

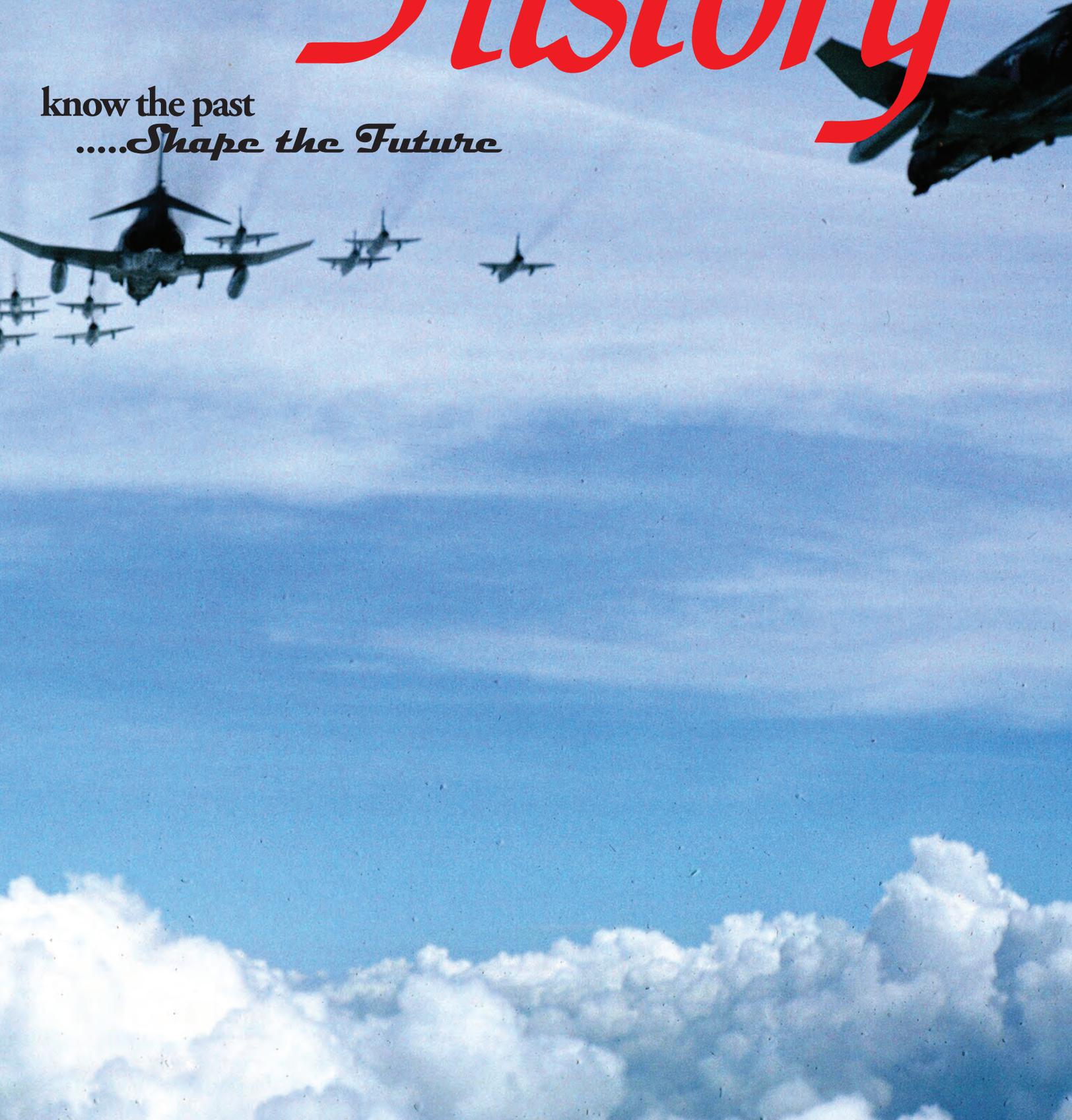
AIR POWER

FALL 2018 - Volume 65, Number 3
WWW.AFHISTORY.ORG

History

know the past

.....*Shape the Future*





The Air Force *Historical* Foundation

Founded on May 27, 1953 by Gen Carl A. “Tooey” Spaatz and other air power pioneers, the Air Force Historical Foundation (AFHF) is a nonprofit tax exempt organization. It is dedicated to the preservation, perpetuation and appropriate publication of the history and traditions of American aviation, with emphasis on the U.S. Air Force, its predecessor organizations, and the men and women whose lives and dreams were devoted to flight. The Foundation serves all components of the United States Air Force—Active, Reserve and Air National Guard.

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.

The Foundation’s four primary activities include a quarterly journal *Air Power History*, a book program, a biennial symposium, and an awards program.

MEMBERSHIP BENEFITS

All members receive our exciting and informative *Air Power History Journal*, either electronically or on paper, covering all aspects of aerospace history

- Chronicles the great campaigns and the great leaders
- Eyewitness accounts and historical articles
- In depth resources to museums and activities, to keep members connected to the latest and greatest events.

Preserve the legacy, stay connected:

- Membership helps preserve the legacy of current and future US air force personnel.
- Provides reliable and accurate accounts of historical events.
- Establish connections between generations.



AIR POWER

Fall 2018 - Volume 65, Number 3
WWW.AFHISTORY.ORG

History

know the past
....*Shape the Future*

Features	Swedish Air Power History: A Holistic Overview <i>Arash Heydarian Pashakhanlou</i>	7
	Nathan Mazer and the 384th Bomb Group <i>Thomas Wildenberg</i>	15
	Lindbergh: A Photographic History of the Lone Eagle <i>Raymond Fredette</i>	21
	Benjamin O. Davis, Jr., as a Tuskegee Airman <i>Daniel L. Haulman</i>	27
	The Red Baron Reports: What They Really Said <i>William Sayers</i>	33
Book Reviews	<i>The Road Not Taken: Edward Lansdale and the American Tragedy in Vietnam</i> By Max Boot	42
	Review by John Cirafici	
	<i>Seven at Santa Cruz: The Life of Fighter Ace Stanley "Swede" Vejtasa</i> By Ted Edwards	43
	Review by Scott A. Willey	
	<i>The Grand Designers: The Evolution of the Airplane in the 20th Century</i> By John D. Anderson, Jr.	43
	Review by Leslie C. Taylor	
	<i>Hue 1968: A Turning Point of the American War in Vietnam</i> By Mark Bowden	44
	Review by George M. Watson, Jr.	
	<i>Flight to the Top of the World: The Adventures of Walter Wellman</i> By David L. Bristow	45
	Review by Scott A. Willey	
	<i>Liberators over the Atlantic</i> By Jack Colman & Richard Colman	45
	Review by Golda Eldridge	
	<i>Always at War: Organizational Culture in Strategic Air Command</i> By Melvin G. Deaile	46
	Review by Golda Eldridge	
	<i>History of Rocketry and Astronautics: Proceedings of the 47th History Symposium, Beijing, China</i> By Andrew S. Erickson & Rick W. Sturdevant, eds.	47
	Review by Richard P. Hallion	
	<i>Tinian and the Bomb: Project Alberta and Operation Centerboard</i> By Don A. Farrell	47
	Review by Darrell Dvorak	
	<i>Bloody Sixteen</i> By Peter Fey	48
	Review by Golda Eldridge	
<i>The Second World Wars: How the First Global Conflict was Fought and Won</i> By Victor Davis Hanson	48	
Review by Robert Huddleston		
<i>1968 in America: Politics, Chaos, Counterculture, and the Shaping of a Generation</i> By Charles Kaiser	49	
Review by John Cirafici		
<i>Magnificent Showcase: History, Heritage and Art: The USAF and the Air Force Art Program</i> By Timothy R. Keck & Lori Ann Dawson	50	
Review by Scott A. Willey		
<i>Anatomy of a Campaign: The British Fiasco in Norway, 1940</i> By John Kiszely	50	
Review by Richard P. Hallion		
<i>Lend-Lease and Soviet Aviation in the Second World War</i> By Vladimir Kotelnikov	51	
Review by Golda Eldridge		
<i>The Shadow Tiger: Billy McDonald, Wingman to Chennault</i> By William C. McDonald, III & Barbara L. Evenson	52	
Review by Leslie C. Taylor		
<i>Bankrupting the Enemy: The U.S. Financial Siege of Japan before Pearl Harbor</i> By Edward S. Miller	53	
Review by Joseph Romito		
<i>Advocating Overlord: The D-Day Strategy and the Atomic Bomb</i> By Phillip Padgett	54	
Review by Golda Eldridge		
<i>The Problem with Pilots: How Physicians, Engineers, and Airpower Enthusiasts Redefined Flight</i> By Timothy P. Schultz	55	
Review by Steven Agoratus		
<i>Solo Stages: A Recollection of Jet Pilot Training in the United States Air Force, 1962-1963</i> By David K. Vaughan	55	
Review by Golda Eldridge		
<i>Dangerous Games: Faces, Incidents and Casualties of the Cold War</i> By James E. Wise, Jr. & Scott Baron	56	
Review by Daniel J. Simonsen		
Departments	President's Message	5
	Upcoming Events, Letters, In Memoriam, and Reunions	58
	New History Mystery	64

The Air Force Historical Foundation



Air Force Historical Foundation

P.O. Box 790
Clinton, MD 20735-0790
(301) 736-1959

E-mail: angelabear@afhistory.org
On the Web at <http://www.afhistory.org>

Board of Directors

Lt Gen Christopher D. Miller, USAF (Ret.)
Chairman
Lt Gen Nicholas B. Kehoe, USAF (Ret.)
First Vice Chairman
Lt Gen Charles R. Heflebower, USAF (Ret.)
Second Vice Chairman
Dr. Rebecca Grant,
Secretary
Col Thomas A. Owens, USAF (Ret.)
Treasurer
Col Clarence R. Anderegg, USAF (Ret.)
Douglas Birkey
Col Scott C. Bishop, USAF (Ret.)
Col Christopher J. Brunner, USAF (Ret.)
Lt Col (Dr.) Dik Daso, USAF (Ret.)
Lt Gen Robert J. Elder, USAF (Ret.)
Lt Col Steven Gress, Jr., USAF (Ret.)
Maj Gen Timothy C. Jones, USAF (Ret.)
Gen Lloyd W. Newton, USAF (Ret.)
MSgt Keith A. Reed, USAF (Ret.)
Maj Gen Roger Teague, USAF (Ret.)

Emeritus

Maj Gen Dale W. Meyerrose, USAF (Ret.)
Chairman

Editor, *Air Power History*

Richard I. Wolf

Editor Emeritus, *Air Power History*

Jacob Neufeld

Staff

Lt Col James A. Vertenten, USAF (Ret.)
Secretary to the Board and
Executive Director
Mrs. Angela J. Bear, Office Manager

Patron Members

Col Gerald F. Christeson, USAF (Ret.)
Col Dennis M. Drew, USAF (Ret.)
Maj Gen Charles J. Dunlap, Jr., USAF
Dr. John Farquhar
Lt Col Raymond Fredette, USAF (Ret.)
Dr. Rebecca Grant
Dr. Jerome V. Martin
Capt Robert Maxson, NOAA
Lt Gen George D. Miller, USAF (Ret.)
Col Bobby Moorhatch, USAF (Ret.)
Col J Calvin Shahbaz, USAF (Ret.)
Brig Gen Wade R. Smith
Lt Col Raymond C. Tagge, USAF (Ret.)

President's Circle

Col William J. Dalecky, USAF (Ret.)
Col Wray Johnson, USAF (Ret.)
Lt Col Kenneth W. Sublett, USAF (Ret.)

Benefactor

Mr. Darrell Dvorak

DONATIONS

Mr. Michael Clarke
Lt Gen Robert J. Elder, USAF (Ret.)
Lt Gen Charles R. Heflebower, USAF (Ret.)
Lt Gen Charles L. Johnson II, USAF (Ret.)
Lt Gen Nicholas B. Kehoe, USAF (Ret.)
Maj Gen Dale W. Meyerrose, USAF (Ret.)
Lt Gen Christopher Miller, USAF (Ret.)
Gen Lloyd W. Newton, USAF (Ret.)
Robert and Kim Nimmons
Maj Gen John Patton, USAF (Ret.)
Roger Vanderhorst
Curt Weil
Pratt & Whitney
Lt Gen Stephen Wood, USAF (Ret.)

CORPORATE SPONSORS

Gold Level (\$10,000 or more)
Lockheed Martin Corporation

AIR POWER *History*

The Journal of the
Air Force Historical Foundation
Fall 2018 Volume 65 Number 3

Editor
Richard I. Wolf

Editor Emeritus
Jacob Neufeld

Book Review Editor
Scott A. Willey

Advertising
Jim Vertenten

Circulation
Angela J. Bear

Air Power History (ISSN 1044-016X) is produced for Spring, Summer, Fall, and Winter by the Air Force Historical Foundation.

Prospective contributors should consult the **GUIDELINES FOR CONTRIBUTORS** at the back of this journal. Unsolicited manuscripts will be returned only on specific request. The Editor cannot accept responsibility for any damage to or loss of the manuscript. The Editor reserves the right to edit manuscripts and letters.

Address **LETTERS** and **manuscripts** to:

Air Power History
3043 Sunny Ridge Drive
Odenton, MD 21113
e-mail: airpowerhistory@yahoo.com

Correspondence regarding missed issues or changes of address should be addressed to the **CIRCULATION OFFICE**:

Air Power History
P.O. Box 790
Clinton, MD 20735-0790
(301) 736-1959
e-mail: angelabear@afhistory.org

ADVERTISING

Jim Vertenten
P.O. Box 790
Clinton, MD 20735-0790
(301) 736-1959
e-mail: ed@afhistory.org

Copyright © 2018 by the Air Force Historical Foundation. All rights reserved.
Periodicals postage paid at Clinton, MD 20735 and additional mailing offices.

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

This issue is rather an assortment of topics, some of which have never been covered in this publication. We lead off with a brief history of the Swedish Air Force by Arash Heydarian Pashakhanlou, a new contributor in these pages. It covers from the beginning of Swedish military aviation until more recent times. Quite interesting.

Our second article is by a familiar author, Thomas Wildenberg, on a less familiar topic, a Jewish airman of World War II who had a bomber named after him. He was quite a character, plucked from the pages of history for coverage here.

Our third article started as a book review, by experienced Air Force historian Ray Fredette, of a photo book on Charles Lindbergh. Rather than reduce it to fit our format, we decided to illustrate it and let it speak as an article. I think you will enjoy it.

Our fourth article is by one of our most prolific authors, and an acknowledged expert on the Tuskegee Airmen, who has contributed a piece on Gen. Benjamin O. Davis, Jr. during his time as an Airmen.

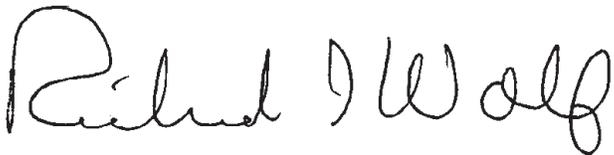
Concluding our articles, we continue a theme of commemorating the conflict in southeast Asia. We include an article that was part of an earlier issue in the summer of 2002. It is about the contents of the Red Baron reports, and their significance. It still bears reading.

Don't miss the flyer for an upcoming air power symposium, taking place in November at the Marine Corps Museum at Quantico, Virginia, that is found on page 4. Focusing on the year 1968 in Vietnam, it is a joint offering by the four service history Foundations, and should prove most interesting.

Additionally, we include our lists of upcoming historical conferences and events, letters, reunions, and an *In Memoriam*, all starting on page 58. Finally, we close with the Mystery on page 64.

The Message from the President starts on page 5. Hope you enjoy it all.

The cover photo was contributed by Col. Darrel B. Couch, USAF (Ret.) who has a group of photos on his web site (information on page 57). This photo is one of a series taken by Col. Couch in December, 1967, and shows twelve F-4s and sixteen F-102s escorting the plane carrying Bob Hope for his annual Christmas show in Vietnam. He kindly granted permission for us to use the striking photo for the cover.



Air Power History and the Air Force Historical Foundation disclaim responsibility for statements, either of fact or of opinion, made by contributors. The submission of an article, book review, or other communication with the intention that it be published in this journal shall be construed as prima facie evidence that the contributor willingly transfers the copyright to *Air Power History* and the Air Force Historical Foundation, which will, however, freely grant authors the right to reprint their own works, if published in the authors' own works.

1968.

Tet.
Hue City.
Khe Sanh.
The End of Rolling Thunder.
The air-to-ground campaign escalates.
Interdiction along the coast and on the river.
1968 was the defining year of the Vietnam War.

IN COUNTRY: THE WAR IN VIETNAM - 1968

A joint service symposium co-sponsored by

- . Air Force Historical Foundation
- . Army Historical Foundation
- . Marine Corps Heritage Foundation
- . Naval Historical Foundation



Marine Corps Museum
Quantico, Virginia
November 15-16, 2018

Further information and
registrations via the
Air Force Historical Foundation
website: www.afhistory.org

From the President

September 2018



Dear Members,

As the summer season draws to a close, I am pleased to welcome three new Directors to our Foundation's board: Mr. Douglas Birkey, Executive Director of the Mitchell Institute; Dr. Rebecca Grant, respected airpower historian and writer; and Maj Gen (Ret) Roger Teague of the Boeing Company. Officers for the 2018-19 year are 1st Vice Chairman Lt Gen (Ret) Nick Kehoe; 2nd Vice Chairman Lt Gen (Ret) Chuck Heflebower; Secretary Dr. Rebecca Grant; and Treasurer Col (Ret) Tom Owens. These new board members join a wonderfully dedicated board—and all serve because they are earnestly and tangibly committed to the Foundation's mission. I am grateful to all of them and hope you share that sentiment.

In our Annual State of the Foundation report in *Air Power History's* last (Summer 2018) issue, I noted the Foundation's resource picture "remained modestly positive, with our recently-received major bequest returning gains above our projections. We hope to grow this and future major gifts to the point they routinely cover future, more robust operating expenses." We are currently stewarding these funds as an endowment, which is reflected in recent Board deliberations that prioritized maintaining the Foundation's assets at or above current levels, while regularly transferring a modest amount of growth into our operating account. This will enable us to look at reasonable investments in growth projects such as updating our coffee table reference books and publishing new works.

Notwithstanding these nominal "flat" trends, additional funds are clearly required to insure our operating account provides necessary overhead and supports increased mission success. The Board has agreed upon several initiatives to accomplish this.

This year the Foundation will explore options to leverage professional fund raising expertise. A similar effort several years ago produced disappointing results for a variety of reasons, but we believe lessons learned and new circumstances make this approach worth a revisit. We will focus this time on a person or firm with much greater knowledge of our own history and mission.

Secondly, we will rejoin the Combined Federal Campaign after a prolonged absence. The Foundation had left the Campaign when the costs of remaining exceeded the anticipated revenues. Many other organizations did the same, but legislative changes now make it feasible for us to rejoin, at least in the Washington DC area.

Grants have been another historically unproductive source of resources. We are in contact with a professional grant writing firm that thinks we have a good opportunity in achieving support given our mission, and will pursue this avenue cautiously.

We are working internally among the board on a fund-raising challenge. This approach many times in the past had positive results, and we hope to achieve the same this time.

We expect the Foundation will have a presence at the upcoming Air Force Association Air, Space and Cyber Conference from 17-19 September to reach out to potential members and Air Force leaders.

Finally, the Foundation is ardently seeking collaboration and partnership with other organizations who compliment our mission, be they museums, educational organizations, veteran's groups, publishing entities, or our sister services historical foundations. We hope that these outreach efforts continue to demonstrate our great organization and its 60 plus years of scholarship to the public but especially senior leadership, and will result in membership growth.

We have in our fiscal and human resources, the “runway” to grow into the organization envisioned by generations of Air Force Historical Foundation leaders—Spatz, Vandenberg, Foulois, LeMay, and the dedicated Airmen they served. As our Air Force and nation continue to face unprecedented, complex warfighting challenges and calls for change to our defense establishment circulate in Washington, it's important that the Foundation helps bring the wisdom of the past to the decisions of the future.

In that regard, AFHF has a historically unique and important role promoting the legacy of airmen and educating future generations to aspire to follow in airpower's legacy of valor, dedication and innovation. The recent posthumous award of the Medal of Honor to Technical Sergeant John Chapman is a sobering but inspirational reminder of the amazing courage and dedication that men and women bring to American aerospace power and we are privileged to document the contributions of these patriots. I am confident the Foundation has what it takes to accomplish this task.

Your continued support—in ideas, time, donations, or just forwarding “This Day in Air Force History” to others who might find the Foundation's work interesting and worthy of support—really matters. In the meantime, your Board and staff endeavor to keep our Foundation on the move and worthy of your interest and investment.

Sincerely,

Christopher D. Miller, USAF (Ret.)
President and Chairman of the Board

Guidelines for Contributors

We seek quality articles—based on sound scholarship, perceptive analysis, and/or firsthand experience—which are well-written and attractively illustrated. The primary criterion is that the manuscript contributes to knowledge. Articles submitted to *Air Power History* must be original contributions and not be under consideration by any other publication at the same time. If a manuscript is under consideration by another publication, the author should clearly indicate this at the time of submission. Each submission must include an abstract statement of the article's theme, its historical context, major subsidiary issues, and research sources. Abstracts should not be longer than one page. Manuscripts should be prepared according to the Chicago Manual of Style (University of Chicago Press). Use civilian dates (month, day, year) and either footnotes or endnotes may be used. Because submissions are evaluated anonymously, the author's name should appear only on the title page. Authors should provide on a separate page brief biographical details, to include institutional or professional affiliation and recent publications, for inclusion in the printed article. Pages, including those containing illustrations, diagrams or tables, should be numbered consecutively. Any figures and tables must be clearly produced ready for photographic reproduction. The source should be given below the table. Notes should be numbered consecutively through the article with a raised numeral corresponding to the list of notes placed at the end. Submissions may be submitted either by mail or via email. Email is generally the norm. While Microsoft Word is the most common, any word processor may be used. Photographic illustrations are greatly appreciated. There is no restriction on the file format used. There is no standard length for articles, but 4,500-5,500 words is a general guide. Manuscripts and editorial correspondence should be sent to Richard Wolf, Editor, c/o Air Power History, 3043 Sunny Ridge Drive, Odenton, MD 21113, e-mail: airpowerhistory@yahoo.com.

Swedish Air Power History: A Holistic Overview



Arash Heydarian Pashakhanlou

An early flight by Baron Carl Cederström, who became the first Swedish aviator.

Air power has a long and distinguished history in Sweden. Yet, it has rarely been documented in the English language.¹ This is what the present article seeks to do by providing a holistic overview of Swedish air power history with an emphasis on military aviation and the Swedish Air Force. It does so by a careful examination of predominantly Swedish sources and is the first study to cover the years 1909 to 2019. The research question that this article poses is as follows: How has Swedish airpower developed throughout the course of history? The investigation reveals that Swedish airpower advanced rapidly from its humble beginnings in 1909, when the first flight in the country took place to eventually becoming the fourth largest air force in the world in the 1950s. Nonetheless, the Swedish Air Force has gradually declined in relative terms ever since.

This argument is developed throughout the remainder of this article. The first section is devoted to the early history of Swedish aviation up until the outbreak of the First World War. The ensuing two sections examine Swedish airpower in World War I and World War II respectively. The fourth section takes a closer look at the Swedish Air Force at the start of the Cold War and traces its progress up until the end of the 1950s. The final section covers the remainder of the Cold War and beyond. At this point, it is however, incumbent to take a closer look at the first phase of Swedish aviation.

The Early History

On July 29, 1909, the Frenchman Georges Legagneux completed the first flight in Sweden.² The following year, Baron Carl Cederström became the first Swedish aviator when he flew around Ladugårdsgärdet in Stockholm, in front of a large enthusiastic crowd.³ The first military flight in the country would however not take place until February 3, 1912 when the pilot, Lieutenant Olle Dahlbeck, flew around the Stockholm archipelago in his Blériot XI bis.⁴

The public and the press were generally extremely favorably inclined towards aviation during these early years. The pioneering military pilot, Gösta von Porat, was for instance, constantly approached by people who desperately wanted to accompany him on a flight. Only a few of his military comrades were fortunate to be granted this privilege, but only if they did not exceed a certain weight.⁵ Von Porat himself was regarded as a hero. In one instance, the media reported that von Porat received ovations from his military comrades who carried him to the mess hall and cheered for him after a flight.⁶

In fact, the media even portrayed the flight in poetic terms. To paraphrase a journalist: a successful flight is a grandiose and impressive sight. One is left speechless in awe of this proud hymn to human ingenuity. For the layman, a flight



A Nieuport IV.G on display at the museum at Malmso.

appears as a miracle, a surreal dreamed vision as the giant bird shrinks into a swallow in the summer light sky. It is like witnessing a creature with spirit and life, a ruler of heaven.⁷

Nevertheless, not everyone was equally enthusiastic about the arrival of aircraft in Sweden. An article, which appeared in the daily Swedish newspaper, *Dagens Nyheter*, posited that particularly elderly people were upset with the advent of these giant birds, as they defied the natural laws of God. In a similar vein, another article at the time claimed that a pious teacher, in a small school, urged her little disciples to ask God to keep an eye on the 'flying machines' like he once did with the Tower of Babel. The teacher regarded airplanes as a work of evil and explained—that this is why God regularly slammed them to the ground, just as they reached their highest altitude.⁸

Acknowledgment: I thank Martin Frood for his helpful comments and suggestions.

Arash Heydarian Pashakhanlou is an assistant professor in War Studies at the Swedish Defence University. His work has appeared in the journals International Relations, Defence Studies, International Politics, Journal of International Political Theory and The Washington Quarterly, among others. Palgrave published his latest monograph, Realism and Fear in International Relations: Morgenthau, Waltz and Mearsheimer Reconsidered.

Such concerns did not stop the Swedish Armed Forces from acquiring aircraft. The first Swedish military airplane was a Nyrop-Blériot nr 3, called the "Big-Bat", which director Otto Emil Neumüller donated to the navy as a gift on December 1, 1911.⁹ Another year and a half later, the navy received its next airplane, which they referred to as "flying boats" irrespective of whether they could takeoff or land on water.¹⁰ The army received its first aircraft in 1912, the Nieuport IV.G and Bréguet C.U 1.¹¹ Sweden chose to buy these French aircraft as France was generally considered a leading nation in the development of aircraft at the time.¹² In total, the army received forty-two airplanes whereas; the navy acquired 22 aircraft in the period 1911-1917.¹³

This speedy expansion largely coincided with the rapid technical advancement in aircraft production. During the period 1909-1913, aircraft went from being experimental vehicles to become reasonably reliable machines with features reminding of modern aircraft.¹⁴ Although military aircraft were still unarmed at the time, their acquisition was justified on the grounds that they are now technically capable of strategic and tactical reconnaissance.¹⁵ The reconnaissance of enemy troop movements, a task of utmost importance normally conducted by the cavalry, would now be conducted more effectively by flight thanks to their superior speed and ability to overlook a far vaster area it was reasoned.¹⁶

In practice, this plan did not always materialize. In his memoirs, von Porat, notes that during the first 'real' reconnaissance flight in Sweden in October 1921, the plane rolled over on landing and the crew was thrown to the ground without detecting any enemies. Even in a more suc-



The Nyrop-Blériot nr 3, called the “Big-Bat”, in 1912.

successful reconnaissance flight, the pilot stated that the snow made it impossible to detect anything on the ground worth reporting.¹⁷

The problems with early aviation were not limited to reconnaissance. In 1912, Axvall became Sweden’s first military airbase for Sweden’s first air force, and home to Sweden’s first war flight school. Von Porat described the airport as quite horrible with power lines everywhere and noted that this was the place where his hatred for power lines first arose. At the time, safety was not taken seriously at airports. One could find bikes laying around, liquid containers in front of the plane and children playing in the backdraft from the propeller when the engine was running. In other words, accidents were inevitable. The first fatal Swedish airplane accident occurred on July 20, 1912 when 18-year old Hilma Johansson came into contact with the propeller after a failed start-up attempt by show pilot Hugo Sundstedt, in his Blériot. Consequently, the media took it upon itself to inform people to stay out of airbases and warned that they would receive a fine of ten Swedish Crowns (equivalent to approximately US \$1.30 at the time of writing) if they failed to do so.¹⁸ It was, however, not until 1930, when the Swedish press covered five accidents over the span of three days that the concept of aviation security was born.¹⁹

The First World War and the Birth of the Swedish Air Force

In the meantime, the First World War broke out on August 1, 1914. At this point, all the major European coun-

tries possessed some type of air power. Initially, the air crewmen attacked their counterparts with regular revolvers or rifles. As the need for heavier weapons grew, the planes became equipped with machine-guns. The fighter and air war was born.²⁰ In 1916, the average life expectancy of a pilot on the Western Front was three weeks but dropped to two weeks at the start of the following year.²¹ Swedish airpower was ill prepared for such encounters. At the outbreak of World War I, Sweden had only twenty or so military pilots whom essentially, lacked tactical and technical war experience along with eight military planes in total; dispersed equally between the navy and the army. To make things worse, there was no coordination between them.²²

The problems did not stop there. Swedish knowledge of aviation at the beginning of WWI was limited to a small number of people who, essentially, made copies of foreign airplanes. Sweden was also barred from buying state-of-the-art aircraft on the international market since it was neutral, and alliance-free. In an attempt to overcome these deficiencies, the Swedish military quickly purchased civilian aircraft and contracted civilian pilots.²³ Furthermore, it sought to strengthen its domestic aviation industry with both public and private aviation companies. The crown jewel at the time was AB Thulinverken. At the start of the war, it only employed twelve to fifteen people but had grown to 900 employees by 1919.²⁴

The expansion of the Swedish Air Force in terms of personnel and aircraft continued after the end of the war.²⁵ In 1924, the importance of airpower in supporting defen-



The Saab B-17 light bomber/reconnaissance aircraft from World War II.

sive and independent offensive operations in warfare was emphasized by the Swedish Parliament in Bill No. 20. In the same year, the Defense Committee recommended a separate air force similar to England, Italy and Finland.²⁶ The army accepted this proposal but the navy was extremely reluctant, as the new military branch was to be mainly formed by the army.²⁷

The concerns of the navy were overridden as the Minister for Defense, Per Albin Hansson agreed to the proposal and the parliament approved it in full on June 2, 1925.²⁸ The political support was expected, as many of them considered an independent air force cheaper than having it spread across the army and navy.²⁹ The following year³⁰, an independent Swedish Air Force was formed and received an annual budget of approximately six million Swedish Crowns (equivalent to approximately US \$758,571 at the time of writing).³¹ Karl Amundson became the first chief of the newly formed air force³² and Malmen, located outside the city of Linköping, became its headquarters. Von Porat was far more pleased with Malmen than he had previously been with Axvall. He regarded the takeoff and landing areas of Malmen satisfactory and had personal reasons to be happy with its location. His fiancée had just moved to Linköping.³³

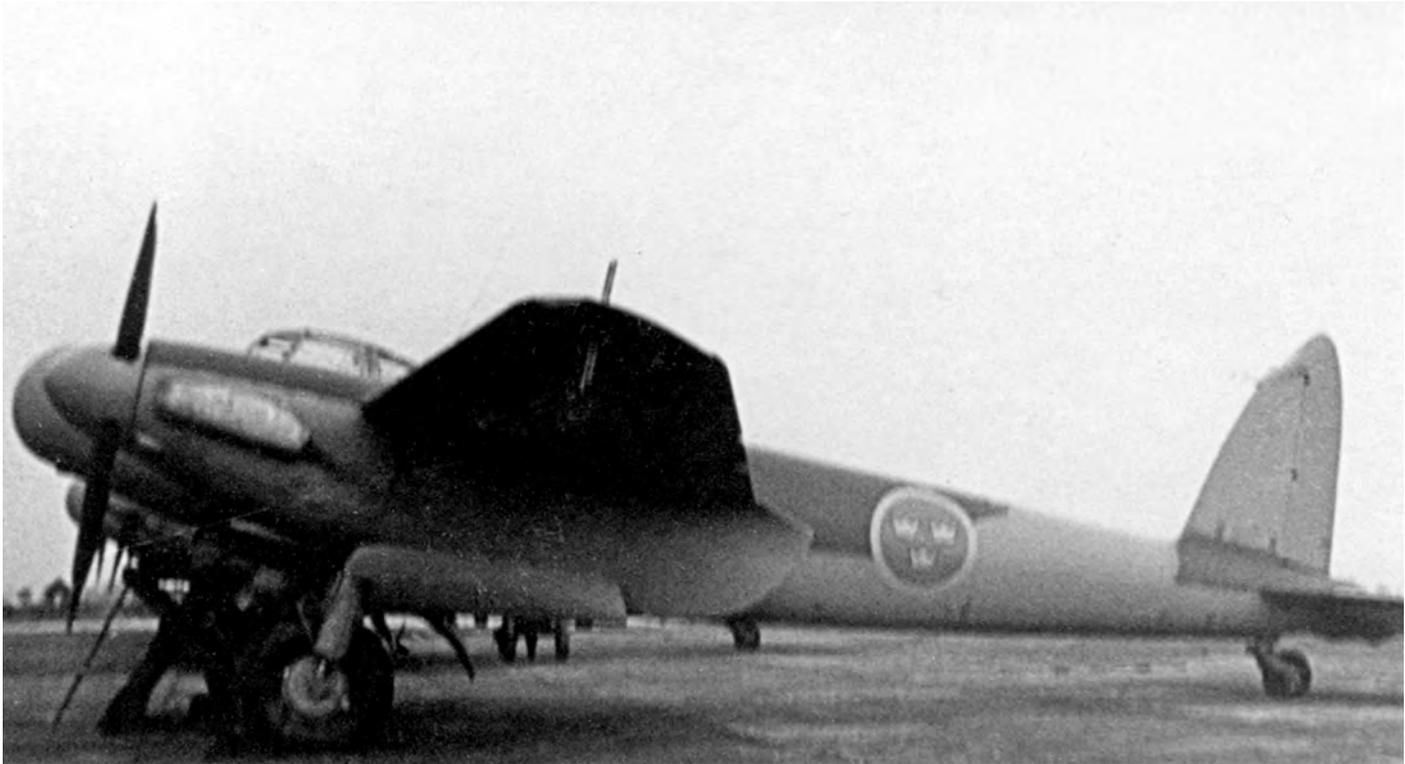
The biggest problem facing the newly formed air force was instead the obtention of equipment, especially planes as most of them already in possession were discarded and rundown. Captain Carl Florman advocated for the acquirement of bombers. In his view, these bombers should be used to attack an opponent's air bases and combat their forces. Florman's favoring of bombers was not surprising. These planes had evolved and could reach a speed of approximately 400 kph at the time, making it difficult for fighters

to keep up. Furthermore, diving enabled bombers to hit their targets with greater precision. With these points in mind, it is not surprising that the Swedish Air Force decided to purchase more bombers than fighters in 1936 at a ratio of 4:1. That same year, it was decided the Swedish Air Force must have its own reliable aviation industry. As a result, what eventually came to be the most important Swedish aerospace company, Saab, was founded in 1937.³⁴

The Second World War and the Swedish Air Force

These reforms were put in place to ensure that the Swedish Air Force would reach full strength by 1943. When the Second World War broke out on the night of September 1, 1939, the Swedish Air Force was thus, by no means fully developed and found itself in a precarious situation. There are several reasons for this: scarce funding from the government, a lack of appreciation for the need of a strong air force, limited opportunities to buy materiel abroad and the weakness of the domestic aviation industry. The air force estimated that it needed 228 million Swedish Crowns to remedy these shortcomings (equivalent to approximately US\$28.3 million at the time of writing), but only received about 30 million Swedish Crowns (equivalent to approximately US\$3.7 million at the time of writing).³⁵

As a result, the Swedish Air Force was ill equipped on the eve of World War II. When hostilities broke out, it had roughly 180 operational planes in total. Out of these 180 planes, there were approximately 40 Junkers Ju 86 bombers, 30 Hawker Harts light bombers, 50 Gloster Gladiator fighters, 25 Heinkel HE 5 reconnaissance aircraft, 25 Fokker C.V light reconnaissance aircraft and 10 Heinkel He



The DH 98 Mosquito of the post-war air force.

