Pyu, where it accepted the surrender of the 1st Division of Bose's traitorous Indian National Army. Slim put the prisoners to work repairing the local airfields, where supplies would now be flown in to support the advance.

From there, the 17th Indian Division assumed the lead. In the next two days it advanced 20 and then 15 miles, easily sweeping aside all resistance. By then 4

Continued on page 98

THE *TIME* MAGAZINE ARTICLE WAS titled "It Flies!" It was a note of triumph and vindication, but also an epitaph, of an aircraft that was five years in the making—the "Spruce Goose," a plane that should not have existed. Many things were against it, even, to a certain degree, its creator.

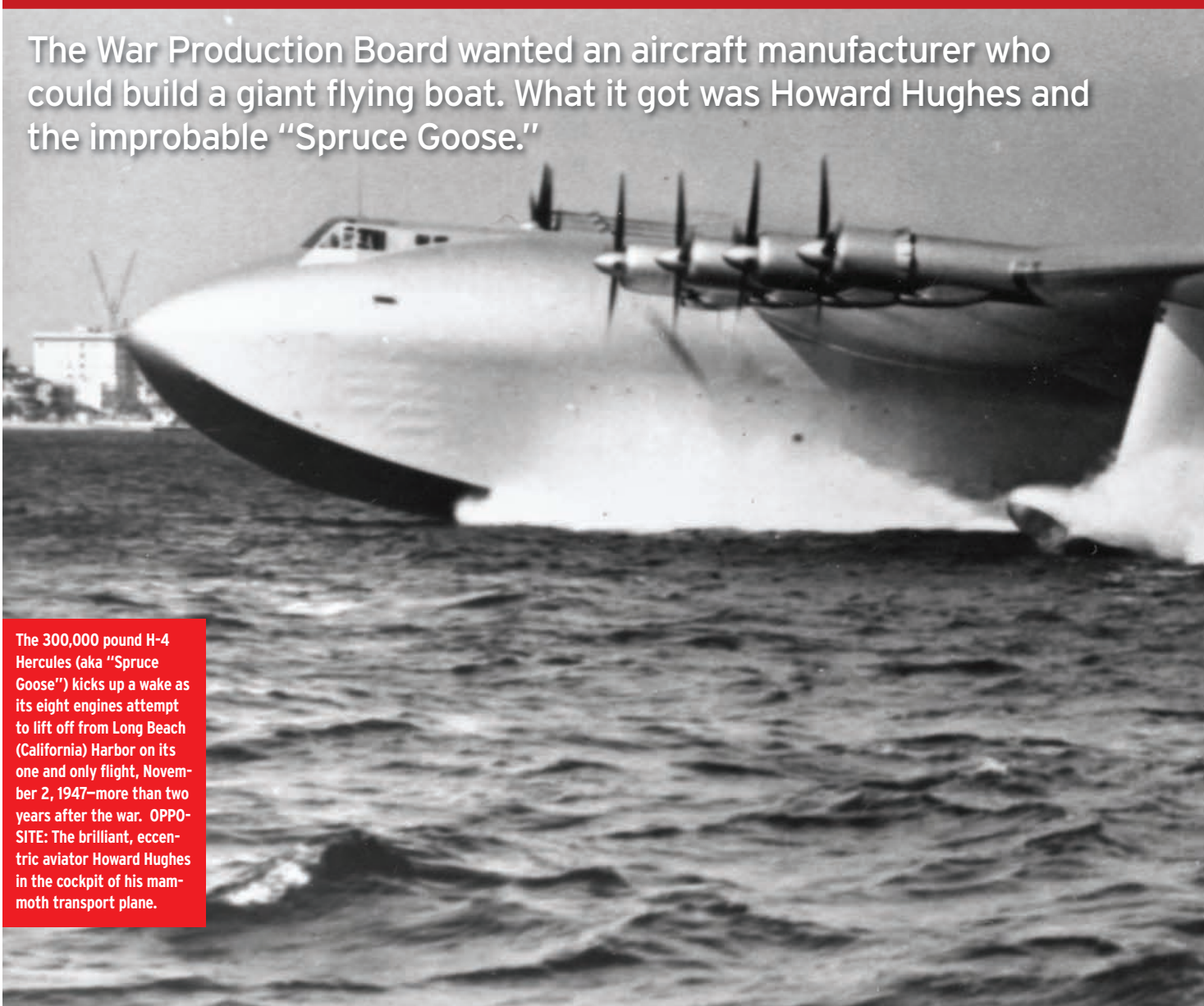
The week of May 4-10, 1942, saw the loss of 300,000 deadweight tons of Allied shipping to German U-boats, loss rates that were twice new ship launches. Imaginative use of America's industrial and technological strengths to deal with such problems was the mission of the War Production Board's planning committee.

On May 22, F.H. Hoge, Jr., a member of the committee, proposed the use of extremely large flying boats, pointing out that current aircraft on transoceanic flights devoted 38 percent of their takeoff weight to fuel and oil, but that a 300,000-pound plane would use only 20 percent, and, that since flying boats did not require landing gear, an additional 15 percent in aircraft weight would be saved.

But it was the industrialist Henry J. Kaiser who saw the opportunity. He approached such problems with big schemes, limitless energy, and a genius for organization and improvisation. He had moved from constructing mammoth hydroelectric dams, such as the Hoover and Grand Coulee, to shipbuilding in 1941.

Faced with the terrible loss of shipping that was threatening the Allies, Kaiser suggested two possible solutions. One was to convert some of his shipyards to the mass production of giant seaplanes. The other was to mass produce antisubmarine aircraft carriers on Liberty Ship hulls. In the latter case, Kaiser facilities would produce some 70 escort carriers during the war.

The War Production Board wanted an aircraft manufacturer who could build a giant flying boat. What it got was Howard Hughes and the improbable "Spruce Goose."



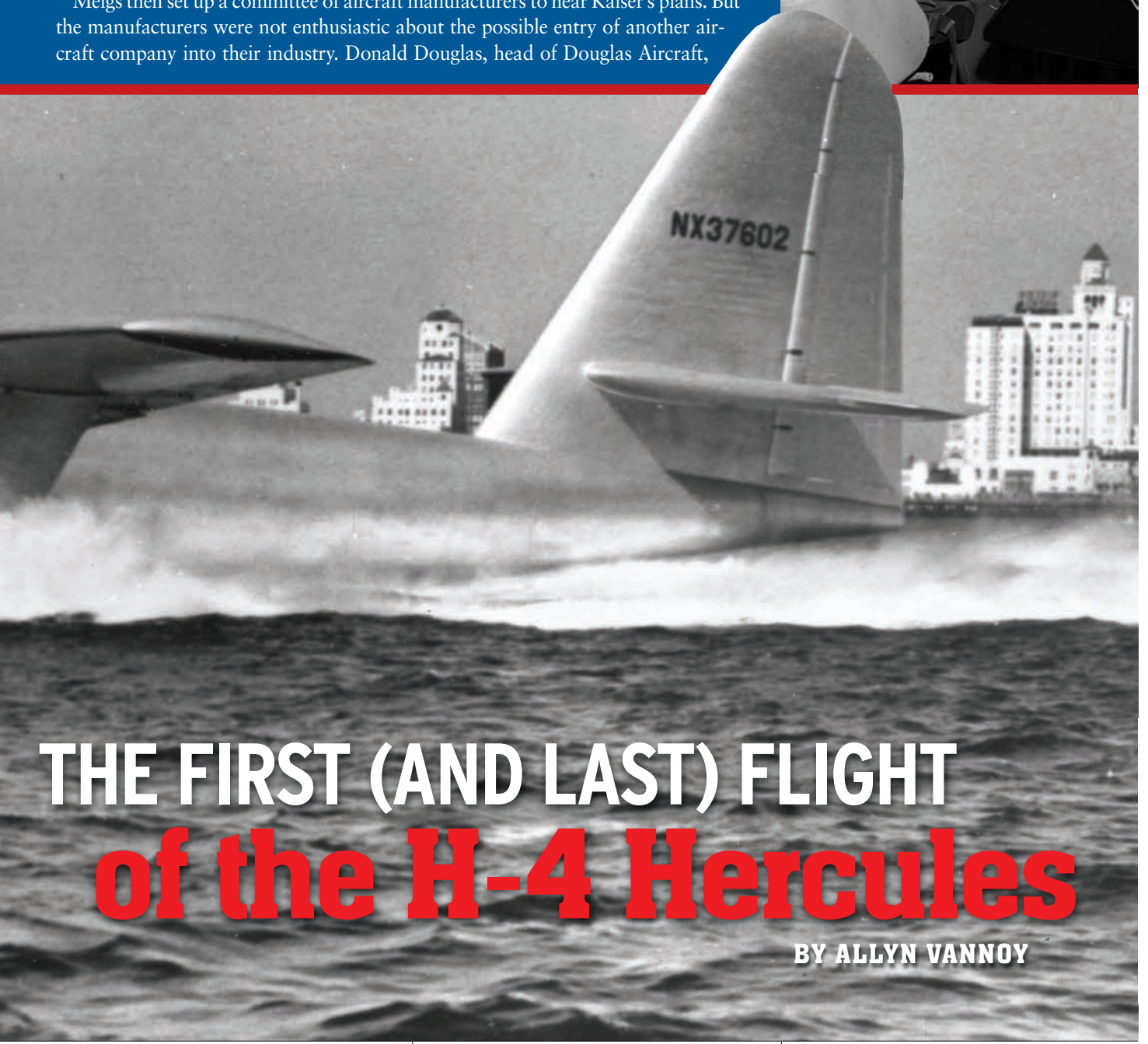
The 300,000 pound H-4 Hercules (aka "Spruce Goose") kicks up a wake as its eight engines attempt to lift off from Long Beach (California) Harbor on its one and only flight, November 2, 1947—more than two years after the war. OPPOSITE: The brilliant, eccentric aviator Howard Hughes in the cockpit of his mammoth transport plane.

But in the summer of 1942, after the Germans sank 681 Allied ships in the first seven months of the year, the idea of flying boats captured the nation's imagination. In July, Kaiser outlined plans for flying boats of 200 to 500 tons and launched a publicity and lobbying campaign telling the press that he envisioned a fleet of 5,000 flying boats.

He followed with a proposal to the Army and Navy. And, though they considered it impractical, they knew that the public and some members of Congress believed otherwise. The Aircraft Division of the War Production Board was asked to review Kaiser's proposal.

Merrill C. Meigs, deputy director of the board's Aircraft Division, told Kaiser that it took more than four years to develop a new aircraft, but Kaiser was undaunted. Regarding possible resource requirements, Kaiser said he would build a steel foundry and educate and develop technicians and engineers in support of his proposal.

Meigs then set up a committee of aircraft manufacturers to hear Kaiser's plans. But the manufacturers were not enthusiastic about the possible entry of another aircraft company into their industry. Donald Douglas, head of Douglas Aircraft,



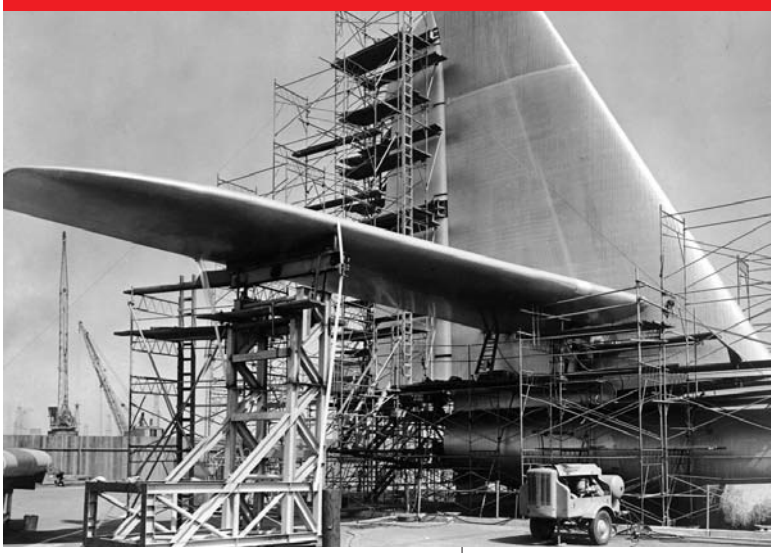
THE FIRST (AND LAST) FLIGHT of the H-4 Hercules

BY ALLYN VANNOY

All photos: National Archives

advised that to prepare a preliminary design for a 200-ton aircraft would require at least 100,000 engineering hours.

During July and August, Kaiser made two proposals—mass production of the Martin Mars flying boat and the design and development of the 200-ton flying boat—both taken under consideration by the War Production Board, headed by Donald Nelson. The Mars, first flown in June 1942, was a four-engine, 200-foot wingspan, 75,000-pound aircraft capable of carrying a 32,000-pound payload, or 133 troops, over a range of 5,000 miles. But Nelson was concerned about the possible impact on existing programs by manufacturers working at full capacity.



ABOVE: An aerial view of the H-4 Hercules shows its impressive size. The plane was almost 219 feet long from nose to tail and had a wingspan of 320 feet. BELOW: The tail of the H-4 was 85 feet—over five stories—high. The tail was deemed unstable after the initial flight according to some accounts.

Kaiser then approached the well-known aviator, Howard Hughes, with a pitch to jointly develop the large flying boat. Though aware of the problems in designing a new aircraft, Hughes was intrigued with the possibility of coming up with the world's largest airplane, especially after being told that the Douglas, Martin, and Northup aircraft companies all thought that it couldn't be done.

By August 22, 1942, after several weeks of discussion, a handshake agreement was reached—Hughes would design the plane and Kaiser would build it. Subsequently, a written contract between Hughes and Kaiser called for the design and construction of 500 aircraft.

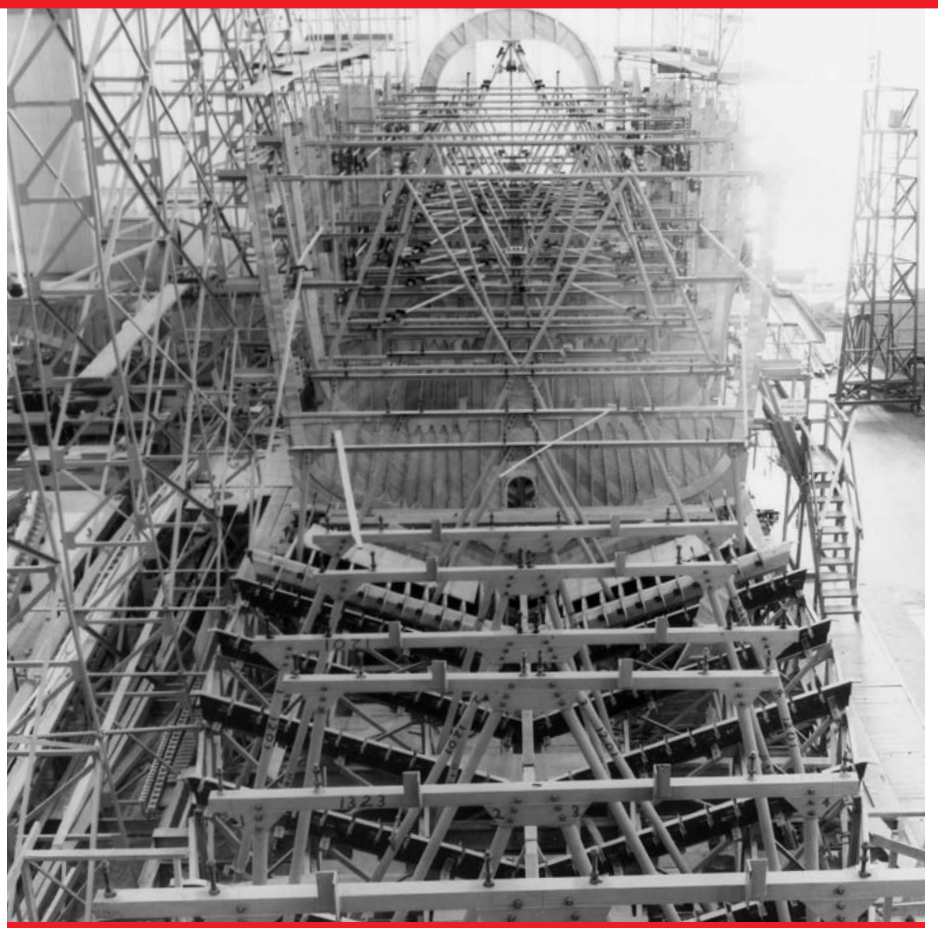
On September 17, Kaiser-Hughes received authorization to proceed with design engineering and construction of three prototype flying boats. Among the conditions imposed were that all construction would use a minimum of any critical or strategic materials, that no engineers or technicians working for manufacturers already engaged in the war effort could be employed without the permission of their employers, that they could spend no more than $18 million, and that the program would be limited to 24 months. But the Kaiser-Hughes partnership soon dissolved and Hughes proceeded alone. During the first seven months of the project, Hughes acted as general manager. Kaiser, unsuccessful in his attempt at combining forces with Hughes, had nothing more to do with the project except to help out with providing a few personnel.

Design presented several challenges— such a plane would require an overhang wingspan 50 percent greater than the Martin Mars, which would present new torsional, wing flutter, vibration, deflection, and control problems never before tested.

Seven aircraft configurations were drawn up, including twin-hull and single-hull designs with four to eight engines. Hughes settled on a design gross weight of 400,000 pounds. This number was reached based on creating the largest aircraft possible using eight of the largest engines then under development. Eight was considered the maximum number of engines that seemed practical.

In the final design, the HK-1, as it was called, would be built mostly of wood, its elevators and rudder fabric covered. It was referred to as the "Flying Lumberyard" by critics, while Hughes detested the other nickname, "Spruce Goose." To him she was "The Flying Boat," though one story was that Hughes's nickname for the plane was the "Jesus Christ," since those were the first words out of the mouths of individuals when Hughes took them into the hangar where the plane was being built.

The giant airplane was made mostly of birch, not spruce, with a wingspan of 320 feet,



ABOVE: The wooden fuselage of the H-4 under construction. Innovative materials, including a new type of glue, had to be developed for the project, which cost more than $18 million. BELOW: Power lines needed to be removed for the fuselage's 28-mile journey in June 1946 from the Hughes Aircraft Company factory in Culver City to Pier E in Long Beach for final assembly. A blimp overhead follows the progress.

a vertical fin of 85 feet, and a weight of 300,000 pounds. It was designed to carry 120,000 pounds of cargo, or 750 combat-ready troops, or two Sherman tanks. Its eight massive engines, with 17-foot propellers, generated over 3,000 horsepower each. It was to have a range of 3,000 miles at a speed of approximately 200 mph.

During the design phase, Hughes was rarely seen by other members of the team. He was a night owl, had a penchant for secrecy, and was involved in multiple simultaneous projects, as well as a reluctance to delegate authority. Key decisions were delayed for days in some cases because of problems contacting Hughes. Even as the project began to fall behind schedule, Hughes refused to relinquish control. He continued to be involved in the smallest of details but then would disappear for weeks.

Despite Hughes's management style, some progress was made during 1943 on the aircraft's design, but major problems resulted from combining wood construction with the plane's giant size. Elaborate and costly jigs had to be devised and new glues and gluing processes developed. Development of new tools, materials, and methods was by trial and error, consuming time, material, and money.

Years later Hughes partially blamed delays on the requirement that he build the plane of nonstrategic materials; however, government records indicate that Hughes was given the option of switching to metal, but declined. Given the progress that had been made in pioneering innovative methods in wood construction, and Hughes's attraction to the smooth finish of the Duramold plywood used, he was reluctant to change materials. Hughes was meticulous regarding materials, workmanship, and appearance.

Numerous elements lined up against the project. In October 1943 the Aircraft Production Board proposed cancelling the contract because it offered no useful contribution to the war effort. In early 1944 it was determined that successful development of the Mars flying boat would make the HK-1 unnecessary. In March 1944 the

Cargo Plane Committee of the War Production Board was of the opinion that a change in the character of the war had abated a need for a giant cargo aircraft.

The War Production Board dispatched Grover Loening, seaplane designer and consultant to the board, to evaluate the plane's design. But his report called the plane's design amazing and the most remarkable flying boat he had ever seen.

On March 17, Hughes advised the board against stopping construction,saying, "If we are going to keep abreast of development in aviation, then we must reconcile ourselves to the necessity of building bigger and bigger airplanes."

Despite the many efforts to kill the project, highly placed administration officials renewed it, though the plan was reduced to one plane.

At the same time that the HK-1 was under development, Hughes was also active in pushing development of the Lockheed Constellation—a postwar, four-engine transport and civilian airliner.

The project continued into 1947, when a Senate committee began investigating Hughes for defense contract irregularities. Hughes was called before the Senate War Investigating Committee in the late summer of 1947. During testimony Hughes stated, "The Hercules was a monumental undertaking. It is the largest aircraft ever built. It is over five stories tall with a wingspan longer than a football field. That's more than a city block. Now, I put the sweat of my life into this thing. I have my reputation all rolled up in it and I have stated several times that if it's a failure, I'll probably leave this country and never come back. And I mean it."

During a break in the Senate hearings, Hughes returned to California to run taxi tests on the renamed H-4 Hercules. On November 2, 1947, the taxi tests began with Hughes at the controls. His crew included Dave Grant as co-pilot, two flight engineers, Don Smith and Joe Petrali, 16 mechanics, and two other flight crewmen. In addition, the H-4 carried seven invited guests from the press and seven industry representatives.

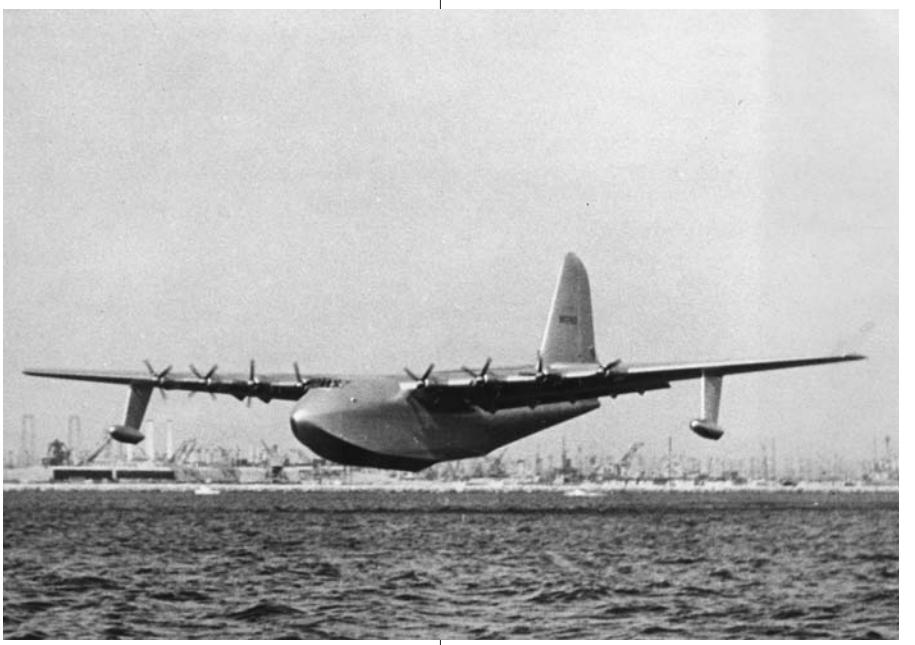
After the first two taxi runs, Hughes made a third and surprised all the onlookers and crew as the Hercules lifted off, remaining airborne at 70 feet off the water at a speed of 135 miles per hour for around a mile. Having proven to his detractors that the aircraft was flight worthy, Hughes felt vindicated in the development of the aircraft and receipt of the government's $18 million funding.

But the flight was not without concerns. Harry Kaiser, engine man, went down to the cargo deck after touchdown and saw the tail twisting around. Bill Noggle, hydraulic mechanic, posted in the tail, reported, "It's about ready to leave us."

After landing, Hughes was asked if he had expected to get the plane airborne. "Exactly," said Hughes. "I like to make surprises." Carl Babberger, Hughes's chief aerodynamicist, stated, "All the factors were present for take-off—a high head wind, the 15-degree flap setting, and a light load. It probably got airborne before he expected it to, but on the other hand it wouldn't surprise me that being under fire from Senator [Ralph Owen] Brewster, he was prepared to gamble. If it took off, fine. If it didn't, fine."

Several months after the test, through a spokesman, Hughes wanted it understood that the Hercules was only a research aircraft. That it would never be used in competition with military or commercial planes, but would help to deal with the problems of large aircraft—that the Hercules would point the way for big planes.

After the test a full-time crew of 300 workers, all sworn to secrecy, maintained the aircraft in flying condition in a huge, $1.75 million, climate-controlled hangar. A million dollars a year was spent maintaining the plane, as the engines were cycled and flight controls exercised weekly. Many modifications were designed and installed. For several



ABOVE: Hughes watches engineer Chal Bowen, October 31, 1947, two days before the flight as the radio operator looks on. Thirty-six people were on board for the test flight. RIGHT: The H-4 Hercules was airborne for about one mile, traveling at 80 miles per hour 30 feet above the water. TOP RIGHT: Hughes, on top of the fuselage, supervises operations to launch his plane from Long Beach. Note the specially constructed, climate-controlled hangar in the background, large enough to accommodate the massive tail.

years the crew expected that it would fly again as several more test flights were scheduled, then cancelled.

There was a great deal of speculation about why the aircraft was never flown again. Some said Hughes was afraid to, but his closest associates denied this.

The aircraft did have its weaknesses. According to one of Hughes's mechanics, "Maybe one of the reasons why they didn't fly it [again] was there was a little fluctuation in the tail, and maybe it wasn't beefed up enough to suit him."

But there was also no reason to continue the project because the need for big seaplanes had evaporated, especially an aircraft made of wood.

Even before the flight Hughes admitted that the plane was too large to be economical. However, claiming there were still research lessons to be learned, he stubbornly kept the work going. But he was distracted by other ventures and increasingly reclusive. After Hughes's death on April 5, 1976, the plane was put on exhibit at Long Beach, California. In 1977, the U.S. Navy considered test flights with the H-4 as part of its research into low-altitude transoceanic flight, but never carried out the tests. The plane was moved from Long Beach to the Evergreen Aviation Museum in McMinnville, Oregon, southwest of Portland, in 1992.

Perhaps the key reason Hughes continued maintenance of the plane was that he saw it as his greatest aviation achievement. Despite being a short flight, the one and only flight of the Hercules may have been Hughes's finest hour. □

THE BATTLE OF GRAIGNES

One of D-Day's lesser known battles was also one of its fiercest.

BY MARTIN K.A. MORGAN

SOME 16 MILLION Americans served during World War II, and tens of thousands of sons of the State of Louisiana served in every branch of the U.S. military. They fought in every theater of operations, but almost 5,000 of them did not return. They perished during bombing missions over Japan and Germany, were lost at sea in the mid-Atlantic and the Pacific, and were killed during ground combat operations in places with names such as Corregidor, El Guettar, Troina, Tarawa, and Cisterna.

Louisianans also lost their lives during the campaign to liberate France. This is the story of two who paid the ultimate price during the D-Day invasion on a little hilltop in the small Normandy village of Graignes.

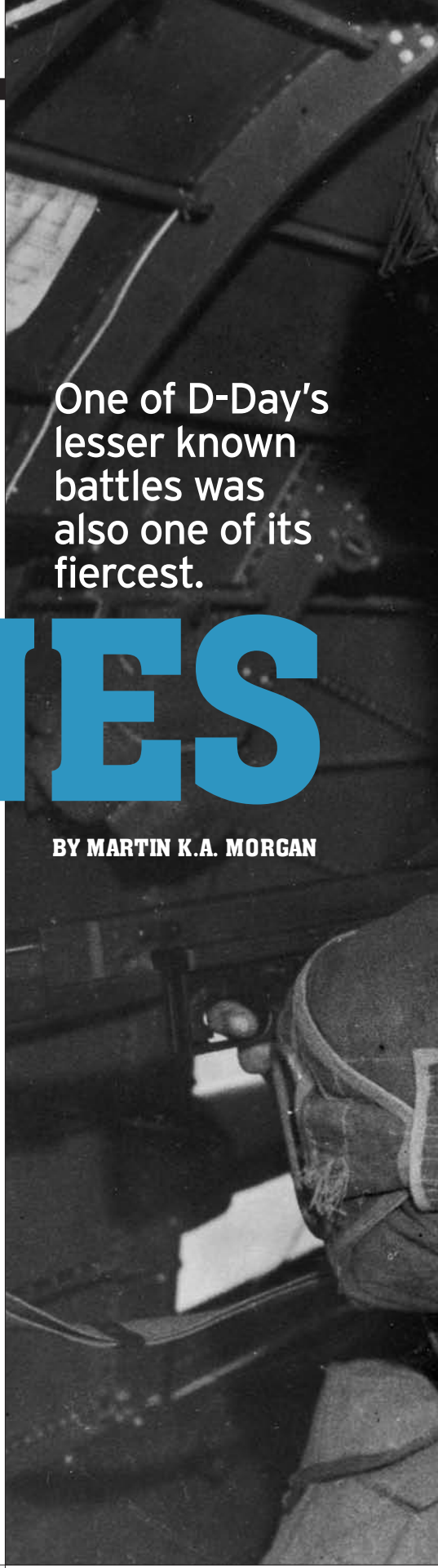
Benton J. Broussard was born on October 16, 1922, to a Cajun family living in the small town of Church Point in Acadia Parish, Louisiana, not far from the city of Crowley. As a child, his native tongue was not English, but French—a common reality among the people of the Atchafalaya basin in those days. In fact, he did not begin to learn English formally until he was forced to do so in middle school. He joined the U.S. Army on May 13, 1941, at Jacksonville Army Airfield, Florida.

George S. Baragona was born in the city of Slidell in St. Tammany Parish on July 24, 1919. There he grew up and attended Slidell High School, where he played almost every sport offered. He was an able athlete in everything, but was a star of the basketball team. After graduation, he worked for a time but then eventually decided to enter the service even before Pearl Harbor. On May 30, 1941, he enlisted in the U.S. Army at the same place where Benton Broussard had just 18 days earlier.

Both Broussard and Baragona made a critical decision after they completed basic training: they chose to join the parachute infantry. Some men did it for the "jump pay"—the extra $50 paid to each paratrooper in recognition of the hazardous nature of the sky soldier's duty. Some men did it for the esprit de corps associated with being in an elite unit, and others did it because they assumed that the airborne would place them in combat sooner than any other Army branch.

In early 1942, Broussard and Baragona both graduated from jump school at Fort Benning near Columbus, Georgia, after completing the four-week course and making five qualifying, static-line jumps. They were in the right place at the right time to receive assignments to the unit that would ultimately take them to Normandy: the 507th Parachute Infantry Regiment.

The Army had created this new regiment in July 1942 and immediately began filling out its ranks with recently qualified personnel who were on hand at the time. Benton Broussard was assigned to Headquarters Company of the regiment's third battalion, while George Baragona went to the regimental Service Company.



National Archives

A "stick" of 101st Airborne Division paratroopers prepares to jump over Normandy during the early hours of June 6, 1944. Due to the scattered nature of the drop, both 101st and 82nd Airborne paratroopers ended up fighting for their lives in cut-off and surrounded Graignes—the "Alamo of Normandy."

The 507th remained at Fort Benning through the end of 1942 and then transferred to Alliance Army Air Field in Box Butte County, Nebraska, to prepare to go to war in North Africa. But the war there came to a conclusion in May 1943 with the surrender of Axis forces in Tunisia, and the 507th no longer had a rendezvous with a desert war.

In December, the 507th crossed the country to New York and boarded a troopship bound for the United Kingdom. Once there, the unit trained briefly in Northern Ireland before moving to an encampment at Tollerton Hall near Grantham in Lincolnshire. The time in England was spent preparing the 507th for its role in the upcoming invasion of Normandy, and the training was intense.

By this time, the regiment had been assigned to the 82nd Airborne Division as a temporary replacement for another regiment—the 504th—that had been badly bloodied during the fighting in early 1944 at Anzio and Nettuno in Italy. With just over 2,000 physically fit, well-trained, disciplined men, and over a year's worth of constant preparation, the 507th was ready for action.

On May 28, 1944, the 507th's 2nd and 3rd Battalions were moved to and sequestered at the airfield at RAF Barkston Heath at Grantham, where they began the final preparations for Operation Overlord, the Normandy invasion.

The 175,000-man invasion force was locked and loaded and ready to go on June 4, with the attack to begin early on June 5, but a raging storm in the English Channel caused General Eisenhower to delay the operation for 24 hours. Finally, on the evening of Monday, June 5, Benton Broussard boarded C-47 #41-38699 belonging to the 53rd Troop Carrier Squadron, 61st Troop Carrier Group, for the flight to Normandy.

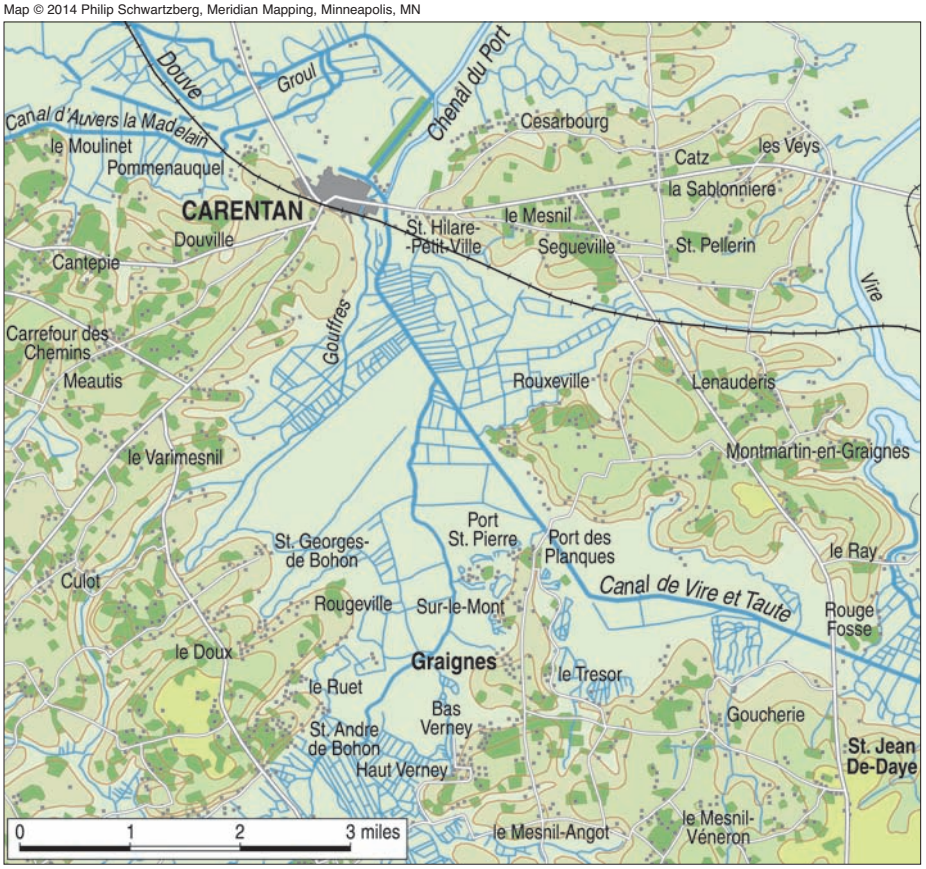
George Baragona was on a different aircraft from the same squadron that evening (C-47 #42-32919). The C-47 "Skytrains" took off and flew south as a part of Mission Boston, the code name given to the operation to move the 82nd Airborne Division to Normandy.

