

AIR POWER

SUMMER 2001 - Volume 48, Number 2

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AIR POWER *History*

The Journal of Air and Space History
(formerly *Aerospace Historian*)
Summer 2001 Volume 48 Number 2

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Air Power History (ISSN 1044-016X)
is produced in March, June, September,
and December by the Air Force Historical
Foundation.

Prospective contributors should consult the
GUIDELINES FOR CONTRIBUTORS at
the back of this journal. Unsolicited manu-
scripts will be returned only on specific
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uscript. The Editor reserves the right to
edit manuscripts and letters.

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Correspondence regarding missed issues
or changes of address should be addressed
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Periodicals postage paid at Lexington, VA
24450 and additional mailing offices.

Postmaster: Please send change of
address to the Circulation Office.

FOUNDATION WEB HOMEPAGE: <http://home.earthlink.net/~afhf>
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In this issue's lead article, William "Tom" Y'Blood tells the exciting story of the 1st Air Commandos in Burma during World War II. "Any Place, Any Time, Anywhere" details the roles of Orde Wingate, commander of the Chindits, and Phil Cochran and John Alison, the Americans "Hap" Arnold selected to lead the air commandos. In "Salvation from the Sky," Daniel Haulman writes of the critical contributions made by Air Force airlifters in the first year of the Korean War. Dependable and indispensable, the airlifters braved the elements and enemy fire as they carried men and supplies both into and out of the war zone. In "Context and Theory," Major "Skip" Hinman analyzes the "Lessons from Operation Allied Force." He examines the traditional air power theories of Douhet, Mitchell, and Trenchard within the context of NATO's air war over Yugoslavia. He concludes that the conflict between theory and context determined the outcome of the war. However, while Allied Force validated the air power theorists, it "demonstrated the superiority of context over theory."

On October 31, 1999, CMSgt. Curtis Brownhill furled the colors of the 24th Wing as the United States prepared to transfer Howard Air Force Base to the Republic of Panama. Readers will feel the emotions Brownhill felt as he participated in this historic ceremony. MSgt. Harry Dill, USAF (Ret.) informs *Air Power History* readers when, how, and why the slogan "Keep 'em Flying" originated. Even today, sixty years later, it remains an effective motto. "Bob" Phillips is a former Air Force historian and a combat veteran of World War II and the Korean War. While he wrote official historical accounts, Phillips's own heroism went unrecognized for fifty years. But no more. His friend and colleague, George Watson, reports that justice was done on February 13, 2001, when Phillips finally received the Silver Star. Brig. Gen. Brian Gunderson's series on World War II Royal Air Force slang terms continues with the letters E through L.

A dozen books are reviewed, ranging in subject matter from scholarly and analytical to fiction and entertainment. Twenty-five new books arrived—see pages 56 and 57. Prospective reviewers are invited to contact Michael Grumelli, our book review editor. The usual departments include upcoming events, the History Mystery, letters, notices, news, and reunions. Readers should note especially the "Upcoming Symposium" notice and registration form on page 64. Save the dates October 17th and 18th, 2001, at Andrews Air Force Base, Maryland, for "Coalition Air Warfare in the Korean War." Sign up now.

As this issue went to press, James Parton, 88, a Supporter of the Air Force Historical Foundation, and author of "Air Force Spoken Here," a biography of Gen. Ira C. Eaker, died of a heart attack on April 20, 2001, in White River Junction, Vermont. A more complete obituary will be included in the Fall 2001 issue of this magazine.



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ANY PLACE, ANY THE 1ST AIR COMM IN WORLD WAR II



TIME, ANYWHERE: VANDO GROUP



William T. Y'Blood

(Overleaf) Colonel Phil Cochran's P-51A in flight over Burma.

THE AIR COMMANDOS WOULD NOT HAVE EXISTED HAD IT NOT BEEN FOR TWO INDIVIDUALS ...ORDE WINGATE AND..."HAP" ARNOLD

Wingate and Cochran chat before the start of a Chindit-Air Commando exercise. Wingate holds the works of Plato and Aristotle.



Probably the most innovative, most colorful Army Air Forces (AAF) units of World War II were the Air Commando groups, particularly the 1st Air Commandos. Denigrated by the more traditionally-minded air leaders of the time, the 1st Air Commandos, nevertheless, performed outstandingly, and their heritage lives on in the Air Force of today.

The Air Commandos would not have existed had it not been for two individuals—the brilliant, but eccentric, Orde Wingate and the visionary Henry H. “Hap” Arnold. Wingate, commander of the famed Chindits, first led them in Operation Longcloth, a long-range penetration of Japanese lines in Burma, during the Spring of 1943. Despite severe losses, and having to leave behind the wounded because there was no way to evacuate them, Longcloth was a major psychological victory for the British. Wingate showed that with proper training and strong leadership, Allied forces could take the war to the Japanese in the jungle.

Though deeply troubled by unreliable resupply of his troops and the inability to safely evacuate his wounded during Longcloth, Wingate determined to try again. The August 1943 Quadrant Conference, held in Quebec between President Franklin D. Roosevelt and Prime Minister Winston Churchill, gave Wingate the opportunity. Encouraged by the rise in morale of the British public following the news of Wingate’s exploits in Burma, Churchill invited the Chindit leader to

Quebec to report on his concepts of long-range penetration.

Quadrant was held mainly to discuss three strategic issues: future operations in the Pacific, long-term strategy for the defeat of Japan, and problems in the China-Burma-India (CBI) Theater. Keeping China in the war was deemed a top priority and, thus, continuing to transport supplies over the Hump (Himalayas) was considered essential. But Wingate’s plan for a new offensive in northern Burma also received the go-ahead from the Combined Chiefs of Staff. For this new operation, Wingate wanted more air support than he had received during Longcloth. He requested a relatively modest 12 to 20 C-47s to drop supplies, but he also wanted bombers, asking for one squadron for each of the eight long-range penetration groups he planned to form for the new operation. He also expressed interest in a recent aviation development, the helicopter.

Although Roosevelt was not impressed with the dour Briton, he arranged for Wingate to meet Gen. George C. Marshall, the head of the Joint Chiefs of Staff, and Gen. Hap Arnold, the AAF leader. Both men found Wingate’s arguments persuasive and promised him help. Marshall sent a regimental-sized infantry unit to Burma to be used in long-range penetration operations. Initially assigned to Wingate, the unit was taken away by Lt. Gen. Joseph W. Stilwell, the U.S. theater commander, to operate under his command. Intensely Anglophobic, Stilwell could not bear to see an American unit operating under a British commander. This unit later became famous as “Merrill’s Marauders.”

Arnold proved even more generous. For almost a year he had been thinking about what had been termed an “Air Blitz Unit,” a self-contained organization comprised of a fighter squadron, a bomber squadron, two transport squadrons, and miscellaneous support units. The timing for such an organization had been premature, however. At Quebec Arnold pressed Wingate about his needs. Initially, Wingate had mentioned light planes, but now he requested additional aircraft to fly out his wounded. Arnold’s reply stunned Wingate. “Two hundred? Three hundred?” The numbers flowed from Arnold. Unaccustomed to such largesse in the British Army, Wingate was wary, but Arnold assured him that he was serious. Surprised but relieved, Wingate left Quebec with renewed hope for the success of his operations in Burma.

Upon his return from Quebec, Arnold quickly set about to establish an organization to support

William T. YBlood has been with the Office of Air Force History (now the Air Force History Support Office) since 1986. From 1960 to 1966 he flew B-47s in the United States Air Force and then was an airline pilot for twenty years. He has accumulated more than 11,000 hours of flying time. He has written several official histories, including two volumes on USAF operations during the Gulf War; the concluding chapters of Winged Shield, Winged Sword: A History of the United States Air Force; The Three Wars of Lt. Gen. George E. Stratemeyer: His Korean War Diary; and MiG Alley: The Fight for Air Superiority. Mr. YBlood is the author or co-author also of six commercially-published books and is working on a seventh book, a study of the World War II Air Commando groups.

ALTHOUGH HE NEVER ACTUALLY SAID IT, BOTH COCHRAN AND ALISON BELIEVED THE GENERAL MEANT, "GO OVER AND STEAL THE SHOW."

Wingate and to find someone to lead this organization. The choice swiftly was pared to two lieutenant colonels—Phil Cochran and John Alison. Both men had known each other for years and were seasoned fighter pilots, Cochran in North Africa and Alison in China. Effervescent and gregarious, Cochran exuded an air of pugnacious confidence. He was also the inspiration for one of Milton Caniff's most endearing characters, Flip Corkin, in his comic strip "Terry and the Pirates." Alison was almost the complete opposite of his friend. Quiet and self-effacing, his demeanor earned him the nickname, "Father Alison." Although not a voluble man, especially compared to the irrepressible Cochran, when Alison spoke, everyone listened. He knew what he was talking about and he usually had the solution to any problem already mapped out in his mind.

The two men were called to Washington to meet Arnold about a mystery project. When Arnold told them that he had a big job for them using small liaison aircraft, both Cochran and Alison were stunned and told the general that they were fighter pilots and did not want a job involving little planes. As might be expected, telling a general one does not want the job he is offering is usually a sure way to get that job. Moreover, Arnold was a good salesman and he made his sales pitch on what he really wanted them to do.

The light planes were only a starting point. Arnold wanted not merely to support Wingate, but to spearhead the operation. "I want to stage an aerial invasion of Burma," was how he put it.¹ Although he never actually said it, both Cochran and Alison believed the general meant, "Go over and steal the show." By now, the two men were showing interest and Arnold threw in the clincher. They would be given *carte blanche* and top priority to obtain anything they needed to organize a force. With that, they said almost in unison, "Can we both go?"

Believing him to be the ranking officer, Arnold named Alison to command the force. When told that Cochran was actually senior by a few months, Arnold said, "Oh well, make it a co-command."² Naturally, this did not work out and Cochran became the commander, with Alison his deputy. Still, the two thought alike and respected each other so much that at times they did operate, unofficially, as co-commanders, each making decisions as needed.

Arnold told them that their project, designated Project 9, was top secret and that they could not tell anyone what was going on. They were on an extremely tight schedule for within just a couple of months they were expected to train and equip an entirely new kind of organization, move it to India, establish bases, and lead it into combat. Their mission would be fourfold: (1) facilitate the forward movement of Wingate's columns; (2) facilitate the supply and evacuation of the columns; (3) provide a small air cover and strike force; and (4) acquire operational air experience under the anticipated conditions. They were not expected to be in combat for more than ninety days. The general closed the meeting with an airy, "To hell with the paperwork. Go out and fight."³

Hitting the ground running, the pair began fleshing out their plans. While Alison stayed in Washington to contact people and obtain equipment, Cochran flew to London to meet Wingate. His trip began on an almost farcical note. Upon his arrival at the headquarters of Lord Louis Mountbatten, the new South East Asia Command (SEAC) leader, Cochran was ushered into a conference involving several British naval officers, including Mountbatten. Cochran was introduced and the meeting began. Every now and then one of the conferees would look at him. He would smile or nod, and they would smile or nod back and resume their discussions. The session was almost over

(Below left) Cochran (L), John Alison (C), and Arvid Olson, the group's operations officer, discuss the group's activities in front of Cochran's aircraft.

(Below right) Judging from the expressions on Mountbatten's and Cochran's faces, Tadpole Smith has just done his "buzz job" on the admiral.



As part of his job as tow rope inspector, Jackie Coogan had to examine all tow rope fittings.



COCHRAN TOLD THE CHINDIT LEADER WHAT HE COULD OFFER AND BOTH MEN REALIZED THEY COULD WORK TOGETHER. IT WAS THE BEGINNING OF A STRONG RELATIONSHIP.

AFTER THE AIR COMMANDOS ARRIVED IN INDIA, MORE MEN WERE ADDED. ALTHOUGH THE GROUP NUMBERED FEWER THAN 1,000 MEN, THEY WOULD DO THE WORK NORMALLY ASSIGNED TO 5,000 MEN.

before Cochran and Mountbatten realized that the American was in the wrong meeting. This one had concerned SEAC shipping matters.

An amused Mountbatten invited Cochran home for lunch and thus began a warm friendship between the two. After lunch, Cochran finally saw Wingate. This first meeting did not go as well as that with Mountbatten. Wingate, as was his usual style, launched into a long monologue on things having nothing to do with long-range penetration, such as, the effect of rainfall on Burmese monasteries. Wingate's mumbling speech and raspy voice left Cochran confused about what Wingate wanted and Wingate apparently thought the American was full of "hot air." A meeting the following day, however, did much to clear the air. Now familiar with Wingate's speech, Cochran suddenly understood what he wanted. He told the Chindit leader what he could offer and both men realized they could work together. It was the beginning of a strong relationship.

Upon their return to Washington, Cochran and Alison sat down to discuss building their force. They had concluded that the force had to be much bigger than originally envisioned. In the back of Cochran's mind was the half-serious thought that if they kept enlarging the force, Arnold might become disgusted and not sent the force to Burma. Their first consideration for aircraft was, naturally, light planes for the evacuation of wounded. They settled on two types, the L-1 Vigilant and the slightly smaller L-5 Sentinel. Both proved superb workhorses in the Burmese jungles. There was no doubt that ubiquitous C-47 was the choice to transport heavy equipment. To bridge the gap between the L-planes and the C-47, they chose the UC-64, a muscular plane used for years by Canadian bush pilots.

Cochran had promised Wingate fighter support, so the P-38 was initially chosen. This request was denied and the P-47 was substituted. Denied again, the P-51A Mustang became their final choice and it turned out to be a very good one. Both Cochran and Alison had realized independently that gliders would be extremely useful in Burma. The Waco CG-4A troop-carrying glider proved

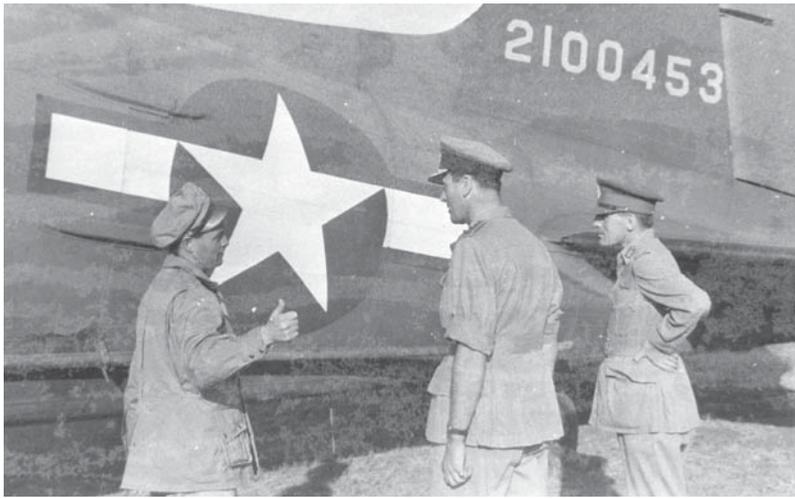
very valuable in the upcoming operation. Finally, they decided that the unique capabilities of helicopters would be useful in the jungle. Although hardly more than prototypes and also underpowered and short ranged, the six machines they obtained demonstrated their worth.

On September 13, 1943, they presented their shopping list to General Arnold. It listed 13 C-47s, 12 UC-64s, 100 CG-4s, 100 L-planes, 6 helicopters, and 30 P-51s. Bombers were not mentioned because the RAF had indicated they would supply those aircraft. Additionally, 87 officers and 436 enlisted men were requested to man the unit. Arnold and his staff examined the request, approved it, and Project 9 was in business. After the Air Commandos arrived in India, more men were added. Although the group numbered fewer than 1,000 men, they would do the work normally assigned to 5,000 men.

The 1,000 consisted entirely of volunteers and they all came highly recommended. There were no castoffs from other units, no "trouble makers." Among the more notable personalities were former Flying Tigers, Arvid Olson (who would later command the 3d Air Commando Group) and R. T. "Tadpole" Smith; Grant Mahony, an ace from the dark days of the Philippines; Bob Petit, a Silver Star holder from Guadalcanal, who would retire from the Air Force as a four-star general; Bill Cherry, who piloted Eddie Rickenbacker's plane when it ditched in the Pacific; and former Washington Senators all-star third baseman Buddy Lewis. But the best-known face in the unit was Flight Officer John L. "Jackie" Coogan. The former child actor and ex-husband of Betty Grable, Coogan was a glider pilot, the assistant operations officer for glider ground operations, and in charge of tow rope inspections.

The men had hardly arrived at Seymour-Johnson Army Air Field outside Goldsboro, North Carolina, to begin training when they were informed that their overseas shipment date had been moved up from December 15 to November 1. Thus, much of their training had to be accomplished after arrival in India. Nevertheless, morale was high—perhaps too high. One of the first group of light plane pilots to begin the movement overseas were issued, in addition to the rest of their equipment, loaded side arms. While waiting in the Goldsboro train station for the train to take them to Miami, a few pilots decided to test their small arms prowess on various fixtures in the station. Later groups were not issued ammunition.

By mid-December, most of the Air Commandos had arrived in India, and Lalaghat and Hailakandi, in Assam, had been chosen as their forward airfields. The Air Commandos arrival in India was not universally popular. There was resentment toward them at all levels—though not from Mountbatten, who had the final say. Much of this animosity was directed at Wingate, whom many British officers detested for his arrogance and his strong Zionist leanings. The airmen were simply caught in the cross fire. But Cochran's force



(Above left) Cochran explains to Mountbatten and Wingate what the January 10, 1944, night exercise will entail.

(Above right) Cochran briefs the SEAC commander on the L-5's controls prior to their eventful flight.



THERE WAS A PERCEPTION THAT THE AIR COMMANDOS WERE WINGATE'S PRIVATE AIR FORCE.

was also envied because it had up-to-date equipment still in short supply to many AAF organizations in the CBI. There was also the uncertainty of many senior officers about the unknown, the untested, the unusual. The secrecy surrounding its future operations contributed to a lack of understanding about what it was capable of and meant to do. Moreover, the Air Commandos were just not the typical AAF organization to which most were accustomed. Finally, there was a perception that the Air Commandos were Wingate's private air force. Many senior officials in the CBI, including Maj. Gen. George E. Stratemeyer, the commanding general of USAAF forces in the India-Burma Sector of the CBI, urged Arnold to abandon this experiment even before the unit had settled into the theater.

The Air Commandos were activated as the 5318th Provisional Air Unit on November 29, 1943. Full training with Wingate's troops began in early January. Although the first exercises were flown in rain and low clouds, they impressed Wingate considerably with the precision of the glider landings. The Chindit leader was so taken with the success of the landings that he decided to participate in a snatch of the gliders for their return to base. On the ensuing snatch the Chindits came close to losing their leader. The C-47 was approaching to make the snatch when the glider pilot glanced back to see if everybody was ready. To his horror, Wingate had unbuckled his seat belt and was leaning out the glider's open door. "Tell the RAF," he yelled to one of his officers, "that I not only have seen it, I have done it."⁴ At the last minute, he was steered back to his seat. Oblivious to all the commotion, Wingate pulled a book from his pack and began reading. The glider pilot, furious over Wingate's lack of common sense, had to be restrained from showing Wingate a few of the more unusual aerial maneuvers a glider could do.

A few days later, another exercise was held with Mountbatten in attendance. That afternoon, before the men boarded the gliders for the night exercise, Mountbatten climbed atop a jeep to deliver a short speech (see photo page 7). Cochran had taken every precaution to ensure that

Mountbatten's talk was successful. There would be no engine run ups and everyone available was ordered to attend. He forgot, however, that Tadpole Smith was up in a P-51 logging some flying time. When Smith arrived back over the field, he thought the man standing on the jeep was Cochran and decided to have a little fun. Midway through Mountbatten's talk, there was a tremendous roar as Smith's fighter flashed by just feet over the admiral's head, almost blowing off his hat. The unflappable Mountbatten stood by waiting for the racket to die down, then resumed his speech as if nothing had happened. A mortified Cochran apologized to the SEAC commander, who shrugged off the incident with the remark that he should not have been speaking on the airstrip anyway. Smith was lucky to escape with little more than a tongue-lashing from Cochran.

That evening, Mountbatten and Wingate drove to the exercise area, while Cochran flew there in an L-5. It was a very dark night but the landings again came off almost perfectly. Ecstatic over the success of the exercise, Wingate gushed, "This is what I've prayed for." Mountbatten bounced up and down, shaking hands with anyone in reach. He was evidently a very religious man for as he watched the gliders swoop out of the darkness to land and later be snatched back into the air by the C-47s, he could be heard repeating over and over, "Jesus Christ."⁵

The next morning, Mountbatten returned to Delhi. Noticing that Cochran had brought in an L-5 and, being a light plane pilot himself once, Mountbatten asked the American if he could fly the little plane back to his headquarters. Ever accommodating, Cochran agreed and the pair hopped in, Mountbatten at the controls in front and Cochran seated behind. Cochran soon realized he had made a serious mistake in allowing the admiral to fly. Mountbatten lost control on his first takeoff attempt and ground looped the plane, fortunately with only minor damage to a wingtip. Crouched over the front seat, Cochran guided Mountbatten through the next successful, though wobbly, takeoff. On the flight to Delhi, every now and then, Mountbatten would look back at

Wingate talks to the Air Commandos about the current situation in Burma.



(Above left) Using a piece of packing crate for a chalkboard, Cochran describes procedures to be used during the January 10 night exercise.

(Above right) The all-important photos of Piccadilly are rushed to Wingate and Cochran.