115 torpedo bomber seaplanes.³⁶ The quantity of planes was dangerously low and completely inadequate for a war of this magnitude. Their quality was also deficient as most of these aircraft were outdated and their performance and armament was inferior to that of potential opponents. Moreover, reserve planes and parts were in short supply. This further weakened Swedish endurance in the case of war.³⁷

In terms of personnel, approximately 6,700 people worked for the Swedish Air Force, of these about 1,000 were permanently employed, around 4,700 were conscripts and roughly 1,000 were civilians. They were generally well-educated, had high morale and could carry out their tasks in a competent manner. The limited flight material that did exist was also in good condition and well-maintained.³⁸

In an attempt to come to terms with the shortage of aircraft and engines, Sweden sought to buy them overseas from Germany, France, the Netherlands and the United States. Sweden had even paid for some of them, but did not receive them. For instance, 300 airplanes from the US were not delivered and France confiscated the Breguet 694 airplanes, which Sweden had ordered, for their own use. The Swedish Air Force not only lacked sufficient numbers of aircraft but also had the wrong type of planes for WWII. The persistent emphasis on bombers proved to be wrong-headed, as Sweden was in desperate need of strategic reconnaissance aircraft for use outside of the country's borders, but had great difficulties to attain them.³⁹

Likewise, Sweden had underestimated the need for fighters. The advent of air surveillance radar and lessons learned from Sweden's own experience during WWII, the Winter War and the Battle of Britain made the importance of fighters evident in the air force. For instance, on Septem-

ber 14, the only Swedish fleet of fighters managed to chase off curious German reconnaissance aircraft that sought to collect information regarding Swedish defense preparations. This operation proved to be successful and resulted in heightened respect for Swedish neutrality and provided a relief for Swedish merchant shipping. Subsequently, Sweden put an end to its relatively one-sided emphasis on bombers in 1941. Instead, the new doctrine stressed the importance of a balanced air force and the Swedish Air Force tripled its number of fighters.⁴⁰

The German invasion of neighboring Norway on April 9, 1940, reinforced Swedish politicians' realization for the need of a strong air force. Resources were therefore devoted to improving the organization. These developments persisted throughout WWII and by August 1943, the air force comprised of about 390 military planes. Despite these advances, their relative quantity and quality were still insufficient.⁴¹ As such, efforts to enhance the capacity of the Swedish Air Force continued and by the end of World War II, Sweden possessed over 800 aircraft. This is a far cry from the meager 180 planes at the Swedish Air Force's disposal at the beginning of the war.⁴² The Swedish aviation industry witnessed significant advances too. Indeed, Saab went from designing traditional propeller aircraft to state-of-the-art jet aircraft, which could rival those of the United States and the Soviet Union at the time.⁴³

The Cold War and the Golden Age of the Swedish Air Force

After World War II, the Cold War emerged with the Soviet Union as Sweden's main adversary. Sweden prepared



The Saab 32 Lansen, of which three variants were produced in the 1950s.

for it by building one of the most formidable air forces in the world, consisting of domestically built aircraft. These efforts affected the whole nation as wings and airspace industry, with thousands of subcontractors, spread across the country.⁴⁴ New airplane types were swiftly introduced and novel airplane systems emerged almost on a yearly basis. The turnover rate for aircraft equipment was high and within a few years, the entire air force with the exception of some reconnaissance planes, were equipped with modern jet-power. In addition, the air force decided to increase the number of fighters by 50% in 1948/1949. By the late 1950s, the bomber-centric air force of 1936 had been transformed into a pronounced fighter air force whilst retaining an admirable attack capability.⁴⁵

Air base systems were developed as well. Previously, airbases were generally large lawns with a few marked lanes. With the advent of jets, with their heavier starting weights and higher landing speeds, better airbases were required. Consequently, a hard surface became the new norm during the first half of the 1950s. At this time, the foundation of a new base philosophy that was structurally reminiscent of the German “Fliegerhorst” system was also introduced. To avoid falling victim to airbase attacks, Sweden built its airbases in conjunction with highways. Since highways already existed, building connecting airbases did not require any major investments. The planes could be scattered and potential opponents could therefore only hit relatively few planes through area bombing. This eloquent and relatively cheap solution garnered a lot of interest abroad.⁴⁶

During the 1950s, the combat control and air surveillance system, STRIL 50, was operationalized. Initially,

STRIL 50 was strictly based on manual reports and classifications but the large-scale STRIL-60 project with its fully computerized and semi-automatic systems was initiated to replace it. Moreover, Quick Reaction Alert (QRA) with continuous radar air monitoring and with fighters on alert around the clock was established. It was also during the first half of the 1950s that the Swedish produced fighter Saab 32 Lansen was developed.⁴⁷ Three principal variants of the Lansen were built: attack (A 32A), fighter (J 32B), and reconnaissance (S 32C). The main objective of these planes was to protect the 270 mile long coast of Sweden. Tactically, Lansen was primarily supposed to strike at “soft” targets such as warships with powerful anti-aircraft weaponry.⁴⁸ In combination, all of these major developments and innovations prompted the Golden Age of the Swedish Air Force in the 1950s. At the time, Sweden possessed the world’s fourth most powerful air force.⁴⁹

This is not to say that everything went according to plan for the Swedish Air Force during the 1950s. A military confrontation and Cold War era diplomatic crisis, known as the Catalina Affair, occurred in June 1952. During the incident, Soviet Air Force fighter jets shot down two Swedish aircraft over international waters in the Baltic Sea. A Swedish Air Force Douglas DC-3, carrying out intelligence-gathering was shot down by a MiG-15bis fighter. None of its eight-crew members were rescued. Subsequently, another PBY-5 Catalina flying boat involved in the search and rescue operation for the missing PBY-5 was also shot down. In this case, the crew of five were saved.⁵⁰ The Catalina Affair had a major impact on the Swedish Air Force and is the reason why the QRA mentioned above was established.⁵¹

This was not the only major headache the Swedish Air Force faced during this era. Swedish Air Force Colonel Stig Wennerström was suspected of working for the Soviet Union as a spy by the Swedish Security Service as early as 1947. These allegations could not be proven until 1963 and Wennerström was convicted of treason the following year. The investigation revealed that Wennerström probably sold over 20,000 pages of secret documents about Swedish defense to his Soviet contacts. They contained information regarding the Swedish Air Force's strategy, secret military bases, radar defense and mobilization plans and the entire Saab Draken fighter jet project. The damage that Wennerström's treason caused the Swedish Air Force was enormous. One of the implications was that the air force had to scrap some of the STRIL centers that were under development and change some of its components which added excessive additional costs since it was highly probable that Wennerström had revealed the initial plans to the Soviets.⁵²

The Cold War and Beyond

The 1960s was marked by defense budget cuts and the Swedish Air Force decreased in size. A number of politicians also began to question the viability of an expensive domestic aviation industry.⁵³ By now, the first-generation jet fighter Saab 29, colloquially called 'Flygande tunnan' (English: "The flying barrel") due to its chubby design from the 1940s, was coming of age. Indeed, unequivocal data indicated that the Saab 29 would not be able to effectively combat an aircraft with the speed, altitude, durability and defensive armament that the Soviet bomber Tu-16 Badger possessed. As such, Saab 29 was ill-equipped to deal with its main tactical objective - to neutralize opponent's aircraft in general and their bombers in particular. To overcome this weakness, the first fully supersonic aircraft deployed in Western Europe, the Saab 35 'Draken' (English: "the dragon") was operationalized in the 1960s as one of the premier fighters in the world. The Saab 35 Draken remained in operational service for almost 40 years, its longevity was due to its ability to technically adapt to new threats and demands with different engines and missiles etc. The versatility of the Saab 35 Draken was indeed impressive. Although early models of the aircraft were intended purely for air defense missions, it nevertheless, possessed a respectable quick-turn capability and proved to be a capable fighter plane of its time as well.⁵⁴

Nonetheless, the main tactical objective of the Saab 35 Draken was to confront enemy bombers from the front with the help of the recently developed air-to-air missiles.⁵⁵ Although Swedish missiles have typically passed or exceeded expectations, their development has often been halted for financial reasons.⁵⁶ Some of them did however see the light of day and among the early Swedish-produced missiles, the RB-04 (Robot 04), a long-range air-to-surface, anti-ship missile stands out. Although the RB-04 has never seen combat; it gave credence to the Swedish deterrence against a Soviet invasion in the Baltic Sea along with its

air force and submarines.⁵⁷ In fact, the last version of this missile, RB 04E was still a potent weapon against most ships by the mid-1990s.⁵⁸

The fully-computerized combat control and air surveillance system, STRIL 60, was operationalized in the 1960s as well and new types of radar stations were purchased for it. A further expansion of the base system also took place and command centers received much-needed upgrades.⁵⁹ These developments were deemed necessary to face the threat posed by the Soviet Tu-16 bombers that could reach Sweden in just over fifteen minutes from the Baltic coast.⁶⁰

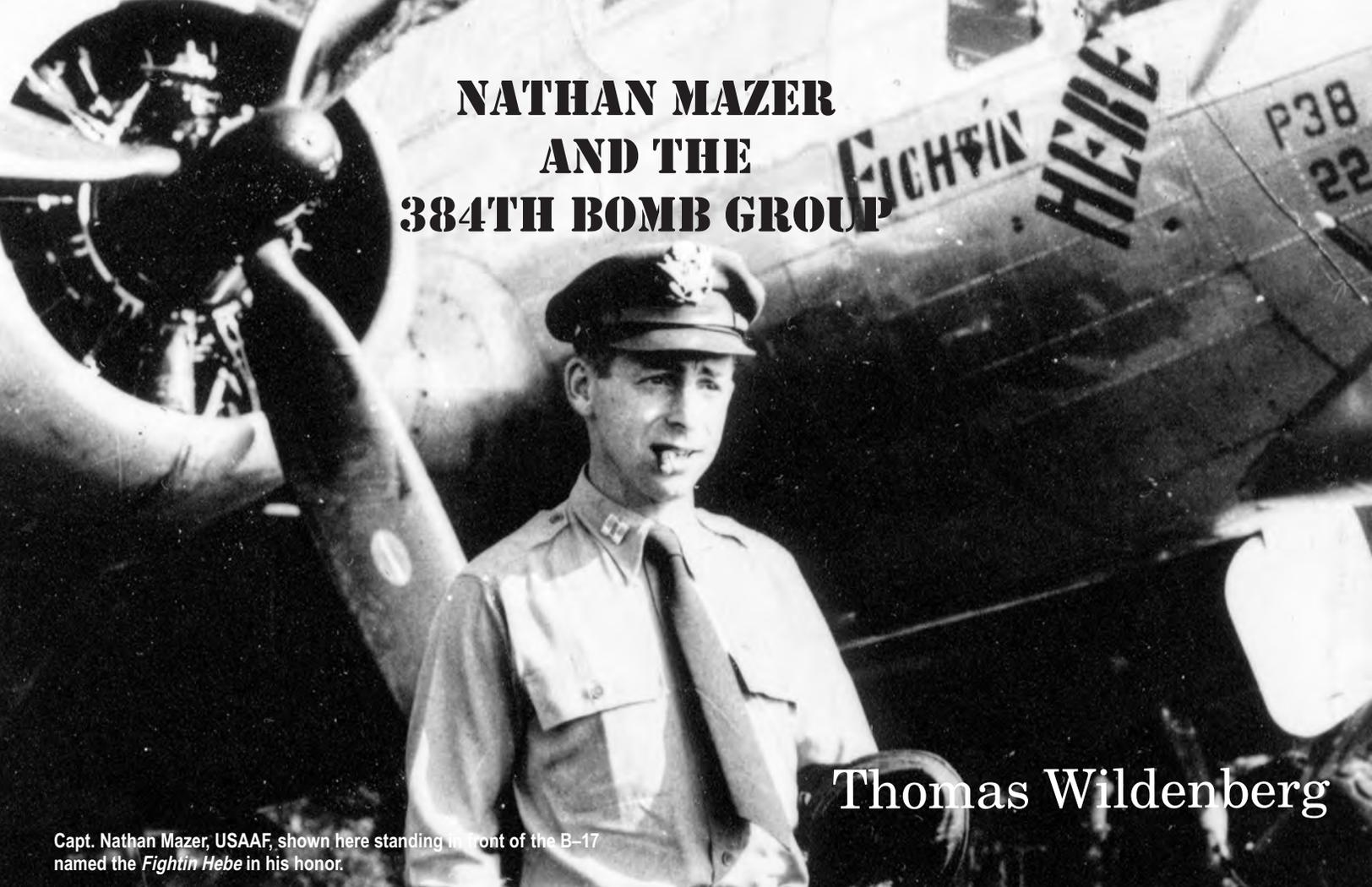
In the 1970s, the societal support for the Swedish military declined and it became viewed with a degree of skepticism. As an example the extensive public spending on defense became increasingly criticized. At the same time, the political and medial focus shifted from the Soviet to the Third World and UN peace missions. As Sweden sought to position itself as an independent actor in the divide between the Eastern and Western blocs, the USSR came to be viewed in less hostile terms. During these conditions, it became increasingly difficult to justify large spending on the Swedish Air Force and aviation industry.⁶¹

Developments in this area did, nevertheless, occur. Perhaps most importantly, the Saab 37 Viggen, a single-engine, short-medium range aircraft entered service in 1971. It was produced in different versions to perform different roles. It came as a strike fighter (AJ 37), aerial reconnaissance aircraft (SF 37), maritime patrol aircraft (SH 37), a two-seater trainer (SK 37) and an all-weather fighter-interceptor aircraft (JA 37). These planes came to replace the Lansen series of the 50s. Viggen did not only take over the duties previously carried out by the Lansen, when it replaced the last Lansen aircraft by 1976, but also inherited the effective but slow-going missile system of its predecessor.⁶²

The 1980s was marked by the development of a next generation combat control and air surveillance system called STRIL 90. The platform utilized modern servers and was operated by regular PCs. STRIL 90 was developed by Saab Surveillance with the intention of working with new aircraft such as JAS 39 Gripen.⁶³ This Saab produced aircraft was designed to replace both Draken and Viggen in the Swedish Air Force but to do so, it had to fulfill several conditions. It had to be sold at a fixed price for a fifteen-year period, be cheaper than the Viggen over its lifetime, have half its weight and have equivalent or better flight performance than the Viggen. The result was a single-engine, fourth generation, multirole aircraft that could switch between fighter, attack, and reconnaissance missions in the air with a simple press of a button.⁶⁴ The JAS 39 Gripen's maiden flight occurred in 1988, entered service with the Swedish Air Force in 1997 and continues to be used today. In fact, the C/D versions of the Saab JAS 39 Gripen are still the main fighters for the Swedish Air Force. This aircraft will likely play a vital role in the future as well, since the heavily modernized E version of JAS 39 Gripen, with a new radar and enhanced fuel and weapons capacity, is planned to replace the C fleet starting in 2019.⁶⁵ ■

1. See for example, Anders Annerfalk, *Flygvapnet: An Illustrated History of the Swedish Air Force* (Ljungsbros: Aviatic Förlag, 1999).
2. Leonard C. Bruno, *On the Move: A Chronology of Advances in Transportation* (Detroit: Gale Research, 1993), p. 173.
3. Lars Ericson Wolke, *Stockholms historia* (Lund: Historiska Media, 2016).
4. John Andreas Olsen and Finn Kristian Hannestad, eds., "Norwegian Air Power: Staying Relevant in a New Era," in *European Air Power: Challenges and Opportunities* (Lincoln, Nebraska: Potomac Books, 2014), p. 139.
5. Börje Räftegård, *Det Svenska Militärflygets Debut: Axvall Och Redberga År 1912* (Kristinehamn: Norlén & Slottner, 2012), pp. 27–28.
6. "Ett Flygbesök i Skara," *Skaraborgs Läns Tidning*, July 27, 1912.
7. "Från Flygningarna På Axvall," *Skaraborgs Läns Tidning*, July 27, 1912.
8. Räftegård, *Det Svenska Militärflygets Debut: Axvall Och Redberga År 1912*, p. 38.
9. Stig Hadenius, Torbjörn Nilsson, and Gunnar Åselius, *Guide till Sveriges historia* (Stockholm: Norstedt, 2000), p. 278.
10. Riksdagen, *Bihang till Riksdagens protokoll vid lagtima Riksdagen i Stockholm* (Stockholm: Norstedt, 1914), p. 105.
11. Johan Engström and Lars Ericson, *Mellan björnen och örnen: Sverige och Östersjöområdet under det första världskriget, 1914-1918* (Visby: Gotlands fornsal, 1994), pp. 113, 136, 143.
12. Räftegård, *Det Svenska Militärflygets Debut: Axvall Och Redberga År 1912*, p. 15.
13. Gösta Norrbohm and Bertil Skogsberg, *Att Flyga Är Att Leva* (Höganäs: Bokförlaget Bra Böcker, 1975), p. 23.
14. Charles Harvard Gibbs-Smith, *The Aeroplane: An Historical Survey of Its Origins and Development* (London: H.M. Stationery Off., 1960), p. 84.
15. Justin D. Murphy, *Military Aircraft, Origins to 1918: An Illustrated History of Their Impact* (Santa Barbara, California: ABC-CLIO, 2005), pp. 103–4.
16. Norman S. Leach, *Cavalry of the Air: An Illustrated Introduction to the Aircraft and Aces of the First World War* (Toronto: Dundurn, 2014), pp. 24–44.
17. Räftegård, *Det Svenska Militärflygets Debut: Axvall Och Redberga År 1912*, pp. 42–43.
18. Räftegård, pp. 10, 22–23, 36.
19. Norrbohm and Skogsberg, *Att Flyga Är Att Leva*, p. 45.
20. Robert F. Grattan, *The Origins of Air War: Development of Military Air Strategy in World War I* (London: I.B.Tauris, 2009), pp. 110–11.
21. Brian Bond, *Survivors of a Kind: Memoirs of the Western Front* (London: Continuum, 2008), 142.
22. Initially, the navy used its flying boats for general reconnaissance but eventually utilized them for more qualified tasks such as averting ships that violated Swedish waters. Annerfalk, p. 25.
23. Norrbohm and Skogsberg, *Att Flyga Är Att Leva*, p. 26.
24. Thomas Kaiserfeld, *Vetenskap och karriär: svenska fysiker som lektorer, akademiker och industriforskare under 1900-talets första hälft* (Lund: Arkiv, 1997), pp. 135–37.
25. Räftegård, *Det Svenska Militärflygets Debut: Axvall Och Redberga År 1912*, p. 45.
26. Norrbohm and Skogsberg, *Att Flyga Är Att Leva*, p. 36.
27. Annerfalk, *Flygvapnet 1926-1996: Från Dronten till Gripen*, p. 30.
28. Norrbohm and Skogsberg, *Att Flyga Är Att Leva*, p. 37.
29. Annerfalk, *Flygvapnet 1926-1996: Från Dronten till Gripen*, p. 31.
30. This is also the year the first Swedish parachute took place, on July 7 1926 to be exact (Norrbohm and Skogsberg, 1975, p. 50). Norrbohm and Skogsberg, *Att Flyga Är Att Leva*, p. 50.
31. Norrbohm and Skogsberg, p. 37.
32. Ulf Hamilton, *Teknik på bönders villkor: de tekniska och politiska aktörernas inflytande på den statsreglerade tekniska förändringen i Sverige 1806-1972* (Stockholm: Almqvist & Wiksell, 1997), p. 135.
33. Räftegård, *Det Svenska Militärflygets Debut: Axvall Och Redberga År 1912*, p. 45.
34. Norrbohm and Skogsberg, *Att Flyga Är Att Leva*, pp. 44, 61, 80.
35. *Ibid.*, pp. 65, 100.
36. *Ibid.*, pp. 70–71.
37. Erik Norberg, *Flyg i beredskap: Det svenska flygvapnet i omvandling och uppbyggnad 1936-1942* (Stockholm: Allmänna förlaget, 1971), pp. 97–102.
38. Norrbohm and Skogsberg, *Att Flyga Är Att Leva*, pp. 70–71.
39. *Ibid.*, pp. 66, 89.
40. *Ibid.*, pp. 61, 69, 77,.
41. *Ibid.*, pp. 79, 84.
42. *Ibid.*, pp. 90–91.
43. Thomas Magnusson, ed., *Svenskt Flyg under Kalla Kriget* (Stockholm: Medströms Bokförlag, 2016), p. 9.
44. *Ibid.*, p. 7.
45. Annerfalk, *Flygvapnet 1926-1996: Från Dronten till Gripen*, p. 144.
46. *Ibid.*, p. 158.
47. *Ibid.*, p. 145, 173.
48. Magnusson, *Svenskt Flyg under Kalla Kriget*, pp. 48, 50.
49. Bertil Wennerholm, *Fjärde flygvapnet i världen?: Doktrinutveckling i det svenska flygvapnet i försvarsbesluten 1942 - 1958. Underlag, beslut och genomförande i nationellt och internationellt perspektiv* (Stockholm: Försvarshögskolan, 2006).
50. Initially, the Soviet Union denied shooting down the DC–3, but a few days later evidence that suggested otherwise was found in the form of Soviet munitions. In 1956, Nikita Khrushchev admitted that the Soviet Union had shot down the DC–3 during a meeting with the Swedish Prime Minister Tage Erlander. Likewise, Sweden maintained that the DC–3 was undertaking a navigation training flight for nearly 40 years. Only after pressure from crewmembers' families did Swedish authorities confirm that the plane was spying for NATO. The remains of the DC–3 was found in 2003 and it is currently at display at the Swedish Air Force Museum in Linköping.
51. Lennart Andersson and Leif Hellström, *Bortom horisonten: Svensk flygspaning mot Sovjetunionen 1946-1952* (Stockholm: Stenbom, 2002); Christer Magnusson, "Teknisk Utredningsrapport Över Haveri Med Tp 79 Nr 001" (Stockholm: Försvarsmakten, May 25, 2007), p. 001.
52. Anders Sundelin, *Fallet Wennerström* (Stockholm: Norstedt, 1999).
53. Annerfalk, *Flygvapnet 1926-1996: Från Dronten till Gripen*, p. 164.
54. Magnusson, *Svenskt Flyg under Kalla Kriget*, pp. 28, 32–33, 84.
55. *Ibid.*, p. 88.
56. Annerfalk, *Flygvapnet 1926-1996: Från Dronten till Gripen*, pp. 153–54.
57. Magnusson, *Svenskt Flyg under Kalla Kriget*, 43.
58. Annerfalk, *Flygvapnet 1926-1996: Från Dronten till Gripen*, p. 155.
59. Örjan Eriksson and Bengt Eklöf, "Strilsystem m/60" (Växjö: Försvarets Historiska Telesamlingar, March 21, 2016).
60. Magnusson, *Svenskt Flyg under Kalla Kriget*, p. 71.
61. *Ibid.*, p. 115.
62. Ulf Edlund and Hans Kampf, *System 37 Viggen* (Stockholm: Svensk flyghistorisk förening, 2009); Jim Winchester, *Military Aircraft of the Cold War* (San Diego, CA: Thunder Bay Press, 2012).
63. Gunnar Eliasson, *Visible Costs and Invisible Benefits: Military Procurement as Innovation Policy* (Cham: Springer, 2017), p. 57.
64. Magnusson, *Svenskt Flyg under Kalla Kriget*, 122.
65. SAAB, "Jas 39 Gripen," Saabs historia, accessed April 19, 2018, <https://history.saab.com/teman/svensk-sakerhet/jas-39-gripen/>.

NATHAN MAZER AND THE 384TH BOMB GROUP



Thomas Wildenberg

Capt. Nathan Mazer, USAAF, shown here standing in front of the B-17 named the *Fightin Hebe* in his honor.

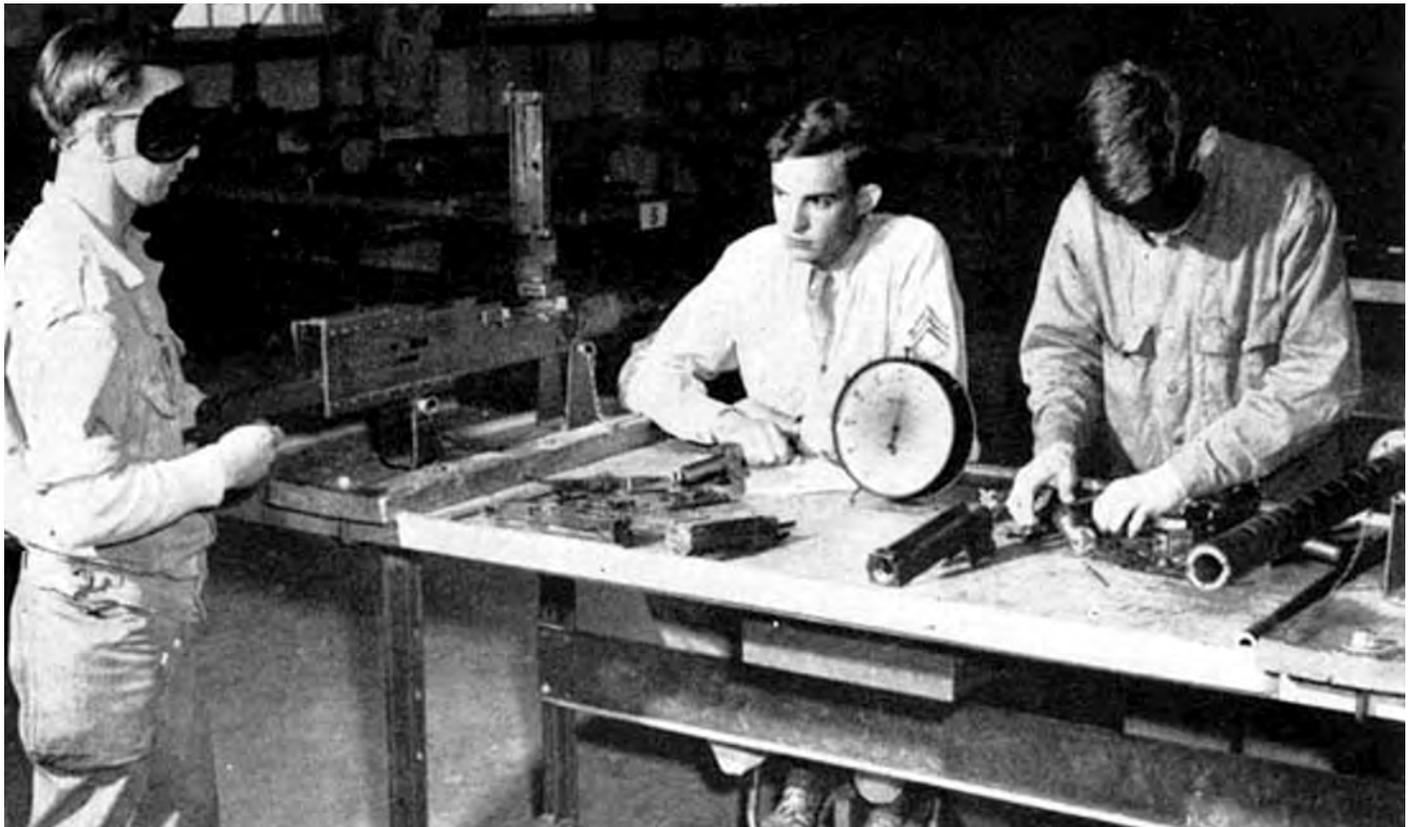
During World War II, only two aircraft in the entire Eight Air Force were named for Air Force personnel. One of them was an ordnance officer assigned to the 384th Bomb Group named Nathan Mazer. As a member of the ground echelon, Mazer, sometimes called "Mike" by his friends, was not expected to fly. Nevertheless, he volunteered to go on so many combat missions that a B-17 (serial number 42-9800) was named the "Fightin Hebe" in his honor as a tribute to Mazer's fighting spirit.¹ That aircraft (serial number 42-9800) completed fifty-two missions over Europe starting on August 7, 1944 until it was hit by flak on the fifty-third over Kyllburg, Germany, on January 8, 1945, and crashed near Rochefort, France.

Nathan Herschel (Mike) Mazer was born in Philadelphia, Pennsylvania on March 11, 1911, one of four children to Harry and Fega (Fannie) Mazer.² He grew up in South Philadelphia, where his days outside of the classroom were spent participating in boxing, baseball and as a Junior Olympics Champion in Track and Field.

In 1941, Mazer was a twenty-nine-year old married man with a decent job working as a salesman for Sears, Roebuck & Company when his number was pulled from a fish bowl used by the Selective Service Commission to determine the next round of inductees in the military.³ The Selective Service and Training Act, passed a year earlier by the United States Congress, decreed that every male citizen between the ages of twenty-one and thirty-six years of age to register for the draft.⁴ Like everyone else in that age group, "Nat" duly filled out the mandatory registration form and mailed it back to the local draft board which arbitrarily assigned the number that was later pulled from that infamous bowl.

When his number came up, Mazer, duly reported to the local draft board where he was told to report in ninety days. The term of service was supposed to be for one year. Mazer opted for early induction so he could complete his service obligations as soon as possible. The papers were processed, he reported to an Army armory for his physical, and was inducted into the United States Army on July 25, 1941.⁵

Shortly thereafter he was put on a train heading to the massive processing center at Camp Lee, Virginia. As he later recalled "It didn't take long to recognize it was the Modern Siberia."⁶ During the next five days he and his fellow inductees endured a battery of tests that measured their physical and mental skills. When they were finished, Mazer and the other inductees were assigned a number. When his number was called, Mazer joined a group of 200 similarly designated privates that were put on a train headed for the Army Air Base at Orlando, Florida. As they later found out, the group was part of an experiment to see whether or not they could take men with a reasonable degree of experience directly into the U. S. Army Air Forces. Previous enlistees had been given nine months of specialized training before they had been assigned to an Air Corps unit, but this didn't make much sense for draftees that were only supposed to serve for one year.



Like these gunnery students shown here, Mazer was timed during training as he strip/assembled a .50-caliber machine guns blindfolded

After a three-day train ride the troops arrived in Orlando, which they found to be hot and full of mosquitoes. At the station they were met by 2 1/2-ton trucks that took them to the air base. There, they were processed again, assigned to various units and taught to march. Before long Mazer was sent to the 13th Bomb Group as replacement where the squadron commander, “a big brute of an Irishman” named Edward R. Casey, interviewed him. Casey, who stood six feet four inches tall with a flattened nose, had been an All-American tackle at Boston College. As Mazer stood in front of the giant squadron commander, he knew that he was “in enemy territory.” After a series of preliminary questions, Casey asked him what he knew about guns?

“Well,” in my part of the country, I bought them and sold them,” he answered.⁷

Thomas Wildenberg is an independent aviation historian and a frequent contributor to Air Power History. He is a former Smithsonian Fellow having served successive terms as a Ramsey Fellow at the National Air and Space Museum in 1998 and 1999. Mr. Wildenberg is the recipient of a number of awards recognizing his scholarship. These include the Surface Navy Association Literary Award, an award from the Air Force Historical Foundation for the best article in Air Power History in 2009, and the John Laymen Award. He is currently working on a biography of Charles Stark Draper.

