

# AIR POWER

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# *History*







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AFHF strives to make available to the public and today’s government planners and decision makers information that is relevant and informative about all aspects of air and space power. By doing so, the Foundation hopes to assure the nation profits from past experiences as it helps keep the U.S. Air Force the most modern and effective military force in the world.

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## History

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Turning first to this issue's featured articles, in chronological order, we begin with a World War I story. In "Against London," A. D. Harvey offers his latest documentary gem—an account of a German Zeppelin raid on London in 1917. Written after the war, by an observation officer who had flown aboard the airship L.40, Lt. Hans Gebauer describes the battle vividly and in great detail. Though the Germans believed that the mission was successful, the British knew otherwise.

Next, Roger Miller provides yet another masterful chapter on the life of Lewis R. Brereton. In this account, Major Brereton is the target of a dastardly vendetta launched by an influential politician, who is determined to ruin Brereton's career. "Under the Influence" and "Acting with Prejudice" is part mystery, part legal brief, always entertaining and instructive, Miller's essay is must reading for anyone who underestimates the pervasive influence of politics into all aspects of our lives.

In "HALPRO: The Halverson Detachment in the Middle East, June-July, 1942," John R. Reese tracks the activities of Col. Harry Halverson, who commanded the B-24 unit, known as HALPRO which had been assigned to bomb Japan from China. Bending to necessity, HALPRO was diverted from its original assignment of bombing Japan, and directed instead to destroy oil refineries in Nazi-occupied Ploesti, Rumania. Reese observes that although they lacked adequate planning, training, or resources for the job, Halverson's men adapted to the challenge thanks to their superb leadership, airmanship, and willingness to learn.

In the fourth article, "The Destruction and Rebuilding of the Afghan Air Force, 1989-2009," Forrest Marion manages to produce a coherent history of Afghanistan's air force during the crucial period from 1989 to 2009. The author augments the scant documentary record with interviews of several leaders of the Afghan air force.

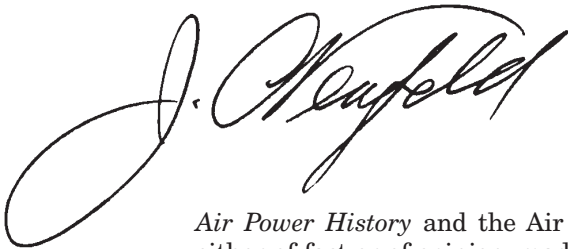
Finally, your attention is also invited to a greatly informative essay on the 1934 air mail episode, by Justin Libby, professor emeritus Indiana University. (See pages 44-47). Professor Libby questions not only the correctness of cancelling the air mail contracts by the Roosevelt administration, but he also questions its legality. Regardless of where you stand politically, Libby suggests that alternative choices were available.

In this issue, books editor Scott Willey and his band of intrepid reviewers tackle twenty new books. (See pages 48-56). Our demanding reviewers heap praise whenever and wherever warranted, but never shrink from lambasting mediocrity, in guiding us through the literature. If you think you can join this team, drop Scott a line. See page 57 for the new books list and Scott's addresses.

Several readers have told me that upon receiving their copy of *Air Power History*, they turn first to Bob Dorr's ever popular "History Mystery." What was the mystery plane? How many readers correctly identified it? Who won the prize—the latest copy of Bob's many books? The cycle repeats with a photo of the next mystery plane. "History Mystery" readers can now do something for Bob. Turn to the "Notice" on page 60 and to page 64 for information on how to contact Bob.

Don't miss the President's Message on page 58. For those who haven't heard the latest breaking news, the identity of the Foundation's new executive director has been revealed. Turn to pages 58 and 59 to find out his name and background. You will also learn where Tom Bradley is headed. On page 60, John Kreis, who chaired the committee to select the best article published in *Air Power History*, in 2009, reports the selection process for the award and names the winner.

Sadly, we report the death of a half dozen former Air Force leaders and aviation personalities, including Dr. Guy Stever, Generals Ascani, Clark, Dickman, and Holm, and aviatrix Elinor Smith Sullivan. Curiously, all lived into their late eighties and nineties. (See, "In Memoriam," pages 62-63).



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Cover photo: Two Mi-35 attack helicopters from the Afghan National Army Air Corps launch from the airport in Kabul, Afghanistan, on a gunnery training mission May 27, 2009, as another ANAAC Mi-17 transport lands in the background. (U.S Air Force photo/Tech. Sgt. Parker Gyokeres)



# “Under the Influence” and “Action Against Maj. Lewis H. Brereton 1929-1930







# Living with Prejudice": Allegations at Fort Sill, Oklahoma,

Roger G. Miller

(Overleaf) Twelve Douglas O-2H aircraft of the 88th Observation Squadron flying in formation over the parade ground at Fort Sill Oklahoma, c. 1930. (USAF photo, National Archives II, College Park, Maryland.)

## COMMAND OF A SQUADRON WAS A DEFINITE COMEDOWN FOR AN OFFICER WHO HAD PREVIOUSLY LED TWO OF THE AIR CORPS'S THREE COMBAT GROUPS

Lewis Hyde Brereton was a 1911 graduate of the U.S. Naval Academy who found his way into the U.S. Army, joined the Coast Artillery Corps, transferred to the Signal Corps, learned to fly, and became a pioneer military aviator. Of the first military pilots to earn the newly created Military Aviator badge in 1913, he was number ten in order of qualification. During World War I, Brereton commanded the 12th Aero Squadron and later the 1st Observation Wing in France, earned the Distinguished Service Cross in combat, and served as Brig. Gen. William "Billy" Mitchell's Chief of Operations during the Meuse-Argonne campaign. After the war, Brereton continued to hold important positions, first as Chief of Operations in Air Service headquarters, then as commander of the 3rd Attack Group and subsequently the 2nd Bombardment Group, two of the Air Service's three combat organizations, the 1st Pursuit Group being the third. As of the advent of the U.S. Army Air Corps in 1926, its leaders had to have viewed Lewis Brereton as one of the service's most capable officers and a future leader of great potential.<sup>1</sup>

A series of events in 1926 and 1927, however, placed the career of this promising officer in jeopardy. His first marriage was an unhappy one, he had financial difficulties, and he appears to have begun drinking heavily. As a result, his military performance suffered. He earned a series of marginal personnel evaluations, then received an official reprimand in 1927, for failing to obey an order. From this low point, Brereton began rebuilding his life, career, and reputation. He and his wife separated and divorced, and in 1928 he graduated from the U.S. Army Command and General Staff School at Fort Leavenworth, Kansas, a necessary prerequisite for promotion. In his first assignment following school at Fort Leavenworth, Brereton became the Air Service Instructor in the U.S. Army Field Artillery School at Fort Sill, Oklahoma, an assignment that gave him command of the 88th Observation Squadron. While command of a squadron was a definite comedown for an officer who had previously led two of the Air Corps's three combat groups, it offered a stepping stone on the path to restoring his career. Lewis Brereton would find this particular stepping stone a slippery one.

Major Brereton reported to Fort Sill on August 15, 1928, and his new command offered a major

challenge to his leadership. The 88th's heritage dated from service on the Western Front during World War I. The Air Service had inactivated the unit after that conflict, however, and had just reactivated it at Fort Sill by transferring personnel culled from flying units based at San Antonio, Texas. The unit commanders at San Antonio, however, had played "the Old Army game," taking the opportunity to rid themselves of undesirable personnel by dumping them into the 88th. Additionally, western Oklahoma proved inhospitable to many of the personnel who found the desolate, isolated plains distasteful compared to the temperate, urban climes of San Antonio. It took Brereton some time to shake out the dead wood and discharge those better suited to civilian life than to service at Fort Sill. Further complicating the situation, in addition to its regular officers, the 88th included a significant percentage of reserve officers serving on extended active duty. In March 1930, the squadron had fifteen regulars and seven reservists, and a rivalry existed between the two groups. The regulars appear to have disdained the part-time officers, considering them little better than amateurs, while the reservists believed that the favored regulars received first choice of any benefits the Army Air Corps might provide. In addition to these challenges, aircraft were in short supply. Observation squadrons were at the bottom of the barrel where Air Corps resources were concerned, and they fared miserably in the penny-pinching budgets imposed by tight-fisted administrations during the late 1920s and early 1930s. A squadron normally had a strength of from eighteen to twenty-four aircraft, but as of March 1930, the 88th possessed only eight single-engine Douglas O-2H observation planes, one Douglas C-1 single-engine transport, and one Martin NBS-1 twin-engine bomber, the latter two were aging aircraft of dubious value.<sup>2</sup>

Brereton did well as commander of the 88th despite the handicaps. First, his extensive practical experience commanding an observation squadron and wing during World War I and the two combat groups in peacetime proved a definite advantage. Second, he quickly demonstrated a talent for developing a program of instruction and syllabus for the Field Artillery School. By early 1930, he had organized his limited resources and instituted a well-

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Maj. Lewis Hyde Brereton was a highly decorated veteran of the war in the air during World War I. (Library of Congress, Washington, D.C.)

balanced training schedule that more than met the school's requirements. Lt. Col. George P. Tyner, the acting commandant, wrote: "Since Major Brereton joined in the summer of 1928, his conduct of the squadron with reference to cooperating with the Field Artillery School, has been superior, and on the last visit of the Chief of Staff of the Army I so informed the Chief of Staff."<sup>3</sup> Lt. Col. Leslie J.

McNair, assistant commandant of the school and future commander of all U.S. Army Ground Forces, reported that Brereton had "shown himself broad minded, progressive, cooperative, and efficient," while Brig. Gen. William M. Cruickshank added that Brereton was "an exceptionally valuable officer."<sup>4</sup>

Praise, however, did not mean that Lewis Brereton avoided controversy. In mid-November 1929, Congressman Jed Joseph Johnson—whose district encompassed Fort Sill and who seems to have treated the post as his personal fiefdom—met casually with Colonel Tyner.<sup>5</sup> To the shocked colonel's surprise, Johnson swore him to secrecy then told him that he wanted Brereton transferred away from Fort Sill. According to the colonel: "[Johnson] placed his hand over his breast pocket and said 'I have sufficient evidence here to have Major Brereton kicked out of the army but I would like to see him transferred instead of having this matter aired.'"<sup>6</sup> The congressman followed his verbal complaint with a private letter to Tyner detailing two incidents. The first was a personal insult. When Johnson had requested an airplane from the 88th for his personal use on a government business trip, he was told that Brereton had replied that he did not have an airplane for any damned congressman. The second complaint accused Brereton of drunkenness. When Tyner sought specific details, however, Johnson refused to provide them, and he refused to identify his sources. Colonel Tyner asked the congressman to make his allegations officially in writing, but Johnson refused and continued to press for action to be taken privately without informing Brereton, something a formal complaint would require. The colonel, however, refused to take action against Brereton behind his back, an action he regarded as unjust. The matter rested there for two months. On January 15, 1930, Congressman

Douglas O-2H observation aircraft, the same type flown by the 88th. This one is a 91st Observation Squadron plane during the 1930 Air Corps Maneuvers at Mather Field, California. (USAF photo, National Archives II, College Park, Maryland.)





Congressman Jed Joseph Johnson served the 6th Congressional District of Oklahoma, 1927-1947. (Courtesy, the Carl Albert Congressional Research & Studies Center, University of Oklahoma, Norman, Oklahoma.)

## JOHNSON'S EXPANDED LIST OF ALLEGATIONS LED TO A FORMAL INVESTIGATION

Johnson finally released Tyner from his oath of secrecy, allowing the colonel to personally investigate the two charges. His findings were mixed. When questioned about the first allegation, Brereton admitted that he had responded to Johnson's request for an airplane as reported, and the major immediately sent the congressman a formal apology. Colonel Tyner was unable to substantiate the drinking charges, however. Brereton did drink, the colonel found, but he failed to validate the claims of drunkenness while on duty.<sup>7</sup>

Colonel Tyner's investigation failed to satisfy the congressman, and on February 6, Johnson put his complaints in writing to his friend and fellow Oklahoman, Secretary of War Patrick J. Hurley, requesting an investigation of Brereton's "moral habits" meaning his use of alcohol. Johnson cited reports of drunkenness by two unidentified officers, and claimed that he, personally, had seen Brereton before piloting a flight "when it was plainly evident that he was under the influence of intoxicating liquor."<sup>8</sup> The congressman also added new allegations to those he had already made. He accused Brereton of prejudice against the reserve officers, mistreating the enlisted personnel, and reserving one of the squadron's airplanes for his own personal use. In a separate letter, George W. MacMillan, a prominent state leader and president of the Reserve Officers Association of Oklahoma, supported these charges.<sup>9</sup>

Johnson's expanded list of allegations led to a formal investigation by Maj. John G. Tyndall of the U.S. Army Inspector General's Office. Major Tyndall interviewed every officer and many of the senior enlisted personnel of the 88th Observation

Squadron, as well as military and civilian personnel from outside the unit including Congressman Johnson. On the basis of his work, Tyndall concluded that the allegations were almost completely without foundation. First, the charge of prejudice against the reserve officers was based on a claim that Brereton allowed regular officers to fly more often than reserve officers and that he had refused to allow the reservists to fly the C-1 and NBS-1 aircraft. Squadron records as well as interviews with the men, however, documented that several reserve officers actually averaged more hours in the air than some of the regulars, and that while Brereton did restrict use of the two named aircraft, these were difficult airplanes to fly and unfamiliar to many of the pilots. Brereton limited them to graduates of the Air Corps's Advanced Flying School, which the reservists had not attended. Second, Tyndall's investigation confirmed that Brereton usually flew a specific airplane. A short man, he had had the controls rigged especially for his height. Flight records, however, revealed that one or two other pilots averaged more time in the machine than Brereton. Third, as for mistreating enlisted men, Johnson had claimed that Brereton had refused to give them satisfactory performance ratings if they planned to leave the Air Corps. Again, squadron records failed to support this claim and interviews with enlisted personnel specifically denied it.<sup>10</sup>

Johnson's specific allegations that Brereton had thrown wild parties at his residence on the post and indulged in heavy drinking while on duty could not be corroborated. Officer after officer denied any knowledge of wild parties or even of Brereton having alcohol in his home, and all denied he had been under the influence of alcohol while on duty. Ground officers from Fort Sill as well as squadron members provided the same testimony. Congressman Johnson further detailed two specific incidents. The first incident alleged that Brereton had been drunk and disorderly at a party sponsored by city and state leaders in a downtown hotel during the Oklahoma State Fair. The second was Johnson's persistent claim to have seen Brereton at the controls of an airplane while inebriated. The first charge was substantiated. The party in the hotel was a pretty wild one, and witnesses verified that Brereton had played a prominent role in the merriment. But the event took place after the duty day and drinking was common in the military, not to mention amongst civilian leaders, despite Prohibition.<sup>11</sup> The episode was not viewed as a serious transgression. The second allegation refused to go away. Johnson continued to maintain that he had seen Brereton drunk just prior to taking off, and one officer from the 88th supported his testimony, although the two disagreed significantly on details.<sup>12</sup>

As Major Tyndall dug deeper, it became clear that one reserve officer, 1st Lt. Joseph R. Reed, was the source of most of the allegations against Brereton. The 37-year old Reed operated a trucking business in nearby Lawton, was a member of the





Patrick J. Hurley, Republican from Oklahoma, served as Secretary of War, 1929-1933. Library of Congress, Washington, D.C.

Maj. Lewis Hyde Brereton, c. 1929. (USAF photo.)

Reserve Officer Association of Oklahoma, had personal connections to local and state leaders, and had political aspirations of his own. Further, Reed proved to be an intimate friend of Congressman Johnson. Colonel Tyner's earlier investigation had identified Reed as the prime source of allegations



against Brereton,<sup>13</sup> and now Major Tyndall verified that Reed had decided he was not getting a fair deal while assigned to the 88th, and his buddy, Congressman Johnson, was helping him by trying to run Brereton out of Fort Sill.<sup>14</sup>

While a good deal of the problem lay in the traditional rivalry between full-time regular officers and part-time guard and reserve officers, Tyndall concluded that personal animosity motivated Reed. The lieutenant had a higher regard for his own flying skills than his experience actually warranted and resented that Brereton lacked proper respect for his ability. Further, while reviewing squadron records Brereton had discovered that Reed was annotating his flight log books in such a way as to hide joy rides that he had been providing for his civilian cronies. This discovery had led to an acrimonious correspondence between the two: Brereton demanding that the logs be filled out correctly and Reed using every means short of disobeying a direct order to avoid doing so.<sup>15</sup>

In October 1929, Reed had told one of the 88th's pilots, Lt. Kenneth P. McNaughton, that: "if I don't start getting a square deal around here I'm going to cause that son of a bitch plenty of trouble."<sup>16</sup> Congressman Johnson's unofficial effort to have Colonel Tyner transfer Brereton from Fort Sill followed a month later. When this first effort failed to bear fruit, Reed had continued his campaign, telling still another pilot, Lt. Cornelius W. Cousland, to "[t]ell Major Brereton that if he will transfer . . . all the investigations and charges will be dropped." And Reed later reiterated that warning, promising Cousland that if Brereton would "come around and get right, I will have the charges dropped."<sup>17</sup> Lieutenant Cousland failed to deliver either message to Brereton. Reed also approached some of the enlisted men, telling MSgt. W. H. C. Carey for one, that he had enough on Brereton "to run him out of the Army" and asking if Carey knew any witnesses who could help. Although Carey was a fellow Freemason—probably why Reed approached him—he proved loyal to his commander and failed to assist the lieutenant.<sup>18</sup> Finally, as might be suspected, Lieutenant Reed was the officer who had corroborated Congressman Johnson's testimony that he had seen Brereton drunk before a flight. His dubious motives thus cast doubt on the validity of that allegation.<sup>19</sup>

Ultimately, Tyndall's investigation exonerated Brereton and brought the full weight of the U.S. Army down on Reed. "In my opinion," the major's report concluded,

*Lieutenant Reed was not loyal to his commanding officer, Major Brereton; that by his actions he appears lacking in the basic qualities of discipline, loyalty, duty, and subordination. . . . Such conduct brings up the doubt as to whether an officer so acting has the basic essential qualities requisite in a commissioned officer. . . . I am of the opinion that the service of Lieutenant Reed on any other active duty with the Regular Army is undesirable.*<sup>20</sup>



Douglas O-2H observation aircraft, the same type flown by the 88th. This one is a plane from the 119th Observation Squadron, New Jersey National Guard. Aircraft of the 119th displayed the same insignia as the 44th Infantry Division. (USAF photo, National Archives II, College Park, Maryland.)

On March 18, 1930, the U.S. Army brought charges against Reed for violating the 95th Article of War: that is, "committing an act prejudicial to good order and military discipline and bringing discredit on the military establishment," the same catch-all charge under which Billy Mitchell had been court-martialed in 1925.<sup>21</sup>

This turn of events stunned Congressman Johnson who concluded that the Regular Army was protecting one of its own by ganging up on an honorable reserve officer. In Johnson's opinion, Reed was being railroaded by Brereton who "has his bluff in on a sufficient number of officers and men to find Lieutenant Joe Reed guilty of anything up to murder."<sup>22</sup>

An agitated Johnson found himself resorting to extreme measures to save the lieutenant. On May 26, he wrote a letter "friend to friend relative to a mutual friend" to the Secretary of War, requesting that Hurley terminate the court-martial process. Johnson suggested that since Reed only had a month left on active duty and had thirty-eight days leave coming to him, that the lieutenant be placed on leave allowing him to depart from the post immediately, but still fulfill his required term of active service. If Secretary Hurley took action it

does not appear in the records, but on June 11, Assistant Secretary for Air F. Trubee Davison assured Congressman Johnson that the commander of the U.S. Army's XIII Corps Area had determined not to court-martial Reed. He would be placed on leave until his period of active duty came to a close.<sup>23</sup>

The allegations made against Lewis Brereton demonstrate the pettiness and bickering that could exist in a small insular, military organization operating in peacetime. In this environment, the rivalry between regulars and reserves and personality differences undoubtedly festered like a nagging tooth ache, continually irritating and bothersome. Personal animosities that always exist in organizations but can normally be ignored became serious concerns. Lacking an immediate wartime purpose and a credible external enemy, officers turned inward, squabbling over irritants that in times of greater purpose and threat could and would have been ignored. This situation is relatively common, and Brereton can be faulted for either failing to recognize it, or, if he did realize what was taking place, failing to exercise the leadership necessary to remedy the situation or remove the cause. Further, in the case of the 88th Observation Squadron in 1930,





Post Field, Oklahoma, c. 1939. U.S. Air Force Collection, National Archives II, College Park, Maryland.

## BRERETON BEGAN THE WAR AS COMMANDER OF FAR EAST AIR FORCES

the state of affairs was exacerbated by the close connections between a subordinate officer and an outside political figure and the willingness of that figure to use his power and position to further his friend's interests. Congressman Johnson's attempted intervention clearly exacerbated the conditions within the 88th Observation Squadron and made of them something out of the ordinary.

Beyond the immediate environment at Fort Sill, the charges brought against Brereton had a wider impact, becoming the subject of rumor and innuendo in the U.S. Army Air Corps. The controversy undoubtedly took hold in some people's minds on the principle that "where there is smoke there is fire" and, when added to other events in his past, contributed to Brereton's later controversial reputation. The Air Corps was a small fraternity; everyone knew everyone else; everyone knew everyone else's business; most had long memories; and, justly or unjustly, once an officer had earned a reputation for good or ill, it stuck.

Other officers experienced controversy and career setbacks between the wars. Lt. Col. Henry H. "Hap" Arnold, for one, was fired out of Air Service headquarters and exiled to Fort Riley, Kansas, in 1925 for violating regulations during activities connected with the agitation for an inde-

pendent air force. From that cavalry post on the Great Plains, though, Hap gradually worked his way back into good graces, eventually becoming Commander-in-Chief of the U.S. Army Air Forces during World War II.<sup>24</sup> And in another case, Maj. Carl Spaatz's failure while commander of the 1st Pursuit Group to supervise a subordinate officer closely earned him an official reprimand in that same year, an incident which did not prevent him from becoming the first Chief of Staff of the U.S. Air Force.<sup>25</sup> In a similar vein, Brereton's career suffered little real damage from the events at Fort Sill.

Lewis Hyde Brereton saw extensive service during World War II, rising to the rank of lieutenant general. He began the war as commander of Far East Air Forces (FEAF) in the Philippines; served as deputy air commander of the American-British-Dutch-Australia Command (ABDACOM) in Java; commanded Tenth Air Force in the China-Burma-India Theater; organized and commanded Ninth Air Force during the fighting in North Africa; reconstituted Ninth as a tactical air force in England to support the invasion of Europe; and served as commander of First Allied Airborne Army, a unique experiment combining British and American airborne divisions and air transport squadrons into a unified combat force. Along the

Maj. Gen. Lewis Hyde Brereton, Commander of the Ninth Air Force in North Africa, 1942-1943. Library of Congress, Washington, D.C.



**BRERETON'S  
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TO 1931  
ULTIMATELY  
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cessful,  
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CAREER**

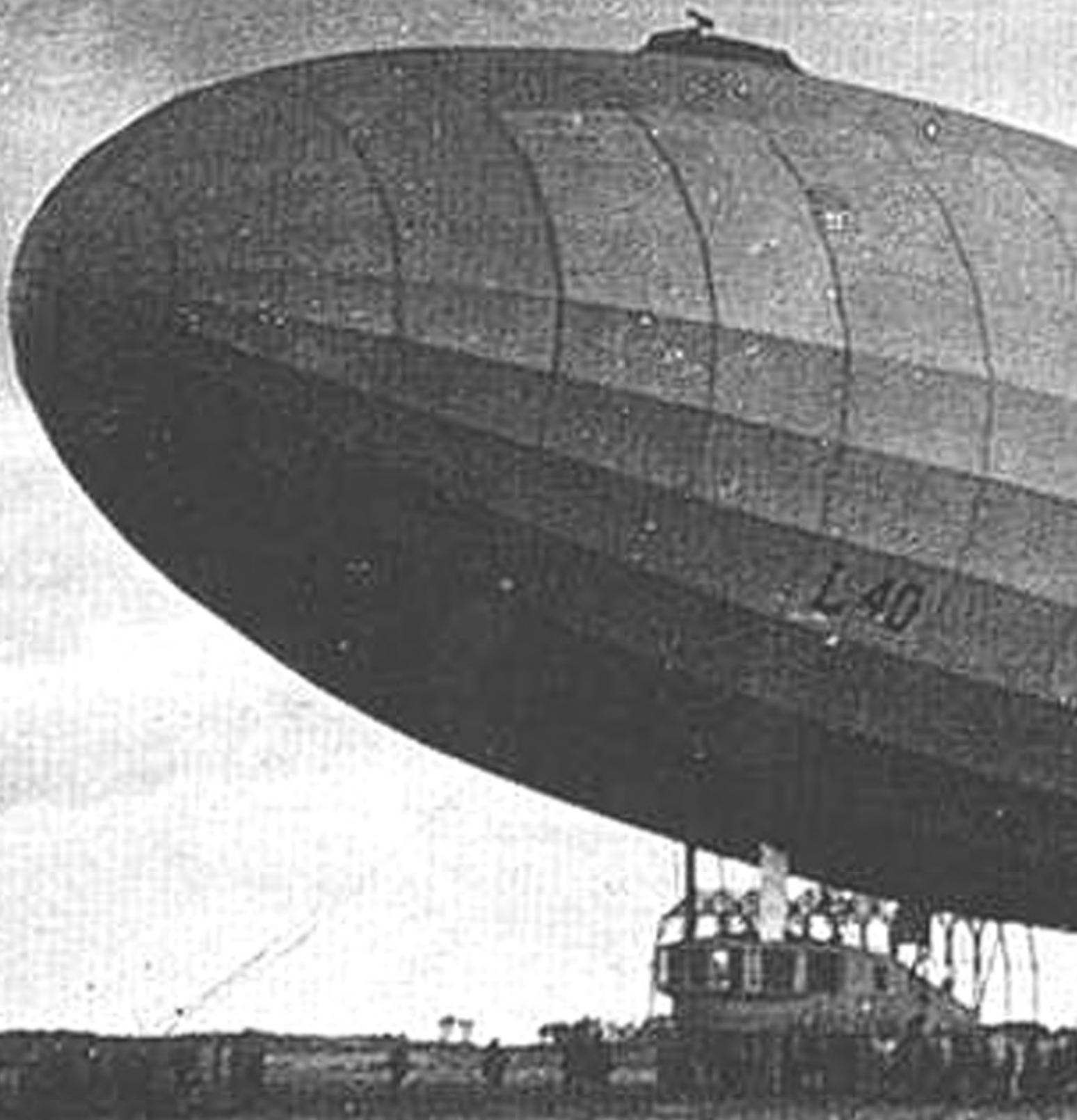
way, Brereton was involved in several of the most debated episodes of World War II including the destruction of much of FEAF's heavy bomber force on the ground at Clark Field on December 8, 1941; Operation Tidalwave, the long-range, low-level attack by heavy bombers on the Ploesti oil refineries in August 1943; Operation Overlord, the landings in France on June 6, 1944; Operation Cobra,

the breakout from Normandy a few weeks later; Operation Market-Garden in September 1944, the largest airborne combat assault in history, and Operation Varsity, the crossing of the Rhine River by 21st Army Group in 1945.<sup>26</sup> Brereton's service with the 88th Observation Squadron from 1928 to 1931 ultimately proved to be a road bump in long, successful, and useful career. ■