INERTIA AND INEFFICIENCY FORCED THE[M]... TO RESORT TO "MIDNIGHT REQUISITIONING"

Cochran to nod and grin. Cochran would smile back but at the same time wondered what the landing would be like. The landing, on two wheels and nose down was nearly a disaster. For a moment Cochran thought they were going to flip over, but the plane's tail came down and they rolled to a safe stop. Mountbatten apologized profusely for his poor showing, revealing that he had not flown in seven years. A few days later, Mountbatten wrote Cochran to congratulate the Air Commandos on the success of the exercises. He also wrote, "I am sorry I nearly wrecked your L-5 by manipulating the brakes so badly and hope I did not frighten you too much!"⁶

Training now intensified because the start of the offensive—codenamed Operation Thursday—was set to go in less than two months. Attached to Cochran's outfit at this time were B-25s. Although the RAF had promised to provide bombers, now,

because of commitments elsewhere, they could not supply them. Appealing for help to General Stratemeyer, the Air Commandos were able to get a dozen B-25Hs. Flying arsenals, these planes carried a 75-mm cannon and twelve .50-caliber machine guns. They would be extremely important during the upcoming operation.

Meanwhile, the movement of supplies to the two forward airfields proved time-consuming. Bureaucratic inertia and the inefficiency of theater supply organizations sometimes forced the Air Commandos to resort to the "midnight requisitioning" of boxcars in Calcutta. But other Allied units and the Indians also proved adept at midnight requisitioning, so guards had to be posted on the supplies. The lack of a standard rail gauge in India created problems of its own, as supplies had to be unloaded from one train and loaded onto another several times before they reached the fields. Both

The brass gather at Lalaghat to watch the launch of Operation Thursday. Maj. Gen. George E. Stratemeyer is the officer in the center talking to Air Marshal Sir John Baldwin, commander of the 3d Tactical Air Force.



Ground crews lay out 350-foot-long tow ropes prior to their attachment to the C-47 tugs.



the Lalaghat and Hailakandi airfields needed much work to get them in shape for combat operations. Although the 900th Airborne Engineer Aviation Company was attached to the Air Commandos to help prepare the airfields, much of the work had to be done by Cochran's men. It was demanding and dirty, and a man's appearance was

less important than what he had accomplished each day. One senior officer visiting the Air Commandos complained that Cochran's men were "nothing less than a mob" and that no two men wore the same uniform, while almost all were growing beards.⁷

In response to this officer's complaints,



Air Commando UC-64s taxi for flight tests following their assembly in the Karachi dirigible hangar in the rear.

Cochran wrote one of the more memorable directives of the war:

Look, Sports, the beards and attempts at beards are not appreciated by visitors. Since we can't explain to all strangers that the fuzz is a gag or "something I always wanted to do" affair, we must avoid their reporting that we are unshaven (regulations say you must shave) by appearing like Saturday night in Jersey whenever possible. Work comes before shaving. You will never be criticized for being unkempt if you are so damn busy you can't take time to doll up. But be clean while you can. Ain't it awful?⁸

**BEGINNING
FEBRUARY 3,
1944, RAIDS
WERE
CARRIED OUT
ALMOST
DAILY
AGAINST
BRIDGES,
RAILWAY
YARDS, AND
RAILROAD
TRACKS.**

Even as training for Operation Thursday was underway, the Air Commando fighters and bombers entered combat. Beginning February 3, 1944, raids were carried out almost daily against bridges, railway yards, and railroad tracks. Cochran was almost lost while leading one of these missions. His planes were jumped by ten Zekes and two Air Commandos were shot down. It was thought that Cochran had been killed, also, but he shook off the attackers. Nevertheless, Wingate was not happy about this incident and restricted Cochran, Alison, and Olson from flying any more missions over Burma. The trio knew too much about the impending operation to risk their capture.

Also seeing early action were several light planes sent to Ramu in the Arakan during the fight known as the "Battle of the Box." Though the Japanese enjoyed superior numbers, they did not prevail because this time the Commonwealth forces, supplied by AAF and RAF transports, did not run but stayed to slug it out with the enemy. The Air Commando light planes provided outstanding support during the battle by evacuating more than 700 sick and wounded soldiers from the Box.

Meanwhile, in addition to hauling supplies and erecting gliders, the transport and glider force

underwent intensive night training, including night snatches and night double tows. While performing the latter, two gliders collided, with one crashing and killing the three Air Commandos and four Chindits aboard. This tragedy might have destroyed morale had it not been for Lt. Col. D. C. Herring, the commander of the soldiers killed in the accident. Upon learning that the Chindits might have reservations about riding in gliders, Herring talked to his men, then wrote Cochran. "Please be assured," he told him, "that we will go with your boys any place, any time, anywhere."⁹ The 1st Air Commando Group adopted the phrase as its motto and it has been a part of Air Force special operations lore ever since.

Operation Thursday, the airborne assault of Burma, actually began on February 5, when a Chindit brigade marched south from Ledo to the planned landing zones near Indaw, Burma. Throughout their march, they were supplied by Air Commando gliders and light planes. At Lalaghat and Hailakandi (plus a couple of other bases that would be used by the RAF) work was proceeding at a frenzied pace to ready the fields for D-day, March 5. There was some concern by Troop Carrier Command, which would provide some of the C-47s and many of the crews, about Cochran's proposal for a double tow of gliders over the imposing bulk of the Chin Hills. It was felt that it would place too great a strain on both the gliders and the C-47 tugs. Cochran decided to go ahead with the double tow anyway.

Cochran, however, worried about the lack of visual intelligence of the planned landing grounds, the primary ones being Broadway and Piccadilly, with Chowringhee and Aberdeen as alternate sites. Over the protests of the Air Commandos and even some of his own officers, Wingate had forbidden any reconnaissance flights over the two landing zones. Despite serious misgivings, Cochran followed orders but felt uneasy about the decision. Finally, on March 5, the day Operation Thursday was to begin, he could no longer restrain himself

**THOUGH THE
JAPANESE
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SUPERIOR
NUMBERS,
THEY DID
NOT PREVAIL**



A C-47 tows a CG-4A over the Chin Hills. The question mark emblem was the insignia for the group's C-47 section.

"NOTHING YOU'VE EVER DONE, NOTHING YOU'RE EVER GOING TO DO, COUNTS NOW. ONLY THE NEXT FEW HOURS. TONIGHT YOU ARE GOING TO FIND YOUR SOULS."

and ordered a photo reconnaissance made of the landing grounds. Tadpole Smith flew a B-25, while the unit photographer, Rush Russhon, took the pictures. Broadway looked fine but when they flew over Piccadilly they saw something very wrong. Hundreds of teak logs covered the clearing. It would be a disaster if the gliders tried to land there. Russhon snapped his pictures and Smith firewalled his plane all the way back to Hailakandi, 12 miles from Lalaghat. They could not land the bomber at the latter field because it was so crowded, and they were operating under radio silence.

The B-25's propellers had not stopped turning before Russhon was out of the plane running for his photo lab. Unable to reach either Cochran or Alison by phone, Russhon despaired that he would not contact them in time. He was about to commandeer a jeep when fortune smiled on him. A fighter pilot, en route to Lalaghat, became lost and landed at Hailakandi for directions. Russhon asked him to deliver the precious photos, to which the pilot consented. A second bit of luck came his way minutes later. An Air Commando L-5 pilot landed and Russhon hitched a ride to Lalaghat. When he arrived there, Russhon found everyone puzzling over the photos. Russhon told his story and Wingate became irate, threatening to court martial him for disobeying orders. Cochran disarmed Wingate by saying that he had felt a hunch.

This seemed to mollify Wingate for he quickly calmed down and even managed a smile.

Wingate, Gen. William Slim (the British ground commander), Stratemeyer, the Air Commando leaders, and Wingate's brigade commanders gathered to discuss what to do. The Chindits and Air Commandos were at their peak of readiness following weeks of training. Any delay would push the operation one month closer to the start of the monsoon season—not a pleasant thought. Finally, the decision was made to put everything into Broadway. With the matter resolved, "controlled chaos" prevailed as flight plans were reworked and loading manifests adjusted to account for the elimination of the twenty gliders scheduled for Piccadilly. Climbing atop a jeep's hood, Cochran told his men, "Say, fellers, we've got a better place to go!"¹⁰ More somberly, he said, "Nothing you've ever done, nothing you're ever going to do, counts now. Only the next few hours. Tonight you are going to find your souls."¹¹

At 1812, just 72 minutes late, Bill Cherry pulled the first two gliders into the air. Piloting one of the gliders was John Alison. It was his second ride in a glider. The rest of the Broadway force followed at two minute intervals. It was a laborious climb over the Chin Hills and the two-ship tow nearly ended in disaster. Only later was it learned that the gliders had been overloaded. Like soldiers everywhere, Wingate's men did not trust the promise that supplies would reach them soon and so they had loaded the gliders with more ammunition, food, and other supplies than had been planned. Because of the extra weight, fraying tow ropes, and turbulent air, several gliders broke loose from their tow ships. Most of the men who went down in these gliders eventually made it back to friendly lines, but some did not and were killed or captured.

The landings at Broadway in the blackness of the Burmese night were wild, the clearing lit only by a pale moon. The tall grass hid deep ruts and tree stumps left by loggers. Some gliders had their landing gear ripped off as they hit these obstacles. Some gliders hit gliders, while others slammed into trees. One glider went through a clump of trees, ripping off its wings. The fuselage continued on until it came to an abrupt stop. The bulldozer it carried slammed forward, unhinging the cockpit section. The two pilots suddenly found themselves staring straight up in the air as the bulldozer continued its mad rush into the jungle. When the bulldozer had cleared the remnants of the glider, the nose section flipped back down, the pilots still strapped to their seats. Of the thirty-seven gliders that made it to Broadway, only three were still flyable the following day. Yet, amazingly, casualties were low—24 killed in jungle crashes and four more lost on Broadway itself.

The commander of the engineers charged with preparing the landing ground to take the C-47s was killed in one of the crashes and it was left up to a second lieutenant to take over the job. When



A glider shows the results of tangling with obstructions and other gliders at Broadway.

REMARKABLY, THE JAPANESE HAD NO IDEA THAT THE ALLIES HAD LANDED BEHIND THEIR LINES

Alison asked him how long it was going to take, the young man answered, "Is this afternoon too late?" And his engineers did the job. It was not perfect, not yet, but it was usable.¹²

Back at Lalaghat, Wingate and the others waited to hear if the operation had succeeded. Soon the code word "Soyalink" came over the radio. This was disheartening because it indicated that things were not going right and to stop further flights into Broadway.¹³ But within a short time the more agreeable code words "Pork Sausage" were received, revealing that the operation was a success. C-47s carrying reinforcements and supplies began landing at Broadway on the evening of March 6. Remarkably, the Japanese had no idea that the Allies had landed behind their lines and some time passed before they finally were aware of Broadway.

As Broadway was building up, Cochran sent his men out to keep the enemy away from the rapidly expanding base. On March 8, Air Com-

mando fighters and bombers executed one of the greatest raids of the war in the CBI when they hit the enemy airfield at Anisakan in central Burma. When aerial reconnaissance showed the Japanese gathering aircraft at that airfield, Cochran decided to break up that assembly. Twenty-one Mustangs, each carrying a 500-lb. bomb, found about 60 Japanese planes on the ground. The enemy never had a chance. Before it was over, the Air Commandos destroyed 38 aircraft. With still more targets available, the bomber section was sent to Anisakan, as well. The B-25s destroyed another 12 aircraft and left most of the airfield facilities ablaze. In these two attacks the Air Commandos accounted for more than 40 percent of the Japanese aircraft destroyed in the CBI in March 1944.

Operation Thursday officially ended on March 11. In less than one week, two British long-range penetration units had been inserted deep behind enemy lines without enemy knowledge or interference. The Japanese did not attack Broadway until the 13th, far too late to affect the operation. It was a remarkable accomplishment thanks in large part to the efforts of the Air Commandos. Tragically, the architect of the long-range penetration concept would not survive to savor the victory. On March 25, while flying to his rear headquarters in an Air Commando B-25, Wingate was killed when his plane plowed into a mountain. The Chindits fought on, but they were never quite the same without their fiery leader.

On March 29, Cochran's force was formally designated the 1st Air Commando Group, shedding their "provisional" label and enabling them, at last, to get proper logistics support. The Air Commandos continued to support the Chindits

Members of the light plane section prepare parapacks containing food, ammo, and other supplies for aerial delivery. The L-5 in the background is loaded already with parapacks.

ON MARCH 29, COCHRAN'S FORCE WAS FORMALLY DESIGNATED THE 1ST AIR COMMANDO GROUP



Even Wingate can smile a bit over the success of the operation. Sharing in his satisfaction are Alison (second from left) and Brig. Michael "Mad Mike" Calvert (third from left), commander of the 77th Brigade, the Broadway assault unit.



THEY HAD PERFORMED AN HISTORIC EVENT—THE FIRST HELICOPTER COMBAT RESCUE MISSION

AS THE WAR ACCELERATED, THE CONCEPT OF LONG-RANGE PENETRATION SUPPORTED BY AIR COMMANDO UNITS WAS NO LONGER CONSIDERED A PRIORITY

until late May when they were finally pulled out of action to reorganize. But before then they had performed an historic event—the first helicopter combat rescue mission. It had not been easy. An L-1 carrying three wounded men had been forced down in enemy territory. Although the Japanese spotted the plane, they could not locate the crew, who were on the move. Radio contact with friendly forces was made on April 24, and Lt. Carter Harman and his YR-4 helicopter were sent to pull them out. Because of the chopper's limited lift capability and underpowered engine, Harman had to fly out the crewmen one at a time, taking them to a sand bar in a nearby river, where an L-1 waited to fly them to the rear. These were the first of 23 combat sorties in which the helicopters rescued 18 men, proving the value of the aircraft.

Hap Arnold had intended to form four more Air Commando groups, but as the war accelerated, the concept of long-range penetration supported by Air Commando units was no longer considered a priority. Two more groups were formed—the 2d, which joined the 1st in Burma in late 1944, and the 3d, which operated in the Philippines beginning in January 1945. But that was all. When the war ended, the three groups were swiftly inactivated, to the delight of some skeptics who had never conceived the enormous possibilities of unconventional warfare afforded by these units. As the noted military theorist Liddell Hart wrote, "The only thing harder than getting a new idea into the military mind, is to get an old one out."¹⁴

Yet, the new idea of unconventional units organized to carry out special operations that was lit by the World War II Air Commandos did not die. Its flames flickered and ebbed over the years, but they kept burning. Others took up the idea and

sustained it. Today the Air Force Special Operations Command carries on the proud tradition of the Air Commandos—Any Place, Any Time, Anywhere. ■

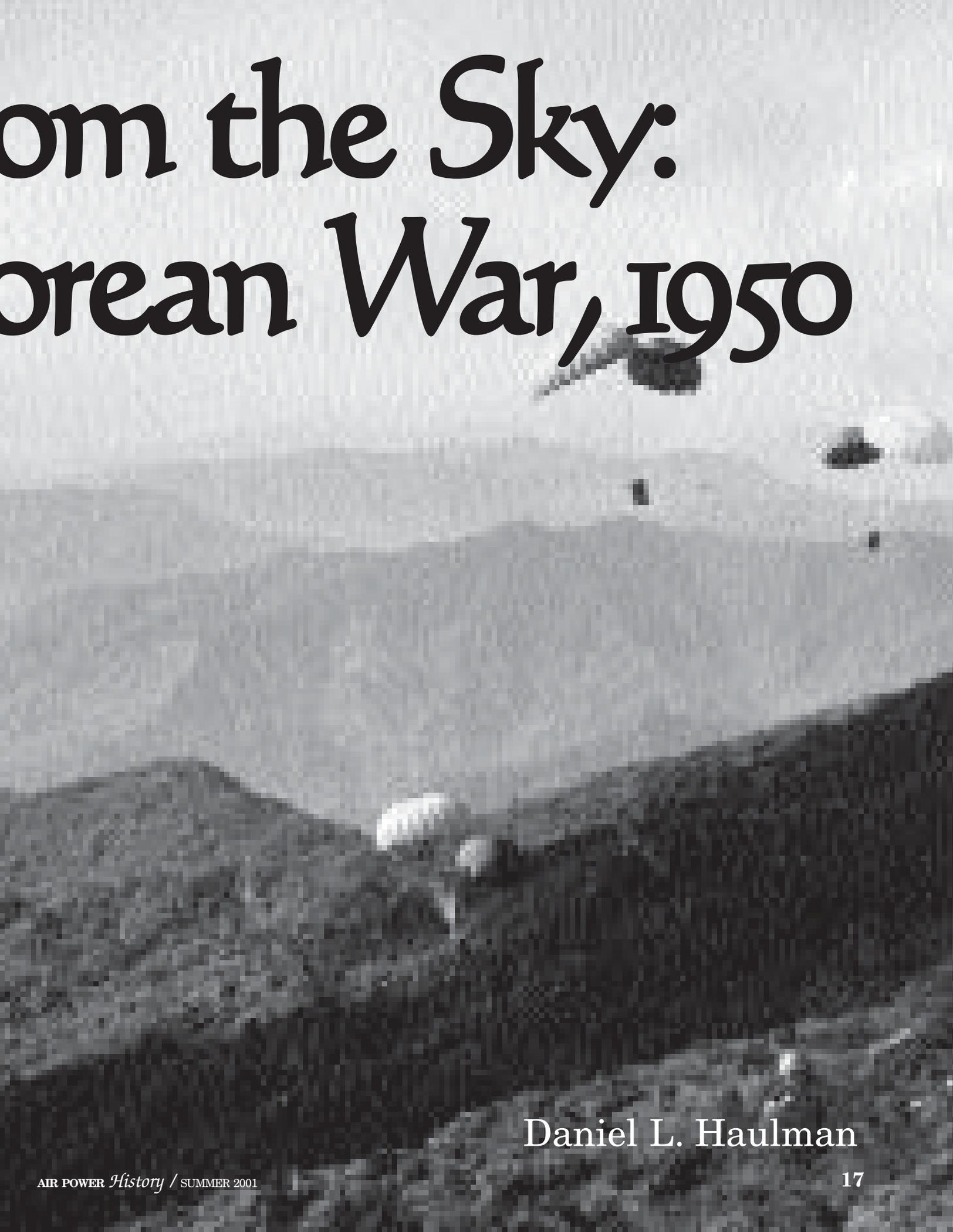
NOTES

This article is based on a talk the author gave on October 5, 2000, to the American Branch of the Burma Star Association. The talk was based on the author's research in the Air Force Historical Research Agency archives for a book on the three Air Commando groups to be published by the Smithsonian Institution Press.

1. Intv, Maj. Gen. John R. Alison, by Maj. Scottie S. Thompson, Apr. 22-28, 1979, p. 347. USAF Oral History Collection, AFHRA No. K239.0512-112J.
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5. Memo, John Alison to Gen. H. H. Arnold, subj: History, Status and Immediate Requirements for first Air Commando Force, Jan. 21, 1944. AFHRA No. 145.81-170, Microfilm Reel No. A1378, fr 605.
6. Ltr, Adm. Louis Mountbatten to Col. P. Cochran, Jan. 18, 1944. AFHRA No. GP-A-CMDO-1-SU- CO, Jan 44-Aug 45, Reel No. B0681, fr 581.
7. Brig. Gen. William D. Old, "Command Diary," Mar. 6, 1944 entry. AFHRA No. 833.13-1, Reel No. A8263, fr 116.
8. Thomas, p. 149.
9. *Ibid.*, p. 155.
10. Field Marshal the Viscount [William] Slim. *Defeat into Victory*. (New York: Davis McKay Co., 1961), p. 228.
11. Thomas, p. 197.
12. Alison interview, p. 405.
13. Soyalink was an artificial food product detested by the British troops.
14. James Charlton, ed. *The Military Quotation Book*, (New York: St. Martin's Press, 1990), p. 63.

Salvation from Airlift in the K



A black and white aerial photograph of a mountainous landscape. The terrain is rugged with deep valleys and ridges. A winding road or path is visible in the lower right quadrant. The sky is clear and light-colored. The title text is overlaid on the top half of the image.

From the Sky: Korean War, 1950

Daniel L. Haulman

(Overleaf) Air-drop resupply.

AIRLIFT PLAYED A PIVOTAL ROLE, ESPECIALLY IN THE WAR'S CRUCIAL FIRST YEAR

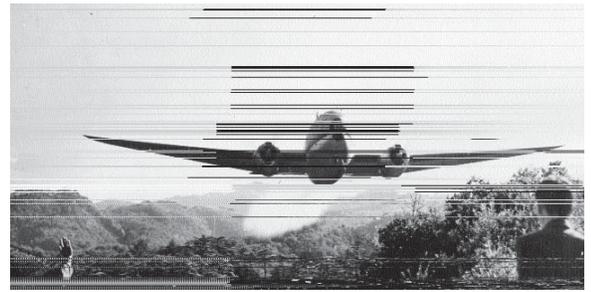
THE ABILITY OF C-47S TO LAND MORE EASILY ON SMALL AND POORLY SURFACED AIRSTRIPS IN KOREA PERSUADED THE AIR FORCE TO EXPAND THE NUMBER OF SKYTRAINS IN THE THEATER

Before dawn on June 25, 1950, Soviet-built T-34 tanks spearheading North Korean infantry columns invaded South Korea, plunging the three-year-old U.S. Air Force into its first war. The Korean War demanded all of the kinds of missions that air power could offer, including counterair, strategic bombardment, interdiction, close air support, reconnaissance, and airlift. Of these, airlift played a pivotal role, especially in the war's crucial first year, when ground forces moved spectacularly down and up the peninsula. Sometimes the airlift role is overshadowed by the flashier fighter and bomber missions. Yet the ability of transport and troop carrier aircraft to move men, equipment, and supplies rapidly from place to place contributed as much to the successful defense of South Korea as bombing, strafing, or shooting down enemy aircraft.