Once in a while, Mazer, who had sold vacuum cleaners for Sears and Roebuck, had traded them for guns. In reality, this was a euphemism in the trade, meaning that you could accept anything in exchange for a sale. But Casey didn’t know this and Mazer was dismissed with the command, “You’re an armorer now.”

The Army, in its infinite wisdom, did not want to waste sending someone who was only going to serve for one year to technical school.⁸ Instead, they made him an apprentice armorer and assigned him to the Armament Section of the Headquarters Squadron, 13th Bomb Group. After assembly the next morning, Mazer was marched out to the unit’s supply room, picked up .50-caliber and .30-caliber machine guns and shot guns and marched out to the units work tent.⁹ There he learned how to pull apart and put together the unit’s weapons. After four weeks he could take them apart and put them together using a nail as his only tool.

If you were an armorer you were automatically classified as a gunner. Thus, Mazer unexpectedly found his name on a list of personnel assigned to flying duties as an apprentice aerial gunner, even though he had never fired a gun in his life. By December, Mazer owed Uncle Sam four hours of flying time a month for which he would receive fifty percent of his base pay, which had suddenly increased from twenty-one dollars to thirty dollars a month.¹⁰

Although Mazer was now classified as an aerial gunner, he was still being assigned to cleanup details, guard duty, and the most dreaded of all KP, which required that he get up at five O’clock in the morning.

Looking for a way to get out KP, Mazer came across a



The obsolete Martin B-10 bomber, which first entered service in 1935, was used to tow gunnery targets over the Nevada desert in 1942.

notice announcing that the squadron was looking for boxers. So, he went to Lieutenant Casey and offered his services.

“Sir,” he said, “in south Philadelphia everybody fights. But I can train, I can help, I can run a corner.”¹¹

So, Mazer became the trainer for the base boxing team, which got him and every member of this boxing team excused from KP, guard duty, and clean up detail.

In January 1942, a few weeks after Pearl Harbor and the U.S. entry into World War II, Mazer was sent to Las Vegas for five weeks of intensive training in aerial gunnery at the air-to-air gunnery school at Indian Springs, Nevada. It took six days and seven nights to reach Las Vegas by train. When he got to the base, which was situated in the mountains 45 miles northeast of Las Vegas, he was assigned to one of the large pyramidal tents that served as

Mazer would practice air-to-air firing with a 30-caliber machine gun from the rear seat of a North American AT-6 Texan.

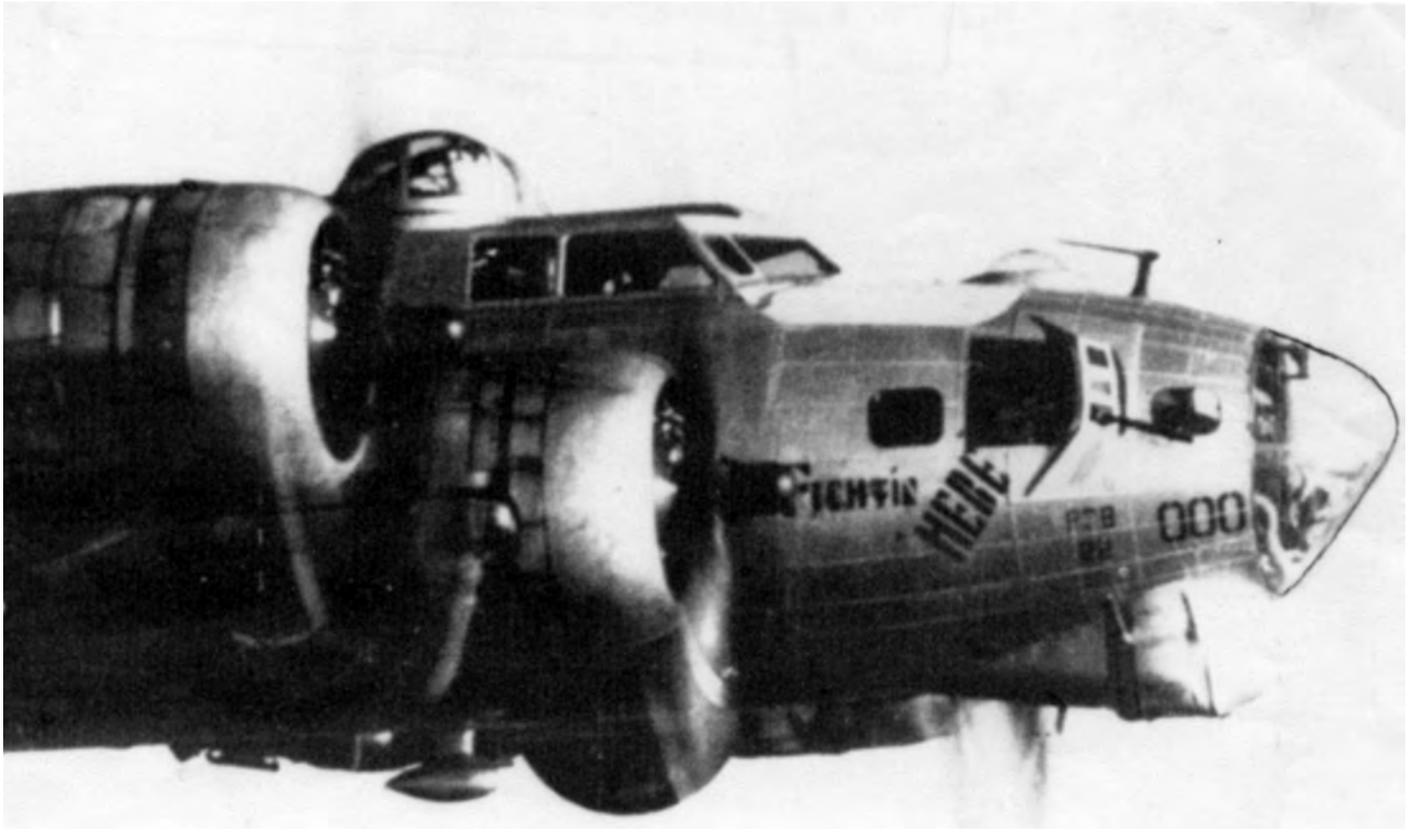


the base’s basic housing. It’s the middle of winter, the base is located 6,200 feet above sea level, there are no buildings, just slit trenches to be used as latrines, and an outdoor Army cook stove. It’s so cold that they slept in their flying clothes, the pancakes they had for breakfast froze on their aluminum plates, and they had to wait for the water spigot on the water tank to defrost at two o’clock in the afternoon before they could brush their teeth.

Every day for the next five weeks, Mazer would get up in the morning, prepare the ammunition belts that he would be using, load the ammunition and a machine gun into an North American AT-6 trainer, get on board and take off. Once in the air he’d pull the canopy back, pull out the swivel mount, put the gun on it, loaded the ammunition and begin shooting at a big square panel being towed by an out-dated B-10 bomber.

Flying around at 9,000 feet above the valleys, with B-10s flying by was both “a beautiful and horrendous experience,” according to Mazer. “Hell, I never got past Pittsburgh and here I am in the Great West . . . The mountains, the valleys, and the desert. Truly fascinating.”¹²

When he returned to the 13th Bomb Group it had been reassigned to Westover Field in Chicopee, Massachusetts, about ten miles northeast of Springfield. From there the unit’s B-25s were assigned to anti-submarine duty. Mazer rejoined the squadron in February and began flying routine anti-submarine patrols over the Atlantic. They didn’t need gunners, but they did need bombardiers, so Mazer was trained on a rudimentary simulator in one of the hangars and became a sergeant bombardier.¹³



The *Fightin'Hebe*, S/N 42-9800, named in honor of Nathan Mazer, was one of only two B-17s in the European Theatre named for an individual.

One day, he was called into the orderly room by a lieutenant whom he had befriended who told Mazer that all of the sergeant bombardiers were going to be replaced by commissioned bombardiers.¹⁴

“Why don’t you go to officer candidate school,” he asked?

Several months went by and Mazer didn’t hear anything more about it until August. By then he had flown more than fifty missions over the Atlantic. He had just landed from a noon mission when a vehicle arrived on the flight line to take him to the headquarters building where he was ushered in to a board of five officers. “I smelt, I stank and I’m dirty. I still had my pistol that we carried and I was wearing my flying suit—remember it’s the middle of summer and it’s hot.”¹⁵ He apologized for not being presentable, but the board was more interested in what he did and what he had seen. At the end of the interrogation one of the officers asked him if he wanted to be an officer. Mazer answered in the affirmative. Five days later he was on his way to the Army’s Ordnance School at Aberdeen, Maryland.

Mazer graduated from the Ordnance School on December 12th and was commissioned as a second lieutenant in the U. S. Army Ordnance Corps. He was attached to the Army Air Forces and told to report to the re-assignment center at Salt Lake City. There, he was assigned to the 544th Bomb Squadron, 384th Bomb Group, which had yet to be formed and was just being activated. Since it only existed on paper, Mazer was sent to Spokane, Washington, for additional training in aerial ordnance. Mazer rejoined

the squadron as it was forming at Wendover Field, Utah, in the latter part of January 1943. At Wendover, the unit underwent rigorous training in formation flying, ordnance loading, gunnery, bombing, and all aspects of aircraft maintenance.

Although he was not a member of the Air Forces, Mike, as he was known to his friends and associates, was well accepted within the group because of his prior experience. He had come from a combat unit, had flown dozens of missions, and had the ribbons to prove it. While at Wendover, and later at Sioux City, he had often flown training missions with the air crews. In April, the 384th moved to Sioux City, Iowa, for a final few weeks of training before deploying to overseas from Kearney, Nebraska.¹⁶ The air echelon left Sioux City for Kearney, Nebraska on May 3, 1943, and then continued to Prestwick, Scotland via Presque Isle, Maine, and Goose Bay, Labrador. The ground unit departed Sioux City by train on May 9th. Four days later they arrived in Camp Kilmer, New Jersey. “Hell, you talk about a sealed camp, it was sealed alright, but that didn’t prevent a few of us from sneaking down to Philadelphia during the day.”¹⁷

Mazer and the rest of the ground unit shipped out on the *Queen Elizabeth* from a New York dock on May 27, 1943. “We spent twelve hours down in the cabins and twelve hours on the deck and that was the way it worked.”¹⁸

Four and a half days later they arrived in Enoch, Scotland, where they were hastily put on trains and sent on to the 384th’s assigned base at Grafton Underwood, in the Midlands of England. The group, which consisted of 36 air-



The fish bowl from which Nathan Mazer's number was pulled in the second peace time draft lottery held on July 17, 1941, shown here being delivered to General Lewis B. Hershey, deputy director of the Selective Service Administration. (Author's collection)

craft, trained again for the next four weeks coordinating air and ground procedures, formation flying as practiced in the European Theater, to bomb storage and delivery, fusing bombs, loading fuel, and loading 50-caliber ammunition.

The 384th flew its first mission on June 22, 1943. The target was a huge General Motors vehicle warehouse and distribution point in Antwerp, Belgium. They lost two aircraft on that first mission and similar losses on each succeeding mission, which began to chip away at the group's personnel. The only fighter cover they had in those early days of the bombing campaign in Europe were Spitfires that took the crews to the French coast and then had to return because they lacked long range capabilities. The P-47s and P-51s came later. By the time the group went to Schweinfurt for their sixth mission, the group had lost thirty-five of the original thirty-six.¹⁹

Replacement crews and aircraft constantly arrived to take up the vacancies, but the losses kept mounting. On a mission to bomb the port of Hamburg, the 384th experienced the reality of a "ghost squadron" when an entire squadron — all seven aircraft and the crews of the 544th failed to return from the mission.²⁰

The losses during the air war conducted against the Third Reich during those early months of the bombing

campaign over Europe were terrible. Mazer was not required to fly missions. Anyone who flew missions over France and Germany during that time period had a good chance of being shot down. In spite of this danger, Mazer, who as part of the ground echelon, known colloquially as "ground pounders," volunteered to fly anyway, knowing full well that as a Jew he would not be particularly welcome if he fell into German hands.

The problem was his dog tags, which were issued to every serviceman for identification in case they were killed. In addition to their serial number and blood, group, that tags were also stamped with a later indicating their religion, "P" for Protestant, "C" for Catholic, and "H" for Hebrew. Knowing the he wouldn't have a chance with name like Nathan Mazer, his friends, to whom he was known as "Mike," re-christened him as Mike O'Mazer and made up a new set of dog tags indicating his was a Roman Catholic in case he got shot down so they wouldn't know he was Jewish.²¹

"When we started operations in England, it was my job to brief the gunners," recalled Mazer, but he quickly discovered that after they flew a couple of missions, the gunners knew more than he did.²² So I asked permission to fly missions as a non-crew member.

In July 1943, Mazer began submitting requests to fly combat missions. By the end of November 1944, he had submitted no less than seventeen separate requests to fly combat and had completed flown more than fifty missions over Europe.²³ At least three missions were flown either as a stowaway and/or an invited “guest”. He never got caught, according to Maj. Gen. Dale O. Smith, USAF (Ret.), who commanded the 384th Bomb Group for a time who claimed that “Mike” was the greatest stowaway in the history of the Eight Air Force.²⁴ Mazer flew so many missions that he was awarded an Air Medal with an Oak-Leaf Cluster.

Mazer showed just as much courage on the ground. On the morning of July 24, 1944, he was busy supervising the ordnance men who were loading B-17s scheduled for that day’s mission. At the time Mazer was the ordnance officer assigned to the 544th Bombardment Squadron of the 384th Bomb Group. The bomb load that day consisted of forty-two 120-lb fragmentation bombs that were to be used against the German troops holding up the Allied advance in Normandy.

He was making his final round of the hard stands when one cluster of six M41, 20-lb bombs fell about ten feet from a B-17’s bomb bay to the concrete hard stand. His immediate reaction stated Mazer, “was to get over there fast.” “We were safe for the moment because noth-

ing had detonated.” He screamed to clear the area as close to one hundred ground personnel ran from the area and the six fully armed aircraft that would go up if the bomb detonated. An M41 fragmentation bomb had come loose from its cluster and had fallen to the concrete hardstand, damaging the fuse and exposing the firing pin. Mazer wasn’t able to remove the fuse so he called his First Sergeant to bring a jeep. When the jeep arrived, Mazer picked up the bomb cradling it in his arms as he drove the short distance to the ordnance shop where the bomb was safely defused.

Ninety days later Mazer received a letter of commendation from the squadron commander. Nothing else was done for the next four decades until he ran into the squadron’s former commanding officer. He remembered the incident and took steps to see that Nathan Mazer received the Bronze Star for his heroic action on that day forty-two years earlier on hardstand at Grafton Underwood.

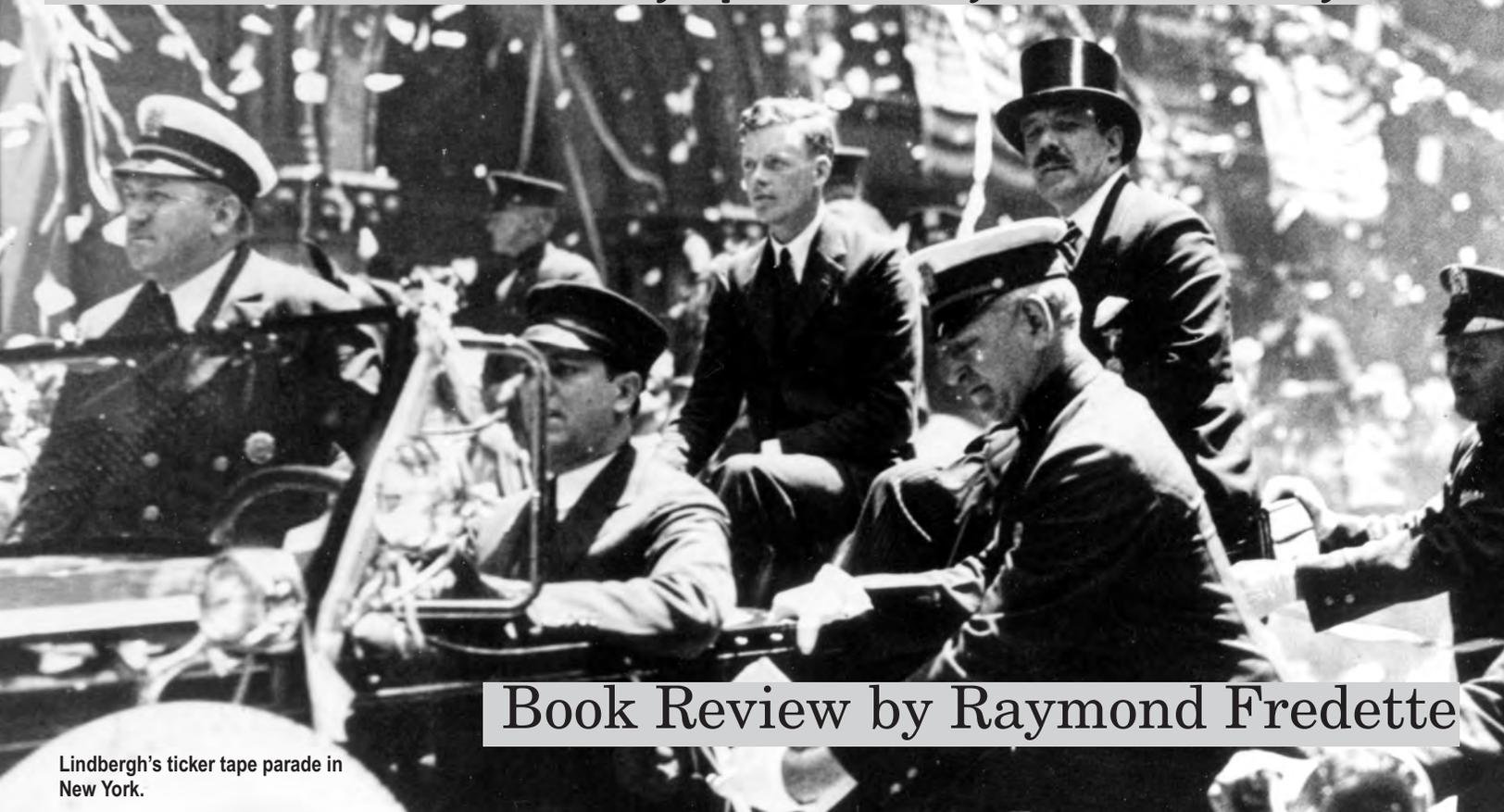
In August 1944, Mazer was promoted to Captain and transferred to the Army Air Forces from the Ordnance Department. He was discharged in 1945, then recalled to duty in July 1946. He retired on June 1, 1964, with the rank of Colonel.²⁵ He passed away on December 6, 2005, and was laid to rest at Arlington National Cemetery with full military honors on January 16, 2007.²⁶ ■

NOTES

1. 384th Bombardment Group, May 14, 2007, Hill Air Force Base Website, p. 2, <http://www.hill.af.mil/About-Us/Fact-Sheets/Display/Article/397460/384th-bombardment-> /; 384th Bombardment Group Website, B-17G 42-98000, http://384thbombgroup.com/_content/_pages/One384thAircraft.php?AircraftKey=42-98000.
2. “Nathan Herschel (Mike) Mazer,” Obituaries, *The Salt Lake Tribune*, December 8, 2006.
3. Nathan Mazer, “A Ground Pounder Remembers: War Story #2,” p. 1 “A Ground Pounder Remembers: War Story #1,” p. 2, courtesy Nathan Mazer.
4. The Selective Training and Service Act, as it was officially known, was passed on September 16, 1940. It was the America’s first peacetime draft and formally established the Selective Service System as an independent federal agency. For details see “Selective Service and Training Act of 1940,” *World Affairs* 103, No. 3 (September, 1940), pp. 179-186.
5. Nathan Mazer telephone interview with Thomas Wildenberg, July 18, 2003, hereafter Mazer Interview.
6. Nathan Mazer, “A Ground Pounder Remembers: War Story #1,” p. 3.
7. *Ibid.* p. 4
8. Mazer Interview.
9. The shotguns were used by the officers for skeet shooting to improve their gunnery.
10. Nathan Mazer, “A Ground Pounder Remembers: War Story #1,” p. 6.
11. *Ibid.*
12. *Ibid.* p. 8.
13. Mazer Interview.
14. Nathan Mazer, “A Ground Pounder Remembers: War Story

- #1,” p. 10.
15. Mazer Interview.
16. Nathan Mazer, “A Ground Pounder Remembers: War Story #2,” p.3; “384th Bomb Group History,” 384th Bomb Group (Heavy) website. http://www.384thbombgroup.com/_content/_pages/grouphistory.php.
17. Nathan Mazer, “A Ground Pounder Remembers: War Story #2,” p.3;
18. *Ibid.*, pp. 3-4.
19. “384th Bomb Group History,” 384th Bomb Group (Heavy) website.
20. *Ibid.*
21. Nathan Mazer’s son, in a letter to Philip Kutner, quoted in “An Online E-mail Correspondence by Philip Fishl Kutner, *Der Bay, The International Anglo-Yiddish Newsletter*, XVIII, No. 9, November 2008, p.2; Philip Kaplan and Jack Currie, *Behind the Wire: Allied Prisoners of War in Hitler’s Germany* (Pen and Sword, 2013), p.106.
22. Mazer Interview.
23. Nathan H. Mazer, 1st Lt. Ord Dept., Squadron Ordnance Officer, to Commanding General, 1st Bomb Wing, copies dated July 17, 1943 thru April 20, 1944, Microfilm Records 384th Bomb Group, AFHRA, Maxwell AFB, AL.
24. MGen. Dale O. Smith, USAF (Ret.), 50th Anniversary of D-Day Address, Hill Aerospace Museum WWII Chapel, Nathan H. Mazer File, Jewish Airmen Collection, Special Collections, Auburn University Library.
25. Service record Nathan Mazer (notes), Nathan H. Mazer File, Jewish Airmen Collection, Auburn University Library.
26. “Nathan Herschel (Mike) Mazer” [Obituary], *The Salt Lake Tribune*, December 8, 2006.

LINDBERGH: A Photographic History of the Lone Eagle



Book Review by Raymond Fredette

Lindbergh's ticker tape parade in New York.

Editor's Note: *What began as a book review by the author of this article ended up being more of an article than a book review. As a result, we chose to print it as a separate article to bring attention to the subject. Ray Fredette has written on Lindbergh in a prior issue of Air Power History and brings years of experience to bear on his subject.*

Ninety years after his epic flight to Paris, books are still being written about Charles Lindbergh in what seems to be an effort to slow his gradual decline into obscurity, at least in the popular mind. The books are usually limited to the flight itself and based on Lindbergh's own account which earned him a Pulitzer Prize, "The Spirit of St. Louis." Not much new is to be learned from them.

One book recently published is quite different both in scope and content. Entitled, "Lindbergh: A Photographic History of the Lone Eagle," it is a coffee-table volume replete with some stunning and rarely seen pictures, although not always in topical or chronological order. The text is skewed and has some inexplicable gaps. While the book is illustrated with several photos of Lindbergh as a boy, there are only two of him in Paris in 1927, and one is mislabeled. The picture is actually one of Lindbergh arriving in Brussels after he departed Paris.

Arguably, that week he spent in Paris is one of the most significant of his entire life, and certainly of his aviation career. It was the events of that week which transformed Lindbergh from a little known airmail pilot into a world figure. Yet, the authors of the book devote only one paragraph to it, mostly by quoting others praising Lindbergh. Biographer Brendan Gill is cited as to how Lindbergh avoided all "opportunities" of making any "blunder by means of any single word or gesture" during his stay. And Paul Garber, a Smithsonian curator, observes that the manner Lindbergh "comported himself" while in France was "even more impressive" than his "flight across the Atlantic." In the very next sentence, the hero is on his way home aboard a U.S. cruiser "on order of President Coolidge." So much for Lindbergh's experiences in Paris.

Even in 1927, at age 25, Lindbergh was a man with no agenda but his own, and returning home was not in his plans. He first intended to leisurely tour Europe and possibly head back eastward to the U.S. to make a round-the-world flight. Had he done so, as he was determined to do, Lindbergh likely would not be much better remembered today than any of the others who flew the Atlantic before him and after him. But the American ambassador in Paris, Myron T. Herrick, prevailed over Lindbergh to return directly home from France and, in the process, made him famous.

For Herrick, a flight across the Atlantic had serious diplomatic implications, and his first reaction to the possi-



Charles Lindbergh as the Spirit of St. Louis is fueled prior to the flight from San Diego, Calif. to St. Louis, Mo. (Photo courtesy of Air Force Magazine.)

Lt. Col. Raymond H. Fredette, USAF (Ret.) is a native of Massachusetts. He earned degrees in history and international relations from Tufts University and the Fletcher School of Law and Diplomacy. During World War II, he flew thirty-one combat missions over Germany with the Eighth Air Force. Recalled to active duty in 1951, Fredette served as an intelligence officer in Morocco, Germany, and Vietnam. He also had teaching assignments with AFROTC and the Defense Intelligence School in Washington, D.C. Shortly after retiring, he met Charles Lindbergh who agreed to cooperate in the writing of a book about his military activities. Lindbergh held the rank of brigadier general in the Air Force Reserve. Before his death in 1974, he gave Fredette "unrestricted access" to his papers at Yale University and other depositories. The project was later expanded when Anne Morrow Lindbergh authorized Fredette "to write the definitive biography of my husband." His research and writing led to a standoff with his publisher, William Jovanovich of Harcourt, Brace, Jovanovich, and the book was never completed. Fredette is currently working on another book titled, "The Lindberghs: Decoding Charles, Remembering Anne." Colonel Fredette has written many articles on aviation history, and a book on the origins of strategic bombing in World War I, The Sky on Fire, which has been reissued as a volume in the Smithsonian History of Aviation Series.

bility of one was to recommend that it be delayed. In May 1927, two other planes were poised in New York for a flight to Paris, when two French fliers, Nungesser and Coli, took off from the opposite direction. Joyful Paris newspaper accounts of their arrival at the Battery in lower Manhattan proved premature when they disappeared over the Atlantic. The mood in France turned from one of exultation to anger. The U.S. Weather Bureau was said to have withheld data in favor of the transatlantic fliers waiting in New York. American tourists were jostled on the Champs Elysees, and a U.S. flag outside a news office was reportedly torn down.

An alarmed Herrick sent an urgent cable to Washington warning that no American plane should take off for Paris "until an appropriate time has elapsed." When Lindbergh unexpectedly did so, the ambassador anxiously cabled again seeking confirmation. He then planned a brief welcome for Lindbergh which would keep him away from reporters until he could be advised on how to act what to say so as to not offend the French about their lost fliers. Admission to a fenced-in area in front of the terminal at Le Bourget was to be limited to individuals with passes and it did not include reporters. Then Herrick learned that the Paris bureau chief of *The New York Times* had plans of his own "to isolate" Lindbergh as soon as he landed and drive him away to a Paris hotel. The newspaper had negotiated a contract with his St. Louis backers for the exclusive rights to his story.

Not to be outdone, Herrick hastily sought the help of the French commandant of the military side of Le Bourget.



En route from Paris to London, Lindbergh lands at Evere Aerodrome for a one-day visit in Brussels.

Once Lindbergh was safely on the ground, searchlights were to beacon him to a spot away from the terminal. Soldiers would then remove him from his plane and take him to a hangar where he would be kept in custody, at least overnight. A bogus aviator, who spoke some English and wearing Lindbergh's distinctive helmet, would be rushed to the terminal where he would be greeted by the ambassador. Lindbergh was successfully taken away from his plane, but the staged reception did *not* go as planned. In the crowd, which rushed out to the plane, was an American student who was mistaken for Lindbergh. The helmet was placed on his head and he was carried away to the terminal. Protesting that he was not Lindbergh, he was nonetheless received by the ambassador who insisted that he was.

Later that evening, Herrick was driven to the military hangar to meet the real Lindbergh. "I was so captured by his sense of humor, his smile and his general appearance," the ambassador recalled, "that the thought first occurred to me to ask him to become my guest at the embassy...." The idea that he had found the perfect good-will emissary to improve Franco-American relations evidently also occurred to the ambassador. While being taken to the embassy, Lindbergh and his escorts made a stop at the Arc de Triomphe. One of them later wrote, "Lindbergh walked to the tomb of the Unknown Soldier and bowed in silence. Only three of us witnessed this historic scene...." An impromptu affair, it was very likely suggested, if not ordered, by Herrick. Barely a few hours later, a Paris newspaper came out with a front-page story relating how Lindbergh had asked to be taken to the Arc de Triomphe "to salute

the Unknown Soldier." The French were moved, but it is doubtful that Lindbergh himself much cared after three nights without sleep.

After landing that night, he had expected to find a place to stay, hoping that it would not be too expensive. Relieved as he was to find himself at the embassy, Lindbergh became upset when told that he should get some rest and meet with reporters in the morning. He had a contract with *The New York Times*, he told Herrick, and insisted that the paper be notified of his location. The ambassador finally yielded and telephoned the local bureau chief. A correspondent soon arrived and he was escorted to an upstairs bedroom where he found Lindbergh "wide-awake, coherent and most cooperative" during a half-hour interview.

Lindbergh was then told to get some sleep. Not long afterward; reporters who had yet to see Lindbergh arrived at the embassy in taxicabs convinced that he was there. Herrick let them in, but was adamant about not letting them see his guest that night. Still awake, Lindbergh heard the commotion and sent word downstairs that he was willing to see the reporters. The *Times* correspondent, who was still there, told him he was free to talk to them. Even Herrick finally agreed because it was "too big an affair to be the exclusive news of any one paper." Lindbergh dramatically recounted his flight, stating he had traveled through "sleet and snow for over a thousand miles." He calculated he could have flown another five hundred miles or more beyond Paris. "I didn't get sleepy at all," he boasted.



Charles Lindbergh stands at Curtiss Field, Long Island, with the *Spirit of St. Louis*, one of three American planes poised to take off for Paris in May 1927.

As the questions shifted to Lindbergh's arrival at Le Bourget, Herrick abruptly ended the interview. The reporters did not see him again until the following afternoon, with the ambassador by his side. A model of humility, Lindbergh said he had brought to France "the great sorrow of the American people" over the loss of the French fliers, and "we grieve over their noble failure." According to one reporter, he did not get to say much anything else. "If a question opened an opportunity to make political capital, Herrick answered for Lindbergh before he could get his mouth open." Later that afternoon, Herrick and Lindbergh called on the grieving mother of one of the missing fliers. She wept as they expressed their condolences and Lindbergh reportedly tried to reassure her that he might yet be found in the wilds of Canada. Given the extolling publicity he was getting in the French press, one observer remarked, "It was as if the spirit of their own aviators had returned. The French accepted Lindbergh as one of their own."

In the days which followed, Lindbergh, escorted by Herrick, met the President and Premier of France as well as the Foreign Minister and Minister of War. He was awarded the Cross of the Legion of Honor. One correspondent later recalled, "We followed Lindbergh through a succession of official events, banquets, and laudatory speeches.... He "was moved through this labyrinth of ceremony like a puppet, wearing an expression of bewilderment." Commented another in Washington, "The Government here is pleased, indeed exuberant. Diplomacy

knows what it means to get a whole nation speaking in praise of an American."

Herrick marveled at "the significance of it all, also of my act of taking him to the Embassy, which placed the United States Government behind him." But the ambassador had achieved as much even before Lindbergh's safe arrival in Paris. At his recommendation, a congratulatory message was sent from Washington to be given to Lindbergh immediately upon his arrival. It read in part: "The American people rejoice with me at the brilliant termination of your heroic flight..." which "crowns the record of American aviation...." Lindbergh was reminded that he was carrying, "the assurance of our admiration for those intrepid Frenchmen, Nungesser and Coli, whose bold spirit first ventured on your exploit, and likewise a message of our continued anxiety concerning their fate." The cable was signed, Calvin Coolidge. On receiving an advance copy, the French were much impressed with Lindbergh even before he arrived.

Since he was "bringing the greetings of the American people to France," Herrick felt Lindbergh should return home with a similar message from the French. He believed it would serve the purpose of "linking up more firmly America's diplomatic relations with France weakened since the war." But Lindbergh was being showered with invitations from other European cities. Herrick did all he could to dissuade him from accepting, especially



The Spirit of St. Louis is readied for takeoff.

one from Berlin. To go there, he told Lindbergh with some heat would be an affront to the French who had honored him with the Legion of Honor. A British delegation came to Paris and persuaded Lindbergh to fly to London with a stop in Brussels. Herrick vainly counseled against the flight, noting that “if explaining a situation to a man who does not understand is giving advice.”

Herrick contacted the American ambassador in London, Alanson B. Houghton, by telephone, as the two cities were then connected, urging him to put Lindbergh up in his own embassy so as to give his visit “official recognition.” He also cabled the Secretary of State, Frank B. Kellogg, stating in part: “Lindbergh has just departed.... An expression of appreciation by the President and by you would be greatly appreciated.... Although he came unofficially... he has become a real ambassador to France....” Others were also agitating for Lindbergh’s return. His St. Louis backers felt that the plane they had financed for the flight belonged to them. They appealed to the Secretary of War, Dwight Davis, who was also from St. Louis, and he agreed that the city should have its share of the publicity and the glory. Kellogg, the Secretary of State, was from Minnesota, Lindbergh’s home state.