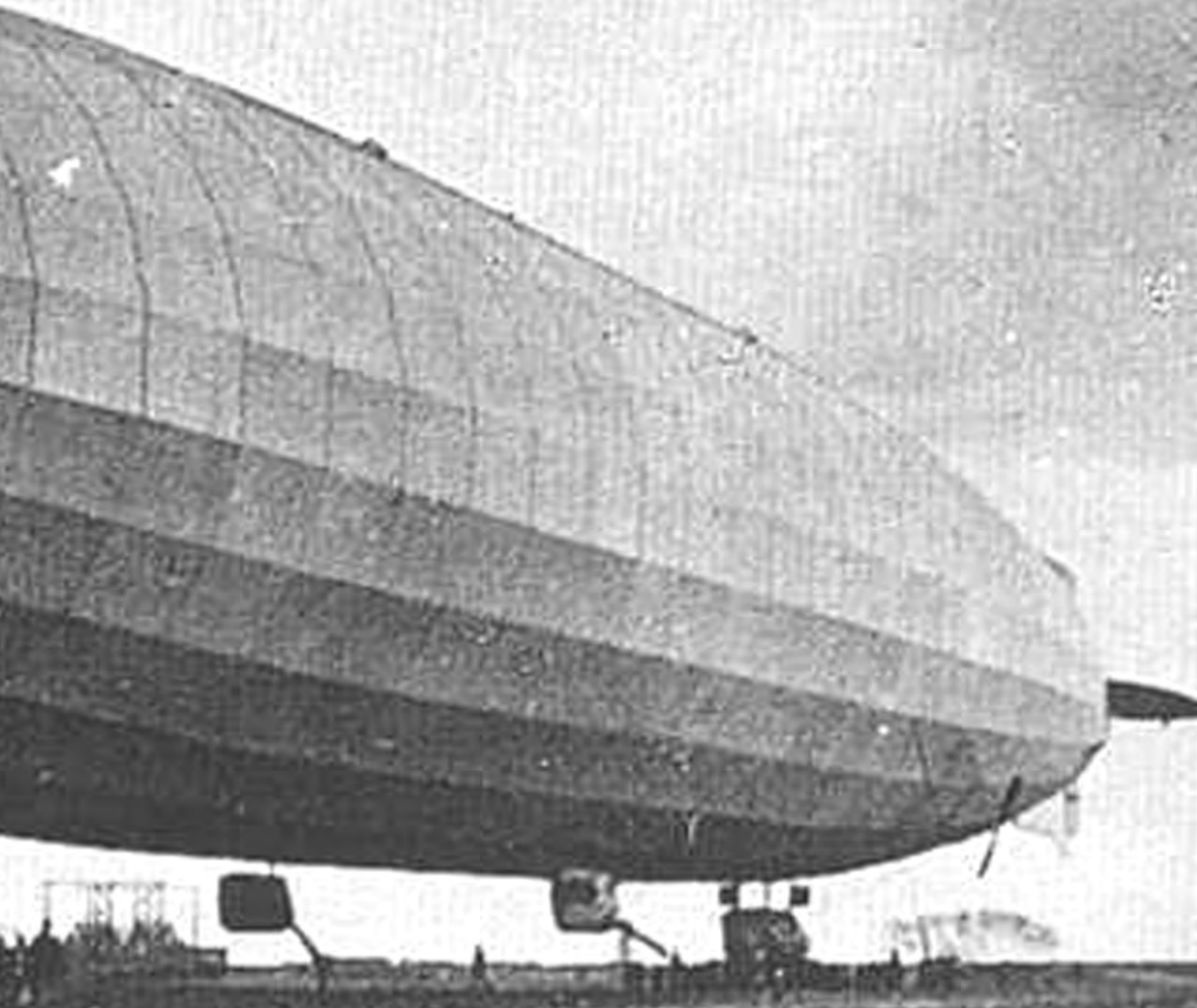
1. Little has been written specifically about Brereton. See Roger G. Miller, "A Pretty Damn Able Commander," Lewis Hyde Brereton," *Air Power History*, Part I (Winter 2000), pp. 4-27, Part II (Spring 2001), pp. 22-45, and Roger A. Beaumont, "Faded Reputation: Brereton of the Allied Airborne Army," *Airborne Quarterly* (Winter 1968/1969), pp. 20-23. After World War II, Brereton published Lewis H. Brereton, *The Brereton Diaries: The War in the Air in the Pacific, Middle East and Europe, 3 October 1941-8 May 1945* (New York: William Morrow and Company, 1946), but this book contains little on his early service and much that is misleading. See the comments in Col. Philip S. Meilinger, *Airmen and Air Theory: A Review of the Sources* (Maxwell, AFB, Ala.: Air University Press, 2001), pp. 46-47.
2. "Activities of the 88th Observation Squadron," *Air Corps News Letter*, April 26, 1929, p. 152; Flight Logs and related correspondence, atch to Rpt, Maj. John G. Tyndall, I.G.D., to Cmd. Gen, Eighth Corps Area, subj: Investigation Concerning Major Lewis H. Brereton, A.C., Post Field, Fort Sill, Oklahoma, March 31, 1930, w/atchs, in File 333.9, Brereton, Louis [sic] H., (3), Box 417, General Correspondence 1917-1934, Record Group (RG) 159, National Archives and Records Administration (NARA). Testimony by squadron officers and enlisted personnel in this file provide a record of the 88th's troubles with personnel and aircraft. The C-1 was a transport or cargo version of the Douglas DWC aircraft, which made the first around the world flight in 1924. The NBS-1 was a version of the Martin MB-2 bomber that Billy Mitchell had used to bomb the captured German battleship *Ostfriesland* during the famed trials off the Chesapeake Bay in 1921. In the nomenclature of the time, "NBS" stood for "night bombardment - short range."
3. Testimony, George P. Tyner, Col., 1st Artillery, p. 108, atch. to Rpt, Maj. John G. Tyndall, I.G.D., to Cmd. Gen, Eighth Corps Area, subj: Investigation Concerning Major Lewis H. Brereton, A.C., Post Field, Fort Sill, Oklahoma, March 31, 1930, w/atchs, in File 333.9, Brereton, Louis [sic] H., (3), Box 417, General Correspondence 1917-1934, RG 159 (NARA). The Chief of Staff was Gen. Charles P. Summerall, who served from November 21, 1926, to November 20, 1930.
4. Officer Efficiency Report and endorsement, July 1, 1929-June 30, 1930, in Lewis H. Brereton, 201 File, Air Force Branch, National Personnel Records Center, St. Louis, Mo.
5. A prominent Democrat, Congressman Jed Joseph Johnson (1888-1963) represented the 6th Congressional District from 1927 to 1947. The district encompassed Fort Sill and the nearby city of Lawton.
6. Testimony, Col. George P. Tyner, 1st Artillery, n.d., atch to Rpt, Maj. John G. Tyndall, I.G.D., to Cmd. Gen, Eighth Corps Area, subj: Investigation Concerning Major Lewis H. Brereton, A.C., Post Field, Fort Sill, Oklahoma, March 31, 1930, w/atchs, pp. 106-15, in File 333.9, Brereton, Louis [sic] H., (3), Box 417, General Correspondence 1917-1934, RG 159, NARA.
7. *Ibid.*
8. Ltr, Rep. Jed Johnson to Sec. Of War, February 6, 1930, in *ibid.*
9. Rpt, Maj. John G. Tyndall, I.G.D., to Cmd. Gen, Eighth Corps Area, subj: Investigation Concerning Major Lewis H. Brereton, A.C., Post Field, Fort Sill, Oklahoma, March 31, 1930, w/atchs, p. 1, in *ibid.*
10. Rpt, Maj. John G. Tyndall, I.G.D., to Cmd. Gen, Eighth Corps Area, subj: Investigation Concerning Major Lewis H. Brereton, A.C., Post Field, Fort Sill, Oklahoma, March 31, 1930, w/atchs, pp 1-4, in *ibid.*
11. The Eighteenth Amendment to the Constitution, which had taken effect on January 17, 1920, forbade the importation, exportation, transportation, manufacture, and sale of intoxicating liquors. Drinking was legal, but the law made obtaining alcohol more difficult.
12. Rpt, Maj. John G. Tyndall, I.G.D., to Cmd. Gen, Eighth Corps Area, subj: Investigation Concerning Major Lewis H. Brereton, A.C., Post Field, Fort Sill, Oklahoma, March 31, 1930, w/atchs, pp 1-4, in *ibid.*
13. Testimony, Col. George P. Tyner, 1st Artillery, n.d., atch to Rpt, Maj. John G. Tyndall, I.G.D., to Cmd. Gen, Eighth Corps Area, subj: Investigation Concerning Major Lewis H. Brereton, A.C., Post Field, Fort Sill, Oklahoma, March 31, 1930, w/atchs, pp. 106-107, in *ibid.*
14. Rpt, Maj. John G. Tyndall, I.G.D., to Cmd. Gen, Eighth Corps Area, subj: Investigation Concerning Major Lewis H. Brereton, A.C., Post Field, Fort Sill, Oklahoma, March 31, 1930, w/atchs, pp. 1-4, in *ibid.*
15. Flight Logs and related correspondence, atch to Rpt, Maj. John G. Tyndall, I.G.D., to Cmd. Gen, Eighth Corps Area, subj: Investigation Concerning Major Lewis H. Brereton, A.C., Post Field, Fort Sill, Oklahoma, March 31, 1930, w/atchs, pp. 106-15, in *ibid.*
16. Testimony, 2d Lt. Kenneth P. MacNaughton, atch to Rpt, Maj. John G. Tyndall, I.G.D., to Cmd. Gen, Eighth Corps Area, subj: Investigation Concerning Major Lewis H. Brereton, A.C., Post Field, Fort Sill, Oklahoma, March 31, 1930, w/atchs, pp. 106-15, in *ibid.*
17. Testimony, 1st Lt. C. W. Cousland, A.C., atch to Rpt, Maj. John G. Tyndall, I.G.D., to Cmd. Gen, Eighth Corps Area, subj: Investigation Concerning Major Lewis H. Brereton, A.C., Post Field, Fort Sill, Oklahoma, March 31, 1930, w/atchs, in *ibid.* Of interest, Cousland may have been closer to Brereton than some of the other officers. Both men were assigned later to the Panama Canal Zone. On May 23, 1934, a U.S. Navy airplane crashed in the waters off Panama City, and Brereton and Cousland flew to the scene in a twin-engine amphibian aircraft. They landed and rescued the two navy fliers, but Brereton received painful burns in the process. Ltr, R.O. Milton, U.S. Fleet Air Base, Canal Zone, to Cmd. Gen., U.S. Army, subj: Assistance Rendered . . . , May 26, 1934, File Correspondence and Certificates . . . , Lewis H. Brereton Papers, Dwight D. Eisenhower Presidential Library, Abilene, Kansas.
18. Testimony, MSgt. W. H. C. Carey, atch to Rpt, Maj. John G. Tyndall, I.G.D., to Cmd. Gen, Eighth Corps Area, subj: Investigation Concerning Major Lewis H. Brereton, A.C., Post Field, Fort Sill, Oklahoma, March 31, 1930, w/atchs, in File 333.9, Brereton, Louis [sic] H., (3), Box 417, General Correspondence 1917-1934, RG 159, NARA.
19. Testimony, 1st Lt. Joseph R. Reed, atch to Rpt, Maj. John G. Tyndall, I.G.D., to Cmd. Gen, Eighth Corps Area, subj: Investigation Concerning Major Lewis H. Brereton, A.C., Post Field, Fort Sill, Oklahoma, March 31, 1930, w/atchs, in *ibid.*
20. Rpt, Maj. John G. Tyndall, I.G.D., to Cmd. Gen, Eighth Corps Area, subj: Investigation Concerning Major Lewis H. Brereton, A.C., Post Field, Fort Sill, Oklahoma, March 31, 1930, w/atchs, pp. 29-30, in *ibid.*
21. Charge sheet, Reed, Joseph Roy, March 18, 1930, atch to Rpt, Maj. John G. Tyndall, I.G.D., to Cmd. Gen, Eighth Corps Area, subj: Investigation Concerning Major Lewis H. Brereton, A.C., Post Field, Fort Sill, Oklahoma, March 31, 1930, w/atchs, in *ibid.*
22. Ltr, Jed Johnson to Sec. of War Patrick J. Hurley, May 26, 1930, atch to Rpt, Maj. John G. Tyndall, I.G.D., to Cmd. Gen, Eighth Corps Area, subj: Investigation Concerning Major Lewis H. Brereton, A.C., Post Field, Fort Sill, Oklahoma, March 31, 1930, w/atchs, in *ibid.*
23. Ltr, F. Trubee Davison to Cong. Jed Johnson, June 11, 1930, in *ibid.*
24. Robert P. White, *Mason Patrick and the Fight for Air Service Independence* (Washington, D.C.: Smithsonian Institution Press, 2001), pp. 126-28.
25. Richard G. Davis, *Carl A. Spaatz and the Air War in Europe* (Washington, D.C.: Center for Air Force History, 1993), p. 16.
26. See footnote 1.

# "AGAINST LONDON." A ZEP





# PELIN OFFICER'S ACCOUNT



Arnold D. Harvey

**E**arly in the afternoon of March 16, 1917, five Zeppelin airships of the Imperial German Navy set out from their bases in Germany to bomb London. The observation officer on board Zeppelin L.40, under the command of Kapitänleutnant Sommerfeldt, was Oberleutnant zu See Hans Gebauer. After the war, Gebauer studied law at the University of Königsberg, wrote a thesis on the question of delayed delivery of purchased items, and became a district judge in East Prussia. In the late 1920s, the staff working on the official history of the wartime Royal Flying Corps and Royal Air Force obtained a copy of an account he had written of L.40's part in the March 1917 attack on London. This seems never to have been published in Germany and only the English translation, preserved in The National Archives at Kew and printed here for the first time, appears to survive. (AIR 1/2398/267/12)

Contrary to what Gebauer supposed, L.40 did not bomb London. What he thought was the River Thames, nearly 900 feet wide at London Bridge, was in fact the Royal Military Canal, just over sixty feet wide and sixty miles south-east of London. The fact that L.40's bombs landed harmlessly in Romney Marsh, on the south side of the canal, also suggests that L.40 was heading in the opposite direction from the one Gebauer supposed. Bad weather and primitive technology made navigation extremely difficult. The primitive technology can be illustrated by some statistics. More than 500 feet long with a gas capacity of 935,000 cubic feet, L.40 carried nearly five tons of fuel, more than a third of a ton of lubricating oil, and nearly twenty-three tons of water ballast for its mission: and only 3,450 pounds (1.6 tons) of bombs. The 878-mile-flight, at altitudes of up to 19,000 feet, lasted 25 hours, 57 minutes at an average speed of 33.7 mph. Only three months later, the German Army began bombing London with twin-engine biplanes, in theory a much more efficient and economical weapon.

## “AGAINST LONDON”

By

Dr. Hans Gebauer (District Judge),  
Königsberg,  
1st Sea Lt. (Reserves) and Former  
Observation Officer.

For over two months we had been in Alhorn [Ahlhorn] with the new ship. Apart from practice and preparatory flights we had not yet been in the air. The enormous progress made by English fliers in the defence against our airships during the night

raids had compelled us also to unremitting work on alterations to our ships in order to make them lighter and thus make it possible for them to rise higher. Thus considerable reconstruction took place with regard to our fine new ship and its fellows of the same type with a view to lightening them. On a practice flight after this reconstruction we reached heights that were almost double that at which we had carried out raids up till then. The general discomfort resulting to the crews from this great height we had learnt to overcome partly by accustoming them to it and partly by the use of oxygen apparatus. Now we were again able to give our old enemy another dig with cheerful minds.

And so the middle of March 1917 arrived. In deep peace lay our base at Alhorn. For days at a time no shed door had opened, for days at a time the inhabitants of the surrounding villages had not seen any of the proud ships moving away above their houses. But the calm was only apparent for we had come to the time of the so called “Raids Period,” that is, the moonless part of the month, during which all airships held themselves ready solely for a raid on England and were used for scouting only in cases of the utmost necessity. The airship staff [was] therefore in these days on tenterhooks to a great extent. Would March pass by like the other two months without the possibility of a raid or would the weather god favour us this time?

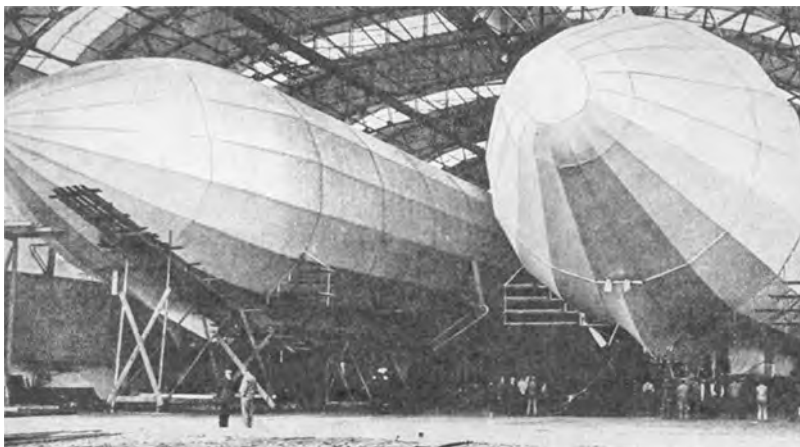
More diligently than ever was the weather chart studied, more often was the curve of the barograph watched and every fresh reading of the weather was taken into reckoning with unusual interest. The commander sat all day long over his charts, plotted out the course, reckoned out the apportioning of weight in the ship and a lot more, and weighed up all the possibilities for the raid on and retreat from London, according as wind and weather allowed. The observation officer drew up in order the charts and signal books that were to be taken with him and superintended the work on the ship. Helmsman and engineer were at work with the crew and the working party, thoroughly overhauling and testing everything down to the smallest part. And above all there weighed on all minds the question: “Will it really come to a raid on London this time?”

And this it came to one morning. To AL. (the senior commander) [Korvettenkapitän Viktor Schütze] there came from the staff the longed-for order: “Raid on England, South, return journey over Belgium.” Five airships had received the order, amongst them ours. In a flash the aerodrome took on quite another aspect. A feverish activity was displayed. Along the rails of the military railway track

THE COMMANDER SAT ALL DAY LONG OVER HIS CHARTS, ...WEIGHED UP ALL THE POSSIBILITIES FOR THE RAID ON AND RETREAT FROM LONDON, ACCORDING AS WIND AND WEATHER ALLOWED

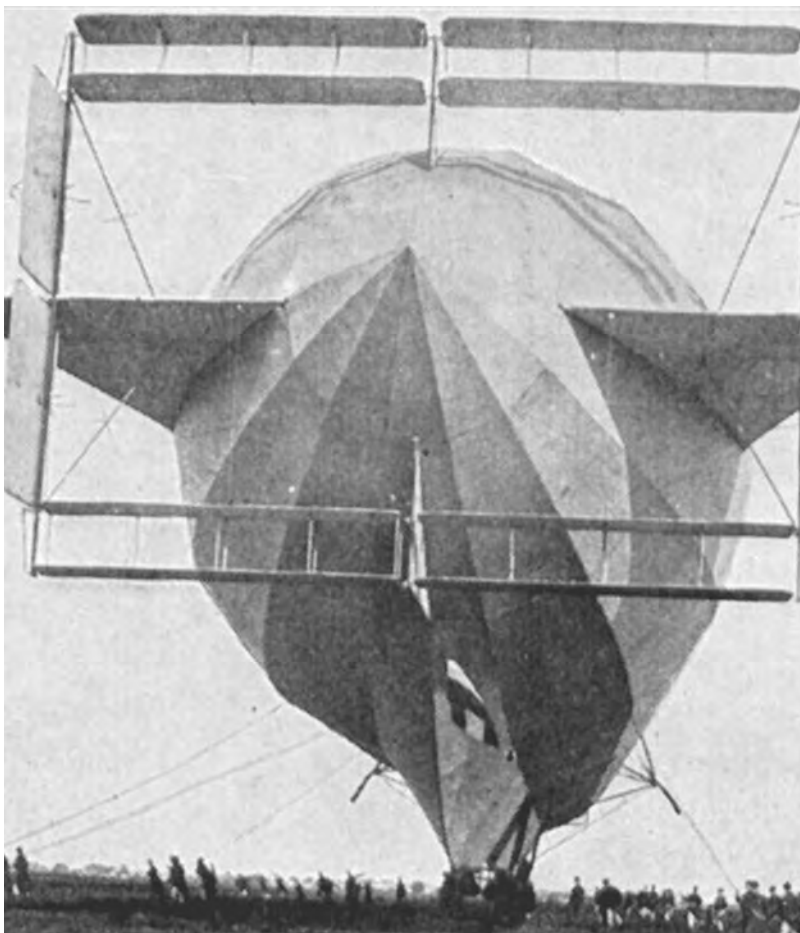
Since completing his PhD at Cambridge, England, Arnold D. Harvey has taught at universities in Italy, France, and Germany. He is the author of *Collision of Empires: Britain in Three Wars, 1793-1945* (1992), *A Muse of Fire: Literature, Art, and War* (1998), *Arnhem* (2001), and *Body Politic: Political Metaphor and Political Violence* (2007). Dr. Harvey has contributed to the *RUSI Journal*, and published articles on air warfare in several journals, including *Air Power History*, “Bombing and the Air War on the Italian Front, 1915-1918.” [Fall 2000]





(Above) View inside a zeppelin shed containing two aircraft.

(Below) Stern view of a wartime zeppelin. Contrast the box-like tail structure with the simple tail of L.40 on pages 14 & 15. This complicated assembly was not used on later model Zeppelins like L.40.



rolled huge explosive bombs and countless incendiary bombs from the munitions depot to the shed where they were hoisted by pulleys to the interior of the ship. Parties of boatmen belonging to the marines fastened numerous gripping straps on to each ship by which these giant birds were to be hauled into the open. Provisions and thermos flasks, furs and leather coats were stowed away in the gondolas. Motors hammered out their test running, so that in the sheds one could not hear oneself speak. The crew went off to their canteen to get an early dinner. On their return the great doors of the sheds opened slowly. On the marines' signal mast rose the signal: "Major Action." Trumpets sounded the alarm and called together to the last man all

belonging to the corps, and rightly so, for a stiff wind was blowing straight across to our sheds so that we had to reckon with an exit not altogether without danger. The marines marched up in their companies and were distributed about the ship. "Crew embark," rang the order of the observation officer down the megaphone through the shed. "Weigh out forward," "Weigh out aft," "Ballast centres," "Ballast aft," came the next commands thick and fast. And once more streams of water gushed out into the shed all along the ship's sides so as to bring the ship to "floating point." Gradually the ship began to lift lightly from its mooring blocks on which it lay with its gondolas. "It is under way"—"Blocks away" [and] "Towing rings loose"—are the two last orders in the shed. The ship hovers free for the exit, held in the shed by hundreds of sailors. Anxious is the face of the commander who stands at his post in the leader's gondola. Uneasy too is the observation officer who has taken his stand a few hundred yards in front of the open shed doors to direct the exit manoeuvres, for the meteorological rating standing near him announces with decisive note the wind strengths read off from the anemometer: "5m, 5½m, 5m," and so on. That is indeed quite enough cross wind for so large a ship. The wind streamers placed along the exit course flutter relentlessly. But at last a moment comes when the wind drops a little. "4m, 4m, 3½m" sounds the monotonous call of the meteorological rating. The moment must be seized. "Airship forwards," rings out the observation officer's order into the shed, drawn by powerful hands, held between the guiding rails by steel hawsers on running blocks the colossus slides out of the shed. Bell signals resound in all the gondolas. The commander has turned the engine room telegraph to "All motors run light." The din of the motors starting up increases the observation officer's difficulty in transmitting his orders to the marines and renders the task still more awkward.

Thus far only half the giant ship has got outside the shed, under pressure of the wind it sways lightly to one side. Every now and then comes a gust of wind and each time the rear gondola sits down heavily on the ground. With all their strength the marines endeavour to intercept the shocks. Anxious minutes there are indeed until there comes from the shed door the relieving call: "Ship is free of the shed."

"Let go aft," rings out the next command over the drome. Freed from the running blocks and now held only by the bow, the ship swings into the wind and thereupon lies on the aerodrome free of the shed and ready to rise. The holding lines are paid out and lifted by ready hands the observation officer climbs into the ship and, the propeller slowly getting into its swing, L.40 rises on the word of command into the air.

Just a turn over the dear Oldenburg, then we follow the ships that have taken off before us with a course set for the North Sea. The aerial is brought out and the successful rise is reported to the fleet leader. Nordeich and the island of Norderney glide

IN THE  
MOTOR  
GONDOLAS...  
THE DIN IS  
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SO THAT IT IS  
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IT IS CHIEFLY  
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THEY WATCH  
OVER THEIR  
MOTORS,  
FOR THEY  
RECOGNISE  
EVERY  
IRREGULAR-  
ITY RIGHT  
AWAY BY  
THE CLANG



past below us, in the gloomy weather the North Sea, destitute of shipping, lies a dirty grey below the ship.

We set out course due west. While we slowly rise and the commander trims his ship for the usual heights by the steady discharge of ballast water, the observation officer goes into the interior of the ship. There hang the explosive bombs gently rocking. When the ship stands over the sea they will be made ready by screwing in the fuses. Those of the crew who can be spared while on the way, go up to the platform on the top of the ship and into the observation post in the stern to keep a look-out. The machine guns standing here and in the gondolas are loaded and test shots are fired. For at all times one must be prepared for the attack of English aeroplanes.

In the motor gondolas sit the engineers, crouched over their motors. The din is infernal, so that it is only possible to converse by signs, and yet it is chiefly with the ear that they watch over their motors, for they recognise every irregularity right away by the clang. The rigger climbs about in the framework, testing his ballonets and making sure that the ventilators are working properly and letting out the gas forced from the ship in its continual ride.

Hours have passed in the meantime.

The observation officer comes back to the front gondola. There stands the commander and the helmsman, gazing with anxious faces downwards towards the stern. It is already twilight down below there and icy cold is the air in the gondola. Fine snow has driven through the chinks of the gondola windows into the interior of the gondola. We are at a height of 3500m. Following the commander's nod, the observation officer also looks down. There lies

the Dutch island of Terschelling. The heavy surge rolls in long white lines towards the shore. There must be a strong wind down there and it blows still stronger up here. Drifts of snow pile up on the ship and allow only a glimpse of the earth now and then. There is no doubt about it: bad weather is coming from the west. We seem now to be in the thick of it for the picture below scarcely alters and we make little progress forwards. Turn back? Give up the raid? Only for a moment does the question rise, it is discarded immediately. In any event we will endeavour to reach London in spite of contrary wind and the increasing load of snow.

The quickly increasing darkness permits us to seek lower levels. The enemy fliers and light sea forces, who have on many a previous occasion given us a bad time here, cannot see us this time. From the phosphorescent tracks of the ships we know positively that we are now making more headway. Still it is past midnight when we catch sight of the English coast in the region of Norwich. As a fine grey line below us it looms out of the darkness. We quickly rise to a height of over 4000m, for Norwich is well protected by searchlights and batteries and many a time before we have exchanged the first greeting with the enemy here. Can it be that our motors have not been heard in the storm? Can it be that an airship raid is considered an impossibility in such weather? After we have passed over this typically darkened town we turn on a southerly course towards London. At great speed with the north west storm behind us, we roar onwards. We must now be over Cambridge. A light mist lies over the earth so that it is only now and then that we see a few lights shining through.

"Raid Stations"—The last ballast water is let out, only leaving a small quantity for the landing.



WHILE WE  
ARE NOSING  
OUR WAY  
OVER THE  
WHARVES,  
THE DOCKS  
AND THE  
DOCKYARDS,  
THE  
EXPLOSIVE  
BOMBS ...  
WHIZZ  
THROUGH  
THE AIR

BELOW, THE  
SEARCH-  
LIGHTS ANX-  
IOUSLY SEEK  
US OUT, BUT  
WE ARE TOO  
HIGH. LIKE  
QUIVERING  
FINGERS  
THEY GROPE  
AROUND  
BENEATH US

We are keeping at 5299m, the watch fingers point to 2 o'clock in the morning. London must now be lying close ahead. Bearing out in wide sweeps to the west we make for the town before the wind. The location chart lies spread out on the chart table and all is still in the leader's gondola. From time to time a table lamp, almost entirely darkened, is passed over the chart or the instruments. The observation officer bends over the speedometer, ascertains the speed of the ship and thoroughly tests the electric controls of the bomb dropping apparatus. The bombs still hang safe in the ship.

For the rest, each of the figures, muffled up in furs, is deep in his own thoughts. All are surely thinking of the last raid on London in the small old ship. Will the defence start off again as intensely? Then we were over the town in company with other ships, in the glaring light of whole clusters of searchlights, shot at with shells of every conceivable calibre, while below us we could plainly see the flashes from the nozzles of the guns. Verey lights, evidently fired by airmen, were exchanged above and below us and the crash and flash of the bombs dropped by the numerous airships mingled in ghastly fashion with the fire of the defence, until all these lights died away in one great blood-red glare of fire and for a second or two the defence was silent. One of our airships had been hit and like a mighty torch lighting us up with a sinister light had plunged into the depths, wrapped in flames, and so close it had been to us that we believed at first that our own ship was on fire. In the next raids on which we had taken other towns also as our objective, it had been the same over London. Every time one of our proud ships had gone up in flames. On our last raid we had seen even as far as the middle of England the flow of light from the burning falling L.31 which under [Kapitainleutnant Heinrich] Mathy had set out with its crew from Alhorn and found death.

"Lights ahead on the starboard"—Thoughts were brusquely interrupted. London is in sight. In spite of the thin layer of mist we can already make out the typically illuminated aerodromes which lie around the whole town. They have heard us and are ready to receive us. For the rest the town is in darkness. And yet she can never conceal herself, the Thames as it flows through is her betrayer.

"Stand by to drop bombs"—The observation officer loosens the safety-catch for the releasing of the bombs and pushes it over. In the body of the ship the trap-doors open below the bombs.

While the commander is giving the side-steersman the necessary directions, while we are nosing our way over the wharves, the docks and the dockyards, the explosive bombs with here and there incendiary bombs whizz through the air. An intense yellowish glare is seen as they explode below and at each explosion there is a corresponding recoil in the ship. Below, the searchlights anxiously seek us out, but we are too high. Like quivering fingers they grope around beneath us and yet they are powerful searchlights whose cone of rays left with us a most unpleasant memory of the last raid.

How different it is today from that time. How far removed below us all lies today. At this height we hear no defence batteries neither do we perceive the flashes of gunfire. Only the fliers are surely around us in the air, that is if it has been possible for them to rise in spite of the storm. No ship besides ourselves is in the raid and the strange silence is only broken now and again by the crash of our own bombs.

Carefully cruising over our selected goals we cover them with our explosive and incendiary bombs until we have used up the last of our munitions. Then we run on a southwest course towards the Channel and the coast of Flanders. On the south coast of England searchlights once more look for us until at last thick white banks of cloud lie under us. We are over the Channel.

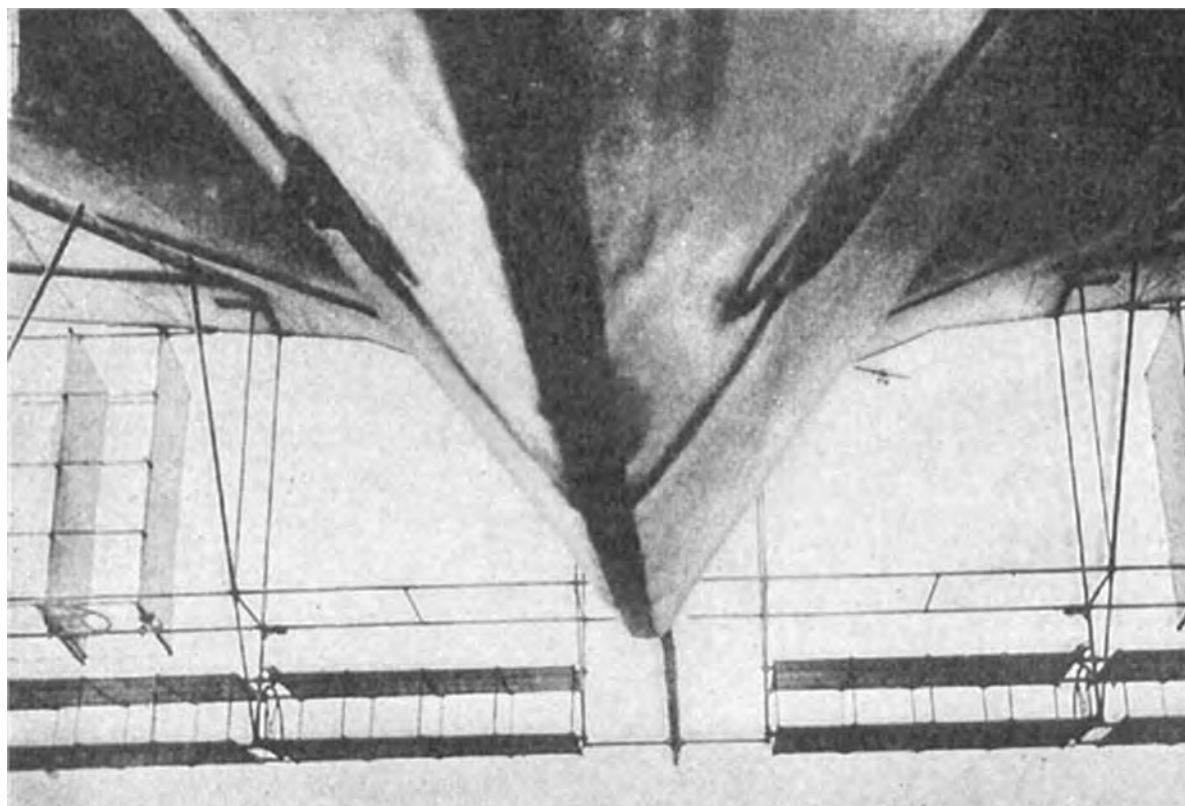
The observation officer climbs into the interior of the ship, there the rigger is diligently searching all over the ballonets, looking to see whether or not gas is escaping anywhere as a result of damage done by shots. It is not exactly pleasant in the corridor. Through the coal-black darkness faintly gleam small luminous marks which are fastened on to the uprights of the railings along the 180m long corridor. The narrow tread in the middle of the passage-way is scarcely a foot wide. A false step means a headlong fall into the depths. Where before hung right and left the long rows of tightly filled bags of ballast water and also the bombs, which provided a certain support, now yawn empty gaps, and picking one's way along this narrow track is no pleasant job at night. Here the rating in charge of the petrol has his station and ascertains with his gauge-rod the amount of oil in the petrol tanks available for the return journey.