The demand for airlift erupted on the first day of the invasion. John J. Muccio, U.S. Ambassador to South Korea, requested a sea and air evacuation of American civilians from Korea. Most of the evacuees were in the Seoul area, and had to leave through the port of Inchon or nearby Kimpo and Suwon airfields. The Far East Air Forces (FEAF) and its 374th Troop Carrier Group mustered 7 four-engine C-54s, and 14 two-engine C-47s and C-46s at Itazuke and Ashiya Air Bases in Japan for the airlift. Between June 27 and 29, the Air Force evacuated about 850 civilians from Korea to Japan. Fifth Air Force F-80 jets and F-82 Twin Mustang fighters covered the evacuation and shot down seven enemy aircraft. At the same time 905 evacuees departed by sea.¹

On June 28, the same day the North Koreans took Seoul and Kimpo, the Air Force began airlifting ammunition to Suwon for the South Korean defenders. FEAF delivered 150 tons from Tachikawa Air Base (AB) in Japan that day. Despite Fifth Air Force fighter cover, enemy strafers caught one C-54 on the ground and left it a burning wreck. On July 1, Suwon also fell to the enemy, depriving the United States of the last large airfield in the Seoul area.²

President Harry S. Truman was not content merely to evacuate U.S. civilians from the South Korean capital or to haul ammunition to the South Korean defenders. He was determined to send U.S. troops from Japan to Korea as quickly as possible to help stem the invasion in the name of the United Nations. For this he turned again to the Air Force. On July 1, seven C-54s airlifted the first U.S. troops from Japan to South Korea. Between July 1 and 4, the 374th Troop Carrier Group (TCG) airlifted 24th Infantry Division troops and their



equipment and supplies from Itazuke AB, Japan, to Pusan, at the southeastern tip of the Korea. Proceeding quickly by land northwestward, the airlifted troops first engaged the North Koreans in combat near Osan on July 5.³

The heavy four-engine C-54s that landed at Pusan had threatened to damage the fragile runways there, forcing the use of smaller two-engine transports. The ability of C-47s to land more easily on small and poorly surfaced airstrips in Korea persuaded the Air Force to expand the number of Skytrains in the theater. Eventually, the number of C-47s available to the 21st Troop Carrier Squadron at Ashiya rose to forty, and Greece sent a detachment of the Skytrains to augment the squadron.

The entrance of U.S. troops into the war failed to turn the tide, and the North Koreans, armed with tanks, continued to advance rapidly and relentlessly into South Korea. To help destroy the tanks, the Military Air Transport Service (MATS) moved rocket launchers, popularly known as

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(Facing page top) C-46 at low level.

(Facing page middle) C-47 Skytrain.

(Facing page bottom) C-54 Skymaster.

bazookas, and shaped charges from the United States to Japan in July. FEAF moved the bazookas from Japan to Korea, but some of the shaped charges went to the Navy's Task Force 77.⁴

Despite domination of the air by Fifth Air Force and U.S. Navy carriers, the North Koreans continued to advance, and more and more South Korean cities fell. The territory available for U.S. airfields in South Korea decreased almost daily. Engineer aviation battalions built, repaired, or extended airstrips still in friendly territory, such as the ones at Pusan, Pohang, and Taegu. Despite having to compete with Fifth Air Force fighters for the use of these airfields, FEAF cargo deliveries to Korea increased in August. On August 2, the Eighth Army in Korea asked for an airlift of 300,000 pounds of military cargo from Japan to Korea, and the 374th TCG accomplished the mission in 24 hours.⁵

That same month, the 314th TCG and its C-119 Flying Boxcars began moving from the U.S. to Japan. MATS C-54 transports also helped move



(Right) C-119 Flying Boxcar.

(Far right) Maj. Gen. William H. Tunner.

ON SEPTEMBER 15, TUNNER'S COMBAT CARGO COMMAND PREPARED TO AIRLIFT MATERIEL AND MEN BOTH TO THE INCHON INVADERS AND TO THE EIGHTH ARMY, WHICH WAS POISED TO BREAK OUT FROM THE PUSAN PERIMETER

two additional B-29 bombardment groups from the U.S. to the Far East. FEAF cargo sorties per day also rose significantly during August, going from 42 on August 1, to 105 on August 14, to 130 on August 25. Airlifted tonnage within the theater also increased sharply, from 60 tons on August 1, to 203 on August 7, and 458 tons on August 27.⁶

At the end of the month, FEAF organized the 1st Troop Carrier Task Force (Provisional), the nucleus of what on September 10 became the provisional Combat Cargo Command. It included the 1st TCG (Provisional) and the 314th and 374th TCGs, that were equipped with C-46s, C-47s, C-119s, and C-54s. The new organization, headquartered at Ashiya AB, Japan, was charged with airlifting men and materiel within Korea and between Korea and Japan. Its first commander was Maj. Gen. William H. Tunner, the famous airlift veteran, who had masterminded the Hump airlift over the Himalaya Mountains between India and China during World War II, and the Berlin Airlift, which had concluded successfully the previous year.⁷

UN demands for airlift increased during September, as the allied forces prepared to go on the offensive. By then the North Koreans held all of South Korea except for a small perimeter around Taegu and Pusan. When General Douglas MacArthur launched his dramatic invasion of Inchon near Seoul on September 15, Tunner's

Combat Cargo Command prepared to airlift materiel and men both to the Inchon invaders and to the Eighth Army, which was poised to break out from the Pusan perimeter. Tunner had available an armada of C-54s, C-47s, and C-46s to land troops and equipment and for air evacuation from soon-to-be-captured airfields, and C-119s for air-dropping supplies to advancing UN troops.

Tunner did not have to wait long for his opportunity. On September 17, U.S. Marines captured Kimpo airfield near Seoul. Two days later thirty-two C-54s landed there with more troops, supplies and night lighting equipment. Using this equipment, the next day Combat Cargo Command transformed the airlift into an around-the-clock operation. With C-54s landing at all hours of the day and night, before long the command was delivering more than 800 tons per day at Kimpo. Skymasters unloaded fuel and ammunition, much of it for Marine Aircraft Group 33. On return trips to Japan, the C-54s evacuated battle casualties.⁸

On September 21, still less than a week after the Inchon invasion, C-54s began airlifting rations and ammunition to newly captured Suwon airfield south of Seoul. As at Kimpo, the Skymasters returned to Japan with wounded casualties. On September 24, eight C-54s transported 65 tons of ammunition and food from Japan to Suwon. The next day Tunner's air transports began landing soldiers of the 187th Airborne Regimental Combat Team at Kimpo. That troop airlift lasted three days.⁹

Ships could not deliver as much military cargo at Inchon as planners had hoped. Surface lines of





(Above) The 187th Regimental Combat Team.

MACARTHUR AND ALMOND ... DEPENDED ON AIRLIFT

transportation also failed to deliver enough war materiel from Inchon to the front line troops. To keep the advancing Marines and Army troops supplied, Generals MacArthur and Edward Almond, who led X Corps, depended on airlift. It included not only the landing of cargo at the Kimpo and Suwon airfields, but also the airdropping of food and ammunition directly to the front, usually by Combat Cargo Command C-119s. Airlift helped supply both X Corps at Inchon and the Eighth Army advancing from the Pusan perimeter. As these forces approached each other to link up, North Korean troops fled northward to escape being cut off.¹⁰ Some of them dispersed into the South Korean mountains to live off the land.

In October, sixty-six Flying Boxcar sorties airlifted components of a 600-ton treadway bridge from Ashiya AB in Japan to Kimpo to allow U.S.

ground troops spreading out from Inchon and Seoul to cross the Han River. This was the first time that airlift had delivered an entire bridge. Once it was assembled, General MacArthur himself crossed it to lead the offensive northward. His troops not only reached the 38th parallel, but, with the approval of President Truman and the Joint Chiefs of Staff, moved into North Korea. What had been an effort to defend South Korea now became an attempt to liberate all of Korea from communism.¹¹

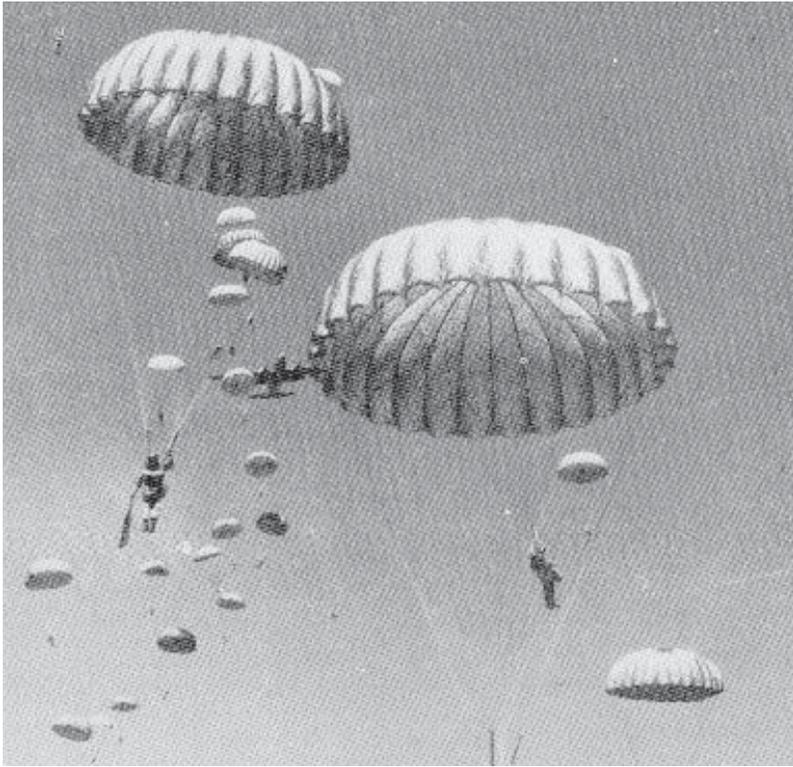
During October 1950, General Tunner's airlift from Japan to Korea and within Korea broke its previous records. USAF transports dropped food to 150 former POWs on October 7.¹² Five days later, Combat Cargo Command began airlifting supplies to Wonsan, that Republic of Korea (ROK) forces had just captured in eastern North Korea. Tunner's airplanes also transported an entire base unit to Wonsan to operate the airfield there.¹³ After Eighth Army troops captured Sinmak airfield, between Seoul and Pyongyang, Combat Cargo Command began airlifting fuel and food there for the UN troops advancing toward the North Korean capital. On October 17, air transports delivered 235 tons of gasoline and rations to Sinmak and returned to Japan with aeromedical evacuees.¹⁴

On October 20, General MacArthur launched the first airborne operation of the Korean War. Tunner's transports, including more than seventy C-119s and forty C-47s, dropped over 2,300 paratroopers of the 187th Airborne Regimental Combat Team and 300 tons of their equipment behind enemy lines at Sukchon and Sunchon, about 30 miles north of Pyongyang. H-5 helicopters evacuated injured paratroops from the drop zone. That same day, Pyongyang fell to UN forces, and Combat Cargo Command began airlifting supplies to the airfields there. Forty C-119s dropped about

(Right) The bridge over the Han River.

SEVENTY C-119s AND FORTY C-47s, DROPPED OVER 2,300 PARATROOPERS OF THE 187TH AIRBORNE REGIMENTAL COMBAT TEAM





(Above left) Airborne assault troops.

(Above right) C-119 air drop.



1,000 additional paratroopers in the Sukchon and Sunchon areas on October 21 to reinforce the airborne troops dropped the day before. Between October 20 and 22, the Flying Boxcars and C-47s had dropped well over 3,000 troops behind enemy lines north of Pyongyang. To resupply the paratroopers until surface supply routes from the Pyongyang area could reach them, Tunner's C-119s air-dropped 290 tons, including jeeps, trucks, and howitzers.¹⁵

Within a day of the airborne operation, UN forces from Pyongyang linked up with the paratroopers.¹⁶ On October 24, Combat Cargo Command delivered 1,182 tons of freight to Pyongyang, the largest one-day airlift into any airfield thus far in the Korean War. The next day the command broke its record again.¹⁷ At the same

time, C-119 airdrops continued. To relieve a group of friendly ground troops cut off temporarily at Unsan, nine Flying Boxcars dropped 28.5 tons of ammunition, fuel, and oil on October 26.¹⁸ During October, FEAF airlifted 2,840 patients within Korea and 3,025 patients from Korea to Japan. By early November, C-47s were flying cargo in and casualties out of newly captured airfields at Sinanju and Anju, deep in North Korea, well north of Pyongyang.¹⁹ By then, the number of transport sorties outnumbered sorties devoted to strategic bombardment, interdiction, or close air support. With the help of airlift, the Eighth Army advanced from the Pusan perimeter all the way to the vicinity of China in just a few weeks. Enemy guerillas continued to throw up roadblocks on surface supply lines, but UN supplies could bypass them. C-47s and C-46s landed freight at forward airfields, and C-119s dropped cargo from overhead.²⁰

(Below) Unloading a C-46.



By November, although UN troops had taken over most of North Korea and were approaching the Yalu River border with China, the war was not yet over, and airlift would have an even more important role to play. The Eighth Army, which had advanced beyond the ability of surface supply lines to sustain it, required additional airlifts of food and ammunition.²¹ On November 10, less than 36 hours after its arrival in Japan, the 437th TCG began airlifting cargo in C-46s from Japan to Korea.²² On November 12, FEAF commander, General Stratemyer, requested additional C-46 and C-54 air and ground crews.²³ Combat Cargo Command dropped rations and gasoline at Kapsan on November 20 to resupply rear echelons of a UN unit that had just reached the Yalu River.²⁴ When overwhelming numbers of Communist Chinese



(Above) C-119 supply mission.

(Right & below) Aero-medical evacuation in C-47s.

ALMOST IMMEDIATELY, COMBAT CARGO COMMAND BEGAN DROPPING SUPPLIES TO THE ENCIRCLED U.S. TROOPS

troops entered the conflict during the month, UN troops began a retreat. Even with airlift to supplement stretched land and sea supply routes, MacArthur could not deliver enough cargo and reinforcements to allow his troops to hold their advanced positions.²⁵

Eighth Army forces in western North Korea fell back to Pyongyang and then retreated to new more defensible lines nearer the 38th parallel. X Corps and ROK troops in eastern North Korea withdrew toward Wonsan and Hungnam on the coast, from which they could be evacuated by sea to South Korea. FEAF Combat Cargo Command facilitated the orderly retreats with a “reverse airlift” that removed tons of supplies that advancing enemy troops might otherwise have captured. For example, during December 1950, Fifth Air Force moved three fighter groups from North to South Korea, using the airlift resources of Combat Cargo Command. On December 1, the command also airlifted some 1,500 wounded personnel from the Pyongyang area. Transport planes evacuated men and materiel that could not be removed expeditiously by land or sea.²⁶

At the end of November, the Communist forces in northeastern Korea surrounded troops of the 1st Marine Division and the 7th U.S. Infantry Division in the area of the frozen Chosin (Changjin) Reservoir. Threatened by terribly cold weather and hoping to escape total annihilation or

capture, the Americans fought their way to the tiny village of Hagaru, about four miles south of the reservoir, where they set up a defensive perimeter protected in part by Marine Corps and Navy close air support missions.²⁷

Almost immediately, Combat Cargo Command began dropping supplies to the encircled U.S. troops. On November 28, 29 and 30, at least thirty-seven C-119 flights and twenty-two C-47 sorties air-dropped 247 tons of ammunition, rations, gasoline, and medical supplies to a relatively small drop zone within the Hagaru perimeter. Some of the initial C-119 loads landed beyond the perimeter in enemy-held territory. U.S. Marine Corps observation airplanes and helicopters landed to take out wounded, but there were far too many casualties to be evacuated that way. X Corps commanders decided they needed to supplement the USMC airlift from Hagaru with C-47s of Combat Cargo Command.²⁸

By December 1, the Marines had carved a larger airstrip in the frozen ground. Although not yet complete, it was ready enough for the first cargo airplanes to land. On that day, seven USAF C-47s and four USMC R4Ds (virtually identical to the C-47s) evacuated more than 1,000 wounded and sick soldiers from Hagaru to Yonpo, about 40 miles to the south, within the X Corps defensive perimeter around Hamhung and Hungnam. In the next several days, the aircraft evacuated an average of 34 men per flight. On December 5, the biggest aeromedical airlift day for Hagaru, 1,580 patients flew from Hagaru to Yonpo.²⁹





(Above) C-119 Flying Boxcar cruises over ground troops manning anti-aircraft artillery battery.

(Below) A C-47 on the beach.

The C-47s and R4D airplanes that carried out the wounded and sick did not arrive at Hagaru empty. Many of them carried ammunition, rations, and gasoline, but these were only a small fraction of the supplies that C-119s continued to drop over the besieged village. On December 1, for example, the Flying Boxcars dropped more than 66 tons of supplies, mostly ammunition, to UN forces at Hagaru.³⁰

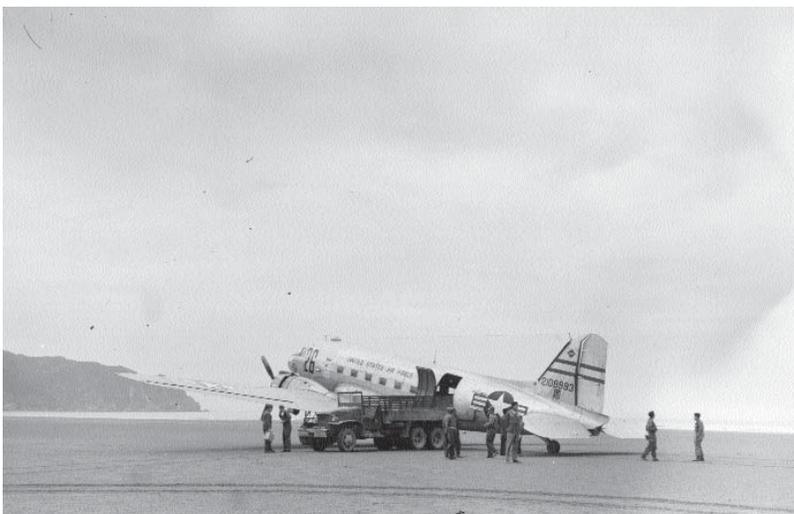
Other U.S. Marines and Army troops from X Corps had been encircled by Communist Chinese forces at the village of Koto, about seven miles

south of Hagaru. On December 6, thirty-one Flying Boxcars dropped 150 tons of ammunition and rations over Koto. American forces abandoned Hagaru and fought their way to join the men at Koto on December 7. By then, Combat Cargo Command had flown 221 airdrop and airlift missions to Hagaru and had evacuated over 4,300 casualties from there.³¹

The crisis was not yet over. Koto needed the same kind of airlift that had supported Hagaru the previous week. On December 7, Skytrains began landing at a newly constructed airstrip at Koto to evacuate the wounded, while Flying Boxcars continued to airdrop supplies. By the end of December 9, when the airdrops to Koto ceased, C-47s had carried 312 casualties from the village to safety behind UN lines. The ground troops at Koto were determined to join the rest of X Corps at Hamhung and Hungnam to the south, but a 1,500-foot-deep gorge blocked their way. The Chinese had destroyed the bridge over the chasm. Without a bridge, the Marines would have to abandon their tanks, other vehicles, and artillery. Airlift provided a solution. On December 7, each of eight C-119s of the 314th Troop Carrier Group dropped a span of an M-2 treadway bridge from an altitude of 800 feet. Each span descended with the help of a pair of huge G-5 parachutes. One span fell into enemy-held territory and another one was damaged, but the other six were enough to span the gorge. On December 8, troops of the 1st Marine Division from Koto linked up with a 3d Infantry Division relief column north of Hamhung. With the help of the first air-dropped bridge in history, U.S. forces had at last broken the encirclement.³²

In the thirteen days since the original encirclement at the end of November, Combat Cargo Command airplanes dropped 1,580 tons of equipment and supplies to the Marines and U.S. Army troops at the Chosin Reservoir, Hagaru, and Koto. Since November 28, the airlift involved 313 C-119 and 37 C-47 flights. Between December 1 and 9, USAF and USMC airplanes evacuated more than 4,680 wounded and sick Americans from Hagaru and Koto. The Air Force subsequently awarded its first Korean War Distinguished Unit Citations to the 21st Troop Carrier Squadron, the 314th Troop Carrier Group, and the 801st Medical Air Evacuation Squadron, for their parts in the emergency airlift.³³

X Corps itself was still not out of danger, despite its recovery of major elements of the formerly encircled 1st Marine and 7th U.S. Infantry Divisions. Chinese Communist pressure still required the evacuation of the Hamhung/ Hungnam perimeter on the northeastern Korean coast that December. UN Task Force 90 accomplished the bulk of this evacuation by sea, but airlift played a major role again. Even while the sea evacuation was under way, 61st Troop Carrier Wing C-54s airlifted ammunition and other supplies from Japan to the perimeter. On December 14, the air evacuation of Yonpo airfield began. It continued for four days, during which time FEAF Combat



DURING THAT TERRIBLE MONTH OF DECEMBER, 1950, THEY TRANSPORTED THOUSANDS OF WOUNDED TROOPS FROM KOREA TO JAPAN.

Cargo Command, in 393 flights, evacuated more than 4,000 personnel and transported over 2,000 tons of cargo. Most of the passengers were U.S. Marine and Army troops, many of whom were wounded.³⁴

While airlift was helping to evacuate the X Corps from northeastern Korea, it was also airlifting Eighth Army and Fifth Air Force personnel, equipment, and supplies from northwestern Korea. Between December 1 and 4, Combat Cargo Command air-evacuated the combat echelons of the 8th and 18th Fighter-Bomber Wings from Pyongyang and Pyongyang East airfields to Seoul and Suwon in South Korea. The provisional 1st and the 437th TCGs, using C-46s and C-47s, flew emergency air evacuations of UN forces from Sinanju and Pyongyang. During that terrible month of December, 1950, they transported thousands of wounded troops from Korea to Japan.³⁵

As Chinese Communist troops approached the South Korean capital of Seoul, managers of orphanages there began gathering children for a sealift to safety on Cheju Do, an island off the South Korean coast. Sealift could not immediately transport the children, some of whom died from malnutrition or exposure while they waited. Airlift responded again. On December 20, twelve C-54 Skymasters from the 61st TCG air-evacuated more than 800 orphans from Kimpo Airfield to Cheju Do. The operation was called "Christmas Kidlift".³⁶

As the year ended, UN forces were withdrawing into northern South Korea, hoping to stop the Chinese and North Korea Communists before they reached the gates of Pusan again. Mobility continued to characterize the Korean War for the first three months of 1951, with Seoul changing hands two more times. Airlift continued to play a major role in the conflict, even after it became a war of little movement.