On another 53rd Troop Carrier Squadron C-47 in the same formation, the Operations, Plans, and Training Officer (S-3) for the 3rd Battalion, 507th PIR, Captain Leroy D. "Dave" Brummitt, was paying close attention to the trip across the English Channel. He later described the unexpected turn the journey took: "The Army Air Corps Troop Carrier Squadron carrying 3rd Battalion Headquarters and Headquarters Company followed the planned flight route from England until we reached the Normandy coast where we began to encounter German antiaircraft flak. Instead of holding course, the squadron took a different heading."

Standing in the open door of his C-47 (#42-92066), Brummitt began scanning the dark terrain below and checking his wristwatch starting at approximately 2:30 AM, Tuesday, June 6, 1944. He was surprised when the red light next to the door came on moments later because he could not identify any landmarks below. Despite the fact that he had spent many long hours studying maps and aerial photographs of Normandy, Brummitt could recognize nothing. The red light over the aircraft's door indicated that he was to prepare the men to jump, but he nevertheless believed that the aircraft was not over its assigned drop zone. Despite this, he had the men stand up, hook up, and check their equipment.

Brummitt looked at his watch again and noted that the critical planned jump time had been reached, and yet the red light continued to glow. If they were indeed over the correct DZ, that light should have already changed from red to green.

"At that point I observed troopers in planes ahead of and around me leaving their planes," he recalled. Knowing that the place for his "stick" of 18 paratroopers was with the rest of the company, Brummitt had to make a split-second decision, so he shouted the "Go!" command and jumped. Within seconds, only the flight crew remained aboard



Located just over four miles south of the important road-junction city of Carentan, Graignes had little strategic value. It became the scene of fierce fighting only because American paratroopers were misdropped there.

Courtesy of the Knight Museum, Alliance, NE

All: Author's Collection

Left to right: Private George S. Baragona, Service Company, 507th Parachute Infantry Regiment, killed at Graignes; Sergeant Benton J. Broussard, Headquarters Company, 3rd Battalion, 507th PIR, also killed at Graignes; Captain Leroy "Dave" Brummitt, 3rd Battalion, 507th PIR, controlled the tactical side of the battle at Graignes. TOP: First Lieutenant Albert L. Stephens (left of center) leads Headquarters Company, 3rd Battalion, 507th Parachute Infantry Regiment, 82nd Airborne Division, on August 23, 1943, during grand opening festivities of the Alliance Army Airfield, Alliance, Nebraska. Most of the men in this photograph fought at Graignes.

as C-47 #42-92066 flew away to the east, and Captain Brummitt drifted toward the ground beneath an open parachute canopy. George Baragona and Benton Broussard jumped from their two planes at approximately the same time.

Although these three C-47s had been part of Serial 25, which consisted of 35 aircraft, they had strayed off course alongside six other Skytrains. Because of this slight miscalculation, nine troop carrier aircraft had just dropped almost 150 paratroopers of HQ Company, 3rd Battalion, 507th PIR, into the marshes south of the city of Carentan. They were supposed to have been dropped 15 miles to the north at Drop Zone "T" near Amfreville, but instead they had just been given the worst misdrop of any airborne unit on D-Day.

At the time of the invasion, the seasonal flooding of the Vire and Taute Rivers had produced a broad area of inundation south of Carentan. This is where Broussard, Baragona, Brummitt, and nearly 150 others landed during the predawn hours of D-Day. At first light, they began slogging their way out of the marsh in small groups, moving toward a church they could see on a nearby hilltop, silhouetted by the rising sun. By 10 AM, Captain Brummitt and 25 paratroopers had assembled in the village, which they soon learned was called Graignes. During the next two hours, more men climbed the hill and joined the group near the church.

As a precaution, Brummitt put out perimeter security to warn the rest in the event the enemy approached the village from the south, and then he made a reconnaissance of the area to the north. He was well aware that HQ Company's mission required it to join the battalion with the greatest possible speed, "otherwise the ability of the 3rd Battalion to accomplish its mission would be drastically reduced to small-unit actions," as he later described it.

During his recce, Brummitt observed no German forces between Graignes and Carentan, just 4.5 miles away across the saturated marsh of the swollen Taute River. By then he knew that the 82nd's assembly area was just over the horizon to the north and, thus far, everything had been quiet. Considering these circumstances, the obvious thing to do, he thought, was move the herd toward Carentan.

"In my capacity as Battalion S-3, I formulated a tentative night-march plan to go through the flooded swamp area which we had waded, finding it to be waist to chest deep, or alternatively to go around the surrounding coast line to Carentan, link up with the U.S. force there, and continue on to the 82nd Division area," he recalled.

But that plan was never to be because, shortly after noon on D-Day, Major Charles D. Johnston, executive officer of 3rd Battalion, 507th PIR, reached the hilltop. After discussing the situation with Brummitt, Johnston took control of the 507th men assembled in Graignes. To him, the idea of moving the force toward the American airborne units to the north was impractical because the 82nd and 101st Airborne Division drop zones were too far away. Major Johnston decided that the best course of action would be to keep the force in Graignes, organize a stronger defensive perimeter, and await a link-up with ground forces pushing inland from the landing beaches.

When the village's acting mayor, Alphonse Voydie, learned that American paratroopers were assembling at the church, he rushed to the scene. By the time he arrived, Johnston had already begun the process of preparing defenses around the

village. Johnston and Voydie then met to discuss the situation while Benton Broussard translated.

Without hesitating, Voydie and several other villagers told Johnston everything they could about the general layout of the area as well as the movement of nearby German troops. Because his men were going to need the ammunition and heavy weapons contained in the parachute equipment bundles that remained scattered throughout the marsh northwest of the village, Johnston asked the mayor about borrowing a boat to retrieve them.

On the spot, Mayor Voydie organized several teams of villagers to begin recovering the equipment bundles and hauling them back to the Graignes perimeter. They collected bundles that contained, among other things, five M1919A4 .30-caliber machine guns and two 81mm mortars—weapons that would make the positions around the village far more defensible.

The French also recovered large quantities of ammunition that they then delivered to the American defenders; Gustave Rigault was one of the citizens who assisted in this effort. From his farm at Le Port St. Pierre, a mile north of Graignes, Rigault could easily see collapsed parachutes dotting the marshy, flooded area that the French referred to as *le marais*.

With the assistance of his daughters Odette (19 years old) and Marthe (12), Rigault spent the afternoon of June 6 rowing out to and retrieving the U.S. equipment. While he concentrated on locating equipment bundles, the girls focused their efforts on recovering the white silk reserve parachutes that littered the area. What they hauled in from the marais was then deposited temporarily in a barn on the farm.

That evening, two paratroopers came to Le Port St. Pierre to retrieve it all, but they quickly determined that the quantity was far more than they could carry. Without hesitating, Odette limbered up the family horse and cart, which was then fully loaded with ammunition. She piled sacks of feed and fertilizer, as well as mounds of hay, on top to conceal the contraband

Author's Collection

Courtesy of Odette Lelavechef)

National Archives

TOP: A prewar view of Graignes with the 12th-century Roman Catholic church in the background. Most of the town was destroyed during the battle. ABOVE: Marthe and Jean Claude Rigault shown in their father's boat, used to retrieve U.S. equipment bundles from the marsh behind them, near Graignes. Like many of the French, the Rigaults risked their lives to aid the Americans. RIGHT: American paratroopers move cautiously into a Normandy village, June 1944. An Army censor has blocked out the name of the village on the signpost.

cargo—a precaution in case she encountered a German patrol. Odette then personally drove the cart up the hill and into Major Johnston's perimeter.

According to 1st Lt. Earcle "Pip" Reed, one of the 507th officers present in Graignes, the villagers hauled in "more ammunition than we thought we could ever use." In addition to that, several field telephones, telephone wire, and a switchboard were delivered to the Americans on the hilltop.

Major Johnston also asked Mayor Voydie about the food situation. Since the misdropped troopers would almost certainly not be resupplied any time soon, he was genuinely concerned about how to feed everyone. Voydie wanted to help the paratroopers, but he realized that coming up with enough to feed more than 100 hungry men several times a day was not something that he could manage alone.

Recognizing that such an effort would require the cooperation and assistance of the entire community, he called a town meeting and appealed to the citizens of Graignes to place all the resources of the village at the disposal of the Americans.

The mayor must have been very convincing because there was a unanimous decision to help the paratroopers—a decision that was not entered into lightly as everyone in the village knew that the Germans would swiftly and harshly punish them for assisting the Americans.

Since the paratroopers would soon exhaust the supply of light rations they had carried with them to Normandy, something had to be done quickly. Voydie mobilized the women of the village in an effort to procure, prepare, and distribute food for the Americans. The proprietor of the village café, 50-year-old Madame Germaine Boursier, was recruited to organize an effort to provide the meals.

Dave Brummitt recalled that, when their rations ran out, Madame Boursier "set up a mess facility and procured foodstuffs, locally and from distant points, clandestinely transporting from the latter by cart and other concealed means."

From that point forward, Madame Boursier set the standard for aiding her liberators. Under her direction, the women of Graignes began cooking on a round-the-clock basis so they could serve two hot meals each day. Using the café as her base of operations, she even coordinated and supervised the transportation of meals out to the soldiers occupying the many dispersed observation posts guarding the approaches to the village.

With the civilians now fully mobilized, the American servicemen in the town had to adapt to an entirely new tactical situation than what they had been trained for. As Dave Brummitt recalled, Major Johnston's decision to remain in Graignes "entailed an on-the-spot reorganization of our specialist personnel into provisional infantry fire teams reinforced by the machine gun and mortar platoons."

But these were not infantrymen and this was not a rifle company. Although they had undergone "long and arduous unit training" before D-Day, that training had focused on supporting the 3rd Battalion's mission, not on direct action with the enemy. Despite that, the men took to this new assignment as if they had trained for it all along. To Brummitt, they seemed "physically and mentally ready and eager to accomplish the missions assigned."

At once, the Americans went to work preparing defensive positions and digging in along a main line of resistance just 250 meters south of the church. There, Brummitt organized a series of observation posts covering the open pastures and distributed his .30-caliber machine guns in such a way that their fields of fire interlocked with one another. The mortar platoon dug in both tubes just to the south of the church cemetery and positioned two men in the church belfry.

National Archives

American airborne troops meet with local French civilians to exchange information about the enemy.

From that vantage point, the observers enjoyed an unobstructed view of the network of roads and trails leading to the village from all directions. Major Johnston established his command post in the Boys' School next door to the church while the village's defenses were being prepared. Men with rifles covered the main road leading uphill to the church, and a number of well-concealed antitank mines were laid to prevent vehicles from getting too close. In short order, rifles, machine guns, mines, and mortars were covering all routes into Graignes.

Throughout this digging-in process, men continued to walk into the perimeter. At approximately 5:30 PM on D-Day, more Headquarters Company, 3rd Battalion, 507th personnel entered the village with 1st Lt. Elmer F. Farnham, 1st Lt. Lowell C. Maxwell, and the battalion's communications officer, 1st Lt. Frank Naughton. Right behind them was a group of troopers from B Company, 501st PIR, 101st Airborne Division, led by Captain Loyal K. Bogart, who had injured his legs during the jump.

When he reported in at Graignes, Bogart insisted that he was still capable of helping, and asked for something to do. Major Johnston placed him in charge of the central switchboard at the command post in the Boys' School. The remaining B Company/501st men were given a sector on the line to guard.

Two other 101st Airborne troopers, Pfc. Norwood H. Lester and Pfc. George A. Brown, also joined the group on D-Day, but they were not from the 501st. These two men belonged to B Battery of the 81st Airborne Anti-Aircraft/Anti-Tank Battalion; they had landed in the marsh shortly after 4 AM on the 6th, but not by parachute. Lester and Green had been passengers on board Waco CG-4A #43-41826—a glider piloted that night by 2nd Lt. Irwin J. Morales and 2nd Lt. Lieutenant Thomas O. Ahmad of the 74th Troop Carrier Squadron/434th Troop Carrier Group.

Waco #43-41826 had been assigned the slot "Chalk 42" of Mission Chicago, the pre-dawn glider assault by elements of the 101st Airborne. "Chalk 42" was supposed to have landed 10 miles to the north on Landing Zone "W" near Hiesville alongside 51 other gliders, but instead it came down northwest of Graignes near a cluster of buildings known as La Brianderie.

Captain Brummitt placed Lieutenant Morales in charge of the right flank outpost of the line defending the hilltop, and Lieutenant Ahmad was given responsibility for a group of men near the church.

For three days, the scene at Graignes remained tense but quiet; unceasing noise from firefights, artillery duels, and naval and aerial bombardments, however, could be heard coming from the nearby countryside.

On June 9, a pair of soldiers from the 29th Infantry Division, who had been separated from their unit, walked into the perimeter, giving fleeting hope to the idea that forces advancing inland from the beaches would soon link up with the mixed group of Americans on the hilltop.

Other nationalities also became a part of the defensive force at Graignes. A pair of Spaniards who had escaped from a nearby German forced-labor camp emerged from the marsh and climbed the hill. Both men could speak French, so they made a great contribution as translators.

Then Flight Sergeant Stanley Kevin Black of the Royal Australian Air Force arrived. A bombardier in RAF No. 106 Squadron, Black's Lancaster (#NE 150) had been badly damaged on a raid over Caen during the night of June 6/7. The bomber managed to limp approximately 20 miles to the northeast before finally crashing between the towns of Saint-Jean-de-Daye and Saint-Fromond. Black parachuted to safety that night, and was then taken by the French to Graignes because Allied troops were known to be there.

During the days that followed, the Allied troops in the village manned their outposts around the clock, adjusted the protective fires around the hilltop, and fine tuned the pre-sighted mortars. They established wire communications between the various dispersed positions around Graignes, prepared fallback positions, and generally made ready to contact the enemy.

Throughout these preparations, "the officers and men proved beyond a doubt that they were elite troops of the highest order," as Captain Brummitt later described them. By June 9, the assembled group in the village numbered 182 (12 officers and 170 enlisted men).

None of them had yet experienced combat with the enemy, but that would soon change.

On June 10, elements of SS-Gruppenführer Werner Ostendorff's 17th SS Panzer-Grenadier Division "Götz von Berlichingen" moved into the area around Graignes, setting the stage for battle. When the invasion began, the 17th SS Panzer Grenadier Division was positioned more than 160 miles to the south near the city of Thouars in the Deux-Sèvres department of western France, but it quickly received orders to join the developing battle in Normandy.

To make the move, the division's six battalions were divided into four Marschgruppe ("movement groups") that made use of parallel axes of advance over the road network leading to the area around Carentan. SS Panzergrenadier Regiment 38 formed Marschgruppe 2; Graignes was directly in its path of advance.

On Saturday, June 10, a mechanized reconnaissance patrol from Marschgruppe 2 (16th Company, SS Pz. Gren. Rgt. 38) approached a section of the main defensive line that was under the command of 1st Lt. George C. Murn from B Company, 501st PIR, 101st Airborne Division. Murn's men let the patrol get close and then opened fire, killing four of the enemy.

Simultaneously, another element of Marschgruppe 2 outflanked Graignes to the east by moving up the road running from Saint-Jean-De-Daye to Carentan. As they did so, another patrol was sent down the length of what is now the D89 to approach Graignes from the north using the bridge across the Vire-Taute Canal at Le Port des Planques.

There, a single 500-meter-long causeway permitted vehicular traffic to cross the inundated area north of the village, but it was being guarded by a detachment of 507th paratroopers under the command of 1st Lt. Frank Naughton. After a brief exchange of fire with the SS Panzergrenadiers, the Americans blew the bridge and pulled back to the hilltop.

That night, the outposts reported hearing activity south of Graignes and contact was made with probing German patrols several times. Knowing that a significant German force was out there in the hedgerows sent a wave of nervousness through the Americans, and the night was spent on full alert with officers conducting almost constant inspections of the perimeter.

Prior to that, the paratroopers at Graignes had been confident that American units to the north would get through to them before the enemy could launch any kind of serious attack against their perimeter. But the crescendo of enemy activity around the village on the 10th seemed to indicate that they could not expect relief to arrive in time. To the American paratroopers and the French civilians in Graignes, the moment of truth was close at hand.

There was no sign of the enemy and all was quiet the next morning—June 11—the first Sunday since the invasion began. That being the case, Major Johnston gave permission for some of the men to attend Mass. Marthe and Odette Rigault went to Mass that morning as well, arriving just as the parish priest, 64-year-old Father Albert Leblastier, began the liturgy. Just 10 minutes later, gunfire interrupted the service.

Captain Brummitt heard firing south of the village, rushed to the scene, and quickly determined that a large German force was approaching Graignes. He shifted some of his men to reinforce the southern flank and prepared to receive the weight of a direct attack.

Back in the church, a woman burst into the sanctuary yelling, "The Germans are coming!" and causing a panic among the assembled parishioners and soldiers. During the brief gun battle, all of the villagers assembled for Mass sheltered inside the nave; the firing was over in less than 15 minutes.

A patrol element from SS Pz. Gren. Rgt. 38's 1st Battalion had probed the village's defensive line, causing the Americans to reveal some of their positions. As soon as the fight was over, Major Johnston ordered Brummitt to place all available personnel on the defensive line below the village. He correctly recognized that it had only been a probing action and that another, heavier, assault would soon follow.

National Archives

ABOVE: Despite facing execution if the Germans catch him, a French civilian informs American paratroopers about the situation in his village. BELOW: First Lieutenant George C. Murn poses with tommy gun. He was one of the officers from B Company, 501st PIR, 101st Airborne Division, who fought at Graignes.

Author's Collection

At about 2 PM, the SS Pz. Gren. Rgt. 38's 1st Battalion executed a light bombardment of Graignes. The fire came from either the infamous Model 34 80mm mortar (8cm Granatwerfer 34), a weapon organic to every German infantry company during World War II, or the Model

Photo by the Author

A recent aerial view of Graignes, taken from the southeast looking roughly northwest toward La Brianderie and Carentan. The ruin of the village's 12th-century church, now a memorial to the battle, is at the upper left of center in the photograph.

18 75mm light infantry howitzer (7.5 cm leichtes Infanteriegeschütz 18), a weapon that was definitely a part of SS Pz. Gren. Rgt. 38's table of equipment.

The preparatory fire was quickly followed by a second infantry assault against the flanks of the southern defensive line. Although the attackers moved so swiftly that the perimeter was almost breached, Captain Brummitt immediately shifted forces to meet the threat, and the line held.

During this phase of the battle, the paratroopers unleashed supporting fire of their own through the effective use of their two M1 81mm mortars. With observers in the church tower providing fire direction, the Americans enjoyed a crucial advantage. The cumulative effect of the mortar fire, the crossfire of the machine guns, and accurate rifle fire disrupted the attack to such a degree that the Germans eventually broke it off.

Although the line had held for a second time that day, the paratroopers and the citizens of Graignes began to suffer their first casualties. The church sanctuary soon became a busy place as the wounded were rushed there to receive medical attention from the 3/507th Battalion Medical Detachment, a portion of which flew and jumped with the Headquarters Company to provide direct medical support in the field. The detachment was under the command of 29-year-old Captain Abraham Sophian, Jr., and included several medics from the 507th and the 501st.

Father Leblastier and Father Louis Lebarbanchon, a 32-year-old former pupil temporarily in Graignes to recuperate from tuberculosis, provided comfort to the wounded soldiers as well as several injured villagers.

An uneasy quiet fell over Graignes following the second attack. During this lull, Captain Brummitt checked the line and found that mortar and small arms ammunition levels were beginning to run low. The remainder was then redistributed among the defenders to provide each position with an even supply.

While this was being done, an unnerving sound was heard rising from the maze of hedgerows to the south of the village. What was clearly the sound of heavy vehicular movement announced that the Germans were bringing up reinforcements. Major Johnston then had all of the civilians sent away since the observed evidence indicated that Graignes was about to be the target of a major attack.

The order to vacate the church came none too soon for Marthe and Odette Rigault, who after almost nine hours of confinement in the church during the day's fighting, were "ready to leave." Marthe remembered, "At 7 o'clock PM, Major Johnston told us that we should go home because they did not have enough ammunition for the night." The two sisters then slipped out of the village and returned safely to Le Port St. Pierre.

From the hilltop the signs were growing more ominous with each passing hour. Through his binoculars, 1st Lt. "Pip" Reed could see two German artillery pieces being set up near a farm at Thieuville, a mile to the south of the church. SS Pzr. Rgt. 38 included several heavy weapons sections armed with several different types of guns that could have provided fire support for the battle.

First, 2nd Battalion, SS Artillerie Regiment 17 was armed with the Model 18 105mm light field howitzer (10.5cm leichte Feld Haubitze 18). Then there was SS Panzerjäger Abteilung 17, which was equipped with the potent and deadly Model 40 75mm antitank gun (7.5cm Panzer Abwehr Kanone 40). Finally, the 3rd Battalion, SS Artillerie Reg-

iment 17 was armed with the most powerful weapon in the regiment: the Model 33 150mm heavy infantry gun (15cm schweres Infanterie Geschütz 33).

Although it remains unclear what type they were, at about 7 PM the two guns at Thieuville opened fire on Graignes, and incoming rounds quickly swept across the buildings clustered on top of the hill. As it began, "Pip" Reed looked up at the belfry just in time to see it take a direct hit. The enemy shell ripped through the observation post, killing 1st Lt. Farnham and another soldier.

The artillery barrage proved to be the beginning of the final assault against the Americans at Graignes. After a thorough "softening up" of the objective, troops from 1st Battalion, SS Pz. Gren. Rgt. 38 moved in for the coup de grace. To the defenders on the hilltop, it was immediately obvious that this assault force was significantly larger than the one from the afternoon battle.

With the observation post in the belfry destroyed, it was no longer possible for mortar fire to be delivered with any degree of accuracy. As the enemy crept closer, the mortar crewmen cranked the elevation of their tubes to the maximum in a desperate attempt to prevent being overrun, but it was of no use. The attacking SS panzergrenadiers closed ranks with the defensive perimeter in the village and, as darkness settled over Graignes, the Germans resumed their relentless drive toward the hilltop.

ullstein bild / The Granger Collection, New York

Wearing camouflage on some of their helmets, an unidentified German unit patrols the Normandy countryside. Almost by accident the Germans came across the Americans holed up at Graignes.

By the time the Germans made the final thrust into Graignes that night, the defensive perimeter south of the village had been reduced to a few isolated pockets of resistance. Defenders were running out of ammunition, and the enemy quickly exploited the situation by overrunning their positions. Those points of the line not overrun were cut off from communication with the command post and the aid station.

With that being the case, Major Johnston had Captain Brummitt pull his remaining outposts back to a defensive line closer to the village. As he attempted to make contact with each point along the line, Brummitt became involved in several intense firefights. When the enemy began to outflank the last position, the captain ordered the crew members of the remaining.30-caliber machine gun to withdraw to a previously designated fallback position. Just as the machine gunner and assistant machine gunner started to move, German rifle fire killed them both.

Without hesitating, Brummitt dropped his M1A1 carbine, scooped up the .30-caliber machine gun and its box of ammunition, but left behind the weapon's M2 tripod because it had been damaged. He then leaped over a nearby stone wall that two other troopers were using for protection while providing covering fire. As he reached their side of the wall, German small arms fire killed both of the other two troopers. Brummitt swung the machine gun around, steadied it on top of the wall, and fired a burst in the direction of the enemy fire. After that, he "heard no more from that sector."

When Brummitt returned to the hilltop area near the command post, Battalion Sgt. Maj. Robert Salewski informed him that Major Johnston had given the order to abandon the position and attempt to return individually to friendly lines.

At about that time, one final artillery concentration fell on the hilltop, this time targeting the Boys' School. The shells battered the stone building, violently hurling fragments and rock in every direction. One of those rounds crashed into the roof directly above the room occupied by Captain Bogart and Major Johnston; when the round exploded, the walls collapsed in on both men. More fire landed on the building, killing some and sending others running for better cover.

Benton Broussard, who had been functioning as the major's translator since the invasion began and had therefore been a part of the staff around the command post the entire six days, made a dash for the protection of the heavily damaged church. He only had to cover 200 feet to make it to the main entrance of the sanctuary, but he did not quite get there. One of the incoming artillery rounds caught him in the open and killed him just steps away from the church door.

Once darkness fell, it was clear that the paratroopers would not be able to hold on much longer. Captain Brummitt was informed that Major Johnston had been killed and, with that, command of what was left of the force at Graignes devolved to him. With the Germans swarming toward the center of the village, the Amer-

ican tactical situation in Graignes had fallen apart once and for all. Realizing that the enemy attack would most likely resume at dawn, and that their chances of survival would be slim beyond that point if they remained in the area, Captain Brummitt decided that the time had come to evacuate.

Still carrying the .30-caliber machine gun and ammunition can, he ordered Sergeant Salewski to round up everyone left on the hilltop. After assembling everyone that could be located, it appeared that they were the last remaining members of Headquarters Company, 3rd Battalion, 507th in the village, so Brummitt led the entire group away toward the designated assembly area. The defenders had done everything in their power to hold out but, in the end, a numerically superior enemy attacking with supporting fire simply overwhelmed them. An entry in 17th SS Panzer Grenadier Division's Kriegstagebuch ("war diary") later ominously recorded this summary: "Graignes was taken at 11:30 PM on June 11th. The area was cleaned out during the course of the night of the 11th and 12th of June."

Although Captain Brummitt was unaware of it at the time, a number of personnel did not depart the hilltop when he ordered the evacuation. Captain Sophian, his medics, and a group of wounded troopers were unintentionally left behind in the church. "Had I been aware of this situation, I would have made a specific move to bring them along," Brummitt later said.

It remains unknown whether or not Captain Sophian received Major Johnson's order to withdraw or if he possibly chose to remain behind with the expectation that his men and the wounded would be treated as prisoners of war. Those details do not matter much considering what happened next.

At the end of the final assault the men of the 1st Battalion, SS Pz. Gren. Rgt. 38 stormed the church and found Captain Sophian's aid station. They then forced the captain and all of the wounded outside where they were divided into two groups and marched away from the church. One group (nine troopers) was marched off to the south and the other group of five troopers was marched down to the edge of a shallow pond behind Madame Boursier's café. At the edge of the pond, the Germans bayoneted the wounded men and dumped their bodies into the water.

The other group of 507th paratroopers was forced to march two miles to the south to a field near the village of Le Mesnil Angot. There, the nine men were shot and then buried in shallow graves.

When the 1st Battalion, SS Pz. Gren. Rgt. 38 took prisoners on the hilltop at the end of the battle, three of those prisoners were officers. Captain Sophian was captured unwounded in his aid station, and Captain Bogart and Major Johnston were pulled, wounded but still alive, from the rubble of the Boys' School. All three were taken three miles to the southwest to the village of Tribehou, where they were interrogated for several hours and then executed. Their bodies were dumped along the Route de la Terrette (the present day D57). Major Johnston's remains were not found until after the war.

But the execution of paratroopers was not the end of the atrocities that followed the conclusion of the battle at Graignes. Once in control of the hilltop, 17th SS troops proceeded to the rectory to exact punishment for aiding the Americans. They knew that the church's belfry had been used throughout the battle as an observation post and they went looking for the people who had allowed it. When they found Father Leblastier and Father Lebarbanchon in their quarters, they dragged them into the courtyard and shot them both to death.

The Germans weren't finished. They ordered any civilians still in the village to evacuate it. Two elderly women, Eugenie Dujardin and Madeleine Pez-

Both: Author's Collection

FAR LEFT: Father Albert LeBlastier, one of the priests murdered at Graignes by panzergrenadiers of the 17th SS. LEFT: Frank Naughton was a captain during the Battle of the Bulge. BELOW: One panzergrenadier carries an MG-43 while his comrades conceal themselves in a French hedgerow prior to an assault.

ullstein bild / The Granger Collection, New York

eril, both caretakers at the rectory, had planned to leave Graignes together in a horse-drawn cart but, as they departed the village on July 6, their old, sick horse died, stranding them. A German patrol, going through the village the following day, found the women and shot them both for failing to obey the evacuation notice.

Despite the violent battle, the brutal execution of U.S. prisoners, and the murder of the two French priests and the two women, more than 100 paratroopers made it out alive. Captain Brummitt's group of troopers crossed the marais without incident that night and took up concealed positions in a hedgerow south of Carentan shortly before dawn on June 12.

Soon thereafter, another group being led by Captain Richard H. Chapman and Lieutenant Frank Naughton joined them, bringing the total number to 80 troopers from 3rd Battalion, 507th PIR, seven from B Company, 501st PIR, 101st Division, plus the two Spaniards and one French citizen. They reached the safety of U.S. lines the following morning.

Several smaller groups of paratroopers who became separated from the others in the pitch darkness ultimately found their way to Carentan during the days that followed, and some even remained hidden in Graignes to avoid capture. It is known that several paratroopers hid in the attic of the Girls' School, and that one man even spent the next several weeks concealed in a large oven in an outbuilding on a farm known as Le Rotz.

This man, Pfc. Frank Juliano of B Company, 501st Parachute Infantry, remained in the oven by day and lived off of collected apples at night. (Although he did not starve, he did not eat like a king, either.) Juliano rejoined the 501st after ground troops finally reached the ruins of Graignes in late July.

The village's citizens became refugees soon after the battle when the German military forced everyone to evacuate the area. They eventually returned in August only to find that their town was permanently touched by war.

What happened to Graignes in 1944 is commemorated today with two street names: the main stretch of the D89 going through town is now known as Rue de 11 Juin 1944, and the road leading up the hill to the church memorial has been renamed Rue de 507e R.I.P. (Street of the 507th Parachute Infantry Regiment).

Despite the atrocities committed in Graignes, no members of the 17th SS-Panzergrenadier Division ever faced justice. The U.S. Army conducted an investigation in 1947, but by then it was too late to find the perpetrators.

After the war, town leaders eventually chose to build a new place of worship at the bottom of the hill where D89 intersects with the D57. They also chose to convert the heavily damaged ruins of the old church into a memorial dedicated to the memory of those who lost their lives in the village in 1944.

At the heart of the memorial site, the final resting place of Father Leblastier and Father Lebarbanchon, is a crypt directly beneath the crossing inscribed with the word, "FUSILLES PAR LES ALLEMANDS LE 12 JUIN 1944" ("Shot by the Germans on June 12, 1944"). In the area where the church's choir and the high altar used to be, a black granite plaque bears the names of the French civilians and U.S. paratroopers whose lives ended during the battle.

On that plaque's center column, the names Benton Broussard and George Baragona are, coincidentally, one above the other. The Army recovered their bodies more than a month after the battle, and then interred them at the temporary American cemetery on the bluff above Omaha Beach at St.-Laurent-sur-Mer.

After the war, the families of both men were given the option of either having their remains permanently buried overseas, or having them returned to the United States. When both families chose repatriation, Broussard and Baragona were brought home to Louisiana. Today, Benton Broussard rests in Woodlawn Cemetery in the city of Crowley beneath a headstone that incorrectly lists him as having served in the 17th Airborne Division.

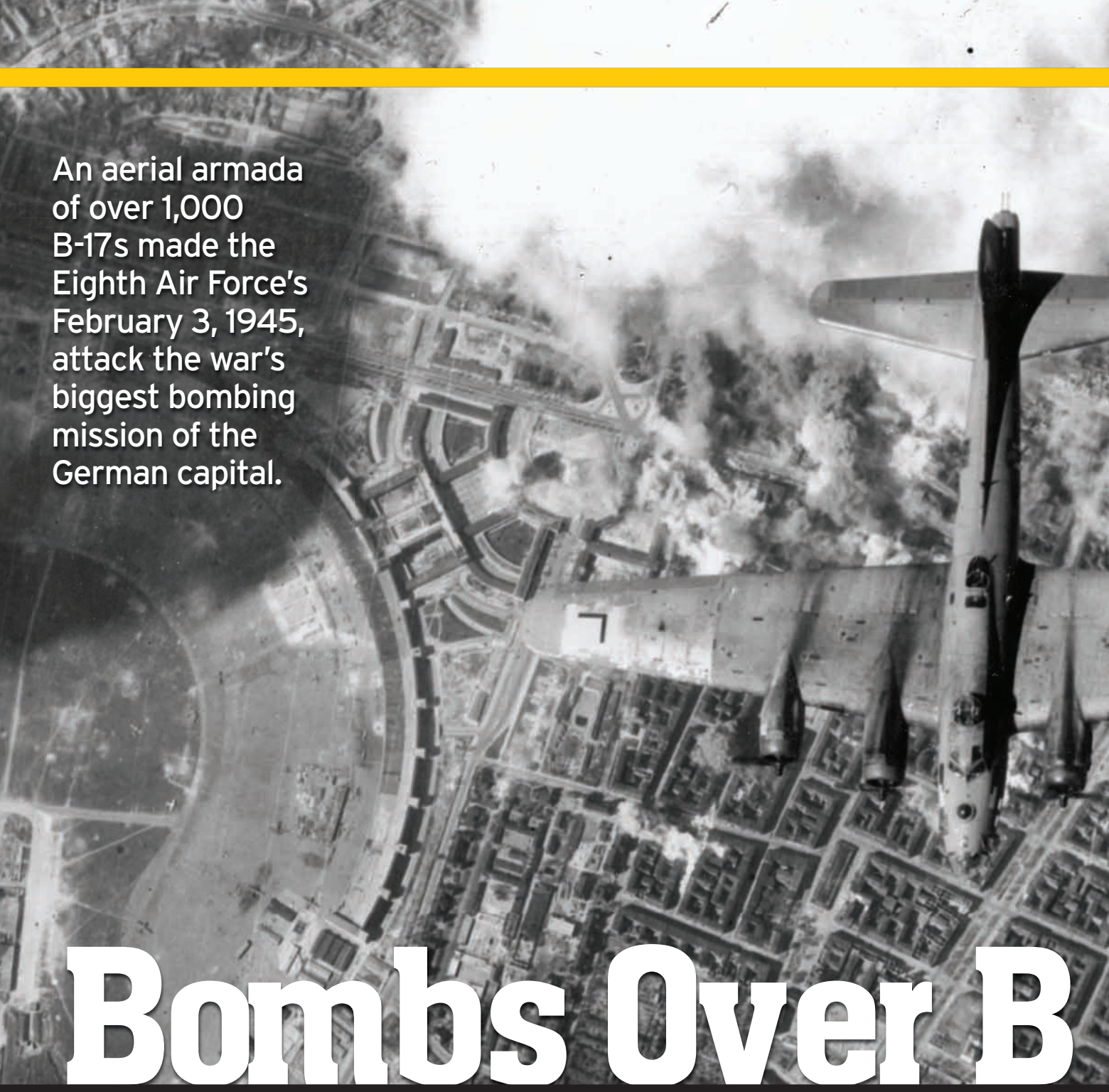
Photos by the Author

ABOVE: The final resting place of Sergeant Benton J. Broussard in Woodlawn Cemetery in Crowley, Louisiana. TOP: The final resting place of Sergeant George S. Baragona in Our Lady of Lourdes Cemetery in Slidell, Louisiana.