The leader's gondola is now a scene of brisk activity, for it is a question of the most careful and precise navigation to get through the narrow space over the war infested area accurately. The usually darkened beacon-fires on the coast are to burn tonight, it is true, but the dense masses of cloud below us block all view from us. To ascertain the speed of the wind and measure any drifting is under these circumstances an impossibility. Have we still the north-west storm as when we were over London? Has it abated, has it increased? It gives rise to earnest reflection and a thorough study of the weather news picked up from time to time. The wireless messages from home are not of the kind to make matters any more pleasant. From the staff of the airship division wireless messages are received urgently advising us to go towards middle or south Germany since a storm is raging over the North Sea. Fine prospects for the journey home!

In the meantime we must have flown over the Channel for the layer of clouds below us is becoming less dense and is giving way as over England to a light mist. Afar off to our right we can see great fires in the midst of a fairly large town. Has an airship been raiding it or is it the Front?

Meanwhile the moon has risen and wanly lights up the thin veil of mist beneath us, trusting to which we descend to 3000m on account of the icy

Photo taken from the bridge of a Zeppelin during a London air raid. Again, notice the complicated tail structure indicative of an early model.



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ELEVATION  
STEERSMAN  
AND SIDE-  
STEERSMAN  
ARE UNCON-  
SCIOUS**

cold. It is 4 o'clock in the morning, and we have already been 16 hours in the air. Faces are somewhat strained and here and there a sailor off duty leaning against a railing post closes his eyes from time to time.

Then suddenly an alarm sounds throughout the ship. The observation officer rushes out of the wireless cabin, having just been in communication with home, and into the leader's room. With the elevation controls laid hard over the ship rises up at a steep incline. "We are over France, the Front lies ahead," cries the commander to him in explanation.

Down below they have discovered us in spite of the mist. Verrey lights and rockets mount upwards but in a few seconds we are over 5000m high and still rising. In our haste no one has thought of getting out the oxygen apparatus. Elevation steersman and side-steersman are unconscious. The commander and the steersman take charge of the controls and the observation officer hurries into the wireless cabin to fetch the oxygen. There the wireless operator has just collapsed in a faint. We are at a height of 5000m and are safe from attack here. Until a flying machine is made that will rise to this height we have nothing to fear.

With the aid of the oxygen the crew soon recover and the Front soon lies far behind us. The incident has however left us with just one unpleasant bit of damage. In the wireless cabin where a message was in the act of being despatched home with great intensity the insulating coils could not hold out against the rarefied air in the room at the great height and burnt out. Now we can only transmit at less power and cannot get into communication with home. Thrown entirely upon our own resources from now onwards we travel on with an

easterly course. We are over the zone held by our own troops and although we do not know where and how we shall land today, there comes to us a certain feeling of protection.

The mist is gradually dispelled and to our great joy L.41 emerges near us. So it also has been over France. Side by side the two ships rush swiftly towards the German frontier.

Beneath us and often hidden by cloud lies a mountainous and rugged land, a river with many windings and fortresses and [i.e. on?] its banks flows through, we take it for the Meuse. We cannot determine it more precisely. But the survey gives us no anxiety for in the end we are bound to come to the Rhine.

From one of the five airships appointed to this flight a wireless message comes in, probably from the ship in front of us, reporting that it has successfully raided London and is going to Dresden. According to its report the second ship did not manage to raid and is on the way to the airship base at Juterbog. Further sheds in middle or south Germany are not fitted for such large ships as we are travelling in.

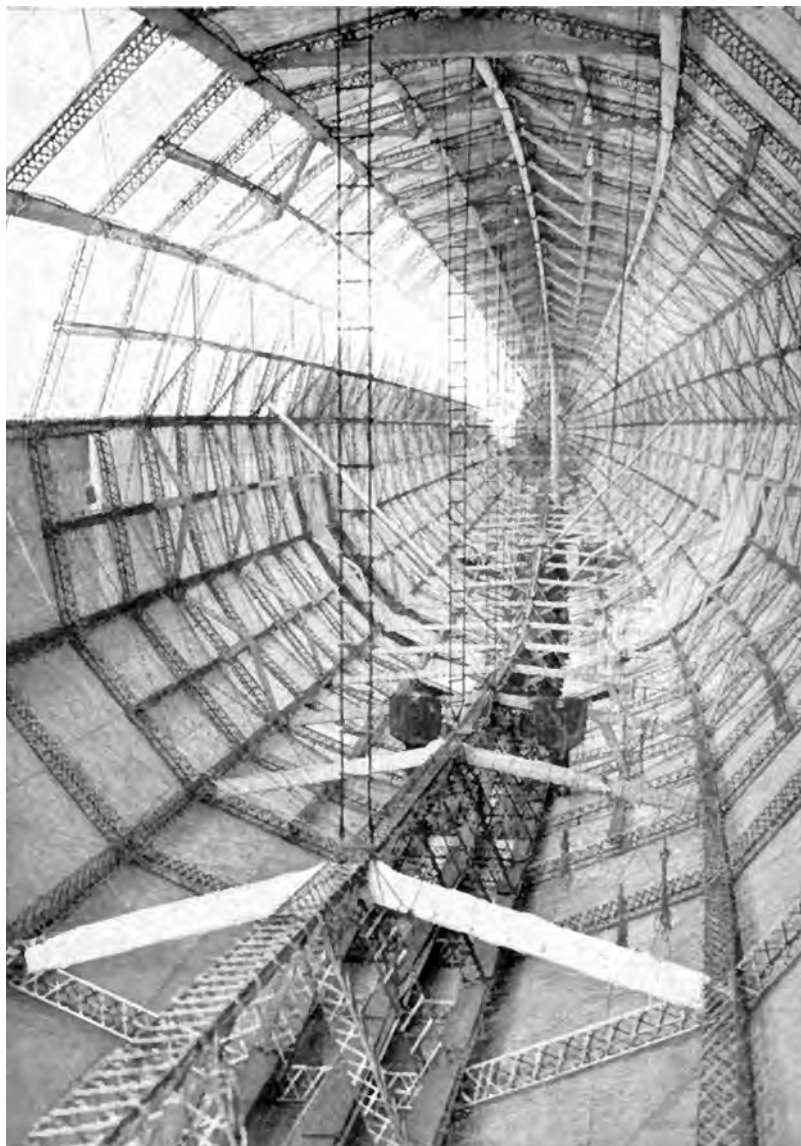
A brief consideration. A landing far from home without the possibility of getting the ship into a shed spells total loss in such weather as this, and in any eventuality we shall be much better off in the neighbourhood of our own base so we gradually set our course for Alhorn.

At 9 o'clock in the morning we see at last far ahead the Rhine and we descend to make sure where we are. "Euskirchen" we read on a station. This lies southwest of Bonn and from there to Oldenburg we still have a fair stretch to go.

In the meantime the sun has broken through

**UNTIL A  
FLYING  
MACHINE IS  
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WILL RISE TO  
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WE HAVE  
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FEAR**





Interior of a Zeppelin, showing the complicated internal structure required.

**THE MARINES HAVE COME TOWARDS US AT A RUN. THEY SEIZE OUR TRAILING ANCHOR ROPES AND FORTHWITH L.40, MAKING A SMOOTH LANDING, LIES ON THE AERODROME**

and we are just crossing straight over Dusseldorf. The ship labours in the gusty winds. Below the people wave enthusiastically and special jubilation rings up from that part of the town where there is a school. Do they then guess down there whence we are coming?

A further anxiety makes its appearance, the petrol is getting scarce. For the moment we cannot conserve it for we need all the motors against the stiff northerly wind.

We come to an industrial area. The side-steersman now knows how to set his course and Essen is the home of our commander. Soon the Ruhr with Herr Krupp's fine villa lies beneath us. Then comes Essen. There is the commander's family house, there is his own house. We signal with flags from the leader's gondola and then Essen, swallowed up in mist, lies behind us.

Gradually the weather becomes more gloomy, but that also has its good side. The gusty winds abate and we can descend lower where the contrary wind is not so strong. L.41 has been out of sight for a long time. We are now in regions with which we are well acquainted through our occasional trial

flights. Munster is passed. With our lame wireless apparatus we inform our base at Alhorn of the landing ahead. We hear the same being sent from L.41. So he will also make for the home base in spite of bad weather.

The layers of cloud grow thicker and thicker but the wind seems to be growing continually weaker. We keep to a height of 300m. in order not to lose our direction for an instant, for although we have shut off two motors the petrol is running alarmingly short. Quakenbruck is ahead it is only a question of minutes and then we must catch sight of the sheds at Alhorn. The commander trims his ship faultlessly so that there may not be a false landing. By this time only the front motor is running and it now has petrol enough for a very short while, but the landing ground already lies before us and the marines are drawn up in wedge shaped formation for the landing. We make straight for them. Just as the ship is moving over the aerodrome hedge the last motor gives out.

At this moment we perceive L.41 thrusting downwards through the mist in order to land likewise. His petrol has also given out. His motor has stopped before he has reached the ground and since the ship is too light, it disappears driving leeward into the clouds.

In the meantime the marines have come towards us at a run. They seize our trailing anchor ropes and forthwith L.40, making a smooth landing, lies on the aerodrome. The faces of the militia and the naval reserves beam with joy at seeing again at least one ship in good condition back again. We also were glad to have got back safe home after the strenuous 27 hour flight contrary to our expectations. The task of getting the ship in turned out to be by no means an easy one but with the enthusiasm with which everyone set to, it was soon accomplished.

Still more delighted were we when L.41 suddenly appeared again over the 'drome. In its numerous petrol tanks they had come upon sufficient residue to enable them to make a smooth landing considering the circumstances.

From the other two ships which had made their way to Dresden and Juterbog came reassuring news likewise. Both had managed to get into the sheds although one of them suffered considerable damage in the process. From L.39 alone had there been no report since the morning. We went on hoping that it like ourselves had met with damage to the wireless apparatus and would soon make its appearance over Alhorn. But at dinner in the officers' mess when the two places of our comrades of L.39 were still unoccupied, we began to suspect something wrong. Next morning the Eiffel Tower sent out the message that the ship had been brought down in flames at Compiègne and the crew had met their death.

So this raid also had demanded its sacrifice. A valiant crew had been this time also snatched from our midst and among them again were two dear comrades, Lt. Captain Koch and Naval Lt. von Collani. ■

# *The Destruction and Rebuilding of*





# the Afghan Air Force, 1989-2009



Forrest L. Marion

(Overleaf) U.S. Army Col. John Hansen (in middle, right knee on ground) poses with Air Corps Advisory Group (ACAG) members and interpreter-translators (ITs) in front of an Afghan National Army Air Corps Mi-35 helicopter. (All photos courtesy of the author.)

(Right) In Zahir's words, "in 1960 taken in a truck when I was moving to the F-86 aircraft with my instructor and my two other friends." (Translation provided by Mohammed Yousef Afzali, Cultural Advisor to Brig. Gen. Givhan, May 2009.)

## BRIG. GEN. MOHAMMAD ZAHIR, RECALLED IN HIS RETIREMENT THAT THE AIR FORCE HAD DOUBLED IN SIZE UNDER DAUD, FROM 200 TO 400 AIRCRAFT

In May 1919, during the brief Third Anglo-Afghan War, the Royal Air Force (RAF) employed a lone Handley Page V/1500 to bomb the palace in Kabul. Although little physical damage resulted, the bombing caused great distress among the city's residents. One author noted that "the women of the royal harem rushed on to the streets in terror." Within days, Afghanistan's King Amanullah Khan had called for a truce. Moreover, he also began planning to create his own air force. In the 1920s, Amanullah accepted a small number of aircraft from the Soviets, Italians, and British and sent Afghan pilot candidates to the Soviet Union and Italy for training.<sup>1</sup>

A rebellion in 1928-1929, proved nearly catastrophic for the young Afghan air force and led to Amanullah's abdication. When order was restored, only a few Soviet-built biplanes remained serviceable, and the majority of pilots in Afghanistan—actually Soviet airmen—had departed Kabul. For most of the 1930s, the Afghan air arm remained on its own and managed to maintain only a few aircraft in flying condition.<sup>2</sup>

In the late 1930s, the Afghan government purchased new aircraft, mostly light bombers, from the British and Italians. In 1939, the air force maintained thirty-four flyable aircraft, mostly British Hawker Hinds and Italian IMAM Ro.37s. Despite Afghanistan's neutrality, World War II took a toll on the Afghan air force. Logistical issues became insurmountable, and foreign support dropped off.<sup>3</sup>

By 1947, the Royal Afghan Air Force's main role was internal policing, that is, counterinsurgency; the air arm remained small, flying largely obsolete aircraft. In 1955, a renewed relationship with the Soviet Union brought newer aircraft and reflected Soviet influence on the Afghans' air organization, materiel, and base infrastructure. Among the Soviet aircraft obtained were MiG-17 fighters, Il-28 bombers, and Il-14 and An-2 transports, plus trainers and helicopters. By 1960, the air force boasted at least 100 combat aircraft, including transports and helicopters. Afghan air force personnel attended Soviet schools and training courses.<sup>4</sup>

From the mid-1960s to mid-1970s, the Afghan air force increased its inventory of MiG-21s and Mi-8 helicopters, in particular. For at least the next two decades the MiG-21s, of which the Afghans received several models, served as Afghanistan's frontline fighters. The Mi-8 "Hip" helicopters also performed yeoman duty for decades. The air force's major airfields were at Kabul, Bagram, Mazar-i-Sharif, Jalalabad, and Kandahar.<sup>5</sup>

In 1973, former prime minister Mohammad Daoud took control of the government in a blood-



less coup, ending the monarchy. Daoud's tenure lasted five years, ending in his death in 1978, in the coup that established the communist "Democratic Republic of Afghanistan." One of Afghanistan's leading airmen, Brig. Gen. Mohammad Zahir, recalled in his retirement that the air force had doubled in size under Daoud, from 200 to 400 aircraft.<sup>6</sup> The increase included several newer aircraft types: several models of the MiG-21; and the Su-7 fighter, An-26 transport, and Mil Mi-8 helicopter. For the most part, while the more modern fighters replaced the older MiG-17s and earlier MiG-21 models, the An-26s replaced older An-2s and Mi-8s replaced the 1950s-era Mi-4s.<sup>7</sup>

By the end of 1978, Afghans increasingly were in rebellion against the reforms the new communist regime intended to impose. In March 1979, during an uprising in the western city of Herat, Afghan Il-28 bombers were called upon to attack the rebels. Although the Il-28s were antiquated aircraft, their performance proved to be the deadliest of Afghan air power in the country's history to that time.<sup>8</sup>

The decade that began with the Soviet invasion of Afghanistan in December 1979, witnessed the increase of the Afghan air force to an unprecedented size in the country's history, by some estimates upwards of 500 aircraft. At its peak, the service possessed between 230 to 250 combat fixed-wing aircraft, including ninety MiG-17s, forty-five MiG-21s, and at least sixty Su-7s, 150 Mi-8 and Mi-24 helicopters, plus an unknown number of transports and trainers.<sup>9</sup>

The introduction of the Stinger anti-aircraft missile marked a turning point in the Soviet-Afghan war. On a September afternoon in 1986, *mujahideen* fighters downed three of eight unsuspecting Soviet Mi-24 Hind helicopters, as they approached the airfield at Jalalabad. The Soviets soon changed their tactics, in most cases choosing to operate their ground attack aircraft at higher

*Forrest L. Marion graduated from the Virginia Military Institute with a BS degree in civil engineering. He earned an MA in history from the University of Alabama and a doctorate in United States history from the University of Tennessee. Since 1998, he has served as a historian at the Air Force Historical Research Agency, Maxwell AFB, Alabama. In 2009, he deployed to Kabul, Afghanistan, as Special Historian to the Commanding General, Combined Air Power Transition Force (CAPTF), from which service this article originated. Commissioned in 1980, he retired from the USAF Reserve in May 2010.*





Afghan Air Force Brig. Gen. Mohammad Zahir (retired), with Col. Forrest L. Marion, USAFR, at North KAIA, May 2009; Marion holds a photo of Zahir as a young officer

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RABBANI-  
MASSOUD,  
LATER, THE  
TALIBAN)**

altitudes so as to remain less susceptible to the Stingers. By 1987, it was clear the Soviets intended to withdraw from Afghanistan, and in February 1989, the last Soviet forces left the country. In their preparation for withdrawal, the Soviets built up the Afghan air force in the hopes that it could help sustain the compliant communist regime of Dr. Mohammad Najibullah.<sup>10</sup>

After the Soviet withdrawal, many observers were surprised when Najibullah's regime lasted—largely due to factionalism among the several mujahideen militias—until April 1992. Burhanuddin Rabbani then formed a new Afghan government, and named as his defense minister Ahmed Shah Massoud, the “Lion of Panjshir”—so called for having survived numerous Soviet operations directed against him in the Panjshir Valley during the 1980s. Later, Massoud selected Mohammad Dawran—a handsome former MiG-21 test pilot, cosmonaut-trained, and with extensive command experience during the 1980s—to be his air defense and air force commander.<sup>11</sup>

Throughout the 1990s, Afghanistan, and especially Kabul, suffered from the ongoing fighting between *mujahideen* groups and the government in Kabul (first, Rabbani-Massoud, later, the Taliban). There was also fighting between (and within) the groups not in control of the capital. Militia leader Gulbuddin Hekmatyar was responsible for much of the city's devastation. Thousands of civilians died in and around Kabul; most of the city's infrastructure was crippled or destroyed. The once-large Afghan air force was reduced drastically in numbers and capability.<sup>12</sup>

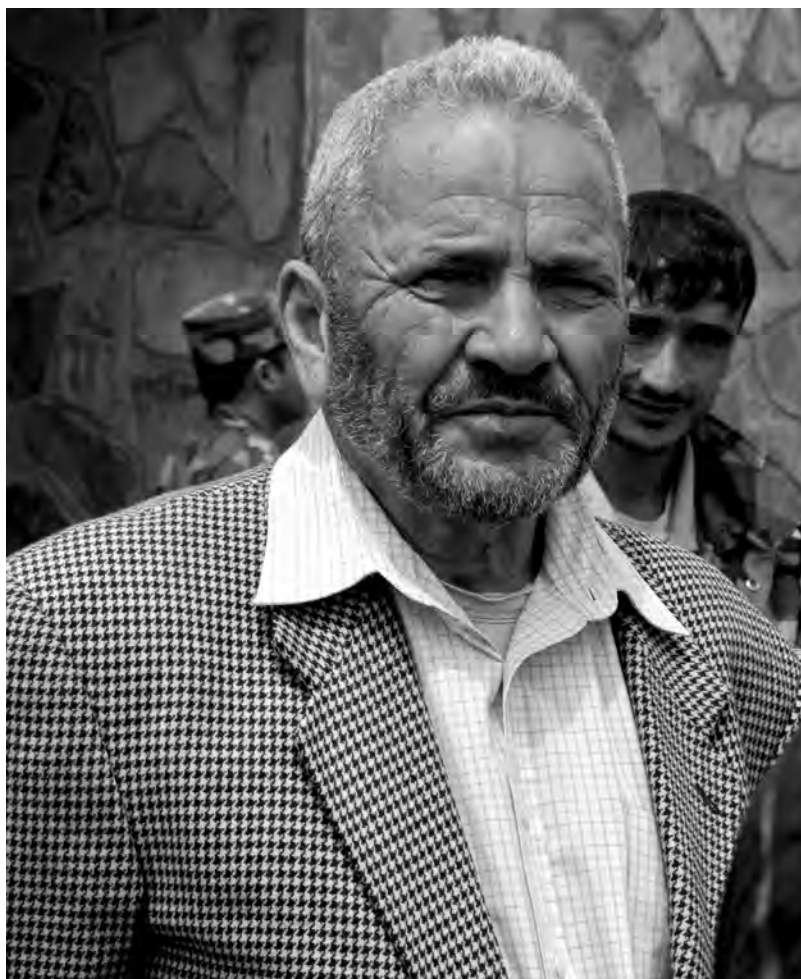
For a time, the Rabbani government controlled most Afghan military aircraft. The Air Corps commander, Major General Dawran, estimated that the Afghan air force possessed 350 aircraft when Najibullah lost power in 1992. By 1994, after a major split within the Rabbani-Massoud government, Dawran recalled his air force maintained control of some 200 aircraft. Well-known for switching allegiances, Gen. Abdul Rashid Dostum, the

leading warlord in the region around Mazar-i-Sharif—the base for most air force aircraft in north-central Afghanistan had defected to Hekmatyar's side. Dawran estimated that Dostum's defection secured some 120 aircraft for the Uzbek leader's air force, including MiG-21s, Sukhoi fighter-bombers, fixed-wing transports such as An-12/32, and Mi-8/17 helicopters. Dostum's strength was in the north-central region of Afghanistan (near Uzbekistan) which included the airfields at Mazar-i-Sharif—where the vast majority of his air force was based—and Sherbegan. In three aerial engagements in January 1994, Massoud's MiG-21s downed two Su-22s and one MiG-21 operating under control of the combined Dostum-Hekmatyar militia, known as DGMAF.<sup>13</sup>

The Afghan Air Corps' senior enlisted man recalled that in the 1990s Dostum's aircraft periodically flew from Mazar-i-Sharif in attacks against Kabul. Command Sergeant Major (CSM) Abdul Malik had been a colonel in the mid-1990s serving as chief of staff of the Kabul-based 77th Air Defense Brigade. When the Air Corps was organized in 2005, as one of the six corps under the Afghan Ministry of Defense—the five others were ground forces—its manning document provided for only a limited number of officer positions, which went mainly to pilots or technical specialists; Malik accepted the CSM position. In that role, he worked hard to improve the training, quality of life, and pay for the enlisted force. He also personally designed both the Afghan Air Corps' patch worn on the flight suit as well as the insignia currently worn by all Air Corps and Afghan National Army NCOs.<sup>14</sup>

The year 1994, saw not only Dostum's defection, but also the rise of the Taliban in the southern part of the country. The Taliban soon captured Kandahar, including at least two dozen MiG-21s at Kandahar International Airport. Col. Abdul Shafi Noori, the highly-respected commander of the Kabul Air Wing Maintenance Group, later noted that in the mid-1990s all the Taliban's fighter aircraft—perhaps thirty—were based at Kandahar. Probably the majority were no longer flyable due to years of neglect and lack of spare parts, despite the best efforts of Shafi and his maintenance crews, who had little choice but to work for the Taliban.<sup>15</sup>

In 1995, the Taliban took Herat and western Afghanistan. In September 1996, assisted by Su-22 air-ground strikes, Kabul fell to the Taliban. The country's new rulers were aided by another defection of militia forces previously loyal to the government. Major General Dawran, formerly Massoud's air force commander, recalled that when he and other senior leaders evacuated Kabul, they flew out by night on an An-32, their destination unknown. Massoud was not with his air chiefs at that moment, having been evacuated to the Panjshir on a helicopter flown by “Massoud's pilot,” Brig. Gen. Mohammad Barat. Barat was the country's foremost helicopter pilot, twice decorated for valor by different regimes, Najibullah's and Rabbani-Massoud's. Blending a warrior's spirit, wit, and a winsome smile, he commanded the



(Above) Afghan Air Force Col. Mustafa Tayer, retired, after speaking to the Afghan pilots and pilot-candidates soon to depart for the United States for training, April 23, 2009, North KAIA.

(Above right) Lt. Mustafa Tayer of the Royal Afghan Air Force, solo T-34 flight, March 5, 1958.

**WHEN THE TALIBAN WAS FORCED OUT OF KABUL IN 2001, HE WORKED AS A SHOP-KEEPER FOR FIVE YEARS BEFORE RETURNING TO MILITARY DUTY**

Kabul Air Wing in 2009. During the evacuation in 1996, Massoud had intended for his air leaders to fly to Takhar province, but the airfields there were not equipped for night landings. The An-32 pilot decided upon Termez, Uzbekistan, as the best suitable airfield. Refused permission to land, he landed there after declaring an emergency. The Uzbek government, however, supportive of General Dostum, took the aircraft and turned it over to Dostum, the militia leader. Ironically, as of 2009, An-32 tail number 350—the very aircraft on which Dawran had evacuated—was one of the six An-32s in the Afghan Air Corps inventory.<sup>16</sup>

Due to the political turmoil since the 1970s, many Afghan pilots have flown under several different regimes and militias. At the Air Corps' highest echelon, both Major General Dawran and Brigadier General Barat entered the air force under the government of King Zahir Shah. Brig. Gen. Abdul Wahab entered the service not long after the king's cousin, Mohammad Daoud, seized power in 1973; while both Colonel Shafi and Command Sergeant Major Malik began their military careers under the Soviet-installed government of the mid-1980s. While Dawran and Barat went on to serve under the Rabbani-Massoud government in the 1990s, Wahab served in Dostum's air force after being a businessman for a couple of years. Prior to that, he had been in prison for his part in a failed coup attempt against Najibullah in 1990. In the late 1990s, the Taliban



“recruited” Shafi to repair their aircraft, first at Kandahar and later at Kabul. A colonel in the 1990s, Malik remained with Massoud's forces until the Northern Alliance/ Coalition forces pushed the Taliban out of Kabul in late 2001. Tragically, the Lion of Panjshir, Ahmed Shah Massoud, had been assassinated by two al Qaeda agents, posing as journalists and seeking an interview with the Tajik leader, on September 9, two days before al Qaeda attacked the United States.<sup>17</sup>

As of 2009, a number of younger pilots among the less than one hundred “active” Air Corps fliers, have similar backgrounds. Many attended military high school in Kabul and then the aviation university there. One still-active An-26 pilot, began his operational flying under the pro-Soviet regime in Su-7 and Su-22 fighter-bombers at Bagram. Later, he flew the An-32 under the Taliban government. When the Taliban was forced out of Kabul in 2001, he worked as a shopkeeper for five years before returning to military duty. Based at Kabul once again, he has served in the Afghan Air Corps as an An-26 pilot. Another current pilot flew the Su-22 in the 1980s followed by the An-26, then the An-32. He flew Massoud in the 1990s. At that time, Khwaja Muhammad Yasin recalled that Massoud's air force consisted of about twenty aircraft: seven An-26 and An-32 transports, ten or twelve helicopters, and two L-39s. As of 2009, the Air Corps still flew the two L-39 jets for ceremonial purposes. A third current pilot, Saleh Mohamad, was diverted during the mid-1980s from a MiG-21 assignment and reassigned to fly An-26s at Kabul during a period of heavy fighting around the capital. He recalled the Najibullah government's air force kept about fifty transports at Kabul International Airport, most of which were An-26s. In the early 1990s, Saleh Mohamad flew as an An-26 instructor pilot for the Rabbani-Massoud Government and later flew An-32s for the Taliban. After the Taliban's exodus in 2001, he remained in the reserve for several years before returning to active flying, in 2009 serving as a lieutenant colonel in the Air Corps. Another Air Corps aviator, Mohammad Esa, learned to fly the Su-7 and served at Shindand under Najibullah's air force. Reassigned to Kabul, he transitioned to the An-26. He recalled that Khowst Province was a dangerous area in those days and that about one transport per month was lost there. In what was perhaps his





One of the six Afghan Mi-35 Hinds, firing rockets for training, the first known use of rockets by an Afghan helicopter since October 2001.

