

Welcome new members!

Spring 2025

THE RAIDER CHRONICLES

IN THIS ISSUE



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THE AFHF Newsletter is a quarterly e-mail newsletter by the Air Force Historical Foundation, a private non-profit organization dedicated to preserving the history and traditions of American air and space capabilities.

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President's

Corner Always Looking Up

Robert Arnold

Dear Members of the Air Force Historical Foundation,

Welcome to the Spring 2025 issue of The Raider Chronicles. Many thanks to our contributors this month: Jeremy Kinney, Frank Willingham, and Pepe Soto.

June 6 marked the 81st anniversary of the D-Day Normandy Invasion. Each year, this always brings to my mind Hap Arnold's December 27, 1943, New Year's Message to Ira Eaker and the 8th Air Force.

"It is a conceded fact that Overlord and Anvil will not be possible unless the German Air Force is destroyed.

"Therefore, my personal message to you --- this is a MUST – is to, destroy the enemy air force wherever you find them in the air, on the ground and in the factories."

This was also clear to General Dwight Eisenhower.

Late in June, standing on a bluff overlooking the Normandy Beaches with his son John (by then a new West Point Graduate), the pair looked down at the huge logistical operation unfolding below them. Lt. John Eisenhower commented to his father that if there wasn't air supremacy this could not be happening.

Ike replied, "If I didn't have air supremacy, I wouldn't be here."

On May 22, I had the honor of succeeding my good friend Jonna Doolittle Hoppes as President of your Foundation. I'm looking forward to continuing her excellent work and to enlarging and enhancing the many wonderful programs and goals of the Foundation. I plan to seek more opportunities and new pathways to share the rich history of the United States Air Force, the Space Force, and its predecessors.

To ensure we continue to provide quality content in our newsletter each year, we will start publishing the newsletter on LinkedIn with the next (Summer) issue. If you have a LinkedIn account, you can subscribe to the newsletter. If you don't want to subscribe or don't have a LinkedIn account, you can access the newsletter via a link that we'll send out and post on our website as we do now. We're also going to scale back on the amount of material provided in each newsletter. These changes will allow us to increase the frequency of our issues, with the goal of publishing them monthly within the next year.

Quiz



Courtesy USAF

On 17 June 1941, Jacqueline Cochran departed Canada to deliver a bomber to the RAF, becoming the first woman to ferry a military aircraft across the ocean. What type of bomber was it?

- a. Lockheed Hudson
- b. Martin B-26 Marauder
- c. North American B-25 Mitchell

Answer on last page of the newsletter.

Fun/First Photo of the Month

A section dedicated to photos of first flights of aircraft/spacecraft and fun air & space events



From Robert Arnold: In the early 50s, we were stationed at Canaveral. Pop was an early member of Benny Schriever's gang. They partied hard in those days. Costume parties were a big thing. Here is a photo of Mom and Pop at one of them in "Flash Gordon" outfits.

Submit quiz ideas or suggested photos to <u>newslettereditor@afhistory.org</u>

The Wright Propellers

Jeremy R. Kinney



Propeller from the 1903 Wright Flyer on display at the National Air and Space Museum (Courtesy NASM)

old Un the morning of December 17, 1903, the world's first successful aerial propellers took to the air on the Wright Flyer. A propeller is a series of twisted airfoils, or blades, that convert the energy supplied by its power source through helical motion. The blades, connected to a central hub, strike the air at a certain angle, called pitch, and generate thrust by creating an area of high pressure behind the propeller, which pushes the airplane forward. The idea of the aerial propeller dates back to the helical screw concept of the fifteenth century inventorphilosopher Leonardo da Vinci. By the late nineteenth century, experimenters rejected power transmission devices such as flapping wings, oars, and paddle wheels in favor of the propeller.