(Although the 507th Parachute Infantry Regiment was part of the 17th Airborne Division later in the war, the regiment belonged to the 82nd Airborne Division when Benton Broussard served in it during the Normandy campaign. At the time of his death, he wore an 82nd Airborne Division patch on his left shoulder.)

George Baragona lies buried in his hometown of Slidell in Our Lady of Lourdes Cemetery beneath a custom headstone that incorrectly lists his date of death as June 6, 1944. In actuality, he survived D-Day and the five days that followed, only to be struck down by shell fragments during the same artillery bombardment that killed Benton Broussard.

Baragona's headstone is decorated with a pair of airborne jump wings and the inscription "LEST WE FORGET." These two sons of Louisiana, George Baragona and Benton Broussard, went to France in 1944 and left their lives on the hilltop at Graignes. They may not be household names, but they are not forgotten. □



An aerial armada of over 1,000 B-17s made the Eighth Air Force's February 3, 1945, attack the war's biggest bombing mission of the German capital.

Bombs Over B

HE WAS WIDELY regarded as America's best pilot, he was already a recipient of the Medal of Honor, he was commander of the Eighth Air Force caught up in 1,000-plane bombing missions deep into the Third Reich, and he was mad as hell.

Lieutenant General James H. "Jimmy" Doolittle was also a gentleman who rarely used harsh language, but when they gave him the battle order for a mission to be flown on February 3, 1945—a mission to Berlin—Doolittle reportedly uttered an expletive or two. The order told American bombardiers to use the Frederichstrasse Railway Station in Berlin as the aiming point for the day's air assault on the Third Reich.

To Doolittle, that sounded a lot like bombing a city. But Americans didn't bomb cities. The British did that, at night. The Americans conducted high-altitude, daylight precision bombing of military and industrial targets, many of which, to be sure, were in the middle of cities.

Doolittle felt he was being ordered to change U.S. strategy and betray American principle. The Eighth Air Force commander got on the phone with his boss, General Carl "Tooey" Spaatz, commander of Strategic Air Forces in Europe (and an immediate deputy

National Archives

As the capital of Nazi Germany, Berlin was subjected to 363 Allied air raids during the war, and over 20,000 inhabitants were killed. Here a B-17 flies over Tempelhof Airport (lower left) and the smoke-shrouded city.

erlin

BY ROBERT F. DORR

of General Dwight D. Eisenhower). No transcript of the conversation exists, and Doolittle did not mention the conversation in an autobiography published decades later.

But a staff officer remembers that hackles were raised and that Spaatz responded to Doolittle's concern by telling Doolittle, in a not unkind way, to shut the hell up. Moreover, Spaatz reminded Doolittle that Berlin was not a new destination for American bombers and that legitimate targets lay within Adolf Hitler's capital—Gestapo headquarters, the Air Ministry, railroad facilities, a panzer army on the move, etc.

The report that Germany's Third Panzer Army was en route from the Western Front to the Eastern and would pass through the railway station was in fact an error on the part of U.S. intelligence. No such movement was taking place. But the Red Army was within 130 miles of Berlin and a punishing aerial assault on the city was seen as a way to help the Soviets advance.

A BIG DAY FOR THE EIGHTH

For the 650,000 men under Doolittle's command—his Eighth Air Force was the largest aerial formation ever assembled—February 3, 1945, was to be one of the biggest days of the war. Doolittle was to dispatch 1,437 heavy bombers and 948 fighters to attack Berlin.

The attack force consisted of 42 bombardment groups in three air divisions and 15,000 crew members. While 434 B-24 Liberators struck the synthetic oil plant at Magdeburg, 1,003 B-17 Flying Fortresses were to aim their bombs squarely on the city center of the capital of the Third Reich.

At this late stage in the war, the German air force, the Luftwaffe, was no longer the formidable force it had been earlier in the air campaign. Unlike previous missions, this attack on Berlin received little coverage afterward because, for the most part, it lacked the high drama of air-to-air duels between Luftwaffe fighters and Flying Fortresses that had occurred earlier in the war.

Yet the mission was both a turning point in U.S. strategy and a continuation (since 1942) of a kind of warfare that had never been seen before and would never be witnessed again, carried out on a scale that seems, today, almost too much to imagine.

Generals gave orders. Young men carried them out.

First Lieutenant Robert Des Lauriers, copilot of a Vega-built Boeing B-17G-75-VE (44-8629) named *Purty Chili* of the 391st Bombardment Squadron, 34th Bombardment Group at Mendlesham in East Anglia, was quietly focused on pulling his weight as part of a nine-man crew. (A waist gunner had been deleted from traditional 10-man crews in part because the Luftwaffe was no longer likely to attack a B-17 from both sides).

Des Lauriers always surprised himself by being calm just after wake-up for a big mission. "We confronted the cold, the fog,

Stan Piet

ABOVE: Considered very young at age 23, and very well liked among Flying Fortress crew members, Lt. Col. Marvin D. Lord was on his second combat tour as operations officer of the 91st Bombardment Group. He lost his life flying lead over Berlin on February 3, 1945. BELOW: Technical Sgt. Raymond H. "Ray" Fredette was togglier/nose gunner of the Douglas-built Boeing B-17G-15-DL Flying Fortress (44-6465) *Fancy Nancy* of the 7th Bombardment Squadron, 34th Bombardment Group, on the February 3, 1945, mission to Berlin.

Raymond H. Fredette

the mist. We especially felt the cold. Asleep, awake, on the ground, in the air, we were always cold," he said. Today's journey into the cold, blue vastness above Europe was Des Lauriers's 12th mission.

Inside a B-17 in flight, it was so cold that Des Lauriers's pilot forbade crew members from carrying drinking water since it would freeze and become useless anyway. Inside a B-17, men were going forth at, typically, 28,000 feet where, until this war, no one had done battle before. Inside a B-17 you needed oxygen to breathe and heated clothing to resist the sub-zero temperature and then, only then, you also needed to be able to fight.

After they learned where they were going that day, Des Lauriers remembers a fellow crew member saying, "I hope we get Hitler today."

Technical Sergeant Raymond H. Fredette, togglier of a Douglas-built Boeing B-17G-15-DL Flying Fortress (44-6465) named *Fancy Nancy,* also at Mendelsham but assigned to the 7th Bombardment Squadron, began the day knowing that someone had scratched "Fat Boy Hector"—referring to his girth and middle name—on the chin turret of his bomber. The previous day, a crewmate had kidded him about his waist size in a way that may not have been meant badly but was not well received. "It was not with great relish that I got up this morning," Fredette wrote in his diary. This was to be Fredette's 21st mission.

Berlin, 550 miles from East Anglia, was handily within reach of the final wartime model of the Flying Fortress, the B-17G. In fact, the "G model" Fort had been baptized during the Eighth Air Force's first big trip to Berlin 11 months earlier, on March 6, 1944. With four 1,900-horsepower turbo-supercharged Pratt & Whitney R-1820-97 Cyclone engines, the B-17G was credited with a maximum speed 287 miles per hour but cruised at about 180.

Crew consisted of two pilots, bombardier, navigator, radio-operator/gunner, and four gunners. The togglier was an enlisted man who filled in for the bombardier, usually an officer, and dropped bombs not by aiming them but by following a cue from the aircraft in the lead of the formation.

COMBAT CREW

Des Lauriers and Fredette, who bunked down a few hundred feet apart in different squadrons and were not acquainted, were thinking about flying conditions. German flak was a worry, too—German fighters less so, because the Luftwaffe had now been largely neutralized by attrition and by far-ranging P-51 Mustangs, the bombers' "Little Friends."

Like nearly all of the 15,000 airmen suiting up for battle today, Des Lauriers and Fredette hadn't been here the previous winter, so this was new—the bone-chilling weather of the British wintertime that brought colds, flu, and frostbitten body parts at high altitude; the electrically heated flying suits that were redesigned repeatedly and still caught fire; a shortage of heat in living quarters; pea-soup fog; howling winds; ice-coated roads, runways, wings and windshields. The forecast for today promised some relief: This Saturday would begin murky, wet, and cold. But over Berlin, at least, it would become CAVU—"ceiling and visibility unlimited."

It began at 3 AM with a flashlight in the face and the word "Up!" mouthed by a charge of quarters (CQ) moving through the Nissen hut with a clipboard.

The ritual followed. First—a close shave, because an oxygen mask would be strapped to the face all day; ablutions, a little hot water if this was a lucky day. Next—chapel, breakfast (real eggs were a harbinger of a difficult mission), and the main squadron briefing. The commander pulled back the curtain. The men gawked at the long, colored yarn stretching from England to the German city they least wanted to see at the end of their route—Berlin.

At briefings taking place at airfields all over East Anglia, men were told the target. Many crew members understood immediately that they were attacking an urban population, breaking U.S. doctrine and betraying Doolittle's wishes. (The British Royal Air Force, the RAF, had bombed Dresden nightly since 1940 but the American firebomb attack on that city still lay two weeks in the future).

THE "BIG B"

With a wartime population that had mushroomed from three to five million and with an area of 1,600 square miles, Berlin was rated as the sixth largest city in the world. Thanks to scores of nocturnal visits by the RAF and a half dozen daytime incursions by Doolittle's men, the city was partly a desert of rubble and detritus in which everyday services like running water and electricity were strained to the limit, yet it had at least one cabaret that catered to the Nazi military elite and a fully functioning opera house.

The Führer, Adolf Hitler, had spent much of the war in residences far from the capital but was now in the city, using apartments in the Reich Chancellery and spending some nights in his bunker deep beneath Berlin.

Both: Robert Dorr

ABOVE: A B-17 Flying Fortress crew stands in front of battle damage to the vertical tail fin of *Betty Jane,* their Boeing B-17G Flying Fortress 43-38420 of the 526th Bombardment Squadron, 379th Bombardment Group at RAF Kimbolton, England in late 1944. BELOW: A weary B-17 crew poses with their group commander following a mission in Europe. The twin .50-caliber M2 machine guns in the nose "chin" turret are stowed in the safe position, pointing upward and to the side.

Berlin. The "Big B." Its antiaircraft defenses stretched across 40 miles of searchlights, flak batteries, decoy fires, decoy marker flares and target indicators, and airfields that still held enough fighters to make approaching the city a risky business. The Allies were relentlessly picking off the finest of the Reich's pilots, but the Germans never lacked aircraft. Although not as effective as in the recent past, the Luftwaffe had 1,600 warplanes defending the capital.

Hitler was personally familiar with various types of Allied aircraft. In military staff meetings he frequently mentioned the RAF's De Havilland Mosquito, a reconnaissance aircraft difficult to detect on radar because it was made of wood and speedy enough that it could overfly the Reich with almost total impunity. Hitler also knew a B-17 when he saw one.

Back in England, in the predawn hours of darkness, American-manned Mosquitos of the 653rd Bombardment Squadron, part of the 25th Bombardment Group, were flying weather- and target-reconnaissance missions ahead of Doolittle's main force. The weather flights were identified by the code name Blue Stocking. While fog and murk shrouded bases in East Anglia until sunrise, Blue Stocking Mosquitos, flown by a pilot and a navigator trained in meteorology, reported correctly that the day was going to be largely clear.

Their work on this morning was part of 1,131 meteorological flights over the Continent, flown by the almost unknown 653rd that, at one time or another reached every target in the Reich. Only when they were finished with their recon would the B-17s enter harm's way.

WAR IN THE AIR

An early leader in Europe, and at 36 the youngest major general in U.S. history, Curtis Emerson LeMay was the architect of three tactics B-17 crews used over and over against Adolf Hitler's Fortress Europe: (1) the "combat box," a formation that concentrated the guns of the B-17s in a defensive screen; (2) the straight-ahead bomb run because, contrary to

intuition, you were less likely to be hit by flak if you didn't dodge; and (3) the concept of a lead bomber and bombardier to signal others when to drop their lethal warload. Bombers not flying lead carried a bombardier or, instead, a togglier like Fredette but no Norden bombsight.

No longer in the European Theater of Operations, LeMay was now managing an air war on the other side of the world, but it was easy to rile up his temper. Just utter the word "raid." The legend lingered of the day a reporter walked up to him brimming with eagerness and said, "Colonel, tell me about today's raid."

LeMay jerked the unlit cigar from his mouth, adopted a stern look, and told the reporter never to use that word again. Almost three years before, in April 1942, Doolittle had led 80 men in 16 medium bombers flying from a carrier deck to bring the war to the Japanese home islands. "What Jimmy and his boys did, that was a 'raid,'" LeMay said. The events unfolding now were not raids but "full-scale battles, fought in the thin air, miles above the land."

Preparations by the B-17 crews continued. The preflight ritual was the same—walk-around check looking for obvious problems with the planes' exteriors, turning through the props, manning the planes, completing intercom, oxygen and engine-start checklists. When Fortresses at RAF Mendelsham in Suffolk began starting engines on cue from a flare fired from the control tower, the sound grew to a thunder. The Eighth Air Force's 122 combat stations were in close proximity, and when over a thousand bombers in 42 bomb groups started their engines, the sound reverberated across the land. Fredette's diary shows a takeoff time of 8:07 AM.

In the glass-covered nose of the *Fancy Nancy,* togglier Fredette watched one of the bombers in his combat box bouncing up and down. Turbulence was always a problem but Fredette saw this as "a case of a nervous pilot bouncing his crew around."

Only hours after the mission, Fredette wrote, "As I went to load my cal. .50s in the chin turret I had quite a bit of trouble

National Archives

Despite an engine and starboard wing on fire, a B-17 stays in formation to drop its bombs during an earlier attack on Berlin. Note the antiaircraft explosions around the formation.

since the spring forming the bolt that guides the ammunition to the gun's feedway was disengaged. I ripped up my B-10 jacket as I reached down in the turret to put my right gun in such a condition so that it would fire.

"After doing that, I discovered that someone had loaded the ammunition in backward with the single link of the belt on the receiver. My patience was almost at an end as I changed the ammunition and reloaded. When I found the ammunition for the navigator's gun put in the same wrong way, I was raving mad. I assisted the navigator in changing his ammunition."

Soon the massive armada became airborne. *Fancy Nancy* took off and crossed the North Sea in "an endless procession of planes neatly arranged in battle formation," Fredette wrote. "The number of bombers was something beyond the imagination.

"We hit the Dutch coast at Bergen an Zee just north of Altmark, carefully flying the plotted course to avoid flak defenses in the vicinity." In the front of the bomber, looking out at the entire world from the clear glass nose that surrounded him, Fredette had a spectacular view of the bomber formation, the European countryside, and—now—the first puffs of flak straight ahead, bursting in little black clouds that sent tendrils in all directions. It crossed Fredette's mind that an infantryman would never charge into an artillery barrage, yet B-17 crews flew directly into exploding shells on every mission.

LAMENTABLE LOSS

Even so, as in all air campaigns, about half of all aircraft losses were caused by something other than enemy fire. There were plenty of reasons, including the number of war machines occupying the same sector of the sky. Of all the things that scared the hell out of aircrew members like Des Lauriers and Fredette, none was scarier than a mid-air collision.

An almost unimaginable magnitude of sheer force kept a B-17 in flight, to say nothing of a formation of B-17s. Although the bomber stream was at 27,000 feet when it passed over Holland, a young Dutch girl watched her mother remove dishes from a shelf, wrap them in towels, and place them on the floor so they wouldn't be damaged

while their house trembled. It would take three hours for all the bombers to pass overhead. And with so many planes occupying so little space, there were more dangers than a few broken dishes.

High above the Dutch family, in a Flying Fortress formation of the 388th Bombardment Group—one of the components of Doolittle's massive force—those forces came together to create a catastrophe. Think about air speed, velocity, mass, and temperature, and two heavy bombers coming together in mid-air possess as much kinetic energy as two railroad locomotives colliding head-on.

Battered by prop wash and turbulence, 1st Lt. Perry E. Powell's B-17G-95-BO Flying Fortress (43-38697/K8-H)—one of the few planes in the 388th Group that hadn't yet acquired a name or a caricature on its nose—slewed out of control. Veering off its flight path for reasons that were never learned, and untouched by any other object but pounded by turbulence, Powell's heavy bomber broke in half. The two halves slammed into B-17G-45-BO (42-97387/also K8-H), with a semi-nude young woman and the name *Maude Maria* painted on its nose. Piloting the *Maude Maria* was 1st Lt. John McCormick.

As if torn open by a can opener, the left front side of *Maude Maria*'s fuselage was suddenly missing a 10-foot slice of metal skin. Others in the formation could see the inside of the aircraft. Many watched in horror as McCormick's navigator, 1st Lt. Ray R. Woltman, was catapulted into the high, cold, open sky. He was not wearing his parachute.

Caught up in a struggle with the elements in the pilots' compartment of *Maude Maria*, with part of his aircraft peeled away and gaping open behind him, McCormick tried to help co-pilot 1st Lt. William Feinstein dislodge the entry (and exit) hatch below them. The parachute belonging to engineer-gunner Tech Sgt. Marvin Gooden had burst open inside the Fortress and billowed around the men, impairing both vision and movement as they struggled to bail out amid howling wind and flying debris.

Once the hatch was gone, McCormick watched Feinstein thrown upward and out, just as the 30-ton bomber careened abruptly to the left. The number two propeller blade slashed into Feinstein's body and threw him into the wing, tearing off an arm. Feinstein's parachute never opened.

The violent motion of the aircraft tossed McCormick out of the open exit hatch; togglier Staff Sgt. William G. Logan went out of the aircraft through a door in the nose. McCormick and Logan got good parachute canopies and descended toward their fate as "Kriegies," or prisoners of war.

Sergeant Joseph D. "Dave" Bancroft, tail gunner on Powell's plane, was alone at the instant of collision. When his aircraft began to break in half, Bancroft saw a pair of hands, probably the waist gunner's, reaching toward him just a few feet forward in the fuselage. Bancroft grabbed the hands but was unable to pull the other crew member back to his tail-gun position. The front part of the bomber fell away and the hands disappeared.

Bancroft, alone in the tail section, plummeted downward. He struggled against centrifugal forces to open the tail-hatch door but it was jammed. He kicked, wrestled, pushed and, after almost giving up, the door suddenly fell off and he bailed out. Bancroft was the sole survivor of his aircraft and among only three men out of 18 who survived the collision.

Many weeks later, one of the trio, prisoner of war Logan, would be killed by gunfire from a strafing Allied aircraft while Bancroft stood beside him on a forced march of POWs—and survived. Bancroft wrote, "For this to happen to Logan, a flyer rescued from certain death with other aircrew members of the mid-air crash, then to fall victim after enduring so many bombings and strafing while on the forced march in Nazi Germany, is too difficult and unreal for our limited human understanding. Especially for all of us who knew him and how he would help the weaker POWs keep up with the group so as not to be shot by the guards at the rear of the column. Logan would be there to give of himself, and in the end, that's exactly what he did—all the way."

Robert Dorr

In a posed photo, a B-17 waist gunner shows his protective leather clothing and boots. The temperature in the drafty, unheated planes could drop to -60º F., and a round trip to Berlin from England could take eight hours.

As if impervious to the fate of the 18 men aboard the two Fortresses that had merged in mid-air, the bomber formation continued toward Berlin. Some aboard the bombers had a clear look at the loss of the planes and men, and it stayed with them. But the bomber formation, unable to help, kept going, never slowing down, even as

exploding flak shells began to fill the air around the planes.

Someone called out, "Fighters!" Fortress crew members saw the Luftwaffe warplanes nearby but most never saw them close-up. The war had changed since its early days when bomber gunners and Messerschmitt and Focke-Wulf pilots concentrated on killing each other. Now, P-51 Mustangs ranged in front of the bombers and held off most of the Bf-109s and Fw-190s.

As the first Flying Fortresses pivoted on the Initial Point 10 minutes from the Berlin city center and began their bomb runs—each squadron following a lead aircraft and a lead bombardier—the flak bursts became even more intense.

Robert A. Hadley

B-17G Flying Fortresses of the 750th Bombardment Squadron, 457th Bombardment Group, drop their bombs on a mission over Germany. By flying in tight formations, the B-17's machines guns could provide mutually supporting defensive fire against enemy fighters.

"Imagine somebody throwing rocks against the side of a metal building and that's what it sounded like," said 1st Lt. Robert Des Lauriers, co-pilot of *Purty Chili*. "The shell blasts and black puffs of smoke came in threes. They bracketed our aircraft, on one side, above us, and then on the other side."

BOMBER STREAM

From behind the bombers of Fredette's and Des Lauriers's 34th Group, a German fighter flew directly through combat boxes of bombers and ended up in front and to the left of the formation. Said another 34th airman, 1st Lt. Charles Alling, "It did a pirouette on its tail, like a ballet dancer, and then exploded. We flew through the mass of exploding metal, a piece of which tore into our right wing. Somehow all of the planes in our group flew through the remains of the German fighter and survived."

How long was the parade of bomber boxes marching toward the German capital? When the first wave of Flying Fortresses reached Berlin, the last bomber was still over the Zuider Zee in Holland: The stream of bombers, from one end to the other, was 360 miles long. Group after group arrived over Berlin. Altogether, fully 90 minutes would elapse while the bomber formation passed over the capital.

In the co-pilot's seat of the lead Fortress, a Vega B-17G-60-GE (44-8379/EP-J) for the 3rd Air Division, Major Robert "Rosie" Rosenthal of the 100th Bombardment Group and pilot Captain John Ernst peered through flak bursts at smoke-covered Berlin.

In the book *Flying Fortress,* Edward Jablonski wrote: "The flak proved to be murderously accurate over Berlin that day—'a beautiful day,' as Rosenthal would later recall it. He was of course referring only to the clear weather. The plane shuddered under the impact of the flak and the air filled with the noises of ripping metal. The number one engine spouted flame, a great white sheet spilling into the air stream behind the wing; the fabric-covered aileron shriveled, exposing the graceful metallic structure."

Two men were killed in Rosenthal's Fortress. Thick, white smoke filled the flight deck. Ernst looked at Rosenthal for guidance. "Rosie" gestured to continue, straight ahead. He knew the B-17 would never make it home. He also knew that if his aircraft didn't bomb accurately, his entire division might scatter its bombs and needlessly kill civilians.

Rosenthal's Fortress stayed on a steady course until lead bombardier 1st Lt. Eugene E. Lockhart toggled its bombs. Other B-17s in the division followed suit. The bomber was hit a second time. Crew members of other aircraft saw the Fortress lurch upward and then down. Its bomb bay doors closed and reopened.

Rosenthal slid back his window and peeled off to the right, directing the group's deputy leader to take command. He took the controls from Ernst and headed northeast. A wall of noise surrounded him as the aircraft began tearing itself apart. "Rosie" ordered crew members to bail out.

Rosenthal looked in all directions, listened, and satisfied himself that every crew member had jumped from the Flying Fortress. Still at the controls, Rosenthal put the aircraft on autopilot so it would continue straight and level as long as possible, just in case a straggler was still trying to get out. He pulled his parachute straps tight, fought his way

With smoke from explosions and fires blanketing Berlin below, a B-17's four 1,900 hp engines leave contrails in the cold air, February 3, 1945.

National Archives

out of the pilot's seat. The nearest exit was the forward emergency door below and in front of the pilot's compartment.

Rosenthal fought his way toward that door and did a double take when he saw at the last moment that a crew member was sprawled on the floorboards behind him. He had no way of knowing who it was because the man had been decapitated. There had been 13 airmen aboard Rosenthal's Flying Fortress. Ten of them survived to become prisoners of war.

THE DEATH OF KLETTE'S CREW

Of the many bomb groups over Berlin that day, the 91st Bombardment Group from RAF Bassingbourn, near Cambridge, had it the roughest. In an apparent mistake, the men had been told there would be no mission on February 3 and had been partying as late as 1 AM. Many took off for Berlin without having gotten any sleep. Some were still under the influence or were seriously hung over.

That was not the situation aboard the lead aircraft for the group. This was another relatively new bomber that had no nose art and no name, but the crew was old in experience if not in years. On two dozen missions, this crew had been led by Major Manny Klette, who had a reputation for being daring and brazen but was recognized as one of the best pilots and leaders in the European Theater of Operations.

Today, Klette was on furlough in London. Another very experienced and dead serious leader and pilot, Lt. Col. Marvin D. Lord, occupied the co-pilot's seat where Klette would have been. Lord and the regularly assigned pilot, 1st Lt. Frank L. Adams, had made certain the entire crew of Vega B-17G-20-VE (42-97632/DF-H/R) got plenty of sleep and had a thorough crew briefing.

Lord was a Silver Star recipient from a previous combat tour, was near the end of his second, voluntary tour in bombers, and was a former squadron commander, group staff officer, and lieutenant colonel at the age of 23. He had a wife and baby daughter back home in Milwaukee. His cheerful, upbeat personality was a contrast to the somber Klette. Some who flew with him claimed Klette had a death wish. If he did, he was about to be cheated in a very big way.

At the start of the bomb run, Adams's bombardier, Captain Nando A. "Tony" Cavalieri, engaged his Norden bombsight; the group would now bomb on Cavalieri's lead. First Lieutenant Theodore M. "Mike" Banta was watching closely from his B-17G-70-BO (43-37844/DF-K) *Yankee Gal*.

In an interview for this article, Banta described the tension as bombers passed over the smoke-covered German capital: "As we flew toward the target, each succeeding battery of flak bursts moved closer to us. This is when the sweat begins. Will we reach 'bombs away' before the antiaircraft gunners make the final correction that puts their bursts in the middle of our formation?"

Said Banta, "When bombs are released by the Norden bombsight in the lead ship, one of them will be a smoke marker bomb. As soon as the bombardiers in our other ships see this, they will pull a toggle switch releasing their aircraft's bombs. We bomb as a unit and a tight formation leaves the best diamond-shaped bomb pattern possible."

Cavalieri released. Banta said, "Immediately after 'bombs away' and before lead pilot Adams could start his evasive turn, the lead ship received a direct hit from an

antiaircraft shell right where the trailing edge of the wing meets the fuselage. The lead ship was blown cleanly in half. The nose section went immediately into a dive with engines still under power. The tail section appeared to fly along with the formation for a split second and then drifted out of my sight behind my co-pilot's window. My co-pilot told me that it fluttered back over the top of our rear element and was lost from his sight."

In an instant, Lord, Adams, and Cavalieri and all of Klette's crew—one of the most experienced in the Eighth Air Force—were gone. Among the 11 who died aboard 42-97632, the radio operator was on his 79th mission, the engineer on his 81st.

With burning debris and detritus flying around everywhere in the bomber formation, a confetti of metallic junk struck B-17G-35-BO Flying Fortress (42-32085/DF-K) *Yankee Belle*, piloted by 1st Lt. George F. Miller, and a Vega-built B-47G-40-VE Flying Fortress (42-97959/DF-Y) *Rhapsody in Red*, piloted by 1st Lt. E.O. Johnson. Both fell out of formation. Miller's crew bailed out and became prisoners. *Rhapsody* was sorely damaged but, thanks to Johnson's ministrations, was able to complete the return flight to England.

BERLIN BELOW

For almost two hours, bombers approached and passed over Berlin. Togglier Ray Fredette aboard *Fancy Nancy* wrote in his diary that night: "It was a fairly long bomb run. I was fully aware of the entire situation—hundreds of bombers bearing down with tons of high explosives to be dropped on Berlin.

"Berlin! Berlin! The very name of this city pounded on my brains. This was the heart of Naziland. This was the city where Hitler had preached his defiance to the world. This was the city where the throngs had shouted 'Sieg Heil!' but today it was the shriek of falling bombs and the rocking explosions that were heard throughout Berlin."

Fredette continued: "As we approached flying over Potsdam there were large

Both: National Archives

A low-level aerial view of Berlin taken four months after the war gives an idea of the total devastation. The building with the tower (left) is the Rotes Rathaus (Red City Hall).

breaks in the clouds over the ill-fated capital. Large portions of Berlin were visible. Smoke was rising from the bomb hits scored by other bomb groups that had preceded us.

"Bomb bay doors were open now and there was flak up ahead. But for the first time I was more intent on the target than the flak. I felt exhilarated. My fingers twitched as I held the toggle [bomb release] switch.

"My eyes were glued on the lead ship. Then its bombs dropped along with two white smoke markers that hurtled downward. This was it. I struck the toggle switch and two tons of explosives in *Fancy Nancy*'s bomb bay fell away."

Fredette wrote that the journey out of Berlin was "exhausting." Yet he never saw a German fighter. *Purty Chili* co-pilot Robert Des Lauriers noted in his diary that his crew was in the air for eight hours and 30 minutes, a grueling ordeal of cold, vibrations, and dehydration. Des Lauriers thought he saw German fighters in the distance. He noted that the German flak was "exceedingly accurate."

Although Berlin that day was a tragedy for some crew members, it was easier than earlier strikes on the German capital. Twenty-five bombers and eight fighters were lost to all causes. Eighteen Americans were initially listed as killed in action, with 208 missing. Gunners did not claim any German fighters shot down but eight aerial victories were credited to U.S. fighters.

The American fighter pilots followed revised doctrine and ranged away from the bomber formations to seek out German fighters where they lived. Using new external fuel tanks for the first time, P-47 Thunderbolt fighters of the 56th Fighter Group made their first appearance over the German capital and claimed several aerial victories. The longer ranged P-51 Mustangs that had become the primary escort fighters in Doolittle's Eighth Air Force strafed German airfields and caught Luftwaffe warplanes when they were most vulnerable, in the airfield pattern.

RESULTS

American crew members who had hoped to kill Adolf Hitler were disappointed. They did kill top Nazis, including Berlin's "hanging judge," Roland Freisler, who was sitting in his courtroom conducting a trial of conspirators who'd attempted to kill Hitler the previous July. The roof fell in on him, literally.

In some sense, what the bombing mission did to Hitler was almost worse than killing him. They drove him underground.

The government quarter of Berlin, already pounded by previous air attacks, was now a smoldering shambles. The February 3, 1945, attack destroyed Gestapo headquarters on Berlin's Prinz-Albrechtstrasse—previously untouched by the war. Germany's Air Ministry was left ablaze. The original Reich Chancellery, a neo-Baroque structure dating to Bismarck's days, still appeared almost undamaged when viewed from the front but had been totally smashed on the inside. The new Reich Chancellery, designed by Albert Speer, sustained bomb damage.

Debris and rubble were strewn everywhere, smoke emerged from government buildings, and bomb craters holed the streets. Hitler was now forced to move permanently into the Führer Bunker located beneath the garden of the New Reich Chancellery. The Führer would see daylight again on only two occasions for the remaining weeks of his life.

According to a U.S. intelligence document from the period, more than 10,000 people were killed on the ground. Hundreds of buildings were destroyed or badly damaged. In the government quarter, water was available only from water carts positioned near the Chancellery. Both the government quarter and large areas of Berlin were without electricity, or had it only intermittently. Transportation, utilities, and infrastructure were badly snarled.

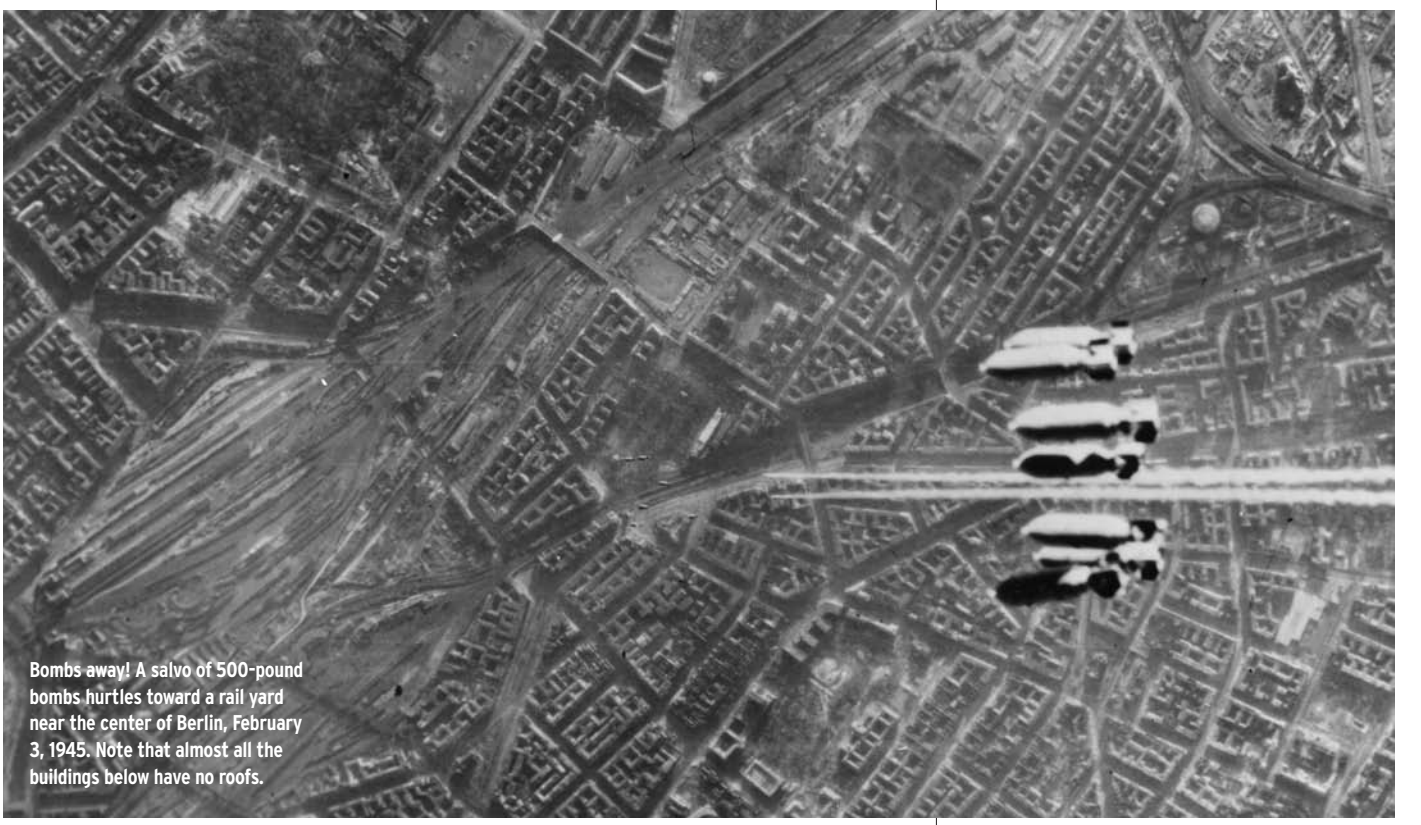
The February 3, 1945, mission was the largest air assault on Berlin and the second largest of the war, involving almost 2,400 aircraft and 15,000 men on the American side. (A Christmas Eve 1944 mission by the Eighth Air Force used more men and aircraft against about a dozen separate targets). In some sense, this appearance by B-17s over Berlin was a metaphor for the larger bombing campaign, its results, and the ongoing debate over its effectiveness.