In the crucial months of 1950, airlift had already demonstrated its ability to influence the outcome of battles and thereby shape the war itself. Without airlift, American civilians would have been captured at Seoul in June 1950, and U.S. forces would not have been able to enter the conflict as early as July 5. Without airlift, UN forces could not have hoped to advance nearly as rapidly as they did from the Pusan perimeter and Inchon into North Korea, and many more would have died surrounded by Chinese Communist forces in North Korea. In 1950, airlift contributed greatly to the successful defense of South Korea, to the near liberation of North Korea, and to the deliverance of U.S. forces from that country. As much as strategic bombing, interdiction, close air support, counterair missions, and reconnaissance, airlift demonstrated the tremendous influence of air power on the Korean War during its critical first year. Military airlift grew up during World War II and the Berlin airlift, but it matured in Korea. ■

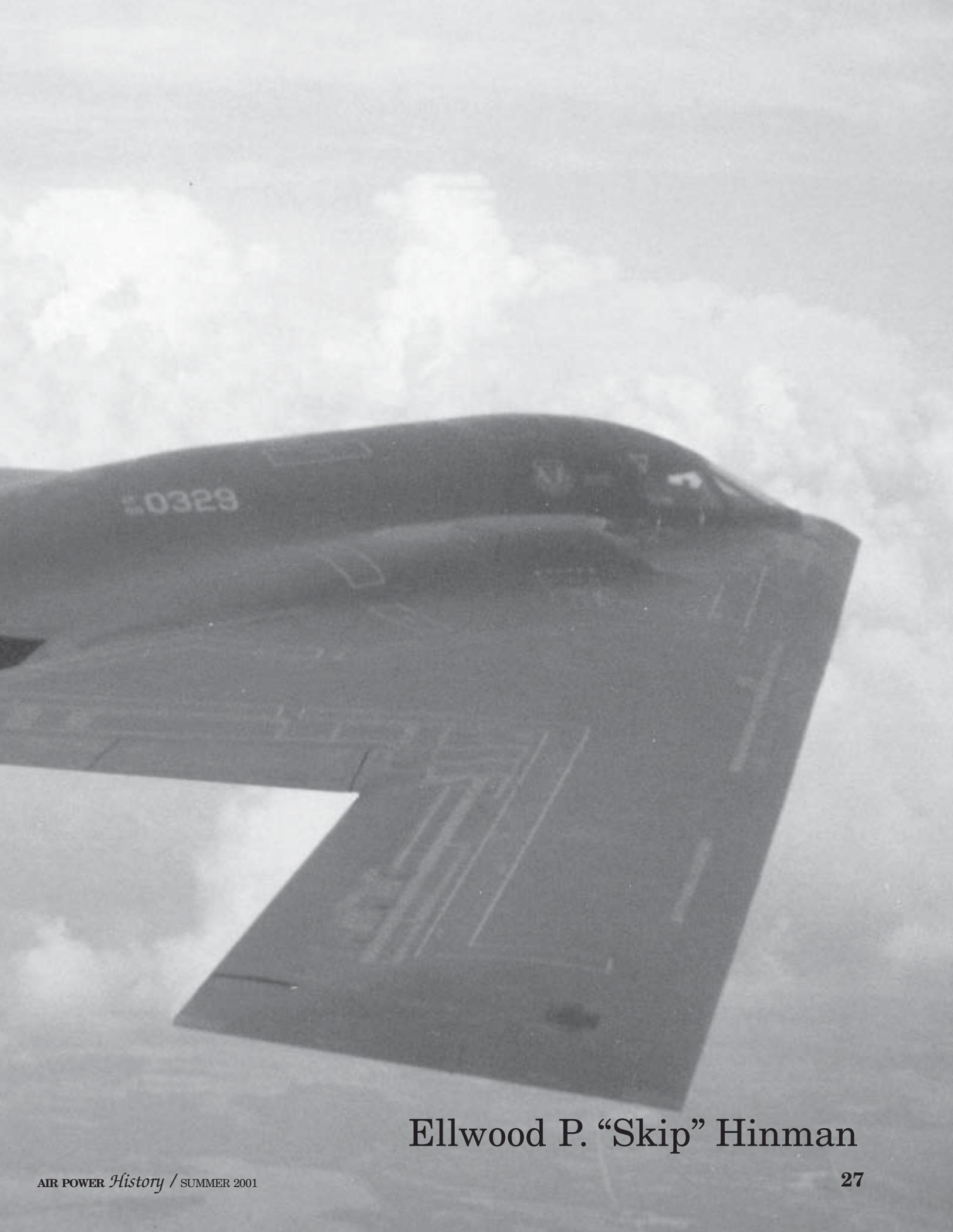
Airlifting orphans from Korea as part of Operation Christmas Kidlift.



THE 61ST TCG AIR-EVACUATED MORE THAN 800 ORPHANS FROM KIMPO AIRFIELD TO CHEJU DO ... [IN] OPERATION ... "CHRISTMAS KIDLIFT".

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Context and Theory: Lessons from Operation Allied Force



Ellwood P. "Skip" Hinman

(Overleaf) The B-2 Stealth Bomber.

LT. GEN. MICHAEL SHORT, ... TESTIFIED AFTER THE WAR THAT HE "WOULD HAVE GONE FOR THE HEAD OF THE SNAKE ON THE FIRST NIGHT..."

An early advocate of air-power, Maj. Gen. William "Billy" Mitchell.

When the North Atlantic Treaty Organization (NATO) began Operation Allied Force on March 24, 1999, it fought two wars at the same time. One was the air war over Serbia, waged between NATO and the Federal Republic of Yugoslavia. The other was a conceptual struggle between the tenets of traditional air power theory and the unique situational context of this contemporary conflict. It was, in fact, this underlying conflict between theory and context that would ultimately determine the outcome of the other more visible war.

The Allied Force air campaign can be divided into two distinguishable phases. In the first phase, the overarching situational context of the conflict in the Balkans prevailed over NATO's effort to exercise the theories of air power's renowned founders—Guilio Douhet, William "Billy" Mitchell, and Sir Hugh Trenchard. During the second phase, a fundamental change in the context of the war allowed Allied air strategists to successfully apply this traditional air power thought. According to historian John Keegan, there "have really been two air wars, the first lasting a month, the second six weeks." The first was a measured failure and the second—a success.¹ The contextual impact on NATO's efforts to blend traditional air power theory with enduring principles of war highlights the stark differences between these two phases and reveals some lasting lessons of the air campaign.

During the first month of Operation Allied Force, situational limitations severely restrained air strategists' efforts to adhere to five principles of war basic to the teachings of Douhet, Mitchell, and Trenchard: (1) objective, (2) mass, (3) unity of command, (4) offensive, and (5) economy of force. While these theorists differed markedly on the margins, most of their work bore striking similarities in conjunction with these principles. First, these three air power pioneers agreed that, aside from "command of the air," the sole objective of aerial bombardment was, as Mitchell explained, to "wreck an enemy nation's vital centers and destroy the enemy's capability and will to keep fighting."² Douhet argued that air power "should keep up violent, uninterrupted action against surface objectives, to the end that it may crush the material and moral resistance of the enemy."³ Initially, however, this total war theory of aerial bombardment simply did not fit well into the context of limited war in the Balkans. Every target required the approval of every NATO country and reluctant participants severely restrained the numbers and types of targets hit during the first weeks of the air campaign. In accordance with the teachings of the early air power theorists, Lt. Gen. Michael Short, Allied Force's Combined Force Air Component Commander (CFACC), testified after the war that he "would have gone for the head of the snake on the first night. I'd have turned the lights out the first



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night. I'd have dropped the bridges across the Danube. I'd [have] hit five or six political and military headquarters in downtown Belgrade. [Yugoslav President Slobodan] Milosevic and his cronies would have waked [sic] up the first morning asking what the hell was going on."⁴ The delicate consensus among NATO participants during the planning and initial execution of Allied Force, however, did not allow General Short to achieve the objective of his predecessors' air power theories.

Nor did the contextual limitations of coalition warfare allow military planners to capitalize on the air power pioneers' related insistence on the principle of mass. While Douhet called for "a mass of battleplanes...acting decisively and exclusively on the offensive," Trenchard urged air war strategists to "hurl a mass of aviation at any one locality needing attack."⁵ And yet, NATO strike aircraft averaged only 92 sorties per day for the first thirty days compared to a "mass" of 1,300 strike sorties flown every day during Operation Desert Storm.⁶ "In terms of level of effort, it took NATO 30 days to do what Gen. H. Norman Schwarzkopf and the Coalition did in about three days of the Gulf War."⁷ Replete in the writings of Douhet, Mitchell, and Trenchard is the underlying assumption that literally thousands of aircraft would be available to prosecute the air war. By that yardstick, an air campaign so restrained to start with a mere 120 strike aircraft is not likely to accomplish the ambitious goals set by the interwar theorists. While the precision guidance capability of modern weapon systems admittedly increases each individual aircraft's effect, such paltry numbers clearly fall short of the intent of the air power pioneers. Lt. Gen. Buster Glosson, USAF (Ret.), a key planner and air boss for Desert Storm, submitted that, when "you fly [fewer] than 50 bombing sorties per day for seven days, you're not serious about what you're doing. At best, it's sporadic bombing."⁸ Arizona's Senator John McCain was more succinct: "Limited actions beget limited results."⁹

Beyond their unanimous calls for objective and mass, the interwar theorists' strong words about the principle of unity of command fell on deaf ears during the air war over Serbia. Mitchell said, "the one thing that has been definitely proved in all flying services is that a man must be an airman to handle air power. In every instance of which I have known or heard the result of placing other than air officers in charge of air power had ended in failure."¹⁰ Such thought culminated years after Mitchell's writings with the creation of the Joint Force Air Component Commander (JFACC) concept, a single airman who would command joint air forces in combat. However, once again, context prevailed over theory; Allied Force was not commanded by a single airman. Instead, political considerations required that Allied Force be controlled well above the JFACC level, by senior civilian leaders of the nations comprising NATO and by Wesley Clark, the Army general in charge of the campaign. Furthermore, the "most senior military leaders in the chain of command were all soldiers,

not airmen."¹¹ General Short, by his own admission, was relegated to the level of "an executor," largely unable to influence the employment of NATO air forces supposedly under his command.¹² "As an airman, I'd have done this a whole lot differently than I was allowed to do. We could have done this differently. We should have done this differently."¹³

Douhet, Mitchell, and Trenchard also agreed that the principle of the offensive was inherent to the concept of air power. In fact, the allure of the aircraft in the aftermath of the carnage and stalemate of World War I was its overwhelmingly offensive answer to the puzzle of positional warfare. Yet, NATO's compromise of air power theory in the face of dominant contextual factors—its reluctance to mass a concentration of force against the enemy's vital centers—relegated the initiative to the enemy. While context protected Serbia's soft underbelly from attack, it left NATO's center of gravity—a delicate alliance of reluctant participants—exposed and vulnerable. The bombing campaign favored the offense in a tactical sense, but the alliance was clearly on the strategic defensive during the first month of the operation. While NATO waged war in the skies over Yugoslavia, Serbia conducted an equally ferocious war over the airwaves throughout Europe and all over the world. Whether NATO was winning the air war was questionable; that it was losing the propaganda war was clear for a while. The appropriate application of traditional air power theory is to seize and maintain the offensive. Conversely, its misapplication may unwittingly pass the initiative to the enemy, leaving the aggressor to defend the morality of its bombing campaign and the unfortunate instances when the bombs go astray.

While NATO was still learning this difficult lesson, President Milosevic was turning another principle of war against the alliance: economy of force. After sustaining two days of light bombing, and with the initiative firmly in hand, the Serb president began a concerted effort to forcefully evict the ethnic Albanians from Serbia's Kosovo province. To NATO's political leaders, the image of Kosovar refugees fleeing their burning homes and flooding across Kosovo's borders demanded action. Milosevic's brutal "ethnic cleansing" campaign had pulled NATO's rudderless air armada in a direction opposite from the teachings of the air power pioneers. Douhet had warned that "no aerial resources should under any circumstances be diverted to secondary purposes, such as auxiliary aviation."¹⁴ For Douhet, such a use of combat aircraft to target fielded forces was, in fact, "worthless, superfluous and harmful."¹⁵ But "when Kosovar refugees began streaming into Macedonia and Albania on 26 March, horrified NATO leaders promptly ordered a shift of emphasis."¹⁶ Milosevic had compelled NATO to dilute its already meager force to initiate a difficult and largely ineffectual effort that would bring more embarrassment to the alliance than success. Additionally, perhaps unwittingly, he had awakened in NATO military

MILOSEVIC BECAME HIS OWN WORST ENEMY AND THE VICTIM OF HIS OWN SUCCESS

GENERAL MICHAEL RYAN, WOULD DECLARE THAT "SERBIA'S AIR FORCE IS ESSENTIALLY USELESS AND ITS AIR DEFENSES ARE DANGEROUS BUT INEFFECTIVE."



leadership the age-old debate between the utility of tactical aviation versus strategic bombardment. In so doing, the Serb president had driven the contextual wedge even further into an already divided alliance.

And it almost worked. In fact, had Milosevic maintained the strategic offensive and continued to divide both NATO forces and NATO opinion, he may very well have driven off Allied Force. But the contextual factors that proved so favorable to him during the first month, and so detrimental to the theoretical tenets of NATO's bombing campaign, began to change. In fact, Milosevic became his own worst enemy and the victim of his own success. The same ethnic cleansing campaign that had initially worked to his advantage became so unpalatable to NATO leaders and their peoples, that they turned against the Serb president. The Kosovar refugees, not the Serb people, became the victims. The propaganda game that Milosevic had played so well during the first month of Allied Force no longer attracted a sympathetic audience.

When NATO planners emerged for "part two" of Operation Allied Force, they found that the rules of the game had changed in their favor. Context no longer prevailed over theory. A more permissive situational atmosphere allowed for a more appropriate application of the theories of Douhet, Mitchell and Trenchard and turned the recalcitrant princi-

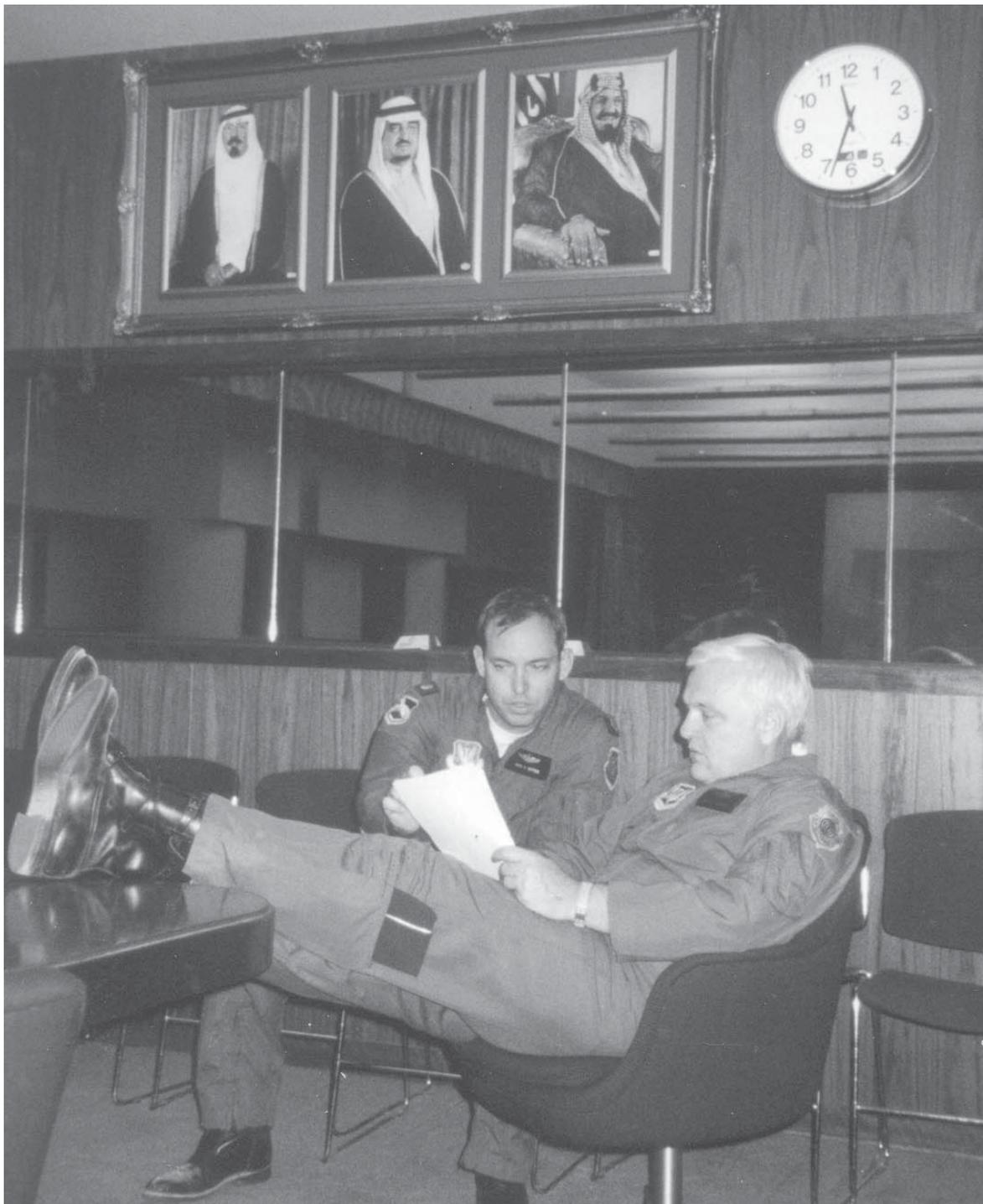
ples of war in NATO's favor. The alliance's objective became increasingly clear, achievable, and commensurate with traditional air power theory. By this point in the air campaign, NATO aircraft had battered enemy air defenses to the point where they could indeed claim to have achieved "command of the air." General Michael Ryan, the U.S. Air Force Chief of Staff, would declare that "Serbia's air force is essentially useless and its air defenses are dangerous but ineffective."¹⁷ Relaxed contextual restrictions unleashed the most modern embodiment of Douhet's "battleplane," the B-2 Stealth bomber, with devastating results. Mitchell's vital centers were no longer shielded by political restraints, exposing both the electrical grid and Serbia's petroleum industry to continuous and successful attack. In accordance with Trenchard's targeting strategy, "NATO aircraft also intensified attacks on key war industries, especially vehicle and weapons factories and repair shops."¹⁸ Every bridge across the Danube was hit and more than 50 percent were completely destroyed. Even Serb television, Milosevic's primary propaganda war weapon, was bombed off the air.

By the end of April, favorable context allowed NATO to achieve the previously elusive principle of mass and concentrate its greatly increased numbers on the enemy, conducting non-stop, 24-hour operations on multiple targets throughout Serbia.

Brig. Gen. Buster Glosson, (right) and Lt. Col. David Deptula (Left) architects of the Desert Storm air campaign.

THE PRECISION CAPABILITY OF MODERN U.S. WEAPONS LED NATO TO CLAIM A 99.6 PERCENT ACCURACY RATE

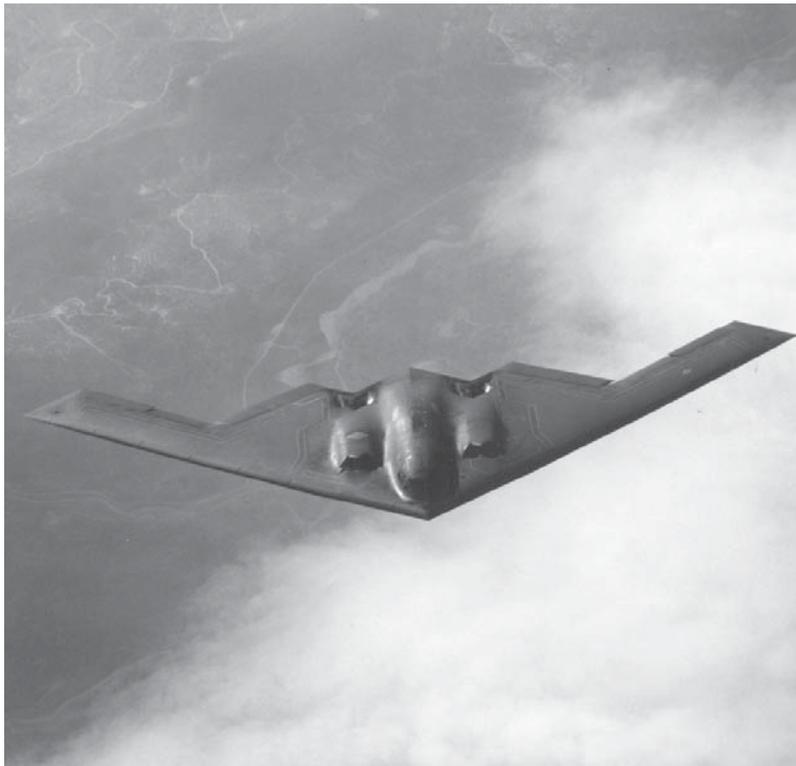
THE DOGMATIC ASSERTIONS OF DOUHET, MITCHELL AND TRENCHARD THAT AIR POWER COULD ALONE BE DECISIVE WAS NO LONGER AN ARTICLE OF FAITH BUT—AN IRREFUTABLE REALITY



The alliance reclaimed the strategic offensive and never again relinquished the initiative. “NATO began to ratchet up the pressure, doubling the total number of targets it struck between day 30 and day 45. The gradual escalation would continue until it peaked on May 31, with 778 total sorties, of which 319 were strike sorties.”¹⁹ But NATO did not only optimize mass through increased numbers of sorties flown and weapons delivered. The precision capability of modern U.S. weapons led NATO to claim a 99.6 percent accuracy rate and may have redefined the principle of mass in ways that even Douhet had not foreseen.²⁰ The contextual shift during Allied Force allowed for a mar-

riage between modern air power technology and traditional air power theory that brought about decisive results. When Milosevic capitulated to NATO demands on June 10, 1999, the dogmatic assertions of Douhet, Mitchell and Trenchard that air power could alone be decisive was no longer an article of faith but—within the confined context of the 78-day air campaign—an irrefutable reality.