**RELEASED IN A PRISONER EXCHANGE, HE LATER FLEW FOR THE TALIBAN AFTER THEY CAPTURED HIS HOME-TOWN AREA, MAZAR-I-SHARIF**

most dangerous sortie, he was fired upon, probably by a Stinger, near Herat, but survived. Under the Rabbani-Massoud air force, he flew An-32s as well as An-26s before flying for the Taliban for three years in the mid-to late 1990s. He recalled that at one time the Taliban's financial problems required them to "lay off" some fifty pilots. As of 2009, Mohammad Esa served as a captain in the Air Corps. A fifth pilot, Qabil Khan, originally expected to go to the Soviet Union for flight training, but family needs led him to remain in Afghanistan. For that reason, he trained in L-39s at Mazar-i-Sharif, near his home. For most of the next twenty years, he flew as an L-39 instructor pilot under the governments of Najibullah, Dostum, the Taliban, and under the Karzai administration, as of 2009. He recalled that at one point in the 1990s under General Dostum, Mazar-i-Sharif was the base for about twelve L-39, six Su-22, three MiG-21, one An-32, and one An-12 aircraft. Qabil Khan endured the experience of being shot down by Taliban ground fire and imprisoned for nearly six months. Released in a prisoner exchange, he later flew for the Taliban after they captured his hometown area, Mazar-i-Sharif. After 2001, three L-39s eventually were flown from Mazar-i-Sharif to Kabul, two of which still flew as of 2009.<sup>18</sup>

By the end of the 1990s, years of warfare had reduced the once-large Afghan air force to a shadow of its former self. The Taliban, which controlled all except the far northern portions of the country, still maintained a small air force, including approximately twenty MiG-21/ Su-22s. Massoud's Northern Alliance forces, supported mainly by neighboring Tajikistan, operated at least one An-12 transport, and eleven Mi-8/17 and six Mi-35 helicopters mostly in the northern reaches of the Panjshir Valley and Takhar and Badakhshan provinces. In what may have been the last major air operation conducted by Massoud's Northern Coalition prior to his assassination, two of his Mi-35 helicopters assisted in halting a Taliban offensive in Badakhshan, in September 2000.<sup>19</sup>

In fall 2001, the U.S./Coalition air strikes that

followed al Qaeda's attack on the United States destroyed nearly all of what remained of the Taliban air force. In a rare incident prior to the start of Operation Enduring Freedom, Brigadier General Barat flew a Taliban Mi-17 from Kabul to a mountain hideout and covered it so as to prevent its detection by reconnaissance assets. It survived the air campaign intact and in late 2009 Mi-17 tail number 514 was returned to the Air Corps' inventory following extensive refurbishment.<sup>20</sup>

In 2005, the Americans took the first tentative steps to reestablishing an Afghan presidential airlift capability in keeping with a directive from U.S. Secretary of Defense Donald Rumsfeld. In May 2005, Afghan officials named Major General Dawran the commander of the new Afghan Air Corps. Later that year, a small team led by Col. John Hansen, U.S. Army, began working with Afghan airmen at Kabul International Airport. By mid-2006, Colonel Hansen had developed a plan for the Air Corps that became the basis for the Combined Air Power Transition Force (CAPTF) that began work the following year. Meanwhile, in early 2006 a London meeting known as "Bonn II" produced an "Afghanistan Compact" that called for an Afghan national army of 70,000 personnel by the year 2010. From that number, Afghan and Coalition air leaders planned to carve an Air Corps of more than 7,000 members. Also during 2006, Air Corps pilots began flying training missions with their American/Coalition counterparts.<sup>21</sup>

A commercial airline pilot and U.S. Air Force Reserve officer, Brig. Gen. Frank Padilla, had led an aerial survey team in late 2006 that developed an "air campaign plan" similar to what Colonel Hansen had envisioned for the Air Corps. In May 2007, Padilla became the first CAPTF commander. The CAPTF's mission was to "set the conditions for a fully independent and operationally capable Afghan National Army Air Corps to meet the security requirements of Afghanistan." The term "independent" did not refer to the air arm as a separate service but rather to the capability of the Air Corps to conduct operations independently, that is, without outside assistance. The plan, revised and approved in 2007, called for a helicopter/transport/light-attack-based Air Corps of approximately two hundred aircraft organized into three air wings—one each for presidential airlift, rotary-wing, and fixed-wing operations. Padilla ably led the CAPTF until he turned over the reins to USAF Brig. Gen. Jay Lindell, in September 2007.<sup>22</sup>

Lindell led the CAPTF until September 2008. During that period, the Air Corps increased modestly in size, largely the result of aircraft donations by Coalition partners. In July 2007, the Air Corps had possessed twenty-two aircraft. Within approximately fifteen months, the donations of seven Mi-17s from the United Arab Emirates (UAE), six more from the Czech Republic, and one from Slovakia helped increase the Afghan inventory, despite several training losses, to thirty-one aircraft. While the UAE funded its own donations, the Czech and Slovakian aircraft were refurbished

One of the six Afghan Mi-35 Hinds, flying near snow-capped mountains in northeastern Afghanistan.



## GIVHAN SPOKE DARI EVEN BEFORE ARRIVING IN AFGHANISTAN, GIVING HIM INSTANT CREDIBILITY

with American financial aid. Also during 2008, the Presidential Airlift Squadron (PAS) became operational. By the close of the year, the squadron had flown President Hamid Karzai several times in and around Kabul and on one occasion to the vicinity of Khowst. Other Air Corps accomplishments included helicopter support for the Afghan Army's 209th Corps near Mazar-i-Sharif in May 2008 and, one month later, its first operational mission in support of the International Security Assistance Force (ISAF) at Kandahar. In terms of the fixed-wing inventory, Ukraine donated three An-32s, refurbished with U.S. funding.<sup>23</sup>

By October 2008, the Air Corps inventory included twenty-one rotary-wing and ten fixed-wing aircraft, consisting of eighteen Mi-17s, three Mi-35s, six An-32s, two An-26s, and two L-39s.<sup>24</sup> A

(Below) Brig Gen Walter D. Givhan, Commanding General, Combined Air Power Transition Force (CAPTF), speaks to an Afghan-American audience at North KAIA, April 23, 2009.



month earlier, USAF Brig. Gen. Walter Givhan had assumed command of the CAPTF. Givhan spoke Dari even before arriving in Afghanistan, giving him instant credibility and greatly enhancing his rapport with every Afghan he met, regardless of status. Under his capable leadership during the next year, the organization grew modestly in size and scope while laying the groundwork for further expansion. Moreover, the U.S. Air Force institutionalized the CAPTF's mission by activating the 438th Air Expeditionary Wing (438 AEW) as U.S. Air Forces Central's unit under the CAPTF. Indeed, for most of Brigadier General Givhan's tour, the only non-USAF members of CAPTF were the eight to ten members of the Czech Republic's Military Training Team who trained the Afghan Mi-35 crews. From the 438th wing's activation on November 1, 2008 until September 2009, Givhan was dual-hatted as commander, 438 AEW, and commanding general, CAPTF. During winter 2008-2009, the North Kabul International Airport cantonment area, the newly-constructed home of the Afghan Air Corps, opened. Just two years earlier, the entire area had been covered with several thousand pieces of unexploded ordnance, much of it from the 1980s. When it opened early in 2009, it was the premier facility of any kind in the country.<sup>25</sup>

In spring and summer 2009, three significant developments affected the Air Corps. First, the CAPTF increased the availability of technical training courses for the Afghans in a variety of subjects, among them communications, electronics, and maintenance. Students attended classes at the Kabul Air Corps Training Center adjacent to Kabul's airport. Interpreter-translators represented a critical link in the training process. One of



Wreckage of a Soviet An-12 transport north side of Kabul Int'l Airport (KAIA), spring 2007 – as the construction of the new compound for the Afghan National Army Air Corps (ANAAAC) was beginning.

## CAPTF BEGAN TRAINING AFGHAN MI-35 CREWS WITH LIVE ROCKETS

## AFGHAN PILOT CANDIDATES TRAVELED TO THE U.S. ...TO BEGIN ENGLISH LANGUAGE, [AND] UNDERGRADUATE PILOT, TRAINING

Final phase of construction of main buildings for the ANAAAC, north compound of KAIA (North KAIA).



the most uniquely qualified interpreters was an Afghan aviator of Indian descent who had flown for Ariana Afghan Airlines in the 1980s. The second development was that CAPTF began training Afghan Mi-35 crews with live rockets for the first time since the Taliban's exit from Kabul in 2001. By the end of the summer, the Mi-35s were flying operational missions. And, third, for the first time in over three decades, a sizeable group of Afghan pilot candidates traveled to the U.S., to San Antonio, Texas, to begin English language, to be fol-

lowed by undergraduate pilot, training. At the same time, a group of rated Air Corps pilots also went to the U.S. to improve their English after which they would undergo instrument flying training. While the latter group was to return to Afghanistan to fly the new C-27A Spartan fixed-wing transports—twenty were expected—the former group would return home as newly-minted pilots to form the backbone of the Air Corps for the next generation of Afghan aviators.<sup>26</sup>

Today, as American and Coalition members



Security Police facility on ANAAC compound, North KAIA, October, 2008.

**THE FORBIDDING TERRAIN OF AFGHANISTAN, THE THREAT FROM ROADSIDE BOMBS, AND THE NEARLY TOTAL LACK OF RAIL TRANSPORTATION MAKE AIR POWER ESSENTIAL**



continue working with Afghan airmen to rebuild their country's air arm, a similar effort is ongoing in Iraq. On the same day the 438 AEW was activated in 2008, the 321st Air Expeditionary Wing was also activated, with the mission of rebuilding the Iraqi Air Force. In both cases, the objective was to restore the air capabilities of a former adversary whose air service had been modeled after the Soviets and for whom air mobility was particularly needed. Learning how to "do it right" is critically important, in part because there may be other "Afghanistans and Iraqs" in the future. In June 2009, the chief of both the 438th and CAPTF, Brigadier General Givhan, observed that probably the closest the USAF has come to the current Afghan air power mission was the one in Southeast

Asia, forty years ago, involving South Vietnamese and Cambodian airmen. But for the most part, as Givhan stated, "It's been left to us to figure out how to do this." The forbidding terrain of Afghanistan, the threat from roadside bombs, and the nearly total lack of rail transportation make air power essential, he added. As the general often noted, "This country begs for air power," not only for security but also for "governance," as it provides the best means by which the government may touch the lives in a positive way of many Afghans in remote and inaccessible villages. Learning how to rebuild air power in the right way in Afghanistan (and Iraq) may well prove to be of strategic significance to the United States in the ongoing conflict; time will tell.<sup>27</sup> ■

Power generation plant on ANAAC compound, North KAIA, October, 2008.



**NOTES**

1. Ali Jan, "Few Snapshots from our Aviation History," publication data unknown; Lance R. Blyth, "The Royal

Air Force and Air Control: Historical Air Operations in the CENTCOMAOR, 1919-1939," ms. dated 15 Apr 2006,



publication data unknown. Blyth served as historian for US Central Command Air Forces-Forward.

2. Lennart Andersson, "The First 30 Years of Aviation in Afghanistan," (2 parts), part 1, at [www.z-bok.se/Afghanistan.html](http://www.z-bok.se/Afghanistan.html); biography of Amir Amanullah Khan at [www.afghanan.net/afghanistan/amanullahkhan.htm](http://www.afghanan.net/afghanistan/amanullahkhan.htm). During the rebellion the Royal Air Force carried out the first mass airlift in history, transporting British citizens from Kabul to safety in Peshawar.

3. Andersson, "The First 30 Years," part 1; Andrea Vento, "The strange story of Zahir Shah's Italian Aircrafts," [original in Italian] *Romba il motore* ["Roars the engine"], place and date of publication unknown.

4. Author's discussion with retired Col. Ghulam Mustafa Tayer, Apr. 8, 2009, Kabul, Afghanistan; Notes pertaining to discussions cited herein are at AFHRA/OH, Maxwell AFB, Ala.; various issues, *Jane's All the World's Aircraft*; Stephen Tanner, *Afghanistan: A Military History From Alexander the Great to the Fall of the Taliban* (Da Capo Press: n.p., 2002), pp. 225-26; Martin Ewans, *Afghanistan, A Short History of its People and Politics* (Harper Perennial: New York and London, 2002), pp. 154-58; Adamec, *Historical Dictionary of Afghan Wars*, (Scarecrow Press, 1996), p. 50.

5. *Ibid.*; Zahir discussion. For MiG-21 information, see [http://en.wikipedia.org/wiki/Mikoyan-Gurevich\\_MiG-21](http://en.wikipedia.org/wiki/Mikoyan-Gurevich_MiG-21).

6. Zahir discussion. Possibly, a significant portion of this increase in inventory occurred shortly after Daoud's death in 1978, when the Soviets began building up the Afghan air force to combat the growing insurgency.

7. Zahir discussion; "List of Afghan Air Force Aircraft."

8. Girardet, *Afghanistan, The Soviet War*, (St. Martins, 1985), pp. 23, 115-16; Tanner, *Afghanistan*, pp. 231-32; Ewans, *Afghanistan, A Short History*, p. 197.

9. Estimate in 1985 by Stalder, "Air War in Afghanistan." Estimates of Afghan "combat aircraft" typically seemed to omit helicopters and transports, despite the fact that those aircraft often conducted "combat" missions, at least by American standards.

10. Mohammad Yousaf and Mark Adkin, *Afghanistan – The Bear Trap, The Defeat of a Superpower* (Havertown, Pa.:Casemate, 2001 [1992]), pp. 174-77.

11. Dawran discussion. Apparently, Dawran was preceded for a time by Col. Mir Anjamuddin, formerly of Najibullah's air force; see article, "Minister Names Air Force Chief," *Asian Defence Journal*, Sep. 1992, p. 106.

12. "Radical Hekmatyar is Afghan Premier," *Asian Defence Journal*, Apr. 1993, p. 87; "Afghan General, Troops Escape to Tajikistan," *Asian Defence Journal*, Dec. 1993, p. 118; Michelle Tan, "From the ground up," *Air Force Times*, Oct. 6, 2008, pp. 16, 18. An article in January 1994 stated, "Some 18-months after the mujahideen threw out the communist regime, the country seems to be heading towards division along ethnic lines. The northern Afghanistan is dominated by ethnic Tajiks and Uzbeks who resent control by the majority group the Pashtoons who live mainly in the south of the country"; see "Hikmatyar Offers to Resign with Rabbani," *Asian Defence Journal*, Jan. 1994, p. 98.

13. Dawran discussion; Tom Cooper, "Afghanistan, 1979-2001; Part 3," Oct. 29, 2003, at [www.acig.org/artman/publish/article\\_339.shtml](http://www.acig.org/artman/publish/article_339.shtml).

14. Malik discussion. The revitalized Afghan air arm was known as the Afghan Air "Corps" because it comprised one of the six corps established under the Afghan Ministry of Defense following the Bonn-II meetings. As of 2009, there was some interest among both Afghan and American officials in restoring the air service as an independent air force.

15. "Fighting Intensifies in Afghanistan," *Asian Defence Journal*, Feb. 1994, p. 120; Steve Coll, *Ghost Wars: The Secret History of the CIA, Afghanistan, and Bin Laden, from the Soviet Invasion to September 10, 2001* (Penguin

Press: New York, 2004); Shafi discussion. As there were probably a number of MiG-21s at Kandahar that were not flyable at the time, varying definitions of "intact" may account for differences in the numbers of aircraft reportedly captured by the Taliban. Cooper stated that when the Taliban captured Kandahar, they obtained "six intact MiG-21 fighters"; Coll stated six MiG-21 fighters and four Mi-17 helicopters were captured. Whether or not they included other aircraft in various stages of disrepair was unclear. See Cooper, "Afghanistan, 1979-2001; Part 3"; Coll, *Ghost Wars*, p. 291.

16. Dawran discussion; CAPTF/438 AEW aircraft maintenance data, Mar.-Jun. 2009.

17. Dawran, Barat, Wahab, Shafi, Malik discussions.

18. "Air Corps Pilot" discussions, May 13, 2009, Kabul, Afghanistan. All "Air Corps Pilot" discussions conducted by Col. Forrest L. Marion, USAF, 438 AEW Historian.

19. Tom Cooper, "Afghanistan, 1979-2001; Part 3." Cooper indicated that in mid-2001 the Taliban air force operated the following aircraft: eight MiG-21s, eight Su-22s, an unknown number of transports, and about a dozen helicopters. The Mi-35 was a modified version of the Mi-24 Hind.

20. Barat discussion; 438 AEW historian's notes, Mar.-Jun. 2009; information on tail number 514's return to the Air Corps was provided to author by Dr. James A. Malachowski, 438 AEW historian, April 2010.

21. Dawran discussion; oral history interview (OHI), Col. Daniel R. Miller (USAF) with author, Mar. 27 and 29, 2009, Kabul, Afghanistan; OHI, Mr. Richard C. "Nick" Nickerson and Mr. Laney M. Pankey with author, Mar. 25, 2009, Kabul, Afghanistan; and OHI, Mr. George S. "Jim" Ferrell with author, Mar. 31, 2009, Kabul, Afghanistan; note that Nickerson, Pankey, and Ferrell were all of MPRI (contractor). E-mails, Col. John Hansen, USA, (Ret.) to author, May 2009. For details of the "Afghanistan Compact," agreed upon at London Jan. 31- Feb. 1, 2006, see [www.nato.int/isaf/docu/epub/pdf/afghanistan\\_compact.pdf](http://www.nato.int/isaf/docu/epub/pdf/afghanistan_compact.pdf). The projected size of the Afghan Army was later increased.

22. Discussion, Maj. Gen. Frank J. Padilla, USAF, with author, Jan. 29-30, notes maintained at AFHRA/OH; CAPTF mission statement, Hq, CAPTF/438 AEW, Kabul; Slides, "Afghan National Army Air Corps (ANAAC), Combined Air Power Transition Force (CAPTF), 438th Air Expeditionary Wing (438 AEW), March 2009," informally referred to as the "air campaign brief/slides," in 438 AEW/HO files, Kabul, Afghanistan, and at AFCENT/HO, Shaw AFB, S.C..

23. Miller discussion; Slides, ANAAC, CAPTF, 438 AEW, Mar. 2009 (air campaign slides). The Mi-17 was a modified version of the Mi-8 Hip.

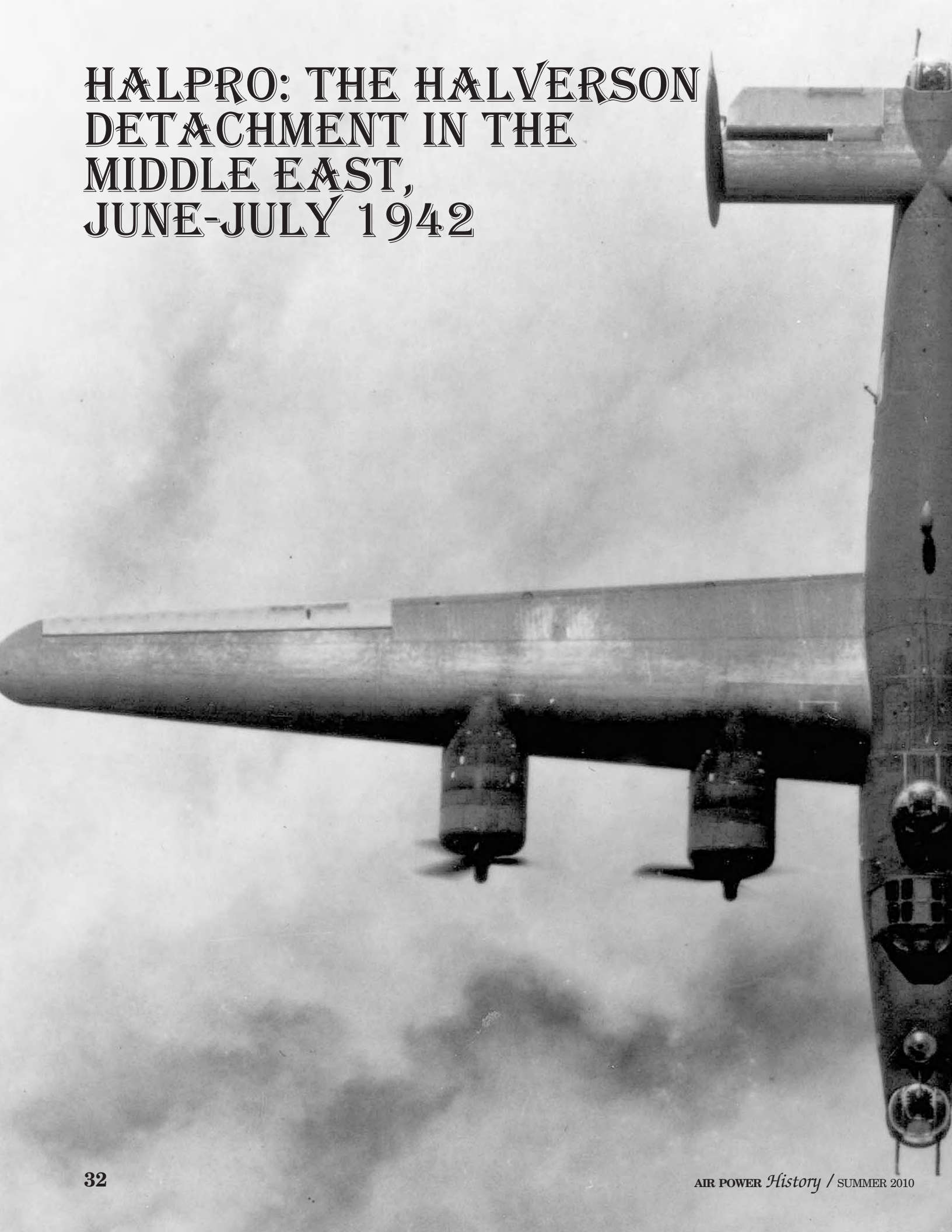
24. Because the L-39s flew mainly for ceremonial purposes, the U.S. provided no assistance for those aircraft. One L-39 pilot was among the group of Afghans that traveled to San Antonio, Texas, for English language training to be followed by instrument flying training. He expected to transition to fly the C-27A Spartan.

25. History, 438 AEW, Mar.-Apr. 2009, May 2009; 438 AEW/HO files, Kabul, Afghanistan; author's personal observations, Mar.-Jun. 2009, Kabul, Afghanistan.

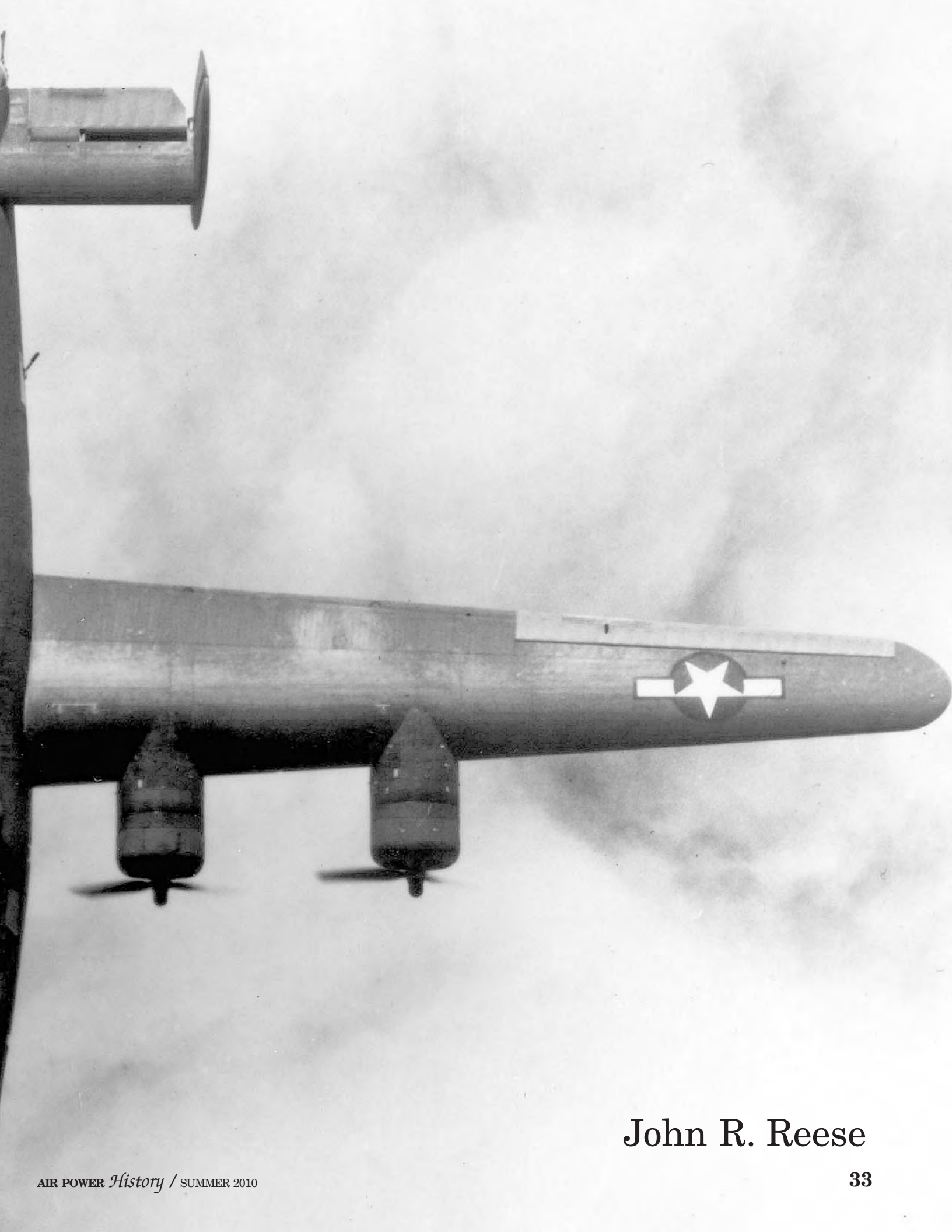
26. Author's discussion with Mr. "K" (name omitted for security purposes), May 20 and 26, 2009, Kabul, Afghanistan; History, 438 AEW, Mar.-Apr. 2009, May 2009; 438 AEW/HO files, Kabul, Afghanistan; author's personal observations, Mar.-Jun. 2009, Kabul, Afghanistan.

27. Discussion, Brig. Gen. Walter D. Givhan, USAF, with author, Jun. 8, 2009, Camp Eggers, Kabul, Afghanistan; John House, "General Cites Importance of Air Power for Afghanistan," *DefenseLINK*, Jun. 3, 2009; for 321 AEW, see Jarrod R. Chavana, "New 321st AEW commander sees promising future for Iraqi Air Forces, at [www.centaf.af.mil/news/story.asp?id=123184521](http://www.centaf.af.mil/news/story.asp?id=123184521).

# HALPRO: THE HALVERSON DETACHMENT IN THE MIDDLE EAST, JUNE-JULY 1942







John R. Reese

(Overleaf) The Halverson Detachment was equipped with B-24s, similar to this one.

(Right) General George C. Marshall.

British historian Sir Michael Howard observed that, while armed forces almost always enter the war with the wrong doctrine, “it does not matter that they have got it wrong. What does matter is their capacity to get it right quickly when the moment arrives.”<sup>1</sup> The list of works sparked by Michael Howard’s observation is short: a collection of essays in *America’s First Battles: 1776-1965* edited by Charles Heller and William Stofft focuses on the struggle to “get it right” in ground operations; and Aldon Purdam takes the same approach for aerial warfare in *America’s First Air Battles*. The latter focuses mainly on challenges to air power theory and doctrine, which seems to be a fetish among airmen. This essay expands the discussion in examining the Army Air Forces’ (AAF) first encounter with the European Axis powers. A military crisis in the Middle East, Anglo-American alliance politics and an unpromising project to bomb Japanese cities from Chinese bases came together in the summer of 1942, to produce a classic case study in what the British call “ad hocery.” The operations of the AAF’s Halverson Detachment, a special task force of B-24 heavy bombers, in the Middle East in June and July 1942, offer unique insights into how politics, doctrine, training, improvisation, combat leadership, and home front morale shape the conduct and the outcomes—perceived and real—of first battles. Examining these initial encounters with the enemy can help us understand why getting it right can be both difficult and instructive for those who survive them.

An air power option emerged as the only feasible American response to British requests for combat forces during what Army Chief of Staff George C. Marshall called the “Egyptian crisis” in summer 1942. For nearly two years, Axis (Italian and German) and Allied armies had traded blows in a series of offensives and counteroffensives back and forth across what the British called the Western Desert, a “comparatively narrow coastal strip running from Alexandria in the East to Tripoli in the West, a distance roughly equal to that between Moscow and Berlin.”<sup>2</sup> In January 1942, Panzer Group Africa, a German-Italian formation under the command of General (later Field Marshal) Irwin Rommel began its last major offensive, aimed at the



Nile Delta and the Suez Canal. By the end of May, Rommel had pushed the British Eighth Army well into eastern Libya before the front stabilized along the Gazala-Bir Hakeim line. By June 11, a series of piecemeal counterattacks so depleted the British armored force that Rommel was able to renew the offensive and send a stumbling Eighth Army back toward the Egyptian border. General Marshall told President Roosevelt that Panzer Group Africa could be in Cairo in as little as a week and on the banks of the canal shortly thereafter. There was nothing, he continued, that the United States could do “immediately that might favorably affect the situation in the Middle East.”<sup>3</sup> While the military situation in the Middle East was grave, U.S. resources were limited. Expediting delivery of tanks to the Eighth Army and sending a few AAF combat units to support the RAF in the Middle East were the best that could be done to help.

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(Near right) General Henry H. "Hap" Arnold.

(Far right) Maj. Gen. George H. Brett. (Photo courtesy of George H. Brett, II.)

WHILE THE REAL SHOW WAS EUROPE, THE ENEMY IN THE WESTERN DESERT WAS THE RIGHT ONE



General Henry H. "Hap" Arnold, Commanding General AAF, was enthusiastic about committing air forces to this fight. Indeed, he envisioned the Middle East as an "air theater of operations." One version of this vision had been "on the books" in the Air War Plans Division since summer 1941. AWPD-1 conceptualized a huge strike force of very long range bombers in the Near East that would join others in "converging on Germany from all directions... [and] reverse the situation wherein Germany is a continent fighting an island and place Germany in the position of an island in air power under attack from all corners of the earth." Execution would have to wait until a suitable bomber was available, perhaps as early as late 1945.<sup>4</sup>

In September 1941, however, the acting Chief of the Air Corps, Maj. Gen. George H. Brett found a more immediate need during his tour of the Middle East. Brett was in the region to judge the results of the U.S. Lend Lease efforts to provide aircraft and contract maintenance facilities to the RAF. Seeing the British in a "tight spot," his airman's instincts told him that the RAF should "immediately strongly reinforce the Egyptian theater with a mass of air" to "wipe out" German supply bases in Libya and "neutralize all attempts to strengthen the German air force in Crete and lower Greece." This RAF buildup would not occur, he believed, as long as "British planning in the Middle East...hinged upon American entry into the war alongside Britain." In anticipation of this event, Air Staff planners roughed out requirements for an American Middle East air force with a full complement of bomber, pursuit, and transport aircraft. After Pearl Harbor, FDR sent William C. Bullitt to the region to survey and report on the strategic situation. Bullitt echoed Brett's



assessment in his cables to the President and advocated the dispatch of "American air units under American command to Egypt immediately," when he returned to Washington.<sup>5</sup>

In June 1942, just six months into the war, the AAF was still mobilizing and balancing competing requirements from all theaters in a global war. Supporting the RAF in the Middle East was an economy of force measure that would nevertheless help Arnold achieve a major AAF goal of having American "youngsters" flying American aircraft in combat against the Germans as soon as possible. "The [American] people," he confided to his diary during a visit to London, "wanted a US Air Force [and] wanted action in Europe." While the real show was Europe, the enemy in the Western Desert was the right one, and the Egyptian crisis provided an opportunity to show what air power could do.

General Marshall, however, saw it somewhat differently. He had his doubts about any U.S. commitment to the Middle East. "Much of what we had," General Marshall recalled, "was in an amateurish stage, particularly air." Even so, Allied leaders, from Roosevelt and Churchill to commanders in the region, saw Arnold's air theater of operations as proof of a growing strategic partnership in which, for the moment at least, the U.S. was the junior member. Consequently, American airmen would be sent into battle as understudies with the modest expectation that they would relieve some of the pressure on their RAF brothers.<sup>6</sup> The first American airmen on the scene, however, had been hand picked, organized and trained for a much different mission.