It remained for Houghton to convince Lindbergh to go home. As forcefully as he could, he advised Lindbergh to comply with “the wish of Washington and those who have your best interests at heart.” Lindbergh abruptly walked out on him and went to his room, but Houghton followed him there and pressed him further. Finally, Lindbergh asked if his return was “an order from the President of the United States.” The exasperated ambassador, who had delayed his vacation because of Lindbergh, said it was. Lindbergh then agreed provided he could fly back in his plane. On being informed, Herrick insisted that Lindbergh had to leave from France, and that he should not be allowed to return to Paris in the *Spirit of St. Louis*. Otherwise, he might fly anywhere, even Berlin. Lindbergh was told to take his plane to a Royal Air Force base where it would be

dismantled and crated for shipment to the U.S. He was so upset the next morning, that he did so while he skipped breakfast. A formal farewell in England was cancelled, and Lindbergh left in a plane loaned to him by the British.

Along with his so-called order to Lindbergh, Coolidge is said to have dispatched a fast cruiser to bring him home soon enough before he was due to leave on a vacation in South Dakota. But in his comments to reporters, the President said Lindbergh would be invited to the White House only if he arrived in time. Otherwise, he could come to South Dakota. Herrick asked the Navy to arrange for Lindbergh’s return, and a destroyer was sent to the French port of Cherbourg. Another ship was to pick up the plane in Southampton because the destroyer was not large enough to accommodate the crates. But Lindbergh insisted he would leave only on the ship carrying his plane, and the French, spurred by Herrick, planned a formal farewell for Lindbergh. The impasse was resolved by the *USS Memphis* then in dock at Rotterdam. A fast cruiser, it made a dash for Southampton and on to Cherbourg, with the crated plane aboard, to pick up Lindbergh. He arrived in Washington two days before Coolidge left on his summer vacation.

The President greeted Lindbergh on the Mall, near the base of the Washington Monument, before an estimated crowd of a quarter-million people. Responding briefly, Lindbergh said he was bringing “the affection of the people of France for the people of America.” In the process of becoming Herrick’s ambassador without portfolio, he had attained the status of world hero, a role in his wildest dreams he never anticipated, and never quite accepted. This explains his aversion to all forms of publicity, his aloofness, and his non-conformity with the generally accepted niceties of everyday living. He lies buried on a distant Hawaiian island about as far as he could get and still rest in American soil.

In writing about his flight to Paris, Lindbergh did not want to relate how he had become a diplomatic pawn and



Charles Lindbergh and Ambassador Herrick respond to a chanting crowd from a balcony window at the U.S. Embassy in Paris.

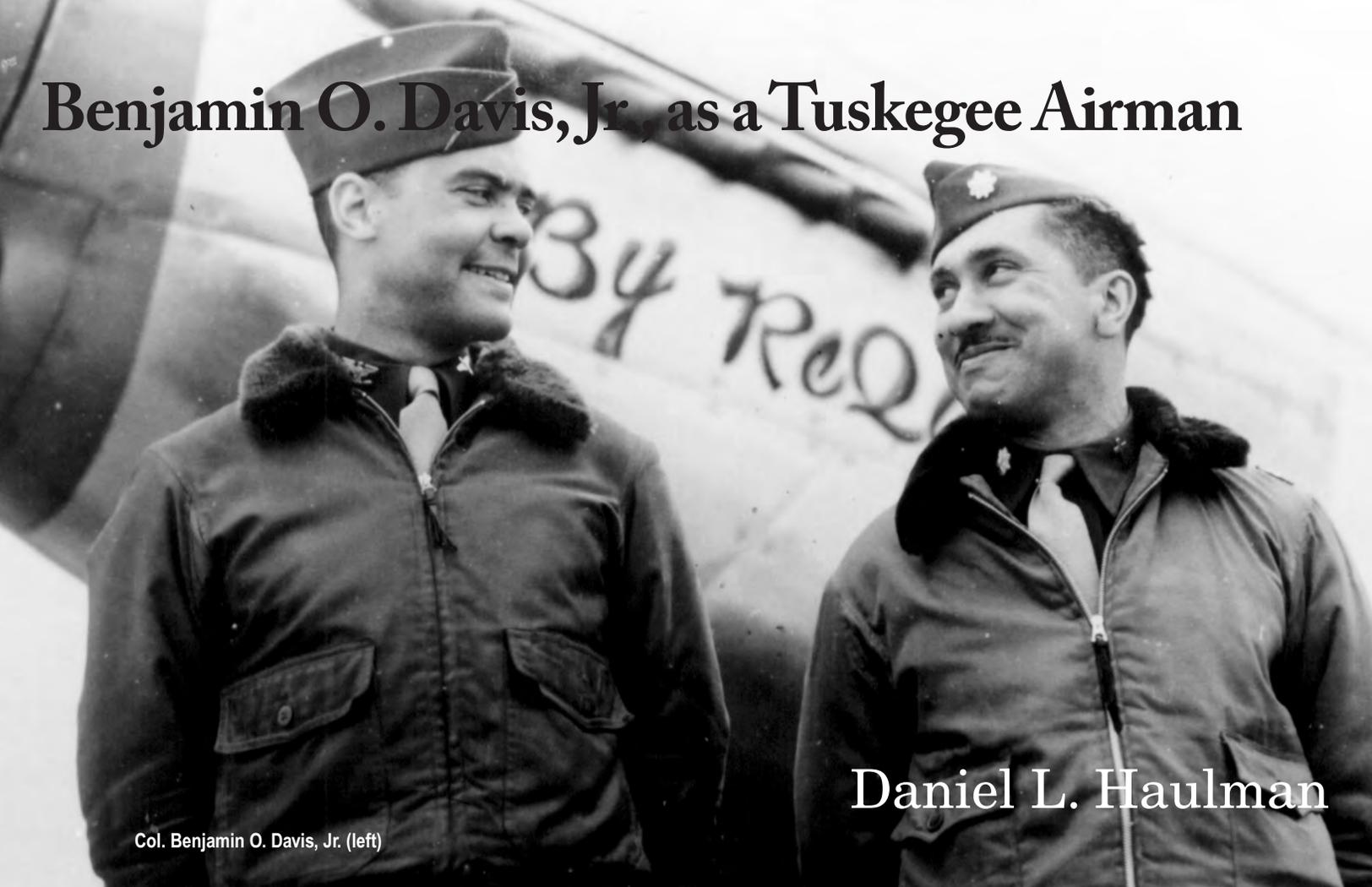
returned to the U.S. against his will, so he ends his book with his wheels hitting the grassy field at Le Bourget. When his editor complained that this was a little too abrupt, he added an afterword about being rescued from the crowd by two French aviators and taken to a hangar, and other published information. He concluded by saying that “the account of my experiences abroad, my homecoming to the United States belong to another story.” Lindbergh later wrote more about his flight and its aftermath, but he never got around to telling the whole story.

However much has been written about Lindbergh, he is still to a large extent unknown. The authors of this skewed photographic biography seem to concede as much. “Who knows?” they ask in the very last sentence of their book. “It’s certainly possible that we don’t know the full Charles A. Lindbergh story yet.” While impressed by their humility, I also think that they know more than they chose to write. There are those who wish Lindbergh to be praised and remembered, yet remain unexplained as he wished of himself.

LINDBERGH: A Photographic History of the Lone Eagle, by Bruce McAllister and Stephan Wilkinson. Roundup Press, 2017, 232 pp., \$59.95.



Benjamin O. Davis, Jr. as a Tuskegee Airman



Col. Benjamin O. Davis, Jr. (left)

Daniel L. Haulman

After he was a West Point graduate, and before he was the first black general in the Air Force, Benjamin O. Davis, Jr. was a Tuskegee Airman. He was unquestionably the most important of them, serving as commander of their most important units. Today I want to focus on that very important part of his distinguished career, which lasted from 1941 to 1949.¹

It was natural for Benjamin O. Davis, Jr. to be among the first black military flying cadets. At the U.S. Military Academy at West Point, where he graduated in 1936, Davis had applied for pilot training, but had been turned down since there were no black flying units to which he could have been assigned. In 1940, President Franklin D. Roosevelt promised to allow the training of black American military pilots, and appointed Davis's father the first black general in the U.S. Army. In March 1941, the War Department activated the 99th Pursuit Squadron, the future 99th Fighter Squadron, but it did not yet have any pilots. The War Department selected Tuskegee as the place where those pilots would be trained. Benjamin O. Davis, Jr. had already served at Tuskegee Institute as an R.O.T.C. instructor from June 1938 to February 1941.²

Davis entered flight training at Tuskegee in August 1941 as one of thirteen black cadets in the first class. He was the only West Point graduate among them. After nine to ten weeks of primary flight training in biplanes on grass at Tuskegee Institute's Moton Field, Davis was one of only six of the thirteen cadets to move on to basic flight training at the much larger Tuskegee Army Air Field, an Army Air Forces facility several miles to the northwest of Moton Field. Davis was among only five of the cadets to complete basic flying training phase in January 1942, and went on with them to complete the advanced flight training on March 7.³ The graduates received their wings and all but one of them became the first black pilots of the 99th Fighter Squadron, the former 99th Pursuit Squadron, which had been activated the previous March as the first black flying unit in American military history.

Davis was not immediately assigned to the 99th when he graduated from advanced flight training at Tuskegee, because he had just been promoted, as other graduates in the 1936 West Point class, to the rank of lieutenant colonel. He would have outranked the white commander of the unit at the time, so a new position, "executive for troops," was created for him.⁴ He remained in that position on June 1, when the squadron received its first black commander, Lt. George "Spanky" Roberts, with whom Davis had graduated from flight training.⁵ Two months later, Davis succeeded Roberts, who became his executive officer.⁶ There was no animosity between the two, and they would remain friends. They had gone through flight training together, and they would eventually go into combat together.

By the time Davis assumed command in August 1942, the 99th Pursuit Squadron had been redesignated as the

99th Fighter Squadron, and finally had enough pilots from subsequent flying training school classes at Tuskegee to be operational.⁷ Fighter squadrons were typically assigned in sets of three to a fighter group, but at the time the 99th Fighter Squadron began, there was no black fighter group to which it could be assigned. While the squadron transition-trained with P-40s, the Army Air Forces activated the 332d Fighter Group at Tuskegee, but instead of assigning the 99th Fighter Squadron to it, three other fighter squadrons, the 100th, 301st, and 302nd, also activated at Tuskegee, were assigned to the group.⁸ The first commanders of these units were white. In March 1943, a full year after the 99th Fighter Squadron received its first pilots, it continued to languish at Tuskegee, while the 332nd Fighter Group and its three other fighter squadrons moved to Selfridge Field, Michigan.⁹ Finally, in early April, the 99th Fighter Squadron deployed, not to Michigan, but overseas.¹⁰ At last the first black flying squadron in history would have a chance to show what it could do in combat, and Davis would lead them there.

After proceeding by rail to the New York port of embarkation, the 99th Fighter Squadron crossed the Atlantic Ocean aboard the converted luxury liner S.S. *Mariposa*. Members of the 99th were the only Army Air Forces personnel on the ship. There were 4000 troops aboard, and only 15 percent of them were black, but because of Davis' rank, he was the senior officer, and served as troop commander during the voyage, working with a small staff of other officers, including white ones. It was a brief hint at an integrated military. The week-long transoceanic trip to

Daniel L. Haulman is Chief, Organizational Histories, at the Air Force Historical Research Agency, Maxwell AFB, Alabama. After earning a BA from the University of Southwestern Louisiana and an ME (Master of Education) from the University of New Orleans, he earned a Ph.D. in history from Auburn University. Dr. Haulman has authored several books, including Air Force Aerial Victory Credits, The USAF and Humanitarian Airlift Operations, and One Hundred Years of Flight: USAF Chronology of Significant Air and Space Events, 1903-2002. He has written several pamphlets, composed sections of several other USAF publications, and compiled the list of official USAF aerial victories appearing on the AFHRA's web page. He wrote the Air Force chapter in supplement IV of A Guide to the Sources of United States Military History and completed six studies on aspects of recent USAF operations that have been used by the Air Staff and Air University. He has also authored The Tuskegee Airmen Chronology. The author of thirty-one published articles in various journals, Dr. Haulman has presented more than twenty historical papers at historical conferences and taught history courses at Huntingdon College, Auburn University at Montgomery, and Faulkner University. He co-authored, with Joseph Caver and Jerome Ennels, the book The Tuskegee Airmen: An Illustrated History, published by New South Books in 2011.



Col. Benjamin O. Davis, Jr., at a flight briefing.

North Africa, was uneventful, with only one submarine alert.¹¹

Lt. Col. Davis had reason for optimism when he and the 99th Fighter Squadron arrived in North Africa. The squadron immediately received 27 brand-new P-40L airplanes, so much better than the old Warhawks they had used in training. They also interacted with white veteran pilots from the 27th Fighter Group, such as Col. Philip Cochran, who gladly gave them advice on how to fight the enemy.¹²

Since there was no black fighter group overseas to which the 99th Fighter Squadron could be assigned, it was attached in May 1943 to the 33d Fighter Group, a white fighter group that already had three assigned squadrons. Col. William Momyer commanded the group, which served the Twelfth Air Force, which flew tactical missions in support of surface forces, land and sea. The group eventually moved from North Africa to Sicily and eventually to the mainland of Italy.¹³

In early September, Lt. Col. Davis left Major "Spanky" Roberts in charge of the 99th and returned to the United States to assume command of the 332nd Fighter Group, which was preparing to deploy to Italy. Not long after he arrived, he was surprised to learn that a memorandum critical of the performance of the 99th Fighter Squadron had been sent from Momyer's staff up the chain of command, with endorsements from Twelfth Air Force major generals, to Army Air Forces headquarters. The memo recommended that the 99th Fighter Squadron be taken out of front-line combat. Davis defended his squadron's record



Benjamin O. Davis, Jr. receives a decoration pinned on by Benjamin O. Davis, Sr.

at a Pentagon press conference in mid-September, and the next month, he testified to the War Department's McCloy Committee on Negro Troop Policies. Surely if the 99th Fighter Squadron was performing poorly in combat, Army Air Forces leaders would question whether the 332nd Fighter Group and its three other black fighter squadrons should be deployed overseas and take part in front-line combat. Davis and the future of black military aviation was on trial.¹⁴

In his testimony, Davis ably defended the combat record of the 99th Fighter Squadron, and explained the challenges faced by the first black fighter flying unit in combat. Davis' arguments convinced Army Air Forces leaders to keep the 99th in combat, but to remove it from Momyer's 33d Fighter Group and assign it to another white fighter group. Commanders of other white fighter groups to which the 99th Fighter Squadron was subsequently attached gave the black pilots more opportunities, and they excelled.¹⁵

When Davis arrived in Michigan, to assume leadership of the 332nd Fighter Group in October 1943, he was disappointed to learn that the previous group and base

commanders, Col. Robert Selway and Col. William Boyd, had enforced racial segregation at Selfridge Field. Davis was the group's first black commander, and by the time it deployed to Italy, in January 1944, all its members were African American.¹⁶ Selway remained to assume command of the 477th Bombardment Group, the second black flying group, which was activated at Selfridge just after the 332nd departed.¹⁷

The 332d Fighter Group trained with P-39s, and that is the kind of aircraft it flew at first for the Twelfth Air Force in Italy. P-39s were more capable of destroying targets on the ground than enemy airplanes, and the group's pilots had little opportunity to shoot down enemy airplanes or become aces.¹⁸

Despite the fact that by early February 1944, the 332d Fighter Group and the 99th Fighter Squadron were serving in Italy and flying missions for the Twelfth Air Force, the 99th was not assigned to the 332nd until the middle of the year. Until then, the 99th continued flying P-40s while being attached to various white fighter groups, while the black 332d Fighter Group, with its other three squadrons, flew P-39s.¹⁹

Maj Gen Ira Eaker, once commander of the Eighth Air Force, was then commander of the Mediterranean Allied Air Forces, under which both the Twelfth and Fifteenth Air Forces served.²⁰ By the spring of 1944, the Fifteenth Air Force had twenty-one heavy B-17 and B-24 bomber groups assigned to it, but only six fighter groups to protect them against enemy fighters. Eaker decided to move the 332nd Fighter Group from the Twelfth to the Fifteenth Air Force and give it a new bomber escort mission. At the same time, he wanted the 99th Fighter Squadron to be assigned to the group, so that all the black fighter squadrons would be serving together. That would make the 332nd Fighter Group the only fighter group with four squadrons instead of three. By the middle of 1944, the 332nd Fighter Group moved to Ramitelli Field near the east coast of Italy, and the 99th Fighter Squadron joined the other three squadrons already assigned to the group. The black pilots got new airplanes, first P-47s, and then P-51s, which were faster, more maneuverable, and had longer range than the P-40s and P-39s they had flown before. To distinguish their airplanes from those of the other fighter escort groups, they painted the tails of their P-51s a solid red. The P-51s of the other three Mustang groups had other colors or patterns.²¹

As leader of the 332d Fighter Group, newly promoted Colonel Davis demanded that his fighter escort pilots stay with the bombers they were assigned to protect, and not leave them to search for distant enemy fighters to shoot down. He knew that the Germans often used fighter decoys to lead away the escorts so that other German fighters could more easily attack the bombers. Keeping their fighters closer to the bombers better protected the B-17s and B-24s they were escorting, but it also reduced opportunities for black pilots to shoot down enemy airplanes. Each of those heavy bombers had a crew of at least ten men. To Davis, getting the bombers home safely was more important than shooting down enemy fighters. Partly as a result of Davis' policy, there were no black aces in World War II because none of the black pilots shot down at least five enemy airplanes.²²

Those who compared the 332nd Fighter Group with the other P-51 fighter escort groups in the Fifteenth Air Force might have noted that the black pilots shot down fewer aircraft, but it was for good reason. The 332nd Fighter Group flew 179 bomber escort missions for the Fifteenth Air Force during the period between early June 1944 and the end of April 1945, and lost bombers to enemy aircraft on only seven of those missions.²³ The total number of Tuskegee Airmen-escorted bombers shot down by enemy airplanes was 27, but the average number of bombers lost by the other groups in the Fifteenth Air Force was 46.²⁴ The Tuskegee Airmen lost significantly fewer of the bombers they escorted than the other fighter escort groups in the Fifteenth Air Force. In fact, their reputation for protecting the bombers spread, and some of the bomber crews expressed a preference for the black escorts. Davis even named his own aircraft "By Request," and had his Mustang's fuselage painted with those words.²⁵

An incident at the end of December 1944 demon-

strated Colonel Davis' racial attitude. Twenty B-24s were forced to land at Ramitelli because of bad weather, and 180 white bomber crewmen found themselves for almost a week living among the black members of the 332nd Fighter Group. Davis made sure that the visitors were welcomed, and there was positive racial interaction at his base. Many of the white crews learned that many of the fighter pilots who protected them were black, and were grateful for their hospitality.²⁶

Davis himself flew on many of the missions with the other Tuskegee Airmen pilots. He was not one to stay back at the airfield and let others do the dangerous work. For the second heavy bomber escort mission, on June 9, 1944, Davis earned a Distinguished Flying Cross. Present at the presentation ceremony on September 10, there were no less than four generals, including Lt. Gen. Eaker of the Mediterranean Allied Air Forces; Maj Gen Nathan F. Twining of the Fifteenth Air Force, Brig Gen Dean C. Strother of the XV Fighter Command, and Brig Gen Benjamin O. Davis, Sr., father of the recipient, who pinned the medal on his son. The citation noted that "Colonel Davis so skillfully disposed his squadrons that in spite of the large number of enemy fighters, the bomber formation suffered only a few losses."²⁷ In fact, only two of the escorted bombers were shot down by enemy airplanes that day.²⁸ At the same ceremony, three other Tuskegee Airmen also received Distinguished Flying Crosses. It was not as if Davis was the only one being recognized for his achievements.

Colonel Davis did not remain the only black West Point graduate serving with the Tuskegee Airmen in combat. While the 332d Fighter Group served in Italy, Capt. Robert Tresville arrived, and Davis appointed him commander of the 100th Fighter Squadron.²⁹

The great majority of the Red Tail missions escorted bombers, but some of them were strafing missions. On April 15, 1945, Davis earned a Silver Star for leading a raid on an enemy railyard in Austria that destroyed or damaged 35 locomotives and even more railroad cars. Colonel Davis himself destroyed or damaged six of the locomotives.³⁰

The most famous of the Tuskegee Airmen missions during World War II was a mission to escort bombers attacking Berlin on March 24, 1945, the longest Fifteenth Air Force mission of the war. On that mission, three of Davis' pilots each shot down a German jet that could fly about 100 miles per hour faster than their P-51s. While Davis did not shoot down any enemy airplanes during the war, his Tuskegee Airmen shot down a total of 112 of them.³¹

Back in the states, the only black bombardment group, the 477th, was still training for combat, moving from base to base. In April 1945, it was stationed at Freeman Field, Indiana. Col. Selway continued to enforce his base segregation policy, and black officers resisted, some by entering the officers club reserved for whites, and some by refusing to sign a segregation regulation. Selway had more than 100 of them arrested. The controversy aroused national attention, and the Army Air Forces decided to move the 477th Bombardment Group back to Godman Field, where



Benjamin O. Davis, Jr. in his pilot's gear, in front of a P-51.

it had been stationed earlier, because the white officers could then use the officers club at Fort Knox, adjacent to Godman. The ultimate solution was to reassign all the white officers of the 477th Bombardment Group to other groups, and to make it an all-black group like the 332nd Fighter Group.³²

By the summer of 1945, the war in Europe ended, and the 332d Fighter Group was inactivated. Colonel Davis was reassigned to the 477th, becoming its first black commander. At the same time, the 99th Fighter Squadron was reassigned to the 477th, transforming it from a bombardment group into a composite group. In 1946, after the war ended, the group moved from Godman Field to Lockbourne Field in Ohio. Lockbourne replaced Godman as the only all-black Army Air Forces base in the United States. In a sense, Davis had become head of the nation's "black Air Force," and Tuskegee-trained pilots went to Lockbourne to serve under him.³³

On July 1, 1947, the 332nd Fighter Group replaced the 477th Composite Group at Lockbourne, and all the black personnel were reassigned to it. In August, a 332nd Fighter Wing was established and placed over the 332nd Fighter Group, and Davis moved up from group to wing commander.³⁴ The next month, September 1947, the United States Air Force was born, and aviation organizations that had been part of the U.S. Army were transferred to it. Colonel Davis became the only black wing and base commander in the new service.

President Harry S. Truman issued Executive Order 9981 in 1948, the year after Air Force independence, man-

dating integration of all the military services.³⁵ The new Air Force was already moving in that direction, and was already training new black pilots with white ones at Williams AFB, Arizona after Tuskegee Army Air Field closed. The black officers at Lockbourne had mixed feelings. They were glad that racial equality would be recognized with integration, but some of them regretted the end of the only all-black wing and base.³⁶

In 1949, its last year, the 332nd Fighter Group had one final hurrah. It sent a team of P-47 pilots to an Air Force-wide gunnery meet at Las Vegas, and it won first place in the conventional aircraft division. Another fighter group won the jet aircraft division.³⁷

The Tuskegee Airmen chapter of Benjamin O. Davis's life closed in mid-1949, when his all-black 332nd Fighter Wing, and its groups and squadrons were inactivated to implement integration of the Air Force.³⁸ Instead of assigning white personnel to the famous black units, the Air Force decided to inactivate them, instead, and reassign their personnel to formerly all-white units across the country. Davis himself was reassigned to Maxwell Air Force Base, to attend Air University and begin a new chapter in his continuing distinguished career.

Benjamin O. Davis Jr. was unquestionably the most famous of the Tuskegee Airmen, having commanded its most important wing and groups. The members of those organizations succeeded in large measure because of their outstanding commander, and their exemplary record is a reflection of his wonderful leadership, honed no doubt in part because of his West Point experience. ■

NOTES

1. 99th Fighter Squadron (later 99th Flying Training Squadron) organizational record card and lineage and honors history, and 332nd Fighter Wing organizational record card and lineage and honors history, in the organizational histories branch of the Air Force Historical Research Agency; Mauer Maurer, *Combat Squadrons of the Air Force, World War II* (USAF Historical Division, Air University, 1969), pp. 329-330; Ravenstein, *Air Force Combat Wings*, 178-179.
2. Benjamin O. Davis, Jr., *Benjamin O. Davis, Jr., American* (Washington, DC: Smithsonian Institution Press, 1991), pp. 44, 65; biography files of Benjamin O. Davis, Jr. and Benjamin O. Davis, Sr., at the Air Force Historical Research Agency; histories of the 99th Fighter Squadron; lineage and honors history of the 99th Fighter Squadron, later the 99th Flying Training Squadron, at the same repository.
3. History of Tuskegee Army Air Field, 7 Dec 1941-31 Dec 1942, call number 289.28-2 at the Air Force Historical Research Agency; 99th Fighter Squadron history, Mar 19041-Oct 1943; Robert J. Jakeman, *The Divided Skies* (Tuscaloosa, AL: The University of Alabama Press, 1992), p. 303.
4. Official biography of Gen. Benjamin O. Davis, Jr., at the Air Force Historical Research Agency, and lineage and honors history of the 99th Fighter Squadron, later the 99th Flying Training Squadron, at the same repository; Benjamin O. Davis, *Benjamin O. Davis Jr., American* (Washington, DC: Smithsonian, 1991), p. 88.
5. History of the 99th Fighter Squadron, March 1941-17 Oct 1943, at the Air Force Historical Research Agency (call number SQ-FI-99-HI).
6. History of the 99th Fighter Squadron, March 1941-17 Oct 1943, at the Air Force Historical Research Agency.
7. History of the 99th Fighter Squadron, March 1941-17 Oct 1943, at Air Force Historical Research Agency.
8. Organizational record cards and lineage and honors histories of the 332nd Fighter Group and the 99th, 100th, 301st, and 302nd Fighter Squadrons, in the organizational histories branch of the Air Force Historical Research Agency.
9. 332d Fighter Group history, Oct 1942-1947, Air Force Historical Research Agency call number GP-332-HI.
10. 99th Fighter Squadron history, Mar 1941-Oct 1943, at Air Force Historical Research Agency.
11. 99th Fighter Squadron organizational record card at the Air Force Historical Research Agency; Benjamin O. Davis, Jr., *Benjamin O. Davis, Jr., American* (Washington, DC: Smithsonian Institution Press, 1991), pp. 93-95.
12. Benjamin O. Davis, Jr., *Benjamin O. Davis, Jr., American* (Washington, DC: Smithsonian Institution Press, 1991), pp. 96-97
13. 99th Fighter Squadron lineage and honors history and 33d Fighter Group lineage and honors history, both at the Air Force Historical Research Agency's organizational histories branch.
14. Benjamin O. Davis, Jr., *Benjamin O. Davis, Jr., American* (Washington, DC: Smithsonian Institution Press, 1991), pp. 103-105; Ulysses Lee, *The Employment of Negro Troops* (Washington, DC: Office of the Chief of Military History, U.S. Army, 1966), p. 485.
15. "Operations of the 99th Fighter Squadron Compared with Other P-40 Aircraft Squadrons in the MTO, 3 July 1943-31 January 1944," Statistical Control Division, Office of Management Control, War Department, Air Force Historical Research Agency call number 134.65-496.
16. Benjamin O. Davis, Jr., *Benjamin O. Davis, Jr., American* (Washington, DC: Smithsonian Institution Press, 1991), pp. 110-111.
17. Lineage and honors history and organization record card of the 477th Bombardment Group, at the Air Force Historical Research Agency.
18. Monthly histories of the 332nd Fighter Group and 99th Fighter Squadron on file at the Air Force Historical Research Agency, under the call numbers GP-332-HI and SQ-FI-99-HI.
19. Organizational record cards and lineage and honors histories of the 332d Fighter Group and of the 99th, 100th, 301st, and 302d Fighter Squadrons for 1944, at the Air Force Historical Research Agency.
20. James Parton, "Air Force Spoken Here," (Maxwell AFB, AL: Air University Press, 2000), p. 338.
21. Lineage and honors histories and periodic histories of the 332nd Fighter Group and the 99th Fighter Squadron, 1944, at the Air Force Historical Research Agency; E. A. Munday, *Fifteenth Air Force Combat Markings, 1943-1945* (Plymouth, England: Oakfield Press, aBeaumont Publication, year not given).
22. VIII Fighter Command Operational Message, 17 Oct 1943, from Papers of Lt. Gen. W. E. Kepner, commander of VIII Fighter Command under Eaker and then under Doolittle, Air Force Historical Research Agency call number 168.6005-69 (17-18 Oct 1943).
23. Fifteenth Air Force mission folders, containing the daily narrative mission reports of the fighter and bomber groups, and missing air crew reports (MACRs), which indicate which aircraft were lost, when and where they were lost, and how they were lost. These MACRs are available on microfiche at the Air Force Historical Research Agency.
24. Comparison of the 332nd Fighter Group bomber losses to enemy aircraft with total Fifteenth Air Force losses for the period early June 1944 through April 1945, according to the Army Air Forces World War II Statistical Abstract, on file at the Air Force Historical Research Agency.
25. Photograph of Col. Benjamin O. Davis Jr. with his aircraft at Ramitelli, among the Tuskegee Airmen photographs at the Air Force Historical Research Agency.
26. Benjamin O. Davis, Jr., *Benjamin O. Davis, Jr., American* (Washington, DC: Smithsonian Institution Press, 1991), p. 131.
27. Fifteenth Air Force General Order 2972 dated 31 Aug 1944.
28. 332d Fighter Group history for Sep 1944, at the Air Force Historical Research Agency.
29. Benjamin O. Davis, Jr., *Benjamin O. Davis, Jr., American* (Washington, DC: Smithsonian Institution Press, 1991), p. 115.
30. Fifteenth Air Force General Order 3496 dated 31 May 1945.
31. Benjamin O. Davis, Jr., *Benjamin O. Davis, Jr., American* (Washington, DC: Smithsonian Institution Press, 1991), p. 133.
32. History of the 477th Bombardment Group for April 1945; Lt. Col. James C. Warren, *The Tuskegee Airmen Mutiny at Freeman Field* (Vacaville, CA: The Conyers Publishing Company, 2001).
33. 477th Bombardment Group lineage and honors history and organizational record cards at the Air Force Historical Research Agency.
34. Histories of the 332nd Fighter Group and the 477th Composite Group, and organizational record cards and lineage and honors histories of the two groups, at the Air Force Historical Research Agency.
35. J. Todd Moye, *Freedom Flyers: The Tuskegee Airmen of World War II* (Oxford, England: Oxford University Press, 2010), pp. 157-158
36. Oral history interview, Al Gropman with Benjamin O. Davis, and Benjamin O. Davis, *Benjamin O. Davis, Jr., American* (Washington, DC: Smithsonian, 1991), p. 155.
37. History of the 332nd Fighter Group for 1949, at the Air Force Historical Research Agency.
38. Lineage and honors histories and organization record cards of the 332nd Fighter Wing, the 332nd Fighter Group, and the squadrons assigned to them at the time, at the Air Force Historical Research Agency.

THE RED BARON REPORTS WHAT THEY REALLY SAID

A three-photo sequence of an F-105 shooting down a MiG-17 over North Vietnam, June 1967.

This article is reprinted from the Fall 2005 issue of this magazine. It is designed to acquaint our readers with its conclusions as the USAF commemorates the fiftieth anniversary of the most eventful year 1968.

William Sayers

Route Pack II vicinity of Vinh, Democratic Republic of Vietnam, May 7, 1968. The two U. S. Navy F-4B Phantom IIs of Silver Kite section were providing MiGCAP in very hazy weather for a strike on Vinh when they encountered interceptors from the Vietnamese People's Air Force (VPAF). In the confusion that followed, the Navy Phantoms lost sight of each other, finding themselves suddenly very alone in the hostile skies of North Vietnam. As Lt. Cmdr. E. S. Christensen turned Silver Kite 210 toward the sea and home, he rolled out wings level at 8,000 feet and searched for his wingman, hoping to join up and regain the vital mutual support they had lost. Indeed, at that very moment, Christensen was being tracked—but not by his wingman. Nguyen Van Coc, the first—and to that point, only—ace of the Vietnam War was moving into attack position astern of Christensen's Phantom. Nguyen succinctly described his sixth and final kill of the war: "I went after him and launched two missiles from 1,500 meters. The Phantom crashed in flames into the sea." Fortunately, Commander Christensen and his Radar Intercept Officer successfully ejected from their stricken fighter five miles out into the Gulf of Tonkin, and were quickly recovered by Navy rescue units.¹

Route Pack VIA vicinity of Hanoi, DRV, May 10, 1972. Four U. S. Air Force F-4Ds of Oyster flight were tracking four VPAF MiG-21s, preparing for a head-on engagement.² The MiGs had no weapons able to engage the Americans from a frontal aspect, but the Phantoms were carrying AIM-7 Sparrow radar-guided missiles that could be fired in a nose-to-nose engagement, and the USAF fighter pilots pressed their advantage to the maximum. As the two flights passed, two of the MiGs exploded, leaving the F-4s with a 2 to 1 advantage in the fight. Oyster Lead (Maj. Robert Lodge, pilot; Capt. Roger Locher, Weapons System Officer), a crew with two previous MiG kills to their credit, immediately turned with Oyster 02 on their wing to pursue one of the survivors, while Oyster 03 and 04 ran down and destroyed the last MiG. As Oyster 01 took aim on his target, a flight of VPAF MiG-19s swept through the furball, initially overshooting the Phantoms. The new arrivals were not particularly well flown, but Oyster 01 was apparently so intent on bagging his prey that he failed to heed the desperate warnings from his wingman that one of the MiG-19s was about to fire on them. Seconds later, Oyster 01 was hit by 30mm cannon shells and began to come apart. Captain Locher successfully ejected, but Major Lodge was killed in the crash. In his debrief of the fight, Oyster 03's pilot referred to the crew of Oyster 01 as the best and most experienced in the theater.³

These two vignettes are emblematic of the air war over North Vietnam because both victims went down the way over 80 percent of their comrades in arms did—unaware that they were under attack.⁴ All six of Nguyen Van Coc's victories were made from dead astern of victims who were unaware that he was there, and fully 62 of the VPAF's 78 confirmed kills were made in fights where the winner initiated the combat from a position of nearly unbeatable advantage.