As air power strategists look to aerospace warfare in the next millennium, NATO's experience in the last air war of the twentieth century clearly carries with it some important and enduring lessons. First, it appears increasingly difficult to refute the axiom that “Douhet was right!” While



The B-2 bomber represented a revolutionary capability.

the early air power theorists may have been blind to the very real technological constraints that would hinder the application of their theories during World War II, modern technology has caught up to their progressive ideas about war. Aerospace power was immensely effective in Desert Storm, but the short, ferocious ground war invalidated any air power claim of “decisiveness.” Even Deliberate Force had its share of ground activity coincident with air operations. Allied Force, however, validated the ideas of air power’s pioneer theorists.

Although the air pioneers won in terms of Allied Force’s decisiveness, they would hardly

have rejoiced to see the debate over air power’s unity of command continue unresolved. Thus, while the requirement for a JFACC was written into law and technically exercised during the air war over Serbia, the JFACC works directly for, and is clearly subordinate to, the regional combatant commander-in-chief. Additionally, the CINCs report to the Chairman of the Joint Chiefs of Staff, the President’s chief military advisor. Since the inception of Goldwater-Nichols Act in 1986, these top military billets traditionally and almost exclusively have been held by the top brass of other services. Consequently, the JFACC is relegated to the executor of air power strategy, as he was in Allied Force. The vitally important decisions and advice on air power application are made at higher levels by military leaders in uniforms other than Air Force blue. “At a time when aerospace power has become the force of choice...it is imperative that both at the level of the national command authority and the top levels of military commands there be a senior airman in position to give advice on aerospace capabilities and employment options.”²¹

Beyond unity of command, Allied Force also left largely unresolved the principle of economy of force. Rather than laying the dispute to rest, the Kosovo conflict only exacerbated the on-going debate over targeting Mitchell’s vital centers. In a more general sense, Allied Force did no better than Douhet to resolve the fundamental question of targeting. What brought Milosevic down? Was it Mitchell’s “capability” or Trenchard’s “will,” industry or the morale of industrial workers, the bridges, the airfields, the oil, the electricity, or the fielded forces that convinced the Serb president to sue for peace?

Perhaps the most important lesson from the air war over Serbia was the overriding significance of contextual factors. Theories and ideas

The air campaign planners receive a visit from the Air Component Commander, Lt. Gen. Charles A. Horner (fourth from left) and Secretary of the Air Force Donald Rice (third from right).





Gen. Schwarzkopf briefs the Secretary of Defense Richard B. Cheney (center) and the Chairman of the Joint Chiefs of Staff Gen. Colin L. Powell. (second from left).

are immensely important, but it was the context of the Balkans conflict that initially held those ideas in check. Only a vital shift in that context allowed the traditional air power theories to prevail. Thus, while Operation Allied Force may have validated the theories of Douhet, Mitchell and

Trenchard, it more accurately demonstrated the superiority of context over theory. Consequently, in looking ahead to the next air war, it will be a consortium of ideas—and not any single theory—that will hold the key to aerospace power's success. ■

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The Final Scene: Howard AFB, Republic of Panama

Curtis L. Brownhill

On November 1, 1999, 1000 hours, Howard AFB, Republic of Panama, was officially transferred to the government of Panama in accordance with the Carter-Torrijos Panama Canal and Neutrality Treaties of 1977. This day officially marked the end of an era and culminated eighty-two years of continuous, American air power presence on the Isthmus of Panama. It was a moment of international importance and a tribute to the region and two nations. What may not be as well known is what occurred less than twenty-four hours earlier. On October 31, 1999, at 1745 hours, a small formation of United States Air Force airmen mustered for one final mission—to ceremoniously inactivate the 24th Wing and to lower the American flag that had flown proudly for fifty-nine years over the skies of this strategically important installation. With just 24 hours remaining until the base would transfer, a 100-member military and civilian caretaker force remained to conduct this ceremony. Only a few spectators, former Panamanian and American employees, were on hand. This ceremony provided a brief moment to reflect on our profession

The mountains loom over Howard AFB.



and service to the nation, and to honor the courageous men and women who struggled to carve air bases from the jungles and the marshes of Panama and who faithfully served from those bases for nearly a century.

October 31, 1999, 1745 hours. Sunset. A warm, humid, and breezeless evening, eight degrees above the equator, in a lush tropical environment. Howard Air Force Base, near the west bank of the Panama Canal, now little more than an empty shell of its once proud existence. The sun is very low, all but hidden by the mountains that loom majestically over the base, casting prominent shadows upon the headquarters building and the formation area. Darkness would set in by the conclusion of the ceremony. Thunder can be heard in the distance, as a massive storm is brewing but surprisingly holding out, as if to allow this historic moment to take place unabated.

The flags of the United States of America and the Republic of Panama are both strikingly illuminated by powerful floodlights. The formation is in place. The flag folding detail is ready. It is hauntingly quiet, except for the clanking of the halyards on the flagpoles and night creatures beginning their evening symphony. There is stillness. The formation comes to attention. The wing colors are marched out to join the formation. The commander takes over from the first sergeant. Reflective words are spoken. There is a prayer. The wing colors parade forward and the wing is decorated. The orders of the day are published. A proud and distinguished unit is inactivated, its colors cased until

Chief Master Sergeant Curtis L. Brownhill is the 6th Logistics Group Superintendent at MacDill Air Force Base, Florida. From September 1997 to November 1999, he was the command chief master sergeant of the 24th Wing at Howard Air Force Base, Republic of Panama. In that capacity, he was intimately involved with executing the final phases of the historic 1977 Carter-Torrijos Panama Canal Transfer and Neutrality Treaties. His twenty-eight-year career has been primarily in the aircraft maintenance field, beginning in 1973 as a propeller repairman. Over the years he has maintained a diverse list of fixed and rotary wing aircraft.

(Right) Furling the 24th Wing colors, Col. Roger T. Corbin, 24th Wing Commander (*left*), CMSgt. Curtis L. Brownhill, Command Chief Master Sergeant (*right*).



such time as it may be recalled to duty. The sky darkens, the thunder intensifies.

The command is given to sound retreat. The formation presents arms. The “Himno Nacional de Panama” is played and the Panamanian flag is lowered respectfully and folded by the detail, a flag that would fly again atop this installation. There is quiet anticipation. The detail is prepared. This moment is not relished. At the command of present arms, a rush of emotion is felt at the first note of “The Star Spangled Banner.” Then comes the dutiful lowering of the flag of the United States of America. Its long journey from its place of honor to the awaiting hands of the flag detail is slow and deliberate. The detail carefully collects

and tends to the flag. There is much upon which to reflect.

A crisp snap is heard as the flag is presented for all to see. The powerful music of “America the Beautiful” is played, as the detail slowly and ceremoniously continues to fold the world’s most recognizable symbol of freedom; its duty here now complete. The detail slowly marches the flags from the poles to the commander. Honors are exchanged. The order is given to retire the colors. The stirring tones of the Scottish pipes echo as the colors are marched off the field. As the lights are extinguished, a prolonged silence follows. There are few dry eyes. Darkness has set in. It begins to rain. ■

(Right) Col. Roger T. Corbin receives the United States flag from SSgt. Francisco Hernandez.



Keep 'em Flying!

Early in 1941, under pressure to speed expansion of the U.S. Army Air Corps, the War Department directed its recruiting service to create a slogan that would serve as an inspirational rallying cry. On May 17th, the Army's chief recruiting officer, Lt. Col. (later Maj. Gen.) Harold N. Gilbert, coined the slogan, "Keep 'em Flying!" He later recalled: "We were trying to think of a picture caption for a recruiting ad for the Aviation Cadet Program. The phrase just came out on the spur of the moment."

A poster illustrating the slogan was designed in which the red capital letters formed a circle reading: "LET'S GO! U.S.A. KEEP 'EM FLYING!" Inside the circle, on a white background and colored in blue, were three pursuit planes and the

caption: "Uncle Sam Needs Pilots. Be a U.S. Army Flying Cadet." Later, variations of the original insignia included the addresses of the nine Army Corps areas.

Not until after the attack on Pearl Harbor was the slogan used in commercial advertising. It first appeared in the June 18, 1941, edition of the *New York Times* in an ad by John David, a man's clothing emporium in New York City. Later, and throughout the war years, many stores in cities nationwide emphasized the slogan in their advertising and displayed the posters.

The War Department asked industries, trade organizations, and advertising agencies to promote the slogan as a patriotic service. By December 1941, more than 15,000 posters were distributed

Lt. Col. Harold Napoleon Gilbert. (Photo courtesy of National Archives Trust Fund, Atlanta, Georgia.)



"Keep 'em Flying" slogan.
(Photo courtesy of National
Archives Trust Fund,
Atlanta, Georgia.)



in New York State alone. The Army printed for national distribution, 900,000 stickers for automobiles, 100,000 small posters, and 50,000 large ones for roadways and other areas. In addition, 50,000 cards were prepared for display in subways, street cars, buses, and trains. About a million stamps were printed for use by the Army and commercial concerns to advertise the slogan through correspondence. Distribution of all materials, except the stamps, was without charge to users. Whether in advertising, or as a public service by editors, the slogan appeared in newspapers across the United States.

The slogan also inspired writers and a song entitled "Keep 'em Flying!" became popular during World War II. A sample verse from one of these, written by Air Corps members Charles Belanger and John J. Broderick, reflected the slogan's strong patriotic appeal:

*And as we go through each day,
Be thankful that we still can say,
We'll preserve our American way,
If we KEEP 'EM FLYING in every way.*

This song and several others were printed in the *Air Corps News Letter* for June and July 1941.

Universal Pictures caught the spirit with its movie, "Keep 'em Flying." Starring the popular comedy team of Bud Abbott and Lou Costello, the picture was released in November 1941. Marquee and newspaper advertisements touted the film as having "a sky full of sunny songs," including "Let's Keep 'em Flying."

The Army recruiters' goals were 120,000 new

applicants for flying commissions and 300,000 applicants as flying crew members. Additionally, the Army hoped to recruit 30,000 trained pilots a year, an increase of 18,000 over 1940's quota of 12,000 pilots. The aviation cadet program offered young men between twenty and twenty-six years of age \$75 on enlistment, plus a dollar per day for meals, all necessary uniforms and equipment being supplied without cost. On completion of the seven months' course, each cadet was commissioned as a second lieutenant in the Air Corps Reserves. Immediately after graduation, the new officers went on active duty at \$245 per month.

The effect the slogan and its advertising had on the recruiting program cannot be measured. But it must have been significant, considering that even after its advent sixty years ago, "Keep 'em Flying!" remains an effective motto.

MSgt. Harry F. Dill, USAF (Ret.), Alexandria, Louisiana

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Air Force Historian Wins Silver Star



Maj. Gen. James T. Jackson (left) awards the Silver Star to Robert F. Phillips (right).

After more than fifty years, former Air Force historian Robert F. Phillips was recognized for his heroic efforts in the Korean War with the award of the Silver Star. He received the medal from Maj. Gen. James T. Jackson, commanding general of the Military District of Washington, at a ceremony held on February 13, 2001, at Fort McNair in Washington, D.C.

Phillips, now seventy-six, was born in South Dakota, where he attended local schools. Drafted immediately after graduating from high school, he was sent to Europe as a combat medic with the 110th Infantry Regiment of the 28th Infantry Division. Phillips was seriously wounded in the Battle of the Siegfried Line in Germany in September 1944. After recuperating in a hospital in Oxford, England, he was released in November

and reprocessed into his former unit on December 15, 1944, on the eve of the Battle of the Bulge. Tasked to hold the line, his regiment lasted only four days. Out of 3,100 soldiers, only 750 made it back to Bastogne. The remnants of his division transferred to French administrative control and fought in the Alsace campaign until February 1945. His unit returned to U.S. control and fought until V-E day, then remained in Europe as part of the occupation forces until July. Phillips returned to the U.S. and was waiting to be shipped to the Pacific Theater when the war ended. He processed out of the Army in November.

Phillips used the GI Bill to attend the University of Oregon, earning a BA degree. Following graduation, he decided on a military



A contemporary photo of Robert Phillips. (Photo courtesy of Robert Phillips.)

career, and enlisted in April 1950. When the Korean War started two months later, he was among the first general replacements sent to Korea. Phillips married his fiancée Marjorie Griffeth from Eugene, Oregon, one week before his departure date.

When he arrived in Korea on August 1, Phillips was assigned to Company I, 21st Infantry Regiment, 24th Infantry Division. On the dawn of September 8, in the vicinity of Kyongju, South Korea, his unit was attacked from the rear by a company-sized enemy force. One enemy

platoon broke from the main attacking force to capture a hill that was the dominant terrain feature in the area. Phillips raced behind his platoon leader to the top of the hill, and the pair unleashed a barrage of hand grenades and rifle fire, preventing the enemy's occupation of the hill. After they depleted their supply of grenades, Phillips raced down the hill under a hail of fire, and heedless of his safety, replenished his stash of grenades. Rejoining his platoon leader, the duo held off the enemy until the officer fell mortally wounded. Alone, Phillips backed a short way down the hill on his stomach and determined to hold off any enemy who dared to crest the hill. Then, a Company I machine gun and tank focused their fire to Phillips's front and began to repel the enemy attack. Once the firing subsided, Phillips rushed over the hillside, killing five North Koreans with his rifle. A later examination of Phillips's field jacket revealed four bullet holes, and the top of his helmet was dented. The citation for Phillips's Silver Star recognized the "utter disregard for his own personal safety and his cool display of marksmanship while exposed to concentrated enemy fire."

He was later evacuated to Japan because of a severe ear infection and in August 1951, sent to Ft. Riley, Kansas, where he became the Regimental Supply Sergeant for the 10th Infantry Division. Two years after the Korean War, Phillips inquired about the status of his Silver Star medal, but was told that it had been lost and, moreover, that the time limit for resubmitting the paperwork had expired. Time limits for rewards were not removed until the late 1990s. Phillips then located his former company commander, who resubmitted the documentation for the medal.

Phillips mustered out of the Army in April 1953, and returned to the University of Oregon, earning an MA in history in 1956. He then went to Washington, D.C., where after a stint with the Department of Health, Education, and Welfare he became an historian in the Office of the Chief of Military History. He remained there for several years before transferring to the Air Force History Program, becoming the chief historian at the Office of Aerospace Research. In the meantime, he and Marge raised two children, Catherine and Mark. In 1970, he became the chief historian of the Seventeenth Air Force in Germany. He returned stateside in 1976 and served as deputy chief historian at Air Force Systems Command, Andrews AFB, Maryland. In May 1986, Robert Phillips retired from the Air Force history program, after a thirty-year civil service career, including twenty years with the Air Force. In retirement, his book, *To Save Bastogne*, was published. Currently residing with Marge in Burke, Virginia, Phillips remains an active member of several veterans' organizations, including some in France.

Dr. George M. Watson, Jr., Chevy Chase, Maryland

Slanguage

Brian S. Gunderson

Part III: Letters E-L

ROYAL AIR FORCE TERM	U.S. ARMY AIR FORCES EQUIVALENT/ DEFINITION	ROYAL AIR FORCE TERM	U.S. ARMY AIR FORCES EQUIVALENT/ DEFINITION
EAR BASHER	A TALKER	FIDO	FOG INTENSIVE OR INSTANT DISPERSAL OPERATION AT SELECTED RAF AIR-FIELDS, MANSTON, WOODBRIDGE, CARN-ABY
ELEVENSES	TEA, COFFEE AND BUNS TAKEN AT 11:00 AM FROM THE NAAFI FOOD WAGON BY AIRCRAFT GROUND/ MAINTENANCE PERSONNEL WORKING ON AIRCRAFT	FINE NICK	GOOD CONDITION
ELSAN	A TOILET ABOARD BOMBER AIRCRAFT	FIRE TENDER	A FIRE ENGINE/TRUCK
ENSA	TRAVELING ENTERTAINMENT GROUPS SIMILAR TO U.S. USO GROUPS	FIRM, THE	THE BRITISH ROYAL FAMILY
ERKS	USUALLY ANY LOW-RANKED ENLISTED GROUND CREW PERSONNEL OR BEGINNERS ON A JOB	FISH HEADS	BRITISH ROYAL NAVY PERSONNEL
EVER SO	VERY GOOD OR A LARGE QUANTITY OF SOMETHING	FISHPOND	RAF AIRBORNE RADAR WARNING ON BOMBERS
EYETIES	ITALIAN POWs WORKING ON BRITISH FARMS	FITTER	AN AIRCRAFT ENGINE MECHANIC
FAGS/FAGGIES	CIGARETTES	FLAKING OUT	FEELING SICK
FAG ENDS	CIGARETTE BUTTS	FLAMER	A PLANE SHOT DOWN IN FLAMES
FAN	AN AIRCRAFT PROPELLER	FLANNEL	PULL THE WOOL OVER ONE'S EYES, FLATTER, SEEK FAVOR
FAT RASCAL	A BUN STUFFED WITH RAISINS OR CURRANTS	FLAP	A LARGE BOMBER RAID
FENDER	A FIREPLACE	FLAREPATH LIGHTS	RUNWAY LIGHTS
FIDDLE	KEEP INCORRECT/ FALSE RECORDS, "COOK THE BOOKS," SWINDLE	FLASHERS	TURN SIGNALS ON A CAR, VAN, TRUCK
		FLAT	AN APARTMENT
		FLAT OUT	ACCELERATE TO TOP SPEED OR COMPLETELY EXHAUSTED
		FLICKS	MOVIES
		FLIMSIES	RICE PAPER CONTAINING CLASSIFIED RADIO FREQUENCIES, GEE CODES, ETC. THAT WAS EDIBLE AND SWALLOWED BY CREW MEMBERS BEFORE ABANDONING AN AIRCRAFT OVER ENEMY TERRITORY
		FLIP	A SHORT TRAINING OR CROSS-COUNTRY FLIGHT
		FLIPPING	POLITE USE OF TERM "BLOODY," E.G. HE LOST HIS FLIPPING MIND

ROYAL AIR FORCE TERM	U.S. ARMY AIR FORCES EQUIVALENT/ DEFINITION	ROYAL AIR FORCE TERM	U.S. ARMY AIR FORCES EQUIVALENT/ DEFINITION
FLOGGING THE CIRCUITS	PRACTICING AIRCRAFT LANDINGS	FUNK-HOLE	A SLIT TRENCH ON AN RAF AIRFIELD USED BY RAF PERSONNEL WHEN UNDER ATTACK BY GERMAN BOMBERS
FLOG IT	WALK OR PLOD ON ALONE	FUNNEL	PATH FOLLOWED IN LINE WITH AND DESCENDING INTO A RUNWAY
FLORIN	BRITISH SILVER COIN, TWO-SHILLING PIECE (50 CENTS)	GAFFE	A MISTAKE
FLOWER MISSION	A PATROL OVER ENEMY NIGHT FIGHTER AIR-FIELDS	GAGGLE	A LOOSE FORMATION OR GROUP OF AIR-CRAFT
FLURRIED	NERVOUS, FLUSTERED	GALOSHES	RUBBER BOOTS
FLUTTER	A SMALL BET OR WAGER	GARDENING MISSION	LAYING AERIAL MINES IN GERMAN OR OCCUPIED TERRITORY HARBORS
FLYING OFFICER	AN RAF OFFICER RANK EQUIVALENT TO A 1st LIEUTENANT	GASH	A RIDE IN A BOMBER IN A NON-COMBAT SITUATION, USUALLY BY GROUND/MAINTENANCE PERSONNEL ON A TEST HOP OR FERRY FLIGHT
FLYING PENCIL	RAF TERM FOR GERMAN LUFTWAFFE DORNIER 17/215 AIR-CRAFT	GASPER	A CIGARETTE
FLYING PORCUPINE	WWII RAF SHORT BROTHERS SUNDERLAND FLYING BOAT	GAUNTLETS	LEATHER GLOVES WORN BY AIRCREW PERSONNEL
FLYING SUITCASE	WWII RAF HANDLEY PAGE HAMPDEN TWIN-ENGINE BOMBER	GEAR BOX	THE TRANSMISSION IN A CAR
FOGGING EFFECT	SMOKE PATCHES ABOVE BOMBED ENEMY TARGETS THAT PREVENTED DETAILED POST-OPERATIONAL PHOTO RECONNAISSANCE OF TARGET AREA	GEE	MEDIUM RANGE RADIO AID TO NAVIGATION EMPLOYING GROUND TRANSMITTERS AND AN AIRBORNE RECEIVER IN A BOMBER AIR-CRAFT
FRESHMAN FLIGHTS	FIRST SIX OPERATIONAL MISSIONS BY RAF BOMBER CREWS; USUALLY PILOT AND NAVIGATOR FLEW THEIR FIRST MISSION WITH AN EXPERIENCED CREW	GEN	INFORMATION
FROG	BRITISH NICKNAME FOR A FRENCHMAN	GENTLEMAN'S JANKERS	DISCIPLINARY ACTION TAKEN AGAINST RAF OR ALLIED AIR FORCE OFFICERS, USUALLY CONFINEMENT TO AIRFIELD FOR A SET PERIOD
FRYING PAN	AN AIRCRAFT DISPERSAL PAD	GEORGE	AN AUTOPILOT IN AN AIRCRAFT
FULL BORE	FLY AS FAST AS POSSIBLE	GET CRACKING	GET GOING, GET A MOVE ON, WORK FASTER
FUNK	PANIC, FEAR, COWARDLY ACTION		