The Halverson Detachment (or HALPRO) was the product of an ambitious scheme to deploy a



B-24s on the assembly line at the Willow Run Factory.

## HALPRO CREWS WERE... TEACHERS WHO HAD TO TEACH THEMSELVES

“four-plane task force” of heavy bombers to strike Tokyo and other Japanese cities from advanced bases in China. In January, Arnold selected Col. Harry Halverson, a member of the interwar Air Corps’ inner circle of aviation pioneers and the Second Air Force’s Assistant G-3, to command the detachment. Colonel Halverson received his assignment from Arnold himself, consulted his “black book” and reached into every corner of the air force, including the Air Staff and Air Ferrying Command, to assemble a “versatile” group of pilots, navigators, and support personnel to man the unit. The book also yielded a “who’s who” of the Air Corps’ enlisted technicians with whom he had worked over the years. By the end of January, the HALPRO team had been selected and orders were being cut; Halverson and his staff were huddled together at Bolling Field, Washington, D.C., with a team of China experts to plan the operation; and HALPRO engineers and technicians were busy at Patterson Field, Ohio, modifying four B-24D Liberators for service in the Far East. From the beginning, the emphasis was on experience and airmanship; looking through the photos at the graying moustaches, receding hairlines, and wrinkled brows, one sees a group of airmen who would be considered ancient a year later.<sup>7</sup> Nevertheless skills developed in peace-

time service require considerable honing to produce combat capabilities.

Despite high-level backing and an apparent sense of urgency, it took time to pull the project together. Initial operational planning was not completed until mid-February, and most of that month was also devoted to an operational test and evaluation of the modified Liberators at Eglin Field, Florida. The nearly 3,000-mile range and heavy payload of the AAF’s newest bomber made it ideal for this special mission. But gunnery tests found problems with both the tail turret, corrected easily, and the bottom turret, which was removed. Testing and modification of the aircraft continued at McDill Field, Florida, where Halverson and his crews were introduced to the Liberator during the first week of March.<sup>8</sup> The next two and a half months were consumed with training and final preparations for deployment, first at McDill and later at Fort Myers (Florida) Army Air Fields.

By almost any standard, aircrew training was abbreviated and accelerated, especially considering that the first HALPRO crews were, in the words of the unit’s after action report, “teachers who had to teach themselves.” Few, if any, of these airmen had B-24 experience, and the AAF was more than a year away from establishing a formal transition



Colonel Halverson was one of the interwar aviation pioneers, shown here in 1929 with the other crew members of the "Question Mark" including, from left to right, Lieutenant Harry Halvorsen, Capt. Ira Eaker, Staff Sgt. Roy Hooe, Maj. Carl Spaatz (mission commander), Lt. Elwood "Pete" Quesada, and an unidentified crewmember. During a 1929 refueling operation dubbed "Question Mark," a Fokker C-2A was refueled in flight by two modified Douglas C-1 transport aircraft.



**HIS UNIT HAD BEEN DETAILED FOR A SINGLE OPERATION—A RAID ON RUMANIAN OIL FACILITIES LOCATED IN THE PLOESTI AREA—WHICH WAS TO BE MADE “AS SOON AS POSSIBLE WITH ALL AVAILABLE PLANES”**

program for heavy bomber pilots and navigators. This initial cadre of veteran Air Corps aviators improvised a syllabus that included “day and night practice missions, gunnery and bombing, fuel consumption tests, navigational flights, etc.,” which allowed them to get to know their new aircraft. In April, they had to apply this knowledge as instructors when the detachment moved to Fort Myers and picked up twenty additional B-24Ds and twenty new “green” aircrews from the 98th Bombardment Group. At that point, the detachment had roughly six weeks to train and otherwise prepare itself for combat. The “name of the game” was putting bombs on target, which was immeasurably complicated when some bright light suggested that navigators do double duty as bombardiers to conserve weight and fuel. Thus, the unit probably went into combat comfortable with the basics of operating the B-24 and only rudimentary skills in employing it as a weapon of war.<sup>9</sup> One pilot who had grown up in the interwar Air Corps bomber force said it best, “they were flying, and they could fly the B-24,” he recalled in a post-war interview, “but these were not bombardment trained people.”<sup>10</sup>

Bombardment trained or not, Colonel Halverson and his crews left the States with every expectation of reaching China. The first of three flights left Fort Myers on May 22 (the second and third flights followed in two-day intervals) and flew the Southern ferry route to Brazil, over the South Atlantic to Accra, Gold Coast, across Africa to Khartoum, Sudan, north to Waddi Halfa in southern Egypt, and on to what was to be another layover at the RAF airfield at Fayid, Egypt. In 1929, as a member of the crew that had established a world endurance record in the *Question Mark*, Harry

Halverson had demonstrated the possibilities of aerial refueling. He would be pleased to know that today’s combat aircraft, flying directly with aerial refueling, can make the flight from the United States to Egypt in twelve to fourteen hours. In 1942, it took fourteen days and sixty-three flying hours to complete the journey. By the time Halverson arrived in Khartoum, the China mission had been placed on hold.<sup>11</sup>

This might have been a classic case of the tactical commander being the last man to get the word. The Doolittle Tokyo Raid on April 18, removed all chance of strategic surprise and raised questions about the mission’s original purpose. Moreover, the War Department had known in early May that the Japanese had captured the advanced bases from which HALPRO was supposed to operate, effectively killing the mission. In fact, Maj. Gen. Dwight D. Eisenhower, the Chief of War Plans, had lobbied to divert the detachment to England as part of the buildup of U.S. air forces there.<sup>12</sup> But General Arnold had other plans. In late May, he and his RAF counterpart, Air Chief Marshall Sir Charles Portal, agreed that Halverson’s unit would be the down payment on a large U.S. heavy bomber force in the Middle East.<sup>13</sup> In summer 1942, the Egyptian crisis, alliance politics, and strategic logic came together to accelerate the process and keep the group in Fayid.

On arriving in Egypt, Colonel Halverson was told that his unit had been detailed for a single operation—a raid on Rumanian oil facilities located in the Ploesti area—which was to be made “as soon as possible with all available planes.”<sup>14</sup> The arrival of the last flight of Halverson’s Liberators on June 10, gave the AAF twenty-three heavy bombers for its first strategic mission against the Axis powers in

(near right) Sir Charles Portal. In 1943 he was Great Britain's Chief of the Air Staff.

(Far right) Sir Arthur Tedder, Commander-in-Chief RAF Middle East Command at the time of the HALPRO raid.



Europe—a far cry from the aerial armadas imagined by prewar air planners.

Those same planners had highlighted the “importance of retaining bases in Asia Minor or Syria” to strike the Rumanian oil facilities, particularly those refining aviation gasoline, in AWPD-1.<sup>15</sup> In December 1941, The RAF commander in the Middle East, Air Marshal Arthur Tedder sent word to FDR, via William Bullitt, that “the German failure to get through to the oil wells of the Caucasus has made the oil wells of the Ploesti region in Rumania vital to Germany” and that “three squadrons of Liberators based in Cairo could destroy this oil field in an attack to be sustained over a period of two months.”<sup>16</sup> Shortly thereafter, Prime Minister Churchill proposed to Roosevelt a similar series of raids by “the heaviest American bombers” flying out of Persia.<sup>17</sup> The airmen who flew the mission mostly saw the raid as a product of Allied politics. Some accused the RAF of contriving it to keep them in the Middle East, a charge that reflected a general wariness about British intentions. Others among the Ploesti raiders, no doubt Republicans, laid the blame at the feet of FDR’s personal advisor Harry Hopkins.<sup>18</sup>

But this specific operation was Arnold’s idea—an airman’s response to the German summer offensive in the Caucasus. Air power theory and AAF doctrine told him that a precision strike against the Ploesti complex would cripple production for months and halt the German drive. Such a grossly unrealistic estimate was certainly a testament to his faith in strategic bombardment. Col. Orvil Anderson and the AAF’s War Plans Division worked out the details of a plan that called for thirty-three Tenth Air Force bombers to deploy from India and

strike Ploesti from Free French bases in Syria. When this proved impossible within the time constraints established by Arnold, the job was given to the only AAF bomber force within striking distance of Rumania. Anderson later considered his plan, apparently forwarded to Egypt without significant changes, to be an excellent one badly botched by amateurs in the field.<sup>19</sup>

That this excellent plan had been concocted in a headquarters almost 6,000 miles away for a unit on another continent did not bode well for its execution, as did the fact that the target lay at the far end of the B-24D’s combat radius. The first point was duly noted and set aside by Halverson and his crews in their enthusiasm to turn “as soon as possible” into immediately. But the second became apparent to the pilots and navigators as an RAF officer briefed them on the mission. They would launch from Fayid at dusk, fly all night and hit the Astro Romma refinery near Constanza at dawn, then recover at Fayid or alternate fields in Syria and Iraq. Mission routing called for a big detour around neutral Turkey, a constraint that only the RAF briefer seemed to take seriously. The American intelligence briefer destroyed his credibility by informing them that they would bomb from thirty thousand feet. As one pilot recalled:

*To us the briefing was straight out of The Wonderful Wizard of Oz. Many of our ships could never make thirty thousand feet with an extra bomb bay tank and six five-hundred-pound bombs. And range! We calculated the round trip was twenty-six hundred miles. Even if we stripped the bombs and put two gas tanks in the bomb bay, we’d never make it back on the briefed route.<sup>20</sup>*

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Members of the HALPRO Detachment in Africa.  
(Photo courtesy of George H. Brett, II.)



# **FORTU- NATELY VETERAN AIRMANSHIP, COMMON SENSE, AND SOUND LEAD- ERSHIP WENT TO WORK IN SALVAGING AN UNWORK- ABLE PLAN**

Little was known about German defenses in the target area, so flak and fighters were assumed to be formidable. Target area weather was another mystery, as the RAF in Egypt had no way of obtaining current, usable forecasts for Eastern Europe.<sup>21</sup>

Fortunately veteran airmanship, common sense, and sound leadership went to work in salvaging an unworkable plan. Following the initial briefing, all the navigators huddled together over the only operational scale “chart” they could find, a

National Geographic map of the Middle East, to plot a direct route through Turkish air space that Halverson approved on the q.t. He also fought his “betters” for other changes to the basic plan. Headquarters AAF verbally approved the use of Turkish airfields as emergency landing sites. But Air Marshall Tedder, who was dead set against a mission that he considered too much for this tiny force, refused his request to launch from one of the RAF airfields on Cyprus, which would have provided an additional margin of safety for the mission. To the relief and delight of the navigators-turned-bombardiers, Halverson lowered the bombing altitude from thirty to fourteen thousand feet, again on the q.t. All during mission planning and preparation, the boss assumed a “completely phlegmatic” bearing calculated to persuade his crews that this first highly ambitious demonstration of American strategic air power had a reasonable chance to succeed.<sup>22</sup>

As a strategic attack on a decisive target in the enemy’s heartland, this mission reflected the theoretical vision of a generation of American air power advocates. Execution, however, did not follow tactical doctrine, which prescribed high altitude daylight precision bombardment by large and tight formations of mutually supporting bombers. With its maintenance and support echelon at sea, still en route to India, the group could generate only thirteen of the group’s twenty-three Liberators for ten-thirty p.m. launch on June 12. This was no small accomplishment as some of the aircraft and their crews had been at Fayid for less than seventy-two hours. The first leg of the mission was flown at night, so formation flying was out of the question. They flew in trail, each navigator using charts, compass, stars, and chronometer to keep his Liberator



A lone B-24 over the Astra refinery on the June 11, 1942 raid on Ploesti, Romania.



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on course and off the tail of the ship in front in of him. It is a tribute to their airmanship that all aircraft hit the designated landfall on the Turkish coast on time and proceeded unmolested across Turkey, over the Black Sea and into Rumania as planned. For us in the GPS [Global Positioning System] era it is difficult to imagine, but the lead navigator had miscalculated the takeoff time, and the group arrived at the initial point an hour before sunrise and hundreds of gallons of fuel were consumed as they widely circled the IP and looked for holes in an undercast that stretched all the way to the target area. Here the plan began to unravel as individual aircraft ducked beneath the clouds when and where they could and pressed on to the target area at first light.

Exactly what happened next is difficult to piece together. Official mission reports are brief and sketchy, and postwar reminiscences are impressionistic. Remarkably, the element of surprise (or luck) was with the group. The flak was judged "heavy and effective," but nothing compared to what many of the same crews would encounter there a little over a year later; fighters were few and far between. Regarding the bombing, the most one can say with certainty is that all aircraft dropped their bombs somewhere within a forty mile radius of Ploesti. Aircrew mission reports (always notoriously inaccurate) noted "smoke from a tank farm between Bucharest and Ploesti," hits "on two factories and [a] bridge in [the] Ploesti area" and one ME 109 "destroyed." A Rumanian informant told the U.S. naval attaché in Lisbon that "several bombs fell on Constanza without doing much damage" and one bomb hit a railway station near Buzau, north of Ploesti.<sup>23</sup> A German diplomatic message, available

via Ultra intercept, reported damage to the railway between Ploesti and Buzau and the death of six civilians.<sup>24</sup> If so, these civilians had the dubious honor of being the first non-combatant casualties of the American bomber offensive in Europe. There were no casualties among the attackers, but nearly every crew had its first experience with hypoxia caused by frozen oxygen masks. Lower than planned on fuel, but lighter by the weight of the first live bombs dropped by many of the crews, all thirteen Liberators reached the Black Sea and headed south toward home. Four landed in Turkey where the crews were interned for the duration; the rest recovered at Aleppo, Syria, and Mosul, Iraq.<sup>25</sup>

The raid was, to borrow a term from General Marshall, generally "amateurish"—ad hoc from conception to execution—as a combat operation. That the mission was not a total disaster can be attributed to the rock solid airmanship displayed by the pilots and their crews. Halverson himself took little consolation from this. He had lost four of thirteen aircraft and their crews to internment; any more such losses would place the China mission in jeopardy.<sup>26</sup>

Detachment participation in what the Italian Navy called the Battle of Mid-June came less than three days after the Ploesti raid. In this case, the target was an Italian task force dispatched from Taranto to destroy a British convoy sailing from Alexandria to Malta. Once again ad hocery seemed to be in full force. With no training or experience in maritime operations, the group had to intercept the Italian task force in the middle of the eastern Mediterranean and coordinate its attack with a flight of RAF torpedo bombers flying out of Malta. Each aircraft was loaded with six British 500-pound



The subsequent attack on August 1, 1943, had more than ten times as many B-24s, in Operation Tidalwave.



semi-armor piercing bombs. The group's armaments officer, who as a sergeant-bombardier had sunk the *USS Alabama* in the 1921 Air Service tests, protested that this was the wrong weapon, but it was the only one available with even a chance of making a dent in an enemy warship. Level bombing and hitting a maneuvering warship was huge task, one complicated by the fact that the bombardiers had no bombsight aiming data for these particular bombs; "Kentucky windage" would have to do. Factoring in the probabilities of finding, hitting and damaging or destroying a naval target, the prospects for this mission did not look good.<sup>27</sup>

Maintenance difficulties kept the group from launching more than seven Liberators at 3:00 on the morning of June 15. The RAF added two LB 30s (its version of the B-24) to the force. Royal Navy observers flew in a number of the aircraft to aid in target identification. Six hours into the mission, after a much too close encounter with the trigger-happy Alexandria convoy, the formation found the enemy task force. Halverson's heavy bombers apparently surprised the Italians who had just fought off the RAF torpedo bombers. In three-aircraft elements, all nine B-24s attacked the flotilla's van—two battleships and a heavy cruiser—head on. Bombing from 14,000 feet, the first element leader began the attack and later reported five direct hits on the *Littorio* and one near miss. Together the attackers claimed sixteen hits and five near misses on *Littorio*, which was reportedly set afire and left dead in the water, and five on its sister the *Cavour*. An escorting cruiser was also reported left ablaze and immobile. If these reports were even close to accurate, mission results were nothing short of miraculous. The account in the

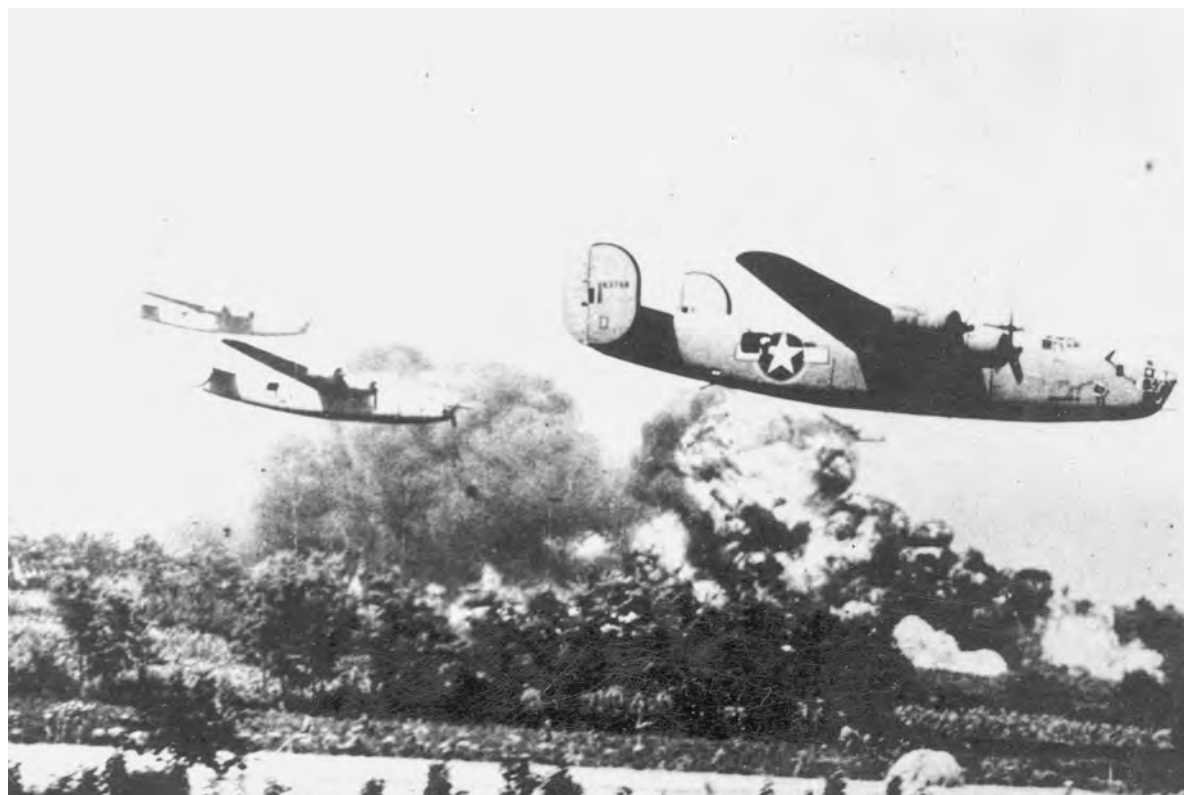
Italian Navy's official history is less inspiring but more believable. It says that only one direct hit was "scored—on the forward turret of the *Littorio*. . . . [which] was not even damaged, and the ship continued without slowing down." At any rate, American attack had no effect on the outcome of the battle. The Alexandria convoy returned to port after repeated and savage attacks from Axis warplanes; the Italian fleet steamed home without having encountered its prey.<sup>28</sup>

If the combat results were less than believed at the time, the mission was an unqualified public relations success. British headquarters in Cairo and the public affairs officer for the U.S. North African Military Mission lost no time in announcing the details of the of the action to the press. Reporters swarmed around the aircrews who were delighted to share their stories. Within days, Associated Press reports from "somewhere west of Cairo" were picked up by newspapers across America, where the contributions of hometown heroes were featured along with the comments of proud parents and neighbors. The Fort Meyers *News-Press* proclaimed "HURRAH FOR HALPRO" and lauded "the new striking power being provided to the United Nations front by the United States." Maj. Albert Kalberer, the mission commander, told the Sunday afternoon audience of "The Army Hour," the War Department's radio program on NBC, that "[i]t was like shooting fish in a barrel." Early in the war, even the smallest evidence of American flyboys taking the fight to the Axis was big news, and General Arnold was no doubt gratified at the public's response.<sup>29</sup>

Shortly thereafter, Colonel Halverson was told that his China mission was cancelled, and the group was placed under the administrative control of the

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U.S. North African Military Mission and the operational control of the RAF. The last two weeks of June were particularly eventful. Flying with RAF no. 205 Group, American airmen learned the tactics and techniques of night bombing—anathema to AAF purists—in a series of interdiction raids on Tobruk and Benghazi harbors in Libya. On June 28, the Halverson detachment was joined by a squadron of ten B-17s from the Tenth Air Force in India to become the First Provisional Bombardment Group, the nucleus of the new U.S. Army Middle East Air Force under the command of Maj. Gen. Lewis Brereton. On June 29, it lost its first aircraft and crew to enemy fire over Tobruk. The next day, the group deployed to Lydda, Palestine, where the boss began a losing battle with the RAF station commander and the RAF in general that ended only when Halverson was sent home on medical leave.<sup>30</sup>

There was also friction farther up the chain of command. While American senior leaders wanted to do all they could to aid the British, the War Department and the Air Staff was nevertheless bothered by the group's employment "in local missions unsuited to the characteristics of heavy bombers."<sup>31</sup> Still the interdiction campaign in the Western Desert continued throughout the summer as the Middle East Air Force expanded to become the Ninth Air Force. The First Group did yeoman duty with the RAF on "milk runs" to Benghazi and Tobruk, raids on German installations on Crete, and even attacks on German troop concentrations in preparation for the Eighth Army's counteroffensive at El Alamein. On November 1, the First Provisional Group, nee the Halverson Detachment, became the 376th Bombardment Group (Heavy), a unit that would compile a distinguished combat

record across North Africa and in the European theater. Its veteran aircrews would return to Ploesti on August 1, 1943, in Operation Tidalwave, the AAF's infamous and costly attempt to destroy "the taproot of German might."<sup>32</sup>

Measured against Tidalwave and the other major air battles over Europe, the Halverson Detachment's first encounters with the Axis seem less significant. Only half-trained for an improbable mission, the unit was committed to a more pressing task of aiding Britain and demonstrating the war winning potential of American strategic air power. Although the combat results from the Ploesti raid were meager, American airmen took some comfort in their claim that "even though Hitler's Panzer divisions were advancing victoriously in the desert the war could still be taken to the heart of Axis territory by means of the long-range bomber."<sup>33</sup> And this first Ploesti raid was a noteworthy display of airmanship, especially when considering that the 2,600-mile mission took place more than a month before the 8th Bomber Command's first tentative (short range with RAF fighter escort) missions over France.<sup>34</sup> The Eighth Air Force public relations juggernaut would soon push America's Middle East airmen to the back pages. But Arnold achieved his aim of getting American airmen into combat and, after the Battle of Mid-June, the headlines. In this first battle, they demonstrated a remarkable ability to improvise and adapt to the job at hand. After the war, Colonel Halverson summed it up matter-of-factly and with humility. "We were headed to China and hoped to hit Japan," he recalled, "You know the result. We were put to work against Rommel. We did alright."<sup>35</sup> On balance the airmen of the Halverson Detachment got it more right than wrong when their moment arrived. ■



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# READERS' FORVM

## Comments on the Air Mail Episode of 1934

By Justin H. Libby

I am in receipt of the latest *Air Power History*, [Vol. 57, No.1, Spring 2010] and just wanted to send this unsolicited comment complimenting the journal editors on the quality of the essays and information presented in the publication. There is one essay that interested me since I recently published an essay on Jack Frye, one of the founders of Transcontinental and Western Airline, which in May 1950, became known officially as Trans World Airlines; the letter “s” was then added to the word airline. The article appeared in the *American Aviation Historical Society Journal* entitled: “Trans World Airlines: The Creation of a Global Airline by Jack Frye and Other Founders,” LIII (Fall. 2008), 181-204 and in particular there was a segment, “TWA and the Air Mail,” 188-89. The essay in *Air Power History* referred to above was Dr. Kenneth P. Werrell’s “Fiasco Revisited: The Air Corps and the 1934 Air Mail Episode,” pp. 12-29.

As is now well known, the air mail story was covered on the front pages of the nation’s leading newspapers and on the radio during the first administration of President Franklin D. Roosevelt. In the early days of commercial flying, the profits for airlines did not come primarily from passenger revenues but from hauling mail for the postal service. During the administration of President Herbert Hoover, Congress passed the McNary-Watres Act (Air Mail Act of 1930), giving Postmaster General Walter Folger Brown (1869-1961) the authority and responsibility of assigning three transcontinental airmail routes. Postmaster General Brown was of the opinion that only one company should serve a single route, resulting in American Airlines winning the southern route, Northwest Airlines the northern route, and forcing Western Air Express (WAF), Transcontinental Air Transport (TAT), and Pittsburgh Aviation Industries Corporation (PAIC) to merge, forming T&WA (Transcontinental and Western Airline), with the result of being awarded the central route. The new company received its mail contract on August 25, 1930, and made the first all service coast-to-coast flight on October 25, taking thirty-six hours including a twelve-hour layover in Kansas City.

During the formative days of the New Deal, however, a charge was forthcoming in a forty-nine page brief, issued on February 6, 1934, by Post Office Solicitor Karl Crowley stating that the mail routes awarded in 1930 were fraudulent and the so called “Spoils Conferences” of that year was a secret conspiracy to divide the air mail routes among the major airlines without competitive bidding. He went on to state that “Since these contracts were procured as a result of fraud, conspiracy and collusion, between post office officials and the holders of such contracts, it is my recommendation that they be annulled.” T&WA had received CAM 34 and thus the potential for losing this profitable business was acute. The problem was that Crowley blamed Hoover’s Postmaster General Walter Folger Brown for the crisis when, in fact, some mail routes were actually granted through competitive and open bidding.

As Dr. Werrell noted the chairman of a special investigative Committee on Ocean and Air Mail Contracts, Senator Hugo Black (D. Alabama), spearheaded hearings and the conclusion was that corruption had existed in the Hoover years regarding air mail contracts. With the current mood of the nation angry at businessmen for the onslaught of the depression and thus no longer financial heroes as they may have once been in years past, these charges were not only taken seriously but believed without hesitation. One of the conclusions noted that TWA had benefited from a lack of competitive bidding in receiving CAM 34 and Black, in a luncheon with the President, urged Roosevelt to cancel all of the air mail contracts. After consultations with his Attorney General and the Chief of the Army Air Corps, Maj. Gen. Benjamin D. Foulois, who confirmed that Army pilots could do the job as efficiently and safely as the commercial companies, all of the domestic air mail contracts were cancelled on February 9, 1934, by Executive Order 6591. Once again, as had occurred in 1918, the Army became responsible for carrying the nation’s air mail.

Charles Lindbergh, who advised Frye and others at T&WA, resulting in the carrier later carrying the designation “The Lindbergh Line” as well as previously having his advice sought after by Juan Trippe in the formation of Pan American Airways some years earlier, took a personal affront to the President’s actions, not only because the Black Report attacked the reputation of Transcontinental and Western Airline but as an added insult had been attached to his name with the finding which





impugned his integrity. The famous flyer shot off an angry letter, dated February 11, 1934, to the President arriving in the White House at 10:15 PM commenting:

*Your action of yesterday affects fundamentally the industry to which I have devoted the last twelve years of my life. Therefore, I respectfully present to you the following considerations. The personal and business lives of American citizens have been built up around the right to a just trial before conviction. Your order of cancellation of all air mail contracts condemns the largest portion of our commercial aviation without just trial. The officers of a number of the organizations affected have not been given the opportunity of a hearing and improper acts by many companies affected have not been established.*

*No one can rightfully object to drastic action being taken provided the guilt implied is first established but it is the right of American individual[s] or organization[s] to receive [a] fair trial. Your present actions [do] not discriminate between innocence and guilt and place no premium on honest business. Americans have spent their lives in building in this country the finest commercial air lines in the world. The United States today is far in the lead in almost every branch of commercial aviation. In America we have commercial aircraft, engines, equipment, and*

*air lines superior to those of any other country. The greatest part of this progress has been brought about through the airmail.*

*Certainly most individuals in the industry believe that this development has been carried on in cooperation with the existing government and according to law. If this is not the case it seems the right of the industry and in keeping with American tradition that facts to the contrary be definitely established. Unless these facts leave no alternative the condemnation of commercial aviation by cancellation of all mail contracts and the use of army pilots on commercial air lines will unnecessarily and greatly damage all American aviation.*

Roosevelt was stung by the criticism and throughout the remainder of his life would neither forget nor forgive this national hero. The White House received many vitriolic letters regarding this issue, but none came close to mirroring the rude and inappropriate correspondence from an individual named S. Sterling who, in a letter dated February 12, 1934, wrote:

*Tell Roosevelt to watch his step-and above all do not gag the American people or a revolution will surely follow. I am fed up on his "my friends" insincerity. We want everything above board — every one must*



1st. Lt. Arthur Lahman's engine cut out as he was about to land at Newark, N.J. on April 15, 1934. Lahman was not injured, the O-38B was totaled.

*have the right to speak his mind, and if you and Roosevelt [the letter was addressed to the President's secretary Stephen Early] don't like it, you might just as well give yourselves up. Remember we worship principles, not a man with rotten legs.*

In addition, as Dr. Werrell and others have written, Lindbergh argued that the Army Air Corps pilots were not equipped to fly the country's mail as safely and efficiently as the commercial pilots and Eddie Rickenbacker, the hero of World War I, called Roosevelt's actions "legalized murder," while even a friend of Roosevelt, Will Rogers, compared the action to finding a corrupt railroad executive and then halting all train traffic. Following a protracted congressional hearing, the President retracted his executive order on March 10, 1934, although the Army continued to fly some routes, but on reduced schedules.

Roosevelt now proposed that the airlines resume the air mail contract flights but in "order to avoid the evils of the past" the President ordered that all contracts would be let for a period of three years in a fair and open bidding process. He also proposed that any individual who had participated in the so called "Spoils Conference," in 1930, be banned from future contracts, even if no criminal charges were ever brought against any participants connected with that meeting. Officially then:

*No air mail contract should be sublet or sold to another contracting company nor should a mail contractor be allowed to merge or consolidate with another company holding an air mail contract. Obviously, also no contract should be made with any companies, old or new, any of whose officers were part to the obtaining of former contracts under circumstances which were clearly contrary to good faith and public policy.*

In subsequent years, therefore, many former

airline officials would no longer be a part of aviation's future and sold their interests and entered new enterprises. Jack Frye survived, but many of his colleagues did not. For Frye and T&WA, when it became evident that the Army pilots were not equipped to fly the mail, the contracts were restored through competitive bidding thus allowing the airlines to once again carry the mail with greater efficiency and safety thus beginning their recovery of lost revenues.