At the time, leaders like Spaatz and Doolittle believed that high-altitude daylight precision bombing was extremely effective. A postwar analysis demonstrated that the bombing was far less accurate than believed at the time. Yet the air campaign tied up tens of thousands of German troops and airmen and several thousand German aircraft that might otherwise have been used against Allied ground forces on both the Eastern and Western Fronts.

Although German industry increased its output during the war—the result of gearing up from a peacetime economy—the bombing had a huge impact on factories, airfields, railways, storage centers, and especially Germany's capability to produce and refine petroleum.

So did the mission achieve its intended purpose, which was to facilitate the Red Army's advance toward the German capi-

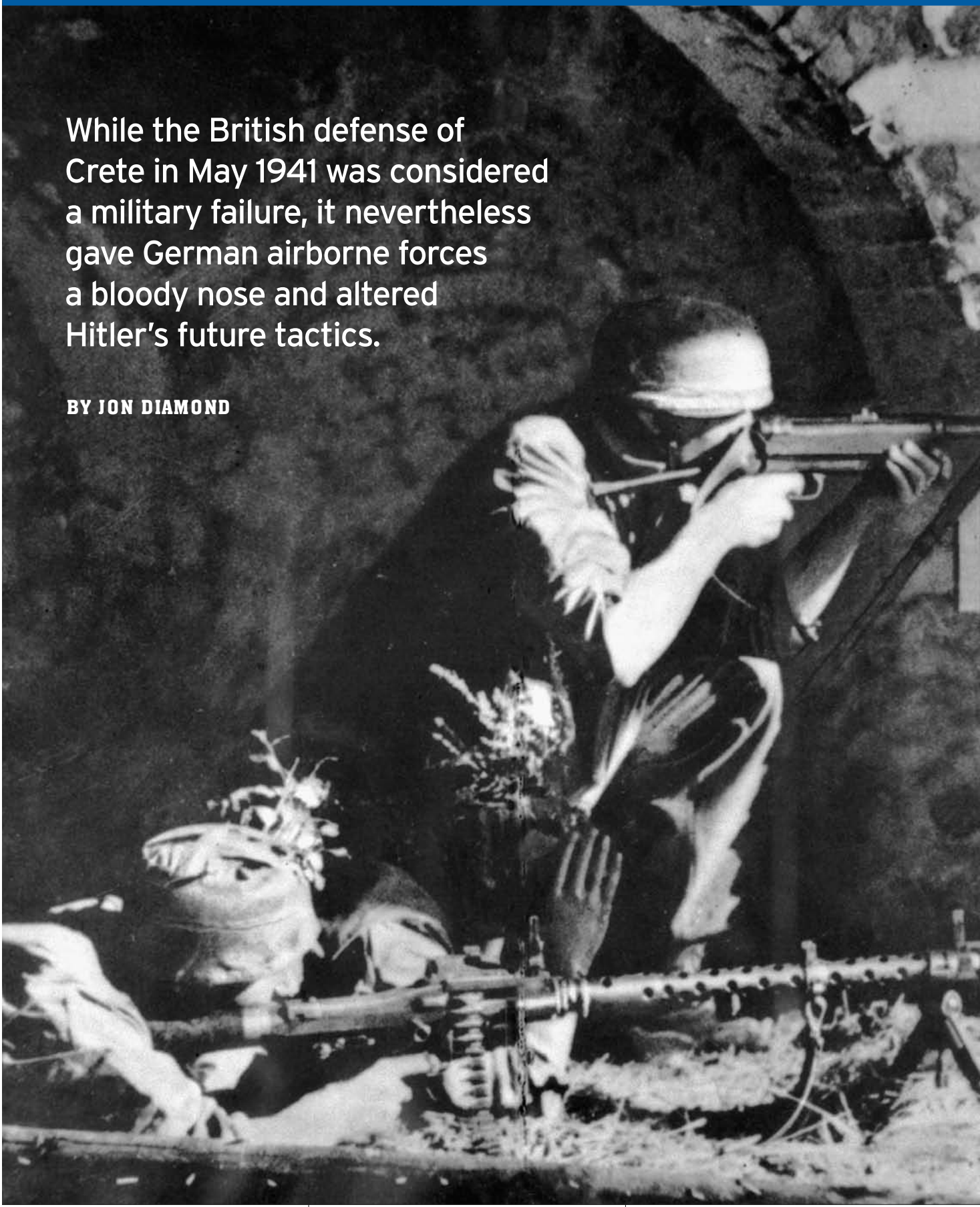
Continued on page 98



Bombs away! A salvo of 500-pound bombs hurtles toward a rail yard near the center of Berlin, February 3, 1945. Note that almost all the buildings below have no roofs.

While the British defense of Crete in May 1941 was considered a military failure, it nevertheless gave German airborne forces a bloody nose and altered Hitler's future tactics.

BY JON DIAMOND



Australian War Memorial

BEYOND ALL PRAISE

BRIGADIER ERIC DORMAN-SMITH, SERVING AS A LIAISON to Lt. Gen. Richard O'Connor during Operation Compass, the Western Desert campaign, traveled to General Archibald Wavell's Middle East Command headquarters in Cairo on February 12, 1941, to seek permission to advance British XIII Corps farther west to Tripoli after the total victory over the Italian Xth Army at Beda Fomm, which gave Britain and her Commonwealth Allies control of the Cyrenaican half of Libya.

In Wavell's office, Dorman-Smith curiously found that the maps of the Western Desert no longer hung on the walls. Instead, they had been supplanted by those of mainland Greece, Crete, the Dodecanese Archipelago, and southeastern Europe.

Rather than granting permission for a continued assault against Tripoli, Wavell informed Dorman-Smith about the upcoming Greek expedition: "You find me busy in my spring campaign."

On February 10, Churchill's War Cabinet had ruled out any possibility of continuing the advance to Tripoli. Wavell was directed to give first and foremost priority to assisting Greece. After the war, Wavell stated, "Having not one single complete formation available, I had to provide for the defence of Crete, the restoration of the situation in Iraq, and for a possible commitment in Syria. The German attacks on the [Corinth] Canal which began in February caused a fresh commitment, since large numbers of observers were required to watch for mines dropped in the Canal."

On May 20, 1941, after six days of intense aerial bombardment of Crete, German Luftwaffe General Kurt Student's XI Fliegerkorps mounted a major airborne assault on all three defended Allied airfields along Crete's northern coast. Here, Fallschirmjägers, lavishly supplied with automatic weapons (such as an MG-34 and a Schmeisser MP-40 machine pistol), battle the island's less well equipped British and Commonwealth defenders.

As background, on October 28, 1940, Italy invaded Greece without coordinating with Germany. England immediately promised assistance to Greece and, on November 6, Churchill announced the establishment of airbases and port facilities on Crete.

Since October 24, 1940, German Air Staff officers had noted the possible British interest in establishing a base on Crete for use by the Royal Air Force's Bomber Command for employment against German-controlled Romanian oilfields. On October 26, a German Navy representative recommended the capture of Crete in the course of the Balkan campaign.

With these two briefings, Crete had become more important. To the Germans, the strategic importance of Britain's possession of Crete was related to British dominance of the Eastern Mediterranean, a jumping-off point for landing on the Balkan coast and waging attacks against Ploesti.

Capturing Crete was a necessary German block against these British threats. It was doubtful, however, that the RAF would have stationed major bomber formations on Crete to attack the Romanian oilfields, which were more than 1,000 miles away. The unescorted Wellington bomber had the range but the Lufwaffe's fighters in Greece would have presented a grave threat to these unescorted bomber squadrons.

Notwithstanding, on April 25, 1941, Hitler issued Directive No. 28 for Operation Merkur, the code name for the seizure of Crete, with an execution date of the middle of May. The task of planning the mission fell to the commander of XI

Imperial War Museum

ABOVE: A New Zealand unit armed with bolt-action Enfield rifles, sword bayonets, and a lone Thompson submachine gun wait for the enemy. Much of the British equipment and heavy weapons was left behind during the evacuation from Greece. LEFT: Maori troops from New Zealand perform the "Haka," a fearsome dance performed before battle to instill courage and fight into the dancing warriors and terror into any of the enemy who might observe it.

Fliegerkorps, General Kurt Student.

The mission's objective was to establish a base for the air campaign against the British in the Eastern Mediterranean. Essentially, the directive stipulated that Operation Merkur must not delay staging operations or in any way jeopardize the coming invasion of the Soviet Union, Operation Barbarossa. The German invasion of Crete would be the only operation during the war in which an expansive strategic target was attacked and secured by airborne assault alone.

On April 17, 1941, Churchill gave Wavell permission to withdraw Lt. Gen. Henry "Jumbo" Wilson's imperial forces from Greece. At this time, Wavell cabled London stating that Crete would hold. The Allied evacuation ended on April 30 with approximately 25,000 troops being shipped to Crete, and Wilson left for Jerusalem to command the Baghdad relief mission. An additional 16,000 imperial troops were brought to Egypt by the Royal Navy, but not before

many British troops were taken prisoner in the Peloponnese and every major piece of equipment was lost. The following day, May 1, the Luftwaffe began its aerial bombardment of Crete.

The deployment of strong air force elements to the Balkans and to Greece, as well as the parachute assault conducted by elements of the 7th Flieger Division at the Isthmus of Corinth on April 26, 1941, unmistakably told the British that Hitler was targeting Crete. When XI Fliegerkorps began to move from northern Germany across the Balkans, German intentions were confirmed.

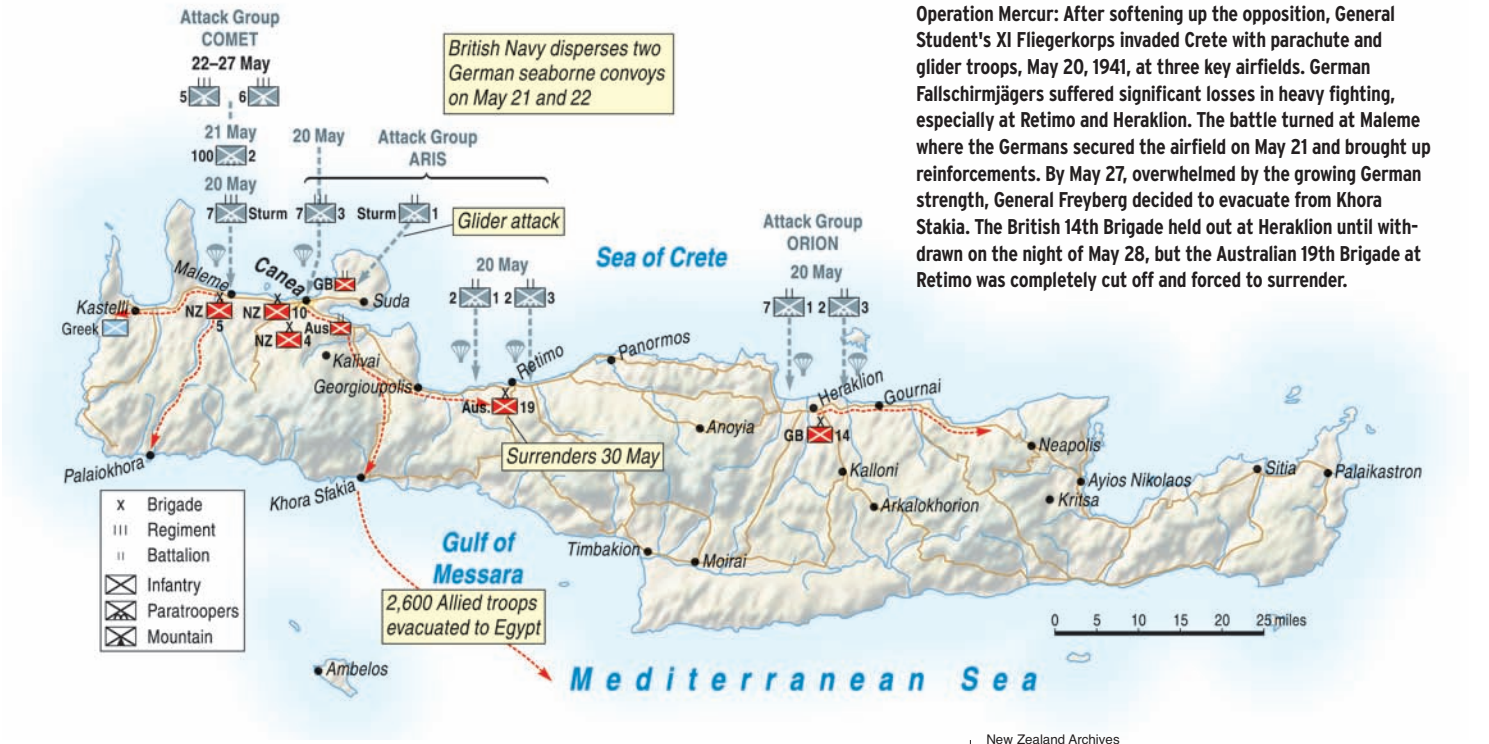
By May 12, the British intelligence network left behind in Greece reported to London, Cairo, and Crete every movement of German forces. Ultra intercepts completed the intelligence gathering.

On May 15, Churchill publicly announced the British intent to defend Crete in order to gain a favorable influence in the "overall global situation" among nonbelligerents (i.e., the United States and the Soviet Union). Thus the British War Cabinet recognized both Crete's military and political strategic importance after the debacle in Greece. Crete could not fall to the Germans by default.

Crete's location—160 miles south of Athens, 200 miles north of Africa, and 325 miles southwest of the Dardanelles Straits—defined its strategic importance, but Crete's terrain made the island's defenses difficult. A steep range of barren mountains, rising to 8,000 feet, runs the entire length of the 160-mile-long island, sloping gradually to the north but steeply to the south. This topographic feature produced the large but limited-capacity port of Suda Bay.

The British fleet in the Mediterranean was the Allies' first defense against possible Axis attacks on the oilfields in Iran, the refineries in Haifa, and the Suez Canal, each of which was vital to sustaining of the British war effort. The naval base at Suda Bay, on Crete's northwestern coast, provided an ideal point, although for only a handful of British ships, to base or to refuel while protecting Britain's vital economic possessions.

Wavell was well aware that all of the island's strategic points lay on the north coast. The lack of any port facilities on the south coast and the absence of a major north-south road to traverse the island hampered reinforcement and resupply from Egypt. Telegraphs, telephones, and transport were all primitive.



Operation Mercur: After softening up the opposition, General Student's XI Fliegerkorps invaded Crete with parachute and glider troops, May 20, 1941, at three key airfields. German Fallschirmjägers suffered significant losses in heavy fighting, especially at Retimo and Heraklion. The battle turned at Maleme where the Germans secured the airfield on May 21 and brought up reinforcements. By May 27, overwhelmed by the growing German strength, General Freyberg decided to evacuate from Khora Stakia. The British 14th Brigade held out at Heraklion until withdrawn on the night of May 28, but the Australian 19th Brigade at Retimo was completely cut off and forced to surrender.

The three strategically placed airfields at Maleme, Retimo, and Heraklion were all located on the northern shore and were connected by Crete's only motor road, which ran in an east-west direction. Maleme was at the western end of Crete with Retimo in the center and Heraklion farther to the east.

The only factor that seemed to favor Wavell's position on Crete after the evacuation from Greece was Germany's underestimation of his force's strength on the island atonly 5,000 British troops.

If the island's three airfields could be held, the British High Command believed there was a strong chance of preventing a German air landing since there were no major points other than Maleme, Retimo, and Heraklion for paratroops to seize, and their numbers were deemed to be finite.

There was a flaw, however, in British optimism. The troops evacuated from Greece, like those after Dunkirk, had brought away only their personal weapons, such as rifles and a few light machine guns. Many of the units had an ad hoc appearance and were poorly-equipped, being devoid of adequate numbers of artillery pieces, tanks, AA guns, mortars, machine guns, and transport. Many of the British, Cypriot, and Palestinian troops were from lines-of-communication units.

To demonstrate the dearth of heavy weaponry to combat an assault, only two heavy infantry ("I") tanks had been provided for each of the airfields. Three additional Matilda tanks were being sent to the island along with a smattering of light tanks. Trenches, gun emplacements, wire obstacles, and demolitions had to be dug with steel helmets replacing entrenching tools. Above all, there were hardly any British aircraft on the island.

Whoever controlled Crete would threaten a large part of the Eastern Mediterranean—particularly important to the German plan to invade the Soviet Union. Having secured the airfields in Greece, if the Germans could also capture and use those on Crete, they could dispose of any aerial threat to the planned southern flank of Operation Barbarossa.

After commanding the New Zealanders in Greece, General Bernard Freyberg was given charge of all troops on Crete ("Creforce") and positioned his corps headquarters near Hania, just to the northwest of Suda Bay. He had no staff or intelligence support and was forced to improvise a headquarters by using regimental officers, few of whom had any training. The result was a dearth of corps-level intelligence preparations to defend Crete. Radio and communications equipment was insufficient to adequately link each level of command or the geographically disparate garrisons defending each of the three airfields.

New Zealand Archives

Maj. Gen. Bernard "Tiny" Freyberg, commander of British and Commonwealth forces on Crete ("Creforce"), was over six feet tall and solidly built, hence his sobriquet. He earned a Victoria Cross during World War I.

With intelligence from Britain, though, Freyberg had detailed knowledge of when and where the assault was to take place. When he sighted the approaching German airborne units on May 20, he remarked, "They are on time." The German commanders found it difficult to obtain accurate intelligence about British forces on Crete, despite attempts at low-altitude flights.

Student planned for tactical surprise by attacking with paratroops and glider-borne infantry at the three airfields simultaneously while Freyberg's defense of Crete was based on preventing enemy seizure of the Allied strongpoints: the three airfields and the port at Suda Bay.

Unfortunately, with limited transport on the island, preparations for defense and development of tactics were essentially rudimentary, leaving each of the four defense sectors wholly independent of the other without the chance of needed reinforcement at critical times.

On Crete there were, at the end of April, between 27,000 and 28,000 Allied troops, exclusive of the Greek battalions. Not all were combat troops and only a fraction—the 14th Infantry Brigade of the British 6th Division—were not evacuees from Greece. The survivors of the 4th and 5th New Zealand Infantry Brigades and the 6th Australian Division from Greece had been formed into new units.

Freyberg succeeded Maj. Gen. E.C. Weston, Royal Marines, who up to that time had been the senior officer on the island. At Suda Bay, Weston commanded the Mobile Naval Base Defence Organization (MNBDO), which was reinforced by the 16th and 17th Australian Battalions, both improvised. The Royal Marines were mostly specialists belonging to AA and coastal artillery units as well as searchlight and maintenance units.

Some 1,200 British riflemen, formed from various units along with the 106th Regiment, Royal Horse Artillery (RHA) acting as infantry, were also attached to the garrison. In October 1940, Crete possessed eight heavy and 12 light AA guns. With the arrival of the MNBDO in April and early May 1941, the total number of AA guns was brought up to 32 heavy and 36 light (of which 12 were not mobile) and 24 searchlights.

Three brigades of the New Zealand Division, under the temporary command of Brigadier Edward Puttick (replacing Freyberg), were deployed around Maleme airfield, the port of Hania, and Galatos, located south of the coast road between the two sites. The 4th New Zealand Brigade comprised three infantry battalions (18th, 19th, and 20th) under the command of Brigadier Lindsay Inglis, whose headquarters was situated between Galatos and Hania.

The 5th New Zealand Brigade, composed of the 21st, 22nd, 23rd, and 28th Maori Infantry Battalions, was commanded by Brigadier James Hargest with his HQ at Platanias, to the east of Maleme airfield. Of note, Lt. Col. L.W. Andrew was the commander of the 22nd New Zealand Battalion defending Maleme airfield, Maleme village, and Hill 107 just south of the airfield and to the east of the Tavronitis riverbed.

The 10th (Improvised) Infantry Brigade comprised the New Zealand Divisional Cavalry Detachment and a Composite Battalion formed from various New Zealand personnel and two Greek battalions. This ad hoc formation was commanded by Lt. Col. Howard Kippenberger and was situated near Galatos.

At Retimo were four battalions of the 19th Australian Brigade and six battalions of the 4th and 5th Greek Regiments. Their HQ was under the command of the senior Australian officer, Brigadier George Alan Vasey. Lt. Col. Ian Campbell was in charge of a sector HQ and his own battalion, the 2/1st, with the mission of defending the airfield and Hill A to the east of Retimo in the vicinity of an olive oil factory.

Imperial War Museum

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LEFT: Heavily laden with personal weapons and equipment, men of 5 Gebirgsjäger (Mountain) Division board their Ju-52 transports in Greece for their flight to Crete. RIGHT: One of the most famous Cretan guerrillas was George Psychoundakis (left) with a bearded compatriot (right). He survived the war, wrote a book titled *Cretan Runner,* and was decorated for his part in the Cretan Resistance movement.

At Heraklion, the 14th Infantry Brigade—consisting of four British (2nd Battalion, the Leicestershire Regiment; 2nd Battalion, the York and Lancashire Regiment; 2nd Battalion, the Black Watch; and the later arriving 2nd Battalion, Argyll and Sutherland Highlanders) and three Greek battalions (of the 3rd and 7th Regiments), along with 300 Australian riflemen and 250 artillerymen employed as infantry—were under the command of Brigadier B.H. Chappel.

There was no separate reserve sequestered outside the sectors, but one of the New Zealand brigades in the Maleme sector and a British battalion at Suda were designated

Germans parachute out of a flaming Ju-52 shot down over the Akrotiri Peninsula near Canea, between Maleme to the west and Suda to the east.

Imperial War Museum

"Force Reserve" and were to be kept ready to move at short notice on Freyberg's order. The heavy AA guns were mostly concentrated in the Suda-Hania area with all sectors possessing some light AA guns, except Retimo, which only possessed a dozen well-camouflaged field pieces.

Freyberg recognized that the forces deployed on Crete were inadequate to face the predicted attack. On May 1, he sent a message to Wavell in Cairo identifying deficiencies in equipment, artillery, and ammunition, and requested RAF and naval support. He recommended that, if additional resources could not be made available, the decision to hold Crete be reconsidered.

Wavell relayed Freyberg's message along with his own concerns on the subject to the Commander of the Imperial General Staff (CIGS) but, under pressure from Churchill, who felt that Crete must be held for political reasons, Wavell received instructions to "hold Crete at all costs." Freyberg proceeded with his preparations to defend Crete from the predicted airborne and seaborne assault.

Wavell cabled Freyberg, "I have most definite instructions from War Cabinet to hold Crete and even if questions were reconsidered, doubtful if troops could be removed before enemy attack." According to Freyberg, Wavell "did everything humanly possible to get us every available bit of equipment, artillery, and defence store." Wavell further dispatched, "[Freyberg] did not anticipate, any more than anyone else, the overwhelming strength in which the German Air Force was to make the attack, nor how carefully and skillfully their plans had been laid nor the losses they were prepared to accept to attain their object."

The Invasion Begins

At 6 AM on May 20, heavy bombing of key points preceded the landing of parachute and glider troops around Maleme (8 AM), Retimo (4:15 PM), and Heraklion (5:30 PM). By nightfall, only a firm area at Maleme was held by the German paratroops, and none of Freyberg's airfields had been captured.

The Germans demonstrated theor brutality when a battalion of Fallschirmjägers landed at Kondomari, southeast of Malame, on May 20. Armed civilians joined the 21st and 22nd New Zealand Infantry Battalions in battling the paratroopers. After Crete fell, German troops took revenge on the partisans, shooting as many as 60 men from Kondomari. Another town, Kandanos, was destroyed and most of its residents executed.

Freyberg cabled Wavell on May 20: "Today has been a hard one. We have been hard pressed. So far, I believe, we hold aerodromes at Retimo, Heraklion, and Maleme, and the two harbours. Margin by which we hold them is a bare one, and it would be wrong of me to paint an optimistic picture. Fighting has been heavy and we have killed large numbers of Germans. Communications are most difficult."

According to the British Official History, "The enemy's domination of the air played an important part, for the sky seemed full of German aircraft ready to take part in the land fighting; any movement was spotted, and men were virtually pinned to their cover."

Indeed. At the start of the battle, the number of German aircraft available was 280 bombers, 150 Stuka dive bombers, 180 fighters (Me-109 and Me-110), 100 gliders, 530 Ju-52 transports, and 40 reconnaissance planes.

Battle for Maleme Airfield, May 20-22, 1941

At 8 AM on May 20, glider-borne troops of the Luftlande Sturmregiment, commanded by Generalmajor Eugen Meindl, and ad hoc groups of Fallschirmjägers arrived over Maleme attempting to capture the airfield there. Maleme was defended by the 5th New Zealand Brigade under the command of Brigadier Hargest. At 8:15, the 3rd Fallschirmjäger Regiment, under Oberst Richard Heidrich, parachuted into "Prison Valley" to the southwest of Hania and Suda Bay.

They were preceded by glider detachments under Leutnant Genz and Hauptmann Altmann that landed on the Akrotiri Peninsula north of Suda Bay. These forces were to silence AA guns as well as an Allied communications center around Hania, but they met strong resistance from heavy AA gunfire and elements of the Royal Welsh Fusiliers. The German paratroops were also met by elements of the 4th and 10th New Zealand Brigades at Hania and Galatos, respectively.

The scene at Maleme on May 20 has been described by author John Sadler: "Sweeping in at under 400 feet, beneath the elevation of the heavier AA guns, the Junkers kept in tight formation until they reached the drop zones.... If the 3.7-inch guns couldn't register, the Bofors, manned by the marines, certainly could and they fired till the barrels glowed red. The slow-moving transports were a gunner's dream and the shells tore through metal and flesh, dismembering men and aircraft in mid-air, slain parachutists tumbling, 'like potato sacks' from the wrecked fuselages."

As described by Churchill in his post-war history, *The Grand Alliance*, "The onslaught continued ... when troop-carrying aircraft again appeared. Although Maleme airfield remained under our close artillery and mortar fire, troop-carriers continued to land upon it and in the rough ground to the west. The German High Command seemed indifferent to losses, and at least a hundred planes were wrecked by crash-landing in this area."

A critical sequence of events, which

ABOVE: German glider troops, killed while exiting their machine, sprawl beside the fuselage in a painting by New Zealand combat artist Peter McIntyre. OPPOSITE: Another painting by McIntyre shows German aircraft attacking New Zealand positions at Canea, Crete. German air superiority severely limited British ships unloading supplies except at night, and also provided "aerial artillery" for the German attackers once on the ground.

probably represented the turning point of the entire battle, occurred during the afternoon and night of May 20 that led ultimately to the withdrawal of 22nd New Zealand Battalion on the morning of May 21 from Hill 107. This action enabled the Germans to land there later that day unimpeded by direct artillery and small arms fire.

Hill 107, located to the south of the Maleme airfield and to the east of the Tavronitis riverbed, was defended by A and B Companies on its reverse slopes with D and C Companies in front of the forward slopes facing the riverbed and airfield, respectively.

During the afternoon of May 20, while on the reverse slope of Hill 107 and after being wounded and confronted with strong paratroop attacks against his entire perimeter, Lt. Col. L.W. Andrew, V.C., judged that his 22nd Battalion could not hold its positions, especially due to the wide and dispersed deployment, and he concluded that he must withdraw from the immediate vicinity of the airport.

Although possessing a wireless set in his HQ, Andrew knew nothing of what was happening to his two forward companies on the airfield and the other side of Hill 107 as he lacked direct sight of them and his C and D Companies lacked wireless sets. At 5 PM he requested that Hargest release the 23rd New Zealand Battalion to him but was denied due to its commitment to fighting elsewhere.

The correctness of not using the 23rd Battalion for immediate counterattack has been questioned. Others have wondered whether Hargest was confused and misinformed. Faced with Hargest's refusal to commit the 23rd Battalion to assist Andrew's 22nd Battalion, the latter ordered his own counterattack late on the afternoon of May 20 with his sole reserve platoon and two Matilda tanks of the 7th Royal Tank Regiment, but it failed to retake the bridge over the Tavronitis.

At 6 PM, Andrew contacted Hargest by wireless to tell him of the counterattack's failure and that, without support of the 23rd Battalion, he would have to withdraw. Hargest said, "If you must, you must." Hargest promised, though, to send two companies, one of the 23rd Battalion and one of the 28th (Maori) Battalion, to reinforce him.

If Andrew had observed before nightfall the western slopes of Hill 107 where his C and D Companies were, he would have seen that C Company was still strongly defending the airfield to the north and that D Company was also intact along the Tavronitis riverbed to the west. Both C and D Companies had suffered many casualties but they inflicted much greater losses on the paratroopers. But Andrew was unaware of these facts and merely knew that the Germans were building up in strength from the west against what he believed to be his only two remaining companies (A and B).

Not long after 9 PM, Andrew radioed Hargest's HQ that he was withdrawing to the subsidiary ridge (Vineyard Ridge) to the southeast of Hill 107; Andrew positioned the remnants of A and B Companies of 22nd Battalion in line with 21st Battalion on that ridge. It was Andrew's fateful decision to withdraw A and B Companies, under severe pressure, that handed Maleme airfield to the Germans.

While the one company from the 23rd Battalion assisted Andrew's withdrawal to Vineyard Ridge, the other company from the 28th Maori Battalion reached the airfield in the dark. This company, upon reaching the edge of the airfield, was in fact only 200 meters from C Company's command post; however, the Maori detachment believed that the airfield's defenders had been overrun and turned back, possibly fearing an aerial attack with the onset of dawn. Had the Maoris linked up with C Company and continued to defend the airfield on May 21, the course of the entire battle could have swung in favor of the Allies.

The survivors from Company D, under Captain Campbell, on the Tavronitis slope of Hill 107, upon learning that Andrew's Battalion HQ had left the reverse slopes of Hill 107, had no alternative but to fall back as well. By dawn, the Germans were in possession of Hill 107.

C Company's commander, Captain Johnson, found out about Andrew's decision to withdraw during the early hours of the morning of May 21 and, knowing that his men could not withstand another 24 hours of attack, he led his surviving troops away from the airfield at 4:30 AM. By dawn on May 21, no New Zealand troops remained within the airfield perimeter. From their new positions, direct fire was only possible on the eastern end of the runway.

Both: New Zealand Archives

Maleme airfield was lost and became an effective operational airfield for the enemy before the second day of the battle had started. The 100th Gebirgsjäger (Mountain) Regiment started to arrive at Maleme by 5 PM on May 21. The 3rd Fallschirmjäger Regiment, which had landed in Prison Valley, south of Galatos and Hania, sent out patrols to link up with German forces moving east from the now-captured Maleme airfield.

Even though Freyberg may have been confused by Hargest's misleading message about the situation at Maleme as "quite satisfactory," the Creforce commander was overly concerned about the enemy's seaborne reinforcements. Freyberg was still vacillating on whether an attack from the sea would commence or whether air landings at the airfields would continue. Whether due to a strategic error or lack of Ultra intelligence, Freyberg did not move needed troops for the further defense of the airfields, specifically Maleme.

Even Churchill commented that "Freyberg … did not readily believe the scale of air attack to be so gigantic. His fear was of powerful organized invasion from the sea. This we hoped the navy would prevent in spite of our air weaknesses." Freyberg later acknowledged, "We for our part were mostly preoccupied by seaborne landings, not the threat of air landings."

Thus, there was a hesitation in leadership to commit the 23rd Battalion to counterattack the airfield because of its responsibility for coastal defense. On the morning of May 21, Hargest remained at his HQ at Platanias and did not let his battalion commanders mount an attack on Maleme.

According to historian Antony Beevor, "Hargest, Puttick, and Freyberg all accepted the principle of counterattack, yet showed little enthusiasm for the enterprise. A more disastrous state of mind for a commander preparing such an operation is hard to imagine. Without action to prevent a Ger-

man build-up and attack from Maleme, a German victory became inevitable."

After delaying, Freyberg, with his 6,000 troops in the Hania and Suda Bay area, kept the Welsh Regiment, his largest and best equipped unit, at Hania to garrison the seafront and committed only the 20th Battalion of Inglis's 4th Brigade to the counterattack at Maleme. As a result, Freyberg's counterattack on Maleme was both too late and too little.

Nonetheless, the 20th and 21st New Zealand and 28th Maori Battalions did counterattack the airfield during the early morning hours of May 22; however, after making some initial gains, they had to call it off by the afternoon since the New Zealanders were exhausted and now had

Imperial War Museum

A German glider lies at one end of the Tavronitis Bridge on the main road to the Maleme airfield. The seizure of key points on Crete began with parachute and glider landings by the Luftlande Sturmregiment at 8:00 AM on May 20.

become subjected to heavy aerial attack as well. It was now broad daylight, and intense German mortar and machine-gun fire made it impossible to cross the open space. Without artillery or air support, the New Zealanders had no choice but to retreat.

In fact, on May 21, the Royal Navy intercepted a convoy of Greek vessels carrying troops of the 5th Gebirgsjäger Division and essentially destroyed the 3rd Battalion of the 100th Gebirgsjäger Regiment of that division at sea, but at considerable loss to the British fleet.

After that foray, the Luftwaffe controlled the skies over the sealanes during daylight. In the sea battles of May 21/22, as described by Churchill, "The Navy had lost two cruisers and three destroyers sunk, one battleship, the *Warspite*, put out of action for a long time, and the *Valiant* and many other units considerably damaged. Nevertheless, the seaguard of Crete had been maintained. The Navy had not failed. Not a single German landed in Crete from the sea until the battle for the island was ended."