For many years, the U.S. Air Force has suffered greatly from comparisons with its U.S. Navy counterparts who at the end of the war ran up an impressive kill ratio. Much credence was lent to this view by the publicly disclosed conclusions of the Air Force's own "Red Baron" reports—one of the most thorough after-action studies of air combat ever done. However, much of the hyperbole resulting from the debate has come from a fundamental misunderstanding of the air war over North Vietnam.

The genesis of this debate started with the experience of the Korean War where USAF F-86 pilots ran up a 10:1 kill ratio over their North Korean and Chinese opponents. In contrast, American fighter pilots over North Vietnam "only" managed a 2.5:1 kill ratio up to the final bombing halt of 1968. Frustration over this embarrassing performance was intense. Popular mythology has it that while the Air Force continued to bungle along with a grossly inadequate training program, the Navy established their famed "Top Gun" program which, when the air war heated up again three and a half years later, proved itself an ace-making machine, its graduates sweeping the skies over North Vietnam. Meanwhile, Air Force fighter pilots failed to keep up—even losing ground to the Vietnamese defenders.

After the war ended, the U.S. Air Force began to dissect the data it had collected on the fight for air superiority in the skies over North Vietnam. With painstaking attention to detail, the authors of what became the Red Baron reports outlined the circumstances surrounding every decisive air-to-air engagement of the war, sifting for the critical elements that led to victory or defeat. The reports themselves were classified for more than twenty years after their completion, but as the myths of the conflict were being written, the Air Force seemingly conceded that the worst was true when the study's conclusions were used to justify a radical overhaul of the USAF fighter community's training program.

The Red Baron reports were finally declassified in the late 1990s, and while the conclusions do, indeed, emphasize the need for better training, a careful study of the data gives a very different impression of the air war over North Vietnam—one that directly contradicts the conventional wisdom that has been so dismissive of the USAF fighter pilots who fought for control of the skies over Southeast Asia.⁵

First, it must be acknowledged that while the North Vietnamese Air Force produced a few excellent pilots who

would have been at home in the best squadrons the USAF and USN had to offer, on average their pilots were considerably less capable than our own.⁶ They certainly could not have stood against American fighter pilots in a straight-up fight, as evidenced by the fact that whenever this happened, they lost badly. Even with every possible advantage on their side, they lost two and a half for every one they shot down. The real key to the VPAF's "success" (if running a .4:1 kill ratio can be deemed as such) lay in the fact that they were truly outstanding *tacticians*.

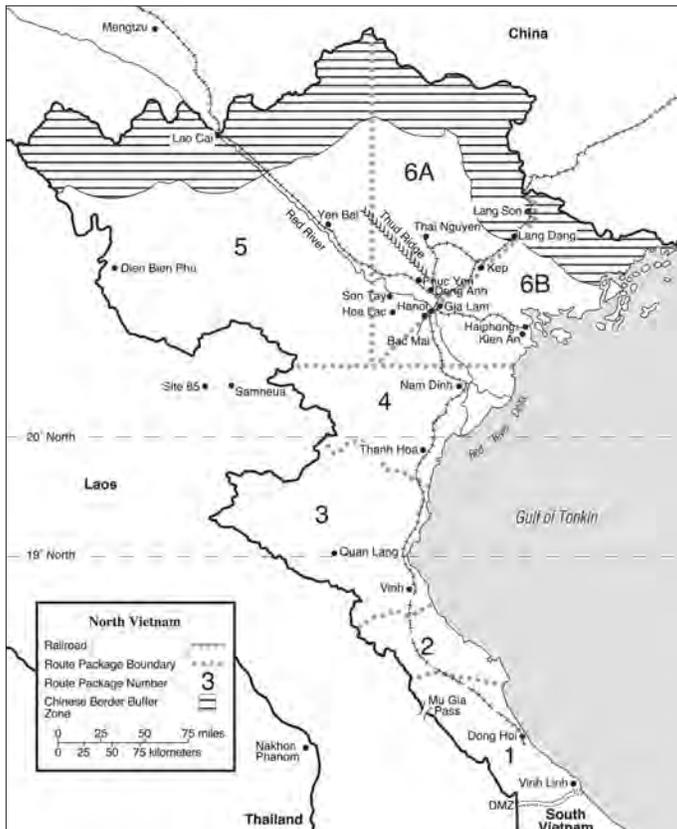
When the U.S. began bombing North Vietnam in 1964, it was clear to the VPAF's leadership that to go up en masse day after day to challenge U.S. pilots for supremacy in the skies over their country would be suicide. They were well aware of the fact that the North Koreans and Chinese had done exactly that in the Korean War, and were shot out of the sky in great numbers. Worse still, their sacrifice achieved nothing. In their long war against the West, the North Vietnamese richly deserve credit for two things: fanatical determination and an outstanding ability to adapt their strategy and tactics to the current realities of their battlefield. While they certainly possessed the courage and stamina to present a head-on challenge to U.S. tactical air forces, they had the intelligence to realize that there had to be a better way.

On the ground, the North Vietnamese followed the three-phased plan for people's revolutionary warfare laid out by Mao Zedong. According to Mao, phase 1 was used to set the stage for the battles to come by using political cadres to infiltrate, educate, and propagandize the target population. In phase 2, guerrilla warfare was used to destabilize the government and demoralize the army and population. Phase 3 consisted of decisive war in which more conventional battles would be fought to win the war once the stage was set. The genius of Mao, and his students to the south, was in the recognition that the three phases were not mutually exclusive, but rather would blend together, ebbing and flowing as circumstances dictated. Most importantly, they recognized that if their attempts at phase 3 operations were rebuffed, they could retreat to phase 2 to buy time and maintain pressure, all the while rebuilding in anticipation of another go at phase 3.

This is important to the air war because the VPAF was apparently greatly influenced by this model. They were no more inclined to challenge U.S. fighters directly than their People's Army of Vietnam counterparts were to openly fight the U.S. Army and Marine Corps on the ground. They would seek a decisive fight only when they believed the conditions were so absolutely aligned in their favor that victory was almost inevitable. In effect, the VPAF ceded air superiority to the U.S. in order to wage a guerrilla war of the air. While this allowed U.S. air forces free rein to go where they wished, it was not terribly painful during the Rolling Thunder campaign of 1965-1968 because the White House virtually gave air superiority back to them over their most important facilities by placing severe restrictions on targeting.

In return, this strategy allowed the VPAF the flexibility to engage only on its own terms. Many U.S. pilots flew

William A. Sayers holds a Bachelor's degree in history (Texas Tech University, 1981), and a Master of Military Studies (Marine Corps University, 1999). A Distinguished Graduate of Marine Corps Command and Staff College, Sayers remained at Quantico for the Advanced Course and became the only civilian graduate in the history of the U.S. Marine Corps School of Advanced Warfighting in 2000. After a brief tour of duty as a U.S. Air Force officer, Sayers became a military aviation analyst for the Department of Defense and has worked in that capacity for the last nineteen years at various government agencies.



hundreds of missions without ever encountering a MiG, while others never saw the one they did encounter—on their final mission. The North Vietnamese built an excellent early warning and Ground Controlled Intercept radar net to build an integrated air picture over their country in support of the air and air defense forces. Using this air defense command and control system, they were able to monitor the progress of U.S. missions and take advantage of any openings that appeared. With rare exception, the North Vietnamese never committed their aircraft to battle unless they believed that they had a high probability of shooting down a U.S. aircraft, and a high probability of safely escaping the American fighters.⁷

While these guerrilla tactics would not seize air superiority from the American air forces, they could exact a cost, particularly when combined with an increasingly dense and sophisticated Surface-to-Air Missile (SAM) network and a prodigious number of ever present Anti-Aircraft Artillery (AAA) guns. Just as importantly, such tactics would create enormous frustration within American ranks, and hopefully have a demoralizing effect. At the same time, the VPAF would be constantly on the lookout for opportunities to use their forces in a more decisive role, working towards the day when they would have the strength and experience to openly challenge American air forces for air superiority over their own country. Until that day, however, it would be up to the SAMs and AAA to stand toe-to-toe with the enemy, while the interceptor force specialized in ambushes and hit-and-run attacks.

Just as with the ground war in the south, the VPAF came out in force only when they believed that they had the opportunity to damage significantly American forces.

Unlike the ground war, which became increasingly conventional as the years dragged on, the VPAF never really met with the decisive success necessary to transition to air superiority operations. The one-sided defeats they inevitably suffered when they came up in force served to ensure that major air battles were a fairly rare occurrence over the course of the war.

During the Rolling Thunder campaign of 1965-1968, the VPAF openly challenged U.S. fighters in only three major actions, all in 1967: January 2 (Operation Bolo), April 19, and a series of battles fought from May 13 to June 5.

By late 1966, the VPAF was operating a substantial number of the very capable MiG-21s, and was becoming more confident and aggressive as a result. Having been frustrated by nearly two years of small skirmishes and ambushes, the USAF leadership believed that the time was right to execute an operation designed to engage the VPAF in a major battle. Operation Bolo was planned and led by the USAF's most outstanding fighter commander of the time, Col. Robin Olds, as a special MiG sweep that would lure the VPAF into the air by masquerading as an unescorted bomber strike. The ploy worked, and Olds's 8th Tactical Fighter Wing decimated the North's MiG-21 fleet, shooting down seven, without a loss to themselves. Four days later, the 8th followed up with two additional MiG-21 kills in another ambush, again without a loss.⁸

The VPAF licked its wounds for some time, but by mid-April apparently was ready to challenge the Americans again. On the 19th, the MiGs came out in force to challenge a large strike by F-105s. The results must have been disheartening, for the F-105s bagged four MiG-17s and two more probables, in exchange for the loss of only one of the fighter-bombers.⁹

This loss may have set back the VPAF a bit, but it is obvious that they had not given up on the idea of mounting an open challenge for air superiority. Finally, in mid-May they came up in a series of battles spread over three weeks. By June 5, it was obvious that they had failed, having lost twenty MiG-17s and five of the deadly MiG-21s, while shooting down just two F-4s—a kill ratio of over 12:1 in favor of the USAF.¹⁰ This not only surpassed the much lauded kill ratio the USAF achieved in Korea, the figures included eight kills by F-105 *fighter-bombers* in the mix. In Korea, the high kill ratio included only F-86 air superiority fighters vs. MiGs—including the F-84 and F-80 fighter-bombers would have lowered the exchange rate somewhat. At the end of the battle, the USAF's overall kill ratio stood at 4.1:1, with F-4C MiGCAP aircraft—the closest equivalent to the Korean War F-86s—at an astounding 10.8:1.¹¹ The USAF could hardly be blamed for believing the MiG problem was well under control. On the other hand, the North Vietnamese Air Force was beaten so soundly that it was five years before they attempted a large-scale battle again.

Once again, the VPAF dropped back into their guerrilla war tactics, decreasing their loss rate by a factor of seven. Over the course of the next sixteen months until the end of Rolling Thunder, they traded the USAF evenly, with



An F-105 takes off for a bombing mission.

the loss of twenty-one aircraft on each side.¹² In every case, without exception, the MiGs' victories were initiated from directly astern of an unaware target.¹³ Obviously, these tactics greatly impacted the USAF kill ratio—driving it down from 4.1:1 to 2.3:1—but it virtually eliminated the VPAF interceptor force as a major factor in the air war.

After more than three years of Rolling Thunder, American pilots were frustrated over North Vietnamese tactics and concerned about their relative lack of success, but in reality, there was little reason to be hard on themselves. The MiGs were dangerous and had taken their toll, but U.S. forces had air superiority over their opponent's country and there was little doubt that, with only temporary exceptions, they could go just about anywhere the White House let them. As long as the Americans were willing to pay the price of admission, there was nothing the North Vietnamese air defenders could do to stop them. Of course, the actual impact of the bombing was dubious. But the "bottom-line" for the MiGCAP forces was to see to it that the bombers could get to their targets, and in that job they had succeeded. If they hadn't run up the score like their fathers and older brothers in Korea, it was more because they were up against a wily and capable opponent who saw no profit in being blown out of the sky for any good purpose.

By "halftime," USAF pilots had accounted for 87 MiGs while losing 38, for a kill ratio of 2.3:1. However, USAF losses included a propeller-driven A-1, an unarmed RF-101, an EB-66 and even an RC-47 (a military variant of the venerable DC-3). These figures also included the primary USAF bomber of Rolling Thunder, the F-105. As noted before, the high Korean War scores that haunted U.S. fighter pilots didn't include non-air superiority types in their tallies, and certainly wouldn't have counted B-29s or B-26s. A better comparison would be to examine the statistics for aircraft on MiGCAP missions: USAF F-4s

achieved 57 kills vs. 10 losses = 5.7:1. Amazingly, even the F-105s ran a positive kill ratio against the MiGs, despite the fact that they were nearly always heavily laden and on the defensive when the engagement began (27.5 kills vs. 20 losses = 1.4:1 overall, and an astonishing 5.5:1 against the MiG-17.)¹⁴

Comparable numbers for the Navy would be, 30 MiG kills vs. 9 losses = 3.3:1 overall; MiGCAP F-4s and F-8s—25 kills vs. 7 losses = 3.6:1¹⁵. Overall, the USAF's 87 victories accounted for three-quarters of U.S. MiG kills, showing that while the talent between the fighter communities may have been fairly even, the USAF was confronted more directly by the MiG threat.¹⁶

As mentioned earlier, the USN reaction to Rolling Thunder was an emphasis on training by creation of the Naval Fighter Weapons School, otherwise known as "Top Gun." Ironically, it borrowed both its name and concept ("graduate-level" training for fighter pilots, who could then pass on the techniques to their squadron mates) from the Air Force's program at Nellis AFB, Nevada.¹⁷ In contrast, while Air Force training may have had room for improvement, it was not considered a driving factor in the USAF's performance. When it came down to a simple duel between pilots, the USAF always came out on top. In fact, in the very first USAF kills of the war, the Phantom pilots used the very same vertical maneuvering tactics taught later at Top Gun to defeat the MiGs.¹⁸ The USAF felt that its greatest problem had to do with effective enemy tactics, and called for a technical solution.

For the most part, USAF aircraft assigned duties under Rolling Thunder flew out of bases in Thailand. These bases were far enough away from the inland "Route Packs" assigned to the Air Force, that multiple aerial refuelings were required for virtually every mission. Consequently, USAF fighters had to approach North Vietnam at high altitude, where fuel efficiency could be maximized, and this



An F-4 on a mission.

resulted in the VPAF being able to pick them up early on radar and track them for some time on ingress to the target area. With a large stretch of Laotian countryside to cross before reaching the broadest area of North Vietnam, there was plenty of room for VPAF controllers to work their interceptors in behind the USAF strike packages. Thus, the typical engagement between the USAF and the VPAF began as a “bounce” by the North Vietnamese interceptor, coming in at high speed, already set up for the kill. In stark contrast, there was no effective USAF radar coverage over its assigned Route Packs.¹⁹ When USAF aircraft flew over North Vietnam, they were generally reduced to using the same sensor the original “Red Baron” had used when hunting Allied aircraft over the Western Front: the Mk-1 eyeball.²⁰

Furthermore, the USAF pilots had the high-altitude SAM threat to contend with, and the VPAF were able to tactically exploit this double-edged threat by shooting at MiG-dodging fighters with SAMs, and bouncing SAM-wary fighters with MiGs.²¹ Except for those battles covered above when the VPAF openly challenged the U.S. for air superiority, the MiG GCI controllers would only commit their interceptors to combat when they believed they had a significant tactical advantage—virtually a guaranteed kill with low risk of loss.²² After the disastrous summer of 1967, the VPAF maximized this tactical advantage by directing their MiG-21s to supersonic missile passes from behind the USAF strike packages. The result was that while MiG-17s were still killed at an exchange rate quite favorable to the USAF, the MiG-21s actually ran a positive kill ratio.

These one-pass “blow-throughs” were effective on a limited basis, but did not allow for reattack or multiple shots. As long as the VPAF was willing to cull a single aircraft out of a package and call it a day, they could be successful. However, these tactics were not effective in stopping the strikers. Interestingly, they undoubtedly had more effect in causing entire flights of aircraft to jettison their bombs in order to evade, than in actually shooting down bombers.²³

The USN Story

The Navy’s areas of responsibility were close to shore where carrier-based aircraft could be used to maximum advantage. As a result of the proximity of USN Route Packs to the sea, Navy fighters had enough fuel to allow them to ingress North Vietnam at lower, less fuel efficient altitudes, coming in under enemy radar coverage. This afforded the VPAF less warning time to react, and far less opportunity to come in behind Navy fighters who had their backs to the “wall” of the USN-controlled Gulf of Tonkin. Any VPAF pilot daring to fly “feet wet” over the Gulf would have had trouble getting life insurance—as evidenced by the MiG-21 bagged by a Navy guided-missile cruiser in 1968.²⁴ More importantly, in contrast to the situation the Air Force had inland, the Navy had effective radar coverage over their target areas provided by cruisers patrolling offshore. In fact, whenever possible, the USAF took advantage of “Red Crown,” and greatly praised its efficiency.²⁵ This all served to put the Navy at a tremendous theoretical advantage compared to the Air Force.²⁶ At any event, however, the



North Vietnam Air Force pilots scramble to meet a U.S. air strike.

Navy faced MiGs less often, faced the less dangerous MiG-17 a higher proportion of the time, and actually paid the price in more aircraft lost to AAA than the Air Force.²⁷

As illustrated by the vignettes at the beginning of this article, it is extremely difficult to counter an enemy of whom one is unaware. An analysis of Rolling Thunder air-to-air losses showed that in the 47 engagements resulting in the shoot-down of an American aircraft, the MiG began the fight from a position of advantage 89 percent of the time, while the U.S. fighter was lost after starting from a neutral position only twice. In other words, if the fight began with the U.S. pilot in a position of at least neutrality, he almost *never* lost the fight. On the other hand, in engagements where MiGs were shot down, U.S. pilots began from a position of advantage only 66 percent of the time. In 13 percent of those engagements, the U.S. pilot actually *reversed* the advantage and gained the kill. Therefore, the USAF's primary answer to this problem was, quite reasonably, to find some way of warning their pilots that MiGs were attempting to gain firing position on them. It was assumed that if the USAF pilot knew the MiG was there, his survival would be almost assured, and if that information allowed him to enter the engagement from at least a neutral position, he would have a good chance of getting the kill.²⁸

In the spring of 1972, North Vietnam mounted an all-out conventional invasion of South Vietnam. In response, President Nixon ordered U.S. air forces to bomb North Vietnam in an attempt to punish and debilitate the aggressors. The Linebacker strikes, which lasted to the end of the year, and the subsequent MiG engagements have been touted as the proof of the Navy's superior response to the problems of the air war. However, this is a misreading of events.

First, it must be said that the Navy aviators did admirably well, and nothing presented here should be construed as taking away from their performance. However, it

will be shown that the USAF fighter community has been unjustly maligned by unfair comparisons between them and their USN counterparts.

The first Linebacker mission took place on the May 10, and on that day the VPAF inexplicably rose to challenge American air power head-on. It was their misfortune to take off directly into a Navy "alpha-strike," and this time, it was the Navy's turn to benefit from the VPAF's mistake. Naval aviators bagged 7 MiG-17s and a MiG-21, while USAF fighters traded 3 MiG-21s for 2 F-4s. The VPAF quickly righted itself, and for the remainder of the campaign, the MiGs reverted, for the most part, to their more successful "guerrilla" tactics as evidenced by the fact that the Navy gained only 11 more kills for the rest of the war. Over the course of 1972, Navy crews shot down 25 MiGs while losing 3 fighters and a reconnaissance aircraft for a kill ratio of 6.3:1. In contrast, USAF crews downed 52 MiGs vs. 25 losses for a 2.1:1 kill ratio.²⁹

Clearly, the Air Force was far more heavily engaged by VPAF interceptors. What is not clear from the raw numbers, however is that of the Navy's kills, only 8 were against MiG-21s, while the Air Force shot down 40 of the deadly interceptors.³⁰ Moreover, nearly all of the USAF losses were from supersonic stern attacks on aircraft caught unawares. As with Rolling Thunder, no USAF aircraft were shot down after entering an engagement from a position of advantage, although this happened to one Navy F-4J.³¹ According to Red Baron data, the single most significant factor in the loss of aircraft was the element of surprise, with 81 percent of all U.S. losses occurring when the crew was either completely unaware they were under attack, or found out too late to effectively defend.³² Under these circumstances, it is difficult to understand how better training would have significantly altered the results.

In June, the MiGs actually gained temporary ascendancy over the USAF—a development troubling enough



Some of the MiG killers of the 8th Tactical Fighter Wing in 1967. (Left to right) Capt. Francis M. Gullick, 1st Lt. William D. Lefever, Capt. Richard M. Pascoe, Col. Robin Olds, Maj. Thomas M. Hirsch, Capt. Norman Wells, and Maj. Everett J. Raspberry.

to cause a reevaluation of tactics.³³ However it must be stressed that while the USAF fighter community was greatly *frustrated* over this turn of fortune, it involved so few losses that it had little real impact on the campaign. In August, the Air Force finally got its technical answer to the warning problem, a control center called “Teaball.” Teaball was, in essence, an all-source fusion center that issued MiG warnings in real-time to U.S. aircrew over a complicated set of radio nets.³⁴ Because of the complexity and unreliability of the communications involved, Teaball did not always work. But when it did, the results were excellent:

The Teaball facility came into operation in early August when we had a loss-ratio of .47-to-one—we were losing almost twice as many as the MiGs to us. Then, with the first week’s operation of Teaball, we jumped to a four-to-one ratio for the month of August, and four-to-one in September... This proved one thing—if you can show the American fighter pilot where [the enemy] is in sufficient time, he’ll shoot him down. Overall, and especially following the commencement

*of Teaball, American pilots enjoyed definite air superiority over North Vietnam.*³⁵

When Teaball didn’t work, the results were just as dramatic. The USAF lost only 6 aircraft to MiGs after Teaball went on the air, and virtually all of them were shot down during a communications interruption.³⁶ “...when Teaball would break down on any given day...we lost airplanes. One very dramatic illustration: we had a Marine aircraft up there being used on Ingress CAP (Combat Air Patrol). That Marine was shot down at precisely the five minute period when Teaball was off the air!”³⁷

From the time Teaball was activated, the USAF shot down 27 MiGs vs. 6 losses for a kill ratio of 4.5:1. More to the point, USAF aircraft on MiGCAP missions shot down 18 MiG-21s and 5 MiG-19s for 4 losses—a 5.8:1 kill ratio. During that same period, the Navy shot down 4 MiGs while losing 2 aircraft.³⁸ Essentially, when the Air Force was afforded conditions similar to those the Navy enjoyed, the results were very similar between the services. One interesting illustration comes to mind: From May of 1972



A pair of US fighters at exercise Red Flag.

through mid-August, naval aviators shot down 20 MiGs while losing 2 F-4Js, for a kill ratio of 10:1. From May through mid-August of 1967, the USAF accounted for 26 confirmed and three probable MiG kills for the loss of 2 fighters, a kill ratio of 14.5:1—one of the greatest winning streaks since World War II. Yet this run went largely without comment—in great contrast to the events of the summer of 1972. Two other excursions are worth mentioning. If the six “probable” kills (instances where the claims are credible, but impossible to confirm) by the VPAF vs. the USN were added in, the Navy’s 1972 kill ratio would drop to 2.5:1, and its overall kill ratio would have remained virtually unchanged from the Rolling Thunder period at 2.9:1. Alternatively, if bad weather had cancelled operations on May 10, 1972, and that day’s kills were wiped from the books, the Navy’s 1972 kill ratio would have dropped to 4.3:1, with the overall ratio falling to 3.7:1. In contrast, discounting that “one day in a long war,” would not have impacted the Air Force’s record at all.

After the war was over, the USAF embarked on a major overhaul of its tactical fighter force. The F-15 made its first flight in 1972, and the AIM-7F and AIM-9L missiles came on line around the time of the Eagle’s entry into service—thus taking care of most of the USAF’s perceived hardware problems. Training was overhauled—with justification provided by the Red Baron reports—in an equally decisive manner. The Air Force created four “Aggressor” squadrons equipped with F-5s (stand-ins for MiG-21s) and trained to execute Soviet tactics.³⁹ The Aggressors flew against each fighter squadron on a rotating basis, giving USAF pilots an “up close and personal” view of their enemy’s way of war.

Perhaps the most radical change was the institution of the “Red Flag” program at Nellis. Designed to give U.S. aircrew a chance to fly complex missions in a simulated

war against a challenging “enemy” (often, though not always, the Aggressors), Red Flag was a direct result of the Red Baron findings that fighter crews that survived their first ten missions had a greatly improved chance of survival and success. The idea was to give them those first ten “combat” missions in an environment somewhat less lethal than actual war.

More and better training is always a good thing, and these programs are almost universally recognized as a major factor in the phenomenal success U.S. airman have garnered since their implementation three decades ago. But did they really address the problems encountered by the USAF fighter force in Southeast Asia? More to our point, did the data collected in the Red Baron reports justify their conclusions? It is difficult to see how. Air Force aircrew, when aware of the presence of the enemy, made extremely difficult prey for VPAF fighters. When equipped for air superiority missions and provided with a stand-up enemy, they ran up impressive kill ratios. Their only difficulty came when the enemy had the opportunity to bounce them from behind with no warning. And all the training in the world is unlikely to save an airman who is unaware he is under attack.⁴⁰ In contrast, the excellent E-3 Airborne Early Warning and Control System (AWACS) aircraft were conceived contemporaneously with these weapons and programs and spoke directly to the problem as the Air Force leadership saw it in July 1972. Yet, AWACS is rarely mentioned in discussions of the hard lessons learned over North Vietnam. Nevertheless, the USAF fighter community had an expansive agenda when the Red Baron study was finished in 1974, and it was a good agenda—even if not entirely justified by the data.

The performance of U.S. aircrews over North Vietnam can be analyzed in any number of ways, however the use of ratios drawn over small numbers of kills seems prone to great abuse. While the Navy may have run a slightly better kill ratio over any particular time period, another of similar length or numbers of kills can probably be found showing the Air Force in a better light. For the entire war, the Air Force shot down 137 MiGs while losing 65 aircraft of all types, including bombers. The Navy accounted for 56 MiGs and 13 losses. However, the bottom line was that it was excellent North Vietnamese tactics—not pilot skill—that kept the kill ratios from reaching Korean War levels. Whenever the VPAF rose to confront U.S. airmen directly, the U.S. kill ratios rose dramatically, as well. The upshot was that if the VPAF wanted to “live to fight another day,” they had only one choice: cede air superiority to the Americans, and be content fighting a guerrilla war of the air. This is most profoundly illustrated by a final statistic: During the course of the Linebacker campaigns, as hard fought as they were, only *four* USAF strike aircraft were shot down by MiGs.⁴¹ Whatever else our fighter forces accomplished, they decisively won the only fight that really mattered. ■

NOTES

Editor's Note: The spreadsheet of data from which the statistics are derived is electronically available by e-mail request to **airpowerhistory@yahoo.com**. (2.4 Mbytes)

1. Chris Hobson, *Vietnam Air Losses: United States Air Force, Navy and Marine Corps Fixed-Wing Aircraft Losses in Southeast Asia 1961-1973* (Hinckley, UK: Midland Publishing, 2001) p. 148; Marshall L. Michel III, *Clashes: Air Combat over North Vietnam 1965-1972* (Annapolis: Naval Institute Press, 1997) p. 147; Nguyen Van Coc quoted by Istvan Toperczer, *MiG-21 Units of the Vietnam War* (Oxford: Osprey Publishing Limited, 2001) p. 21; Red Baron II, vol I, pt II pg. 4.
2. *Clashes*, pp. 212-213.
3. Red Baron III, vol II, pt 1, p. 104.
4. Red Baron III, vol III, pt 1, p. 61.
5. The 25-year review for the immediate post-war analyses came up in 1998, with the declassification of the Air Force's definitive postwar analysis of the fight for air superiority, the famous "Red Baron" reports, providing a virtual gold mine of information. Marshall Michel's *Clashes* was largely based on the Red Baron reports, and provides an excellent narrative context. Istvan Toperczer, a Hungarian Air Force flight surgeon, has published a series of short volumes on the VPAF using Vietnamese interviews and sources, opening up the Vietnamese perspective for the first time, while Chris Hobson's *Vietnam Air Losses* details the loss of every US fixed-wing aircraft by tail-number, finally allowing VPAF claims to be validated.
6. See Red Baron II, vol II, pt 1, p. II-18, and Red Baron III, vol III, pt 1, p. 62, in which the conclusion of a detailed analysis is that despite the advantages the enemy had, they were unable to achieve better than a .4:1 kill ratio because, "US aircraft and their pilots were more capable than their VPAF counterparts."
7. Red Baron III, vol III, pt 1, p. 62.
8. *Clashes*, pp. 73-74.
9. Red Baron II, vol. II, pt.1, p. II-7. A second pulse at the end of the month saw the VPAF trade 4 MiG-17s and two MiG-21s for four F-105s; however, the USAF losses were all in carefully orchestrated MiG-21 "bounces" of Iron Hand (SAM-hunter), flak-suppression or RESCAP (rescue of downed aircrew) aircraft.
10. Red Baron II, vol. II, pt.1, pp. II-3, II-8 & 9; *Clashes* pp. 99-107. Navy fighters shot down 4 MiG-17s without loss during the same period.
11. Through 5 June 1967, USAF fighters on air superiority missions shot down 22 MiG-17s and 21 MiG-21s for the loss of 4 F-4s. The overall USN kill ratio at this point was 3.2:1.
12. Red Baron II, vol. II, pt.1, pp. II-3 & 4, II-9-11. Included in the USAF losses are an unarmed RF-101 and an F-102 interceptor in the only air-to-air combat action of the type's entire career. The VPAF also brought down an EB-66, an obsolete bomber converted into a platform for jamming North Vietnamese radars. Over the same period, the Navy shot down 14 MiGs while losing 4 F-4s.
13. *Ibid*.
14. Red Baron II, vol. II, pt.1, pp. II-2-II-11 and Red Baron II, vol. II, pt. 2, p. II-7.
15. The F-8s accounted for 18 MiGs while losing 3 for a 6:1 kill ratio. However, the numbers involved are so small as to question the almost mythic reputation that has grown up around this aircraft. Oft billed as "The Last of the Gunfighters," Crusaders actually gained only two guns kills – compared to 25 for the F-105; 16 for USAF F-4s (9 by F-4Ds with gun pods, and 7 by F-4Es with internal guns); and, of course, 2 by B-52 gunners.
16. *Ibid*.
17. Disappointment with missile reliability was a major concern for both services. Both communities believed that they would have had considerably greater success if they had been equipped with missiles that could be depended upon to function as advertised—or even a fraction of what was promised—when launched. Their efforts to fix this vexing problem would not see fruition for another decade—long after the end of the conflict in Southeast Asia.
18. *Clashes*, pp. 21-24.
19. Red Baron III, vol III, pt 1, pp. 67, 69-70, and 120. EC-121 Early Warning radar aircraft were tried, but their obsolescent equipment proved wholly inadequate for detecting fighters over land.
20. The radar on the F-4 was wholly inadequate for air search work, especially over land. It was designed to take the intercept hand-off from a GCI or other search agency.
21. Of course, naval aviators had to contend with the SAM threat, as well. However, they generally had more tactical options available to them, given the aircraft carriers' proximity to their targets.
22. Red Baron II, vol II, pt 1, p. II-18, and Red Baron III, vol III, pt 1, p. 62.
23. Red Baron II, vol. II, pt 1, pp. III-54-III-57. The MiG-21s shot down 17 USAF aircraft using these tactics while losing 4 from August 23, 1967 to the end of Rolling Thunder.
24. *Clashes*, p. 147.
25. *Clashes*, p. 226. According to Michel's account, a USAF fighter pilot commented that if they had more Red Crown coverage, "...we would have doubled our MiG kills."
26. Red Baron III, vol III, pt 1, p. 67.
27. For example, during the Linebacker operations, the USAF and USN lost comparable numbers of aircraft, but while the Air Force lost more to MiGs, the Navy nearly made up the difference in aircraft shot down by AAA. Red Baron III, vol. III, pt.1, p. 122.
28. Red Baron II, vol. II, pt.1, pp. II-2-II-11 and Red Baron II, vol. II, pt 1, p. II-16.
29. Red Baron III, vol. III, pt.1, pp. 121, A-2, A-10-14, A-16-17.
30. Red Baron III, vol. III, pt.1, p. 121.
31. Red Baron III, vol. III, pt.1, pp. 50-54.
32. Red Baron III, vol. III, pt.1, p. 61.
33. *Clashes*, p. 253. The MiGs shot down 7 USAF fighters for only 2 losses. All seven USAF losses were taken by MiG-21s attacking from behind on unaware targets, while one of the USAF victories was made in a reversal over an attacking MiG.
34. *Clashes*, p. 251.
35. HQ PACAF Project CHECO Report, "Linebacker: Overview of the First 120 Days" quote of 7th AF Commander, Gen John Vogt, pp. 47-48. In August, the USAF shot down 4 MiGs for no losses. In September, they traded 8 for 2, and in October, they shot down 9 MiGs while losing 2 aircraft.
36. HQ PACAF Project CHECO Report, "Linebacker Operations: September - December 1972" p. 52.
37. "Linebacker: Overview of the First 120 Days" p. 68. Again, a quote from Gen. Vogt.
38. Red Baron III, vol. III, pt.1, pp. 100 & 121.
39. Interestingly, the Navy's aggressors were equipped with A-4s—a MiG-17 simulator.
40. To be fair, the experience provided by the Red Flag program may improve a pilot's situational awareness to the point that he might be able to avoid be caught unawares—but that is speculation, and Red Flag certainly didn't play in the perceived success of the Top Gun graduates in 1972.
41. Red Baron III, vol. III, pt.1, p. 64.