For the interested reader, a visit to the Franklin Delano Roosevelt Presidential Library, in Hyde Park, New York, will reveal extensive material on the air mail contract dispute and controversy and I wish to thank Mr. Robert Clark and Mr. Mark Renovitch for their expertise, courtesies and assistance in making those files accessible to me. In particular, see a copy entitled "Amending Air Mail Contract of February 2, 1925, by the acts of June 3, 1926, May 17, 1928, and April 29, 1930," House Resolution 3, March 9, 1934, 73d Congress, 2d Session, found in the President's Official File. Also of interest and value is a brief written by the then president of the Airline Pilots Association, Lamar Nelson, in the Air Mail Service File, located in the Vertical File of the President's papers. In Box 11 the reader can also review the "Post Office Department" and "Post Office Miscellaneous, Air Mail Contracts, January-February, 1934" folders; Other letters can also be found in Official File 19, "Miscellaneous" folder, Box 11, as well as "Air Mail Contracts February 15-25, 1934," "March 1-15," "March 16, 1934-March 27, 1934" and "April-December 1934" folders.

In addition, the library is also the repository of the Samuel Rosenman Manuscript Collection and additional material on the air mail issue can be found in Container 32, "Materials Used in Editing Correspondence, 1937-1950" file; see also J. J. Doran, CAA Inspector, "Compilation of Certain Public Papers, Reports of Investigations, and Other Matters Concerning the Air Mail Service" which is contained in the "Air Mail" folder. Within this material are the following titles and pages relating to the investigation: "Spoils Conference and Consequences," pp. 18-62; "Air Mail Route to Transcontinental Air Transport (CAM-34)," pp. 20-22; "Listing of Air Mail Routes," pp. 44-45; The big winner was American Airlines, which received Air Mail Routes 1, 2, 20, 21, 22, 23, 24, 27, 29, 30 and 33, while Western Air Express Transport, which later merged in forming Transcontinental and Western Airline, received Air Mail Routes 4 and 12.

The Hoover Administration's air mail contracts were officially cancelled in the Roosevelt Administration on February 19, 1934, and information relating to that event can be found in the President's Official File 19. There is a letter from Richard Robbins, then president of Transcontinental and Western Airline to the President, dated February 9, 1934, and received in the White House at 4:56 PM, requesting fair play in deciding the air mail contract distributions. The White House was inundated with letters and telegrams relating to



Arnold pushed to counter bad press and garner favorable publicity for the air mail operation, including the use of girls, some in swim suits, and even a dog.



the air mail issue and they can be found in the President's Official File 19, Post Office Department, Box 11, January-February 1934, "Post Office Miscellaneous, Air Mail Contracts" folder.

The letter from Charles Lindbergh and S. Sterling to the President can be found in the President's Official File 19, Box 11, "Air Mail Contracts" folder. It is interesting to note that within the library there are no reference files for Jack Frye, Howard Hughes, Donald Douglas nor other luminaries of military and commercial aviation during the 1930s except for a file on Juan Trippe, the founder and president of Pan American Airways. That information is located in the President's Official File, "Pan American Airways Incorporated, 1933-1943," folder, Container 1, File Number 2875 and in Container 2, "Pan American Airways, Inc," File 4393. In the Adolph Berle MSS within the Presidential library there is interesting information in subject file "State Department, 1938-1945," Container 54, as well as "Aviation Matters-Annex," and "Airways System, 1936," folders.

Another source of the air mail controversy can be found in the TWA files located in the Western Historical Manuscript Archives and the Mercantile Library both within the Thomas Jefferson Library on the campus of the University of Missouri-St. Louis. The archivists at both locations were most courteous and professional in assisting my project. Further resources can be found in the William P. MacCracken Jr. MSS at the Herbert Hoover Presidential Library located in West Branch, Iowa. On August 11, 1926, MacCracken (1888-1969) was appointed the first Assistant Secretary of Commerce for Aeronautics by the then Secretary of Commerce, Herbert Hoover.

MacCracken left the Commerce Department to resume the practice of law and was made chairman of the air mail contract conference in 1930, since his firm represented many of the major airlines of the day. He thus became one of the prime targets of Senate investigators and especially Senator Hugo Black (D. Alabama) who chaired the Senate Committee on Ocean Mail and Air Mail Contracts in September 1933. His papers were seized by the committee, but later returned to the family and were donated to the Hoover Presidential Library by Mrs. Sallie Lucille Lewis MacCracken Murphy and her daughter, Nell Elizabeth MacCracken totaling 45 linear feet between 1971 and 1992. I wish to thank Mr. Spencer Howard, an archives technician at the library for all of his assistance while researching this topic for the Frye essay. The interested reader can find the Walter Folder Brown Papers (MLS 121 housed within the Ohio State Historical Society Library in Columbus. Additionally, the Charles Lindbergh Collection and the items relating to his career and opposition to President Roosevelt's air mail contract decision in the James Madison Building, Library of Congress, Washington, D.C.

**Justin H. Libby Professor Emeritus Indiana University.**

*American Aviation Society Historical Journal* Articles on Gen. Muir Fairchild, Gen. Harold Harris, and an essay on the fliers Lester Maitland and Albert Hegenberger. This completes a two-part series which focused on Oakley Kelly and John Macready "John A. Macready and Oakley G. Kelly: Pioneering Aviators, LIV (Winter, 2009), 275-87).

**The Adaptive Optics Revolution: A History.** By Robert W. Duffner. Albuquerque: University of New Mexico Press, 2009. Illustrations. Photographs. Notes. Index. Pp. xxviii, 457. \$45.00 ISBN: 978-0-8263-4691-9

Adaptive optics involves techniques for improving the resolution of a large telescope through real-time, computer-controlled deformation of the mirror's shape to compensate for the effects of atmospheric turbulence. Some experts have touted this as the most revolutionary breakthrough in astronomy since Galileo built his first telescope to survey the heavens four centuries ago. As Robert Duffner explains in *The Adaptive Optics Revolution*, government scientists and engineers played a significant role in developing this new technology, because they believed it could improve imaging quality for space situational awareness and targeting accuracy for laser anti-satellite weapons.

This, the first book-length history on the development of adaptive optics, covers the topic from its conceptual roots to its successful application on telescopes with mirrors larger than 3.5 meters. Physicists, as early as the 1940s, had begun to define the properties and structure of atmospheric turbulence. Not until 1953, however, did astronomer Horace Babcock, working at the Mount Wilson Observatory in California, propose adaptive optics as a way to reduce in real time the blurring that the atmosphere caused. From the mid-1960s through the early 1970s, physicist Raymond Urtz led a pivotal series of experiments by USAF's Rome Air Development Center (RADC) to characterize the effect of atmospheric turbulence on laser beams. In 1973, RADC partnered with Itek Optical Systems to build a workable adaptive optics system. Duffner states that there was no single inventor of adaptive optics, but Itek's John Hardy should stand among its inventors based on his applications to improve images of space objects.

The main challenge in designing an adaptive optics system is getting its three critical components—wavefront sensor, high-speed processor, and deformable mirror—to work harmoniously. With funding from the Defense Advanced Research Projects Agency, RADC took the initial steps in 1975 toward resolving that problem, but it took the “definitive presence” of Robert Fugate at the Air Force Research Laboratory (AFRL) Starfire Optical Range in New Mexico to ramrod R&D until a fully workable 3.5-meter telescope was completed. A key feature of that R&D process involved finding a sufficiently powerful artificial beacon—a laser guide star—to provide the necessary data for

defining in real time the distorted shape of the light beam entering the telescope. Through the 1980s into the first years of the twenty-first century, Fugate spearheaded a remarkably talented team of AFRL, academic, and contractor scientists and engineers who solved “enormously complex problems” to devise “real-world atmospheric compensation techniques and new hardware leading to the production of high-resolution images of space objects, as well as compensated laser beams propagating through the atmosphere.”

Duffner, a longtime historian at the AFRL Phillips Research Site, Kirtland AFB, New Mexico, had relatively unfettered access to official files and many of the people directly involved with AFRL's adaptive optics research. The keeper of a unique collection of primary source documents, he had the raw material for *The Adaptive Optics Revolution* literally at his fingertips. Since many of those documents originally were classified, Duffner could not use them to write his book until much of the secrecy surrounding AFRL's experimentation with adaptive optics ended in the early 1990s. As both his narrative and endnotes reveal, however, he augmented archival research substantially by interviewing more than seventy knowledgeable individuals, some of whom he contacted more than once.

*The Adaptive Optics Revolution* offers a captivating description of individual personalities juxtaposed with a detailed, intellectually strenuous account of scientific experimentation and engineering development. How various talented specialists contributed to adaptive optics will intrigue most readers, but the eyes of some might glaze over when they encounter Duffner's technical discussion of “thermal blooming” and “focal anisoplanatism.” Others might detect the author's occasional struggle to balance chronological and topical—scientific and technological—aspects of the narrative, which results in a degree of repetition, but none of these things detract significantly from this first-rate piece of scholarship.

*Dr. Rick W. Sturdevant, Deputy Command Historian, HQ Air Force Space Command, Peterson AFB, Colorado.*



**Mighty By Sacrifice: The Destruction of an American Bomber Squadron August 29, 1944.** By James L. Noles and James L. Noles, Jr. Tuscaloosa: The University of Alabama Press, 2009. Maps. Photographs. Notes. Bibliography. Index. Pp. x, 277. \$34.95 ISBN: 0-8173-1654-9

In the literature of the Combined

Bomber Offensive (CBO) of the Second World War, the Fifteenth Air Force seems to get less attention from scholars than the Eighth and Ninth Air Forces. More people are familiar with the exploits of the *Memphis Belle* than those of, say, *Tail End Charlie*, despite the fact that members of its crew flew nearly twice as many combat missions as the *Belle*. The father-and-son team (Noles Sr. is a retired Army brigadier general, while Noles Jr. is an independent historian and lawyer) have written an excellent work on the fate of the men of the 2nd Bomb Group's 20th Bomb Squadron.

On August 29, 1944, the squadron's seven aircraft were all shot down during a mission against Moravska Ostrava, Czechoslovakia. In essentially four parts, the book covers the lives of those who were shot down. Part one describes where the individuals were when the Japanese attacked Pearl Harbor—different parts of the country, different socio-economic backgrounds, and varied educational backgrounds.

Part two covers training. The Noles concentrate mostly on the pilots' training and then whisk across the Atlantic as the newly minted aviators flew to Europe via either the North Atlantic or through Brazil, across to Africa, and then to their Italian airfield.

Part three covers the airmen's experiences while serving from their base in Amendola, Italy, approximately fifty miles east of Naples. The 20th flew B-17Gs and the pilots needed to learn how to handle the Flying Fortress. For several, their first time behind the yoke of the big bomber was their first official combat mission. On the fateful day, the squadron's seven aircraft flew toward their targets in the eastern part of the modern-day Czech Republic. Before Allied escorts could arrive, however, approximately seventy *Luftwaffe* Bf 109s and FW 190s attacked and downed all seven aircraft. The authors argue that by this point in the war, the *Luftwaffe* was rarely able to bring so much force to bear on Allied bombers. Nonetheless, in some aircraft only one man in the ten-man crew survived. One particularly unlucky man was *Tail End Charlie's* ball-turret gunner, Sgt. Joseph Marinello, who was trapped inside his turret while the B-17 plummeted to the ground.

The final part of the book covers what happened to the survivors. Most of them spent the rest of the war in German POW camps. Some encountered sympathetic Czech civilians who would nurse the wounded and offer them meals before a German patrol arrived to take them into custody. Lt. Thayne Thomas and Sgt. Robert Donahue were among the lucky few who evaded capture and were recovered



through the help of sympathetic Czechs with contacts with the Office of Strategic Services. The POWs, however, encountered meager meals, hungry and vicious guard dogs, and a crumbling Third Reich. As the Allies inched closer to Berlin, the Germans constantly moved prisoners to other camps, placing them in cattle cars for several days at a time. The book ends with brief biographical paragraphs of how the men lived out their lives. Many of them, sadly, have passed away.

*Mighty by Sacrifice* is an immensely readable book. The authors do a masterful job in blending oral history sources and archival material to produce a first-rate work. It gives the historical community a much-needed glimpse of Fifteenth Air Force campaigns. Its limited perspective allows for a greater sense of the human experience of war through the analysis of these men's experiences. The book does need more maps to show targets and the various prison camps where the aviators were held. Also, an occasional reminder of the men's ranks would make their careers easier to follow. Despite these minor flaws, however, this is a work that will be a welcome addition to anyone's book shelf

*Adrien Ivan, Doctoral Candidate, University of North Texas.*



**Network-Centric Warfare: How Navies Learned to Fight Smarter through Three World Wars.** By Norman Friedman. Annapolis, Md.: Naval Institute Press, 2009. Photographs. Tables. Notes. Index. Pp. xv, 361. \$32.95. ISBN: 978-1-59114-286-7

The former president of the Naval War College, Arthur Cebrowski (almost as influential as Luce and Mahan), coined the term network-centric warfare. However, Friedman gives credit for the idea to Admiral "Jackie" Fisher, First Sea Lord of the Royal Navy (later the first Baron Fisher of Kilverstone) a century ago. Despite the claim, the term was not in use in the Naval War College correspondence courses I took forty years ago.

Friedman's book covers the command and control practices in naval warfare, specifically information gathering and handling required to achieve success in battle. This means gathering messages and transmitting data for decision making and control—fusing all the bits of a jig-saw puzzle to create a useable picture—using the latest technology. The point of netting is not only to catch as much information as possible, but also to compress time. Even netting, however, doesn't guarantee the

value or accuracy of the catch. Since the word comes from a structure of intersecting strands, the picture may not be a true photo. The net may have trapped an overload of trash fish. There has to be a method for selectively screening the value of the catch. The evaluation process is where it is hard to replace man with a machine. Information is not a weapon itself, but an enabler that makes tools of war more effective—if used well.

The book starts with the Radio Era, which should be called the Radio/Telegraph (R/T) Era. The latter gave a global strategic reach beyond the limited radio range of that time. Radio and telegraphy were not only modes for message (information) transmission, but also a tool for intelligence gathering—in other words, not only reading an enemy's messages but also locating his vessels. In World War I, R/T was used for fleet surveillance and safeguarding trade.

The Radar Era added a new dimension to all warfare, but mostly to that at sea and in the air where line-of-sight added "seeing" targets, whereas R/T only "heard" them. After the First World War, aircraft dramatically changed the ability to gather, and the need for, surveillance. The Computer Era, with its equipment of ever-increasing strength and coverage, is one answer to overload. Computer systems can receive, organize, and transmit data far faster than can humans, though still without the final touch of discrimination.

Friedman is a well-known defense analyst and historian. I've been a Life Member of the U.S. Naval Institute for fifty-two years and have read his columns in their magazine during many of those years. While his book is not a work for the general audience or casual reader, it is highly recommended for those with a strong interest in warfare of today and tomorrow—and not just at sea.

*Brig. Gen. Curtis H. O'Sullivan, ARNG (Ret), Salida, California.*



**American Military Technology: The Life Story of a Technology.** By Barton C. Hacker with Margaret Vining. Baltimore: The Johns Hopkins University Press, 2006. Illustrations. Photographs. Glossary. Bibliography. Index. Pp. xxi, 205. \$19.95 ISBN: 0-8018-8772-0

Dwarfed by the military supremacy of Britain in its War for Independence, American capabilities grew to dominate the realm of military technology by the year 2000. However, the history and assumptions that underlie this ascendant

cy also contain the seeds of failure if left unexamined. Barton Hacker takes on the "simple" task of chronicling the history of American military technology in order to understand its effects on both the military and society. In a fascinating journey through haphazard to highly centralized research efforts, he shows the current state to be one of "permanent technological revolution." This revolution influences both society and its military, leaving in its wake the deep-seated assurance that technology holds the answer to any problem. However, as Hacker's work demonstrates, technology doesn't always yield the desired answer, though it does demand the bills be paid.

Hacker tells the life story of American military research and development from his perspective as curator of military history at the Smithsonian's Museum of American History. The book also benefits from the work of Margaret Vining, a curatorial specialist at the museum as well as Secretary General of the U.S. Commission on Military History. Their access to archives and artifacts is almost unparalleled, although they acknowledge the futility of their aim from the outset. Simply put, it's impossible to capture the history, success, and subsequent effects of any weapon system, let alone that of multiple systems that span hundreds of years. However, Hacker rightly acknowledges the need to expand understanding in this arena. In this, he succeeds.

Advocates of any technology or service will likely feel frustrated by the seemingly cursory treatment of their pet systems. Yet, readers who can set aside their biases and look at this as the first expansive chronicle to examine the pervasive nature and promises of military technology in America will not be disappointed. First, the text provides a chronology of influences that drove technology and vice versa. Second, it suggests critical underpinnings for success. Third, it highlights key innovators to include biographical vignettes from David Bushnell's 18th century submarine to John Boyd's OODA loop and Edward Teller's space-based, X-ray lasers. Fourth, it integrates changing research-management philosophies that include the military's preference for scientific management reinforced by the rise of the PPBS system that has often replaced decisionmaking vision with cost accounting. Finally, it chronicles the changing nature of research from spotty entrepreneurial efforts to military centrality of most basic research to the increasing focus on immediate, practical results.

Just as expectations of weapon systems have seldom been fully met, so too has a divide existed between technology

and doctrine. Hacker argues that doctrine outstripped technology until the Cold War when the rise of nuclear weapons actually narrowed the thinking of policy-makers and researchers alike. Though the Vietnam War briefly helped shake such thinking, it did not end it. "Efficiency" became the new byword ushering in an era that replaced basic research with applied research. Further, as communication technology increasingly centralized decisionmaking in the hands of senior leaders, increasingly constrained budgets and unsympathetic political actors forced greater focus on immediate results from military research rather than allowing for flights of fancy seeking a possible breakthrough technology. Hacker describes several instances when the latest technology failed to ensure success.

He concludes with an examination of the "New Era in Warfare" drawn from the lessons of Vietnam. Though the military now accepts Vietnam-era advances like helicopter operations, command and control, and smart weapons as status quo, the fall of the Soviet Union left no comparable enemy to justify increasingly larger research costs. Meanwhile, the demand for proven results further compounded the challenge inherent in bringing new systems on line. Though "Unrestrained pursuit of technical perfection...produced a baroque arsenal, possessed of extraordinary capabilities at astronomical expense ....The assumption that better technology meant victory" no longer holds widespread acceptance. These forces have led policy makers to replace technological revolution with "transformation" as cost cutting and certainty become more important.

Ultimately, this work ends with a solid understanding of where the United States has been and the larger question of where it's going in the arena of military technology. It definitely offers worthwhile reading for a broader perspective on military procurement, operations, and thinking.

*Col Brett Morris, Ph.D., Director of Research & Publications, Air Command and Staff College.*



**Night Fighters: Luftwaffe and RAF Air Combat over Europe, 1939-1945.** By Colin D. Heaton and Anne-Marie Lewis. Annapolis Md.: Naval Institute Press, 2008. Photographs. Appendices. Index. Bibliography. Pp. xiv, 188. \$27.95 ISBN: 1-59114-360-4

Authors Heaton and Lewis examine the historical, technical, strategic, and tactical evolution of night air combat over

Europe during World War II. Heaton, an historian and author of three previous books, and Lewis, a professional photographer and digital image specialist, sought to write an unbiased evaluation of the performance and wartime policy of the *Luftwaffe* and RAF as the two air forces dueled to the death. With "Father Time" claiming more veterans every year, Heaton tried to capture information from still-living participants—men such as Wolfgang Falck and Hajo Herrmann—before their special insights into events passes. In that respect, the book is a notable addition to the historical literature documenting night air combat.

Early in World War II, the RAF learned that its bombers could not survive day combat over the Reich. But Winston Churchill had two very important political reasons to ensure that aerial bombing continued unabated: the British public needed the morale boost that offensive air operations provided, and Stalin demanded a second front in the West to take pressure off his hard-pressed forces. As a result, RAF Bomber Command waged night operations against Germany. Since RAF bombers could not accurately strike defense and military targets at night, Bomber Command developed a strategic doctrine of "de-housing"—bombing German cities to kill civilians or destroy their homes. Faced with British bomber streams attacking their cities at night, the primarily day-combat-oriented German fighter force had to quickly devise a night fighting capability. Night aerial combat would become an arena of ever-changing technology and tactics.

American airmen opposed the British approach and launched their bombers in daylight. Heaton details the politics of this fight between Allies and its unintended consequence—the 'round the clock bombing of Germany. German fighters had to fight both campaigns, and they would pay the price. Of the nearly 25,000 German fighter pilots who fought during the war, only 2,500 survived. RAF Bomber Command paid an equally high price, losing 51 percent of its aircrews during night operations. The Germans lost the air war—according to Heaton—because of the ineptitude of Hitler and Goring and the attrition of pilots and fuel needed to carry out operations.

The book does not flow in a straightforward chronological manner like many typical history books. Its structure and style read more like an analytical study, probably because it began as the author's master's thesis. The structure and flow of the book work well though, and the serious reader gets all the critical information when needed. What flows is a detailed

explanation of how human dynamics influenced the politics, strategies, tactics, and technology of British and German night air combat during World War II.

Well illustrated with photographs, the book offers only a few maps, but these are useful in showing the operational range of night fighter operations. The fourteen pages of appendices include information on RAF and German night fighter aces, German night fighter unit deployments, Bomber Command assets and casualties, and a map section. Serious students of the air war over Europe will find this book useful. It will disappoint those looking for an entertaining read.

*David F. Crosby, former USAF history writer and doctrine developer for the Army Air Defense Artillery School.*



**Aircraft Carriers at War, a Personal Retrospective of Korea, Vietnam, and the Soviet Confrontation.** By Admiral James L. Holloway, III. Annapolis, Md.: Naval Institute Press, 2007. Photographs. Glossary. Index. Pp. xiii, 479. \$34.95 ISBN: 1-59114-391-8

This book provides a persuasive argument about the importance of the aircraft carrier to national policy told through the details of a remarkable naval career. Admiral Holloway begins his narrative with a gun director on the USS *Bennion* (DD-662) at the last sea battle between lines of battleships and ends it with the challenges and opportunities of the world since the collapse of the Soviet Union. In between, the *Bennion* was shot up by the Japanese in World War II; Naval Aviator Holloway was shot down by the Chinese in Korea; and as commander Seventh Fleet, he took his flagship, USS *Newport News* (CA-148), into Haiphong Harbor on a shore bombardment mission. He retired as Chief of Naval Operations.

Since Holloway's narrative begins after World War II, the five great carrier-vs.-carrier battles—Coral Sea, Midway, Eastern Solomons, Santa Cruz, and Philippine Sea—as well as the incredible voyage of the USS *Enterprise* (CV-6) as Carrier X are not covered. However, I recommend the book, if for no other reason than for its personal descriptions of Navy shipboard life and naval operations. Holloway captures the excitement of carrier operations and inherent dangers of naval aviation. The descriptions of naval combat are superb. Readers should note the operations tempo that kept carriers deployed throughout the Cold War and responsive to every international crisis. All



this was consistent with my personal experiences as a rather junior naval officer: two squadron tours, including two deployments to the war in Southeast Asia; one carrier ship's company tour; a carrier-group assignment; and two staff tours in Washington.

The book should be required reading for those who aspire to command at the highest levels in the Navy. It highlights the importance of career guidance; Adm. Holloway's best mentor was his father, a flag-rank officer. Holloway was commissioned before World War II, when battleships were the capital ships of the world's navies. He changed his warfare specialty from surface-based to aviation-based on an advisory letter from his father, then a captain commanding an Iowa-class battleship during the Battle of the Philippine Sea. The supremacy of the battleship ended in the Pacific during World War II, but dad made flag rank.

It is interesting how careers are sometimes shaped, often in ways that do not become apparent until years later. In 1965, VADM Tom Connolly, a member of the flag selection board, kept the author off that year's promotion list. He knew Holloway would be selected the following year, but if selected in 1965, he would have been relieved of command of *USS Enterprise* (CVAN-65) and have lost that experience.

There is much to learn from *Aircraft Carriers at War*. It is suitable for the serious student of military and naval history, yet it will hold the interest of even the casual reader.

*Comdr. Robert W. Covey, USN (Ret.),  
Docent, NASM's Udvar-Hazy Center.*



**Through These Eyes: A World War II Eighth Air Force Combat Diary.** By James Lee Hutchinson, Ed. Bloomington, Iowa: Authorhouse, 2005. Photographs. Bibliography. Tables. Pp. xiv, 367. \$19.95 Paperback ISBN:1-4208-6644-3

and

**Bombs Away! World War II Air Force Stories.** By James Lee Hutchinson, Ed. Bloomington, Iowa: Authorhouse, 2008. Tables. Bibliography. Pp. xvii, 274. \$20.00 Paperback ISBN: 1-4389-0366-8.

*Through These Eyes* is the personal story of James "Hutch" Hutchinson's pre-war and wartime experiences as an Eighth Air Force B-17 radio operator during twenty combat missions over the deadly skies of Nazi-occupied Europe. Based on the posi-

tive reception he received, Hutchinson followed up with *Bombs Away!* In many ways, this is a recap and reprinting of many of the stories from *Through These Eyes*, with some additional experiences of other Eighth Air Force airmen, rather than a completely separate book.

Like a majority of the Greatest Generation airmen, Hutchinson grew up in the Great Depression. He begins with two chapters on his childhood in Indiana and weaves an interesting story of growing up during those trying times. One semester short of graduating from high school, "Hutch," as he was known, was drafted two days after his eighteenth birthday. The books chronicle his aircrew training leading up to his arrival in England as part of a combat crew assigned to the 490th Bomb Group, Eye, England, in 1944.

Shortly after arriving in England, and before his first combat sortie, Hutchinson purchased a ledger to use as his diary. He then recounts his combat experiences mission by mission. He includes the original text from his diary along with additional facts and details. After their fourth mission, Hutchinson's crew was moved up to become a lead crew. This resulted in having two enlisted gunners being replaced to make room for the command pilot, a lead bombardier, and a Pathfinder Force Radar (PFF) radar (Mickey) operator and navigator. Additionally, the ball turret was removed to make room for PFF radar dome.

What is particularly interesting is that Hutchinson was a radio operator. To my knowledge, his two books are the only ones that recount a radio operator's experiences. Hence, they provide a rare insight into this key bomber crew position. Hutchinson shares stories of extending a trailing wire for long range code communications back to England. Finding it difficult to tap out code while wearing the thick gloves needed to protect him from the -40° temperatures, he risked frost bite by taking off his glove and tapping out messages wearing only his electrically heated inner glove.

The strength of these two books is how they tell the unpolished story of being an Eighth Air Force crewman: living in the always-cold huts, the special comradery shared by crewmen, the terror of seeing other squadron aircraft being shot down with no survivors, the horror of seeing aircraft collide on training missions, and the final joy of returning home after VE Day. "Hutch" had a front row seat to the air war over Europe and, through an easy-to-read style, brings the reader right into the B-17 flying through the flak-filled skies with him.

While I find it difficult to criticize any World War II vet's efforts to record his experiences, I found both books falling short in two areas. The first weakness was the editing. Within each book there are multiple instances where Hutchinson repeats the same point within the span of a few paragraphs. Additionally, there are the occasional typos or typesetting errors that point to the self-published nature of the book. The second weakness is the ventures into off-topic discussions such as the German population, statistical summaries of Allied and German aircraft, and the Nuremberg Trials. These distract readers from what they are looking for: the personal experiences and recollections of the vanishing members of the Greatest Generation. The true value of these books is the "there I was" stories.

In summary, these books give an excellent understanding of the B-17 crewmember's life. Furthermore, they give a unique look at being both a radio operator and serving on a lead bomber. The flaws mentioned above are minor distractions, but I recommend both books.

*Lt. Col. Dan Simonsen, USAF (Ret.).*



**Khobar Towers: Tragedy and Response.** By Perry D. Jamieson. Washington D.C.: Air Force History and Museums Program, 2008. Photographs. Notes. Appendices. Glossary. Bibliography. Index. Pp 276. \$29.00 ISBN: 978-0-160807-0-15

Perry Jamieson of the Air Force History Program provides the first book-length examination of a cathartic event in USAF history that has since been overshadowed in the escalation of destructive terrorism in the wake of 9/11 (September 11, 2001). Jamieson's focus in *Khobar Towers* is more play-by-play than a detailed analysis of the deadly June 25, 1996, terrorist attack on U.S. airmen in Saudi Arabia. As the title tips off, the book is divided into the events surrounding the bombing of the U.S. housing complex at Dhahran and the initial response. Using a chronological structure that is rich in oral histories of airmen and other eyewitnesses on the scene, Jamieson uses the early chapters to show how bureaucratic processes slowed military readiness. For instance, the report includes press statements that highlighted how the DoD lacked forceful insistence and instead pursued "ongoing discussions" with the Saudi government to extend the security perimeter around the Khobar Towers housing complex.

The oral history, as compiled by

Jamieson, provides no clear-cut answer as to whether or not the tragedy was preventable. Though commanding officer Brig. Gen. Terry Schwalier raised threat-on levels based on vulnerability assessments in the months prior to the attack, Jamieson outlines the difficulty in getting firmer American and Saudi commitments to security, training, and readiness in Dharan in 1996. Toning down the political fallout and finger pointing that prevailed for years after the attack, Jamieson instead devotes most of his work to the actions of American airmen in the twenty-four hours surrounding the bombing. The personalized accounts give the narrative a human context that is very engaging and provide the reader a string of highlights that show how the airmen personally and collectively coped with the immediate impact of the tragic attack. Some amazing information emerges in the eyewitness reports. The bomb blast was felt in Bahrain, some twenty miles away. On base, the "fog of war" was quickly mitigated as the 2,000 airmen and soldiers sprang into a recovery role. Jamieson provides ample reports of personal accountability, the base leadership's response, the effectiveness of Air Force first aid training, and crisis management.