Battle for Retimo, May 20-29, 1941

At 4:15 PM on May 20, 1,500 paratroopers of the 2nd Fallschirmjäger (less the 2nd Battalion) under Oberst Alfred Sturm dropped on part of the 19th Australian Brigade and the 4th and 5th Greek Regiments at Retimo. These paratroopers, comprising the regimental HQ, at first captured the airfield but faced rapid counterattacks from the Australians and the Greeks led by Lt. Col. Ian Campbell, resulting in the capture of Sturm and his HQ.

Although lacking sufficient troop numbers and adequate antiaircraft support, Campbell concentrated his defense around the airstrip, leaving only a light screen around the town and on the beaches.

The lack of heavy weapons and AA guns, along with excellent concealment of the Allied infantry trenches, misled the German paratroops into believing that the area was lightly held. Of the 161 transport planes utilized by the Germans, 15 were shot down by the Allies.

Other German paratroopers of the 3rd Battalion, under Hauptmann Weidemann, landed to the west of the 19th Australian Brigade and headed for the town of Retimo but were met by fierce resistance from the Greek Gendarmerie and Cretan civilians. To avoid heavy casualties, Weidemann fell back and established a defense around an adjacent village, Perivolia. Here the 4th and 5th Greek Regiments continued to beleaguer Wiedemann's German paratroops.

The 1st Battalion of paratroopers, under Major Kroh, landed to the east of many of the Allied troops and succeeded in taking the majority of Hill A, which overlooked Retimo airfield's eastern end. Kroh's men resisted numerous attacks by Campbell's Australians, including his tanks.

As the day wore on, it became imperative to dislodge this paratroop position atop Hill A, so Campbell contacted Freyberg for additional support but none could be spared. The day's end would find Campbell planning a counterattack with his entire force around the airfield at dawn on May 21.

The tenacity of the Australian infantry prevented Retimo from becoming another Maleme. Retimo airfield and town still remained under Allied control. German paratroop reinforcements were unable to break through the Commonwealth defenses. The defense of Retimo demonstrated that fierce counterattacks could dislodge landed paratroops.

As John Sadler wrote, "There is no escaping the conclusion that an injection of the same urgency and dash could have turned the tide at Maleme and altered the entire

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Before German troops assaulted Crete in 1941, General Archibald Wavell (second from left), commander of British Army forces in the Middle East, inspected island defenses. Here he talks with a soldier at a 3.7-inch antiaircraft gun position, a number of which were targets for German glider landings on May 20.

course of the battle." So, too, historian Antony Beevor noted, "If events at Maleme had followed the pattern at [Retimo] and Heraklion, then the Germans would have lost the battle of Crete."

Since no attack had been made at Georgeopolis, located between Suda Bay and Retimo on May 20, Freyberg moved the 2/8th Australian Battalion during the night to Suda, followed the next night by the 2/7th Australian Battalion and Brigadier Vasey's HQ. Thereafter, the two battalions and supporting units at Retimo, under the command of Ian Campbell, acted as an independent force; it soon became impossible to reach it and Retimo remained completely isolated until the end.

On the morning of May 21, Campbell's Australians successfully counterattacked Kroh's force on Hill A, with the German survivors retreating to form a position around Stavromenos and the olive oil factory. The next day, Campbell attacked the factory with his Australians and the 4th Greek Regiment; however, the thick walls of the building, along with some language barriers among the Allied troops, caused the assault to wane in intensity.

At both Perivolia and Stavromenos, "a virtual stalemate" continued for several days. On May 25, Campbell's men suddenly captured the olive oil factory after bombarding it with their field guns' last few rounds. Major Roy Sandover, commander of the 2/11th Battalion, and his men participated in the bloody attacks on Perivolia. They captured some of the outlying houses but the Germans blasted them with light antitank weapons.

Quickly realizing that without heavy weapons more attacks would only lead to a waste of lives, Sandover ceased his assault on Perivolia. Campbell's entire garrison at Retimo had fulfilled their orders; namely, to deny the airfield and the port to the enemy.

However, the Aussies had no knowledge of the evacuation from Heraklion to the east. Communication by land had been blocked and Campbell was unable to contact Creforce by wireless. A small boat sent from Suda with supplies reached the Australians in the early hours of May 28, shortly after their two tanks had been finally destroyed in an attack on the German strongpoints round Perivolia.

Lieutenant Haig, the young naval officer commanding the supply boat, had failed to bring Freyberg's message with instructions for evacuation due to confusion at Suda and Creforce headquarters. All Haig could tell Campbell was to head for Sphakia on the south coast. But Campbell would not abandon his mission at Retimo until officially relieved.

Both Campbell and Sandover finally had to accept that they could not break the German grip on the coast road. An idea to attack toward Suda was discarded, and Campbell insisted on continuing to deny the airfield to the enemy as ordered. On May 29, German mountain artillery and motorcycle troops were advancing from the west while another German force had left Heraklion in the east for Retimo.

The next morning, the Germans renewed their advance, with tank support, against the survivors of the Australian 2/1st and 2/11th Battalions. Rather than incur more futile casualties, Campbell surrendered with most of the garrison, while Sandover, along with 13 officers and 39 NCOs and other ranks, later escaped to Egypt by submarine after spending many months hiding in the mountains of Crete.

Battle of Heraklion, May 20-29, 1941

On May 20, the 3,000 paratroops of the 1st Fallschirmjäger under Oberst Bruno Bräuer, with the 2nd Battalion of the 2nd Fallschirmjäger Regiment attached to it, dropped around Heraklion onto the 14th Infantry Brigade, under the command of Brigadier Chappel, and suffered grievous losses.

After initially remaining silent in order to convince the Germans that their previous raids on the gun emplacements had put them out of action, small arms and AA fire decimated the initial wave of transport aircraft and paratroops, the latter landing in open terrain with little cover.

Since the Stukas and Me-109s had returned to their base on the island of Skarpanto, east of Crete, because they

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ABOVE: German parachutists gather weapons and supply boxes dropped to them. These paratroopers landed in favorable terrain amid olive groves and some rough ground, thereby providing cover for them. Some of their counterparts landed in full view of Allied troops in open terrain without any cover and suffered heavy losses. OPPOSITE: German paratroopers converge on a house. By both their relaxed posture and gait, they are in apparent control of the farmhouse, which may be a headquarters. Once under cover, these German paratroopers armed with automatic weapons were difficult to evict by local Allied counterattacks.

could not wait for the delayed Ju-52 troop carriers, the British Bofors gun crews shot down 15 of these slow transports in two hours. The 2nd Battalion of German paratroops was caught in a deadly crossfire dealt to them by the 2nd Leicesters and the 2nd Black Watch.

The 3rd Battalion of the 1st Fallschirmjäger Regiment, under Hauptmann Karl-Lothar Schulz, was assigned the task of taking the town of Heraklion and initially had to overcome Greek troops and Cretan civilians resisting them prior to gaining control of some of the town.

The 1st Battalion of the 1st Fallschirmjäger Regiment under Major Erich Walther landed relatively unscathed but, recognizing the plight of that regiment's 2nd Battalion, quickly moved to its aid. The 2nd Fallschirmjäger Regiment's attached 2nd Battalion, under Hauptmann Gerhard Schirmer, landed intact and far to the west of Heraklion to block Allied reinforcements from Retimo, thereby isolating Crete's easternmost port and airfield.

Brigadier Chappel's Allied troops immediately attacked on May 20 with the two Matildas of the RTR and the six light tanks of the 3rd Hussars. Chappel had decided to counterattack within the first two hours of the aerial assault since he knew that the outcome of the battle would be decided early. But Chappel, although decisive on the first day of the German landings, did not throw his entire weight into advancing against the severely reduced enemy to crush them on May 21.

In addition to expecting reinforcements from the 2nd Battalion, Argyll and Sutherland Highlanders, the 14th Infantry Brigade had insufficient ammunition for a major attack and lacked the local intelligence to realize how few reserves the Fallschirmjägers actually possessed.

Parenthetically, the leading company of the Argyll and Sutherland Highlanders with two Matildas did not arrive from Timbaki in the south to Heraklion until midday on May 23 due to harassing attacks by the paratroopers. Since his orders were to hold Heraklion and the airfield there, as well as being ignorant of the disaster at Maleme due to lack of wireless sets, Chappel adopted a risk-averse posture and stayed within his perimeter, assuming that by simply holding on the German assault would end.

At dawn on May 28, after having endured a five-day stalemate with the Germans at Heraklion, the 14th Infantry Brigade officers were informed that Royal Navy craft would embark the troops from Heraklion harbor that night. The withdrawal, which had remained a secret that whole day, was conducted flawlessly and any extra supplies and vehicles were destroyed. About 3,500 men had embarked by 2:45 AM on May 29.

Aftermath of the Maleme Airfield Capture

On May 23, German airborne assaults continued, and the Allied troops commenced withdrawing to a new line near Galatos. On the night of May 23, the 5th New Zealand Brigade was withdrawn into divisional reserve and its front taken over by the 4th New Zealand Brigade.

Two days later, the British front lines at Galatos came under attack by elements of Gebirgsjäger regiments. The attack began early in the afternoon and tore a large gap in the 10th New Zealand Brigade's front by cracking the 18th Battalion's line. The situation was restored by Colonel Kippenberger, who made an unexpected counterattack with two companies from the 23rd New Zealand Battalion, sent by Hargest, along with two light tanks of the 3rd Hussars, thus delaying the German onslaught and enabling the New Zealand Division to disengage.

After Kippenberger's counterattack on Galatos forced a temporary German retreat from the village, he realized there was now no alternative but to retreat to a line linking up with Vasey's two Australian battalions at the end of Prison Valley.

As Wavell stated in his postwar commentary, "On 24th and 25th May the fighting continued with the same intensity. The enemy continued to land troops and to force back

our line from the Maleme area towards Canea, which was heavily bombed and almost destroyed. General Freyberg now abolished the separate Maleme sector and put the New Zealand troops who had formerly occupied it under General Weston, Royal Marines, the commander of the M.N.B.D.O."

Given the ferocity of the German airborne attack and the disaster at Maleme, Wavell had tried to send more reinforcements to the island. The only means of doing so was by fast warship that could reach Suda Bay under cover of darkness, disembark troops, and get clear of the island before dawn. This limited both the number and type of troops that could be sent.

Some of them were the Argyll and Sutherland Highlanders, along with two battalions of commandos known as "Layforce," a body of specially picked troops who had been sent out from Britain for combined operations under the command of Colonel Robert Laycock. Two hundred men from Layforce had arrived at Suda Bay on the night of May 24 on the cruiser HMS *Abdiel*.

The main body had to return to Alexandria after failing to land, finally reaching Suda Bay two nights later aboard fast destroyers and the *Abdiel*. According to Churchill, "Fortunately, two commandos, about 750 men, under Colonel Laycock, had been landed at Suda by the minelayer *Abdiel* on the night the 26th. These comparatively fresh forces, with the remains of the 5th New Zealand Brigade and the 7th and 8th Australian Battalions, fought a strong rear-guard action, which enabled almost the whole of our forces in the Suda-Canea-Maleme area that still survived to make their way to southern shore."

On May 26, the Germans broke through the Hania-Galatos line and Allied troops withdrew to Suda Bay. Further troops withdrew to the south to Sphakia so that a seaborne evacuation could be conducted. By the end of the seventh day, Freyberg signaled Wavell that his force was exhausted and that the Allied position was hopeless.

In Freyberg's own words, "A small ill-equipped and immobile force such as ours cannot stand up against the concentrated bombing that we have been faced with during the last seven days…. Once this section [Suda Bay] has been reduced the reduction of Retimo and Heraklion by the same methods will only be a matter of time."

After the war, Wavell wrote, "26th May proved the critical day. Our line west of Canea was broken and driven back on Suda Bay, so that a considerable portion of the base area fell into enemy hands. Suda Bay became no longer tenable. All troops were much exhausted and the enemy air bombing was as intensive as ever. The enemy had by this time landed some 30,000 to 35,000 troops on the island.

"Early on the morning of 27th May, General Freyberg decided that evacuation was inevitable, and reported to me accordingly. In view of the situation he described and the impossibility of sending further reinforcements, I gave orders for the withdrawal of our garrisons from Crete."

On May 27, the Germans deployed a five-regiment attack against Freyberg's Force Reserve (consisting of Royal Welsh Fusiliers, Northumberland Hussars, and the 1st Ranger Battalion from the King's Royal Rifle Corps) of about 1,300 men. After being surrounded by the Germans, some of the Force Reserve broke out to rejoin the main force at Suda.

Bundesarchiv Bild 101I-166-0508-14; Photo: Franz Peter Weixler

To keep an evacuation route to Sphakia open and buy time for an Allied withdrawal to get started, the Allies mounted a counterattack with elements of the 19th Australian Brigade and the Maoris of the 5th New Zealand Brigade.

Even as late as May 27, Churchill continued to exhort Wavell, "Victory in Crete is essential at this turning-point in the war. Keep hurling in all aid you can."

But on May 27, Wavell signaled to Churchill that Crete was no longer defensible: "Canea front has collapsed and Suda Bay only likely to be covered for another 24 hours, if as long. There is no possibility of hurling in reinforcements…. Force at Retimo reported cut off and short of supplies. Force at Heraklion also apparently almost surrounded. Fear we must recognize that Crete is no longer tenable and that troops must be withdrawn as fast as possible. It has been impossible to withstand weight of enemy air attack, which has been on unprecedented scale and has been through force of circumstances practically unopposed."

London reluctantly ordered the island's evacuation, which occurred in an orderly fashion from May 27 through June 1.

On the afternoon of May 27, Freyberg received approval from Wavell to withdraw over the White Mountains to Sphakia on the south coast. From Suda a road climbed the mountains to the south but stopped a few miles short of Sphakia, to which it was linked by a steep and twisting mountain path. This was the road along which the main British force withdrew.

Wavell initially wanted the remnants of Freyberg's force from the western part of the island to withdraw to Retimo and link up with the Heraklion garrison, but Freyberg disagreed and Creforce HQ set off southward. In any event, the coast road to Retimo was blocked, so Retimo and Heraklion were already isolated.

Nonetheless, part of Crete's Allied garrison headed eastward for Heraklion (to be evacuated by Royal Navy Force "B"), while the surviving troops from the Maleme-Canea-Suda Bay area headed south across the island toward Sphakia to be embarked by Royal Navy's Force "C." Their withdrawal was covered in the early stages by Layforce, 5th New Zealand Brigade, and 19th Australian Brigade, the latter two working as one force.

The 4th New Zealand Brigade, some light tanks of the 3rd Hussars, and a Royal Marine battalion also covered the retreat which, in spite of poor terrain and logistics and six days of aerial and paratroop assault, was conducted in a determined manner under the leadership of General Weston.

Through the efforts of the Mediterranean Fleet, 16,000 men were brought off the Cretan beaches and harbors to Egypt. This was a major feat since the Luftwaffe had ensured that a British ship within 50 miles of Crete in daylight would not reach the island. Only the fastest warships, during darkness, were able to patrol off the north coast of Crete.

On May 29, a small number of troops (less than a thousand) were embarked from Sphakia, while 4,000 were evacuated from Heraklion, despite horrendous bombings by

Bundesarchiv Bild 101I-166-0527-04; Photo: Franz Peter Weixler

ABOVE: In retaliation for the mutilation of fallen Fallschirmjägers, the Germans executed Cretan civilians and suspected partisans. Despite harsh German treatment of civilians, many partisan groups, some under the direction of the SOE (Special Operations Executive), roamed the mountains of Crete during the occupation. OPPOSITE: Fallschirmjägers in their baggy jump smocks guard British prisoners. Some 18,000 Allied troops were left behind after the evacuation.

the Luftwaffe that resulted in the sinking of a Royal Navy cruiser. Also, on this day, the Germans took complete control of the airfields and ports of Retimo and Heraklion.

On May 30, the Royal Navy's Force "D," from Alexandria, evacuated 6,000 men at Sphakia with the Allied rear guard having retreated to just a few miles from that port on the south coast. The following day, Royal Navy's Force "C" returned to evacuate an additional 1,500 men from Sphakia; General Freyberg left Crete by Sunderland flying boat.

According to General Wavell, "The Navy sustained heavy losses in ships during the passage to and from Crete, and it had been decided that the evacuation must end on the night of 31st May-1st June. The embarkation during the last two nights was carried out under conditions of considerable difficulty, rations and water were limited, and the troops, scattered in various hiding places during the day to shelter from enemy air attack, were difficult to collect for embarkation.

"I ordered General Freyberg to return to Egypt on the night of 30th-31st May, and he and his staff were taken off by flying boat. General Weston remained in command and was taken off the following night. It is regretted that a considerable number of troops had to be left behind, including an Australian battalion and the bulk of 'Layforce,' who had all fought most skillfully and gallantly to the end."

Out of the total of 27,550 imperial troops on the island at the beginning of the attack, 14,580 were evacuated: 7,130 out of 14,000 British; 2,890 out of 6,450 Australians; and 4,560 out of 7,100 New Zealanders.

The failure to hold Crete was due mainly to the overwhelming superiority of the Luftwaffe and the way in which it was handled in conjunction with paratroops and glidermen. Allied officers who had fought through the last war in France claimed that the bombardment the troops underwent in Crete was both more severe and continuous than anything they had ever experienced.

Wavell's HQ in Cairo suffered from the dual major handicaps of lack of proper equipment (i.e., aircraft, tanks, and artillery pieces) and the inability to reinforce the island with either men or matériel due to inadequate southern harbors and road networks as well as control of the air by the Germans.

Wavell admitted, "It was the enemy air force which was the deciding factor. Even had the German attack been beaten off, it is very doubtful whether the troops in Crete could have been maintained in face of the enemy air force, which made the approach of shipping to the island most hazardous."

Wavell was highly complimentary of his Imperial infantry, their commander, and the men of the Royal Navy and RAF: "The troops, including the Greeks on the island, fought magnificently under the most stern conditions, and deserve the very greatest credit for their efforts.

"General Freyberg and General Weston, and the subordinate commanders ... set a fine example to their men and handled their troops with determination and skill.... The work of the Royal Navy in preventing the enemy attempts at invasion by sea and in evacuation of the troops in spite of extremely heavy losses in ships and men was beyond all praise.

"To Admiral Sir Andrew Cunningham himself, who took the responsibility of ordering the evacuation to proceed in spite of the losses, the Army owes a deep debt of gratitude.... Although they were completely outmatched in numbers, the Royal Air Force never failed to do their utmost to support the Army. Though they were obliged to operate from distant places in Egypt, they attacked to the utmost of their ability and in spite of heavy and inevitable losses."

The defense of Crete, though unsuccessful, undoubtedly frustrated the enemy plan for future operations by destroying such a large number of the airborne troops and their transports. The total German losses were at least 12,000-15,000, of whom a very high proportion were killed.

(One of the Fallschirmjäger casualties was Max Schmeling, world heavyweight boxing champion in 1930 and who had legendary bouts with Joe Louis in 1936 and 1938; he injured his leg and back on the May 20 jump and spent months recovering.)

Although ending in evacuation and imprisonment for many Allied troops, the decision to defend Crete probably led to Wavell's victories in Syria and Iraq, as well

Continued on page 98

Steel Typhoon at

The savage final land battle between "the eagle and the sun" was America's longest and bloodiest campaign in the Pacific Theater.

BY BLAINE TAYLOR

All images: National Archives

OKINAWA

A U.S. Marine patrol clambers over the remains of a rock wall above the Hagushi beaches on L-Day at Okinawa. The Marine at left carries a Browning Automatic Rifle while the one at right holds his M-1 Garand. Between them is another Marine with a flamethrower.

AS ONE ISLAND OR ISLAND GROUP in the Pacific was fought over by American and Japanese forces, it became clear that Japan's days as a combatant in World War II were numbered. One after another, these Imperial outposts fell to the Americans, who were clawing their way ever closer to the Japanese home islands.

Just as Nazi Germany could only be defeated by the Allies seizing one mile after another on their way to Berlin, American planners had looked at the maps of the Pacific and plotted a roadmap across vast stretches of ocean, with the arrows all pointing at Tokyo.

Beginning in August 1942, at Guadalcanal, the war in the Pacific had been a bloodbath as American forces wrestled one tropical island after another from a tenancious enemy for whom the word "surrender" was the equivalent of "dishonor." After the Americans, near the end of 1943, had seized the Gilbert Islands of Tarawa, Makin, and Apamama, the Marshall Islands were next in the crosshairs. The islands of Kwajalein, Majuro, and Eniwetok were taken, opening the sea lanes for further battles in the Marianas, where the defenders of Saipan, Tinian, and Guam waited to be slaughtered.

In the waters around the Philippines, huge naval and aerial battles erupted, and the Japanese were soundly defeated. Still the Japanese refused to give up, and so the American juggernaut rolled on, unchecked, crushing opposition at tiny places with such unfamiliar names as Peleliu and Angaur in the Palau Islands. More islands would continue to fall like dominoes—Biak, Noemfoor, Morotai—each one bringing the Americans and their devastating Boeing B-29 Superfortress heavy bombers closer to Japan.

Although islands such as Mindanao and Formosa were on the American hit list, they would be bypassed, their garrisons cut off and allowed to wither in favor of other, more strategic islands. On October 3, 1944, American commanders in the Pacific received orders to attack and seize Japanese-held territory in the 620-mile-long Ryukyu chain of islands that extend south-

ward from Kyushu, Japan's southernmost home island. The main island in the Ryukyus, located almost midpoint in the chain, is named Okinawa.

A new operation was conceived to invade Okinawa. Its code name: Iceberg.

In a top-level command conference on December 12, 1944, Japanese military leaders in Tokyo pondered the next move of their American opponents on the vast ocean highway leading to the home islands: Formosa or Okinawa? Japanese martial doctrine asserted "decisive battle" to defeat their enemy, both on land and at sea, and Okinawa seemed their best bet to inflict both as 1945 was about to dawn.

For their part, the Allies coveted strategic Okinawa as the final staging point for the projected twofold invasion of the Japan homeland itself—Operation Downfall and its twin parts, Operations Olympic (the attack on Kyushu) and Coronet (the invasion of the main island of Honshu).

Japanese Emperor Hirohito's generals and admirals saw the coming island battle as their last chance to destroy the invading enemy before the home islands could be ground under the foe's iron heel from the west. Thus, for both sides, Okinawa was to become the crucial battle of the entire war. It would also be the largest and costliest land battle of the Pacific campaign.

Indeed, due to the later two American atomic bomb attacks that ended the war in sudden flashes, the fight for the island fortress was to be the last such ground combat between them.

Okinawa is a rugged, mountainous island, a scant 350 nautical miles south of Japan's sacred home islands. The Japanese landed on the island in 1609. When American Navy Commodore Matthew C. Perry landed there with his "black ships" in 1853 on his way to Japan, he called Okinawa "the very door of the Empire." He recommended that the U.S. fleet establish a base there. Okinawa was annexed to Japan proper in 1879, and in 1945 it was included in the 47 Japanese administrative prefectures.

The Japanese began to build up their defenses—artillery positions, bunkers,

After hitting the invasion beaches at Hagushi Bay on Okinawa's southwestern shore, American Army and Marine Corps troops fan out and push the defenders to the far ends of the island.

Map © 2014 MPhilip Schwartzberg, Meridian Mapping, Minneapolis, MN

trenches, caves, tunnels, spider holes, and minefields—on the island in 1944. Imperial Lt. Gen. Mitsuru Ushijima—nicknamed the "Demon General"—was given command of the 877-square-mile "ocean island fortress" of Okinawa in August 1944. The island was defended by the 32nd Army, about 120,000 men strong. This initially encompassed the following units of the Imperial Japanese Army: the 9th, 24th, and 62nd Divisions, as well as the 44th Independent Brigade.

However, the loss of the 9th Division to shore up defenses in the Philippines before the start of the Okinawa battle forced Ushijima to enlist many native home-guard units from Okinawa proper to bolster his ranks. In March 1945, American intelligence estimated 53,000-56,000 enemy troops stationed on the island; shortly before the invasion, this number was upped to 65,000.

In actuality, Ushijima had 77,000 Army troops at his command: 39,000 infantry combat troops and 38,000 "special troops" from artillery and other units. These included 20,000 Boeitai (drafted militia) native Okinawans, 15,000 nonuniformed laborers, 15,000 students in Iron and Blood Volunteer Units, and 600 more students in a nursing unit.

Mitsuru Ushijima was one of Japan's most experienced commanders. He was born on July 31, 1887, in Kagoshima City, Japan, and graduated from the Imperial Japanese Army Academy in 1908, and from the Army Staff College in 1916 during World War I.

He took part in the Siberian Intervention and the Second Sino-Japanese War between the two world wars as well. A brigade and divisional commander between the world wars, Ushijima also was commandant of the elite Toyama Army Infantry School and in

1939 was promoted to the grade of lieutenant general.

During the early part of World War II, Ushijima commanded troops in China and Burma. He again became a commandant—both of the NCO Academy and the Army Academy—during 1942-1944.

Despite his rather gruff nickname, this Japanese commander was described as being a humane man who discouraged his senior officers from striking their subordinates and who disliked displays of anger because he considered it a base emotion. According to staff members, Ushijima was a calm and capable officer who evoked confidence among his soldiers.

In contrast to Ushijima was his temperamental chief of staff, Army Lt. Gen. Isamu Cho, termed "Butcher" Cho by author David Bergamini. Cho served Japanese Prince Asaka in that same capacity during the brutal "Rape of Nanking" in China in 1937, during which thousands were slaughtered (See *WWII Quarterly,* Fall 2011).

Isamu Cho was born on January 19, 1895, in Fukuoka Prefecture, Japan. He graduated from the Army Academy in 1916 and the Staff College in 1928. His early military service was in the radically politicized Kwantung Army in eastern China, and he also took part in several right-wing Army coups against civilian politicians in Japan.

His later service included tours of duty in the puppet state of Manchukuo, on the frontier with the Soviet Union, on the island of Formosa, and in Indochina.

During 1942-1944, Cho commanded the 10th Division. He was promoted to lieutenant general in 1944 before becoming chief of staff to Ushijima's 32nd Army. In basic disagreement with his commander's defensive *shugettsu* (bleeding) strategy, he felt that all-out aggressive action was the only way to defeat the Americans.

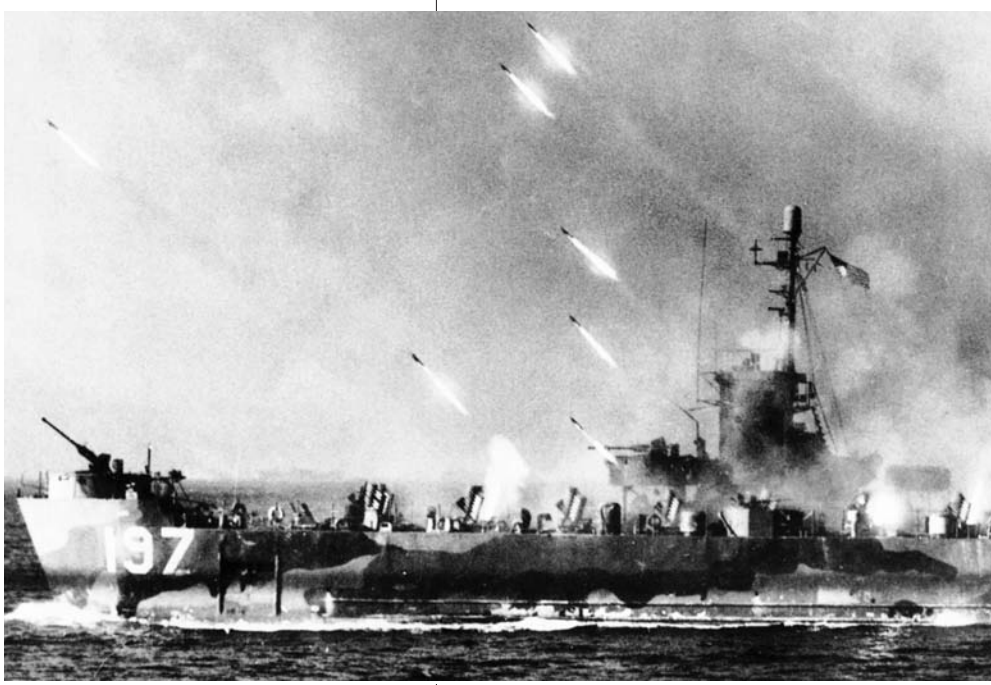
A violent man who both smoked and drank too much, Cho was known for slapping subordinates. While ruthlessly seizing all civilian food supplies for his troops, Cho asserted, "The Army's mission is to win, and it will not allow itself to be defeated by helping starving civilians."

Colonel Hiromichi Yahara was the talented operations officer of Ushijima's 32nd Army. Born October 12, 1902, he joined the Army in 1923, teaching strategy at the Army War College. It was he who persuaded Ushijima to adopt the defensive *jikyusen* (war of attrition) strategy employed on Okinawa to bleed white the Americans, as opposed to General Cho's preferred massed banzai charges. Yahara and Cho clashed often over tactics, but the general eventually relented and allowed Colonel Yahara to return to his former tactical doctrine of "retreat and defend."

After the war, Yahara's U.S. Army interrogation officer noted, "Quiet and unassuming, yet possessed of a keen mind and a fine discernment, Colonel Yahara is, from all reports, an eminently capable officer, described by some POWs as 'the brain' of the 32nd Army."

In the spring of 1945, Admiral Chester W. Nimitz, commander of Pacific Ocean Area Forces, had an immense arsenal at his disposal. Practically every plane, ship, submarine, soldier, and Marine in the Pacific was made available for Iceberg.

Beneath Nimitz was the huge joint Army-Navy Central Pacific Task Forces headed by U.S. Navy Vice Admiral Raymond A. Spruance, commander of the Fifth Fleet. There were numerous subordinate commands, including Task Force 50, a naval covering force, and special groups that were also under Spruance's personal command. Task Force 51, a joint expeditionary force, was under the operational control of Vice Admiral Richmond K. Turner, commander of Amphibious Forces



ABOVE: Commander of U.S. ground forces, Lt. Gen. Simon Bolivar Buckner, Jr. (right), surveys the battlefield in this photo taken just minutes before he was killed by an enemy shell, June 18, 1945. RIGHT: American warships support the amphibious landings by saturating Japanese positions with rockets and naval shells. Here a rocket gunboat unleashes a fusillade of explosives at the enemy.

Pacific Fleet. Task Force 57 included British warships. Air operations were under the command of Vice Admiral G.D. Murray, and Vice Admiral Charles A. Lockwood was in charge of American submarine forces.

In March the vast Allied naval armada commanded by Spruance approached the fortified sea bastion of Okinawa to launch Operation Iceberg—a battle later aptly described as "The Steel Typhoon."

The American plan was based on experience gained from previous assaults of enemy-held islands. As the Army's official history notes, "Iceberg brought together an aggregate of military power—men, guns, ships, and planes—that had accumulated during more than three years of total war."

United States Army Lt. Gen. Simon Bolivar Buckner, Jr., a veteran fighter since 1942, would lead the ground troops (Task Force 56). Buckner's amphibious assault force consisted of seven combat divisions and their supporting units—about 183,000 men—thousands more than those who invaded Normandy on June 6, 1944.

Buckner, the only son of famed Confederate Civil War General Simon Bolivar Buckner, Sr. (later governor of Kentucky), was born July 18, 1886, in Kentucky. After attending the Virginia Military Institute (VMI), the younger Buckner graduated in 1908 from the U.S. Military Academy at West Point as an infantry officer. He then saw two duty tours in the colonial Philippine Islands and trained aviators during World War I.

Postwar, Buckner was again a training officer, at West Point, the General Service School at Fort Leavenworth, Kansas, and the Army War College. He was a tough taskmaster. Noted one parent, "Buckner forgets that cadets are born, not quarried!"

He first fought the Japanese as commander of the Alaska Defense Command during 1942-1943 at the battles of Dutch Harbor, Kiska, and Attu in the Aleutians. In July 1944, Buckner assumed command of the new American Tenth Army in Hawaii. It comprised both Army and U.S. Marine units preparing for the invasion of Taiwan, an operation later cancelled, with Okinawa substituted for it instead. Probably no one was better suited to lead the American ground forces at Okinawa than the fearless Buckner.

The opening act of Iceberg was performed in late March by the 77th Infantry Division, which hit the nearby Kerama and Keise Islands off Okinawa's southwest coast. Then it was time for the main event.

On March 28, hell began to break loose along the western center of Okinawa. Bombers and fighters streaked over the invasion beaches and enemy airfields, bunkers, gun positions, barracks, warehouses, ammunition dumps, and other installations, unleashing a furious bombardment that kept up night and day for a week. Warships added their firepower to the effort, plastering predetermined targets. Minesweepers went in to clear the sea lanes, then underwater demolition teams came in to destroy any obstacles.

Millions of propaganda leaflets were dropped on the defenders, urging them not to resist the invasion and to surrender at the earliest possible moment. Okinawan civilians were also advised to seek shelter.

ABOVE: The battered terrain feature known as "Sugar Loaf Hill," where author and Marine veteran William Manchester said the life expectancy was "about seven seconds." OPPOSITE: Operation Iceberg heats up as American Sherman tanks, one employing a flamethrower, burn fanatical Japanese defenders in their pillboxes at a point known as Rocky Crags, April 19, 1945. The tanks are supporting the 7th Infantry Division.

The 2nd Marine Division made a diversionary feint at the Minatoga coast, the southeast tip of Okinawa, in hopes of diverting Japanese attention away from the main landing beaches at Hagushi.

At 6 AM on L-Day (Landing Day), Easter Sunday, April 1, 1945, the intensity of the naval fire against the Hagushi beachhead picked up until the noise was one continuous roar. In the hundreds of landing craft were the assault waves of the 1st and 6th Marine Divisions and the 7th and 96th Infantry Divisions of the U.S. Army; the 27th Infantry Division was detailed as the floating reserve.

Mortar- and rocket-firing boats cruised close to shore, adding their ordnance to the din. A soldier in one of the landing craft waiting to go in said the noise "was like the world was coming to an end."

Any Japanese soldier braving a look at the armada assembled offshore would have seen over 1,000 ships, including 10 battleships, nine cruisers, 23 destroyers, and 177 gunboats; he, too, would have thought the world was coming to an end.

In the pre-invasion bombardment, 45,000 rounds of 5-inch or larger shells were fired, plus 33,000 rockets and 22,500 mortar shells. As the official history states, "This was the heaviest concentration of naval gunfire ever to support a landing of troops."

William Manchester, a rifleman in the 29th Marine Regiment, 6th Marine Division, and later a prize-winning author, captured the moment in his searing wartime memoir, *Goodbye, Darkness*: "Now we descended the ropes into the amphtracs, which, fully loaded, began forming up in waves. Yellow cordite smoke blew across our bows, battleship guns were flashing, rockets hitting the shore sounded c-r-r-rack, like a monstrous lash, and we were, as infantrymen always are at this point in a landing, utterly helpless. Then, fully aligned, the amphtracs headed for the beach, tossing and churning like steeds in a cavalry charge."