The Road Not Taken: Edward Lansdale and the American Tragedy in Vietnam. By Max Boot, New York: Liveright Publishing, 2018. Endnotes. Bibliography. Maps. Photographs. Index. Pp. xx, 717. \$35.00 ISBN: 978-0-87140-941-6

Scholarship on the Vietnam War and its key personalities is again in vogue at the fiftieth anniversary of the war's, and perhaps America's, most traumatic year. Ed Lansdale is often overlooked among those who played a significant role during an earlier phase of what became the Vietnam War. This book is exceptionally well detailed and documented and is a very readable biography of America's most impressive counterinsurgency expert. Lansdale was a key player in shaping early on the South Vietnamese political landscape; he later anticipated the downward spiral of the war during the American phase of the war.

Boot begins in the Philippines where Lansdale had tremendous success in helping defeat the Huk insurgency and assisting Ramon Magsaysay in building a government that held the trust and respect of the people. Not long afterwards, he was sent to assist President Diem in Vietnam because of his understanding of nation building and counterinsurgency—a term credited to Lansdale. As a consequence, Diem's greatest successes were during those years when Lansdale was at his side. This changed for the worse after Lansdale returned to Washington, and Diem's manipulative brother, Nhu, and his wife were able to consolidate their hold on him.

The list of those either unable to properly appreciate, or unwilling to endorse, Lansdale's recommendations, and who discounted his well-founded advice, is a "who's who" of national security's key players during the 1960s: Robert McNamara, Robert Kennedy, Maxwell Taylor, Dean Rusk, J. Lawton Collins, Richard Helms, McGeorge Bundy, Philip Habib, Henry Cabot Lodge, and others. These "Wise Men" or the "best and brightest" led the US into the Vietnam War quagmire by embracing a shortsighted and destructive strategy and the heavy use of firepower that the insightful Lansdale had opposed from the beginning. By the early 1960s, both the State Department and the CIA kept him at arm's length because of his contrary views. This is at a time when the US government was complicit in Diem's murder and reaped the resultant chaos that took hold in Vietnam in the subsequent leadership vacuum.

Lansdale's commonsense approach to national security objectives continued with his assignment as chief of operations for Operation Mongoose, the overthrow of the Castro regime, in the aftermath of the Bay of Pigs fiasco. Mongoose was a pet project of Robert F. Kennedy. Lansdale realized it was another illogical Washington-hatched scheme that could not succeed, because there was no strong indigenous political opposition to Fidel Castro. He was exasperated by the CIA's focus on hit-an-run sabotage

operations in Cuba rather than building up a popular movement within the country and collecting supporting intelligence.

Lansdale was not without his own outlandish ideas that were of questionable value—a product of free-thinking in the style of the Second World War's Office of Strategic Services, an organization that had greatly influenced his brain-storming approach.

Ed Lansdale spent his career trying to convince America's political and military leadership that there was much more to defeating insurgencies than simply killing insurgents. Their failure to grasp this fundamental truism in many ways led to defeat in Vietnam. Lansdale saw his central thesis—in a people's war you never make war against your own people—grossly violated with the use of non-discriminant free fire zones and airstrikes. The focus on "body counts" as a key metric for measuring success was a major manifestation of the wrong-headed thinking behind the military's strategy. During the Tet Offensive of 1968 he helplessly watched swaths of Saigon destroyed by artillery and airstrikes, serving to increase the numbers of people more afraid of government forces than of the enemy. Perhaps one of the great tragedies of the Vietnam War, then, is that the "best and the brightest" rejected Lansdale's vision of a counterinsurgency war and, instead, charged head first into the "American War" and its catastrophic outcome. Vietnam was not the only war where self-regarded Washington strategists got it wrong. As Boot astutely observes, "If Lansdale had lived to see the wars of the twenty-first century, his sense of frustration would have only deepened." It was only years into the wars of Iraq and Afghanistan that some of the hard-learned lessons of Vietnam were belatedly applied.

Was Lansdale correct? Could the war in Vietnam have been successfully prosecuted by targeting the hearts and minds of the Vietnamese people instead of turning most of country into a free-fire zone? No one can answer that question with any degree of certainty, but this book presents the possibility as an alternative outcome.

Boot points out that many scholars of the war have praised without reservation both Daniel Ellsberg and John Paul Vann for their widely publicized views on the Vietnam War. In contrast, Boot, an accomplished historian and scholar on conflict, rather sees Vann, famous for his outspoken comments on the South Vietnamese Army, as actually highly opinionated and Daniel Ellsberg, of "Pentagon Papers" fame, as one given to exaggeration.

Most readers will respond to a quote by Lansdale that is as appropriate today as it was in 1961. Lansdale, ever the focused and pragmatic professional said, "I don't know which has the worst jungle, Vietnam or Washington." His perceptive observation was a consequence of frustrating experiences in both settings.

This exhaustively researched and well written book will prove rewarding for a reader who possesses an inter-

est in national security policy making and the Vietnam War.

Col (Ret) John Cirafici, Milford, Del.



Seven at Santa Cruz: The Life of Fighter Ace Stanley “Swede” Vejtasa. By Ted Edwards. Annapolis MD: Naval Institute Press, 2018. Notes. Appendices. Glossary. Bibliography. Index. Pp. xi, 270. \$29.95 ISBN: 978-1-68247-287-3

This book is an advance reading copy, so there may be some things changed or added when the book is formally released on June 15, 2018. What a reader will then be treated to is the story of one of the lesser known, but very important, naval aces of World War II.

Edwards spends only a little time covering Vejtasa’s (pronounced VAY-tuh-suh) pre-Navy life. What he says, however, is well written and describes the upbringing in eastern Montana that molded the man who fought so gallantly in the early days of the war.

Vejtasa joined the Navy in 1937 and became a Naval Aviator in 1939. When war came to the US, he was already a seasoned flyer in, first, the SBC Helldiver and, later, the SBD Dauntless. He had good mentors and operational experience flying on neutrality patrols aboard *USS Yorktown* in the Atlantic. Soon after Pearl Harbor, *Yorktown* moved to the Pacific.

Combat came quickly, as the limited US carrier force attempted to slow the advancing Japanese tide at many locations. In March 1942, Vejtasa was credited with sinking at least one ship along the eastern coast of New Guinea and was awarded the first of what would be three Navy Crosses in 1942.

Yorktown was in the thick of the Battle of the Coral Sea in May, and Vejtasa not only shot down three Mitsubishi Zero fighters with his SBD, but was also one of the pilots who hit and sank the Japanese light aircraft carrier *Shoho*. He received his second Navy Cross for that action.

His biggest combat day, however, came at the controversial Battle of the Santa Cruz Islands in October 1942, when the outcome of the entire Solomon Islands campaign was still very much in doubt. *USS Hornet* was lost in that battle. Vejtasa was now a fighter pilot flying F4F Wildcats. On October 26, he shot down two Aichi *Val* dive bombers attacking *Hornet* and followed that up with five Nakajima *Kate* torpedo bombers that were going after his own *USS Enterprise*. These seven kills (plus an eighth probable) in one day garnered a recommendation for the Medal of Honor, an award that was presented instead as a third Navy Cross.

Vejtasa’s combat ended in May 1943, when he returned to the States with 10.25 victories credited. He stayed in the Navy and served as an air officer during

Korea (no combat flights), commanded two ships, including *USS Constellation*, and retired as a captain in 1970.

A great biography that is well told. However, I got the feeling that Edwards was out to prove what a raw deal Vejtasa got by not receiving the MOH. He devotes a lot of text to this and one entire appendix. As much of the story covers the Santa Cruz action, he also goes after Admiral Thomas Kinkaid, the US fleet commander, very hard. Kinkaid has been raked over the coals for decades regarding his decisions at Santa Cruz, but Edwards goes so far as to make a case that Kinkaid was suffering from post-traumatic stress disorder—maybe a little out of his field. The greatest shortcoming of the book, and one that I hope will be corrected in the actual release, is the lack of photos (nice but not mandatory) and maps (absolutely mandatory). Edwards goes into a lot of detail about the Santa Cruz action: it is vital to have maps at hand that show everything he is talking about.

These shortcomings notwithstanding, I liked the book and recommend it. It provides a detailed look at one of the US Navy’s great aviation heroes in the dark, early days of the Second World War in the Pacific.

Col Scott A. Willey, USAF (Ret), Book Review Editor, and Docent, NASM’s Udvar-Hazy Center



The Grand Designers: The Evolution of the Airplane in the 20th Century. By John D. Anderson, Jr. Cambridge UK: Cambridge University Press, 2018. Photographs. Illustrations. Appendices. Index. Pp. x, 306. ISBN978-0-521-81787-5

This book is part of the, thus far, six-volume Cambridge Centennial of Flight series. Dr. Anderson is Curator for Aerodynamics at the National Air & Space Museum and Professor Emeritus of Aeronautical Engineering at the University of Maryland. He has written eleven books on aeronautical engineering and the history of aeronautics.

Anderson sets out to create a history of the development of the conceptual aircraft-design process, a process effectively codified by Frank Barnwell by World War I that has remained essentially the same since! The book is not trivial and is very interesting and enlightening, as Anderson explores the processes used by six representative designers whom he refers to as Grand Designers. These are the Wright Brothers; Frank Barnwell, a designer for Bristol Aircraft starting in 1911; Arthur Raymond, the designer of the DC-3; R. J. Mitchell, the designer of the Spitfire; Edgar Schmued, who designed the Mustang; and Kelly Johnson. These are not the only Grand Designers, but they are ones who are representative of succeeding eras of aviation technology.

The Wrights could not be left off the list, although their design process, as far as it can be determined, is a

difficult fit with the processes used by the others on the list. This is to be expected: The others were trying to design an aircraft to meet a requirement. The Wrights were trying to *invent* the airplane, quite a different problem. Anderson also points out that the Wrights most likely viewed their design process as proprietary and were very closed-mouth about it. They were entrepreneurs, not employees.

The conceptual design process, based on Barnwell's work, consists of seven steps, several of which are returned to iteratively to obtain an appropriate conceptual design that can meet the initial requirements. Anderson shows how each of the subsequent designers, consciously or not, used the same Barnwell process to arrive at their initial designs. He shows that the progress in airplane performance is due to progress in technology and that the conceptual design process effectively remains unchanged despite technology change.

This is an excellent book for several reasons. As a history, it gives an insight into the design processes and decisions that went into several iconic aircraft: the Bristol F.2A, DC-3, Spitfire, Mustang, and Kelly Johnson's aircraft. As such, it also gives a short history of the technology changes that drove the evolution of the airplane. The book represents an immense amount of research.

Nevertheless, the book has some problems. The text seems rushed. The photos are small and somewhat muddy. There are numerous typographical and small factual errors: F. W. Lanchester, not Lancaster; 10,926 DC-3s, not 10,296, as shown by adding the numbers in the text; the Rolls Royce R engine did not "morph" into the Merlin, which was a new design—if the R morphed into anything it was the Griffon; the North American NA-73X was *not* developed with company funds; and Anderson himself refutes this statement later on. Unfortunately, he also repeats some urban legends that are not true. So, while this is an excellent book for how it traces the history of the design process and for short histories of leading designers; it is a \$50 book with no bibliography, no list of references, numerous typographical errors, and minor errors in fact. The Cambridge University Press can do better.

Leslie C. Taylor, docent, National Air & Space Museum's Udvar-Hazy Center



Hue 1968: A Turning Point of the American War in Vietnam. By Mark Bowden. New York: Grove Press, 2017. Maps. Photographs. Vietnamese Glossary. Notes. Pp. 574. \$30.00 ISBN 978-0-8021-2790-7

This gripping narrative about the battle for Hue during the Tet offensive of January-February 1968, is superbly supplemented by fantastic maps that enables readers to follow battle maneuvers and unit placements on both sides. Bowden has taken advantage of documen-

tation unavailable some thirty years ago and presents a spellbinding account. He supplements his document search with many interviews of combatants on both sides.

Well into the Hue battle of January 30 through February 25, 1968, the U.S. leadership wasn't aware or certain of the number of enemy troops stifling U.S. and South Vietnamese army (ARVN) counterattacks. U.S. intelligence didn't predict the numbers of North Vietnamese army (NVA) and Vietcong (VC) troops that had stealthily squeezed into Hue's citadel and old palace. Nor was the Military Assistance Command Vietnam (MACV) leadership willing to admit that U.S. and ARVN troops were heavily outnumbered at the start of the encounter. Thus, planners may have initiated the counterattack too soon instead of waiting until they could gather all essential military arms required to face a large, well trained force. One argument said that the longer they waited to counterattack, the more civilian lives would be lost at the hands of NVA executioners taking revenge against those who had supported the South Vietnamese government. Nevertheless, there was slaughter, death, and carnage on every street corner and every city block. As they sought to advance, U.S. Marines and soldiers found it difficult to rescue wounded comrades from the streets. Attempts to do so were often met with more dead troops.

Death was widespread on both sides during the battle for Hue. Bowden presents a realistic depiction of the horrors of war that is perhaps best described in the following passage: "No matter who died, there was no time or energy to grieve. This haunted them [soldiers]. It wasn't rational. How you were killed was rarely your fault but part of the horror was the humiliating display—bodies ruptured, insides horribly spilled. No matter how dignified or admired or liked a man had been in life, here he was, very suddenly and publicly dead, sometimes left in some ridiculous splayed posture or missing a part. One moment you were an inspiring leader . . . and then next you were nothing more than dismembered, bleeding remains. And while each death would echo loudly halfway around the world, hurling families and even whole communities into grief, often with shattering consequences for generations, in Hue there wasn't even time to stop and look, much less grieve. The body was reassembled and recomposed by corpsman, covered and removed. One less cold, wet scared marine." Yet the fight went on for nearly a month with nearly hand-to-hand fighting necessary to defend and capture buildings block by block.

One thing that puzzles me is how so many enemy troops escaped from the Citadel at night when U.S. and ARVN troops controlled all but a couple of gates. Was this an intelligence failure or was it because allied forces were tired and licking their wounds and glad to wake up to learn that the enemy had fled?

This is a well researched book and is a tribute to the American Marines, soldiers, and airmen who fought to rid Hue of Communist oppression. These U.S troops are truly

heroes and deserve the admiration and consideration of the American people.

George M. Watson, Jr., retired Air Force historian



Flight to the Top of the World: The Adventures of Walter Wellman. By David L. Bristow. Lincoln NE: University of Nebraska Press, 2018. Maps. Illustrations. Photographs. Notes. Bibliography. Index. Pp. xviii, 368. \$29.95 ISBN: 978-0-8032-9678-7

This was an interesting book to review for APH, because it's not directly related to airpower. It is the story of a man who was, arguably, one of the most influential individuals in the U.S. during the late 19th and early 20th centuries, and a man who made five attempts to reach the North Pole (three by air) and tried to fly across the Atlantic Ocean. What the reader gets is a look into the period when aviation was in its infancy and at the life of one of the really interesting characters in those early days of aviation.

I found the title of this book to be a bit constraining and misleading. Yes, Walter Wellman was in the thick of the action trying to reach one of the most inaccessible spots on Earth, the North Pole. But that is only one portion of his life—a life that Bristow brings forth in great detail through his exceptional research and clear writing.

Walter Wellman was a journalist, first and foremost. He had a knack for getting to the heart of some important stories of the day and for getting into the halls of power. He was a close friend of Theodore Roosevelt before, during, and after his presidency. He wrote for a number of newspapers, and his stories appeared all over America. But he also had a lot of adventurer in him.

He started out trying to find and prove the actual point where Christopher Columbus first landed on the shores of the New World. Then he got the bug to be the first to reach the North Pole, this in the time of Cook and Peary after some previous expeditions had already failed. His first two were by means of dogsleds, ships, and hiking. After nearly losing his life on the second of these attempts, he decided to try the relatively new contraption of a powered balloon—an airship. With no engineering expertise but a talent for raising money through the newspapers and his vast contacts, he made three attempts. All of these, as with the ground attempts, never even got close to the Pole. But, in working the airship problem, he teamed up with a man who became his closest associate and later continued Wellman's work, Melvin Vaniman.

With the claims by Cook and Peary to have reached the Pole, Wellman gave up his attempts but turned, instead, to crossing the Atlantic. There was probably an underlying motive that Wellman shared with such notables as Robert Fulton, Jules Verne, and Alfred Nobel: if the

weapons become terrible enough, war will cease. Being able to fly across the Atlantic in ships that could eventually reek destruction like the world has never seen could convince people to give up on war. It obviously didn't work out that way, but it was a stimulus at the time.

On October 15, 1910, six men and a cat set off on an ill-prepared-for voyage in the *America*, a substantially redesigned airship from the Pole attempts. But not before the world's first radio transmission from an aerial vehicle to a ground station had been made. There was a radio and operator aboard neatly ensconced in a lifeboat that had been specially built for the air voyage. Soon after departing, the primary engine of two quit working. Low on fuel and getting lower on hydrogen in the balloon, the flight continued with less and less chance of reaching the European continent, and then maybe the Azores, and then, hopefully, Bermuda. With the second engine shut down because of low fuel, they drifted. On October 18, they luckily ran across the steamer *Trent* northwest of Bermuda. They took to the lifeboat and were rescued, but *America* drifted off, never to be seen again.

There was a lot of adulation from the voyage, but Wellman was through with flying. Vaniman continued, however, and had Goodyear Tire & Rubber build its first airship, the *Akron*. Vaniman and his crew undertook a final test flight in *Akron* on July 2, 1912, leaving the lifeboat from *America* on the ground to save weight. At about 2500-ft altitude, the balloon burst, and Vaniman and his crew were killed. Interestingly, the only major part that survives from these first two dirigible attempts to cross the Atlantic is the lifeboat that is in the collection of the National Air & Space Museum.

If you are interested in one of aviation's early characters, or what was going on in America around the time aviation was born, or in polar exploration, this is a book that you ought to read. It is excellent history.

Col Scott A. Willey, USAF (Ret), Book Review Editor, and docent, NASM's Udvar-Hazy Center



Liberators over the Atlantic. By Jack Colman & Richard Colman. UK: Fonthill Media, 2017. Maps. Photographs. Appendix. Pp. 286. £25 ISBN: 978-1-78155-650-4

This book chronicles Jack Colman's RAF experiences of flight training and flying patrol bombers hunting U-boats in the North Atlantic between 1942-43. It is a personal history originally written for his family. His son, Richard, edited the story and published it after his father passed away.

The story starts with Colman's first experience of flight (two rides in a Tiger Moth when he was ten years old), continues with his entry into the military, flight training in Canada, and his operational assignments in Ferry

and Coastal Commands flying Lockheed Hudsons and Consolidated Liberators (equivalent to the B-24D and PB4Y-1) patrolling the North Atlantic. Richard wrote the introduction in which he admits to not knowing much about the stories related; because his father, like many others who served in World War II, rarely spoke of his contributions to the war effort. Richard, and by extension we readers, can consider ourselves fortunate that Jack wrote down his story and gave us a glimpse into this, perhaps, less glamorous but extremely vital combat operation that contributed to winning the Battle of the Atlantic. It is unfortunate that Jack did not also write of his later experiences in the war, flying Beaufighters and Mosquitos in the Far East—another little-covered area of World War II operations.

The book is well written with excellent, detailed descriptions of a variety of topics. These range from training processes to flight conditions encountered in the very challenging North Atlantic, aircraft procedures, and amazing Aurora Borealis and St Elmo's fire phenomena. All of the details he covers are based on journals he kept during the time. It makes for very enjoyable reading and provides an interesting look at the less well known but key role long-range aviation played in defeating the U-boat threat.

Colman writes in a very personal style with no comments on politics, leadership, or decision making except as they affected his unit when it received new equipment. His British slang is sometimes challenging; a glossary or notes for American readers would be helpful. There are good pictures from his travels and personal life which add depth to the story and provide the readers with a glimpse into this lesser-known theater of war.

This is a good book for fans of personal narratives of aviation and reminds me of a Sunderland pilot's personal history I reviewed some years ago. Reading this kind of book is a reminder of how important it is to record the stories of those who have gone before, regardless of when or where they served, to learn from them and honor their accomplishments.

Golda Eldridge, Lt Col, USAF (Ret), EdD



Always at War: Organization Culture in Strategic Air Command, 1946-62. By Melvin G. Deaile. Annapolis MD: Naval Institute Press, 2018. Photographs. Notes. Appendices. Glossary. Bibliography. Index. Pp. xiv, 296. \$34.95 ISBN: 978-1-68247-248-4

Always at War is one of a series of books from the Naval Institute Press that examine the fundamental shifts in military technology and strategy commonly referred to these days as a revolution in military affairs. Other books in the series focus on space and cyber as domains, a variety of strategic shifts including ICBM's and

their employment, the modern conundrum of small-scale insurgencies, and resurging great-power competition. This book focuses on the development of Strategic Air Command (SAC) from the perspective of culture, where it came from, what it was, and how it impacted the execution of SAC's mission of deterrence and the overall Air Force.

As a retired USAF bomber pilot with a PhD in history, Deaile is well qualified to write this study. This book is, in fact, derived from his doctoral dissertation. Since he is a SAC veteran who served under the legacy left by Curtis LeMay, readers might have some concern about a bias either for or against the subject. I sincerely believe that Deaile did an admirable job of presenting the facts and drawing logical conclusions without letting personal opinions or experiences sway his arguments.

Deaile frames the development of SAC culture through a sociological lens; the tools he used to examine this are those of the social scientist. He starts by defining culture. He then traces airpower's growth and eventual separation from the Army and the dominant pilot-culture's impact on the new service's development. From there he delves into the heart of the subject, the creation and development of SAC.

To many, SAC has always been synonymous with General Curtis LeMay. While he wasn't the first commander, he, more than any other, is recognized as creating the SAC everyone remembers. This is the heart of Deaile's thesis. LeMay's approach, he argues, was that SAC was not preparing for war but was actually at war. This molded SAC into the institution it became. LeMay placed his stamp on procedures, processes, and culture in ways that were never erased. He took what he felt were proven methods based on past experience; surrounded himself with like-minded people; and, with singular determination, created a unique organization. Deaile discusses SAC before and after LeMay to highlight his contention that SAC was LeMay's creation and remained so in many ways until disestablished after the end of the Cold War.

Having served in the waning days of SAC and personally knowing several people quoted in the book, I feel Deaile has hit the mark. He uses interviews, historical records, and personal observation (he attended a number of reunions of SAC groups) to build a picture that is both interesting and enlightening. His discussions aren't so academic that the average reader loses interest, and his use of anecdotes and stories breathes life into the narrative. This very interesting book is useful for anyone interested in military culture and its development as well as the early days of one of the most influential military organizations in U.S. history.

Golda Eldridge, Lt Col, USAF (Ret), EdD



History of Rocketry and Astronautics: Proceedings of the 47th History Symposium of the International Academy of Astronautics, Beijing, China; v. 45 of the AAS History Series, and v. 33 of the IAA History Symposia. Edited by Andrew S. Erickson and Rick W. Sturdevant. San Diego CA: Univelt, Inc. for the American Astronautical Society, 2015. Photographs. Illustrations. Notes. Index. Pp. 270. \$95.00, paperback \$75.00 ISBN 978-0-87703-625-8 (hard) and 978-0-87703-626-5 (soft)

Prepared under the direction of series editor Rick Sturdevant and, because of the subject matter, with distinguished China expert Andrew Erickson as volume editor, this edition of the hugely successful and influential *History of Rocketry and Astronautics* series is both historically informative and very timely.

Divided into three sections, it covers memoirs, organizational histories, and scientific and technical histories. The final section explores the origins and progression of the space program of the People's Republic of China (PRC). Readers will find the first two sections very useful—particularly Charles Lundquist's and Francis William's paper on Heinz-Hermann Koelle; Frank Winter's, Kerry Dougherty's, and Phillipe Cosyn's survey of reaction-propelled aircraft concepts in the seventeenth through nineteenth centuries; and Tal Inbar's study of Israel's first satellite effort, the *Ofeq-1*.

The third section is a very rich dish of papers, beginning with a fascinating examination of two important personalities: the Nazi-American rocketeer Rudolf Hermann, and Qian Xuesen (known more familiarly to American readers as Hsu-shen Tsien, a senior Caltech research colleague of the legendary Theodore von Kármán), father of the PRC's rocketry and spaceflight program. Marsha Freeman follows this with a startling paper on a 1946 proposal by two German rocketry experts to China's military mission in Berlin. If implemented, Freeman believes, this proposal would have enabled China to become "a leading space power decades earlier."

The last two papers are particularly useful. The first, by Haipeng Chen and five others of the Beijing Institute of Aerospace Systems Engineering, is a very informative and surprisingly detailed survey of Chinese launch-vehicle development. It stresses the importance of evolutionary quality improvement and quality control. In the second, Andrew Erickson, a Naval War College professor well known to the aerospace and maritime community for his insightful work on Chinese naval and aerospace developments, has contributed an excellent and thoroughly documented survey essay on the evolution of Chinese rocket and satellite technology, drawing both on Chinese language and Western sources.

Overall, this volume brings further credit to the editors and to the IAA and AAS, and makes a most useful contribution to our understanding of the surprisingly

rapid and prolific development of Chinese aerospace technology, capabilities, and power.

Dr Richard P Hallion, Florida Polytechnic University



Tinian and The Bomb: Project Alberta and Operation Centerboard. By Don A. Farrell. Tinian, Marianas: Micronesia Productions and UOG Press, 2018. Maps. Tables. Diagrams. Illustrations. Photographs. Notes. References. Index. Pp. 472. \$35 ISBN 978-0-930839-04-1

Author Don Farrell seems to have been destined to compose this well-researched, well-written history of the creation and use of the world's first atomic bombs, a story that ultimately peaks on Tinian Island of the Marianas archipelago in the Pacific Ocean. Not only has Farrell authored previous books and articles about the Mariana Islands, but also he has lived on those islands for more than 40 years. It would have been unfortunate if Farrell had not written this book.

The title announces its three primary topics: the role of Tinian as the Army Air Forces base for conventional and atomic bombings of Japan 1500 miles away; the "Alberta" section of the Manhattan Project that combined work of Los Alamos Laboratory and Wendover Army Air Field to transform nuclear science into aerial bombs married to the new B-29 Superfortress long-range heavy bomber, and to prepare for operations from Tinian against Japan; and the "Centerboard" codename for executing the atomic bombing missions.

Farrell's narrative begins in December 1938, when German physicists announced they had achieved nuclear fission—the splitting of an atom—a breakthrough that suggested the possibility of a controlled nuclear chain reaction to create unprecedentedly powerful bombs. The narrative continues to the August 1945 Japanese surrender, the departure from Tinian in November 1945 of remaining Project Alberta personnel, and the beginning of the Allies' demobilization—an excellent description of a broad spectrum of activities that few military historians seem to attempt. Farrell's narrative especially suggests that, in the 44 months of war, men and women scientists, technicians, and everyday workers necessarily became figurative warriors whose goal often was to win the war in order to stop the killing and devastation.

Perhaps because of the very wide scope of Farrell's narrative, he makes a welcome effort to profile important military officers other than those of Tibbets' 509th Composite Group. In particular, Navy Captain William Parsons, director of the Los Alamos Ordnance & Engineering Division, Associate Director of Los Alamos, Officer-in-Charge of Project Alberta, and weaponeer who armed the Little Boy bomb arguably was the single most important Manhattan Project officer after General Leslie R. Groves.

The book includes an impressive list of references ranging from such seminal researchers and authors as the Hoddeson *et al.* technical history of Los Alamos; the Norris biography of Manhattan's Commanding Officer, General Leslie Groves; and Coster-Mullen's definitive description of the atomic bombs' technology; as well as many primary sources from the U.S. National Archives.

Finally, this book stands out for its numerous, very-high-quality pictures throughout the narrative, most of which I have never seen before.

In sum, Farrell successfully combines comprehensive research with a compelling, accurate, and readable narrative that should reward any reader, from amateur military history buffs to the experts.

Darrell Dvorak



Bloody Sixteen. By Peter Fey. Sterling VA: Potomac Books, 2018. Maps. Tables. Diagrams. Photographs. Notes. Appendices. Glossary. Bibliography. Index. Pp. xiv, 393. \$32.95 E-book or hardbound. No ISBN

Bloody Sixteen tells the harrowing story of Carrier Wing 16 and the *USS Oriskany* during their service during the Rolling Thunder bombing campaign. It is a hard-hitting story of almost incredible perseverance and sacrifice. During the three cruises that make up the book, *Oriskany* and Carrier Wing 16 lost fully half their aircraft and one third of all pilots. This incredible loss rate was due not only to the dangers of flying over an increasingly lethal North Vietnam, but also to noncombat losses and a devastating fire (one of three on separate Navy carriers during the war) that in a stroke wiped out many of Sixteen's most combat-experienced aviators. The book focuses on the war from the perspective of those who fought and suffered and continued, despite the odds, to get the mission done.

Fey is a naval aviator with multiple deployments to Southwest Asia. He conceived the idea for the book as a master's thesis after meeting members of Sixteen at the annual Tailhook convention. The men he interviewed urged him to expand his thesis and tell their story; this book was the result. As a combat-experienced naval aviator and trained historian, he brings skills unmatched in telling this most compelling story. My first reaction was wishing it was longer, because he only scratches the surface of many stories and had to bypass others entirely. However, in no way does this detract from the book's interest or usefulness. Fey's narrative brings to life the daily grind on the ship and in the air wing as they attempted to execute what is now widely accepted as a completely flawed strategic concept of gradual escalation.

Fey weaves in commentary about the decision making in Washington and elsewhere showing impacts on tactics,

morale, and the mission. Two stories (among many) illustrate this toll. In one, a highly experienced senior aviator turned in his wings rather than put his fellow aviators at risk based on his perception of his own inadequacies. In the other, a junior aviator turned in his wings and requested assignment to the riverine forces (the "brown water" Navy that operated in the Mekong delta) after being shot down and rescued three times in less than a year. Others chose to continue despite the odds and in many cases paid with years of captivity or death. Combining first-person narratives with primary and secondary sources results in a powerful presentation.

The book a quick read; one could easily finish it in a day. The outstanding maps are clear and easy to understand. The excellent appendices include aircraft and personnel losses (both aircrew and ships company), aircraft damaged, a listing of each phase of Rolling Thunder, and a short discussion of targets and related information.

For the price, I recommend this book to everyone. Military aviators and, indeed, members of all services can learn valuable lessons in leadership, sacrifice, and camaraderie from Sixteen's story. Aviation enthusiasts, history buffs, and anyone seeking a better understanding of Vietnam and its impact on service members and their families will find much to consider. A fascinating, uplifting, and, at times, heartbreaking story.

Golda Eldridge, Lt Col, USAF (Ret), EdD



The Second World Wars: How the First Global Conflict Was Fought and Won. By Victor Davis Hanson. New York: Basic Books, 2017. Maps Photographs. Notes. Bibliography. Index. Pp. xxi, 652. \$40.00 ISBN: 978-0-465006698-8

Victor Davis Hanson is a Senior Fellow in classics and military history at the Hoover Institution, Stanford University. His goal here was "to explain why a single conflict encompassed global fighting in ways not true of most prior wars, fought in limited locales between predictable enemies through familiar methods." He chose *Wars* for the title because no supposedly single conflict was ever before fought in so many diverse landscapes, and no war had ever been fought in so many different ways.

This is not a classically chronological text. In a relatively fresh approach, Hanson divided his work into seven parts: Ideas, Air, Water, Earth, Fire, People, and Ends. Readers can turn directly to those chapters of prime interest.

In the first chapter, "The War in a Classical Context," he notes that sixty millions dead, twentieth-century ideologies, the singular evil of Adolf Hitler, the appearance of V-2 rockets, the dropping of two atomic bombs, the Holocaust, napalm, kamikazes, and the slaughter of

millions in Russia and China seemed to redefine World War II as unlike any conflict of the past—even as predictable humans with unchanging characteristics, fighting amid age-old geography and weather patterns, continued to follow the ancient canons of war and replayed roles well known from the ages.

“The Air Power Revolution” shows that in the crucial categories of heavy bombers, transports, and fighter-bombers, the aircraft of the Allies very quickly proved as superior in quality as they were greater in quantity, and they gave the victors advantages in mobility, deployment, and offensive reach undreamed of by the Axis.