ROYAL AIR FORCE TERM	U.S. ARMY AIR FORCES EQUIVALENT/ DEFINITION	ROYAL AIR FORCE TERM	U.S. ARMY AIR FORCES EQUIVALENT/ DEFINITION
GET THE CHOP	KILLED IN ACTION, GET SHOT DOWN	GRAUNCHING	LANDING AN AIRCRAFT WITH GEAR UP
GET THE GRIFF	RECEIVE PRE-MISSION BRIEFING	GRAVY	PETROL, GASOLINE
GIPPO	MILITARY SLANG FOR GRAVY	GREASER	A PERFECT THREE-POINT LANDING
GIVE IT THE GUN	ACCELERATE, INCREASE SPEED	GREAT COAT	A FULL LENGTH MILITARY OVERCOAT
GLASS HOUSE	A PENAL DETENTION CENTER	GREEN HOUSE	A PLEXIGLASS COCKPIT COVER, AIRCRAFT CANOPY
GLYCOL	AIRCRAFT ENGINE RADIATOR COOLANT	GREMLIN	A MYTHICAL, MISCHIEVOUS AND INVISIBLE IMP THAT CAUSES AIRCRAFT MALFUNCTIONS, PROBLEMS, ACCIDENTS, AND CRASHES
GOBSMACKED	FLABBERGASTED, OVERWHELMED	GRIFF	INFORMATION, NEWS, OPERATIONAL BRIEFING
GOING CLAPPERS AT NOUGHT FEET	AN AIRCRAFT FLYING AT MAX SPEED ON THE DECK/GROUND LEVEL	GROUPIE, GROUPY	RAF GROUP CAPTAIN, EQUIVALENT TO A COLONEL
GOLD FISH CLUB	AIRCREW MEMBERS WHO SURVIVED A BAILOUT OVER WATER OR AIRCRAFT DITCHING	GUINEA PIG CLUB	MEMBERS WERE MILITARY FLIERS WHO SUFFERED SEVERE DISFIGUREMENT (BURNS, LOSS OF LIMBS, ETC.) IN CRASHES OR IN-FLIGHT FIRES, MOST SEVERE CASES WERE TREATED AT QUEEN VICTORIA HOSPITAL IN EAST GRINSTEAD, ESSEX, SOUTH OF LONDON
GONE FOR A BURTON	MOST COMMON RAF EXPRESSION FOR A CREW MEMBER KILLED IN ACTION (KIA) OR MISSING IN ACTION (MIA) ON AN OPERATIONAL FLIGHT OR ON A TRAINING FLIGHT	HAD A GO AT	ATTEMPTED, TRIED
GONE FOR SIX	AIRCRAFT MISSING IN ACTION	HAIRY DO/ SHAKEY DO	A RISKY, SCARY OR DIFFICULT OPERATIONAL MISSION
GONG	A MEDAL/MILITARY DECORATION	HALF CROWN	A BRITISH SILVER COIN, TWO SHILLINGS AND SIXPENCE (62 ½ CENTS)
GOOD BLIND	A DRINKING BINGE	HALF AND HALF	A MIXED DRINK OF ALE AND STOUT OR A MILD AND BITTER
GOOD SHOW	WELL DONE, A SUCCESSFUL MISSION	HALIBAG, HALLIE, HALLY	NICKNAME FOR WWII RAF HANDLEY PAGE FOUR-ENGINED HEAVY BOMBER
GOODS TRAIN	A FREIGHT TRAIN	HANG UP	A BOMB THAT FAILED TO RELEASE FROM A BOMB RACK
GOODS WAGON	A FREIGHT TRAIN BOX-CAR		
GOOSENECK	A PARAFFIN RUNWAY LIGHTING FLARE		
GOT THE CROWN	WAS PROMOTED TO FLIGHT SERGEANT		
GRAMAPHONE	A RECORD PLAYER/ PHONOGRAPH		
GRAND SLAM BOMB	A 22,000-LB BOMB		

ROYAL AIR FORCE TERM	U.S. ARMY AIR FORCES EQUIVALENT/ DEFINITION	ROYAL AIR FORCE TERM	U.S. ARMY AIR FORCES EQUIVALENT/ DEFINITION
HAPPY VALLEY	RAF "BLACK HUMOR" DESIGNATION GIVEN TO HEAVILY DEFENDED TARGETS IN GERMAN RUHR VALLEY	HURRIES/HURRI'S/ HURRY BACKS	NICKNAME FOR AN RAF WWII HAWKER HURRICANE FIGHTER AIRCRAFT
HARBOUR MASTER	THE COMMANDING OFFICER OF AN AIRFIELD/STATION	ICE CREAM CONE	AN EASY MISSION AGAINST AN ENEMY TARGET
HARD CHEESE	TOUGH LUCK	IN A FLAT SPIN	RATTLED/CONFUSED
HEADED FOR THE BARN	RETURNING TO AIRFIELD/BASE AFTER A MISSION	IN DOCK	IN SICK QUARTERS OR IN A HOSPITAL
HEDGEHOP	FLYING AN AIRCRAFT AT VERY LOW ALTITUDE, ON THE DECK	INSTRUMENT BASHER	AN AIRCRAFT INSTRUMENT MECHANIC
HIGHBALL	ONE OF TWO TYPES OF "BOUNCING BOMBS" DESIGNED BY SCIENTIST/ BOFFIN DR. BARNES WALLIS	IN THE BAG	BECAME A PRISONER OF WAR
HIGH TEA	AN EARLY EVENING OR LATE AFTERNOON MEAL THAT INCLUDES A HOT DISH (EGGS, SAUSAGES AND/OR BAKED BEANS WITH TEA)	IN THE CART	IN TROUBLE
HIT THE DECK	DIVE AN AIRCRAFT TO TREETOP HEIGHT FOR VARIOUS EMERGENCY REASONS	IN THE DRINK	DITCH AN AIRCRAFT IN OR BAIL OUT OVER WATER/SEA/OCEAN
HIT THE TAPS	ADVANCE THE THROTTLE IN AN AIRCRAFT	IRONMONGER	A HARDWARE STORE
HOIST A CRANE/ HOLD THE CAN	HAVE THE RESPONSIBILITY FOR SOMETHING	IRONS	RAF ISSUED METAL EATING UTENSILS (KNIFE,FORK,SPOON, MUG)
HOOCHING	PUB CRAWLING, VISITING VARIOUS BARS	IRVIN SHEEPSKIN JACKET	A HEAVY DUTY JACKET WORN BY RAF AIRCREW SIMILAR TO USAF B-3 JACKET
HOOD	AN RAF FIGHTER AIRCRAFT COCKPIT CANOPY	JACKET POTATO	A BAKED POTATO
HORIZONTAL REFRESHMENT	TAKE A REST, SLEEP	JAKE	EVERYTHING IS OK OR WELL
HOT UP	PREPARE FOR A MAXIMUM EFFORTBOMBER MISSION	JANKERS	DISCIPLINARY PUNISHMENT METED OUT BY A ROYAL AIR FORCE PROVOST MARSHAL OR SENIOR RAF OFFICER/SENIOR NON-COMMISSIONED OFFICER
HUFF DUFF	HIGH FREQUENCY RADIO DIRECTION FINDING EQUIPMENT	JERRY	A GERMAN MILITARY PERSON
		JINKING	WEAVING AND TWISTING AN AIRCRAFT ALONG COURSE TO AVOID AN ENEMY AIRCRAFT ATTACKING FROM THE REAR OR TO AVOID ENEMY ANTI-AIRCRAFT FIRE BY VARYING AIRCRAFT'S ALTITUDE

ROYAL AIR FORCE TERM	U.S. ARMY AIR FORCES EQUIVALENT/ DEFINITION	ROYAL AIR FORCE TERM	U.S. ARMY AIR FORCES EQUIVALENT/ DEFINITION
JOE	A SECRET AGENT DROPPED FROM AN ALLIED AIRCRAFT OVER ENEMY OCCUPIED TERRITORY	KRIEGIE	SHORT FOR KRIEGSGE- GANGER, AN ALLIED PRISONER OF WAR IN A GERMAN CAMP
JOE JOB	PUNISHMENT FOR "SWINGING THE LEAD," MALINGERING—USU- ALLY CLEANING LATRINES, POLICING THE AREA	LADDER IN ONE'S HOSE	A RUN IN A LADY'S STOCKING
JOINT	A ROAST OF BEEF, LEG OF LAMB, OR LOIN OF PORK	LAI D ON A FLIGHT	SCHEDULED A MIS- SION/FLIGHT
JUDDER	A VIOLENT SHAKE OR LOUD NOISE IN AN AIR- CRAFT	LANC	NICKNAME FOR AN RAF WWII AVRO LANCASTER FOUR -ENGINE D HEAVY BOMBER
JUG	A GUARDROOM, A DETENTION ROOM	LANDING CIRCUIT	THE AIR TRAFFIC PAT- TERN AROUND AN AIR- FIELD
KERB	THE CURB OR GUT- TER ON A STREET	LAST POST	THE BUGLE CALL OF TAPS
KICKERS	RAF AIRCREW IN BOMBER AIRCRAFT THAT KICKED OUT BUNDLES OF FOOD, AMMUNITION, ETC. FROM AIRCRAFT IN SUPPORT OF PARTI- SANS FIGHTING GER- MAN TROOPS IN OCCU- PIED COUNTRIES	LET, TO	TO RENT AN APART- MENT, ROOMS OR HOUSE
KIP	A SHORT NAP, SNOOZE	LIE DOWN	A NAP, A SNOOZE
KIPPER KITE	A BRITISH COASTAL COMMAND AIRCRAFT	LIE IN	SLEEP IN LATE
KITE	A COMMON TERM FOR ANY AIRCRAFT	LIFT	AN ELEVATOR IN A BUILDING
KITE GUARD	AN ARMED PERSON GUARDING AN AIR- CRAFT	LINE SHOOT	BRAGGING, BOASTING, EXAGGERATING
KIWIS	NICKNAME FOR NEW ZEALAND MILITARY PERSONNEL	LITTLE NEAR THE KNUCKLE	A BIT RACY, RISQUÉ OR BAWDY
KNACKERED	FAILED, STOPPED—AS AN AIRCRAFT ENGINE DUE TO MECHANICAL FAILURE, ICING OR ENEMY ACTION	LMF	LACK OF MORAL FIBER, COWARDICE IN THE FACE OF THE ENEMY
KNOWS HIS ONIONS	COMPETENT, ABLE	LOBBING IN	AN EMERGENCY OR UNEXPECTED LAND- ING
KRAUT	A NICKNAME FOR A GERMAN PERSON	LOLLEY	MONEY, CASH
		LOO	A LAVATORY/TOILET
		LOOKSEE	AERIAL RECONNAIS- SANCE
		LOOSEOFF	TEST FIRE AIRCRAFT GUN
		LORRY	A TRUCK
		LOSE YOUR WOOL	LOSE YOUR COOL, BE UPSET
		LOW WRACK	LOW CLOUD



The readers of *Air Power History* know their airplanes. Once again, readers correctly identified last issue's "What Is It?" flying machine. Thirty-three readers sent in postcards with the right answer. Only one reader flunked.

The photo in our last issue depicted the only surviving Douglas B-18B Bolo bomber, restored at the Pima Air and Space Museum in Tucson, Arizona, in 1996. The B-18B was the radar-equipped anti-submarine version of the twin-engine bomber based on the DC-2 transport. The Pima aircraft (38-593) hunted German U-boats and later hauled cargo in 1942-44 with the 4th Antisubmarine Squadron of the Caribbean Wing of Air Transport Command.

The Pima B-18B was built as a B-18A by Douglas in Santa Monica, Calif., in 1935 for \$ 80,479.72. In 1942, 122 B-18As were modified with SCR-5180A radar and MAD (magnetic anomaly detection gear) for the sub-hunting role.

On 7 July 1942, a B-18B from the 396th Bomb Squadron became the first Army Air Forces aircraft to sink a German submarine (U-701) in the Atlantic near Cherry Point, N. C. Two other B-18Bs were credited with sinking U-boats.

Our "History Mystery" winner is George Bowman of Norwich, Connecticut. Thanks to all readers who joined in our "name the plane" exercise.

This Issue's Mystery Plane

Once again, we challenge our ever-astute readers. See if you can identify this month's "mystery" aircraft. But remember please, postcards only.

The rules, once again:

1. Submit your entry on a postcard. Mail the postcard to Robert F. Dorr, 3411 Valewood Drive, Oakton VA 22124.

2. Correctly identify the aircraft shown here. Also include your address and telephone number, including area code. If you have access to e-mail, include your electronic screen name.

3. A winner will be chosen at random from the postcards with the correct answer. The winner will receive a recently-published aviation book as a prize.

This feature needs your help. In that attic or basement, you have a photo of a rare or little-

known aircraft. Does anyone have color slides? Send your pictures or slides for possible use as "History Mystery" puzzlers. We will return them.



The Cold War and Beyond: Chronology of the United States Air Force, 1947-1997. By Frederick J. Shaw, Jr., and Timothy Warnock. Washington, D.C.: U.S. Air Force History and Museums Program in association with the Air University Press, 1997. Photographs. Pp. 163. \$19.00 Paperback ISBN: 0-16-049145-2 Gov't Doc Call No. D 301.82/7:C 67

The USAF in Korea: A Chronology, 1950-1953. By A. Timothy Warnock, Ed. Washington, D.C.: U.S. Air Force History and Museums Program in association with the Air University Press, 2000. Photographs. Glossary. Pp. 105. \$7.00 Paperback ISBN: 0-16-050410-4 Gov't Doc Call No. D 301.82/7:K 84/5

These paperback commemorative editions were issued on the fiftieth anniversaries of two important events in American military history—that of the establishment of the United States Air Force (the same year that the Cold War is generally acknowledged to have started), and the outbreak of the Korean War. Both reference tools were compiled at the USAF Historical Research Agency (AFHRA), located at Maxwell Air Force Base (AFB), Alabama, (www.au.af.mil/au/afhra). The coverage of the Cold War chronology extends from the date the service was established on September 18, 1947, to the rollout of the new Lockheed-Martin-Boeing F-22 *Raptor* fighter jet, on April 9, 1997. The book is first divided into ten-year chunks, then further subdivided by year. The individual entries contain a lot of details about combat, deployment, and testing operations, important people, organizational changes, and equipment used. Much more was going on with the Air Force than just combat in Korea, Southeast Asia, and the Persian Gulf, so there are many entries on aircraft development and space operations. There is no glossary, which would have been helpful for those trying to decipher official acronyms and abbreviations. This work complements *Winged Shield, Winged Sword: A History of the USAF*, ed. By Bernard C. Nalty (2 vols.; Washington, D.C.: U.S. Air Force History and Museums Program, 1997) and Michael Robert Terry's *Historical Dictionary of the United States Air Force and Its Antecedents (Historical Dictionary of War, Revolution, and Civil Unrest*, no. 11) Lanham, Md.: Scarecrow Press, 1999. The *Cold War* chronology was reprinted in 1998 by the DIANE Publishing Company and sells for \$35.00!

Warnock's book on the Korean War might be considered a subset of the title reviewed above, but, as one would expect, with a lot more details. (The *Cold War* chronology only allocates six pages to the Korean War.) The coverage in *The USAF in Korea* extends from June 25, 1950 (when North Korea attacked) to July 27, 1953 (when the armistice was signed). This

reviewer expected to find *some* entries for the immediate pre- and post-war periods, such as USAF deployments, projections, and plans for Korea and Asia. Each month begins with an overview of operations for that month. The entries that follow include information about the number of sorties flown, number and types of planes involved, losses and victories, important names, targets, amount of bombs dropped, etc. Those not familiar with this air war may be surprised at the aerial battles that resulted in seemingly small losses for the large number of planes involved from both sides. There is a glossary of important terms at the end of the book. For an official history of the war one can consult Robert Frank Futrell's *The United States Air Force in Korea, 1950-1953* (Washington, D.C.: Office of Air Force History, 1981, reprinted 1991). The USAF Korean War web site can be found at: www.au.af.mil/au/afhra/wwwroot/korean_war/korean_war.html.

This chronology can also be found online at: www.au.af.mil/au/afhra/wwwroot/korean_war/korean_war_chronology/kwc_contents.html. A very specialized complement to these sources is Roger D. Launius' *Significant Airlift Events of the Korean Conflict, 1950-1953: A Brief Chronology (Military Airlift Command Historical Office Special Study)* Scott AFB, Ill.: Military Airlift Command, Office of History, 1990. One can also consult the *Korean War Almanac*, by Harry G. Summers, Jr. (N.Y.: Facts on File, 1990).

Some maps, organizational charts, indexes, and bibliographies would have improved the usefulness of both books, especially the chronology on the Korean War. But these are not critical points at all. The many photographs in both titles are interesting, and ones not usually seen in commercial products. Government documents call numbers, also known as Superintendent of Documents (SuDocs) call numbers, were included in the bibliographic citations at the beginning of this review in case readers want to find these items in the separate federal depository documents collection that are housed in many academic and large public libraries. The AFHRA has produced many titles that are very useful for the study of USAF history. They are real bargains, especially when one considers the prices of commercial publishers. These two government publications are suitable for personal collections as well as the reference or circulating collections of public, academic, and interested special libraries.

Daniel K. Blewett, Reference Librarian, The College of DuPage Library, Glen Ellyn, Illinois



Soldier and Warrior: French Attitudes Toward the Army and War on the Eve of

the First World War. By H. L. Wesseling., trans. Arnold J. Pomerans (Westport, Ct: Greenwood Press, 2000).

At first glance, an unrevised English translation of a book originally published in 1969 may seem out of step with current historiography. Fortunately, H. L. Wesseling's *Soldier and Warrior* proves the exception to this perception. Wesseling traces the evolution of French attitudes toward war and the Army from the early years of the Third Republic through the tumultuous road to the First World War.

This is not a conventional military history; for studies that contain a more martial flavor see Douglas Porch's excellent *The March to the Marne: The French Army, 1871-1914* or David B. Ralston's somewhat dated, but still relevant, *The Army of the Republic: The Place of the Military in the Political Evolution of France, 1871-1914*. Wesseling writes a cultural history that draws heavily on popular and official sources. Throughout this edition, the translator provides original French quotations, where appropriate, followed by parenthetical English translations—a considerate aid to those who lack proficiency with the language. *L'Echo de Paris*, the *Revue Hebdomadaire*, the works of Maurras, Psichari, Péguy, Marshal Foch, and Marshal Lyautey provide raw materials from which the author weaves a complex description of French attitudes that departs from interpretations that attribute the source of the Great War to the French desire to avenge the defeat of 1870-1871. The result is an analytical narrative that shows cycles of animosity, ambivalence, and infatuation with war and military culture. Unfortunately for Frenchmen, the last wave of infatuation occurred as political tensions flared on the eve of the Great War.

Wesseling focuses on the relationship between civil society and standing military forces. At times, the military represented a symbolic unifying force for the Third Republic. When the Army served this function, themes of patriotism, nationalism, and civic duty characterized the national debate. When the general opinion of French society did not favor the Army, Wesseling concludes that "the love of the army was the monopoly of one political wing only, the Right, and one distinct ideology, that of nationalism and militarism. From its position as a symbol of national unity the army became a bone of political party contention" (p. 2). Working from this broad characterization of the Army as a tool of the Right, Wesseling organizes his work thematically around subjects as diverse as intellectual trends, international crises, military reform, and images of war. This thematic approach allows author and reader to flow with the changing currents of socio-cultural, political, and intellectual attitudes toward the cataclysm that engulfed Europe in 1914.

Wesseling identifies a shift in intellectu-

al attitudes as the beginning of the march toward war. Boulanger's bid for power combined with the Dreyfus Affair and a general loss of respect for university learning pushed a generation of Frenchmen to abandon rationality in favor of "the qualities of service, virility, and power" (p. 40). According to Wesseling, young men sought to redeem the nation through vigorous endeavors—sports and colonialism. This shift in intellectual values set the stage for the now famous doctrines of *élan vital* and *offensive à outrance*. It was not that Frenchmen sought war, but that the intellectual climate convinced them that war had become inevitable.

The chain of international crises that began with the Morocco crisis in 1905 reinforced intellectual trends that emphasized war as an inevitable, if not desirable, method of resolving international tensions while simultaneously restoring French greatness. From Morocco to Tangier to Agadir, French foreign policy experts, intellectuals, and private citizens focused their attention on the growing competition with Germany. Wesseling draws upon Eugen Weber's *The Nationalist Revival in France* to help frame his discussion of how a wide-ranging series of events reinforced belligerent attitudes among metropolitan citizens. Wesseling observes, "Even those who rejected war unreservedly seemed to have resigned themselves to its inevitability. People bowed to the inescapable and prepared for it as best they could" (p. 96). The transformation of foreign policy objectives from pacifism and internationalism toward nationalism fit with the intellectual mood that emphasized irrationality and valor. This combination produced a resurgence of admiration and support for the Army. Offensive doctrines gained precedence over defensive strategies, rapid mobilization that supported preemptive strikes replaced political restraint, and the expansion of the ranks with the addition of a three-year conscript law enhanced Army numbers and prestige.