Spruance's transport ships began landing Buckner's Tenth Army on the Hagushi beaches at around 8:30 AM, just as his enemy expected.

As the troops came ashore, they were startled to find the smoking, shell-pocked beaches virtually undefended, in sharp contrast to previous amphibious assaults. Astonishingly, more than 60,000 U.S. troops were ashore by the end of the first day, with two key objectives—Yontan and Kadena airfields—both taken at the loss of but 28 killed and 27 wounded.

Of the unopposed landing of April 1, 1945, famed American Scripps Howard newspaper chain columnist and war correspondent Ernie Pyle wrote, "We were at Okinawa an hour and a half after H-hour without being shot at, and hadn't even gotten our feet wet!"

This relatively easy start of the campaign was deceptive, however, and before it was over a torturous 82 days later, it would go down in history as the bloodiest battle involving American forces since Gettysburg in 1863.

Over the course of 30 years, the author had occasion to interview late Maryland U.S. Senator Daniel B. Brewster many times about his war experiences on Guam and Okinawa. Commissioned in 1943, he retired as a colonel and died at age 83 on August 19, 2007. Following are some of his reflections on the ferocity of combat he encountered as a lieutenant on Okinawa:

"We were in the LSTs very early in the morning" of April 1, 1945. "On the second day, we attacked, deployed in a battalion column…. My job was to lead the point platoon…. We were attacking up a ravine…. The whole hillside above the rice paddy blazed with fire from scores of cleverly concealed caves in the almost vertical cliffs."

Seven Marines were soon badly wounded. One platoon was pinned down, and another ran into heavy machine-gun fire. "As it gained the crest of a ridge," he said, "a Marine who ran toward the cave with a grenade was killed before he could throw it. The entire machine-gun team was destroyed before it could fire a shot…. This was my covering base of fire."

He said that his group was "hopelessly pinned down in the center of the ravine…. Six Marines were killed trying to reestablish communications." By now, Lieutenant Brewster had been wounded twice. "We were pinned down and cut off for most of the day…. My walkie-talkie was hit, and my runner was killed. I sent two more runners back, and both were killed…. I managed to swim and crawl through an irrigation ditch to make contact between the two groups….

"The Japanese attacked both of our little units twice, but we fought them off with grenades and rifle fire. We could see them 20 feet away…. We'd shoot them at almost point-blank range, and throw grenades—and they'd throw the grenades back at us…. We were fighting for our lives! It was the worst day of my life! I thought I'd be killed…. When the day was over, I'd walked in with some 70 men—and 17 walked out. Everybody else was dead or wounded.

"My wounds were this scar you see on my forehead, so my face was all covered with blood. Another bullet grazed my heel. That was April 2, 1945.

"We thought we were better—and that the Marines were better than the Army—and that we were all better than the Japanese! This was part of our training, to think that our unit was the best.

"We took only a handful of prisoners…. The Japanese just didn't surrender.… Our men weren't much of a mind to take prisoners, and they [the Japanese] took no prisoners at all…. It was a battle to the death…. I'd already seen so many people killed—including my own men—that I had no feeling whatsoever for the Japanese. We really didn't consider them human beings. They were the enemy…. There was very close—often hand-to-hand—combat, particularly on Okinawa…."

The new Japanese strategy was both simple and deadly: allow enemy forces to land, draw them ever inland, and only then annihilate their soldiers en masse. Thus, fierce, daily battles after the first week raged around the ancient royal Shuri Castle—Japanese headquarters—and at the capital city of Naha that changed hands under fire 14 times.

More ferocious fighting took place on Kakazu Ridge, the Rocky Crags, and atop Sugar Loaf Hill, where, wrote William Manchester, life expectancy was "about seven seconds."

Time magazine reported, "There were 50 Marines on top of Sugar Loaf Hill. They had been ordered to hold the position all night, at any cost. By dawn, 46 of them had been killed or wounded. Then,

ABOVE: A line of Marines passes the body of a dead Japanese soldier, May 24, 1945. The tenacious defenders preferred death over dishonor. OPPOSITE: The escort carrier USS *Sangamon* (CVE-26), operating near Okinawa, survives a near-miss by a kamikaze pilot, May 4, 1945. Another kamikaze attack later that day hit home, however, and caused extensive damage.

into the foxhole where the remaining four huddled, the Japs dropped a white phosphorous shell, burning three men to death. The last survivor crawled to an aid station."

The Japanese deployed their men well on Okinawa, firmly embedded in successive lines of vast complexes of above-ground pillboxes and bunkers, plus in dug-in mountainous caves and deep underground shelters.

Fanatical Japanese defenders—and many civilians who had been told by the Japanese that American GIs would rape and kill them and their children—either fought to their deaths or leaped over the edge of the island's sheer cliffs to their doom, some clutching their children to them.

Other civilians became tragic victims. Eighty-five frightened student nurses had taken shelter from the fighting in one of the numerous caves that dot the island. Marines approaching the area heard strange voices, sounding much like Japanese, coming from the cave. An interpreter with the Marines called for those in the cave to come out. When they didn't, the Marines shot a stream of fire from a flamethrower into the cave's mouth, killing all the nurses. To this day, the cave is a sacred place known as the "Cave of the Virgins."

As William Manchester later wrote, "My father [a wounded World War I Marine] had warned me that war is grisly beyond imagining. Now I believed him."

General Buckner landed his troops on the western side of the island's narrow waist

and advanced for the first five days almost without any enemy contact. Major contact with the Japanese was finally made on the 6th, as the Americans ran into the first enemy defense line along Kakazu Ridge.

General Buckner's own "blowtorch and corkscrew" frontal assault tactics finally prevailed over the dogged Japanese resistance. The former referred to flamethrowing U.S. Army Sherman tanks that fried the enemy defenders alive in their emplacements, while the latter referred to blasting them out of their pillboxes and caves with satchel charges full of explosives.

Buckner rejected Marine pleas for a second, follow-up amphibious landing behind the enemy's inland lines, choosing instead to slug it out inch by inch, yard by yard. For this, American General Douglas MacArthur accused rival theater commander Admiral Chester Nimitz of "sacrificing thousands of American soldiers,"one of many controversies still raging over the epic fight today.

Meanwhile, offshore an equally fierce battle raged at sea and in the air again, just as the wily Japanese had planned.

The Imperial Japanese Navy's Combined Fleet launched 16 ships in Operation Ten-Go led by the world's greatest battleship, the mammoth *Yamato* ("National Spirit"), on a grim suicide mission with just enough fuel to steam one way and attack the U.S. invasion force standing off Okinawa. Intercepted by U.S. aircraft carriers 210 miles north of Okinawa, however, the mighty Japanese battlewagon was sunk on April 6, 1945, in just under two hours by bombs and torpedoes. The other ships in the Japanese flotilla were lost as well.

Overhead, from April 6-May 25, the Japanese Navy's Special Attack Corps launched seven mighty waves of more than 1,500 kamikaze (Divine Wind) suicide planes to crash into and hopefully sink the 1,200 American warships off Okinawa. At least 1,100 of the suicide planes were lost in action. The "Divine Wind" reference harkened back to the 13th century, when a storm destroyed a Chinese invasion fleet bound for Japan.

Japanese Rear Admiral Minoru Ota commanded 10,000 sailors of the Okinawa Naval Base Force's Surface Escort Unit, and also local naval aviation units on Oroku Peninsula. His seven sea-raiding battalions—formed to man suicide boats to crash into U.S. warships—were mostly converted to naval infantry units fighting in the land battle instead.

Ashore, Buckner's next advance was launched on April 11 and smashed through the Shuri Castle line, broken on both enemy flanks, forcing the Japanese to fall back to their third and last defensive line on the island's southern tip. Two tough Japanese banzai counterattacks, ordered by General Cho, were crushed by massive American ground fire on April 12 and again during May 3-5.

On the morning of April 18, 1945, war correspondent Ernie Pyle was riding in a jeep with four others on Ie Shima, off the main island of Okinawa. Coming under enemy machine-gun fire, they leaped into a nearby ditch. Raising his head, Pyle was hit in the temple by a bullet and killed.

Buried still wearing his helmet, the 44-year-old Pyle was later exhumed from his wartime grave and moved to Hawaii's famous National Memorial Cemetery (the "Punchbowl"). A stone memorial stands on Ia Shima where he was killed: "At this spot, the 77th Infantry lost a buddy, Ernie Pyle, 18 April 1945."

President Harry S. Truman said of Pyle, "More than any other man, he became the spokesman of the ordinary American-in-arms doing so many extraordinary things." Pyle was one of the few civilians during the war to be awarded the Purple Heart medal as well.

On May 9 word came through that Germany had surrendered; all the years of bloodletting in Europe were over. The news brought little comfort to the Americans half a world away on Okinawa, however. While they may have hoped the Japanese would follow suit and wave the white flag, experience had taught them that the Japanese rarely, if ever, surrendered.

General Buckner launched his third and final push on June 18, 1945, the very day

he was slain. On June 18, exactly one month shy of his 59th birthday, Buckner ventured far forward against advice to observe the 8th Marine Regiment of the 1st Marine Division in combat.

Standing between two boulders, he turned to leave when a Japanese 47mm artillery shell exploded overhead. Author John Toland said, "A fragment shattered a mound of coral and, freakishly, one jagged piece of coral flew up and embedded itself in the general's chest. He died 10 minutes later."

Succeeded briefly by Marine General Roy Geiger, Buckner was the highest ranking American killed in the Pacific Theater and in 1954 was posthumously promoted to full general by a special act of Congress.

William Manchester recalled a horrific scene in a cemetery when he heard a shell screaming his way and ducked into the doorway of a tomb: "I wasn't actually safe there, but I had more protection than Izzy Levy or Rip Thorne, who were cooking breakfast over hot boxes. The eight-incher beat the thousand-to-one odds. It landed in the exact center of the courtyard. Rip's body absorbed most of the shock. It disintegrated, and his flesh, blood, brains, and intestines, encompassed me....

"My back and left side were pierced by chunks of shrapnel and fragments of Rip's bones. I also suffered brain injury. Apparently I rose, staggered out of the courtyard, and collapsed. For four hours I was left for dead." A corpsman found Manchester and evacuated him to a hospital on Saipan.

The fighting in the ancient graveyards led Geiger's successor, the fiery U.S. Army General Joseph W. Stilwell, to comment, "The poor Okinawans have had even their ancestors blown to pieces!"

It was just as bad for the Marines. Twenty-one-year-old Marine Lieutenant Daniel Brewster never forgot the fight for Okinawa. He recalled that in May, "I called over my platoon sergeant.… As I was talking to him, a mortar shell landed on his shoulder and blew his head off, and put fragments through both my legs, knocking me down. We dug in as fast as we could…. We were shelled all night long and we took several direct hits and heavy casualties….

"The flamethrower tanks were the very best weapon we had, where the cannon barrel was used for napalm instead of the usual 75mm shell…. The tank would lead the way.

"In the whole battle … I never took a prisoner. My unit never took a prisoner, and we killed hundreds of Japanese…. When we saw them, we would shoot them; wounded or not, they would still throw grenades."

Brewster was standing with two others when "suddenly, there was a blinding explosion, and a shell went off between the two men. One was severely wounded, and the other was blown to pieces…. I felt something sting my face."

Brewster's unit proceeded into the city of Naha. He said, "A day or so later, I rejoined the unit for the attack on Oruku Peninsula and the Admiral's Cave where Ushijima and Ota had committed suicide. We took that hill, cave, and little peninsula in the same type of hand-to-hand fighting…. We were in the line day after day…. When [the Japanese] got out in the open, we slaughtered them."

One day, exhausted, Brewster was taking a nap in a hole when, suddenly, "I felt somebody stumble in on top of me. I pushed him up while he was stabbing me with a knife. My runner killed him.

"The civilians took a terrible beating…. We would wait until anybody coming our way was literally on top of us before we'd open fire with everything we had, and in the morning, discover that we had slaughtered civilians…. Japanese soldiers herded civilians down in front of us…. Women and children, all dead—and mixed in with them were Japanese regulars."

Another U.S. infantryman noted, "There was some return fire from a few of the houses, but the others were probably occupied by civilians. We didn't care. It was a terrible thing not to distinguish between the enemy and women and children."

When he received the American commander's demand to surrender on June 17, 1945, General Ushijima answered, "As a Samurai, it is not consonant with my honor to entertain such a proposal," a dignified rejection that was typical of the man.

Five days later, the beaten Japanese commanders in their final headquarters cave—Hill 89 near Mabuni—could hear the approaching explosions of American hand grenades. The end had come. Before dawn, after drinking considerable amounts of alcohol, Generals Ushijima and Cho knelt together on a quilt, with Cho lowering his head. A cap-

ABOVE: Summoning all their courage, Marines make an uphill assault against the entrenched enemy. A Marine (at left) carries a radio and another a spool of wire. OPPOSITE: A 1st Division Marine comforts another who broke down in tears after witnessing the death of a buddy during the furious drive on Japanese headquarters at Shuri Castle.

tain standing by with a samurai sword brought it down on Cho's exposed neck, but the blow didn't cut deeply enough. Sergeant Kyushu Fujita grabbed the weapon and cut the general's spinal column with a surer stroke. His final message asserted, "I depart without regret, shame, or obligations."

General Ushijima sliced open his own abdomen, and then his spinal cord was also severed by a sword stroke. Seven of his staff members shot themselves as well. Today, the former Japanese Navy underground headquarters is open to the public. Traces of mass suicide—hand grenade blast scars on the walls—are visible. The farewell message left by Ota on a wall also remains clearly visible.

Before his demise, General Ushijima wisely refused to allow Colonel Yahara to kill himself: "If you die, there will be no one left who knows the truth about the Battle of Okinawa! Bear the temporary shame, but endure it! This is an order of your Army commander."

The colonel obeyed and escaped from the death cave disguised as an English teacher but was eventually captured. In 1973, Yahara published his firsthand account of the fighting, *The Battle for Okinawa*. He died on May 7, 1981, at age 78.

Rather than surrender, other Japanese soldiers, knowing the chance of victory was nil, killed themselves with hand grenades rather than submit to the shame. As the official U.S. Army history said, "When cornered or injured, many of [the Japanese] would hold grenades against their stomachs and blow themselves to pieces—a kind of a poor man's hari-kari. During the last days of the battle many bodies were found with the abdomen and right hand blown away—the telltale evidence of self-destruction."

The island finally fell to the Americans on June 22, 1945. The 82-day Battle of Okinawa resulted in the deaths of 110,000 Japanese soldiers, while the surprising number of 10,775 were captured. The U.S. Army, Navy, and Marines lost a total of 12,520 men killed, 38,916 wounded, and 33,096 noncombat injuries—including the highest rate of combat fatigue of any campaign in the war. The U.S. Navy suffered greater casualties in this one campaign than in any other battle of the war: 368 ships and landing craft damaged and 28 sunk, while 458 planes were lost to enemy action and another 310 were lost due to mechanical failure or operational accidents.

Smashed between the meat grinder of two determined and ruthless foes, the native Okinawan population suffered somewhere between 42,000 and 150,000 dead from a pre-battle population of 450,000 (today the population is 1.4 million), making Okinawa the costliest battle in the Pacific for both combatants and civilians. Actual casualty, rape, and suicide figures are still debated.

British Prime Minister Sir Winston Churchill called the fight for Okinawa "among the most intense and famous battles in military history." The Army's official history said, "The military value of Okinawa exceeded all hope. It was sufficiently large to mount great numbers of troops; it provided numerous airfield sites close to the enemy's homeland; and it furnished fleet anchorage helping the Navy to keep in action at Japan's doors. As soon as the fighting ended, American forces on Okinawa set themselves to preparing for the battles on the main islands of Japan, their thoughts sober as they remembered the bitter bloodshed behind and also envisioned an even more desperate struggle to come."

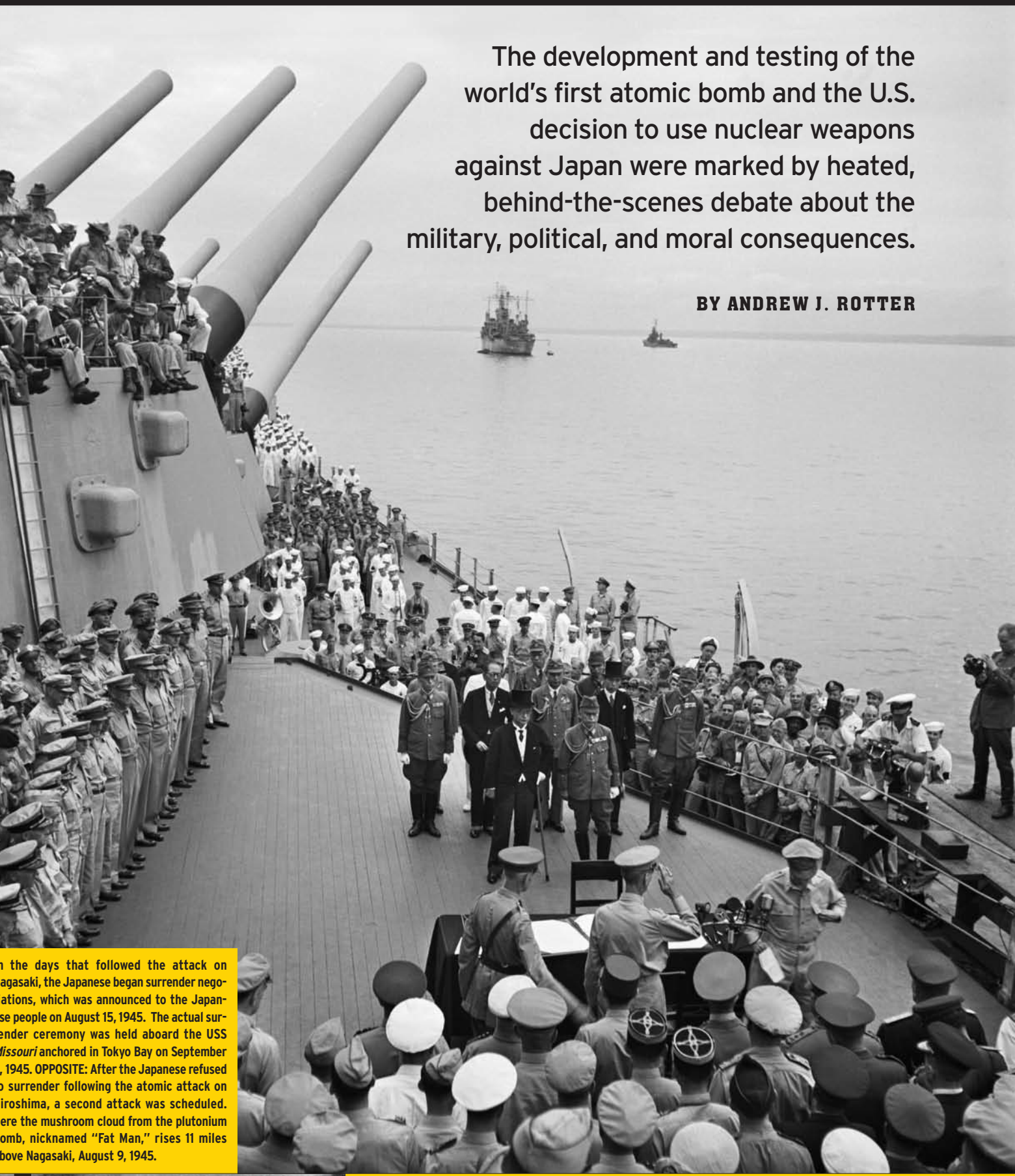
William Manchester was forever haunted by the wanton death and destruction visited upon the civilian population. He called it "the callousness with which we destroyed a people who had never harmed us."

As a gesture of goodwill, Okinawa was returned to Japan by the United States in 1972. By agreement with Japan, the United States still keeps a sizable military presence on the island—but not always to the civilian population's liking.

In 1995, the prefecture dedicated the Cornerstone of Peace Memorial at Mabuni, scene of the final fighting, to be inscribed with the names of those who died, 240,734, by 2008. □

The development and testing of the world's first atomic bomb and the U.S. decision to use nuclear weapons against Japan were marked by heated, behind-the-scenes debate about the military, political, and moral consequences.

BY ANDREW J. ROTTER



n the days that followed the attack on agasaki, the Japanese began surrender nego- iations, which was announced to the Japan- se people on August 15, 1945. The actual sur- ender ceremony was held aboard the USS *Missouri* anchored in Tokyo Bay on September , 1945. OPPOSITE: After the Japanese refused o surrender following the atomic attack on iroshima, a second attack was scheduled. ere the mushroom cloud from the plutonium omb, nicknamed "Fat Man," rises 11 miles bove Nagasaki, August 9, 1945.

UNLEASHING THE DRAGON

The men and women who imagined and then built the atomic bomb thought they were doing something different from what makers of "conventional" weapons did. They believed they were engaged in something special.

No one recalls the names of those who developed napalm and other incendiaries. No other single weapons project received $2 billion in U.S. government funds. Radar cost more, but it was not a weapon as such. Knowing what they knew about the power of a nuclear chain reaction, and whatever they may have guessed about the impact of radioactivity beyond the perimeter of the blast, some scientists and some government policymakers felt a need to think especially hard about how and against whom the atomic bomb should be used.

General Curtis LeMay was permitted by Air Force strategic doctrine to firebomb Tokyo with many tons of incendiaries, but he made the decision to launch the attack himself. There were no high-level meetings to discuss the use of napalm. The opposite, of course, was true for the atomic bomb.

There was, as one of the scientists, Princeton's Robert Wilson, suggested, an assumption in the air that, if a bomb became feasible while the enemy—any enemy—was still in the field, it should be used. It would have been, as Wilson put it, "unrealistic and unfair" to have asked the scientists to stop their work and the United States to stop its fight.

President Franklin D. Roosevelt seems to have assumed this, and when, in late 1943, the Manhattan Project's military director, Brig. Gen. Leslie Groves, began retrofitting a Boeing B-29 Superfortress bomber, largely designated for use in the Pacific Theater, to carry the bomb, it was clear that he, too, planned to use his weapon against any and all enemies. Roosevelt's and Grove's decisions were the ones that mattered most, and most of the scientists working on the bomb, like Robert Wilson, accepted this.

But even before Germany had surrendered, several of those involved with the Manhattan Project, convinced that the great evil of Nazism had been subdued and the danger of a German atomic bomb had passed, argued that the bomb ought not to be used against Japan. In other words, the target of the bomb should be understood as having been defeated, and the bomb's aiming point not merely shifted to another nation.

It must be said that there was not much sympathy for the Japanese themselves—while the Jewish refugee scientists especially regarded them as less malignant

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than the Nazis, most also remembered Pearl Harbor, read the news of the ferocious island-hopping campaign, and shared the view held by most white Americans that the Japanese were not quite human.

Instead, the scientists' major concern was that combat use of the bomb against Japan would set a bad precedent for the rest of the world and would in particular antagonize the Soviet Union, which would feel threatened by the U.S. attack and would consider it necessary to race ahead with a bomb-building project of its own.

Niels Bohr, the Danish physicist and a member of the British mission to the Manhattan Project, was an early advocate of informing the Soviet Union about the bomb project, thereby hastening a return to "the republic of science" and an "open world" of information exchange. Bohr had traveled to the bomb makers' laboratory at Los Alamos, New Mexico, in 1944 and had there advocated, in his elliptical way of speaking, the use of the bomb as a symbol of international hope and the opportunity for international cooperation.

He did not, apparently, recommend specifically against using the bomb in Japan, but he stressed the singular evil of Hitler and confidently told Robert Oppenheimer, the civilian head of the project, that "nothing like" Nazism "would ever happen again."

Czech-born nuclear physicist Leó Szilárd went further. He had energetically promoted the bomb, and to him belongs a good deal of credit for harassing U.S. authorities into taking the project seriously early in the European war. Gradually, however, Szilárd's gifts as a scientist became less relevant to the task of crafting the bomb itself.

In early 1945, as Germany's defeat loomed, Szilárd decided to talk to Roosevelt about the urgent need for postwar control of nuclear weapons. He solicited a letter of introduction from Albert Einstein, gained permission to take his cause to the president from University of Chicago physicist Arthur Compton, and secured, through Eleanor Roosevelt, an appointment at the White House for May 8, 1945. When FDR died unexpectedly on April 12, Szilárd managed to reschedule with the new president, Harry S. Truman.

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ABOVE: Albert Einstein (second from right) poses with atomic physicists Neils Bohr, James Franck, and Isidore Rabi in 1954. Although all four men were part of the Manhattan Project, all four expressed serious reservations about military use of nuclear weapons. They also wished to share the atomic secret with the world—a recommendation President Truman rejected. BELOW: Manhattan Project scientists Leo Szilárd (left) and Enrico Fermi (center) patented the idea of a nuclear reactor in 1933. Szilárd advocated demonstrating atomic power, not its use in war, while Fermi later felt guilt. Richard Feynman (right) was also troubled by the bomb's use on civilians.

The day after Roosevelt's death, James ("Jimmy") Byrnes, Roosevelt's director of War Mobilization and the man who would soon be Secretary of State, briefed Truman on the bomb, telling the new president that "we were perfecting an explosive great enough to destroy the whole world," then adding that "the bomb might well put us in a position to dictate our own terms at the end of the war."

For his part, Szilárd got as far as Truman's appointment secretary, Matthew Connelly, who assured Szilárd that his boss took him seriously, then shunted him off to South Carolina for a meeting with Byrnes. The war in Europe ended on May 8, 1945, and the possibility of using the bomb against Nazi Germany ended with it.

Szilárd took Nobel Prize-winning physical chemist Harold Urey and University of Chicago Dean Walter Bartky along for support during his visit with Byrnes; the men arrived by train in Spartanburg, South Carolina, on May 28. Szilárd presented Byrnes with Einstein's letter and read a memo that suggested dropping a bomb on Japan would probably move the Soviets more quickly to making a bomb of their own. Byrnes remonstrated. Groves, he said, had told him there was no uranium in the Soviet Union.

Having spent $2 billion on the bomb, not to use it against Japan would ultimately dismay Congress and make it difficult to get funding for nuclear research in the future. And, Byrnes implied, the Soviets, who seemed to him up to no good in the East European nations they had liberated from Germany, might be easier to deal with if the United States dropped an atomic bomb. More consistently than any other U.S. official, Byrnes saw the atomic bomb as a vital instrument of wartime and postwar diplomacy toward the Soviet Union and firmly believed that the Soviets should not receive any information about the bomb lest Stalin insist on a "partnership" the Americans must never offer.

At this point, Szilárd remembered, "I began to doubt that there was any way for me to communicate with Byrnes in this matter." Szilárd and his colleagues took their leave in a fog of depression.

Szilárd returned to the Metallurgical Laboratory at the University of Chicago (dubbed the "Met Lab") and discovered that he had, as he often had, generated controversy. The Army was angry that Szilárd had been permitted to get to Connelly and especially Byrnes. Bartky was reprimanded by Groves and scolded for giving Szilárd's memo to Byrnes; Groves considered Szilárd "an opportunist" with "no moral standards of any kind."

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Manhattan Project scientists and officials are all smiles at the University of California at Berkley, 1940, before the atomic bomb became reality. Left to right: Ernest Lawrence, Karl Compton, Vannevar Bush, James B. Conant, Arthur Compton, and Alfred Loomis.

Arthur Compton loyally backed his scientists and, as the high-level Interim Committee (established by Truman in April 1945 and made up of Byrnes, Secretary of War Henry L. Stimson, Army Chief of Staff George C. Marshall, and other scientists and government officials) began its deliberations, he deputed James Franck, the head of Met Lab's chemistry section, to write a report on the probable consequences of the bomb's use. Franck had serious reservations about using the bomb and had in fact exacted a promise from Compton, in 1942, that if an American bomb was ready before Germany or another nation had one, Franck could object to its use at the highest level of government.

Franck rushed to his conclusions and sent his 13-page report to Stimson on June 11—though, as things turned out, it did not reach Stimson's desk. Franck knew the reason why many were promoting the use of the bomb, or he anticipated it with remarkable acuity. Some said that using bombs would end the war quickly and thus save American lives. But Franck doubted that the first generation of nuclear weapons would be powerful enough to discourage the Japanese from continuing the fight.

Moreover, even if the bombs did shorten the war and thus keep American soldiers alive, that benefit "may be outweighed by the ensuing loss of confidence and wave of horror and repulsion" the world would feel if the bombs were dropped. The huge expense of the Manhattan Project, mentioned by Szilárd to Byrnes, did not require the bombs' use; the American public would understand "that a weapon can be made ready only for use in an extreme emergency," and that nuclear weapons were in this category.

The compelling reason to build the weapon had been the scientists' fear that Germany might be building one too, but that was no longer an issue (the Germans were far behind in their efforts to master nuclear technology). Above all, using the bomb against a Japanese city would so shock the world as to make future control of nuclear weapons unlikely. According to the Franck Committee Report, the bomb was "something entirely new in the order of magnitude of destructive power."

Given that, the report said that the way forward was to arrange a demonstration of the weapon in "the desert or [on] a barren island," to which representatives from all nations, including of course Japan and the Soviet Union, would be invited. If the Japanese saw the awful power of the bomb, they might surrender. If the Russians and others saw that the Americans had the bomb but were too merciful to use it, they might be persuaded to place nuclear weapons work under international control.

Military or government officials either remained unaware of the Franck Report or ignored it. Still, dissent continued. A gas-diffusion engineer (gas diffusion had been one method scientists considered as a way of producing weapons-grade fissionable nuclear material) named O.C. Brewster got a letter through to Stimson on May 24 in which he insisted that if the United Sates dropped the bomb, "We would be the most hated and feared nation on earth."

George Harrison, Stimson's special assistant, wrote to his boss on June 26 of sci-

entists' concerns about the bombs' use leading to a nuclear arms race. In July, Szilárd tried again, circulating at the Met Lab a petition calling on the government to refrain "on moral grounds" from using the bomb against Japanese cities. He got 53 signatures at first, then toned down his language slightly and gained 17 more.

But he could not win over the lab's chemists, nor could he persuade Oppenheimer or Edward Teller, both at Los Alamos, to sign. Oppie refused even to circulate the document. The petition went through channels to Groves, who sat on it until August 1, when he sent it to Stimson. President Truman, who had been in Potsdam and was then returning home aboard

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ship, never saw it.

There were also several high-ranking doubters, men involved in atomic bomb decision making, who shared, perhaps independently, the scientists' concerns about dropping the bombs on Japanese cities, or who had different concerns that nevertheless brought them to some of the same, troubled conclusions. George Marshall did privately urge Stimson, on June 29, to confine the use of the bomb to a genuinely military target. When the administration instead agreed to target Hiroshima and other cities, Marshall kept his counsel.

Joseph Grew, the Undersecretary of State and former Ambassador to Japan, urged Truman in late May to signal to the Japanese that even in surrender they could retain control of their political system, meaning that the office and the person of the emperor would be preserved.

Grew's proposal came in the aftermath of the latest firebombing attack on Tokyo; the atomic bomb lurked only in shadow form behind his argument to the president. Truman sent Grew off to see Stimson and several military leaders, who objected that such a concession would signal weakness to the Japanese even as the battle continued for Okinawa.

Most forceful among the dissenters was Ralph Bard, Undersecretary of the Navy and a member of the Interim Committee. Bard was convinced that the Japanese were looking for a way to capitulate. If perhaps Japan was warned about the bomb, even a few days before it was to be used, and if perhaps the president could make "assurances" to Tokyo regarding the emperor, the Japanese would surrender unconditionally. Bard saw nothing to lose by trying.

All these dissents, doubts, and inklings of doubt were overridden by the determination among bomb builders and policymakers to use the new weapon as long as the enemy refused to surrender unconditionally as the U.S. government defined the adverb. The strenuous concerns of Szilárd and Franck, along with the more qualified ones of Marshall, Grew, and Bard, could not match the combination of assumption and conviction on the part of those who saw no reason not to use the bomb and various and substantial benefits to using it.

To some small extent, the Interim Committee's discussion of how to use the bomb sometimes slipped into discussing whether or not to use it at all. Ralph Bard, after all, concluded that the Japanese should be warned in advance about the bomb and offered a guarantee that the emperor would be retained. In summarizing the deliberations, R. Gordon Anderson, who took notes at the meeting, recorded "general agreement" with the conclusion that "we could not give the Japanese any warning" that the bomb was coming.

Some members of the committee had talked at lunch, for around 10 minutes, about the possibility of using a noncombat demonstration of the bomb to convince the Japanese to give up. Everyone hearing this argument objected to it for at least one of several reasons. The Japanese could attack the demonstration site or the plane delivering the bomb. The bomb might be a dud. Even if it exploded, Japan's "determined and fanatical men," in Compton's words, might be unimpressed. America's war prisoners might, somehow, be placed in the demonstration area. The element of surprise, crucial to shock the Japanese, would be lost. And, finally, someone added, would the threat of the bomb or its noncombat display move a people whose cities had already been firebombed?

The Interim Committee had been treating the atomic bomb as something special, but its membership still was not convinced that in every respect it was, or that its victims would see it so. In June the committee agreed that the bomb should be used as soon as it was ready.

National Archives

ABOVE: The Trinity test bomb, known as the "gadget," is carefully winched to the top of a 100-foot tower for the final assembly at the Alamogordo Bombing and Gunnery Range, New Mexico. OPPOSITE: Alpha Track Calutron at the Y-12 plant at Oak Ridge, Tennessee, was used to enrich uranium for the Manhattan Project. RIGHT: Close-up of the "gadget," photographed in the shed at the top of the tower prior to the test firing.

Still, Stimson had grave misgivings about the bomb's moral implications and, when a scientists' Target Committee placed the city of Kyoto at the top of its objectives for an atomic bomb crew, Stimson, who had twice visited the city, demanded its removal. Kyoto was a cultural and religious center that would become, if destroyed, an example of American cruelty, and, if spared, a symbol of American decency and restraint. No amount of entreaty from Groves would persuade the secretary to put Kyoto in the crosshairs. Stimson also took it on faith that civilians should be spared "as far as possible" from the weapons of war.

Harry Truman exhibited on the atomic bomb issue a combination of feigned indifference and zealous overinvolvement characteristic of the insecure. There is little evidence that he saw the bomb as a moral matter, at least before the second bomb was dropped on Nagasaki. He nevertheless felt compelled to tell himself, like Stimson, that the atomic bombs whose use he authorized, or to whose use he acceded, were to be aimed at military targets. Stimson had told him that the "most desirable target" of the bomb "would be a vital war plant employing a large number of workers and closely surrounded by workers' houses." Truman accepted this recommendation.