Wilbur and Orville Wright used their "mind's eye," or non-verbal thinking, to envision the airplane as a synergistic technical system based on the four sciences of flight-aerodynamics, control, propulsion, and structures-during the process of creating their historic Flyer. Within Wrights theorized, that framework, the designed, and constructed the world's first practical fixed-pitch aerial propeller and the aerodynamic theory calculate to its performance. Wilbur believed that studying the design of ship propellers would help them design their aeronautical propeller, but they quickly realized that no formal theories for such designs existed. It was left to them to establish such theoretical work. After many heated engineering discussions, Wilbur and Orville realized that a propeller was simply a rotating, twisted wing moving in a helical path. As a result, the brothers used airfoil data calculated from their wind tunnel to design blades able to convert the energy of their twelve-horsepower

engine into thrust. Using a drawknife and hatchets, they carved and shaped the propellers from two-ply spruce wood, covered them in linen, and sealed them with aluminum powder mixed in varnish. The two original Wright propellers, once connected to the engine via a chain-and-sprocket transmission system, were 66 percent efficient--good enough to get the Flyer off the ground at Kitty Hawk. Wilbur and Orville went on to improve the design of their propellers. Their 1908 and 1909 propellers featured a swept-back leading edge, which the described as "bent end." Wrights а configuration that generated approximately 75percent efficiency. Such unprecedented 80 performance, surprisingly, was not realized again until the 1930s. The pioneering knowledge the Wrights gained during their process of invention was lost on successive generations until the rise of professional aeronautical engineering during World War I.

The Wright propellers did possess limitations related to their configuration and construction materials. Their fixed-pitch configuration was simple in operation, efficient for one operating regime, and gave adequate performance for aircraft that operated at low altitudes. Wilbur and Orville constructed them from wood because the material was strong, light, and easy to fabricate. For propellers to be efficient contribute the enough to to overall performance and military mission of the airplane over the course of the twentieth century, engineers needed to develop a metal variable-pitch propeller, which allowed the pitch angle at which each propeller blade rotated through the air to vary according to different flight conditions. Metal construction ensured the propeller survived extreme environmental



Wreckage of the Wright Flyer that took the life of Lt. Thomas E. Selfridge (Courtesy National Archives and Records Administration)

conditions, but it was much more difficult to hand-work than wood. The Wrights never experimented with variable-pitch and they rejected metal as a propeller construction material because their fixed-pitch wood propellers delivered exceptional performance for their designs.

Orville traveled to Fort Myer, Virginia, near Washington, D.C., in September 1908 to demonstrate a Wright airplane to the American military. Tragedy struck when one of the bentend propellers failed in flight. In the ensuing crash, Orville was seriously injured and his passenger, Lt. Thomas E. Selfridge, was killed becoming the first passenger fatality in an airplane accident. Orville would recuperate and return a year later with the Military Flyer, which became the American military's first powered flying machine. Despite those setbacks, the importance of the Wrights' invention of the aerial propeller cannot be overestimated. The Wright's twisted, rotating wing propeller was a significant step above the flat plates of previous propeller experimenters. The combination of the aerial propeller and the reciprocating internal combustion piston engine, perfected by Wilbur and Orville, was the main form of propulsion for the first fifty years of heavier-than-air flight.

> Jeremy Kinney is the Associate Director for Research, Collections, and Curatorial Affairs at the National Air and Space Museum. He has a PhD in history form Auburn University.

Announcement



AFHF has returned to publishing important USAF history. We are proud to announce the AFHF/AU Press Joint Imprint Project. The first project, *A Few Great Captains*, by Pete Copp, was released on 22 May and is available to download at no cost on the AFHF website. A limited run print version was published late May 2025. This imprint includes a new foreword, afterword, completely revised photo essay, and Copp's research and reference notes (excluded from the original by the publisher). Looking forward: The second volume in the series, *Forged in Fire*, examines the Army Air Corps during WW II, picking up where *A Few Great Captains* left off. Stay tuned for that announcement!

Free digital copy: https://afhistory.org/wp-content/uploads/2025/04/B_185_Copp_A_Few_Great_Captains-1.pdf

Copp's Research Notes and Finding Aid: <u>https://afhistory.org/wp-content/uploads/2025/04/B_185_Finding_Aid.pdf</u>

Active duty and retired military can request a print copy by sending an email to: airuniversitypress@au.af.edu SUPPLIES ARE LIMITED

Book Review

(Reprinted from Journal of the AFHF / Summer 2025)



Visual Friendlies, Tally Target: How Close Air Support in the War on Terror Changed the Way America Made War, Volume I: Invasion. By Ethan Brown. Barnsley UK: Casemate Publishers, 2024. Glossary. Notes. Bibliography. Index. Pp. 254. \$42.95. ISBN: 978-1-63624-422-8

Brown is an Air Force veteran who served 11 years as a special-warfare Tactical Air Control Party (TACP) specialist. He deployed to multiple warzones during the Global War on Terror (GWOT), working with conventional and Joint special operations teams. He is a Bronze Star recipient. Since leaving the service in 2020, he has worked as a policy analyst for a Washington think tank and has contributed to a variety of national security publications.