“From Poland to the Pacific” shows that Germany possessed the best organized and most professionally trained strategic bombing force in the world in September 1939. However, the utter failure of the Luftwaffe in the Battle of Britain was the first clear-cut defeat of the German military. And in the subsequent Blitz, to achieve a mere five percent reduction in British military production, the Luftwaffe had lost somewhere between three thousand and four thousand pilots and crews killed, captured or missing. Without British Mosquitoes and Typhoons and American Thunderbolt fighter-bombers, the Allied ground offensive of July and early August 1944 might well have stalled in Normandy. The vaunted Luftwaffe, in truth, was the most poorly prepared branch of the German military, both on the eve of and during the war, and it eroded as the war progressed. Of all the services of the Wehrmacht, the air force should have been the most crucial.

In Chapter 16, “Supreme Command,” Hanson’s opinions instinctively connect to contemporary events. It is disturbing to think that eventually Hitler might have gotten away with holding on to his gains prior to September 1, 1939—perhaps even before June 1941—had he cancelled the invasion of the Soviet Union, avoided war with America, and made major concessions to Great Britain that even Churchill might not have been in a position to refuse. Had Hitler stopped without invading Poland, the Allies might well have conceded to a huge German-speaking empire, one larger and more influential than at any time since the birth of the German state.

In Part Seven, “Ends,” Hanson cites numerous factors that contributed to the Allied Victory, but he emphasizes the importance of strategic planning. He notes that the stupidity of the Axis in carrying out the surprise attacks on the Soviet Union and then the United States, together with the German and Italian declarations of war against America, and the Japanese invasion and occupation of mainline China mark the five greatest strategic blunders of the war—and perhaps of any war in history.

The war, Hanson contends, led to a new American engagement abroad. The United States spearheaded NATO and its lesser Pacific imitations and began to intervene routinely around the world to shore up anticommunist and sometimes authoritarian regimes, as

if engagements in the 1950s would not repeat the mistakes of what followed from the isolationism in the 1920s and 1930s.

Hanson took on a daunting task to cover the history of World War II in one volume: it took Winston Churchill six volumes! His bibliography lists in over 37 pages some 450 sources that he cited. The result of his work is an outstanding history that should be welcomed especially by high school teachers and college history professors. The book’s coverage of important aspects of the conflict might even inspire a new generation of talented military historians, as well as current and future military leaders.

Robert Huddleston, Chapel Hill NC, combat veteran of World War II, freelance essayist, and book critic



1968 in America: Music, Politics, Chaos, Counterculture, and the Shaping of a Generation. By Charles Kaiser. New York: Grove Press, 2018. Notes. Photographs. Index. Pg. xxix, 306. \$18.00 ISBN:978-0-8021-2803-4

This book is more than just “1968;” it is about “the sixties” and the incredible impact that the decade continues to have on the present. The philosophical start of the 1960s is most often begun with John F. Kennedy’s election in 1960 or, alternatively, with his assassination in 1963. The decade’s “end” is often tied to either Richard Nixon’s 1974 resignation or perhaps the stark reality of Altamont in December 1969, when the flower-power dream was shattered. In between was a protracted period when America was being torn apart at the seams by the Vietnam War and the struggle for social justice in this country. On a lighter note this was the decade of the British Invasion, led by the Beatles, and the heyday of the counterculture. If one, however, had to highlight a singular year in that decade of extraordinary change, it would likely be 1968. Hence, this book. It was the year of the watershed Tet Offensive in Vietnam that changed the course of the war and anticipated America’s exit from Vietnam. It was also when Martin Luther King and Robert F. Kennedy were murdered, casting a dark shadow over the country. It was also a watershed year because of its pivotal presidential election leading to significant changes in America’s foreign policy and domestic direction. So much happened in that year that its impact, fifty years later, is still being felt. It should not be forgotten that cultural change took place in the arts, music, and, not least of all, in film making. This was the year of cult classics and reality challenging movies like “2001: A Space Odyssey,” “Rosemary’s Baby,” “Planet of the Apes,” and “The Night of the Living Dead.”

Charles Kaiser gives it his all to capture the era’s spirit and significance through his recalling of the drawn-out political process, especially in light of the acrimony between Eugene McCarthy and Robert F. Kennedy. Kaiser

revisits the confusion leading up to the chaos at the Democratic Convention and Hubert Humphrey's nomination, and to the incredible role that Martin Luther King had played as a moral compass. In turn, Kaiser visits the social and cultural backdrop of the '60s; the rejection of conventional wisdom leading up to 1968's presidential election; the significance of Tet on the American psyche; the rise of radical activism; and, intriguingly, the increasing power of media and its images to affect American opinion.

I understood, as one who was a product of the '60s, from celebration of the counterculture, to social activism, and veteran of ground combat in Vietnam, from 1967 to 1968, what Kaiser was recapitulating. However, his telling of personal experiences in that era, as if they were representative of a universal experience for everyone, is somewhat less than the reality of that time. I have known many Americans who were only marginally touched by the war, the political turmoil, and the cultural revolution. So, one's perspective on the 1960s, when all is said and done, depends on where one was standing at the time. This book's strength, then, is that it levels the playing field by informing the reader about aspects of the 1960s that he or she may have missed the first time around. Likewise, it provides excellent insight for those whose only knowledge of that era comes through scholarship and documentaries.

John Cirafici, Milford DE



Magnificent Showcase: History, Heritage, and Art: The United States Air Force and the Air Force Art Program. By Timothy R. Keck and Lori Ann Dawson. Washington DC: USAF History and Museums Program, 2014. Illustrations. Notes. Bibliography. Index. Pp. xxiv, 327. \$90.00 ISBN: 978-0-16-092661-7

This book should bring back pleasant memories to anyone who has ever been assigned to the Pentagon or who has had some time during a visit or tour to look at the art that adorns the walls of the building. But this superb coffee-table volume is really for anyone who wants to better understand the history of the United States Air Force as told through the paintings and drawings of hundreds of artists who have participated in the Air Force Art Program.

Art has been used to document military activities for centuries and has been with aviation since nearly the beginning. To get the new Air Force's program started, in 1950 the Army transferred about 800 works of art that covered the early period of military aviation back to the Signal Corps days. But the program really took off when Chief of Staff Hoyt Vandenberg called for an art collection documenting the history of the new service. Eventually a program was established wherein artists, travelling on military orders, would be transported to locations around

the world to do the research and initial work necessary to produce art that would then be given to the Air Force. The program has undergone changes over the decades but continues today in essentially the same format.

Text author Keck and designer Dawson have done a masterful job of selecting about 325 works for this book from the vast overall collection. They organized the book in a chronological fashion. The broad sections are early flight through the Great War, World War II, Cold War beginnings and the Korean War, Cold War stalemate and the Vietnam War, into the new century, and airmen around the world. Within these wide topic areas are more specific topic coverages such as the Great War, Kitty Hawk, aircraft production, Cuban Missile Crisis, community life, the Thunderbirds, Bob Hope, and many more.

Interspersed in their own sections are works from some of the major contributors. Frenchman Henri Farré completed 175 paintings of air combat in World War I, a number of which are in the Air Force collection. Thirteenth Air Force airman Robert Laessig painted many watercolors of his World War II experiences. Then-Major Bob Bales, the officer most responsible for creation of the Art Program, was also a prolific artist and documented the Korean War. Maxine McCaffrey's Vietnam period works are well known to anyone who spent any time on the Pentagon's fourth floor E Ring. Possibly the best known aviation artist is Keith Ferris, who has over 60 paintings in the collection and many more in the collections of the National Museum of the USAF and the National Air & Space Museum. The final highlighted artist is James Consor, whose works have covered the past three decades.

The book's index is arranged by artist with each of their included works; it is easy to find paintings by your favorite.

This book contains a very well-balanced selection of machines, events, and people. And it isn't just manned aircraft but also the space systems and unmanned craft that make up the total Air Force story. It would be nice if everyone interested in the Air Force story could have a copy, but the price is prohibitive. However, it seems that there will one day be a website with much of the collection displayed on line. That should allow a much wider dissemination of a truly magnificent aerospace-art collection. But if you can afford the book, buy it.

Col Scott A. Willey, USAF (Ret), Book Review Editor, and Docent, NASM's Udvar-Hazy Center



Anatomy of a Campaign: The British Fiasco in Norway, 1940. By John Kiszely. Cambridge UK: Cambridge University Press, 2017. Photographs. Maps. Appendices. Bibliography. Notes. Index. Pp. 375. \$44.99 ISBN: 978-1-107-18459-5

A retired lieutenant general of the British Army, Kiszely has written what is undoubtedly the definitive history of the ill-fated Norwegian campaign. As one reads it, it is quickly evident why it received the Royal United Services Institute for Defence Studies' prestigious Duke of Wellington Medal for Military History, presented yearly for the best English language writing on military history.

Anatomy of a Campaign is a thoughtful, sobering, and, indeed, damning account of how unfounded prewar and wartime assumptions; intelligence failures; political and military miscalculation; inadequate and questionable strategy; multiple liaison and communication failures; deficiencies in doctrine, equipment, logistics, and training; poor operational and tactical execution; and, above all, failure to appreciate and use air power properly, led to disaster. Overall, Kiszely's book, a volume in the *Cambridge Military History* series, adds further luster to a highly regarded series of impeccably researched and written works.

Kiszely employs a chronological framework, but within this, he discusses and digresses on a wide range of issues offering insights, information, and assessments that speak highly of his research. His bibliography constitutes a superb reference for anyone studying the early history of the Second World War in Western and Northern Europe, and his source notes will feed and assist the scholarship of historians who may seek to explore in greater detail individual parts and issues of the story that he tells.

Unlike many historians who often lose themselves in narrow discussions of individual tactical actions, he ranges freely and widely over the battlespace, covering the decisions, actions (and their consequences) of individuals at the senior, operational, and tactical levels of planning and war. An appendix of the *dramatis personae* of September-June 1940, is surprisingly useful in keeping people and their positions straight. Kiszely is fair but unsparing in his judgments: Prime Minister Chamberlain's "great disadvantage was not that he did not know the answers but that he did not know enough about the subject [military affairs] to know the right questions to ask." General Sir Edmund Ironside, the Chief of the Imperial General Staff (CIGS) was "totally miscast as CIGS," prone to "erratic judgment," and "constantly rejecting the warnings of his staff and the Joint Planners." The Army, Air Force, and Navy chiefs "were not of the highest quality," and "made a poor team." Too little prewar thought was given to joint and combined operations so that, when war erupted in 1939, all three British services were deficient in joint doctrine, training, and experience and in combined operations with potential allies. This latter was a constant source of frustration, and resulted in national forces—British, Norwegian, French, Polish—often having to go-it-alone against an enemy who, if not perfect, was nevertheless perfectly instructed and comfortable with joint operations.

At times, Kiszely's account is darkly comic and would be almost funny if one did not keep in mind the sobering reality of killed, wounded, and captured soldiers, sailors,

and airmen, and destroyed ships, planes, and equipment. In perhaps the most bizarre episode of the campaign, the aircraft carrier *Glorious* was caught by the German battlecruisers *Scharnhorst* and *Gneisenau* and sunk (together with two destroyers) with great loss of life, all because its captain, a submariner by training and experience, was racing to make a court-martial in Scotland and didn't bother to have any of his aircraft scouting around the ships.

Overall, Kiszely concludes that while the Allied campaign failed most obviously at the tactical level, the outcome was decided at the grand-strategic and operational levels. Allied lack of appreciation for what the German *Luftwaffe* could accomplish—quickly seizing air superiority, moving 2300 tons of supplies and 29,000 troops from Germany to Norway using 500 transport aircraft (mostly the ubiquitous Junkers Ju 52-3m), sinking ships at sea, and undertaking punishing bombing strikes of Allied forces and positions—highlighted prewar failures not only by the British Army and Royal Navy, but by the Royal Air Force's own leadership as well. "Britain's command of the sea, on which the campaign strategy from the outset had rested, was shown not to extend to inshore waters dominated by Germany's command of the air," Kiszely concludes.

In sum, Kiszely, whose historical judgments and insights draw freely on his extensive experience as a military commander at the highest levels of NATO, offers a cautionary tale that commanders today at all levels would be well advised to read and ponder, given the challenges faced in Asia, the Mid-East and—again—in Northern Europe, particularly the Baltic. This is a book that should find a home on the shelves of any officer assigned to joint and combined planning: the lessons presented here, cogently argued and thoroughly documented, are enduring ones.

Dr Richard P Hallion, Florida Polytechnic University



Lend-Lease and Soviet Aviation in the Second World War. By Vladimir Kotelnikov. Solihull UK: Helion & Company, 2017. Maps. Tables. Diagrams. Illustrations. Photographs. Glossary. Bibliography. Pp. viii, 542. £49.50 ISBN: 978-10911512-26-4

It has been accepted for many years that the Lend-Lease program of World War II was critical to both Great Britain's and the Soviet Union's survival in their struggles with Nazi Germany and contributed materially to Germany's eventual defeat. Anyone who knows anything about the program is familiar with the bases-for-destroyers trade with the UK and American industry's contribution in providing the Soviet Union with thousands of aircraft. But how much does the average reader know beyond these bare facts? Probably not much. This book, writ-

ten by a Russian aviation historian, describes the contribution Lend-Lease made in supporting the Soviet Union, with a focus on aviation.

Kotelnikov is an archivist and aviation historian with over 30 years of experience. His mastery of his subject is beyond dispute. He begins with a short background on Soviet aviation prior to World War II. This includes describing challenges the Soviets faced in attempting to create a domestic aviation industry as well as efforts to purchase aircraft licenses, actual aircraft, and plans from countries where they often didn't have formal diplomatic relations. Kotelnikov shows that, despite anti-communist rhetoric, all the major European powers and the U.S. found ways to work with the Soviet Union. He follows this background with a good, albeit brief, explanation of the Lend-Lease program and its origins, framework, and execution.

The bulk of the book consists of discussions of the various aircraft types that found their way to the Soviet Union. This includes types involved in the Lend-Lease program as well as aircraft obtained by other means, such as B-29s interned after landing in the Soviet Union. Kotelnikov describes each aircraft type including its acquisition, various models, air and ground crew training, employment, and final disposition. These descriptions also include assessments of the type's viability as employed—assessments that are balanced and based on facts, not ideology. Each section also includes personal stories of people involved on both sides. While not an integral part of the story, they add depth and interest to the narrative.

Throughout the book are even-handed assessments of government interactions and fair assessments of Western (US and British) aircraft strengths and weaknesses vs. Soviet aircraft. There are good descriptions of why some aircraft (the Bell P-39 especially) were more effective in Soviet service. Eastern Front air combat was generally fought at lower altitudes and shorter ranges than in either Western Europe or the Pacific, and the P-39 excelled in this environment.

Kotelnikov also addresses the impact of Western technology and industrial equipment transfer on the Soviet aircraft industry and industry in general. His descriptions of the Soviet research and development and industry show organizations more than ready to incorporate new technologies where appropriate—but not slavishly copying Western models (while the Tu-4 externally looked almost identical to the B-29, there were significant changes made to accommodate Soviet needs and capabilities).

A realistic assessment of the Lend-Lease program—neither magnifying nor belittling its overall impact—ends the book. Kotelnikov points out that the bulk of Lend-Lease aircraft didn't begin arriving in the Soviet Union until 1943, after the Soviets had stemmed the initial tide of Nazi conquest. So while Lend-Lease aircraft did not stop Hitler's invasion, Kotelnikov is quick to point out that without the support and equipment from the Western Al-

lies, the price the Soviet Union ultimately paid would have been significantly greater.

The book is well done, easy to read, and simple to follow. One highlight is the plethora of photographs at the end of each chapter. These include photos from Soviet archives as well as many from private individuals. There are line drawings of many aircraft highlighting modifications. The center of the book contains a section of exceptional color plates of every aircraft included in the book. For the more common aircraft (e.g., Douglas A-20, Bell P-39) there are multiple plates showing the aircraft in various models and unit colors. Kotelnikov's English is generally quite good. There is some idiosyncratic phrasing at times, but this is minimal and does not detract from readability.

The book has very few issues for a work of this scope and depth. Lack of an index in such a scholarly work seems unusual, but this is not a big liability given the book's format. The book is not inexpensive; but, for anyone interested in the subject, its comprehensive coverage and Russian origin make it money well spent.

Golda Eldridge, Lt Col, USAF (Ret), EdD



The Shadow Tiger: Billy McDonald, Wingman to Chennault. By William C. McDonald III and Barbara L. Evenson. Birmingham AL: Shadow Tiger Press, 2016. Maps. Photographs. Pp. xxiii, 313. \$35.00 ISBN: 978-1945333-05-7

After author McDonald, the son of the book's subject, retired as president of a large multi-national company, he found a vast array of photos, documents, and log books pertaining to his father, William C. (Billy) McDonald, Jr. (1906-1984) and his career in aviation. Using these materials and more that he obtained from his father's friends, McDonald, with the help of Evenson, wrote this book. The book's title derives from Billy McDonald's close association with Claire Chennault, the creator of the Flying Tigers and, later, commander of the Fourteenth Air Force in China in World War II, and from McDonald's comparative and undeserved obscurity.

This book is reasonably informative about Billy McDonald's life through his career in the Army Air Corps and his subsequent years as an advisor to and trainer of the Chinese Air Force in the 1930s. McDonald was an enlisted Army pilot who was one of the members of Chennault's "Three Men on a Flying Trapeze" aerial demonstration team. He was initially the alternate pilot, but when Hayward Hansell left the team, McDonald became a regular member.

When it became obvious that he would not become an officer, McDonald left the Army in 1936 and accepted a job as a civilian trainer for the Chinese Air Force, similar to

the job that Chennault himself accepted a year later. The book suggests, without substantiation, that McDonald and Chennault actually shot down a significant number of Japanese aircraft while flying as trainers and advisers to the Chinese Air Force.

In the spring of 1940, McDonald moved on to become a pilot for China National Aviation Corporation (CNAC) and remained with them until August 1947, flying throughout the war in China and India. After eventually becoming Chief Pilot for CNAC, McDonald was involved, on the ground, in the Christmas 1946 CNAC crashes—two planes lost in one day. In August 1947, he left China and CNAC. Because CNAC was a joint venture of the Nationalist Chinese government and Pan American Airways, McDonald was able to take a position as a senior pilot flying for PanAm on their South American routes until his wife's health forced him to retire from airline flying.

The book is a scrapbook. There are no notes, index, or bibliography. It has many photographs of and by McDonald, many photo reproductions of McDonald's letters to family and friends, and even reproductions of newspaper clippings and comic strips. Unfortunately, there is minimal commentary to set the letters and photos in context. It even continues with photos of McDonald's children and grandchildren, some taken after his death.

As an interesting source for how one person, who was there, felt about how things were unfolding in the war between China and Japan before US entry into the war, this is a good book. However, it is a *selection* of Billy McDonald's letters and memorabilia and, as such, should be used with care. For instance, McDonald is described as rising to Chief Pilot of CNAC. It seems slightly odd that in the material selected from the letters and memorabilia of the CNAC Chief Pilot, the operations manager and vice-president of CNAC from 1931 until 1948, William Langhorne Bond, is never once mentioned. Nevertheless, the book is worth reading for its first-hand impressions of what it was like to be involved in aviation in China prior to the US entry into World War II.

Leslie C. Taylor, docent, NASM's Udvar-Hazy Center



Bankrupting the Enemy: The U.S. Financial Siege of Japan before Pearl Harbor. By Edward S. Miller. Annapolis MD: Naval Institute Press, 2007. Maps. Tables. Illustrations. Photographs. Notes. Appendices. Bibliography. Index. Pp. xvi, 324. \$24.00 ISBN: 978-1-59114-520-2

In the 1930s, Japan took aggressive actions that generated tension in its relationship with the U.S. These began in 1931, when Japan seized Manchuria, and escalated in 1937 with Japan's invasion of China.

The U.S. was not prepared to respond militarily to Japan's moves but chose instead to focus on economic

sanctions. This book is the story of those actions—a peacetime strategy that was intended to get Japan to cease its war in China and to back out of Manchuria.

The economic actions culminated on July 26, 1941, when the U.S. rendered Japan illiquid by “freezing” its assets in U.S. banks, cutting off Japan's access to those resources. The freeze left Japan with three options: continue its military operations, accept the freeze, and suffer economic impoverishment; accede to US demands to give up its territorial conquests; or go to war against the U.S. and its allies. They chose the latter.

A brief discussion of terminology is in order. “Bankrupt” means that an entity, usually a corporation or individual, doesn't have sufficient funds to pay its debts. Japan was never bankrupt, because it had adequate resources—dollars in U.S. banks and gold bars in Tokyo vaults—to cover its needs. Hence the proper term is “illiquid,” meaning that the freeze made it impossible for Japan to liquidate its resources to pay debts and conduct trade.

The first public suggestion of economic action against Japan came in October 1937, when FDR made his famous “quarantine speech.” In this speech Roosevelt stated that peaceable nations should uphold international law by quarantining aggressors. The president didn't cite any countries by name, but it was clear that he was talking about Germany, Italy, and Japan. He also didn't explain what he meant by quarantining or describe how it would be done, and the idea faded away without action.

After Japan invaded China, U.S. analysts projected when Japan would deplete its gold and hard currency. Projected dates included September 1939, June 1940, March 1941, and mid-1941. Over time, the estimates pushed the date further into the future. The experts were continually surprised that Japan came up with more resources than it was thought they possessed. The most significant reason for this was that, through a pattern of improper accounting procedures, Japan had concealed roughly \$100 million. The U.S. didn't become aware of this secret hoard until late 1940. This was when officials started to think seriously about freezing Japanese funds.

A turning point came in 1941. Up to this time, export controls had been applied to many commodities, but the controls allowed Japan to apply for export licenses on a case-by-case basis, and most Japanese requests were approved. But the approval process tightened up considerably; and by mid-1941, the only commodities freely exportable to Japan were cotton, food, and non-aviation fuel. In other words, Japan was cut off from the commodities most important to its war effort—metals, aviation fuel, and armaments.

In the Spring of 1941, an interagency team began drafting the executive order (EO) that would announce the freeze of Japanese assets. The legal basis for the freeze was the Trading with the Enemy Act (TWEA) of 1917. TWEA was originally intended to restrict trade with enemy nations and their allies. But whether by design or

by accident, the section on freeing assets was written to apply to all nations at any time, whether or not they were enemies in a declared war.

The EO was issued on July 26. The freeze was implemented swiftly and with little room for flexibility. Roosevelt had intended to allow for exceptions and for some limited trading to be done, but his subordinates applied the freeze in an ironclad fashion. In November the State Department assessed that the freeze had reduced U.S. exports to Japan to essentially zero.

In April 1941, several months before the freeze order, U.S. and Japanese diplomats began negotiations to try to resolve tensions. Entering the negotiations, the U.S. position was that Japan must leave Manchuria and China and must not interfere in the internal affairs of other nations. Japan's position was that it would not withdraw from its occupied territories, would maintain its ties with Germany, and would be permitted to continue its trading with the U.S. Once the freeze was announced, it was clear that there was no longer any room for negotiation, and Secretary of State Hull restated the U.S.'s going-in position. Japan interpreted this position as an ultimatum. Within a few days, forces that had been pre-positioned for an attack on Pearl Harbor received the order to attack, and the economic war against Japan became a shooting war.

Ed Miller brings solid credentials to this work. He had a 35-year career with one of the country's largest mining and resource companies, culminating in being its CFO, and was a director of an aluminum joint venture with Mitsui, a major Japanese trading firm. The book is incredibly well-researched, with enough details to satisfy anyone who wants to make a deep dive into a complex subject. If there is a criticism to be offered, it is that some of the discussion of international banking transactions might be a bit too arcane for the average reader to grasp fully. But I'm inclined to attribute this to my limited background in international commerce and not to Miller's shortcomings. For the reader who wants to learn more about the economic warfare between the U.S. and Japan that led up to the attack on Pearl Harbor, this book is highly recommended.

LTC Joseph Romito, USA (Ret), docent, National Air and Space Museum



Advocating Overlord: The D-Day Strategy and the Atomic Bomb. By Phillip Padgett. Sterling VA: Potomac Books, 2018. Maps. Photographs. Notes. Glossary. Bibliography. Index. Pp. Xv, 379. \$39.95 ISBN: 978-1-61234-962-6

This book seeks to weave together two distinct but ultimately related narratives about World War II, the stories of the development of the atomic bomb and the process

leading to the final decision to invade northern Europe over the beaches of Normandy. Padgett attempts to answer the question of whether Britain's (and, more specifically, Churchill's) acquiescence (and he shows it was more acquiescence than agreement) to the decision to invade northern Europe via Normandy a *quid pro quo* for reopening U.S./British cooperation on the atomic bomb. This cooperation had foundered on American reluctance to share atomic research and secrets with their British allies. The British were alarmed at this attitude and spent a great deal of effort trying to reengage the Americans as equal partners. Concurrently the two allies sparred continually over what each thought was the best strategy to defeat Germany. The British favored a peripheral approach through the Mediterranean, hoping for a German collapse. Most Americans committed to a direct assault across the English Channel. These two issues and their possible impact on each other form the basis on this book.

Padgett spent his professional career working in national security and intelligence and has an excellent perspective and background to assess the diplomatic and bureaucratic processes he reviews. The bibliography is extensive and includes many primary sources: Padgett prefers to rely on his own interpretation of sources. The resulting argument is, therefore, stronger and more logical.

In seeking to determine how much one decision affected another, Padgett divides his discussion roughly 70/30 between the bargaining, discussions and arguments that led to the final decision to invade at Normandy, and the issue of information sharing and cooperative work on the atomic bomb. The subjects are not treated separately but, rather, are woven together chronologically. There are a number of interesting insights into how and why these decisions were made with particular attention paid to a fishing trip FDR made in mid 1943 to the Canadian wilderness. Padgett argues that it was then that FDR finally settled on the strategic direction the allies would pursue—the cross channel invasion.

The book's biggest weakness is the lack of specific documentation to support or refute some key assertions, primarily as they pertain to cooperation on the atomic bomb. There is no written record for many of FDR and Churchill's conversations on this subject. FDR's notoriously secretive nature did not lend itself to sharing his thoughts with others who might have written them down, and Churchill wrote his accounts with an eye on posterity and his own reputation. Consequently, Padgett makes his own inferences about what may have been said or agreed to based on actions or communications that emanated from both Churchill and FDR following these meetings. The challenge is assigning motives and assessing causality in the absence of documentary evidence. Padgett accepts this challenge and, in the end, makes a compelling, although not conclusive, case that, while one may not have led directly to the other, these two issues were intimately connected.

Padgett presents a balanced picture with no obvious bias toward or against either side. No one shows as a villain or savior, and his discussions of the give and take associated with these monumental decisions are enlightening. He shows the human side of such processes and makes it clear that in many ways the key players' peculiarities and quirks were as important to the decisions made as the issues themselves.

The book is a bit pricey but is an interesting and useful addition to the scholarship on World War II.

Golda Eldridge, Lt Col, USAF (Ret), EdD



The Problem with Pilots: How Physicians, Engineers, and Airpower Enthusiasts Redefined Flight.

By Timothy P. Schultz. Baltimore MD: Johns Hopkins University Press, 2018. Photographs. Notes. Pp. 243. \$44.95 ISBN: 978-1-4214-2479-8

In *Global Mission*, Hap Arnold recounted an incident early in his flying career in which he remedied what Schultz calls a pathology of flight. Momentarily blinded in flight by a bug or particle of dirt, Arnold wore goggles from then on. Although not cited in *The Problem with Pilots*, Arnold's solution characterizes the thesis of this book. From almost the moment the Wrights flew, technological, operational, and medical innovations have attempted to remediate shortcomings of human pilots. Pilots become disoriented and lose spatial awareness. They suffer from hypoxia and the bends. Extreme heat or cold reduces their effectiveness. They are the "weak cog" in the machine.

The resulting solutions change the relationship between the pilot and aircraft—what Schultz, interweaving theories of such groundbreaking authors as Norbert Weiner (*Cybernetics*, 1948), David Mindell (*Between Human and Machine*, 2002) and Thomas Hughes (*Human Built World*, 2005), calls a cybernetic combination of person and machine. Instruments interpret weather conditions, distance from the ground, and aircraft attitude. Flight suits, oxygen masks, pressure pants, and pressurized cockpits keep pilots alive. By 1937 aviation engineering innovation added up to a system that could land an aircraft with no pilot intervention. The pilot became more a manager of machines that did the actual flying. Even dogfighting—the "knife fight"—has given way to beyond-visual-range targeting.

The phenomenon of complete machine automation brought its own problems. There was a potential for the pilot's flying skills and instincts to erode. The pilot needed the ability to interpret and manage the machine's outputs. The autopilot of Air France A330 Flight 447 over the Atlantic in 2009 experienced a critical malfunction and turned control back to the pilots. The pilots could not interpret the autopilot readings and crashed.

Schultz notes the interface, or relationship, between the skilled, trained pilot and the machine is the key to the future. For this reason, he concludes, the human pilot will retain an important and substantial role.

Associate Dean for Electives and Research at the Naval War College, Schultz spent 26 years in the Air Force and has a Ph.D. in history from Duke University. Schultz's specialty is the relationship of people to technology. He has mined archives at the National Archives, USAFA Special Collection, AFHRA, USAF Museum, Wright-Patterson AFB, the Library of Congress, contemporary journals, and official documents to assemble a well-researched and reasoned account.

The absence of a bibliography in this well-researched book is surprising for this academic publisher. Detailed endnotes provide background and perspective. Schultz mines photos (including one of Hap Arnold wearing goggles while perched in an early aircraft) from the Smithsonian, AFM, and AFHRA to illustrate some of the technical developments described in the book. A photo caption that refers to a "Boeing" B-24 was unusual for this otherwise impeccably edited volume.

This very readable and clearly written book gives the reader a convincing picture of the emergence of aviation automation and how it has changed the pilot's role and flight itself. This volume is recommended reading for everyone with an interest in the future of airpower.

Steven Agoratus, Hamilton NJ



Solo Stages: A Recollection of Jet Pilot Training in the United States Air Force, 1962-1963.

By David K. Vaughan. Pittsburgh: Dorrance, 2017. Photographs. Appendices. Pp. ix, 338. \$63.00 ISBN: 978-1-4809-4393-3

As the subtitle states, this is one man's description of his pilot training year almost 60 years ago. I have a particular interest in this book since my father followed Vaughan into Air Force pilot training about a year later, me some 26 years after, and my oldest son 54 years later. I was very interested to read Vaughan's stories and see how things have changed (or not) in the intervening years. Whether they are called war stories (something common to all veterans) or hangar flying (flying stories told in the squadron or, better, at the bar), I am always intrigued to hear stories from another day and time. Having grown up on stories about my dad's primary T-38 instructor, I relished this opportunity. Vaughan does not disappoint.

This book will appeal to anyone interested in aviation; because, whether one is a flyer or not, Vaughan relates his joys, frustrations, hopes, and fears in a way anyone can appreciate. He expands beyond the day-to-day flying and training to include his relationships with and participation in the life of a small Texas town. This gives a small glimpse into the vital connection between the military

base and the surrounding community, something many of us take for granted. One resident told Vaughan (somewhat resentfully I think), “You flyboys come and go year after year, but here we are for the long haul.” Whether those folks resented being “stuck” in their small town or relished it, they are a key part of the experience; I’m glad Vaughan chose to include that part of the story.

As the title says, the book really does focus just on the one year of pilot training. Vaughan opens with just a few pages of background that covers his interest in flying and attendance at the Air Force Academy and devotes the rest of the book to pilot training. The book is chronological, but he doesn’t give equal weight to all aspects of the program. His discussion of flying centers around spin training in the T-37 primary trainer, formation flying in the supersonic T-38, and his solo experiences in both: the first because it scared him to death; the second because it was so much fun, and he struggled with his instructor pilot to get checked out solo; and the last because soloing is the goal of every pilot, no matter what the airplane or circumstance. It is very difficult to capture the exhilaration, slight edge of fear, and pure joy that comes in taking your airplane into the air for the first time alone. Add to that the thought that this (for Vaughan and my family) also involved soloing in high performance jets: it truly is something difficult to put into words. Vaughan does justice to his experience and captures enough that anyone can feel something of what he felt when he “strapped on the jet” to go solo.

My criticisms are few. There are some minor editing issues and one glaring factual error where Vaughan describes General Curtis LeMay as a 5-star general. The biggest issue is the price. As a hardbound book from a specialty printer, the \$63.00 cost is more than most people will be willing pay for even so enjoyable a book. The publisher should consider a paperback version or even an e-book which could give this excellent story a much wider audience.

Golda Eldridge, Lt Col, USAF (Ret), EdD



Dangerous Games: Faces, Incidents and Casualties of the Cold War. By James E. Wise, Jr. and Scott Baron. Annapolis MD: Naval Institute Press. 2010. Photographs. Pp 241. \$19.95 ISBN 978-1-59114-968-2

The Cold War wasn’t always cold. It often proved to be hot; it was “cold” only because neither superpower used nuclear weapons. In this book, Wise and Baron describe some of the “hot” events and the people involved in Cold War incidents.

To tell their story effectively, Wise and Baron use a combination of both well-known events (e.g., Col Gale Halvorson and the Berlin Airlift and the *USS Forrestal* fire) and lesser known events (e.g., the mysterious death of Navy Captain Eugene Karpe and actor James Garner

being the first Oklahoman drafted for the Korean War).

The book is divided into nineteen chapters, each of which focuses on a person or on a specific event. As the title implies, many of the subjects of the chapters are killed. To highlight the global nature of the Cold War, Wise and Baron included events from all over the globe but pay particular attention to both Cold War Europe and the Korean peninsula. The book is arranged chronologically starting with U.S. Marine Corps forces in China 1945-1949 during the Chinese Civil War and ending with the death of Army SSgt Gregory Fronius during the El Salvadoran Insurgency in 1987.