Between 1870 and 1914, the Army's reputation traveled on waves of favor and disfavor. Wesseling points to a rather consistent ideal, however, that portrayed the Army as a school for refining patriotism and national virtue. Lyautey's writings on the role of the officer captured the essence of this phenomenon. "That the army had a subsidiary social and educational task was an idea that had essentially arisen because there were no immediate prospects of military action. But when the dangers became more imminent, the purely military tasks came into their own" (p. 119). But the Army also became a haven for those who harbored a certain idealistic vision of French nationalism. Here, Wesseling draws heavily upon Ernest Psichari's life and works to make his argument. Psichari's Catholicism, his search for heroic fulfillment, his accounts of military adventure in the colonies, and his ultimate

fall in the Battle of the Frontiers seemed to capture the essence and the imagination of a generation that marched bravely, enthusiastically to their deaths in 1914.

By the end of the first decade of the twentieth century, the French socio-cultural climate appeared poised for a headlong charge into war. Wesseling argues that the transformation of the images and expectations of war formed the last element in the process that plunged the nation into the abyss of the trenches. He proposes that "The image of war had lost the impact of personal experience or direct witness. It is in this light, and this light alone, that we can begin to appreciate the optimism and enthusiasm with which people could say of a future war, 'As a matter of fact, we look forward to it'" (p. 154). Success and conspicuous heroism in colonial campaigns—typified by Psichari's and Lyautey's romantic descriptions of colonial military life—coupled with a lack of experience with war's suffering and death among metropolitan citizens produced this attitudinal shift.

Soldier and Warrior reveals the complex currents in French society that propelled the nation into World War I. The subtle evolution of attitudes from anti-militarism/anti-war to a full embrace of war as a cleansing, rejuvenating experience should give cause to pause and examine current attitudes toward the relationship between war and society. Read this important book with a focus on the past to expand understanding of French culture, with a focus on the present to detect similar tendencies in contemporary society, and with a focus on the future to guard against losing an appreciation for the horrors of war.

Anthony C. Cain, *Air Command and Staff College, Maxwell AFB, Alabama.*



Petals of Fire. By Herb Alf. Roseburg, Ore.: Millennium Memorial Trust, Inc. 2000. Pp. 539. \$45.00 ISBN: 0-967-81400-6. www.petalsoffire.com.

Herb Alf's *Petals of Fire* is an autobiographical novel of the combat and prisoner of war (POW) experiences of a B-17 crew of the Eighth Air Force's 100th Bomb Group. The novel grew from scraps of a secret journal, some written on both sides of toilet paper, that Alf maintained as a POW. While serving as a twenty-three-year-old bomber pilot, he was shot down during his nineteenth mission, on April 23, 1944, and spent the next year in captivity. The work reflects not only this intense experience, but gains insight from the author's maturation and postwar experiences. After a brief stint in military intelligence working with German rocket scientists, Alf earned a doctorate in psychology, and then studied screenwriting at UCLA. He worked as a screenwriter and

cameraman in Hollywood. Along the way he has also worked with creative children and completed a book on aging in America. He does not intend to go quietly into the night.

Alf's battle descriptions vividly and with first-hand accuracy convey the action and terror of bomber crews in combat and during their shoot down and capture. Likewise, his depiction of survival in a German POW camp, or Luftststalag, compares favorably to those of Donald Westheimer in *Song of the Young Sentry* and the classic *Stalag 17*. Alf's POW characterizations approach the dark spirit portrayed in James Clavell's *King Rat*. His airmen, hoard and bribe their compatriots for favors. Senior POWs abuse their positions. The mid-winter march in which the Germans evacuated their Allied prisoners to the west ahead of the Red Army's offensive is a scene no reader will forget. The portions of the novel based on the author's personal experience are gripping and well done. The author hews to the facts with no exaggeration.

The sections of the work based on second-hand knowledge, such as those dealing with the American air force high command and the Anglo-American policies concerning area or city bombing do not measure up to the rest of the novel. Alf's attempts to convey the Americans' participation in the purposeful bombing of German cities, which he experienced both as a perpetrator and victim, reveals, I believe unintentionally, the deeply conflicting emotions such strikes evoked in air crew and in the service at large. Unlike RAF Bomber Command, who had an officially sanctioned government directive authorizing area raids and a commander-in-chief, Bomber Harris, who relished them, the American Army Air Forces in Europe approached area bombing with qualms. Whenever the level of such raids seemed to become too high, Generals Arnold, Spaatz, Doolittle, or officers in their headquarters would protest.

An example of *Petals of Fire's* unevenness is its treatment of one of its main characters, Colonel Dean Raymond, a friend of Billy Mitchell and inspector general sent out by Arnold to England. In England, as he talks to the generals, spouts the air force credo of precision bombing and independence, and comes across as a cardboard character. Once he is shot down he is transformed from a prig to an officer who learns and internalizes the need to look after his men.

Fortunately, Alf spends most of the novel following his airmen. In doing so he presents a war story that rings true. I recommend it to participants in, or students of, the bomber offensive. It may raise painful images, but those are the ones we should not allow ourselves to forget.

Richard G. Davis, *Air Force History Support Office, Washington, D.C.*



Air Power at the Battlefield: Allied Close Air Support in Europe 1943-45. By Ian Gooderson. London and Portland, Ore.: Frank Cass Publishers, 1998. Pp. 282. \$24.50 Paperback. ISBN: 0-714-64211-8.

Here is a much needed book that examines an aspect of air power that is often overlooked: tactical air support in World War II. Rather than giving a chronological or campaign account, Gooderson analyzes the systems, weapons, and techniques of tactical aviation as well as comparing the close support, armed reconnaissance, and artillery roles. In many respects Gooderson's book brings to light numerous important observations, however, his conclusions do not follow from the material he presents, and seem to have been made a priori. His main contention is that close air support was not vital to the war effort and essentially wasted effort.

To support his thesis Gooderson relies heavily upon Operational Research (OR), which he defines as "a scientific approach to the problems of determining the likely effects of weapons and tactics and of deciding between varying courses of action." The OR material was gathered by Operational Research Sections (ORS), which accompa-

nied the 21st Army Group and 2d Tactical Air Force in Northwest Europe. The ORS studied the effects of bomb and rocket attacks, distinguished between damage from air strikes and ground weapons, and had access to some battlefields like those at Mortain, Falaise, and parts of the Ardennes almost immediately after the conflict moved eastward. However, the ORS often acted without clear orders or procedures and did not always have an early chance to scour the battleground. Gooderson also points out that the Germans routinely carried their dead back for burial, but failed to consider the reclamation of damaged or destroyed vehicles. The OR material and Gooderson's English origin weight his study towards the British experience, and Northwest Europe over the Italian Campaign.

Air Power at the Battlefield raises several good points on the limitations and capabilities of close air support. The OR material calls into question the claims made by pilots engaged in ground attack. In most cases evidence of vehicles damaged or destroyed from the air fell well short of that claimed. This should come as no surprise given the inflated claims from air combat, but is well worth keeping in mind. Gooderson also showed that during World War II the accuracy of

aerial weapons, both rockets and bombs, was very limited. Statistics gleaned from the OR material show that large numbers of sorties were necessary to hit point targets even as large as a tank. The author concludes from this that the destructive effect of air attacks was much lower than previously thought, and that it was the morale effect that really provided most of the impact on the enemy. This is something that American air theorists knew as early as World War I, and stated repeatedly during the interwar period, but it is still a good point that many commanders may have forgotten during World War II. Finally, Gooderson devotes an entire chapter to the limitations on the use of strategic forces for close support. This subject has been covered before and Gooderson correctly points out the dubious value of using heavy bombers in frontline support, but adds little new information.

Gooderson does reveal several advantages to close air support. It could engage targets closer to armored units than artillery, and in fact, his statistics show that despite the inaccuracy of air weapons, they were still more accurate than artillery fire. Other air support advantages over artillery include the ability to keep pace with rapid advances; faster response time to requests if

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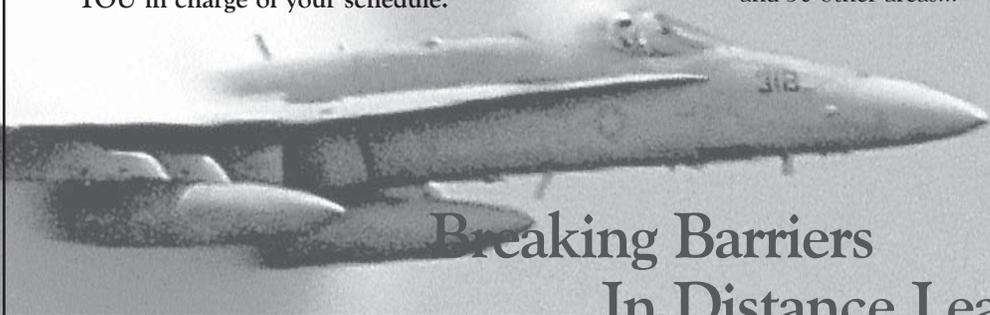
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using the CABRANK system of keeping aircraft overhead; a heavier weight of ordnance delivered in a shorter period of time that led to quicker and longer neutralization of enemy targets; and finally the TIMOTHY technique involving aircraft striking ahead of advancing troops proved more responsive than rolling barrages.

Given the advantages of air support one may wonder how Gooderson reached his conclusion that it was wasted effort. As mentioned earlier, he goes to great lengths to show that the morale effects of air support were much more pronounced than the destructive effects. The ORS data indicated that the actual elimination of tanks, guns, or enemy strong points was very difficult due to the lack of accuracy. In many cases it was the shock and disorientation from the air weapons' concussive force, or fear of repeated strafing, that led to neutralization of the targets attacked. However, this effect wore off after a period of time depending on the quality of the troops and the weight of the attack. If the ground forces did not follow up the air attack with an assault of their own, or if they were somehow delayed, the neutralization effect would have been overcome and the enemy ready to resist any advance. Therefore, in any instance that the ground

forces failed to take advantage of the air strikes, the effort was mostly wasted.

Gooderson also critiques the value of the CABRANK technique. To be successful, CABRANK required aircraft to be constantly over the advancing armored column, ready to strike targets whenever called. The problem that he identified with this system is that planes needed to report on station every hour in order for a flight to always be ready to respond to requests. Unless large numbers of fighter-bombers are available, this system deprives other sectors, or missions, of badly needed aircraft. Because other missions maybe more profitable, CABRANK is either a waste of air assets or a luxury that couldn't be sustained.

Gooderson's last objection to close air support comes from comparison to other air force missions which he regards as more vital. Obviously constant diversion of heavy bombers from their strategic mission would lead to a lessening of their campaign, and would be a misuse of air units. In the case of fighter-bombers he believes that the armed reconnaissance mission was more vital and could be compromised by too much air support. The advantages of armed recon missions included limiting enemy freedom of movement and ability to deploy reserves,

slowing down of enemy reinforcements to the sector being attacked, and a general interdiction of supplies. He states that even sorties where planes did not encounter any enemy targets were not wasted effort because their presence helped instill in the enemy mind the fear of omnipresent allied aircraft, further restricting his movement.

Gooderson's analysis contains several flaws, contradicting some of the evidence he presents. Although he acknowledges the utility of air support in unusual cases, like the German counter-attack at Mortain, he gives several other examples where units with air support advanced faster and with fewer casualties than units without such support. His analysis of friendly fire casualties showed that during offensive operations when the front was moving fighter-bombers on armed recon were more likely to bomb friendly ground forces than those on close support missions. Losses from anti-aircraft fire were much higher on armed recon missions because the targets were easier to anticipate and could be protected by heavier concentrations of flak. In contrast, the widely dispersed frontline units could not put up a similar amount of defensive fire, actually making close air support a safer mission. Gooderson also fails to fully take into

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account the interconnectedness of the two air efforts. Many times aircraft on CAB-RANK or other air support missions would be diverted to armed recon, and vice versa. The diversion of aircraft from one mission to the other enhanced the flexibility with which the fighter bombers were used and allowed for their employment at the most vital point at any particular time. These facts combined with the advantages of air support that Gooderson brings out seem to refute his charge that it was not vital and a wasted effort.

On the whole, *Air Power at the Battlefield* is a worthwhile book containing a great deal of useful information along with some flawed conclusions. That rear area targets presented more profitable targets is something that most of the interwar manuals and theorists had stated. However, to deny the utility of air support, especially given the surplus of aircraft that existed during the campaign in Northwest Europe, seems backwards. Air power's greatest asset is its flexibility; the ability to intervene at the most critical junction for the largest impact. To deny that air support can be vital seems to deny the validity of combined arms theory. The combination of the various ground arms and tactical air missions create a favorable situation for the offensive and air support can allow a sustained offensive by minimizing casualties and maintaining the offensive momentum, something Gooderson touches on when looks at the British XXX Corps during Operation Market-Garden. Perhaps the most important point to Gooderson's book is the reaffirmation that any arm's effort can be wasted if its limitations are not understood and it is not coordinated with the rest of the forces available.

Garner Johnson, is a Ph.D. student at the University of Nebraska in Lincoln currently working on his dissertation on World War II close air support in the Pacific.



Angels Zero: P-47 Close Air Support in Europe. By Robert V. Brulle. Washington, D.C.: Smithsonian Institution Press, 2000. Photographs. Notes. Bibliography. Index. Pp. 164. \$29.95 ISBN 1-56098-374-4

The two most dangerous missions of the Army Air Forces during World War II in the European theater were unescorted strategic bombing and close air support (CAS). This book, details the personal experiences of a P-47 pilot, assigned to the 366th Fighter Group, who flew the "hairy and scary" CAS mission over French and German battlefields from D-Day to VE Day. During virtually every mission flown by the author and his fellow pilots, their aircraft routinely received some damage and, all too often, the wounding or loss of a pilot. From June 1944

to April 1945, Brulle's unit had 135 aircraft shot down and 95 pilots lost—24 became POWs and 71 were killed in action. Statistically, the group had an average monthly loss of seven aircraft and five pilots for each of the nineteen months it was in combat. An additional 26 pilots were wounded during this time. This casualty rate is grim testimony of the ferocious combat environment of the pilots who flew—and fly—the CAS mission. More than 45 years later, Coalition pilots flying at low altitudes during Operation Desert Storm found themselves in a similar position vulnerable to enemy ground fire (Iraqi radar-controlled anti-aircraft artillery and shoulder-fired surface-to-air missiles) that forced them to fly higher at medium and high altitudes.

Air Force Document Doctrine (AFDD) 1, Air Force Basic Doctrine, defines close air support (CAS) as "air operations against enemy targets in close proximity to friendly forces." It involves the application of air power against enemy ground forces, men and vehicles, near or at the frontlines of battle to protect friendly ground forces, assist them in stopping enemy advances, and help pave the way for the advance of friendly ground forces. This formal definition, however, does not capture the teeth-shattering reality of anti-aircraft artillery shells exploding near the cockpit, machine gun bullets ripping through the wings, shrapnel from exploding munitions tearing into the underbelly of a low-flying aircraft, or watching a buddy's aircraft spiral into the ground with too few precious seconds remaining to hope for a parachute. As Brulle mentions, General "Jimmy" Doolittle, commander of the Eighth Air Force in England, considered fighter-bombing to be so hazardous that he abandoned the practice except in rare instances. Brulle translates this sterile definition from the doctrine document into the reality of actual combat as he portrays his own dangerous world as one CAS pilot who daily went "down to the deck" to help American soldiers advance against Hitler's army on the way to victory in Europe.

The author was a young twenty-year old when he applied for flying training in 1943. He was accepted and ultimately received an assignment to fly a P-47 Thunderbolt from right after D-Day to VE Day with the 366th Fighter Group in Europe. In the first two chapters, Brulle provides the reader with a good look at the various stages of flight training during the war that ultimately won him his wings. In the remaining nine chapters, he covers his personal wartime experiences, going into combat right after D-Day in western France and later flying from various airfields in liberated France as the Army advanced and the frontlines moved ever closer to Germany. He then records his experiences flying CAS and interdiction missions during the difficult battles of the Huertgen Forest and the Ardennes in late 1944. As Brulle recounts his own personal experiences in these battles, based on a diary he

kept, he also provides complementary historical background that places these experiences into the "bigger picture."

What further makes Brulle's memoirs interesting and personal is that he and his parents had emigrated from Belgium to the United States in 1929 and he still had relatives in what was, in mid-1944, German occupied territory. In addition to the routine dangers of flying CAS missions, he had to worry about being shot down and captured by the retreating Germans. If he had been, the Germans might have retaliated against his hometown and relatives. He once asked his commander what should he do, and his commander gave him the best advice he could: "Don't get shot down." When his hometown was finally liberated, Brulle had several opportunities to visit his relatives. On his first visit, they could not believe that the six-year old youngster who had gone to the United States so many years before was now an American officer flying a modern fighter. Brulle also took several opportunities to do "flyovers" of his hometown as he returned to his home base from combat missions in late 1944 and early 1945.

Brulle also provides an excellent account of the P-47 as one of World War II's most famous aircraft and one of the most produced aircraft by the United States during the war. The P-47 Thunderbolt was affectionately called the "Jug" for juggernaut because of its rugged build and the amount of damage it could take. It is often associated with the fighter escort role that helped, along with the P-51 Mustang, to curtail the frightful losses of bombers and crews on long-range daylight bombing raids over Germany. The P-47 was also a mainstay of the CAS and interdiction missions in the European theater. Brulle, as well as other pilots who flew the "Jug," were amazed and grateful for the amount of damage the P-47 could take and still bring them back their bases in one piece. Rare was the mission in which Brulle's aircraft did not suffer some damage caused by German ground fire from "flak wagons," special vehicles equipped with quad-anti-aircraft guns that often accompanied German military convoys, German soldiers firing upward at the attacking P-47s, or shrapnel from exploding ammunition trucks recently attacked by the P-47s. The author, who became an aeronautical engineer and went work for McDonnell Aircraft Company after the war, also ably provides information about the flying characteristics of the P-47, especially in combat.

The only real criticism of *Angels Zero* is a comment that the author makes in the Preface and Acknowledgements. He states the P-47 "performed [as a high-altitude escort fighter] admirably during the great air battles over Germany in 1943. American pilots flying the P-47 challenged the best of the Luftwaffe fighter force...and forced them to withdraw." In 1943 the P-47s could escort the American bombers no further than France and had to turn back for lack of

range. Furthermore, long-range fighter escorts of any type did not appear in substantial numbers until late 1943, and, as a result, the “great air battles” of which Brulle writes did not take place until early 1944, especially after “Big Week” in February 1944. By early 1944, the P-47s were equipped with drop tanks to escort the bombers to Germany and would achieve a good record against the *Luftwaffe* fighters. Even then, most of the fighter groups used for to escort the bombers on raids over Germany flew the P-51 Mustang. I wonder if the author made this statement to somehow inflate the image of the P-47 against that of the P-51, something that is unnecessary. The pilots, like Brulle, flying the P-47 in the CAS and interdiction roles deserve their own special credit in the defeat of Germany as the P-51 escorts and certainly experienced their share of danger and losses in these, perhaps less glamorous, but certainly equally important missions.

Dr. Robert B. Kane, a lieutenant colonel in the USAF, is currently assigned to the Nonresident Studies Directorate, Air War College, Maxwell AFB, Alabama.



Stars in Khaki: Movie Actors in the Army and the Air Services. By James E. Wise, Jr. and Paul W. Wilderson III. Annapolis, Md.: Naval Institute Press, 2000. Photographs. Appendices. Bibliography. Index. Pp. x, 241. \$24.95 ISBN: 1-55750-958-1

Stars in Khaki is about the military service of celebrities, including some of the biggest names in the movies, theater, and music world. Of course, one picks up this type of book mainly out of curiosity, but I found it both enjoyable and informative to discover that many of these celebrities were regular people. The book tells about the stars’ roots, how they climbed their ladders of success, and their military achievements. This makes for an interesting trip down memory lane.

I was most impressed to learn about an old time favorite, Art Carney. Although he was very popular beginning in the 1950s, his talents were in bloom as early as the 1930s, when he was already a creative mimic and performing one-man shows. Drafted into the U.S. Army in 1944, Carney soon was shipped to Normandy—where he arrived two weeks after the invasion. Although there was still much to do there, Carney initially went as a replacement with Pennsylvania’s Keystone Division, then he joined the 28th Infantry Division at the Viere sector in France. In August 1944, his leg was severely wounded. After undergoing extensive surgery and much rehabilitation—which left him with one leg shorter than the other—Carney helped the other men at the rehabilitation

hospital. He was like their older brother or father and would listen to their problems and try to help them. He received a Purple Heart medal and was discharged in April 1945. The book describes not only all of Art Carney’s travels during his stay in the Army, but also many of the campaigns involving his division and some of the men alongside whom he fought. It also provides some personal information regarding his marriage, family, and career moves up until the present.

Stars in Khaki mentions a great many other interesting people, including Charlton Heston, Glenn Miller, Sammy Davis, Jr., Elvis Presley, Clark Gable, Tony Bennett, Martha Raye, and James Garner, to mention just a few. An appendix contains an additional 100 or so vignettes of celebrities who served; there is also an appendix noting those “who could not serve.” There are many appropriate photographs of the entertainers illustrating how they boosted the troops’ morale.

The book is worth reading if only to appreciate how the authors created a combination of nostalgia and a feeling of patriotism. We are able to see our idols as patriots who fought in a foxhole or aboard an airplane.