This book offers an in-depth exploration of the evolution and critical role of close air support (CAS) during the early years of the GWOT. Drawing from his tenure as a TACP specialist, Brown provides a detailed narrative that combines historical analysis with firsthand accounts that shed light on the complexities and significance of CAS in modern warfare. The book has three main parts, each focusing on a distinct phase of the early GWOT:

Retribution (Afghanistan: 2001-2003) delves into the initial US military response in Afghanistan, highlighting the challenges faced in a terrain historically resistant to foreign intervention. Brown discusses the integration of CAS in operations against terrorist networks, emphasizing the pivotal role of Forward Air Controllers (FAC) in directing precise airstrikes. invasion of Iraq. Brown examines the strategic shift and implementation of "shock and awe" provides insights into tactics. He the coordination between ground forces and air support, illustrating how CAS was instrumental in rapid advances and in confronting unexpected insurgencies.

Evolving the Machine (2004-2006) addresses the adaptation and refinement of CAS tactics in response to evolving combat scenarios. Brown explores the development of a global architecture for joint fires, the psychological reslience of FACs, and the technological advancements that enhanced the effectiveness of air-ground coordination.

While describing the integration of air and ground operaitons, Brown emphasizes the seamless collaboraiton between air assets and ground troops (facilitated by FACs) which was critical in achieving tactical successes in both Afghanistan and Iraq. He covers technological advancements--highlighting the transition to digitally aided CAS--that improved precision and reduced collateral damage. Through personal anecdotes and interviews, Brown captures the experiences, challenges, and heroism of the individuals who served as the linchpins between air and ground operations.

While this is a comprehensive account that offers valuable insights into CAS's role in contemporary military operations, it was a difficult read. A non-TACP specialist will spend much time with the inadequate glossary trying to obtain full meaning of much of the narrative. "We would get get CAS by contacting CJSOTF-N, we would then prioritize requests and submit those directly to the CAOC, who had allocated assets against the entire invasion force's prioritized requests" is tough to decipher. However, Brown's professional expertise makes this work an interesting read, especially for military professionals and historians interested in understanding the intricacies of modern combat dynamics.

A New World War (Iraq: 2003) transitions to the

Frank Willingham is a docent at the National Air and Space Museum.

Click here to see books by AFHF members

When I Served

Maj. John "Pepe" Soto, USAF (Ret.)





Unit: The Strategic Weapons School (SWS)

Unit dates: The SWS stood up in June of 1988. It was integrated into the USAF Weapons School in August of 1992, during the drawdown of SAC and the movement of tankers to the newly named Air Mobility Command (formerly MAC), and bombers into the newly formed Air Combat Command (formerly TAC).

Dates I served in unit: May 1988 - June 1992

My unit memories: I was the chief of intelligence and part of the initial cadre for the SWS, which was part of the newly formed 99th Strategic Weapons Wing, based at Ellsworth AFB, South Dakota. At that time, SAC had a SAC Tactics School at Nellis AFB, Nevada. The SAC commander, Gen. John Chain, saw the need for a formal flying course to ensure SAC aircrews were equal to their fighter brethren in TAC's Fighter Weapons School (FWS) and the Navy's Top Gun and Strike "U" (University), which was the Strike version of the 'Gun. The SWS initial cadre came from B-52 units with a conventional mission, which were the wings at Loring AFB, Griffiss AFB and Anderson AFB. The intel cadre came from personnel with strong fighter and adversary threat backgrounds.

Being on the team setting up the B-52 division and then the B-1 division was a great experience and a lot of work building a Weapons Instructor Course from scratch, especially in regards to bringing a tactical mindset to SAC. We had the added issue that the school wasn't popular with many in SAC. But the SAC DO, Maj. Gen. John Borling, was 100% behind the school and became our lead advocate. We also developed a great relationship with the FWS, who welcomed us with open arms and shared much of their courseware with us, which was invaluable in helping us meet our aggressive timeline. We validated our course during classes 89C and 90A, and graduated our first non-cadre students in 90B.