Jamieson offers a short final chapter and epilogue, which very lightly brush on Khobar events since 1996. The book feels incomplete with this shortened third section, but Jamieson would be hard pressed to entitle a chapter "Resolution" since, as he points out, there is a significant lack of closure following the attack on Khobar Towers. In the three years following the Khobar bombing, U.S. personnel continued as targets of terror in Kenya, Tanzania, and Yemen. "Uncertainties...controversies, and frustration continued to surround the Dhahran attack," according to Jamieson; but readers will have to satisfy their curiosity of the investigation and elusive justice for the perpetrators in other works. Instead, the book's strength lies in the narratives of the eyewitnesses and the timelines that form an official record of the events.

*Lt. Col. Samuel B. Vandiver, 99th Reconnaissance Squadron, Beale AFB, California.*



**Finding a Fallen Hero: The Death of a Ball Turret Gunner.** By Bob Korkuc. Norman: University of Oklahoma Press, 2008. Map. Photographs. Notes. Bibliography. Index. Pp. xv, 256. \$24.95 ISBN: 0-8061-3892-3

Having gone through a family geneal-

ogy search, I can appreciate the work Bob Korkuc put into this book. His research on his uncle, Anthony Korkuc, and the young men he served with in World War II, is outstanding.

Tony Korkuc enlisted in the Army shortly after Pearl Harbor and soon decided he was not cut out for the Medical Corps. Hoping to become a pilot, he transferred to the Army Air Corps where he, instead, wound up as an aerial gunner. Assigned to B-17s, he became a ball-turret gunner because of his size. On Friday, February 25, 1944, Tony Korkuc took to the skies out of England on what would be his final mission. His airplane had already dropped its bombs and was headed back to base when it went down.

The end of Tony's life marked the beginning of this story. The book provided closure not so much for Bob—who had not even been born when his uncle died—but for Edmund Korkuc, Bob's father and Tony's younger brother. Ed was able to provide few clues as to what happened to his brother. Bob knew early on that if he wanted to discover anything regarding his uncle's military life, it would take a tremendous amount of digging. The story of this pursuit can serve as a guide for others looking for answers from history since he shares not only what he discovered but also how.

Korkuc's search for records of the crew and aircraft tail number 42-37786 lasted about seven years. He spent a lot of time on the internet, met with former Eighth Air Force personnel, and attended reunions. Often, more information only added to the mystery surrounding the crew. He talked with members of the press and located knowledgeable people in Germany. He was able to locate some surviving crew members and piece together some of the story. Many of the airmen Korkuc contacted just did not want to talk about what happened to the Fortress and its crew. Ultimately, he made a trip to Germany where the plane went down. This helped to resolve the mystery of what happened to Uncle Tony and the crew of the B-17.

In piecing the story together, Bob was able to determine that the B-17 ran into problems within five minutes of passing near the target of Augsburg. Enemy aircraft were certainly part of the difficulties, but he also discovered that mechanical problems with the aircraft had cropped up as well. He was able to determine that the B-17 crashed just southeast of Willmandingen near the house of Otto Flad. The plane burned immediately. Only four crew members survived. In 1995, he discovered that his uncle's remains had been recovered in Europe and re-interred in Arlington National Cemetery.

When I started reading this book I related it to my own search for family members. When I finished it, I felt I had just read a good mystery book. For those who enjoy military history, this book is good reading.

*SMSGt. Stu Tobias, USAF (Ret.), Indianapolis, Indiana.*



**Deterrence: From Cold War to Long War.** By Austin Long. Santa Monica, Ca.: RAND Corporation, 2008. Notes. Glossary. Bibliography. Pp. xiv, 107. \$25.00 Paperback ISBN: 978-0-8330-4482-2

In this short study, Austin Long reviews sixty years of RAND research on deterrence, arguing along the way that deterrence is as indispensable today to U.S. national security strategy as it was when the concept first took form. His study is supplemented by a short annotated bibliography (unfortunately, the annotations are too short to really be useful) and a long reference section capturing the bulk of the work conducted by RAND analysts over the years.

Long describes the theoretical and practical work done by RAND analysts over the years for the Air Force, and the tremendous influence these analysts gained within government after Robert McNamara's appointment as Secretary of Defense, under President Kennedy. That influence was seen in short order with the adoption of "Flexible Response" but continued long thereafter with the development of, for example, limited nuclear options (LNOs), counterforce options, and President Carter's "countervailing strategy." Long rightly points out, however, that RAND analysts often disagreed with one another.

Considering deterrence to be a longstanding concept predating the nuclear era, Long also reviews RAND's work on conventional deterrence, advocacy of precision-guided munitions, and conventional counterforce options in the aftermath of the Vietnam War. More interestingly, he highlights the work RAND did to address its critics, in particular accusations that its analysts did not conceive of irrational actors in their deterrence models. He points out, for example, the research carried out on non-material components of deterrence by RAND "Kremlinologists" who acknowledged the limits of human cognition.

Finally, Long argues that deterrence remains a relevant concept in the post-9/11 era, and that it can usefully be studied through challenges posed by a peer or



near-peer competitor (citing Russia and China as more than remote possibilities), a regional power or a significant non-state actor. Credibility (of capability and intentions) being the linchpin of deterrence, it will be essential that the U.S. possess a far "greater understanding of regional powers and their security environment," in particular their governments and societies, than they may currently have. With respect to non-state actors such as transnational terrorist networks, Long concedes that the practice of deterrence would face some obstacles, but that deterrence by denial, rather deterrence by punishment, is still an option. Regional armed groups, on the other hand, could be subject to deterrence by punishment because of what they have to lose, or the leverage that could be exercised on their sources of external support. Deterrence, in other words, is here to stay and is vital to U.S. national interests.

Long succinctly goes to the heart of what RAND has done and contributed to the theory and practice of deterrence. As such, the book is a primer. His key points are well argued but not fully theoretically developed and empirically supported. While a good starting point to grasp the evolution and today's relevancy of deterrence, the book should be supplemented by more recent in-depth studies such as Patrick Morgan's *Deterrence Now* (Cambridge, 2003), Lawrence Freedman's *Deterrence* (Polity Press, 2004), Ian R. Kenyon's and John Simpson's edited work on *Deterrence and the New Global Security Environment* (Routledge, 2006), and Keith Payne's *The Great American Gamble: Deterrence Theory and Practice from the Cold War to the Twenty-First Century* (Naval Institute Press, 2008).

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**X-Plane Crashes: Exploring Experimental, Rocket Plane, and Spycraft Incidents, Accidents and Crash Sites.** By Peter W. Merlin and Tony Moore. North Branch, Minn.: Specialty Press, 2008. Maps. Photographs. Appendices. Pp. 160. \$29.95 ISBN: 1-58007-121-5.

Both authors are aviation archeologists, who specialize in finding the crash sites of experimental and exotic black-world aircraft. Merlin is an archivist and historian at NASA's Dryden Flight Research Center and the author of several aviation books. Moore is a museum assistant at the Air Force Flight Test Center

Museum at Edwards Air Force Base, who also holds an airframe and powerplant technician's license. They used interviews, photographs, maps, and archival documentation to locate the exact crash sites of historic experimental aircraft such as the X-2 rocket plane and the XB-70 Valkyrie, and black-world aircraft such as the SR-71 Blackbird and the F-117 Night-hawk. Once on site, they collected crash artifacts to verify they had located the correct aircraft.

None of these aircraft crash sites were initially unknown; but, during the heyday of X-plane test flights, policy was to pick up the bodies and major components of the aircraft and move on. In the case of black-world aircraft, the crash sites were initially sanitized, but experience proved that some debris always remained even at these cleaned-up crash sites. In many cases, the investigators had little more than newspaper accounts and old photographs of crash sites to use to find the actual crash locations. The authors devised an ingenious method of matching the terrain features seen in the photographs to the contemporary terrain features to find the exact locations where these aircraft had gone down. Once on site, aircraft fragments such as fuel-drain access hatches, fuselage pieces, and parts with still-visible numbers on them provided positive proof that the actual X-plane debris had been located.

A typical chapter covers an aircraft type such as the XB-70 Valkyrie and includes the history of the aircraft, its test program, and the actual crash or crashes, as well as a number of excellent photographs taken both at the time of the crash and during the authors' investigation. In fact, most pages in the book have at least one photograph, but many present three or four.

Flying test aircraft always entails risk, and the pilots who flew these cutting-edge aircraft often paid for that risk with their lives. *X-Plane Crashes* also tells the stories of the men who died flying these history-making aircraft.

An excellent thirty-page appendix section contains crash lists for both the Muroc/Edwards and Groom Lake (Area 51) areas. The Muroc/Edwards list is in chronological order and covers crashes from May 26, 1930, to February 6, 2006. The Watertown/Area 51 crash list is also ordered chronologically and lists crashes from November 17, 1955, to March 16, 2004.

Aviation enthusiasts of all stripes will enjoy this well-written, well-illustrated, and interesting book.

David F. Crosby, former USAF history

writer and doctrine developer for the Army Air Defense Artillery School.



**Aviation in Canada: The Pioneer Decades.** By Larry A. Milberry. Toronto: CANAV Books, 2008. Photographs. Glossary. Bibliography. Index. Pp 176. \$50.00 Canadian ISBN 978-0-0921122-19-0

Larry Milberry, the dean of Canadian aviation historians outside of the Directorate of History of the Department of National Defence, has spent a lifetime and a fortune pursuing many of the aspects of our northern neighbor's flying history. This book, his newest offering, looks at the beginnings of Canadian aviation through 1918, when the Great War ended with aviation established as technically viable, but also as only a mere military and civilian infant.

The U.S. connection to the story was through Glenn H. Curtiss. Dr. Alexander Graham Bell, the inventor of the telephone, had a summer place at Baddeck, Cape Breton Island, Nova Scotia, and had founded the Aerial Experiment Association (AEA) in 1907 at nearby Halifax. He was a serious aeronautical experimenter and a leading mental pillar of scientific developments in Canada from 1875 on. The AEA met and experimented both in Canada and Hammondsport, New York. Its members included, Bell, Curtiss, two University of Toronto graduates—Frederick Baldwin, and J.A.D. McCurdy. Lt. Thomas Selfridge, of the U.S. Army, was on loan as an observer, per President "Teddy" Roosevelt.

Milberry well covers these pioneer years to 1914 in text and photos and includes the military's interest from 1909, when a Baddeck-built biplane was demonstrated at Camp Petawa. In 1910, a Canadian major made two flights at Baddeck. Finally, in 1912, the Chief of the General Staff in Ottawa agreed to buy two machines, but this was opposed by the new Minister of Militia and Defence. However, the outbreak of war in August 1914, changed all that, and the Canadian Aviation Corps was formed.

Canada began to train pilots for the Royal Flying Corps and had a school in Texas for the winter months. By the time the school closed, the Canadians had trained 3,135 pilots and 1,370 observers. Canadians also built aircraft, notably flying boats of Curtiss design. To accomplish this Canada required an aircraft industry. Milberry covers this topic well, including the part performed by women in 1918, assembling the big Curtiss F-5L flying-boats.

Of special interest is the color-photo section on aircraft and replicas of both Allied and German World War I types surviving in Canada today. The book concludes with a gallery of photos and biographies of Canadian airmen and a description of their lives on the Western Front. All in all, this book is a pleasant and informative book.

*Dr. Robin Higham, Professor Emeritus,  
Kansas State University.*



**From North Africa to the Arakan: The Engrossing Memoir of a WW II Spitfire Ace.** By Alan McGregor Peart. London: Grub Street, 2008. Photographs. Appendices. Index. Pp 222. £20.00 ISBN: 1-906502-03-4

Alan Peart's war took him from his native New Zealand to the U.S., Canada, the UK, Gibraltar, Algeria, Malta, Sicily, Italy, and Burma. His book is not a history, but an "engrossing memoir" written for later generations of his family.

He actually begins his story in the middle. On September 16, 1943, he was in a flight of six Spitfires flying from Sicily in support of the Salerno invasion. Operating at 10,000 feet, they saw a battleship below them explode. Expecting to spot the wake of another ship or submarine in the vicinity of the warship, they were astounded to see three Dornier bombers egressing to the north. The Spits gave chase and downed two of the enemy while losing several of their own.

What Peart had witnessed was an attack by the Luftwaffe's III/KG 100 using Fritz-X 3000-lb radio-guided bombs on *HMS Warspite*, which barely survived the explosion. This was the same unit that had sunk the Italian flagship *Roma* a week before in the first successful attack by precision guided munitions—a precursor of what was to come decades later.

After describing this period, Peart goes back to the start of his military career. Following training in New Zealand, it was off to the war in England—via San Francisco, Vancouver, rail across Canada, and a dangerous voyage across the North Atlantic. Bomber intercepts, fights over the Channel protecting shipping, and fighter sweeps over France were the roles there. With only a few primitive navigation aids, they were also called upon to intercept friendly bombers and escort them to an airfield.

Just before he was to be commissioned (he graduated from flight school as an enlisted pilot), he was sent to Gibraltar. There, he was key to the area's night air

defense by virtue of being the only pilot with Hurricane experience. In November 1942, he was back in a Spitfire with long-range tanks flying to an airfield in Vichy-controlled Algiers. He was told that there was going to be a friendly field in time for landing. Descending through hostile French fighters, the flight was met by a French officer who said they were his prisoners! The ranking RAF officer responded by "capturing" the Vichy officer and closing the deal when a British tank showed up.

The successful Operation Torch invasion did not guarantee air superiority. Peart did a lot of flying over the next months to wrest control of the skies from the Germans until North Africa was secured. At that time, he was sent to Malta and then on to Sicily and Italy as the Allies landed on the European mainland.

By this stage of the war, action was picking up in the China-Burma-India (CBI) Theater. Peart left Foggia, Italy, and picked up a Spitfire in Cairo for transfer to the Arakan (the southwest portion of Burma), a trip interrupted by one crash and two forced landings. There, the RAF never seemed to run out of large numbers of Japanese or tropical diseases. These were combined with bad food, snake bite, combat fatigue, and just plain rot due to the miserable living conditions and climate attendant to the nearly complete lack of human life support notorious in the CBI. By his reckoning, it took three years for this combat-hardened ace to completely recover after returning home.

Despite the fact that Peart set out to write only for his family, this book is not only entertaining but it is useful. His descriptions of air engagements and logistics matters, particularly in the CBI, are insightful. Maps would have been helpful, as would more reference to dates, especially in the CBI part of the book. It would be almost impossible to understand this almost forgotten campaign without narratives such as this. I'd like to sit down with him and just listen to his cracking good war stories.

*Col. Jerry Hoblit, USAF (Ret.), Willis,  
Texas.*



**The Architecture of Leadership: Preparation Equals Performance.** By Donald T. Phillips and ADM James M. Loy, USCG (Ret). Annapolis, Md.: Naval Institute Press, 2008. Diagrams. Illustrations. Photographs. Index. Pp. x, 102. \$16.95 ISBN: 978-1-59114-474-8

*The Architecture of Leadership* brings together world-renowned author on lead-

ership, Donald Phillips, (*Lincoln on Leadership*) and former Commandant of the Coast Guard and Deputy Secretary of Homeland Security, James Loy, in a collaboration to write a simple, yet informative, book on leadership. Phillips is not an academic, but his insights and engaging prose have made him a popular author on the subject. Admiral Loy brings a wealth of firsthand experience gained in a lifetime of service in both the Coast Guard and Homeland Security.

The book does not offer a groundbreaking new theory of leadership, nor does it claim to be the final word on the subject. The essence of this slim volume is a message to would-be leaders that preparation equals performance. The authors base their approach on the acceptance of certain fundamental concepts. The first of these is that leadership can be learned. This learning takes the form of experience and study, and it is only through the combination of both that the best leaders achieve greatness. The second, and equally important, assumption is that leadership is not about coercion; it is about motivation. With this focus they describe and illustrate the traits they feel central to effective leadership.

Phillips and Loy use an architectural construct to provide a framework showing how their various elements of leadership connect to and affect each other. They start with the foundation and build through the floor to the framework then the ceiling and finally the roof. This approach provides a clear and easily followed pattern showing the progression of one element to the next and their interdependence.

This book is not an in-depth discussion of theory or an attempt to glean new lessons from the rapidly changing circumstances of the modern world. Rather, it is a primer best suited to an entry-level discussion of leadership, its critical elements, and how one can work to improve his or her own leadership abilities. The authors provide a liberal dose of anecdotes and stories from history ranging from the Revolution to Hurricane Katrina to illustrate their points. Many of these stories are familiar, but they add perspective and make the book a quick and enjoyable read.

This book is not going to be the final word on leadership. But, as a companion volume to leadership training or a primer for those interested in learning more about how they might become better leaders, it is very useful. About the only criticism is its lack of a bibliography or suggested list for further reading. It is obvious the authors are widely read on the subject, and their recommendations on good books for further study would be very useful. Despite



this minor flaw this is a useful and worthwhile book.

*Lt. Col. Golda Eldridge, Commander, AFROTC Det. 845, Texas Christian University*



**F-15 Eagle at War.** By Tyson V. Rininger. Minneapolis, Minn.: Zenith Press, 2009. Maps. Tables. Diagrams. Photographs. Notes. Glossary. Index. Pp. 158. \$24.99 ISBN: 978-0-7603-3350-1

If you like airplanes and, more specifically, beautiful photographs of fighters and their crews, this is the book for you. The large glossy-paper format lends itself well to presenting a magnificent collection of archival and author photographs. The quality of the printing, layout, color balance, and photo subjects is dramatic. Every aviation enthusiast will love the way Rininger has laced together the various aircraft views to tell the F-15 story. The photographs sing with emotion and beauty. Both the author and printer deserve high praise for the graphic quality.

Unfortunately, it is too bad the photo quality is not mirrored by accuracy in the text. I found misleading comments, poorly derived assertions, and serious gaps in what could have been an excellent history of the most remarkable air-superiority fighter of all time. In many cases, it appeared the author or editor merely inserted gratuitous dates, numbers, and comments—not all of them accurate or understandable. These are just a few examples:

On page 10, he says, “The Convair F-102 Delta Dagger was originally designed as a high-speed bomber escort...” Continuing on: “Like the F-102 and the F-106, the Lockheed F-104 was intended to be an intercept aircraft.” The last sentence on this page states: “The Starfighter simply lacked the payload for a tactical bomber...” I have no idea what the author is trying to tell the reader or what point is being made.

The text of page 11 tells the reader that the F-4E had only missiles, while the chart on page 14 indicates the F-4E had an internal gun.

The photo caption on page 13 reports that “SAC used the F-101 Voodoo as a high-speed bomber.” I don’t believe any Strategic Air Command unit was ever equipped with F-101s as strategic bombers.

The killer mistake for me showed up in the last paragraph of page 26: “On December 23, 1969, USAF systems program manager for the newly named F-15, Brig. Gen. Benjamin N. Bellis, personally

awarded McDonnell Douglas the F-X contract.” Totally wrong! Rininger’s grasp and understanding of the processes of source selection and contract award in the Air Force and Defense Department are quite deficient.

Throughout the text there is a constant drumbeat of Pratt & Whitney’s *problematic* F100 engines, but Rininger makes no mention of the F-15’s eight time-to-climb records set in January 1975, with those same *problematic* engines.

Another tremendous factual error is on page 68 where it notes that “The Eagle’s first combat kill came...” (the book’s implied date is January 17, 1991). Actually the very first Eagle kill came on June 27, 1979, when a Syrian MiG fell to an Israeli Air Force Eagle piloted by Lt. Col. Moshe Melnik.

The Glossary tells us AFSC is the acronym for Air Force Strategic Command. AFSC stood for Air Force Systems Command.

These are samples of why I can say that the photos are beautiful, but the writing gets an F—any way you read it.

*Col. Donn Byrnes, Col, USAF (Ret), author of Air Superiority Blue: The F-15 Story.*



**Carrier Battles: Command Decisions in Harm’s Way.** By Douglas V. Smith. Annapolis Md.: Naval Institute Press, 2006. Maps. Tables. Diagrams. Illustrations. Photographs. Notes. Appendices. Glossary. Bibliography. Index. Pp. xxxiii, 346. \$32.95 ISBN: 1-59114-794-8

*Carrier Battles* discusses the five carrier-vs.-carrier battles of World War II: Coral Sea, Midway, the Eastern Solomons, Santa Cruz, and the Philippine Sea. These battles are unique in history and are also significant to the American victory in the Pacific. They signal the twilight of the battleship and surface-fighting forces and the rise of the aircraft as the determinant of naval engagements.

This is a well-researched volume that sets the scene for each battle, lays out the order of battle, discusses both sides’ plans, follows the action, and delivers a conclusion. Omission of squadron identification from the participating units is a real flaw in the order of battle reporting, since Navy squadrons move from ship to ship. For example, VB-3, the Black Panthers, was on *Saratoga* when she was torpedoed north of Hawaii, on *Enterprise* when she escorted *Hornet* on the Doolittle Raid, on *Yorktown* and *Enterprise* during Midway, and on *Saratoga* again during the Eastern Solomons. Further, Smith misidentified

VB-3 in the Battle of Midway as VB-5.

Smith’s analysis of the effects of Japanese aircraft and pilot losses is compelling. They were unable to replace aircraft and aircrew lost in aerial combat as well as those lost in the sinking of their carriers. However, he seems to be blind to the effect of petroleum shortages on pilot training and industrial production. Before the attack on Pearl Harbor, the Japanese bought petroleum products from the United States. Withholding of those products and scrap metals was a factor in the Japanese decision to go to war. Japan captured oil resources in southern Asia but was frustrated in transporting them home.

Smith promises to evaluate each battle from eight points of view: commander’s estimate, commander’s planning ability, adequacy of command arrangements, commander’s adherence to doctrine, communication of mission requirements to subordinates, commander’s understanding of the strategic importance of the battle, commander’s audacity and brilliance, and commander’s ability to learn from the situation and subsequently apply those lessons. He grades the commanders in each of the battles.

Unfortunately, the book reads like a reworked dissertation with a central thesis that a Naval War College training manual, *Sound Military Decision*, was the key to carrier-battle outcome. I was not convinced. In his book *Fleet Tactics: Theory and Practice*, Wayne Hughes stressed the importance of scouting and swift attack as the keys to naval victory: find the enemy when you are prepared to strike and strike quickly. At Coral Sea, for example, the Americans were hidden under a cloud bank; and the Japanese were in the clear the first day. This facilitated discovery of the Japanese force resulting in the loss of the small carrier *Shoho*. On day two, the tables were turned; and the Japanese sank *Lexington* and damaged *Yorktown*.

The book’s illustrations are inadequate and often repeated. In one figure, only two of the three American carriers are shown, and neither is identified. When movement of forces is illustrated, surface ships are shown, but aircraft movements are depicted, at best, as straight dashed lines. While aircraft operations in three dimensions are a challenge to the graphics designer, they should be not ignored. After all, it was aircraft that determined the results of these battles, whether in the tracks flown by the scouts as each side groped for the other, or in the development and execution of the attacks.

The carrier battles of World War II are worthy of continued study and analysis. I yearn for the day when the American

Navy honors Midway at the level the British honor Trafalgar. Unfortunately, this volume doesn't do justice to that incredible victory.

*Comdr. Robert W. Covey, U.S. Navy (Ret.), Docent, NASM's Udvar-Hazy Center.*



**The Navy Cross: Extraordinary Heroism in Iraq, Afghanistan, and Other Conflicts.** By James E. Wise, Jr. and Scott Baron. Annapolis, Md.: Naval Institute Press, 2007. Maps. Illustrations. Photographs. Notes. Bibliography. Index. Pp. xiv, 250. \$34.95 ISBN: 978-1-59114-945-3

Both authors are veterans of the Vietnam War, and they are tired—tired of athletes and celebrities wearing the title “hero,” tired of media coverage that focuses only on caskets, and tired of bravery going unnoticed and unrecognized. With this book, they resolve to honor “America’s true heroes . . . military men and women . . . who put [their lives] on the line for others” by telling the stories of the sailors and Marines awarded the Navy Cross in recent conflicts. Just less than half the book focuses on heroes from Iraq and Afghanistan before it transitions to the medal recipients of the Vietnam, Korean, and World Wars. Wise and Baron appropriately created an overdue tribute focused on the valor of these heroes.

Each chapter describes a Navy Cross recipient’s experiences. Generally, every one provides the citation for the medal and then some detail about the individual and/or the situation for which he was recognized. Likely due to the resources available (especially for posthumous awards), the commentaries and compiled stories lack consistency from chapter to chapter. Some provide great detail on the events, while others give the reader emotional insight to the man behind the award (interestingly, every individual recognized is male). For example, the chapter on Gunnery Sergeant Justin Lehew, USMC, illustrates the intense fog and friction of war by describing unit movements, smoke discharges, and Lehew’s internal monologue. The chapter also demonstrates the writers’ knowledge of the subject and their aptitude for comprehending the battle situation, but leads to a portrayal that less experienced readers may not understand. Detailed maps of troop movements or locations would benefit the reader in this chapter and others. The story of Col. Gregory Boyington, USMC(R), however, gives insight into his childhood, adolescence, military career, and civilian life, portraying for the reader a common man out of uniform, but a legendary one in uniform.

The book struggles in two areas significant to a critical reader. First, the source citations appear inadequate or inaccurate at times. The story of 1st Lt. Brian Chontosh, USMC, gives the reader unique perspective on Chontosh’s thoughts in the heat of battle; seemingly, these thoughts originated from Chontosh himself. Unfortunately, the source the authors cite does not reach the same level of detail and is not entirely credible itself. Perhaps the authors, as veterans, interpreted the source for a less capable reader, a potentially useful but misleading approach. Chontosh’s chapter merely exemplifies the book-wide lack of transparency with sources. The authors cite the website “Home of Heroes” often; yet, as the book progresses, the citations become less specific and essentially useless to the reader because he cannot locate the exact source for further information. The listing in the bibliography for “Home of Heroes” poorly corresponds to the description of the information gained from the site and leaves the reader searching for an actual source.

Secondly, the authors’ style challenges the reader as it bounces between technical terms for weapons or specific unit titles and rough paraphrases of men’s accounts. They succeed at creating a personal feel, at the cost of professional voice.

Wise and Baron should be admired for their efforts to recognize a wide range of deserving servicemen. While they generally provide little previously unpublished information, some stories, like that of Lieutenant Commander Charles Hutchins Jr., USNR, reveal gems of first-person recollections. Wise and Baron have succeeded in compiling known information on these heroes and presenting it in concise format, easily accessible, and inspiring for the average American.

*2d Lt. Elizabeth Simpson, USA, Instructor, U.S. Air Force Academy.*



**The Titan II Handbook: A Civilian’s Guide to the Most Powerful ICBM America Ever Built.** By Chuck Penson. Tucson, Ariz.: Chuck Penson, 2008. Tables. Diagrams. Illustrations. Photographs. Notes. Appendices. Glossary. Bibliography. Index. Pp. xi, 180. \$24.95 Paperback. ISBN: 978-0-615-21241-8 [www.titan2handbook.com/](http://www.titan2handbook.com/)

Chuck Penson has put his background in industrial archeology and the history of science and technology to excellent use in preparing this superb history of the most powerful missile the U.S. ever put into operation. The book could easily have

been titled *Everything You Ever Wanted to Know about the Titan II Weapon System*.

The book is not a history of how the LGM-25C Titan II was developed. There are other books that cover that (and they are included in the excellent bibliography). However, Penson does provide a very brief history of the origin of ICBMs in general. Near the end of the book, there is another useful chapter, “Atomic Bombs 101,” for those needing some nuclear basics. This is a good chapter, because ICBMs are not of much use without a nuclear weapon!

What Penson does cover in depth is the launch complex including the Launch Control Center, the silo, all of the equipment that was above ground (topside), the equipment and structures tying the complex together, and the construction of these hardened launch complexes. Each subject is handled in a separate chapter. Of course, there is a chapter on the Titan missile itself. At the end of the book there is another chapter—somewhat chilling—on what would have happened to the crews that manned these missiles for several decades had they even been required to launch their birds.

While the text throughout is well done and written for the lay reader (Penson explains technical terms as he uses them and also provides a good glossary), the beauty of the book lies in the more than 300 black-and-white photographs, diagrams, and illustrations showing all sorts of details. These are all high-quality—none of those fuzzy images and diagrams with 1-pitch writing that can’t be read without a magnifying glass that are often found in books about weapon systems. While he didn’t call them appendices, Penson has included four 11 x 17 blueprints detailing different sections of the complex as well as a foldout schematic of the missile that is five feet long. Also included as a non-appendix is a two-page table of specifications for the Titan II, including a nominal launch profile.

As some readers may know, only one of USAF’s 54 Titan launch complexes exists today. It is the Titan Missile Museum and National Historic Landmark, the former launch complex 571-7, and is complete (including a Titan II missile). Run by the Pima Air & Space Museum, it is located in Green Valley, Arizona, just off of I-19, south of Tucson. I have visited the site and found the tour fascinating. Having read Penson’s book, I definitely want to return; the revisit will mean so much more now because of the knowledge gained from *The Titan II Handbook*.

*Col. Scott A. Willey, USAF (Ret.), Book Review Editor.*





# Books Received

Burgess, Colin, Ed. *Footprints in the Dust: The Epic Voyage of Apollo, 1969-1975*, London and Lincoln: University of Nebraska, 2005. Photographs. Notes. Appendices. Bibliography. Index. Pp. xxxiv, 480 Paperback \$34.95 ISBN: 978-0-8032-2665-4

Elliott, Mai. *RAND IN Southeast Asia: A History of the Vietnam War Era*. Santa Monica, Calif.: RAND Project Air Force, 2010. Maps. Tables. Diagrams. Illustrations. Photographs. Notes. Bibliography. Index. Pp. xxi, 672 Paperback \$35.00 ISBN: 978-0-8330-4754-0

Fisher, Steven C. and Shamim A. Rachman, Eds. *Remembering the Giants: Apollo Rocket Propulsion Development* [SP-2009-4545]. Washington, D.C., 2009. Notes. Photographs. Appendices. Glossary. Index. Pp. 207. Paperback.