The chapters all begin with a scene setter leading up to the focus of that chapter. To effectively describe the event covered, Wise and Baron wove in many, often lengthy quotes from those who participated in the events. The long quotes, such as those of North Korean pilot No Kum-Sok and Russian Cosmonaut Yuri Gagarin, bring each chapter to life. Though used sparsely, each chapter includes several relevant photos to help convey the story. The chapters vary in length depending on the complexity of the topic. What results is a fast-paced book that does not drag by trying to conform to a uniform chapter size.

While the book’s primary viewpoint is that of the west, it does contain several chapters focusing individuals from the Eastern Bloc: one American-born spy for Russia, two defectors (one East German and one North Korean), and Russian Cosmonaut Yuri Gagarin. Wise and Baron provide a balanced treatment of the Communist Bloc individuals. For example, they discuss Gagarin’s rise from working on a farm with his father to becoming a military pilot and cosmonaut. The authors conclude the story with Gagarin’s personal struggles, his falling out of favor with senior party leaders, and his fatal MiG-15 crash.

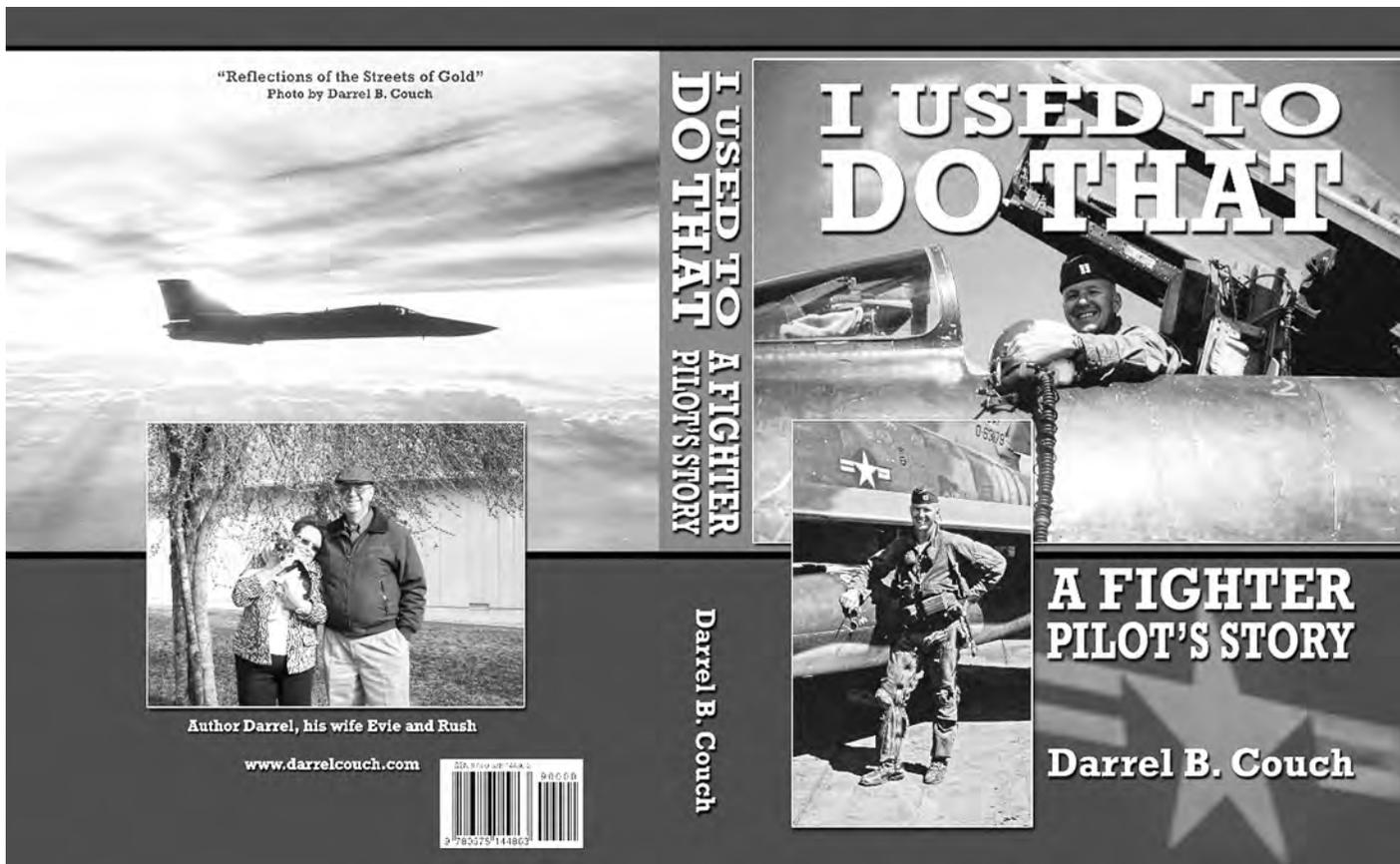
Wise and Baron conclude the book with two appendices: “Aircraft downed during the Cold War” and “U.S. Navy aircraft carrier incidents and casualties during the Cold War.” While the second appendix is not all inclusive, it is an excellent addition to the book because it highlights the frequency of Cold War events.

If there is one deficiency in this book, it’s the fact that the Naval Institute Press chose to use a smaller-than-normal type font. While this is most likely a cost-savings measure to reduce the number of pages, the small size of the text made the book physically harder to read.

Wise and Baron have written an excellent volume that presents the Cold War at a more personal level. Readers interested in the Cold War will find *Dangerous Games* both a fascinating and easy read. Those with very limited knowledge of the Cold War will find the book both educational and interesting. In either case, *Dangerous Games* is certainly worth reading.

Lt Col Daniel J. Simonsen, USAF (Ret), Bossier City LA





My self published book is not currently available at my website.
 For a signed copy, call me or e-mail me at d-couch@sbcglobal.net.

Hard cover: 8.5 X 11.0 inches table top style, 400 pages, 687 short stories, and 212 pictures with 90 pictures in color.
eBook: 645 short stories with 8 pictures.

Description : Come – Take a walk with me! Travel down a 100 year long memory lane. Experience the sheer exultation of my most improbable dreams being fulfilled beyond my wildest expectations.

Starting my career as a poorly rated 1956 high school student, I become a seventeen year old USAF enlisted man working on B-52 and B-47 electronics. With time, work, and the grace of God, I became a USAF pilot. I eventually achieved the coveted aviation pinnacle of becoming a cold war and Vietnam War single seat single engine fighter pilot. This memoir covers my entire life. It also includes selected stories taken from my 426 Vietnam combat missions and my grandfather's and father's lives. Through the 687 stories in this book, relive history as few today know how it really was. Let your easy chair, recliner, or rocking chair, become your ejection seat in the complex supersonic office of the fighter pilot. Your ability to enjoy the experience is limited only by your imagination.

In Vietnam, live the experiences of when 1/1000 of a second could mean the difference between life and death. Fly night low level combat at speeds of 600 mph at 100 feet or less.

As a Forward Air Controller, in a 100 mph 0-1 Bird Dog, hear and feel the shock waves of countless passing supersonic bullets; all aimed at you. Feel the crushing concussion of urgently requested bombs exploding way too closely to your brothers, husbands, fathers, and grandfathers.

Sit on top of a thermonuclear weapon and learn of what you are really made, and believe.

Experience riding an explosive initiated and rocket boosted ejection seat into the unknown.

Grow old and experience the real cost of war and political in-difference.



Coming Up



Compiled by
George W. Cully

September 6-9, 2018

The **Tailhook Association** will hold its 62nd annual symposium at the Nugget Casino Resort in Sparks/Reno, Nevada. This year's theme will be "The Future of Carrier Aviation." For more information, see the Association's website at <http://www.tailhook.net/>.

September 17-19, 2018

The **Air Force Association** will hold its 2018 Air, Space & Cyber Conference at the Gaylord National Hotel in National Harbor, Maryland. For more information, see the Association's website at <https://www.afa.org/afa/home>.

September 19-21, 2018

The **League of World War I Aviation Historians** will hold its 2018 Seminar in Fairborn, Ohio. This meeting will be held in conjunction with the biennial WWI Dawn Patrol hosted by the National Museum of the United States Air Force. For further information as it becomes available, see the League's website at <https://www.overthefront.com/about/news/25-seminar-news/188-2018-seminar>.

September 22, 2018

The **National Museum of the Pacific War** will host its annual symposium at the Museum in Fredericksburg, Texas. This year's topic is "The Nimitz Graybook – A Chronicle of the Pacific War." For additional insight, see the Museum's website at <http://www.pacificwarmuseum.org/news-events/annual-symposium/>.

September 22-23, 2018

The **National Museum of the United States Air Force** will host its 2018 biennial WWI Dawn Patrol Rendezvous on the Museum grounds in Fairborn, Ohio. For details, see the Museum's website at <http://www.nationalmuseum.af.mil/Upcoming/>.

September 26-29, 2018

The **Society of Experimental Test Pilots** will host its 62nd annual symposium and banquet at the Grand Californian Hotel in Anaheim, California. For more info, see the Society's website at <http://www.setp.org/annual-symposium-banquet/62nd-symposium-banquet-call-for-papers.html>.

September 28, 2018

The **National Aviation Hall of Fame** will hold its annual enshrinement dinner and induction ceremony at the National Building Museum in Washington, DC. This year's inductees include Col Walt Cunningham, Mr Bill Dana, Gen Jack Dailey and Gen Ron Fogelman. For more details, see the website at www.nationalaviation.org/enshrinement/.

October 2-5, 2018

The **Aviation Engine Historical Society** will hold its 15th annual convention at the Aerospace Museum of Aviation and the California Automobile Association in Sacramento, California. For registration, see the Society's website at <http://www.enginehistory.org/Convention/Convention2018.shtml>.

October 8-10, 2018

The **Association of the United States Army** will hold its annual meeting and exposition at the Walter E. Washington Convention Center in Washington, DC. For additional information, see the Association's website at <http://ausameetings.org/2018annualmeeting/>.

October 10-14, 2018

The **Oral History Association** will hold its annual meeting and symposium at Concordia University in Montreal Quebec, Canada. For details, see the Association's website at <http://www.oral-history.org/2018-call-for-papers/>.

October 11-14, 2018

The **Society for the History of Technology** will hold its annual meeting in St. Louis, Missouri. For more details as they become available, see the Society's website at <https://www.history-of-technology.org/annual-meeting/2018-shot-annual-meeting-10-14-october-st-louis/>

October 23-25, 2018

The **American Astronautical Society** will host its annual Werner Von Braun Memorial Symposium in Huntsville, Alabama. For more details as they become available, see the Society's website at <http://astronautical.org/events/vonbraun/>.

November 1-4, 2018

The **History of Science Society** will hold its annual meeting at the Sheraton Hotel in downtown Seattle, Washington. This year's theme is "Telling The Stories Of Science." For registration and program information, see <https://hss2018.hssonline.org/en/>.

November 2-6, 2018

The **National Air & Space Museum** will present its Mutual Concerns of Air and Space Museums Program in Tucson, Arizona. For more details as they develop, see the Museum's website at <https://airandspace.si.edu/events/mutual-concerns/>.

November 27-29, 2018

The **Association of Old Crows** will hold its 55th Annual International Convention and Symposium at the Marriott Marquis Convention Center in Washington, DC. For more details, ping a Crow at <http://www.crows.org/page/annualsymposium>.

January 3-6, 2019

The **American Historical Association** will hold its 133rd annual meeting at the Hilton Chicago and Palmer House Hilton in Chicago, Illinois. This year's theme will be "Loyalties." For program information and registration, see the Association's website at www.historians.org/annual-meeting.

March 19-21, 2019

The **American Astronautical Society** will host its annual Robert H. Goddard Memorial Symposium in Greenbelt, Maryland. For gathering details, see the Society's website at <http://astronautical.org/events/goddard/>.

Readers are invited to submit listings of upcoming events. Please include the name of the organization, title of the event, dates and location of where it will be held, as well as contact information. Send listings to:

George W. Cully
3300 Evergreen Hill
Montgomery, AL 36106
(334) 277-2165
E-mail: warty@knology.net

April 4-9, 2019

The **Organization of American Historians** will hold its annual meeting at the Philadelphia Downtown Marriott in Philadelphia, Pennsylvania. This year's theme will be "The Work of Freedom." For details, see their website at www.oah.org/meetings-events/meetings-events/call-for-proposals/.

April 25-26, 2019

The **Society for History in the Federal Government** will hold its annual meeting at the National Archives Building in Washington, DC. For further information, see the Society's website at <http://shfg.wildapricot.org/Annual-Meeting>.

May 9-12, 2019

The **Society for Military History** will hold its 86th annual meeting on the campus of the University of Ohio in Columbus, Ohio. This year's theme will be "Soldiers and Civilians in the Cauldron of War." For more details, see the Society's website at <http://www.smh-hq.org/smh2019/index.html>.

In Memoriam

Morris MacGregor 1932-2018

Morris MacGregor, 86, a writer and historian who wrote about race relations in the armed forces and in the Catholic church, died April 14, 2018 at a hospital in Lanham, Maryland.

Mr. MacGregor, a resident of Mitchellville, Maryland, was born in Washington. He retired in 1992 as acting chief historian of the Army Department after thirty years of service. His major works were *Integration of the Armed Forces, 1940-1965* and *Race Relations in the Armed Forces*. In retirement, he wrote *The Mother Church of Black Catholics in Washington*, about St. Augustine Church. He also wrote a biography of the late Washington Archbishop Patrick Cardinal O'Boyle.

Guidelines for Contributors

We seek quality articles—based on sound scholarship, perceptive analysis, and/or firsthand experience—which are well-written and attractively illustrated. The primary criterion is that the manuscript contributes to knowledge. Articles submitted to *Air Power History* must be original contributions and not be under consideration by any other publication at the same time. If a manuscript is under consideration by another publication, the author should clearly indicate this at the time of submission. Each submission must include an abstract statement of the article's theme, its historical context, major subsidiary issues, and research sources. Abstracts should not be longer than one page. Manuscripts should be prepared according to the Chicago Manual of Style (University of Chicago Press). Use civilian dates (month, day, year) and either footnotes or endnotes may be used. Because submissions are evaluated anonymously, the author's name should appear only on the title page. Authors should provide on a separate page brief biographical details, to include institutional or professional affiliation and recent publications, for inclusion in the printed article. Pages, including those containing illustrations, diagrams or tables, should be numbered consecutively. Any figures and tables must be clearly produced ready for photographic reproduction. The source should be given below the table. Notes should be numbered consecutively through the article with a raised numeral corresponding to the list of notes placed at the end. Submissions may be submitted either by mail or via email. Email is generally the norm. While Microsoft Word is the most common, any word processor may be used. Photographic illustrations are greatly appreciated. There is no restriction on the file format used. There is no standard length for articles, but 4,500-5,500 words is a general guide. Manuscripts and editorial correspondence should be sent to Richard Wolf, Editor, c/o Air Power History, 3043 Sunny Ridge Drive, Odenton, MD 21113, e-mail: airpowerhistory@yahoo.com.

June 4, 2018

Re: *Red Markers* Book Review

I was pleased to read Jerry Martin's review of *Red Markers, Close Air Support for the Vietnamese Airborne, 1962-1975* in the Summer 2018 edition of *Air Power History*. http://www.afhistory.org/wp-content/uploads/Summer2018-Issue_All-1.pdf The forward air control detachment using the call sign Red Marker was unique in that it fought in all four combat tactical zones...wherever the Airborne Red Berets and their Army advisors in MAC-V Team 162 (known as Red Hats) deployed.

It may interest your readers that we recently learned an aircraft flown by the unit has been on static display for years at the main gate of Shaw AFB, SC, where it was stationed after returning from Vietnam. Once informed about the plane's combat history, Shaw personnel helped get the plane repainted in its Southeast Asia battle dress. On May 4, 2018, coincident with a reunion of the Army and Air Force veterans who supported the Airborne, we rededicated O-2A #68-10962 to all Red Markers, Red Hats and Red Berets. Shaw AFB published an article about the event at <http://www.shaw.af.mil/News/Article-Display/Article/1514933/skymaster-relives-glory-days-at-shaw/>

Very respectfully,

Gary N. Willis
Red Marker 18
redmarker181969@yahoo.com

Operation Bolo-First Letter

I really enjoyed William Head's discussion on Robin Olds and the Bolo operation—any discussion on Olds is a good one. I followed him in into the Wolfpack and later was an instructor pilot at George AFB after Olds retirement and when he visited as the speaker at a class graduation. This I believe was Olds first official visit to an Air Force base after his 'encouraged' retirement and after what we were told was a forced cooling off period encouraged by senior Air Force leadership. Let me say this about Olds—he was physically big—but in person he was imposing beyond size—he was a *Viking!* His presentation was shock and awe—all of the IPs were veterans of the Vietnam Air War—most of the students were fresh out of pilot training and still learning of the operation Air Force—we loved it. Even the wives were caught up

in the spirit of the evening. It was a good night—one I will never forget, and one that I wish today's warrior men and women could experience.

I have another story of Olds—second hand but related to me by a flight surgeon I served with at Ubon and who knew Olds well. You may have seen a documentary TV show filmed at the Air Force Museum where Robin was in the cockpit giving an interview in Scat XXVII. If you look closely you can detect body movement below the sill of the cockpit not related to the interview. My friend saw Robin at a symposium and asked him what was going on. Olds replied, "I had a screwdriver and was removing the clock—it's my GD clock and it doesn't belong in a museum!" True—I believe so—I sure hope so.

A few notes on the Bolo article—There are several comments about the F-105 being slower than an F-4. I believe this is true in terms of top end speed, but trust me, there are many, many, Phantom drivers that have seen a Thud walk away from them in target ingress and certainly when the Thuds were "going a thousand miles an hour" heading off target.

—There is a comment about striking at the core of Hanoi's infrastructure. True in many ways, but airfields and SAM sites were on and off denied targets. Vigorous prosecution of the NVA air defense system would have enabled more effective and efficient attack of infrastructure, maybe, maybe, leading to an early and more favorable end of hostilities.

—I am still trying to visualize an "inverted barrel roll"—maybe it would be a common maneuver in a P-38 but other than a last ditch maneuver not something routinely exercised due to the relatively low negative G available.

—A comment regarding the MiG-21 being a nimble and effective high-speed, nearly all-weather interceptor is close but no cigar. Anyone with only an IR missile can't be called nearly all weather capable.

- About ECM on Phantoms, and only when you were flying with nuclear weapons. Setting alert yes—but I know of no occasion when a Phantom actually flew with nuclear weapons aside from missions to certify carriage on the jet.

I had the great privilege of flying with and being trained by some of the Bolo players: Wetterhan, Radeker, Dunnigan, and Glynn. I am grateful for what they did on Bolo and what they gave back as leaders and instructors—they did Robin proud.

Thanks for a great magazine and very worthwhile stories!

Steve Mosier, Colonel (ret) USAF

Operation Bolo-First Letter

I enjoyed all the articles in the summer issue, alerted by my colleague Theo Van Geffen since we share an interest in Thanh Hoa Bridge (the subject of an upcoming book I'm completing with Steve Coonts.)

Regarding Bolo planning:

I got to know Robin tolerably well during my tenure as secretary of the American Fighter Aces Association and thereafter. During his first tour of the late-great Champlin Fighter Museum here in Arizona, I showed Robin the 30-plus aircraft from WW I onward, including three MiGs. (Sidebar: late-late one night or maybe early-early one morning he said "A MiG-21 pilot at Phuc Yen was the best flying job in the world. If I'd been one of them I'd have got 50 of us.")

Discussion turned to Bolo, and he said something I've never seen in print or heard elsewhere. He said Bolo's inspiration was Hannibal's classic battle of encirclement at Cannae, 216 BC. Thus he envisioned Bolo as a planned annihilation raised to the third dimension.

Congratulations on your excellent publication. I'm reminding my aviation e-mail list to check in periodically.

Sincerely,
Barrett Tillman
Mesa AZ

A Tale of Two Commanders

I wanted to point out a mistake in the last sentence of the first paragraph, which mentions the 332nd Fighter Group and the 477th Bombardment Group as "the only two black flying organizations in the American military services during the war." The statement is not true, since each of the four squadrons assigned to each of the two groups was also a black flying organization: the 99th, 100th, 301st, and 302nd Fighter Squadrons, and the 616th, 617th, 618th, and 619th Bombardment Squadrons. There were, in fact, ten black flying organizations in the American military during World War II, two groups and eight squadrons. I believe the problem was that my original "the only two black flying groups" must have been changed in editing to "the only two black flying organizations," which made the statement inaccurate. Daniel L. Haulman

Editor's Note: Our apologies to Dan Haulman for the inadvertantly introduced error in editing.

Robert L. Martin 1919-2018

Robert L. Martin, a combat pilot who said he flew “63 and a half” missions during World War II as part of the barrier-breaking Tuskegee Airmen, was shot down over German-occupied territory on the 64th and spent five weeks trying to return to Allied lines with the help of Josip Broz Tito’s anti-fascist Yugoslav partisans, died July 26 at a senior living center in Olympia Fields, Ill. He was 99. The cause was pneumonia, said his daughter, Gabrielle Martin.

Mr. Martin, known as “Fox,” grew up in Iowa and became entranced by airplanes when he attended an air show as a 13-year-old Boy Scout. He persuaded his father to let him take a ride on a Ford Trimotor. “And the pilot, after starting the engine, buckled me in, he touched me with a wire and shocked me, and he said, ‘You’re going to be a pilot,’” he remembered in a video interview for the Experimental Aircraft Association, a Wisconsin-based international association promoting recreational flying. During college, Mr. Martin completed a civilian pilot-training program, joking that for a small fee “you could get silver wings and get all the girls.”

War was raging when he graduated from Iowa State University. He joined the Army Air Forces and trained at the segregated military complex in Tuskegee, Ala., in January 1944. With the rank of lieutenant, he immediately set sail for Italy and was attached to the 100th Fighter Squadron, which helped provide cover for Allied bombers on missions over targets in Europe.

On March 3, 1945, he was one of 24 Tuskegee Airmen who climbed into their single-seat P-51 Mustang fighters from their base in Ramitelli, Italy, to conduct a rail-strafting mission in parts of Slovenia and Austria. Two pilots did not return — Mr. Martin and Alphonso Simmons.

“We flew over this airfield where there was no opposition,” Mr. Martin said in 2008 at Chicago’s Pritzker Military Museum & Library, according to the St. Louis Post-Dispatch. “We saw two airplanes parked a little bit off the field, and we said, ‘We’ll get more credit for destroying two airplanes than shooting up a railroad train.’ We went in to shoot up these planes.”

Mr. Martin and Simmons were hit by anti-aircraft fire. Simmons was killed. “I said, ‘I’m not going to fry, I’m going to get out of here,’” he recalled in the Pritzker talk. “I got up high enough to bail out and my beautiful parachute opened and knocked me out — cut my chin open and floated me down to earth.”

He was spotted by members of Tito’s partisan forces, which controlled swaths of Yugoslav territory; Tito became Yugoslavia’s postwar Communist strongman. Taken to a farmhouse, Mr. Martin was greeted by one of Tito’s men as a “warrior on the side of the Allies,” he told the Experimental Aircraft Association. “The guy fried me an egg and gave me a glass of grappa when he found I was hungry, and just told me to sit and wait.”

On March 10, he was taken to Topusko, Croatia, where he met with an Allied mission manned by British soldiers that helped downed Allied airmen. Because Topusko had natural hot springs, Mr. Martin said, it was the ideal place for recovery.

“They could take a bath in the natural hot spring bath house, get rid of all the lice and dirt and whatever, and they had clean uniforms, shoes, food to feed them, whisky, candy, books, a safe house, there was meat and flour and all types of foodstuffs dropped in by parachute to help these downed Allied airmen,” he said to the Experimental Aircraft Association.

After a month, he was airlifted to Bari, Italy, and weeks later he celebrated V-E Day in Naples. He soon embarked on a ship for home.

Robert Leander Martin was born in Dubuque, Iowa, on Feb. 9, 1919. His mother, a homemaker, died shortly after he was born. His father was a foot doctor. He graduated from Iowa State University in 1942 with a bachelor’s degree in electrical engineering. After his military discharge in September 1945 at the rank of captain, he became an electrical engineer with the city of Chicago and retired in 1988.

His decorations included the Distinguished Flying Cross, the Purple Heart and seven awards of the Air Medal. He was among the recipients of the Congressional Gold Medal at a 2007 ceremony honoring the Tuskegee Airmen.

Survivors include his wife of 68 years, the former Odette Ewell, of Chicago; four children, Gabrielle Martin of Denver, Noelle Martin of Chicago, Dominique Martin of Olympia Fields and Robert Martin Jr. of Plymouth Meeting, Pa.; a sister; and two grandchildren.

Reunions

Strategic Air Command Airborne Command and Control Association (SAC ACCA) Sep. 12–15, 2018, Courtyard by Marriott, Omaha South, Bellevue at Beardmore Event Center, Bellevue, NE. Contact:
Norma Kathman
402-250-7065
norkath@cox.net

6th Air Reserve Transportation. Sep. 21-23 2018, Fairborn, OH. Contact
Ken Byrd
105 Moultrie Lane
Aberdeen NC 28315
(703) 623-2538
kabyrdconsulting@aol.com

18th Fighter Wing Association. Oct 17-20, 2018, Fairborn, OH. Contact:
John Gearheart
16578 State Highway 155N
Ore City, TX 75683
(903) 931-1629
John.gearheart1629@gmail.com

34th Tactical Fighter Squadron 50th Anniversary May 7-11, 2019, Fairborn, OH Contact:
Jake Shuler
214 Hive Road
Glennville, NC 28736
(828) 743-4285
jake_usaf64d@yahoo.com

38th Tactical Recon Sqdn. Oct 3-6, 2018, Dayton/Fairborn, OH Contact:
Greg Hartley
4304 Beaumont Ct,
Fairfax, VA 22030
571-238-6273
pghartley@hotmail.com

40th/469th Tactical Fighter Squadrons May 2-5, 2019, Fairborn, OH Contact:
Carl Smith
376 Towncrest Drive
Beavercreek, OH 45434
(937) 306-8371
carl7389@att.net

376th, 451st, 455th, 460th, 461th, 464th, 465th, 484th, 485th Bomb Groups. Sept 13-16, 2018, Dayton, OH. Contact:
Dave Blake
648 Lakewood Road
Bonner Springs, KS 66012
(913) 523-4044
reunion@461st.org

384th Bomb Group. Oct 17-21, 2018, Fairborn, OH. Contact:
Frank & Carol Alfter
1306 Adams Way
Beavercreek, OH 45434
(937) 306-2142
fjalfter@gmail.com

656th Radar Squadron. Sept 10-12, 2018, Fairborn, OH. Contact:
John Tianen
7041 E. Calle Tabara
Tucson, AZ 85750
jtianen@earthlink.net

B-47 Stratojet Association. Sep 18-20, 2018, Omaha, NE. Contact:
Dick Purdum
13310 S. 26th Ave
Bellevue, NE 88123-1909
402-291-5247
dickpurdum@cox.net

Air Force Academy Class of 1959. Sept 19-23, 2018, Fairborn, OH. Contact:
Jim Brown
7400 Crestway Drive
San Antonio, TX 78239
(210) 699-3318
jimbrown59@earthlink.net

Spectre Association. Oct 4-7, 2018, Fairborn, OH. Contact:
Bill Allen
2600 Windsor Lane N
Ft Walton Beach, FL 32547
(850) 865-1207
wrallenrealtor@gmail.com

Troop Carrier/Tactical Airlift Assn Oct 11-13, 2018, Fairborn, OH Contact:
Mike Welch
1002 - 17th Street
Hermosa Beach, CA 90254
(310) 944-8089
mikewelch333@gmail.com
www.troopcarrier.org

AC-119 Gunship Association XIX Reunion October 10-14, 2018, Tuscon, AZ All are welcome who maintained, flew, supported — friends, family and “anyone whose bacon we saved” Contact:
Everett Sprou
ac119gunner@hotmail.com
ac119gunships.com

Vietnam/Thailand Air Force “Sky Cops” Apr 25-28, 2019, Fairborn, OH Contact:
Pat Houseworth
540 West Livingston Street
Celina, OH 45822
(419) 586-3076
pathouseworth@gmail.com

TAC Tankers May 26-29, 2019, Fairborn, OH Contact:
Natalie Hill
2091 Sussex Road
Winter Park, FL 32792
(407) 951-7195
natnoles38@gmail.com

Nakhon Phanom RTAFB Jun 6-9, 2019, Fairborn, OH Contact:
Barry Rowland
3659 Lake Bluff Drive
Sherrills Ford, NC 28673
Phone: (941) 779-6119
barrydrowlandksu77@gmail.com

12th Tactical Fighter Wing May 6-9, 2020, Dayton/Fairborn, OH Contact:
William Cathey
1555 Horizon Blvd
Kerrville, TX 78028
(830) 370-3386
whectc@aol.com

Air Force Security Force Assn Meeting #34 Aug 27-30, 2020, Dayton/Fairborn, OH Contact:
Jon Probst
P.O. Box 683,
Helotes, TX 78023
(505) 414-2166
jprobst@msn.com

List provided by:

Rob Bardua
National Museum of the U.S. Air Force
Public Affairs Division
1100 Spaatz Street
WPAFB, OH 45433-7102
(937) 255-1386



The *Escadrille Américaine*, N. 124 was formed in April 1916, and flew its first mission in May 1916. Initially, the unit had seven American pilots. While the French military did need more pilots, the main benefit of creating the unit was political as it provided propaganda demonstrating French and American bonds. The letter in the squadron designation indicated the type of aircraft the unit flew. In this case, the “N” represented Nieuport aircraft. The unit first flew the Nieuport 11 and later transitioned to flying the Nieuport 17.

In December, 1916, concerns over the United States’ neutrality led to the unit’s name being changed to the *Lafayette Escadrille*, in a veiled attempt to mask American involvement in the war. The new name served as a tribute to the Marquis de Lafayette, who fought with General George Washington during the American Revolutionary War. Shortly after the unit’s name change, the *Lafayette Escadrille* transitioned to the SPAD VII; resulting in the unit designation changing to SPA 124. The *Lafayette Escadrille*’s aircraft are easily recognized by the Lakota Sioux Warrior in full Indian headdress Squadron insignia. The insignia was created by unit pilot Ed Hinkle, after the unit pilot’s decided that the earlier insignia of a Seminole Indian did not look fierce enough.

Thirty-eight Americans ultimately would fly as mem-

bers of either the *Escadrille Américaine* or *Lafayette Escadrille*. The *Lafayette Escadrille* pilots would shoot down fifty-seven aircraft. Five of the pilots would become aces during the War. (Raoul Lufbery—pictured on the question page—was the only pilot to become an ace while serving in the *Lafayette Escadrille*.) While only thirty eight American’s flew as part of the *Lafayette Escadrille*, 143 pilots flew in other French units.

In 1917, the United States entered the war, ultimately clearing the way for the *Lafayette Escadrille*’s transfer to the United States military. That transfer happened on February 18, 1918, when the *Lafayette Escadrille* became the 103rd Aero Squadron of the Air Service, American Expeditionary Force.

To learn more about the *Lafayette Escadrille* go to:

<https://media.defense.gov/2010/May/26/2001330298/1-1/0/AFD-100526-048.pdf>

<https://www.nationalmuseum.af.mil/Visit/Museum-Exhibits/Fact-Sheets/Display/Article/197457/escadrille-america/>



Test your knowledge of Airpower history by trying to answer this quarter's history quiz. Since the goal is to educate and not merely stump readers, you should find the multipart question, challenging but not impossible. Good Luck

November 2018, marks the 100th anniversary of the end of World War I, the War to End all Wars. World War I was the first war where aircraft were employed in large numbers. While the United States as a nation entered the War in April 1917, almost three years after the war started, many American's travelled to Europe and volunteered to fight for the Allied powers. The French military organized a flying unit comprised of American's who volunteered to fly and fight for the French. What is the second more commonly remembered name given to this largely American flying unit that flew for the French *Aéronautique Militaire*? For a bonus, what was the unit's first name?

The monument with the B-52 flying over it is a memorial to this unit.



Air Force *Historical* Foundation
P.O. Box 790
Clinton, MD 20735-0790



To: Air Force *Historical* Foundation
P.O. Box 790
Clinton, MD 20735-0790

Visit Us Online at:
www.afhistory.org



Know the Past,
Shape
the Future



A I R F O R C E H I S T O R I C A L F O U N D A T I O N M E M B E R S H I P F O R M

NAME _____ PHONE _____ E-MAIL _____

STREET ADDRESS _____ CITY _____ STATE _____ ZIP _____

- Associate Membership (\$25/year) (on-line magazine access)** (Visit our Web site at www.afhistory.org)
 - Sustaining Membership (\$45/year)** GIFT FOR (NAME) _____
 - Gift Membership (\$45/year)** ADDRESS _____
 - Life Membership (Inquiries to the Foundation)** CITY _____ STATE _____ ZIP _____
- Become a Patron or Contributor (Please ask)**

* Non-US recipients please add \$8.00 for postage (See Web site for additional membership options)

- Check enclosed, payable in US Funds to Air Force *Historical* Foundation**
- Please charge my credit card (VISA/MasterCard/Discover)**

CARD NUMBER: _____ EXPIRATION DATE: _____

SIGNATURE: _____ DATE: _____

Send form, along with your remittance to:
Air Force *Historical* Foundation
P.O. Box 790
Clinton, MD 20735-0790