Anyone who knew, as Stimson and Truman did, what the firebombs had done to Hamburg, Dresden, and Tokyo, and what the test of the plutonium bomb in New Mexico would soon reveal, also knew that these weapons unleashed upon cities did not magically kill only their military inhabitants or destroy factories and "workers' houses" while sparing tea shops, hospitals, and the homes of teachers.

Here again was self-deception—undertaken at the highest level and on the most critical of issues. Probably, like Stimson, Truman told himself that sparing Kyoto (and, belatedly, Tokyo) absolved him of charges that he was targeting innocents. Having thus persuaded himself that he was merely engaged in the accepted strategic practice of war, Truman slept soundly on those midsummer nights.

That decisions needed making, that self-delusion seemed necessary, were the results of the Manhattan Project's success in producing a functional atomic bomb. While Truman struggled to find his footing as president, while Byrnes, Groves, and especially Stimson tutored him about the bomb, while the Interim Committee discussed how to use the bomb, and scientists, generals, and government officials debated targets, Oppenheimer's army in New Mexico labored to solve the bomb's technical problems and thus fulfill its destiny.

Szilárd, Franck, and several others thought the bomb should not be used automatically against Japan. Oppenheimer was having none of it. He turned aside Szilárd's provocative petition and threw himself so fully into the work of finishing the plutonium test bomb that Groves wondered if he would have time for policy meetings in Washington, and friends wor-

National Archives

ried about his health.

There remained difficulties with the implosion mechanism, the series of detonators that needed to fire simultaneously "within a fraction of a millionth of a second," if the bomb's plutonium was to chain react properly.

Equally troublesome was the bomb's gumball-sized initiator (code named "urchin"), which lay within the plutonium core and would start the release of neutrons. A brave Canadian scientist named Louis Slotin spent his days at a gunmetal desk, pushing toward each other, then quickly separating, two hemispheres of plutonium. He was trying to figure out

exactly how much of the volatile element would be needed for the shot.

Nobody had a more dangerous job. "Tickling the dragon's tail," it was called. On May 21, 1946, Slotin was still tickling. His screwdriver slipped, the hemispheres joined for a split second of criticality, and Slotin, who threw his body over the hemispheres even as he wrenched them apart, died an agonizing and secret death nine days later.

It was serious and sophisticated work. Preparing the test bomb gave the scientists a sense of masculine power. They named their bombs Little Boy and Fat Man and planned to label any unsuccessful test device "a girl." The work allowed them to presume to control nature. Nuclear energy was the fundamental force in the universe; to command it "in a pint pot," according to physicist Freeman Dyson, was to "produce an illusion of illimitable power."

Oppenheimer called the test site (and ultimately the shot itself) "Trinity," inspired by the "three-person'd God" of a John Donne sonnet.

Preparation for the test was, at times, almost shockingly quotidian. Once the Trinity bomb was under assembly, scientists found several holes in its volatile core, which they plugged with shreds of facial tissue. Some of the bomb's detonator charges required snugging by means of Scotch tape. The bomb was taken by car and truck to the test site at Alamogordo, 200 miles south of Los Alamos; the core, separated of course from the rest of the assembly, traveled in two suitcases with thermometers attached.

As the test bomb (nicknamed the "gadget") was hoisted into a tower, wherein it was to be detonated, technicians threw dozens of Army-issue mattresses beneath it, hoping to cushion it if it tore loose from its fittings and plunged to earth.

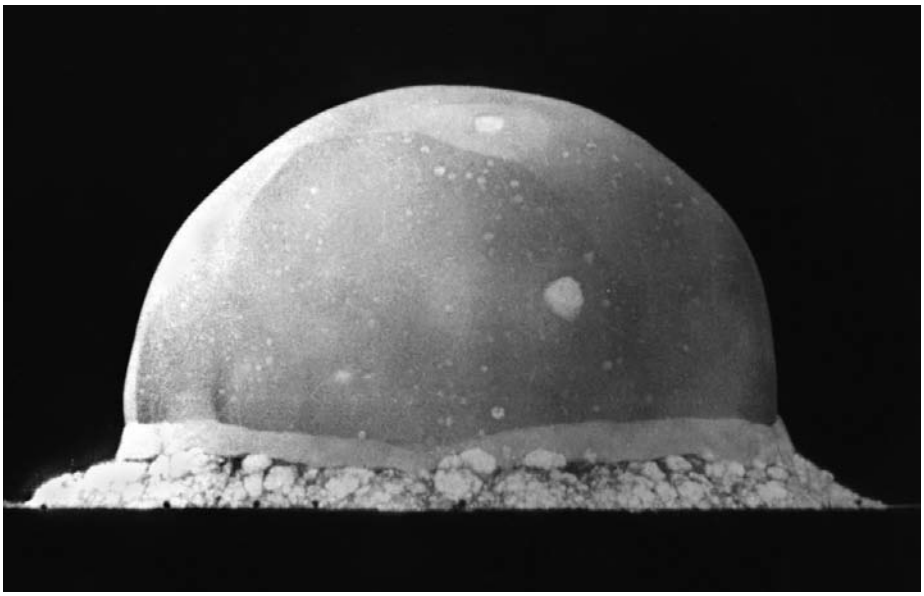
As the bomb lay in place throughout the day and night of July 14, thunderstorms sparked throughout the area, making the scientists jittery and more than once inspiring them to gallows humor.

Through the day and night they figuratively held their breath. Groves fretted about the unstable weather and unhappily contemplated postponing the test. Oppenheimer, agitated, worried that postponement would mean that "I'll never get my people up to pitch again."

Vannevar Bush, head of the U.S. Office of Scientific Research and Development, on site for the shot, was awakened prematurely when the wind blew down his tent; he gave up on sleep and walked to the makeshift mess hall for breakfast at 3:45 AM on July 16.

Men chain smoked and drank coffee. Enrico Fermi, oddly, tore a piece of paper into scraps. After the blast, he would use these as primitive but effective indicators of the test bomb's power. At 4:45 AM, project meteorologists reported a short break in the storms;

Both: National Archives



ABOVE: The Trinity test fireball photographed 0.016 of a second after the explosion, 5:29 AM, July 16, 1945. Some scientists feared the world's first nuclear explosion would destroy the atmosphere. BELOW: Project director Robert Oppenheimer (with hat, center), Brig. Gen. Leslie Groves (center), and others inspect the melted remains of the test tower at ground zero after the Trinity blast. The photo was taken in September when some participants returned for news reporters. Note men wearing shoe covers to keep from picking up radiation.

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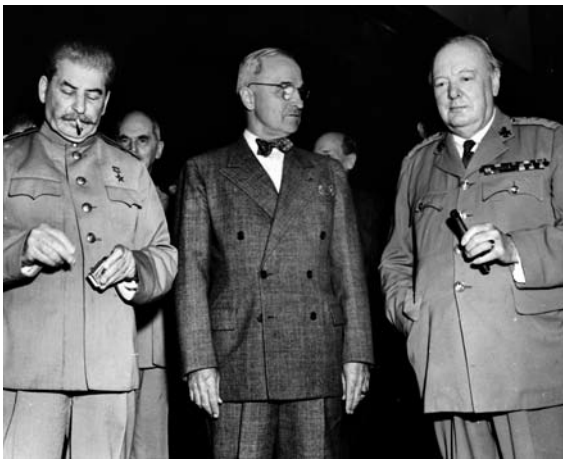


National Archives

Left: Stalin, Truman, and Churchill at the Potsdam Conference, July 1945, where Truman, bouyed with the news of the successful test, reportedly told Stalin "where to get off." Truman was unaware that Stalin had been informed about the work at Los Alamos by physicist, and Soviet spy, Klaus Fuchs, right.

Groves and Oppie decided to test Trinity at 5:30.

Those witnessing the test got pieces of smoked welder's glass through which to watch. One of the scientists, Richard Feynman, refused to use his, reasoning that at a distance of 20 miles his eyes would be protected sufficiently by the windshield of the truck in which he sat. Edward Teller, on the other hand, put on gloves, a pair of sunglasses under the welder's glass, and a generous portion of antisunburn cream.

Samuel Allison, from Chicago's Met Lab, read the countdown on a radio station that crossed frequencies with another playing a Tchaikovsky serenade, which provided surreal background music for Allison's steady voice. At 5:20 AM, Allison reached zero. A split second later, ground and heaven burst open.

The Trinity shot produced a light brighter than any seen previously in the world, bright enough to have been seen from space. Its core temperature was four times greater than that at the center of the sun. The pressure from the blast was unprecedented; the radioactivity it threw off, as journalist and A-bomb historian Lansing Lamont calculated, was a million times more than that emitted by all the radium on earth.

The light, then blast wave, reached Groves, Bush, and James Conant, president of Harvard University and head of the National Defense Research Committee, lying side by side and facing away from the tower at a distance of about 16,000 yards. The men shook hands, then Groves said, "We must keep this whole thing quiet." An Army major was standing next to Groves. "Sir," he said, "I think they heard the noise in five states."

If not quite that, Trinity nevertheless drew a good deal of attention. An 18-year-old blind woman named Georgia Green, in a car with her brother-in-law on the road to Albuquerque, registered the bomb's light. Windows broke in Texas, terrified people called police or newspaper offices to report an earthquake or plane crash and a New Mexico man found himself shivering in bed, the sheets and blankets having been blown off him. Groves put it out that an ammunition dump had exploded.

Oppenheimer thought of a regnant Brahma from the epic *Mahabharata*: "Now I am become Death, the destroyer of worlds."

"A foul and awesome display" was Harvard physicist Kenneth Bainbridge's verdict. Fermi, seemingly oblivious to the light and heat and shock, dropped his paper scraps and watched as the blast wave carried them. Cocky Richard Feynman turned away, temporarily blinded. Others cheered and danced.

Groves included in his post-test report an account written by Brig. Gen. Thomas E. Farrell, who had witnessed the explosion from the Alamogordo control room 10,000 yards south of the blast site. "The effects," wrote Farrell, "could well be called unprecedented, magnificent, beautiful, stupendous, and terrifying. The whole country was lighted by a searing light with the intensity many times that of the midday sun. It was golden, purple, violet, gray, and blue....

"Thirty seconds after the explosion came first the air blast pressing against people and things, to be followed almost immediately by the strong, sustained, awesome roar which warned of doomsday and made us feel that we puny things were blasphemous to dare tamper with the forces heretofore reserved to The Almighty," said Farrell. "Words are inadequate tools for the job of acquainting those not present with the physical, mental, and psychological effects. It had to be witnessed to be realized."

As Groves struggled to contain information about the test—a harbinger of America's efforts to prevent specific knowledge of the bomb's works from reaching the international community once the war had ended—he faced a dangerous related problem. Soon after the shot was fired, Robert Wilson led an observation team north out of Trinity. Needles on the Geiger counters carried by the team members suddenly jumped. Radioactivity, in a reddish-brown cloud, was drifting north, threatening small communities and cattle ranches and raising the distressing possibility that these might have to be evacuated.

Updrafts from the narrow canyons intensified the winds and caused them to blow promiscuously across the area. The small town of Carrizozo was endangered, as were larger communities such as Coyote, Ancho, and Vaughn, 112 miles north of Trinity. A radiation monitor named Joe Hirschfelder drove through the worrisome landscape and returned to Base Camp with radioactive tires and a skin exposure reading so disturbing that he found it impossible to hitch a ride to Albuquerque with nervous colleagues, even after a shower.

Several cattle ranches on a mesa west of Carrizozo were contaminated with radioactive ash, a circumstance the government labored to keep secret. Groves's

report to Stimson on the test did not alert the secretary to any potential problem with radioactivity from a bomb blast, though Groves admitted that assessments were not yet final.

At the site itself, among the scientists especially, reflection and sobriety soon set in. Initial jubilation gave way to a silent breakfast, for those with an appetite. Project director Kenneth Bainbridge shook hands with Oppenheimer and said to him quietly, "Now we're all sons-of-bitches."

Oppie discovered on the desert floor, where sand had been turned to glass, a turtle struggling on its back, having been overturned by the bomb's blast wave. Oppie flipped him over and watched him scuttle away. "That's the least I can do," he thought.

"I am sure," said Ukraine-born Harvard physical chemistry professor George Kistiakowsky after the test, "that at the end of the world—in the last millisecond of the earth's existence—the last men will see what we saw."

And yet they were at least sure of something else: that the atomic bomb would prove to be the winning weapon against the Japanese. When Thomas Ferrell saw Groves after the test, the first thing he said was, "The war is over."

"Yes," replied Groves, "after we drop two bombs on Japan."

When Truman sat down at the summit conference in Potsdam, Germany, to discuss with Winston Churchill and Josef Stalin how Great Britain, the Soviet Union, and the United States planned to punish Germany and establish order out of war's chaos, the radioactive dust was still settling in New Mexico. Truman's spirits were buoyed by Stimson bringing the news of the successful Trinity test and also by Stalin's assurance that the Soviet Union would declare war on Japan by the middle of August.

As secret coded reports from Alamogordo continued to arrive in Potsdam, carried by Stimson to Truman, Byrnes, and Churchill, the president's confidence rose, and so did his doubts about the need for Soviet involvement in the war. By the 18th, Truman seemed to Stimson "greatly reinforced" in his determination to make the Soviets see reason. The next day, as he boasted to his wife Bess, he managed a "tough meeting" with the Russians when he "reared up ... and told 'em where to get off and they got off."

Having received a final, detailed report on Trinity on the 21st, Truman turned even more bumptious, quarreling vigorously with Stalin on Germany and the political future of Eastern Europe. Churchill was surprised at Truman's performance—until Stimson gave him a copy of the latest Trinity report the following day. "Now I know what happened to Truman yesterday," the prime minister said. "When he got to the meeting after having read this report he was a changed man. He told the Russians just where they got on and off and generally bossed the whole meeting."

At 7:30 in the evening of July 24, the eighth plenary session of the Potsdam Conference took a recess. Instructing Charles Bohlen, his Russian interpreter, to stay put, Truman walked across the room to Stalin, turned him away from the group, and told him with a casualness that was clearly strained that the United States had "a new weapon of unusual destructive force."

According to Truman, Stalin replied that "he was glad to hear it and hoped we would

Library of Congress

U.S. Air Force

ABOVE: Pilot Paul Tibbetts's B-29 *Enola Gay* returns to Tinian after dropping "Little Boy" on Hiroshima. OPPOSITE: Hiroshima after the bomb. Everything was destroyed within a radius of five miles from ground zero. Over 200,000 people eventually died from the blast or radiation sickness.

make 'good use' of it against the Japanese." Truman and the other U.S. officials thought Stalin's reply indicated that he did not know what weapon the president was talking about—no more, that is, "than the man in the moon," as Truman said later.

They were wrong. Stalin had in June received information, gleaned from Soviet spy Klaus Fuchs at Los Alamos, that a bomb test was scheduled for later in the summer.

From the Potsdam Conference came a declaration to the Japanese that they must still surrender unconditionally but offering the promise that Japan's Emperor Hirohito would escape punishment, removal from office, or humiliation if the offer were accepted.

When the Japanese government did not immediately accept the Potsdam Declaration—Prime Minister Kantar Suzuki reportedly said, on July 28, that Japan would ignore it—the Americans moved ahead with their plans to drop an atomic bomb on their first target city, Hiroshima.

The uranium core of the bomb, encased in a cylinder of lead and weighing 300 pounds, had left San Francisco on the day of the Trinity shot and sailed for Tinian Island in the Marianas, seized from Japan the previous summer. Tinian was the home of the Air Force's 509th Composite Group, members of which had been designated and trained to deliver the bomb.

Carried by an aging and ill-fated cruiser, USS *Indianapolis,* the carefully cosseted core of the world's first combat atomic bomb arrived on Tinian on July 26, the day the Potsdam Declaration was issued. It was joined to the rest of the bomb assembly on August 1 in an air-conditioned hut. When finished, the bomb, nicknamed Little Boy, looked like ... a bomb. It was 14 feet long, five feet in diameter, and weighed approximately 10,000 pounds.

Colonel Paul Tibbets would command the B-29, dubbed *Enola Gay,* that would carry Little Boy to its target. Delivery was set for August 6, as long as the weather cooperated. The bomb's proximity fuse, set for an altitude of about 1,800 feet, was designed to touch off a small explosion at the rear of the bomb, which would send a uranium bullet at the rear of the bomb hurtling toward the bomb's nose. There it would collide with a "cap" of fraternal U-235.

If all went as planned, that would ignite an atomic explosion that would destroy the center of Hiroshima and transform the world.

After Little Boy was hoisted into *Enola Gay*'s forward bomb bay and secured, Tibbets and his crew tried to grab some sleep, but it was impossible. The final briefing came at midnight. Tibbets blandly repeated his description of the bomb they carried as "very powerful," and the Lutheran chaplain on base prayed with the crew that "they bring this war to a rapid end." After breakfast, the men were driven to their B-29s at 2 AM. Photographs were taken of *Enola Gay*'s crew, after which they climbed into their plane.

The men all had pistols, and Tibbets secretly carried a metal box holding 12 cyanide capsules; if the plane went down over Japan, any crewman left alive would choose suicide by self-inflicted bullet or self-administered poison.

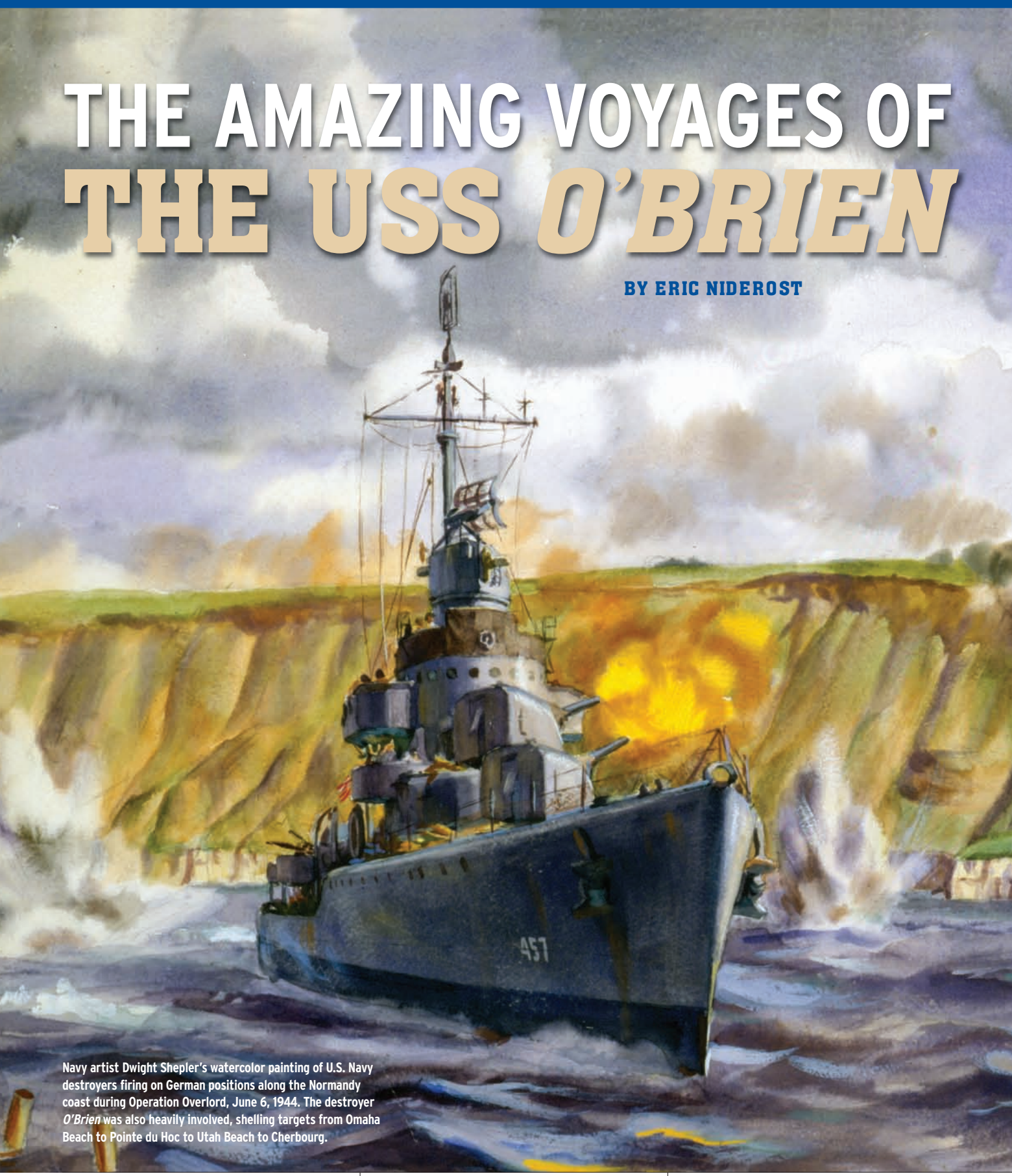
"Let's go," said Tibbets at 2:45, and he throttled his plane forward. It was heavy, some 15,000 pounds over spec with its weighty bomb and extra fuel, and Tibbets badly frightened co-pilot Robert Lewis by using nearly all of Runway A to gain speed. At what seemed the last second, Tibbets lifted the plane's nose, and the *Enola Gay* rose over the night sea, flying northwest at low altitude to save fuel and ease the task of Deke Parsons, who would arm the bomb in the air and who was squatting behind the bomb in the unpressurized bomb bay.

More than four hours later, another B-29, named *Straight Flush*, overflew Hiroshima and sent word to Tibbets that the skies above the target were mostly clear. Tibbets committed to his course and brought his plane to bombing altitude, 31,000 feet. Nearing Hiroshima, the *Enola Gay* rendezvoused with two other B-29s, the *Great Artiste* and No. 91, the instrument and photo planes. Everything was ready.

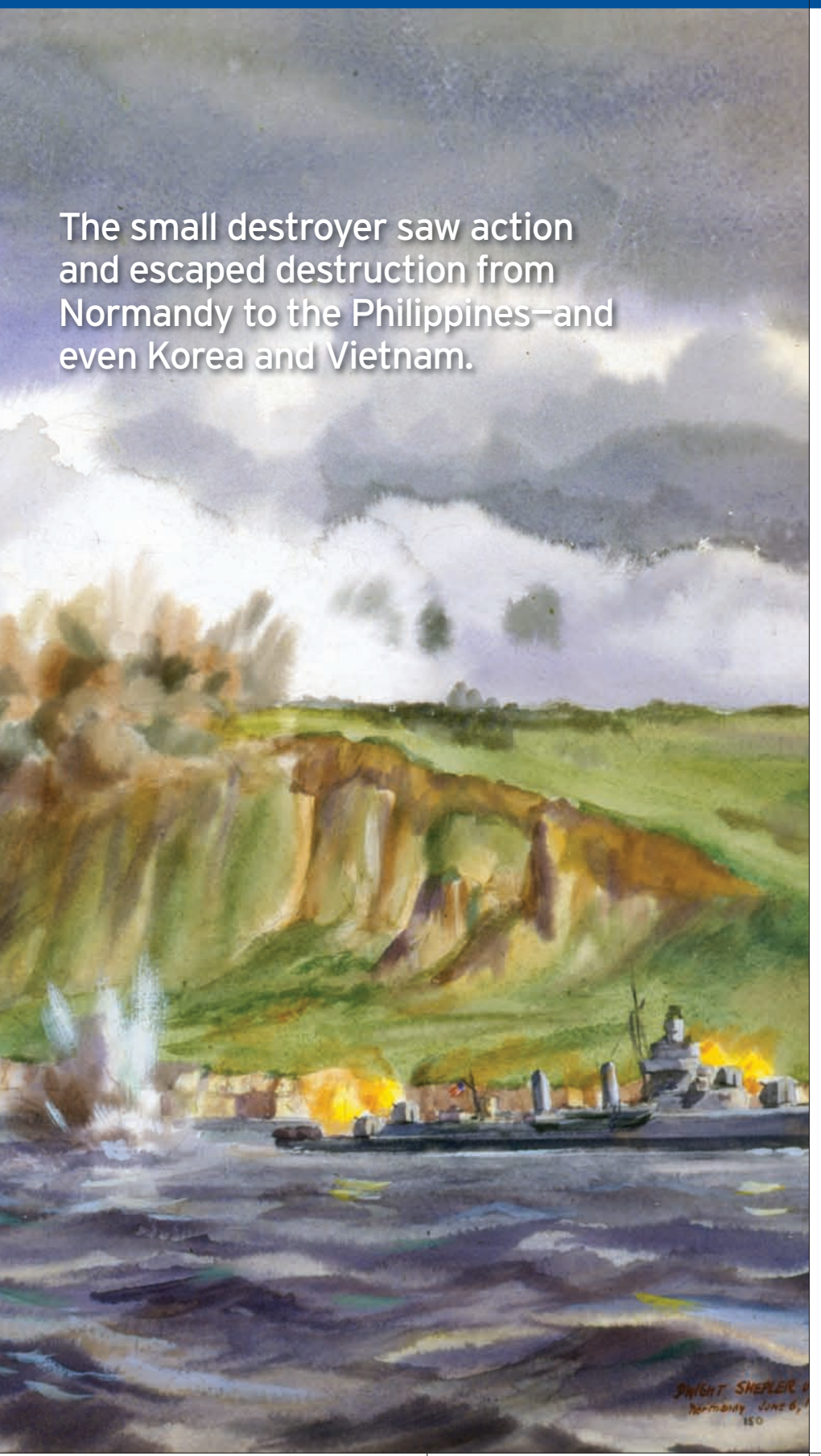
At 8:15 AM Hiroshima time, *Enola Gay*'s bomb bay doors opened and Little Boy plummeted earthward; Tibbets banked hard to get away from the shock wave. Forty-three seconds later, the city of Hiroshima and thousands of its citizens were obliterated. □

THE AMAZING VOYAGES OF THE USS *O'BRIEN*

BY ERIC NIDEROST



Navy artist Dwight Shepler's watercolor painting of U.S. Navy destroyers firing on German positions along the Normandy coast during Operation Overlord, June 6, 1944. The destroyer *O'Brien* was also heavily involved, shelling targets from Omaha Beach to Pointe du Hoc to Utah Beach to Cherbourg.



U.S. Navy

The small destroyer saw action and escaped destruction from Normandy to the Philippines—and even Korea and Vietnam.

AT EXACTLY THREE O'CLOCK IN THE afternoon on February 25, 1944, a crowd gathered at the Boston Navy Yard for the commissioning ceremony of the USS *O'Brien* (DD725), a destroyer of the Sumner class. Built by Bath Iron Works of Bath, Maine, and named after Captain Jeremiah O'Brien, a U.S. naval officer of Revolutionary War fame, the destroyer had been launched on July 12, 1943, and, after the usual fitting out, a skeleton crew sailed her down to Boston.

The ceremony was impressive, with military protocol and tradition strictly observed. Commander P.F. Heerbrandt, the designated skipper of the new ship, was handed its new ensign, which was hoisted after the usual preliminaries. As the flag unfurled in the chilly winter breeze, the officers turned and smartly saluted.

The crew was lined up on the dock, ready to come aboard, when the signal was given to man the ship. The group of civilians stood just above on a high platform, bundled up against the New England chill. They were mainly wives and other relatives of the ship's crew, there to witness the historic moment.

World War II was raging in both Europe and the Pacific, and commissioning ceremonies were commonplace in a time of global conflict. But the *O'Brien,* fresh from the builder's yard, was to earn a particularly distinguished record in the months to come. The destroyer served in so many theaters and so many climes that some of the record seems to have been obscured by time or forgotten altogether.

But to "plank men"—those who served aboard the ship from the very first day—every moment is indelibly etched in their memories. One such is Ray Woods, who was senior radarman on the *O'Brien* from its commissioning to the end of its service in World War II.

Developed by the British in the 1930s, radar was a key factor in the 1940 defeat of the Luftwaffe in the Battle of Britain. The technology was not only new, it was secret, at least to the public at large. "We were told," Woods recalled, "that if asked what our rating badge meant, we were to

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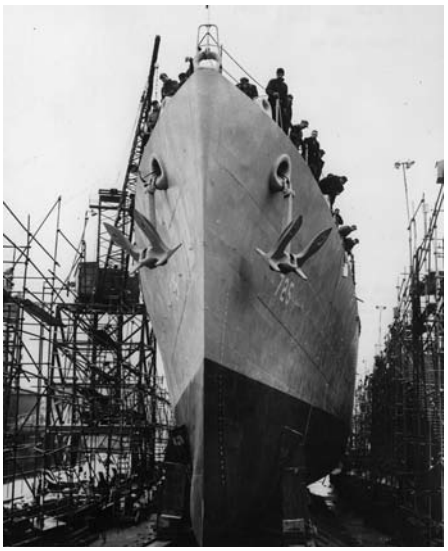


say 'Radioman.'"

After the commissioning ceremony, the friends and relatives were allowed to come aboard for a tour. There was only one area that was off limits—the radar room.

The USS *O'Brien* was a magnificent warship, fast, maneuverable, and well armed. She was equipped with a half dozen 5-inch/38-caliber guns, two twin and two quadruple 40mm antiaircraft mounts, and two quintuple 21-inch deck torpedo tubes. If necessary, the ship could reach a maximum speed of 34.5 knots, at least on paper.

After the *O'Brien*'s commissioning, the skipper took her out on a shakedown cruise. Drills were conducted, and the crew became more and more like a functioning team. Much of the shakedown was held in the waters off Bermuda, then it was back to Boston to await further orders. They were not long in coming. The *O'Brien* would be part of Destroyer Division 119, which included the USS *Barton* (DD772), USS *Walke* (DD723), USS *Laffey* (DD724), and USS *Meredith* (DD726).

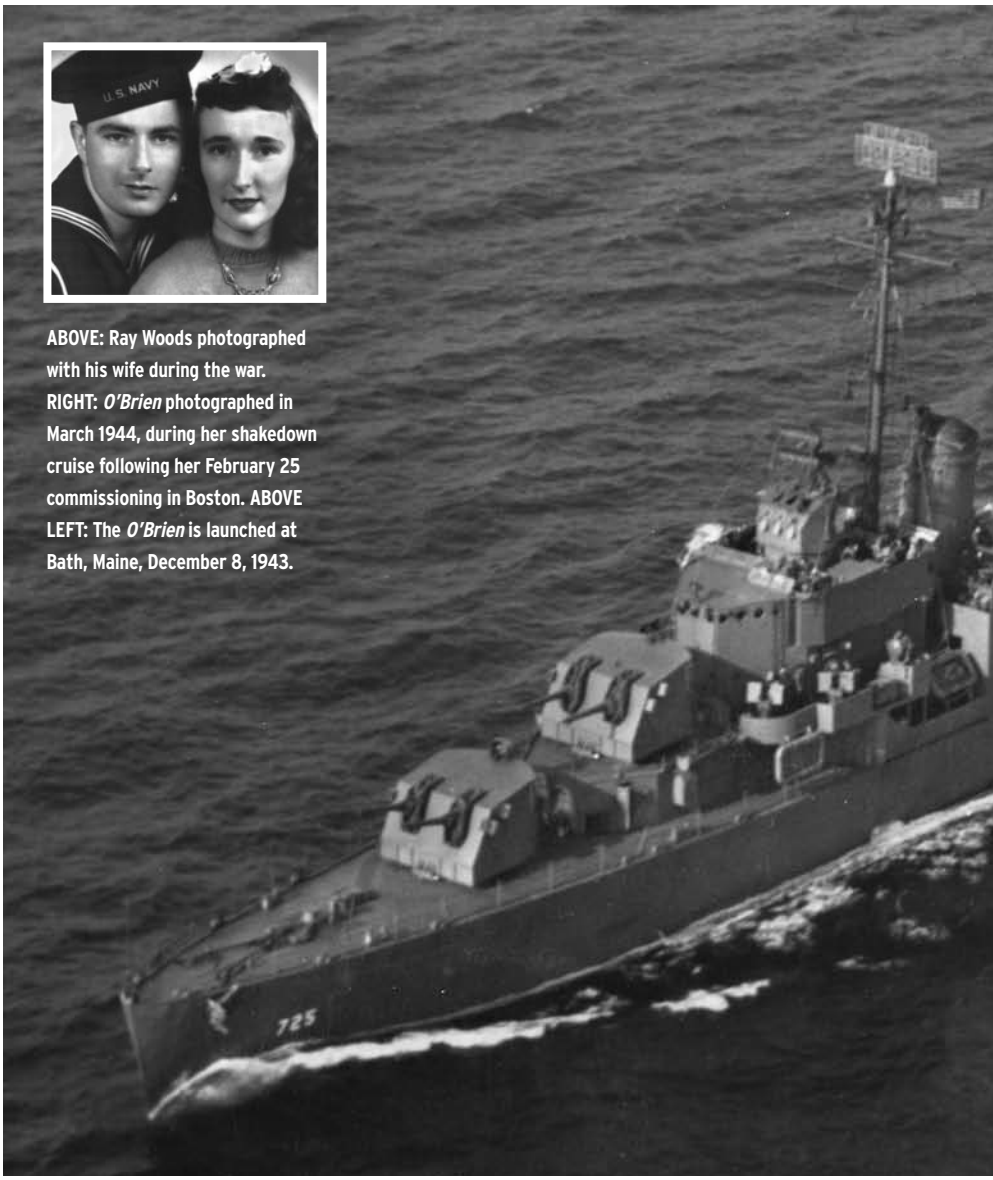
For their maiden voyage, the *O'Brien* and her companion vessels escorted eight ammunition-laden ships across the Atlantic without incident. Commander Robert Montgomery, a major Hollywood celebrity who had given up stardom to join the war effort, served aboard the *O'Brien* at this time, and Woods remembered him as a flag officer in the radar room. After the war, Montgomery went back to acting and starred in director John Ford's 1945 tribute to the PT-boats, *They Were Expendable*.

After a stop at Belfast, Northern Ireland, the ship headed to England and ended up at Plymouth. The harbor at Plymouth, where the Pilgrims once set sail for America in 1620, was crowded with warships of every description, and barrage balloons floated over the ancient city like they did through most of Britain. It was said in jest that so many men and so much equipment were on the island, preparing for the invasion of France, only the barrage balloons kept it from sinking into the sea.

It was the spring of 1944, and by May the sense of anticipation was growing. Everyone knew that Operation Overlord, the Allied invasion of German-occupied France, was about to begin—but no one knew when. The time and place of the invasion were one of the most closely guarded secrets of World War II.