A funny thing happened during the end of our first real class when Saddam Hussein invaded Kuwait. During our graduation exercise I was informed SAC wanted a bomber weapons intelligence officer deployed to Diego Garcia, and I was the closest thing resembling that in the Air Force. A week later I was on Diego as we got ready for war. After a few months I was moved to the CAOC in Riyadh as we started pivoting from Operation Desert Shield to Desert Storm.

In January, the rest of the B-52 weapons school cadre deployed to augment the small number of SAC crews who were considered conventional qualified. It was the only weapons school division to close down for the war! Our students and instructors had exemplary performance in combat, and it gave them the credibility one can only get from combat. We modified a lot of our courseware based on what we learned from the war. Right away the Strategic Weapons School made a difference and never looked back.

Current unit status: With the integration of the SWS into the USAF Weapons School, the two courses have evolved into the B-52 and B-1 divisions of the 340th Weapons Squadron (B-52) at Barksdale AFB, and the 77th Weapons Squadron (B-1), at Dyess AFB.



Forgotten History

Eileen Bjorkman

I love reading old magazines and newspapers to discover all sorts of history that has been mostly forgotten about. I've long been fascinated by the amount of aviation record-setting that occurred in military aircraft in the 1950s and 1960s. This was especially true of a series of records set by the

Convair B-58 Hustler, which smashed 19 world speed records, more than any fighter or bomber aircraft in the world. And these speed records weren't set with stripped-down aircraft flown by test pilots; they were set by operational crews flying aircraft from operational bomber squadrons. A few highlights:

Six records were set during one flight on 12 January 1961, at Edwards AFB by an aircraft and crew from Carswell AFB, Texas, carrying a payload of 2,000 kg, which which allowed for speed records in three categories at once: no payload, 1,000 kg, and 2,000 kg over a 1,000 km course and then flying another 1,000 km to set the records for 2,000 km. The 1,000 km course speed was 1,200 mph, totally obliterating the previous 700 mph set by an F-101 in April 1959. The somewhat slower speed of 1,062 mph over the 2,000-km course was still faster than the previous Russian record of 596 mph.

The B-58 crew consisted of pilot Maj. Henry J. Deutschendorf, navigator-bombardier Capt. William L. Polhemus, and defensive systems operator Raymond R. Wagener. An interesting sidenote is that Maj. Deutschensorf's son later became the famous singer John Denver after changing his name. Just two days later, on 14 January, another Carswell crew broke those records, achieving 1,285 mph.

Why set speed records in the first place? It was the height of the Cold War, and the records sent a message to the Soviet Union. Gen. Thomas S. Power, the commander of Strategic Air Command, explained: "... it has dramatically proved the capabilities of SAC's first operational supersonic bomber. The combat-ready SAC crew which achieved these marks has vividly demonstrated that the B-58 may be counted on to conduct successful bombing missions against enemy targets in the event of war."

A B-58 round trip across the United States on 5 March 1962 aet another record: 4 hours, 42 minutes, 32 seconds. The crew of Capt. Robert G. Sowers (pilot), Capt. Robert McDonald (navigator-bombardier) and Capt. John T. Walton (defensive systems operator) flew from Los Angeles to New York in 2 hours, 1 minute, 39 seconds, including one refueling in the middle of the country. After refueling again over the Atlantic, the crew flew back to Los Angeles in 2 hours, 15 minutes, 12 seconds.

The B-58 reportedly left a 40-mile-wide trail of sonic booms as it traversed the country, cracking windows and plaster walls along the way. The Air Force had anticipated some backlash. During preevent publicity, the Air Force didn't say who might pay for any damages but called the booms "the sound of freedom" and reminded Americans that the noise was essential or they "might not live at all."

Col. Eileen Bjorkman, USAF (Ret.), served 30 years as a flight test engineer, squadron commander, and staff officer. She is editor of The Raider Chronicles and serves as the FTHF Treasurer.

Submissions

Please send submissions to newslettereditor@afhistory.org

Feature Articles: 800 - 1,000 words. Submit full articles or ideas to editor.

Book Reviews: Less than 500 words. In addition to traditional airpower and aviation history books, we welcome young adult and children's books with aviation themes.

Ask a Researcher: Submit questions or let us know if you would like to answer questions.

When I Served: Answer the five questions and submit. We are interested in anyone who has served or is serving in any USAF or USSF unit at any time. Family members are also encouraged to submit their memories.