Shari Kerner Neufeld, Potomac, Maryland



Truman, MacArthur, and the Korean War. By Dennis D. Wainstock. Westport, Ct.: Greenwood Press, 1999. Notes. Photographs. Index. Pp. 186. \$55.00. ISBN: 0-313-30837-3

As we commemorate the fiftieth anniversary of the beginning of the Korean War, we have been exposed to a variety of new works on every aspect of the conflict, be it diplomatic, strategic, tactical, the home front or some other unique perspective. Wainstock describes his work as a general history of the first year of the war, with a special focus on policymaking and the developing conflicts between President Truman and his theater commander, Gen. Douglas MacArthur.

It is appropriate to renew our interest and focus on this long forgotten war. We should honor the Allied combatants who sacrificed so much in defeating an invasion by the North Korean army and then by the Chinese Communists a few months later. It is ironic to remind ourselves that fifty years later, the United States still maintains a force of over 37,000 troops in South Korea to fulfill its commitment. Recently, it has been encouraging to read of the increased communications between both the North and South Koreans, with the hope of uniting the country peacefully in the years to come.

Wainstock, an associate professor of history at Salem-Teikyo University in West Virginia, has crafted a balanced, informative work that fulfills his purpose and is an easy read. He carefully discusses most of the

major issues from the early months of the war, many of which are still relevant in today’s world. For example, how should a great power such as the United States confront direct aggression in distant locales? Should it act unilaterally or in consonance with a variety of international and regional security organizations? How should an American president proceed to commit forces to combat overseas in a nuclear environment? What was the effect of nuclear weapons upon the policymakers in Washington? How should civilian authority react when its uniformed theater commander refuses to follow instructions or comply with directives? Should the war end when the initial objectives have been met or only with the total defeat of the adversary’s armed forces? Wainstock discusses all of these issues and more, that force the reader to reflect on more contemporary events as well.

The lingering debate about the closing hours of Desert Storm come to mind. We continue to analyze the situation of whether President George Bush acted too hastily to end the allied offensive in Iraq. In Korea, some of the same questions were raised, of course in a very different context. After the brilliant Inchon invasion of September 1950, the United Nations forces had to decide whether to cross the 38th parallel and then how to proceed northward. Should the U.S. and all its allies have led the charge or should only elements of the South Korean army have proceeded to the Yalu River and effected the unification of the country. In the case of Korea, decisions were made in pieces that eventually moved UN troops to the border, resulting in the Chinese invasion and the growing chasm between MacArthur and his commander-in-chief. There were plenty of mistakes and bad judgements to go around. Neither Truman nor MacArthur is spared.

Using English language sources, Wainstock effectively weaves the growing policy differences that eventually forced Truman to relieve MacArthur in April of 1951. The great general often loomed larger than life, especially after the success of the Inchon invasion. The Joint Chiefs of Staff seemed unable to handle this “Czar of the Pacific,” whose bottom line in military operations was victory in the field and destruction of the enemy. The idea of limited goals, compromise, and a negotiated peace was repugnant to the proud warrior. Truman feared widening the war. He and his European allies were anxious that the Chinese might intervene and tie down the U.S. in an Asian conflict.

Only the maps in the book do not meet the quality of the discourse. With the myriad of Korean locales and battle sites, the reader often searches in vain on the scant maps provided. Regardless, this work is a solid effort that serves as an excellent review of the war and the two dominant personalities who shaped its outcome. It redefined the role of the military commander vis a vis his civil-

ian authority in our democracy. It was a costly lesson.

Peter Lane, University of North Texas



To Save a City: The Berlin Airlift, 1948-1949. By Roger G. Miller. (College Station: Texas A&M University Press, 2000. Maps. Illustrations. Notes. Index. Pp. x, 253. \$34.95 ISBN: 0-890-96967-1

It has become almost trite to suggest that the most unlikely of air power applications—one that does not kill people and break things—proved decisive in defeating the Soviet Union in the first major contest of the Cold War, but it is true. The victorious Allies divided Germany and Berlin into four zones in 1945, one each for France, Great Britain, the United States, and the Soviet Union. As Soviet-American relations deteriorated during 1946 and 1947, the jointly occupied Berlin, located deep inside the Soviet zone, began to be the focus of confrontation between the two ideologies. When the Soviets blockaded the land routes to Berlin from the West the United States, Great Britain, and France responded with a massive airlift that both relieved a surrounded and starving city and avoided direct conflict with the Red Army. It represented a truly decisive use of what I like to call “constructive air power.”

Roger G. Miller's *To Save a City* seeks to tell the story of this airlift, both its geopolitical and operational elements, in a spare volume that represents an important up-to-date contribution to the subject. A civilian historian with the U.S. Air Force History and Museums Program, Miller draws on official Air Force files, recently declassified documents from the National Archives, Soviet documents released since the end of the Cold War, and interviews with airlift veterans to reconstruct the story of this important Cold War confrontation. The result is a compelling story well told. While other historians, including myself, have laid out the major parameters of this subject before, this work is a worthy synthesis of those earlier studies and offers a depth of study not previously offered.

Miller begins by discussing the political crisis that led to the airlift. He quickly moves on to the hasty organization of the operation to resupply the city by a small number of antiquated cargo airplanes. This soon evolved into an intricate bridge of modern transports that flowed in and out of Berlin through narrow air corridors on a precise schedule regardless of weather or other conditions. In the slang of the present, this 24/7/365 operation delivered everything from food and medicine to coal and equipment to a besieged Berlin. It allowed airlift forces to hone to fine edge their doctrine and operational procedures. It also brought to the

attention of postwar leaders the most significant thinker the possibilities of airlift for military purposes, William H. Tunner, who commanded the operation and eventually went on to lead the Military Air Transport Service, now Air Mobility Command.

Miller observes that the Berlin Airlift served to codify the flexibility of airlift as an instrument of national will. If one believes that the military exists as tools to help further the national defense and diplomatic objectives of the nation they serve then the more flexible the tool the more useful it becomes. Fighters and bombers are precise tools useful in only a limited number of circumstances, essentially that involving combat. Military airlift can be used in every conceivable scenario across the spectrum of conflict. Unlike virtually all other major types of Air Force aircraft, air transport has an important mission in both the peacetime and combat environments. In peace or war, military airlift sustains the American presence abroad, projecting military resources in a crisis or assisting in humanitarian missions. A unique national resource, the Berlin Airlift demonstrated its significance.

Roger Miller notes that American allies around the world regarded the airlift as a triumph of will, and it solidified the western position in the early Cold War era. The size and extent of the airlift, the requirement for close coordination, and the resourcefulness of allied leadership also impressed the Soviet Union. The airlift affected Air Force doctrine as well; demonstrating that virtually any amount of cargo could be moved anywhere in the world with little concern for geography or weather. It provided valuable experience in operational techniques, air traffic control, and in aircraft maintenance and reconditioning. Finally, as already stated, the Berlin Airlift proved for the first time what has been confirmed many times since: airlift is a more flexible tool for executing national policy than either fighter or bomber aircraft.

To Save a City is a useful resource for all who seek to understand the development of Air Force roles and missions, the importance of strategic airlift in executing national policy, and the significance of the technology of aviation in the Cold War. It is a book that should find its way onto the shelves of many historians of air power.

Dr. Roger D. Launius, NASA Chief Historian



Study of Revenge: Saddam Hussein's Unfinished War Against America. By Laurie Mylroie. Washington, D.C.: The AEI Press, 2000. Photographs. Index. Pp. 321. \$24.95 ISBN 0-84474127-2

Study of Revenge: Saddam Hussein's Unfinished War Against America is a “must read” for the U.S. national security commu-

nity and especially for the new George W. Bush foreign policy and defense team. Over the last eight years, Clinton Administration national security officials argued that loose networks of “non-state actors”—for example, extremists such as Islamic Jihad and Osama bin Laden—were responsible for violent attacks on Americans. Laurie Mylroie, an expert in Middle Eastern politics, societies, and culture, and publisher of the on-line newsletter *Iraq News*, explodes this argument. She argues that recent horrific acts of terrorism committed against American citizens and interests are more likely to have been ordered by Saddam Hussein and organized by Iraqi intelligence officials. Mylroie acknowledges that some Muslim extremists, particularly Osama bin Laden, may cooperate with Iraq on particular missions. However, the capabilities and resources of a state, which range from diplomatic privileges to the organizational ability to coordinate diverse activities, are much greater than those that may be built and commanded by non-state actors.

Mylroie performs the type of analysis of the World Trade Center bombing and the attempted bombing of the New York City United Nations building that one would have hoped the U.S. government had done. She meticulously examines telephone, passport, and airline records to demonstrate that the U.S. Department of Justice (DoJ) prosecution of the cases was flawed conceptually. The DoJ prematurely decided—that is, before evidence was gathered and analyzed—that the World Trade Center bombing was a criminal act of individuals. Little DoJ effort was made to examine the evidence in the context of whether there was a state sponsor, nor did the DoJ seek to apply the resources of national security agencies to determine who organized the attack. Hence, the way the prosecution conceived and “bureaucratically compartmented” the case prevented achieving an understanding of who masterminded the terrorist acts. It is ironic that James Steinberg, deputy national security adviser from December 1996 to August 2000, recently lamented the lack of interagency coordination for dealing with problems such as terrorism (*The Washington Post*, January 2, 2001, page A15). He concluded that, “Organization cannot replace strategic thinking. But bad organization can make it difficult to respond imaginatively and effectively to the needs of today.” Applied to the Clinton Administration's Iraq policy, Mylroie would agree: policy has been plagued by an abundance of bad strategic thinking and bad organization.

This reviewer believes that Mylroie has correctly pinpointed Saddam Hussein as the source of terrorist attacks on Americans, including the World Trade Center bombing and the attempted assassination of former President George H. W. Bush. The Clinton Administration, wittingly or unwittingly, has chosen the path of self-delusion: to not investigate the matter seriously. In this way,

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unpleasant policy options have not been articulated and discussed. Yet, the failure of U.S. officials to address the question of state sponsorship of terrorism will have significant consequences. It encourages future terrorist attacks by eliminating the costs of retribution from the calculations of leaders such as Saddam Hussein.

The decision by President George H. W. Bush and his aides, in February 1991, to allow Saddam Hussein to remain in office and not to fully destroy Saddam's military forces has bedeviled the foreign policy of President Bill Clinton. Americans may have thought the war was over, but Saddam Hussein does not agree: economic sanctions remain and American and British aircraft attack selected sites. Indeed, Saddam continues his programs to acquire and stockpile nuclear, chemical, and biological weapons (and the means to deliver them), just as he threatens the U.S., its interests, and its allies. A cursory examination of Saddam's speeches, as translated by the Foreign Broadcast Information Service, shows that the Iraqi dictator routinely threatens the U.S. Saddam is telling his listeners, clearly and directly, his intentions.

In the book's penultimate paragraph Mylroie concludes: "Given how decisive America's defeat of Iraq seemed in 1991, Saddam has accomplished a significant part of his program. He has secured the critical goal of ending UN weapons inspections, and he is now free to rebuild an arsenal of unconventional armaments. he has also succeeded in thoroughly confusing America as to the nature of the terrorist threat it has faced since the World Trade Center bombing. He is free, it would appear, to carry out more terrorist attacks—possibly even unconventional terrorism, as long as he can make it appear to be the work of a loose network of Muslim extremists." Thus, Laurie Mylroie predicts Saddam Hussein will continue to attack American citizens and interests. At a minimum, we should expect attempted bombings and other attacks in the year 2001 and beyond. What is to be done?

The dust jacket of *Study of Revenge* lists well-earned laudatory comments from former Director of Central Intelligence R. James Woolsey, former Assistant Secretary of Defense Richard N. Perle, former Under Secretary of Defense for Policy Paul Wolfowitz, former U.S. Ambassador to the United Nations Jeanne J. Kirkpatrick, former CIA chief of counterterrorism Vincent Cannistraro, and the former director of the New York FBI Office James M. Fox. *Study of Revenge* reads well and it sets a new high standard for investigative literature; it is the product of thorough and painstaking research, and its conclusions are sobering.

Dr. Mark D. Mandeles, The J. de Bloch Group, Fairfax, Virginia.



Air Commando Fighters of World War II. By Edward Young. North Branch, Minn.: Specialty Press, 2000. Maps. Photographs. Notes. Index. Pp. 128. \$29.95 ISBN: 1-58007-022-1.

Air Commando One: Heinie Aderholt and America's Secret Air Wars. By Warren A. Trest. Washington, D.C.: Smithsonian Institution Press, 2000. Maps. Photographs. Notes. Glossary. Bibliography. Index. Pp. xi, 322. \$27.95 ISBN: 1-56098-807-X.

Publishers for many years tended to ignore Air Force special operations activities. Fortunately, this disregard has begun to fade recently as a number of books have been published on various aspects of the USAF's involvement in special operations. Two of the best of these came out in the year 2000. Although very different in tone and subject matter, both fill great gaps in the history of USAAF/USAF special operations.

In the fall of 1943, "Hap" Arnold authorized the organization of the 1st Air Commando Group (ACG) to support Orde Wingate's Chindits in a long-range penetration operation. The 1st Group consisted of fighter, bomber, transport, glider, light plane, and helicopter sections. All performed outstandingly in the glider assault behind enemy lines in Burma, known as Operation Thursday. Following this operation the group was reorganized into a more traditional USAAF unit, although still containing fighter, transport, and light plane squadrons, with gliders and bombers attached. With this reorganization, it became less involved in "special operations," which were viewed differently then than they are today, and was used in a more conventional role. Arnold wanted to organize several air commando groups, but only two more were established. The war was now turning in favor of the Allies and there was less need for such specialized units. Too, senior airmen in the USAAF were not comfortable with these kinds of units and were eventually successful in quashing the formation of more than the three that became operational.

Edward Young has spent many years attending the reunions of the World War II air commando groups, where he interviewed the veterans, particularly those in the fighter squadrons, and collected photographs. He has also studied the official records in detail. In the process, he has become an expert on the air commandos. He has woven together the interviews and official records deftly to produce an outstanding history—both scholarly and very readable—on the air commando fighter squadrons. Young has fleshed out the story by the judicious use of commercial and official publications, including Craven and Cate and British official histories. Correspondence with a Japanese individual on Japan's air operations in the CBI provides an interesting "other side of the hill" viewpoint. Finally, the book is illus-

trated liberally with mostly never before seen photographs. This, in itself, is a rare treat.

The book begins with a short chapter on the formation of the original air commandos, followed by chapters on the 1st ACG's initial fighter section, then its 5th and 6th Fighter Squadrons, the 2d ACG's 1st and 2d Squadrons and, finally, the 3d ACG's 3d and 4th Squadrons. An "album" of photos completes the book. Numerous colorful individuals, including Arvid Olson, Grant Mahoney, Levi Chase, and Bud Mahurin, appear in the book, giving it a very human dimension. While Young describes many engrossing subjects throughout, perhaps the best is his description of the 1st and 2d Squadrons attack on the Don Muang airfield near Bangkok in March 1945. This epic raid, over 1,500 miles round-trip, though little recalled today, was one of the longest fighter missions of the war and one of the most successful. Another, more amusing, incident recounted is one in which a 4th Squadron pilot got official credit for shooting down an AAF C-47! *Air Commando Fighters of World War II* is highly recommended; an excellent book on units that have received far less recognition than they have deserved.

Another time; another war. After a long dormancy, the air commandos resurfaced, albeit in a different guise in the Vietnam War. There are similarities, however, between the two periods—charismatic and energetic special operators and senior airmen who did not understand special operations and who wished to fit a square peg into a round hole just two examples. Warren Trest's *Air Commando One* is a fine work by an excellent historian on one of the Air Force's more colorful individuals.

Aderholt's candor did not always serve him well, often creating powerful enemies. One such was Gen. William W. Momyer, the Seventh Air Force commander in Vietnam and, later, commander of Tactical Air Command. Momyer serves as Aderholt's personal bete noire in this book. The general openly disliked Aderholt and took every opportunity to rein in the special operators in Southeast Asia. Also, Momyer was wedded to the idea of an all-jet Air Force and was unable, apparently, to fathom what the special operations people could accomplish with their old, slow prop planes. Aderholt's strong views on the "proper" use of these aircraft and of his people served to inflame the tensions between these two strong-willed individuals. This was a fight Aderholt could not win. Interestingly, it appears that some State Department officials, notably the U.S. ambassador to Laos, had clearer views than some senior Air Force leaders on the value of special operations.

Forced into retirement in January 1973, Aderholt was back in uniform ten months later and sent back to Thailand. Eventually promoted, over the protests of Momyer and other senior Air Force officers, to brigadier

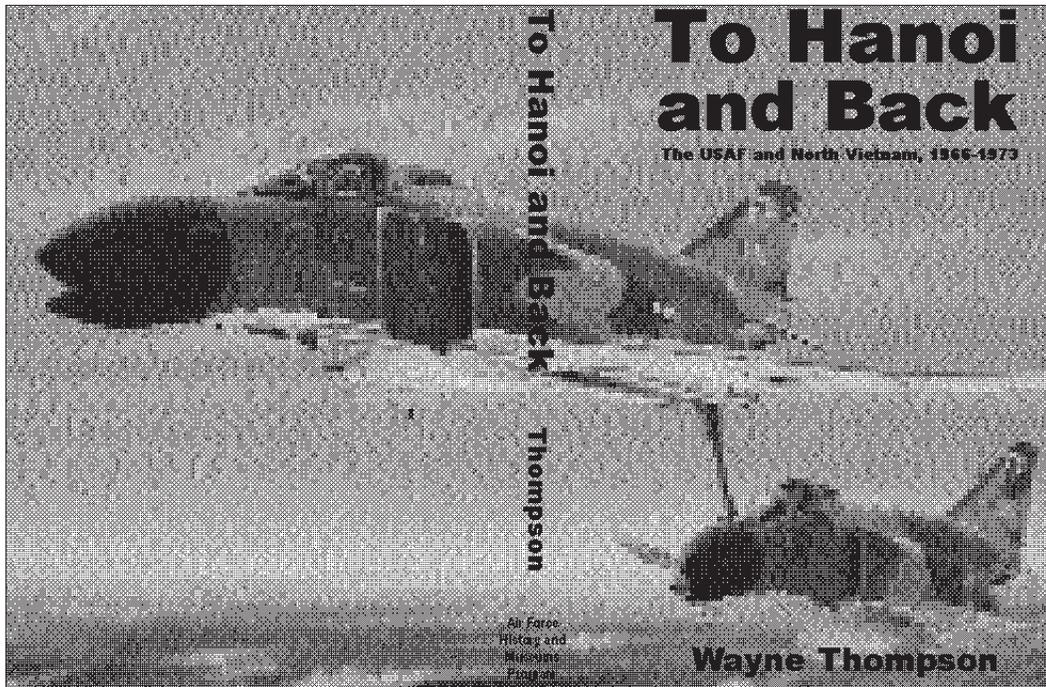
general, Aderholt had his hands full closing out the United State's military presence in Thailand and at the same time retaining the goodwill generated between the Thai and U. S. governments during the preceding years. Being able to do that was perhaps the greatest of his many accomplishments over the years. Aderholt retired for the final time on August 1, 1976. Given his unquenchable

drive, he is still active in a variety of endeavors, notably the Air Commando Association.

If there is a caveat to this book it is that it comes close to hagiography at times. Aderholt can do no wrong; almost everyone who disagrees with him can do no right. Nonetheless, Aderholt is a remarkable individual who accomplished—by himself and

with his men—incredible things despite obstructions thrown up by friends and enemies alike. *Air Commando One* deserves to be on the bookshelf of anyone interested in the United States Air Force.

William T. YBlood Air Force History Support Office, Bolling AFB, D.C.

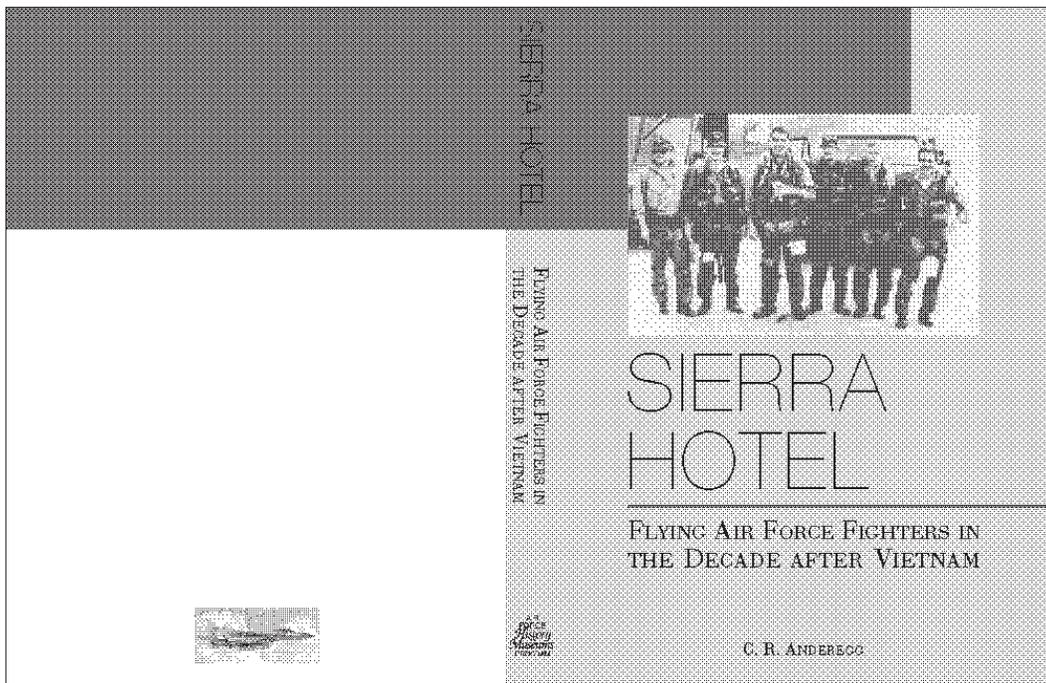


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