Herris, Jack and Bob Pearsom. *The Essential Aircraft Identification Guide: Aircraft of World War I, 1914-1918*. London: Amber Books [Casemate], 2010. Maps. Tables. Diagrams. Illustrations. Photographs. Index. Pp. 192. \$34.95 ISBN: 978-1-906626-64-8

Landis, Tony R., Comp. *Lockheed Blackbird Family: A-12, YF-12, D-21/M-21 & SR-71 Photo Scrapbook*. North Branch, Minn.: Specialty Press, 2010. Maps. Diagrams. Photographs. Pp. 127 Paperback \$19.95 ISBN: 978-1-58007-151-2

Moroney, Jennifer D. P., et al. *International Cooperation with Partner Air Forces*. Santa Monica, Calif.: RAND Project Air Force, 2009. Tables. Diagrams. Bibliography. Pp. xxiii, 130 Paperback \$37.50 ISBN: 978-0-8330-4571-3

Newdick, Thomas. *The Essential Aircraft Identification Guide: Aircraft of the Cold War I, 1945-1991*. London: Amber Books [Casemate], 2010. Maps. Tables. Diagrams. Illustrations. Photographs. Appendix. Index. Pp. 192. \$34.95 ISBN: 978-1-906626-66-2

Olsen, John Andreas, Ed. *A History of Air Warfare*. Washington, D.C.: Potomac Books, Inc., 2010. Notes. Bibliography. Index. Pp. xvii, 488. \$55.00 ISBN: 978-1-59797-440-0

Pavelec, Sterling Michael. *The Jet Race and the Second World War*. Annapolis, Md.: Naval Institute Press, 2007. Photographs. Notes. Appendices. Bibliography. Index. Pp. x, 227 Paperback \$19.95 ISBN: 978-59114-666-7

Slayton, Robert A. *Master of the Air: William Tunnner and the Success of Military Airlift*. Tuscaloosa: The University of Alabama Press, 2010. Photographs. Notes. Index. Pp. xii, 291. \$43.50 ISBN: 978-0-8173-1692-1

Stern, Robert C. *Fire from the Sky: Surviving the Kamikaze Threat*. Annapolis, Md.: Naval Institute Press, 2010. Photographs. Notes. Appendices. Bibliography. Index. Pp. 384. \$49.95 ISBN: 978-59114-267-6

Trimble, William F. *Hero of the Air: Glenn Curtiss and the Birth of Naval Aviation*. Annapolis, Md.: Naval Institute Press, 2010. Photographs. Notes. Bibliography. Index. Pp. xvi, 270. \$47.95 ISBN: 978-1-59114-879-1

Wolk, Herman S. *Cataclysm: General Hap Arnold and the Defeat of Japan*. Denton: University of North Texas Press, 2010. Notes. Photographs. Bibliography. Index. Pp. xii, 300. \$24.95 ISBN: 978-1-57441-281-9

**Have you read a very good or very bad book in air power history recently? Send your review to Col. Scott A. Willey, address below.**

## PROSPECTIVE REVIEWERS

Anyone who believes he or she is qualified to substantively assess one of the following new books is invited to apply for a gratis copy of the book. The prospective reviewer should contact:

Col. Scott A. Willey, USAF (Ret.)  
3704 Brices Ford Ct.  
Fairfax, VA 22033  
Tel. (703) 620-4139  
e-mail: [scottlin.willey@gmail.com](mailto:scottlin.willey@gmail.com)

# From the President



## A Message from the President

April 29, 2010



This is the time of year that our Foundation closes out the last fiscal year and prepares for the next. This process also compels us to assess how well we serve our membership.

The Board of Directors is committed to improving the value of membership and broadening our appeal. To that end we need to hear from you.

We believe that technology can play an ever increasing role in our ability to reach out to existing and potential members. We are exploring enhancements to our website content and interactive features. Under specific consideration:

- larger variety of links to historical museums and recommended websites
- image collection
- researcher corner to share ideas and sources
- forum to discuss historical issues that provoke commentary
- calendar of events, including reunions, meetings, etc
- personal service stories

The most important element in our moving forward on these initiatives is your feedback. Visit us at [www.afhistoricalfoundation.com](http://www.afhistoricalfoundation.com) and tell us what you think. Or if you prefer older fashion methods, write or call us anytime. With your help we can continue to promote the preservation and appreciation of air power history.

Dale W. Meyerrose  
Major General, USAF (Ret)  
President



# From the Executive Director

## A Momentous Year

The Foundation is coming off an interesting year and looking forward to another. We have had successes and challenges, but we have worked diligently to overcome the challenges and build on the successes. We continue to work to improve our most visible programs:

- Publication of our flagship journal, *Air Power History*;
- Awards, including the two newest—the General Carl “Tooey” Spaatz Award and the Major General I. B. Holley Award;
- We are striving to make our website more vibrant and functional;
- Our book program has been re-energized with *World War II: A Chronology of War*, published in cooperation with our sister historical foundations for the Marine Corps, Navy, and Army, and we anxiously await the forthcoming (Fall 2010) publication of a similar chronology of the Vietnam War.

## Spaatz and Holley Award Nominations

We request your help in identifying and nominating worthy candidates for the fourth annual award of two of our most prestigious honors. *We need the members to nominate individuals or groups for the aforementioned Gen. Spaatz Award and Maj. Gen. Holley Award.* The Spaatz Award was created in 2007, to recognize a living person



# New Executive Director



Lt. Col. James A. "Jim" Vertenten, USAF (Ret.) is the newly appointed Executive Director of the Air Force Historical Foundation. He succeeded Col. Tom Bradley in February. Jim comes to this position following an extensive career in banking in the Chicago area, where he rose to the position of President, Madison National Bank.

He entered the United States Air Force via Officer Training School (OTS) in 1967, following graduation from Loyola University in Chicago. Jim's military career spanned the fields of personnel, missile operations, and munitions security. Early on he earned a Master of Business Administration degree via the Air Force Institute of Technology (AFIT) sponsorship at the University of Rochester, New York. Twice he was assigned to be the Base Director of Personnel: at Goose Air Base, Canada, and at McConnell AFB, Kansas. Later, at Malmstrom AFB, Montana, Jim served as a missile launch control officer, instructor, and Chief of Emergency War Order Training. He commanded the 7261st Munitions Support Squadron at Memmingen Airfield, Germany, where

he also acted as the senior U.S. military official in the region. He was also assigned twice to Headquarters, Strategic Air Command in the Assignments Directorate. In his final Air Force duty he was the Chief of the Airman Assignments Division, responsible for force positioning of approximately 127,000 personnel at thirty locations worldwide. Jim completed the professional courses at the Air Command and Staff College by correspondence and Air War College by seminar.

A widower, Jim has four adult children and four grandchildren. He makes his home in Alexandria, Virginia.



Col. Tom Bradley resigned from the staff of the Foundation on February 15, 2010, to work for a contractor to the Department of Defense for the Joint Improvised Explosive Device Defeat Organization, the part of the Department that works to reduce the effectiveness of roadside bombs and other explosives in Iraq, Afghanistan, and elsewhere. Tom's mission is to improve communications with America's international partners. During his nearly four years as Executive Director, he planned and executed two symposia, in 2007 and 2009, providing outreach to the active Air Force and to academic, industry, and historical communities. He acted on the Board's decision to create two new, prestigious awards, the Gen. Carl "Tooe" Spaatz Award and the Maj. Gen. I. B. Holley Award for distinguished service. He planned and executed three awards banquets for presentation of several Foundation awards. He worked to implement a new corporate sponsorship program that raised over \$250,000. He worked with our printers to publish two new books for the membership, with a third on the Vietnam War well underway for publication later this year. Finally, he reorga-

nized all the Foundation's holdings and property and put it into the best-organized system in several decades.

Tom Bradley remains a life member and supporter of the Foundation, and an air power advocate. He has said that his favorite part of his work for the Foundation was meeting the many Air Force veterans who have devoted their lives to serving the country, and taking phone calls from many of our older members, particularly the World War II veterans. The Board wishes him well in his future endeavors.

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who has made a sustained, significant contribution to the *making* of Air Force history during a lifetime of service. Nominations will be accepted anytime during the six-month period following the previous award presentation. This year, we will accept nominations through July 31, 2010. The nomination letter should be not more than one page long and highlight significant contributions. The Holley Award recognizes a living person who has made a sustained, significant contribution to the *research, interpretation, and documentation* of Air Force history through a lifetime of service. The Foundation President, with the advice of the Board of Directors, will select the winners.

## Board of Directors

Each year a certain portion of the Board has its term expire. *You, as members, may nominate individuals to serve on the Board of Directors.* The Board works without any compensation, providing their time and expertise generously to strengthen the Foundation. Most Board members have full-time jobs, including one on active duty in the Air Force. Their direction, guidance, advice, and help make the Foundation viable. A wonderful group of people, with long, affectionate connections to the Air Force, Board members are dedicated to the objectives of the Foundation as laid out by Carl Spaatz, H. C. Pratt, and T. D. Milling when they incorporated the Foundation on February 20, 1953.

Sincerely,

Jim Vertenten  
Lieutenant Colonel, USAF (Ret)  
Executive Director

# Letters

I am in receipt of the latest issue of *Air Power History*, LVII (Spring, 2010) and just wanted to send this unsolicited comment complimenting the journal editors on the quality of the essays and information presented in the publication. Having recently published an essay on Jack Frye, one of the founders of Transcontinental and Western Airline, I was most interested in Kenneth P. Werrell's "Fiasco" Revisited: The Air Corps & the 1934 Air Mail Episode." I look forward to future issues of *Air Power History* and learning something new every time I turn a page.

Justin H. Libby, Professor Emeritus  
Indiana University

# News

## ***Air Power History's* Best Article Award, 2009**

A three-member panel of judges chose as the Best Article to Appear in *Air Power History* during 2009, Thomas Wildenberg's "The A-1C Gunsight: A Case Study of Technological Innovation in the United States Air Force." The article appeared in the summer issue, Vol. 56, No. 2, pp. 28-37.

The A-1C (M) lead-computing sight was the first fighter aircraft gunsight to employ radar ranging. The sight had its roots in experimental sight development that began in 1942, during World War II. It was widely used in Korea, where it received a mixed reception by the F-86 Sabre pilots who depended upon it. Many of the younger, less experienced pilots found it a godsend, while the veterans, particularly some aces of World War II, considered it unreliable and much too complicated—particularly its radar. Nevertheless, the introduction of the A-1C gunsight marked an important milestone in the development of sophisticated fire control equipment for air-to-air combat. It supplemented experience, and replaced the wad of chewing gum that some pilots stuck on the inside of the canopy or other types of fixed sights better suited for slower, less maneuverable aircraft.

The radar gunsight's development also highlights USAF's endless search for new and better technology to enhance a combat aircraft's performance. Moreover, the article illustrates that some technological developments come about because very talented individuals persevered in promoting their ideas. The A-1C sight that finally came to be used in the F-86 in the midst of the Korean War began as a project to develop a sight to aid pilots in dive

bombing and ground attack shortly after the U.S. entered World War II.

The judges—Torger Anderson, Lawrence Spinetta, and Ken Alnwick—praised several other articles published in 2009. This year's competition was extremely close, with four articles scoring within a few points of each other. All of the articles nominated related incidents and circumstances important in the development of the U. S. Air Force. The two highest-scoring articles dealt with technology development: the runner-up examined defensive radar development and employment in the Pacific during World War II. The main principles of radar employment remain in use today. Another high-scoring article related diplomacy and technology employment in early Cold War efforts to create an Allied capability in the United Kingdom that would provide a quick deployment of Thor intermediate range ballistic missiles as a deterrent to Soviet expansionism in Europe.

Another fine article explored a little-known aspect of the Berlin Airlift, the Air Force's use of former German *Luftwaffe* maintenance technicians to keep the logistics aircraft flying into and out of Berlin when postwar force reductions meant that there were insufficient American airmen available to do the job. The judges also considered a number of diverse topics, including an exploration of the personality of Charles Lindbergh, surely one of the quirkiest and most unusual airmen of the Twentieth Century. Another excellent article related the story the air combat controllers who flew into Iran as part of the attempt to rescue the American hostages held in Tehran during 1979 and 1980. This article ought to be read in conjunction with a book reviewed in *Air Power History* last year, Steve Call's *Danger Close, Tactical Air Controllers in Afghanistan and Iraq*. In recent years, the Air Force has made major strides in resolving a long-running, acrimonious conflict with the Army over responsibility for close air support. With the development of precision guided weapons, the Air Force can now provide extremely accurate bomb delivery. Although its critics contend that it has taken the Air Force far too long to achieve this ability, the Air Force has created an air combat controller specialty for enlisted troops, and these airmen have achieved remarkable results in recent fighting as members of ground combat teams.

Another exceptionally good article was Cargill Hall's exploration of President Dwight Eisenhower's use of aerial overflights of the Soviet Union to gather reconnaissance information that could help inform decisions regarding Communist nation's threats to the U.S. and its Allies.

An extremely touchy subject with the Soviets, President Eisenhower had to walk a very narrow line in carrying out his constitutional responsibility to protect the United States from all enemies. In this case, the opposition party in congress gave him full support.

All of the articles published in 2009 were excellent, and each author should be proud of his/her accomplishment.

In addition to the wide variety of outstanding articles published in *Air Power History*, are the many reviews of books that are relevant to air power and the Air Force. Continuing a practice, begun last year, to recognize a greater scope of accomplishment, we also wish to acknowledge the authors of books that were reviewed in our journal. These include scholarly tomes as well as accounts of personal exploits by airmen, which are highly informative and entertaining. Later this year, we will honor several books written by airmen and announce our choice for the "Best Book Award for 2009."

We encourage any reader who has a special favorite, to let us know. Send an e-mail via [exedir@afhistoricalfoundation.org](mailto:exedir@afhistoricalfoundation.org) to my attention.

John F. Kreis, Chairman, Publications  
Awards Committee

# Notice

## **Did You Fly on a Mission to Berlin?**

I'm writing a book about the mission of February 3, 1945, when the Eighth Air Force dispatched 1,003 B-17 Flying Fortresses to Berlin and 434 B-24 Liberators to Magdeburg, escorted by 948 fighters. "Mission to Berlin," will be published by Zenith Press in March 2011. I'd like to hear from veterans who participated in this mission, including pilots, aircrew members, ground support troops and from anyone who can help. This is an opportunity to help preserve the memory of all who served and to tell this tale to a new generation of young readers.

I'm especially interested in learning more about 1st Lt. David Magel, the P-47 Thunderbolt pilot who was apparently the only American fighter pilot to lose his life on February 3, 1945.

Robert F. Dorr  
3411 Valewood Drive  
Oakton, Virginia 22124  
(703) 264-8950  
[robert.f.dorr@cox.net](mailto:robert.f.dorr@cox.net)



# Reunions

**The Pilot Training Class 55-B** reunion will be held June 17-19, 2010, in Colorado Springs, Colorado. Contact:

Dick Nemeth  
703-280-5075  
dhnemeth@verizon.net  
www.danbanks.net/index.htm

**The 6th Bomb Group** will hold a reunion June 23-26, 2010, in Dayton, Ohio. Contact:

Jane Reagan  
646 McCauley St  
Williamston, Michigan 48895  
(517) 655-2739  
janeellenreagan@gmail.com

**The 10th Tactical Recon Wing** will hold a reunion June 23-27, 2010, in Fairborn Ohio. Contact:

Jerry Graham  
409 Maple Drive  
Schertz, TX 78154  
(210) 658-5962  
nodaktwointx@sbcglobal.net

**The 354th Air Fighters** will hold a reunion July 13-16, 2010, in Dayton, Ohio. Contact:

Jeanne Ludders  
16445 Lake Road  
White Pigeon, MI 49099  
269-625-6377  
jeannelou\_69@hotmail.com

**The 355th Tactical Fighter Wing** will hold a reunion July 16-18, 2010, in Dayton/Fairborn, Ohio. Contact:

Robert Fluck  
5205 Pocono Drive  
Huber Heights OH 45424  
(937) 237-9622  
twobobies@aol.com

**The 551st AEW Wing** will hold a reunion August 12-15, 2010, in Fairborn, Ohio. Contact:

John Loftus  
420 Jefferson Ave  
Edgewater NJ 08010  
(609) 386-1318  
jloftus@comcast.net

**The Strategic Air Command** reunion will be held August 25-29, 2010, in Tucson, Arizona. Contact:

J. T. Romero  
520-203-8809 or 866-260-9302  
jtrome-25@excite.com

**The C-7A Caribou Association's** 25th reunion will be held August 25-29, 2010, in Macon, Georgia. Contact:

Bill Avon  
330-878-7451  
Veteran1@tusco.net  
www.c7acaribou.com

**The 526th Fighter Squadron** will hold a reunion September 9-12, 2010, in Fairborn, Ohio. Contact:

Tom Lane  
125 N West St  
Norwalk, OH 44857  
(419) 668-9446  
tomlane@neo.rr.com

**The American X-POWs** will hold a reunion September 13-18, 2010, in Dayton, Ohio. Contact:

Linda Irvine  
50721 State Highway 410 East  
Greenwater WA 98022  
(360) 663-2521  
linda@thereunionbrat.com

**The 58th Fighter Association** reunion will be held September 13-19, 2010, in Dayton, Ohio. Contact:

Jean Kupferer  
2025 Bono Road  
New Albany, IN 47150  
(812) 945-7649  
jkupferer@insightbb.com

**The 307th Bomb Wing (B-29)** reunion will be held September 15-18, 2010, in Fairborn Ohio. Contact:

David White  
722 County Road 32N  
Bellefontaine, OH 43311  
(937) 593-3950

**The 44th Bomb Group Veterans Association** will hold a reunion September 15-20, 2010, in Dayton, Ohio. Contact:

Lowell Roberts  
11910 S E 44th Street  
Oklahoma City, OK 73150  
(405) 732-5838  
Jlrc42@cox.net

**The 308 SMW** reunion will be held September 18-19, 2010, in Little Rock, Arkansas. Contact:

William Leslie  
william.leslie2@wpafb.af.mil

**The 98th Air Refueling Squadron** reunion will be held September 20-23, 2010, in Fairborn, Ohio. Contact:

Col. James L. Lee Jr., USAF (Ret.)  
8323 Scarsdale Drive  
Indianapolis, IN 46256  
(317) 842-8737  
jlee411@comcast.net

**The 317th Troop Carrier/46th Troop Carrier Squadron** reunion will be held September 22-25, 2010, in Fairborn, Ohio. Contact:

Jim Timmons  
758 221st Street  
Pasadena, Md. 21122  
(410) 255-2735 jimt0708@aol.com

**The 85th Bomb Squadron** will hold a reunion September 27-30, 2010, in Dayton, Ohio. Contact:

Mrs Jane Cox  
380 Turner Road  
Bluff City, TN 37618  
(423) 538-9690  
freemanjanecox@charter.net

**The 91st Bomb Group Memorial Association** will hold a reunion September 29-October 2, 2010, in Fairborn, Ohio. Contact:

Jim Shepherd  
20670 Via Augusto  
Yorba Linda, CA 92887  
(714) 504-4970  
jshep91@earthlink.net

**The 27th Air Transport Group** (310th, 311th, 312th, 325th Ferrying Squadrons; 86th, 87th, 320th, 321st Transport Squadrons; and 519th, 520th Service Squadrons) will hold a reunion on September 30-October 3, 2010, in Las Vegas, Nevada. Contact:

Fred Garcia  
6533 West Altadena Ave.  
Glendale, AZ 85304  
(623) 878-7007

**The 487 TMW (Comiso)** reunion will be held October 6-10, 2010, in Tucson, Arizona. Contact:

Chuck Vickery  
915-760-4673  
chuckvickrey@sbcglobal.net

**The 579 SMS (Walker Atlas)** reunion will be held October 6-10, 2010, in Tucson, AZ. Contact:

William Leslie  
william.leslie2@wpafb.af.mil

**The Association of Air Force Missiles** will hold a reunion October 6-10, 2010, at the Radisson Airport in Tucson, Arizona. We are encouraging units or other groups looking at a reunion to consider joining us - we make all the arrangements, help you get the word out and make sure you have meeting space or fill any other special requirements. Registration in each newsletters and at [www.afmissileers.com/nmreg10.pdf](http://www.afmissileers.com/nmreg10.pdf). Contact:

Col. Charlie Simpson, USAF (Ret.),  
Executive Director  
Association of Air Force Missileers  
PO Box 5693,  
Breckenridge, CO 80424  
970-453-0500  
[www.afmissileers.org](http://www.afmissileers.org)  
[afmissileers@msn.com](mailto:afmissileers@msn.com)  
[aafm@afmissileers.org](mailto:aafm@afmissileers.org)

## **Maj. Gen. Jeanne M Holm (1921-2010)**



The first woman to achieve the rank of brigadier general in the U.S. Air Force, Jeanne M. Holm, died on February 15, 2010, in Annapolis, Maryland. She was eighty-eight. The cause of death was heart disease.

She was born in Portland, Oregon, on June 23, 1921. Her father died when she was very young, leaving her mother as a single parent with three small children. The family moved frequently and Jeanne was fifteen when her mother remarried. Jeanne learned to be a silversmith and plied her trade until July 1942, when she enlisted in the U.S. Army as a truck driver. General Holm joined the Women's Auxiliary Corps, and was commissioned after completing Officer Candidate School. General Holm left the military in 1946 to complete her college education.

In 1948, after earning her BA degree, she was recalled to active duty. During the Berlin Crisis, she served as a company commander at Camp Lee, Virginia. The following year, she transferred to the Air Force and was assigned as assistant director of plans and policies for the 7200th Air Force Depot Wing and later served as war plans officer for the 85th Air Depot Wing, in Germany.

She returned to the United States in 1952, and became the first woman in the USAF to attend the Air Command and Staff School at Maxwell AFB, Alabama, after which she held various positions in the United States and overseas, including work with NATO.

In November 1965, she was appointed director, Women in the Air Force (WAF), and extended in that position twice. During her

tenure policies affecting women were updated, WAF strength more than doubled, assignment opportunities for women were greatly expanded, and their uniforms were modernized. Only four USAF specialties remained closed to women: pilot, navigator, missile operations, and security police. She successfully pushed for women to be admitted to AFROTC, the first service to do so. She made the Air Force the first service in which a woman commanded a mixed unit of men and women.

She filed her retirement papers in 1970, but General Robert J. Dixon, the new director of personnel, urged her to continue promoting opportunities for women. In 1971, she became the USAF's first female brigadier general. Two years later, she was promoted to major general, the first woman in the armed forces to attain that rank. She retired in June 1975. General Holm became the special assistant for women's programs in the administration of President Gerald R. Ford and later held similar posts under Presidents James Carter and Ronald Reagan.

Among her awards and decorations were the Legion of Merit and the Distinguished Service Medal. General Holm is the author of *Women in the Military: An Unfinished Revolution* [Novato, Calif.: Presidio Press, 1982] She served as a trustee for the Air Force Historical Foundation, a member of the board of Campfire Girls, Inc., and the Pentagon Federal Credit Union. She is survived by a brother, Dale M. Holm.

## **H. Guyford Stever (1916-2010)**



H. Guyford "Guy" Stever, the former science advisor to Presidents Nixon and Ford, died on April 9, 2010, in Gaithersburg, Maryland. The cause of death was "adult failure to thrive." He was ninety-three. Born in Corning, N.Y. on October 24, 1916, he was orphaned as a boy. He graduated from Cornell and earned a doctorate in physics from Caltech. During World War II he performed seminal research on radar. In 1957, he was teaching at MIT when invited to become chief scientist of the U.S. Air Force and the next year helped to establish NASA. He remained a key figure in the nation's space program a generation later. Following the space shuttle *Challenger* disaster in 1986, he led a National Research Council team of experts to oversee the shuttle's redesign. In 1965, he became president of Carnegie Institute of Technology, and then led its merger with the Mellon Institute of Research to become Carnegie Mellon University. Stever

served as president until 1972, when he was named to head the National Science Foundation and President Nixon's science advisor. In 1976, he occupied the same position under President Ford. Dr. Stever continued to advise the nation's leaders over the next three decades. In 2002, he wrote his autobiography, *In War and Peace: My Life in Science and Technology*.





## Maj. Gen. Fred J. Ascani (1917-2010)

A retired test pilot, Maj. Gen. Fred J. Ascani died of lung cancer on March 28, 2010, in Alexandria, Virginia. He was ninety-two.

Born in 1917 in Beloit, Wisconsin, he was graduated from the USMA, West Point, in 1941, and flew B-17 bombers during World War II. He completed fifty-three missions, including a daring flight in October 1944 into German-occupied Czechoslovakia to land, resupply partisans, and evacuate downed aircrews and Czech leaders.

After the war, he piloted some fifty types of experimental planes, including the Bell X-1 that first broke the sound barrier. In August 1951, piloting an F-86E, he set an official speed record of 628 mph that stood until 1953. In 1961, he became program director for the XB-70 Valkyrie bomber that exceeded 2,000 mph and flew at 70,000 ft. He was later vice commander of Fifth Air Force,

based in Japan. Before retiring in 1973, he was the senior USAF member of OSD's weapons systems evaluation group. Among his awards and decorations are the Distinguished Service Medal, two Legions of Merit, two Distinguished Flying Crosses, five Air Medals, and two Army Commendation Medals.



## Maj. Gen. Joseph L. Dickman (1917-2010)

Maj. Gen. Joseph L. Dickman, USAF (Ret.) died of congestive heart failure on March 20, 2010, in Leesburg, Virginia. He was ninety-two.

Born in Tampa, Florida, he was a third-generation West Pointer, graduating in 1939. A fighter pilot in World War II, he flew the P-47 and was deputy commander of a P-38 group based in Italy. After the war, he commanded a fighter-bomber wing, based in France, was deputy chief of operations of the Seventeenth Air Force in Germany, and commander of the Duluth Air Defense Sector in Minnesota. Promoted to major general in 1965, he served in the North American Air Defense Command in Colorado and another branch in New York. His military decorations include: the Purple Heart, Legion of Merit, two Distinguished Flying Crosses, and five Air Medals. After retirement, he was a volunteer at the Smithsonian's National Museum of American History and a volunteer researcher at the Air Force Historical Research Studies Office, at Bolling AFB, Washington, D.C.



## Lt. Gen. A.P. Clark (1914-2010)

Lt. Gen. A. P. Clark died on March 8, 2010, in Colorado Springs, Colorado. He was ninety-six. Born into a military family at Schofield Barracks, Hawaii, he was graduated from West Point in 1936, and completed flight training at Randolph Field, Texas, in 1937. He then served at Selfridge Field, Michigan, until June 1941, when he went to England as second in command of the 31st Fighter Group, the first American unit of its kind in the European Theater of Operations. His squadron and two other Allied units engaged a group of Luftwaffe FW-190s, but he was shot down and became a prisoner of war for three years in *Stalag Luft III* in Poland, which inspired the film, "The Great Escape," starring Steve McQueen.

After World War II ended, he went on to command the 48th Fighter-Bomber Wing in Chaumont, France, in 1955-1956, and then was chief of staff for U.S. Air Forces in Europe. Subsequent assignments included service as chief of the U.S. Military Mission to Saudi Arabia, a four-year tour as director of military personnel at Air Force Headquarters, Washington, D.C., starting in 1959, and appointment as commander of the 313th Air Division on Okinawa. In 1965 he was promoted to lieutenant general and served as vice commander of Tactical Air Command and commander of the Air University. In 1970, he became superintendent of the Air Force Academy. He retired in 1974. General Clark's decorations and awards include the Distinguished Service Medal, Legion of Merit, with Oak Leaf Cluster, Air Medal, Air Force Commendation Medal, and the Purple Heart.



## Elinor Smith Sullivan (1911-2010)

Elinor Smith Sullivan died on March 19, 2010, in Palo Alto, California. She was ninety-eight. Known by her maiden name, Elinor Smith, the pioneer aviatrix was named female pilot of the year in 1930, over Amelia Earhart. She set multiple records for speed, altitude, and endurance; soloed at age fifteen and at sixteen became the world's youngest licensed pilot. In a 1928 stunt, she flew under four New York bridges. She was hired as the first female executive pilot of Irwin Air Chute Co., the first female test pilot for Fairchild Aviation Corp. and Bellanca

Aircraft Corp. Miss Smith was hired by NBC as a commentator covering international flights and races. She retired from flying after marrying New York legislator Patrick H. Sullivan II in 1933.



Our Summer mystery aircraft was the North American XB-28 bomber.

First flown April 24, 1942, at Los Angeles Municipal Airport—today, Los Angeles International Airport—by test pilots Edward Virgin and Joe Barton, the XB-28 was a product of the company famous for the B-25 Mitchell.

The XB-28 was an ambitious design, a high-altitude medium bomber with a pressurized cabin, supercharged engines, and remotely-controlled gun turrets. The bomber may have been overly ambitious, offering too many innovations at a time when the United States needed to mass-produce good airplanes more than it needed to develop better ones.

The XB-28 used two Pratt & Whitney R-2800 radial engines. Early in flight tests, it pulled away from a P-38 Lightning at high altitude.

An Army crew ferried the prototype XB-28 from the North American plant at Inglewood, California, to Wright Field, Ohio. The plane eventually became a ground laboratory with wings removed, its pressurized cabin functioning as a high-altitude test chamber.

A second plane made its initial flight on April 24, 1943, again piloted by Virgin and Barton. With different gun turrets and other changes, the craft acquired an “A” suffix to become the XB-28A.

It wasn’t around for long. On April 24, 1943, test

pilot Bob Chilton and flight engineer Roy Ferrin were performing roll tests off the California coast when the XB-28A went out of control in a dive. Chilton and Ferrin bailed out and were rescued, but the XB-28A went to the bottom of the Pacific.

With the B-29 Superfortress emerging on the scene, there was no real place in U.S. military plans for a high-altitude, pressurized medium bomber. Although the XB-28 showed promise, perfecting the plane’s advanced systems would have distracted North American, which was busy building B-25s and P-51 Mustangs.

With a wingspan of more than 72 feet, and a gross weight of 33,763 pounds, the XB-28 had a maximum speed of 372 miles per hour. Sadly, the surviving XB-28 was scrapped, even though it was located at the site of today’s National Museum of the United States Air Force. Had it been saved, the XB-28 could have been displayed as an example of a reach for progress in aviation technology.

All but one of the thirty-one readers who submitted entries in our “name the plane” contest had the right answer. Our “History Mystery” winner, chosen at random, is Mark Sublette of Clemson, S.C. As his prize, we’ve sent him a copy of the book *“Hell Hawks,”* a history of a P-47 Thunderbolt fighter group in combat in World War II.

## This Issue's Mystery Plane

Can you identify this issue’s “mystery” aircraft? Remember the “History Mystery” rules:

1. Submit your entry on a postcard. Mail the postcard to Robert F. Dorr, 3411 Valewood Drive, Oakton VA 22124. Entries may also be submitted via e-mail to robert.f.dorr@cox.net.

2. Name the aircraft shown here. Include your address and telephone number. Entries not accompanied by both an address and a phone number will be disqualified.

3. A winner will be chosen at random from among correct entries and will receive an aviation book.

And do you have a rare photo of a little-known aircraft? We’ll return any photos sent by readers for use on this page.







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