To counter the expected Allied assault, the Germans had been building the Atlantic Wall, a series of powerful coastal fortifications, since 1943. Beaches were mined and steel beam obstacles—nicknamed "hedgehogs" by the Allies—dotted the sands of the likely invasion beaches. Reinforced concrete pillboxes sheltered machine-gun nests and an

ABOVE: Ray Woods photographed with his wife during the war. RIGHT: *O'Brien* photographed in March 1944, during her shakedown cruise following her February 25 commissioning in Boston. ABOVE LEFT: The *O'Brien* is launched at Bath, Maine, December 8, 1943.



National Archives

array of artillery, including 15-inch guns.

The Allied buildup for D-Day staggers the imagination. There were 39 divisions—20 American, 14 British, three Canadian, one Free French, and one Polish. They would be supported by nearly 11,000 aircraft, including 5,000 fighters, 2,300 transport planes, and 2,600 gliders. The Allied invasion would also be augmented by 6,000 warships, transports, and landing craft.

The coast of Normandy had been selected as the site for the invasion, and five landing beaches were staked out: Utah, Omaha, Juno, Gold, and Sword. Two of the beaches, Omaha and Utah, were assigned to the Americans, while the other three were Anglo-Canadian.

That spring the *O'Brien* acquired a new captain, Commander William W. Outerbridge. Outerbridge had the distinction of ordering the first shot in the defense of the United States in World War II. Born in Hong Kong in 1906 and having graduated from the U.S. Naval Academy in 1927, the bespectacled officer was in command of the destroyer USS *Ward* (DD139), an old four-stacker destroyer that was on patrol off the entrance to Pearl Harbor in the early morning hours of December 7, 1941.

When a Japanese midget submarine was spotted trying to gain access to Pearl Harbor, Outerbridge ordered No. 3 deck gun to open fire, and a depth charge run. The submarine was sunk, and Outerbridge was later awarded the Navy Cross. But now Outerbridge faced a new command with a new set of challenges.

Operation Neptune, the assault phase of the Normandy invasion, had battleships, cruisers, and 104 destroyers—the *O'Brien* included—forming a bombardment force to support the amphibious landings. The ships were to engage the German coastal batteries and provide general covering fire for the landing craft and their occupants.

Originally the ships supporting the operation were to leave port on June 5, 1944, and, accordingly, the *O'Brien* left England before dawn on that day. However, the English Channel was rough, whipped up by a storm that some said was the worst in 20 years. All D-Day operations were postponed until further notice. The *O'Brien* returned to England and anchored in Portland.

The *O'Brien* left port the next day, its first mission to escort 45 LCI's (Landing Craft, Infantry) to Utah Beach. But on the evening of June 5, Ray Woods picked up a sonar contact. Was it a German submarine? The destroyer dropped depth charges, and contact was soon lost.

At dawn on June 6, the *O'Brien* safely escorted its charges to Utah Beach without further trouble, but was then ordered to the waters just off Omaha Beach to provide standby support. Support was definitely needed. Omaha was a bloody shambles.

Omaha Beach was a four-mile stretch from Vierville-sur-Mer in the east to Colleville in the west. The infantry's route inland was blocked by steep shingle slopes and treacherous cliffs, many some 150 feet high. This geography provided ideal high-ground defensive cover for the Germans. Those Omaha slopes were well fortified, boasting eight heavy guns, 35 antitank guns, and 85 machine guns. Elements of the 1st and 29th U.S. First Infantry Divisions on Omaha met with difficulties from the start.

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ABOVE: *O'Brien* comes to the aide of the stricken USS *Ward,* December 7, 1944, at Ormoc Bay, Leyte. Exactly three years earlier, the *Ward* had attacked a Japanese submarine trying to enter Pearl Harbor. William Outerbridge, captain of the *O'Brien,* was then skipper of the *Ward.* OPPOSITE: The USS *O'Brien* (DD725) and other American ships fight a blazing fire on an LST caused by a Japanese kamikaze during landing operations at Mindoro Island, December 15, 1944.

Omaha was defended by the 352nd Division, the best German fighting unit on the Normandy coast. The landing craft were met with a withering fire from the first moment the ramps were lowered to disgorge the infantry. Scores fell dead and wounded, the survivors scrambling to find whatever cover they could. Some companies foundered about leaderless because every officer and sergeant was down.

At first, destroyers like the *O'Brien* were mute observers to the spectacle that was being played out before their horrified eyes. "We were off about 4,000 yards from the beach," Woods grimly recalled recently. "There we watched the annihilation of the first wave. Bodies were floating in the water throughout the beach area."

The second landing wave came in and likewise found itself in a meat grinder. The result was sickening. Around 9 AM Captain Outerbridge felt he could stand no more. He wasn't going to let his ship be an impotent spectator of the terrible drama that was being played out before his eyes. Without orders, Outerbridge headed closer ashore until the *O'Brien* was only 500 yards from the bloodstained beaches.

The skipper ordered a hard right until *O'Brien* paralleled the shoreline and its deadly cliffs. All 5-inch/38-caliber batteries commenced firing at the German pillboxes and machine-gun nests that were perched high above the beaches. After the first salvo, the ship received radio calls from Army units that were huddled at the bottom of the cliffs, unable to advance but unwilling to retreat.

Outerbridge asked if anyone had been hit by the ship's salvo. No, came the reply—but please raise your fire, because we are here just below! *O'Brien* continued down the coast about a mile or so until reaching Pointe du Hoc. At one point, observers from the destroyer spotted German soldiers fleeing from the cliffs to a lone building just to the rear. It was quickly demolished—the soldiers still inside—by *O'Brien*'s well-aimed 5-inch shells.

Curiously, Outerbridge's heroic action in bringing his ship so close to shore disappeared from the official record. The ship's war diary, recently released by the U.S. government, states in part that the *O'Brien* arrived at Omaha Beach on June 6 at 2233 military time—10:33 PM. The ship's log, signed by all officers, claims the destroyer stayed at Utah Beach until midnight.

Ray Woods confirmed that *O'Brien* did get close to Omaha Beach as described and did lend vital and much welcomed fire support to the soldiers ashore. He feels that, by accident or by design, there was a cover-up of Outerbridge's heroic actions that morning.

After the action off Omaha Beach, things were relatively quiet for the remainder of the day and into the night. After midnight, Woods was operating the ship's SC aircraft radar, and he picked up some contacts about 100 miles out. It seemed to be "the whole German air force," Woods said with a chuckle.

The Luftwaffe was a pitiful shadow of what it had been in the glory days of 1940 and during the Battle of Britain. The Allies ruled the skies over Normandy, so a major German air attack seemed unlikely. Woods remembered that the Germans might be jamming, dropping foil to create ghost "blips" on the radar screen. Sure enough, only one Junkers bomber, not a whole squadron, was flying overhead.

The *O'Brien* commenced firing, and Woods felt the ship suddenly sway. The bomber had released a stick of 250-pound bombs, narrowly missing the destroyer. It was the ship's first brush with destruction, but it would not be its last. Within a few days *O'Brien*'s luck seemingly ran out.

D-Day was a success, and although there was still hard fighting in the weeks to come, the Allies were firmly on the Continent and there to stay. Nevertheless, it was deemed important that the Allies seize the nearest deep-water port available.

Cherbourg, located atop Normandy's Cotentin Peninsula, was the logical choice. The Allies had already taken the approaches to the peninsula and by mid-June were at its base. The U.S. VII Corps, under General J. Lawton Collins, was given the task of taking the port city.

Hitler's confidence was placed in General Karl-Wilhelm von Schlieben and the 21,000 German troops now bottled up in the peninsula. They were a mixed bag—everything from the exhausted remnants of the 709th Division to labor battalions and a few Kreigsmarine naval personnel. Yet Cherbourg's fortifications were formidable and might prove

a hard nut to crack.

It made sense for the Navy to bombard the port and soften up its defenses. Admiral Morton L. Deyo's Task Force 129 received orders to bombard Cherbourg on its seaward side, so the admiral divided his force into two components. *O'Brien* was assigned to Task Group 129.2 under Rear Admiral Carleton F. Bryant which included the battleships USS T*exas* and USS A*rkansas*. Besides *O'Brien,* the destroyers USS *Barton*, USS *Laffey*, USS *Hobson*, and USS *Hunkett* were on hand.

The original plan was for the battleships to shell German shore batteries for 90 minutes, as directed by General Collins on land. Land-sea coordination was vital, and gunnery had to be precise because the U.S. 7th Infantry Division was operating on the outskirts of Cherbourg.

The *O'Brien*'s initial task was to support the minesweepers, which were clearing a path for the big battleships just behind. Once the German batteries were in range, the battleships poured salvo after salvo into them. The battleship *Texas* unleashed its 14-inch guns, the shells roaring over the *O'Brien* before crashing into their targets in gouts of smoke and flame.

But the German shore batteries were well protected, and even more importantly, well manned. Battery Hamburg, for example, was a concrete bulwark that featured four 240mm guns. The Germans held their fire until the American ships were within range, then opened fire in a furious counterbattery salvo. German shells bracketed the *Texas,* and within a few moments the battleship was hit.

The *O'Brien* came to the rescue, making smoke so that the *Texas* would not be such a perfect target. After screening *Texas* and *Arkansas*, the doughty little destroyer renewed its attack. All of *O'Brien*'s 5-inch batteries opened up at 13,200 yards, peppering the shore with a hurricane of shells. Stung by this barrage, the Germans turned from shelling the *Texas* to shelling the destroyer.

Captain Outerbridge immediately grasped what was happening and ordered a hard right rudder, at the same time increasing speed to 25 knots. The sea began to boil with foaming geysers of water marking each German near miss. *O'Brien* twisted and turned, snaking though a gauntlet of fire, and for a time the ship successfully escaped damage.

A German 240mm shell struck the aft starboard corner of the bridge, then rico-

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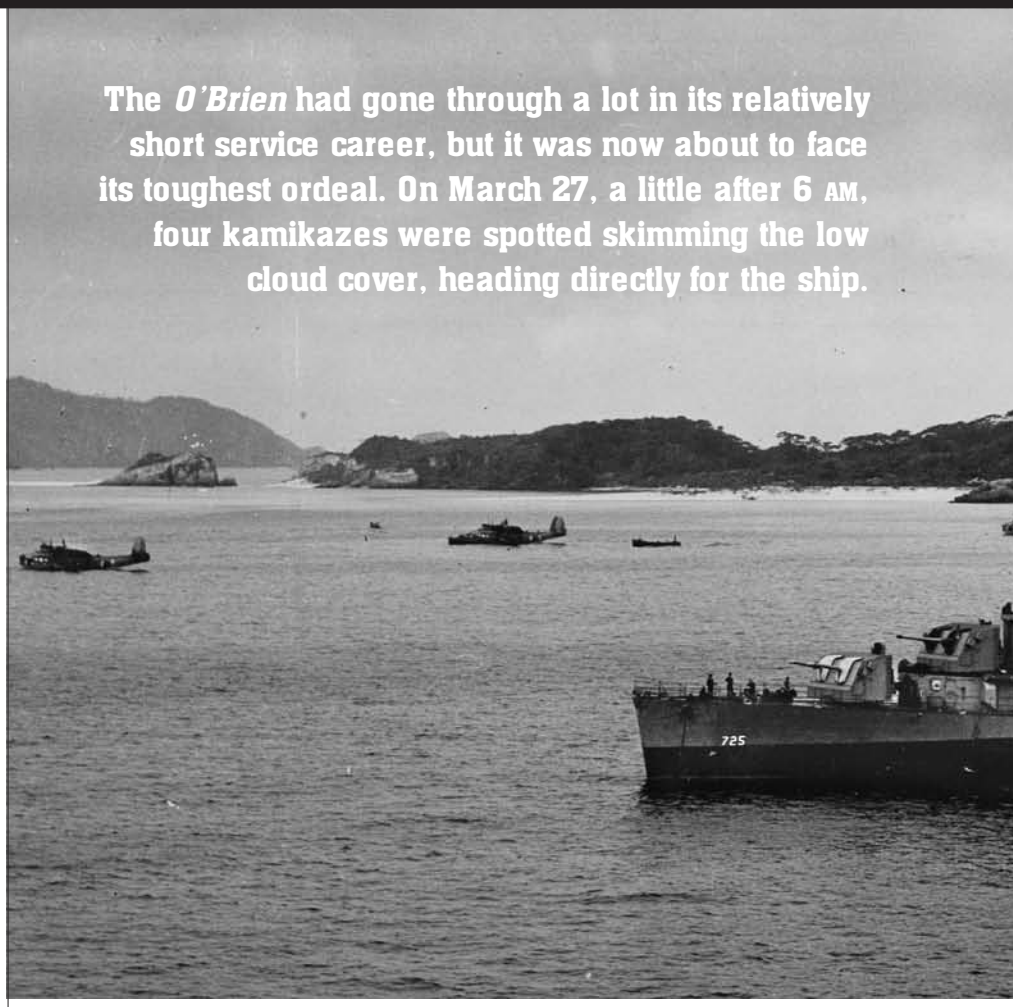

The *O'Brien* had gone through a lot in its relatively short service career, but it was now about to face its toughest ordeal. On March 27, a little after 6 AM, four kamikazes were spotted skimming the low cloud cover, heading directly for the ship.

cheted into the forward starboard 40mm gun mount. The shell detonated in a ball of yellow flame and dirty black smoke, ripping the ship's body as if it were made out of paper. The 40mm gun mount was shattered, and the guns themselves knocked out. Everything within a radius of 15 feet of the blast was reduced to blackened pieces of twisted metal.

The ship's CIC (Control Information Center)—where the radar was located—was a shambles, and fires raged all around. The flames were fed by 40mm shells and cartridges that had been set off by the initial blast. Luckily, the crew managed to extinguish the flames.

The O*'Brien* was badly hit, with 13 killed and 19 wounded. In the radar room, one man was killed and five wounded, but Woods was lucky enough to escape unscathed. "When the blast occurred," he said, "the debris flew past me and Lt. Cmdr. Robinson, who was looking over my shoulder. There was nothing we could do but get out via a nearby hatch." As they emerged from the wreckage and carnage, Robinson remarked, "Well, Ray, we're on our second one." It was an oblique reference to the old tale that a cat has nine lives.

Bloodied but unbowed, *O'Brien* stayed in the fight, firing her remaining guns until at last the task group broke off the action. Two days later, Cherbourg was in Allied hands and *O'Brien* limped back to England, where a burial service was conducted. Robert Montgomery was asked to say a few words at the service, which he did.

The *O'Brien* then sailed home for the Boston Navy Yard and much needed major repairs. After about a month, when the ship was ready for sea again, orders came to travel to the Pacific via the Panama Canal. Eventually *O'Brien* joined the Seventh Fleet in operations off Leyte in the Philippines. Particularly memorable was the fighting in the Ormoc Bay region. While American and Japanese land forces grappled for possession of Leyte, air and sea battles raged off the coast.

The Ormoc Bay phase of the Leyte Gulf battle lasted for much of November and December 1944. Japanese warships tried to bring in reinforcements to their beleaguered forces on the island, and the U.S. Navy tried to interdict them. During this time, the kamikaze—Japanese suicide pilots and planes—made their appearance.

At the time, *O'Brien,* with Outerbridge still at the helm, was attached to Task Group 78.3, commanded by Rear Admiral Arthur D. Struble. The main duty of the task group was to escort the U.S. Army's 77th Infantry Division's amphibious landing at Ormoc Bay, Leyte. The men of *O'Brien* got their first real taste of what it was like to be a kamikaze target, something that would be indelibly etched into the memory of the surviving crew.

On December 7, 1944, *O'Brien* and USS *Laffey* were just behind some minesweepers and just ahead of the main U.S. forces that were about to land. By 6 AM, *O'Brien*'s batteries were firing on enemy barges, barracks, and guns along the shore. At about 7 AM, the landing craft went in and disgorged masses of well-armed U.S. infantry onto the Leyte shore.

Although a beachhead was quickly established, *O'Brien*'s task was still not completed. Captain Outerbridge ordered the helmsman to turn the ship along Ormoc Bay's northwest shore to search for more targets. The destroyer got lucky and managed to locate additional shore batteries, some of which had been camouflaged, and additional barracks and barges.

But while *O'Brien* was engaged in this task, elsewhere a swarm of bogeys had appeared on some ship radar screens at about 8 AM. These proved to be a swarm of Japanese twin-engine Mitsubishi G4M "Betty" aircraft being used as deadly kamikazes. American antiaircraft guns peppered the sky, bringing down some of the planes, but some man-

The USS *O'Brien* is surrounded by Martin PBM Mariner flying boats in the Keramas, March 1945. *O'Brien* joined Task Force 54 for the invasion of Kerema Retto on March 21, 1945.

aged to slip through the screen. One of the ships, a former destroyer turned troop carrier, was badly crippled when a kamikaze smashed into it, igniting a number of fuel tanks. Soon the unlucky ship was engulfed in flames, the thick coils of black smoke ascending to the sky like a funeral pyre.

There next occurred a series of events so strange that, if written as a Hollywood script, would be rejected as too improbable and unrealistic. Captain Outerbridge received a signal aboard *O'Brien* that ordered him to assist the stricken vessel. Scanning the lines of the massage, he could pick out the name of the ship—USS *Ward*.

It was the same ship he had commanded on December 7, 1941, outside Pearl Harbor. And as if to underscore the incredible coincidence, he was being dispatched to aid the *Ward* on December 7, 1944—three years to the day after he ordered the ship to fire on the Japanese midget submarine.

Outerbridge would have done his duty in any event, but the fact that he was going to the rescue of the *Ward* must have given the mission an added poignancy. Outerbridge ordered full speed ahead, and *O'Brien* pulled out all the stops, managing to reach speeds of 27 knots in an effort to reach the *Ward* quickly. The sense of urgency was real because the flames were spreading fast, turning the aging vessel into a raging inferno.

The *O'Brien* approached from the port side, but the stricken ship was so engulfed in flames it was necessary to stand off 30 feet to enable fire hoses to do their work. Outerbridge did not order a firefighting party to go aboard because the *Ward*'s magazines were threatened. The task was made even more difficult by the fact that *O'Brien* was still under attack by rampaging kamikazes.

After a time, it became obvious the venerable old ship could not be saved, and Outerbridge was ordered to sink the *Ward* by naval gunfire. Outerbridge himself gave the command, and one can well imagine the thoughts that raced through his head at that moment. He had won a Navy Cross for his actions aboard the *Ward*. Now, by a strange twist of fate, he was ordering the ship's destruction on the exact anniversary of that fight.

The next objective was supporting the invasion of Mindoro, an island in the central Philippines. After Leyte had been secured, Mindoro was considered a stepping stone to the all-important retaking of Luzon. The island of Luzon had both emotional and strategic importance. The big island was where Manila, the Philippine capital, was located, and it was the scene of the heroic defense of Bataan and Corregidor in 1942.

But it was during this period that *O'Brien* suffered a small tarnish on what was otherwise a sterling record. It happened in mid-December 1944, when the destroyer escorted some LSTs through the Surigao Strait. Two *O'Brien* crewmen stole some food, ammunition, and a rubber raft and secretly left the ship under the cover of darkness. They were able to get away in part because the LST's were slow, and *O'Brien* was not going its usual speed.

The deserters were not discovered missing until the next morning, when predictably all hell broke loose. It wasn't simply a matter of two AWOL sailors; these things occasionally happened in all branches of the military. But the missing pair had known that the ship was headed for Mindoro—if captured and interrogated by the Japanese, the entire invasion of the island might be compromised.

Outerbridge was summoned to a conference with Admiral Thomas Kinkaid and was informed that all was well—the two deserters were in U.S. custody. They had tried to join a Filipino guerrilla group ashore, claiming that they were the "survivors" of the destroyer *O'Brien*. Luckily for the war effort, the tale was not believed

and they were turned over to American authorities.

After a fairly quiet Christmas and New Year's, the *O'Brien* made ready to support the invasion of Luzon. American forces were going to land at Lingayen Gulf, the exact spot where Japanese forces landed in 1941 at the beginning of the war, and *O'Brien* one of over 800 ships participating. The destroyer provided fire cover, much as it had at Normandy roughly six months earlier. Although kamikaze action was heavy and several American ships were hit, *O'Brien* was lucky.

Later, Outerbridge's ship and crew found themselves patrolling alone in the Sulu Sea without air cover. The kamikazes were still a major threat, and the ship radioed for fighters that could protect it. Army North American P-51 Mustangs arrived on the scene much to the relief of the *O'Brien* crew, but after a time the air cover had to depart and the destroyer was once again vulnerable.

The *O'Brien*'s luck finally ran out. A lone kamikaze appeared on the horizon and was able to get through the ship's protective screen of flak. The plane collided with *O'Brien*'s portside stern. There were no casualties, but the ship was taking water from the hit. Damage control parties went to work at once, improvising a "patch" made up of odd pieces of wood and mattresses. After some shoring up, the ship doggedly, even courageously, continued her various assigned missions, including supporting underwater demolition teams and dueling with enemy shore batteries.

On January 18, 1945, *O'Brien* arrived at Manus, New Guinea, for three weeks of rest and relaxation while the ship was repaired. Woods said that New Guinea was close to the equator and no one's idea of a vacation spot, but the crew was pleasantly surprised to find some compensation. There were beer and movies, and songwriter Irving Berlin was in person to present his USO show *This Is the Army.*

The respite, though welcome, was all too brief for the men of the *O'Brien*. The destroyer participated in a quick carrier raid, and, while on picket duty, got within

ABOVE: On March 27 the *O'Brien* was attacked by four kamikaze. One of the four struck the ship, killing 52 and wounding 76, including Captain Outerbridge. OPPOSITE: The *O'Brien* photographed in 1952. After an additional 20 years of faithful service (including Korea and Vietnam), she was sunk as a target ship.

90 miles of the Japanese home islands. In February 1945, she was assigned fire-support duty in connection with operations at Iwo Jima.

March 21, 1945, saw *O'Brien* join Task Force 54 for the invasion of Kerema Retto. These islands may have not been major objectives in and of themselves, but once secured they would provide safe harbor for hospital ships or vessels damaged in the battle for Okinawa.

The *O'Brien* had gone through a lot in its relatively short service career, but it was now about to face its toughest ordeal. On March 27, a little after 6 AM, four kamikazes were spotted skimming the low cloud cover, heading directly for the ship. *O'Brien*'s antiaircraft guns opened fire at once, peppering the air with explosives and shrapnel, sending two Japanese planes crashing into the sea in flames. A third was downed by American combat air patrol planes.

Unfortunately, the fourth kamikaze struck *O'Brien* just behind the bridge. The plane collided with the ship with a terrible ear-splitting roar, wounding Outerbridge and transforming the central superstructure into an inferno of leaping flames and blackened, twisted metal.

The suicide plane had hit the radio room, just behind the radar room. At one moment, Ray Woods was at his station, performing his duties. Then, without warning, all hell broke loose. "The blast threw me to the deck," he said, "and everything was a cloud of black dust. I tried to see through it for some light, but all I saw was some cables hanging down from above."

Woods tried to reach for the cables, hoping to use them to lift himself off the floor, but quickly let go when he found they were red hot. Somehow he got out of the smashed radar room and made his way up to the main deck. Still dazed, Woods went forward and then sat down for a moment; someone put a blanket over his shoulders.

Fires raged all over, but surviving crew members heroically manned the hoses and managed to get the flames under control. Captain Outerbridge reduced speed to 10

knots and nosed the ship into the wind, a maneuver that would help fight the fire. The destroyers USS *Shannon* and USS *Gwin* offered assistance and stood by to help protect the crippled *O'Brien* in case additional kamikazes showed up.

Some of *O'Brien*'s crew had either been blown off the ship when the plane hit or had dived off when they had been trapped by the flames. Once in the water, seeing their ship enveloped in oily black smoke, they were sure the destroyer was going to sink. It didn't, and later the crew members in the water were picked up.

In the immediate aftermath of the kamikaze strike, Ray Woods remembered a particularly grisly sight: two crew members had been literally blown up to the crossarm of the mainmast. Their bodies still hung there, awful reminders of that terrible moment. "I don't know who it was that climbed up and got them down," Woods commented, "but whoever it was deserved a medal."

The destroyer managed to limp back to Kerema Retto and came alongside a hospital ship. When *O'Brien*'s wounded were transferred to the hospital ship, Ray Woods was among them. He was surprised at being included because "although feeling very shaken by it all, I couldn't see any physical injuries." But once Woods looked at himself in a mirror, he was shocked at what he saw: "Most of my hair was burned off, all of my head and arms were black, and I had a burn on the left side of my face. However, I was among the lucky ones—lucky to be alive at all."

The *O'Brien*'s final casualty count was 52 dead and 76 wounded. Twenty-eight of the deceased were buried at sea. The crippled destroyer was eventually ordered to Mare Island in San Francisco Bay for extensive repairs. Woods and many other crewmen had happy reunions with family and friends but in July 1945, the patched-up *O'Brien* was declared fit for sea duty again.

At one point in the summer of 1945, the *O'Brien* was anchored near the heavy cruiser *Indianapolis* in San Francisco Bay. The meeting was routine at the time, but later gained significance when the *Indianapolis* left San Francisco on a historic mission that would profoundly alter the course of the war. The cruiser was carrying the atomic bomb that would be dropped on Hiroshima on August 6, 1945, to the island of Tinian in the Marianas.

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On the return voyage, the *Indianapolis* was torpedoed by a Japanese submarine, resulting in one of the greatest maritime tragedies of the 20th century. The cruiser went down in 12 minutes, leaving about 900 men in the water. The victims endured thirst, exposure, and incessant shark attacks. Only 316 survivors were picked up and lived to tell the horrific tale.

In mid-summer 1945, the U.S. armed forces were gearing up for the invasion of Japan, and the *O'Brien* underwent "operational training" from July 21 to August 12. It was during this period that Hiroshima and Nagasaki were hit by atomic bombs.

The United States played a magnificent game of bluff, implying that it had many more bombs in its nuclear arsenal. In reality, there were none, and it would have taken many months to create more. Unaware of this fact and faced with the possibility of utter annihilation, Japan surrendered unconditionally on August 15, 1945.

In early September 1945, the USS *O'Brien* steamed into Tokyo Bay and anchored there. The official Japanese surrender ceremony had taken place on September 2, only a few days before the destroyer's arrival. Since Germany had capitulated a few months earlier, the global conflict known as World War II had officially ceased. It was an ending that the officers and crew of the *O'Brien* had done more than their fair share to bring about. Rarely had a newly commissioned ship seen so much action in so short a period of time.

The *O'Brien*'s World War II career may have been over, but still she was not done. She was refurbished and saw action in both the Korean and Vietnam Wars. The brave little "tin can" suffered an ignominious end, however, being sunk as a target ship in July 1972.

During four decades of faithful service, the *O'Brien* was awarded six battle stars for her World War II service, five battle stars for Korea, and three for Vietnam, making her one of the most honored American warships of all time. □

A heartwrenching exhibit near Ground Zero geographically displays the power of the first atomic bomb used in wartime.

ALTHOUGH LOCATED 420 miles west of Tokyo, the city of Hiroshima is today a tourist mecca, drawing tens of thousands of visitors from around the world for one single reason: to stand at the epicenter of history's first nuclear explosion used against an enemy population.

Hiroshima is a sobering experience. Most of the city was obliterated in a blinding flash at 8:15 AM on August 6, 1945, and—except for the skeletal remains of one building and a park and museum dedicated to the memory of those who perished—there is virtually nothing left to remind visitors of that awful day.

But the solitary building's ruins and the silent, horrific exhibits in the museum are more enough to evoke a flood of emotions (on the day I visited the museum, I saw a teenaged American girl weeping uncontrollably). Other visitors just stand quietly in front of exhibits that demonstrate the effects of the bomb's power—warped steel girders, melted children's toys, scorched clothing, and pieces of stone and metal scarred by flying glass—or view a film that graphically shows the terrible injuries suffered by those Hiroshimans who weren't killed outright by the blast.

ABOVE: The stark, derelict remains of the former Hiroshima Prefectural Commercial Exhibition Hall, now known as the Genbaku, or "A-Bomb Dome," stand as a visible reminder of the horrors of nuclear war. LEFT: A view of the Hiroshima Peace Memorial Park, with the Genbaku, or "A-Bomb Dome," in the distance.

At the other end of a long memorial park, there is the enduring symbol of Hiroshima and atomic destruction: the Genbaku (Atomic Bomb) Dome, as it is now called. Built in 1915 as the Hiroshima Prefectural Commercial Exhibition Hall, the building had been used as a trade center and a place for art exhibitions, fairs, and cultural events. Located only 150 yards from the spot where the bomb exploded, the building along the banks of the Otagawa River was shattered and set on fire. Yet, somehow, much of the brick-and-concrete structure remained standing. After the war, its burned-out shell was stabilized and left in place as a memorial to as many as 140,000 people (no one is sure of the exact number) who died on that fateful day—a day that surely changed history.

On February 25, 1981, Pope John Paul II visited Hiroshima Peace Memorial Park and said, "War is the work of man. War is destruction of human life. War is death. To remember the past is to commit oneself to the future. To remember Hiroshima is to abhor nuclear war. To remember Hiroshima

ABOVE: A full-size replica of the "Little Boy" atomic bomb is suspended above a display case in the Hiroshima Peace Memorial Museum. BELOW: A large model in the museum shows what Hiroshima looked like before August 6, 1945. The Hiroshima Prefectural Commercial Exhibition Hall is prominent to the left of center. Over 95 percent of the buildings shown on the model were destroyed.

is to commit oneself to peace."

As historian Andrew Rotter has written, "Hiroshima, city of the bombed, remembered its past but had also moved on. It was no longer a city of victims but a cosmopolitan place with an international reputation. The first atomic weapon was the world's bomb. Modern Hiroshima, in the aspirations of its leading citizens, is the world's city."

Today, Hiroshima is a modern, vibrant city. Yet its name will be forever linked to one of the greatest tragedies of World War II.

HIROSHIMA PEACE MEMORIAL MUSEUM

Location: 1-2 Nakajimama-cho, Naka-ku, Hiroshima City
Hours: March 1-Nov. 30, 8:30 AM - 6:00 PM; Dec. 1-Feb. 28, 8:30 AM - 5:00 PM; Aug. 1 - 31, 8:30 AM - 5:00 PM (Closed Dec. 29 to Jan. 1)
Admission: Admission fee charged.
Website: www.pcf.city.hiroshima.jp

Burma

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Corps was encountering abandoned Japanese equipment, vehicles, and even Allied POWs. The only strongpoint left was the town of Pegu, straddling both banks of the Pegu River and heavily fortified by the Japanese, just 47 miles north of Rangoon. Cowan attacked the east bank of the town first and then sent a brigade to circle around the flank and enter the west bank of the town. It was tough going, and Slim described the resistance as "bitter." But after two days, by April 30, the British had control of the town.

Then the monsoon hit nearly a month before it was due. The torrential downpour turned the road south to Rangoon into a mud bog and waterlogged the countryside. Advancing was now all but impossible. What the Japanese could not do, it seemed Mother Nature had. However, on May 2, 1945, the Royal Navy executed Operation Dracula and landed elements of the 26th Indian Division at Elephant Point, west of Rangoon. Through the rain British troops advanced toward Rangoon and entered the city the next day. The Japanese had pulled out. Slim described the scene: "The population in thousands welcomed our men with a relief and joy they made no attempt to restrain."

Hard battles remained to be fought as the remnants of three Japanese armies were caught between liberated Mandalay and Rangoon, but Japanese power in Burma was forever broken. The mild-mannered and humble William Slim had remade a defeated army into the best-trained, most professional force in the British Empire. By the end of the Burma campaign the officers and men of the British 14th Army—British, Hindu, Muslim, Sikh, Gurkha, African—were experts in jungle warfare capable of active defense and aggressive offense. They were specialists in deep penetration and close air support who could use combined arms to overwhelm fanatical Japanese defenders.

By the end of the war, the 14th was the best army in the British Empire. □

Berlin

Continued from page 51

tal? There is no way to accurately measure, but the disruption of activity in Berlin had to help the Soviet forces as they closed in. The postwar Strategic Bombing Survey found that this mission, and others, also eroded citizen morale. Unlike the British during the Blitz of London, residents of Berlin did not gather new strength from being attacked. Instead, they blamed their own institutions, including the Army, the Luftwaffe, and their Führer.

When this giant air battle over and around Berlin ended and the planes came home, there was a final postscript for the crew of, the B-17G-75-BO (43-38031/VN-M) **Blue Grass Girl,** piloted by 1st Lt. Lewis Kloud of the 486th Bombardment Group. It was testimony to the fickle nature of war.

Every man on Kloud's crew was flying his 35th mission, the magic number that meant a ticket home. These nine B-17 crew members had defied flak, fighters, and fate and were almost home from their last flight, never touched by the Germans. All looked forward to receiving certificates signed by Doolittle making them members of the "Lucky Bastard Club"—men who'd completed their tour of duty and would now be able to go home. To celebrate this triumph, a member of the crew of **Blue Grass Girl** grabbed a Very pistol and began firing colored flares out the waist-gun hatch.

The Kloud crew had reason to celebrate. They pulled away from the target. They crossed Europe, crossed the North Sea, crossed the English Channel, and within minutes they would be putting down their landing gear. That's when crewmembers in a nearby B-17 looked at **Blue Grass Girl** and saw that it was on fire.

One of the flares had gone off inside the plane. Only two of **Blue Grass Girl**'s nine crew members were able to jump before the bomber crashed and exploded in a field near Southwold, England—the last casualty of the largest mission by B-17s to Berlin. □

Crete

Continued from page 65

as maintaining Cyprus and Tobruk in Allied hands.

Some have argued that despite the losses in personnel and matériel on Crete, the resistance mounted against the invasion may have greatly contributed to saving the British position in the Middle East at this crucial juncture of the war.

One must wonder if, had there been more wireless sets to facilitate better communication between the commands at the three airfields, a more robust counterattack at Maleme on the first and second days of the battle to keep that airfield in Allied hands, and a greater RAF presence to interfere with the Luftwaffe, Crete might have been a victory for Wavell and Freyberg.

Churchill referred to a "battle report" captured from Student's XIth Fliegerkorps at the end of the war: "British land forces in Crete [said the Germans] were about three times the strength which had been assumed. The area of operations on the island had been prepared for defence with the greatest care and by every possible means…. All works were camouflaged with great skill…. The failure, owing to a lack of information, to appreciate correctly the enemy situation endangered the attack of XIth Fliegerkorps and resulted in exceptionally high and bloody losses."

Shortly after the battle, Wavell thanked his evacuees "for the great courage and endurance with which you attempted the defence of the island of Crete. I am well aware of the difficulties under which you carried out your task and that it must have appeared to many of you that you were insufficiently equipped and supported. As Commander-in-Chief I accept the responsibility for what was done. It was for strategical reasons necessary to hold the island ... if this could reasonably be done."

As a footnote, because of his high losses on Crete, Hitler vowed never to use parachute and glider-borne troops as an assault force in a major operation again. □

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