TOPEKA REGIONAL AIRPORT THE OFFICIAL NEWSLETTER OF THE FORBES FIELD, TOPEKA, KS

July-September 2023 Vol. 39, No. 3

oters Courtrooms **By Dennis Smirl**

USEU

John R. Dietrick, local attorney and Vietnam veteran, was the speaker for the April CAM membership luncheon. Having served two tours as a helicopter pilot, John shared his first-hand combat and helicopter experience in a dynamic and fascinating presentation.

John explained the concept of the helicopter war, sharing experiences and insight regarding what went right and what went wrong with the heavy employment of rotary-wing craft in a war fought in a tropical, heavily forested environment.

During his time in the Army, John flew several different types of helicopters. His initial training began on Hiller OH-23

Raven helicopters, much like the Hiller in our hangar 604. Most of this training was at Fort Rucker. Alabama. Following that, John transitioned to the Bell UH-1 Iroquois, a utility helicopter better known as the "Huey."

Once a qualified helicopter pilot, John deployed to South Vietnam, specifically to II Corps. He said that most of the flying he did in that role was transporting combat troops into battle. Later, John transitioned to the Bell AH-1 Cobra attack helicopter and mentioned, with a smile, that the Cobra was air conditioned and. more importantly, provided a

Gene Howerter

Dennis Smirl

Dennis Smirl

Kevin Drewelow

much more comfortable environment than the Huey.

John provided some interesting facts about the Cobra, one of them being how narrow it was and how hard it was to shoot down. On the other hand, the Cobra, which carried a minigun and a 40 mm grenade launcher, among other weaponry, was a formidable machine in a combat environment, and was rarely shot down.

As John went on with his presentation, we learned that during his two tours, he was awarded a Bronze Star along with an Air Medal for heroism, among many other decorations.

Following his service in Vietnam, John returned to plant

roots in Topeka, added to his educational achievements, continued flying helicopters in the Kansas Army National Guard and established a law practice.

John is admitted to the bar in Kansas and Louisiana, is a member of the U. S. Supreme Court, American Bar, Kansas Bar, and the Louisiana State Bar associations.

Following the presentation, John opened the meeting to a short, but very lively question and answer session that provided even more insights into the role of the helicopter in the war in Vietnam.

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Topeka Regional Airport

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PLANE TALK, the official newsletter of the Combat Air Museum of Topeka, Kansas, is published quarterly. *We welcome your comments!* Newsletter Layout by Megan Garner

MUSEUM HOURS

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January 2 - February 28/29 Mon.-Sun. Noon - 4:30 Last Entry Every Day is 3:30 P.M.

March 1 - December 31 Mon.-Sat. 9 A.M. - 4:30 P.M. Sun. Noon - 4:30 P.M. Last Entry Every Day is 3:30 P.M.

Closed New Year's Day, Easter, Thanksgiving, Christmas Day

Your membership is important to us! Join the COMBAT AIR MUSEUM



I have always said June is the fastest month of the year. Suddenly July is here and before we know it, August will appear. The past few months have seen a lot of activity here at the Museum and it appears we will not slow down until the middle of October. Kevin has just completed his second of two Young Aviators classes of the summer. I enjoy hearing many of the students' parents expressing their pleasure with the class, as well as helping where it is needed. Kevin, our Museum Education Director, assisted by many Museum members, has done a superior job organizing and creating activities for this summer's Young Aviators classes. It is great seeing all the youngsters having so much fun as they participate in various class activities.

The Museum will not hold our annual 5K/10K Run/Walk for the first time in the past 19 years. As the number of participants dropped dramatically over the past two years, we decided we would be better off investigating another fundraising activity. We are working with Be Filled of South Topeka, a food bank and clothing closet based at Topeka Regional Airport, to hold a plane-pulling event. Be Filled is registering teams and the Combat Air Museum will provide the venue and aircraft-our Chinook and F-15. Teams will compete over time and distance to determine the winner. Please plan on attending this event Saturday, September 16, 2023. The Museum will open at 9 a.m. for attendees. The event also features music, food, vendor booths, face painting, cotton candy, a balloon artist and lots of excitement.

Other fall events coming up include Girls in Aviation Day and our third annual car show.

Girls in Aviation Day will take place on Saturday, September 23. We will once again partner with The Museum of the Kansas National Guard, our neighbor here at the Topeka Regional Airport. The day will begin at 8 a.m. with activities at the National Guard Museum before moving to the Combat Air Museum at 11 a.m. for aircraft tours and additional fun activities related to aviation. Admission is free at both museums on Girls in Aviation Day.

The Museum will hold its third annual car show on Sunday, October 1. The Topeka Mustang Club organizes the event with all proceeds benefitting the Combat Air Museum. This year's event will be taking place on a Sunday for the first time. The car show hours are 10 a.m. to 2 p.m. I think you will find this car show to be an inspirational way to spend a Sunday. For those who attend church, we will be waiting for you after your service is over. ◆



Taming the Eagle

By Dennis Smirl

Combat Air Museum members who attended the June luncheon met and heard from James M. Means, founder of Rockstream Aviation located in St. Louis, Missouri. In a stimulating hour of facts, many of which were new to us, James talked of his 1970s experiences at Edwards Air Force Base, located in Southern California.

His presentation was very timely, considering CAM's recent acquisition of the seventh prototype of the McDonnell/Douglas F-15A Eagle, serial number 71-0286. The presentation featured 286's role in a critical series of weapons tests.

The number 7 F-15A performed dozens of tests making sure that Raytheon's AIM-7F Sparrow and the AIM- 9E and J Sidewinder missiles could be safely deployed throughout the F-15's speed, altitude, and G-force flight envelope. No other F-15 has ever launched as many AIM-7G Sparrow missiles as number 7 with its 50 live firings.

As part of the presentation, Jim shared a thumbnail history of the development of the F-X fighter, a contract for which several aircraft manufacturers were in active competition. The US Air Force began a study in 1965 which led to the development of the F-15. The goal was the creation of the stealthiest, highest flying, longest ranged, fastest, and hardest hitting aircraft in the history of military aviation.



Jim Means (K. Hobbs photo)

The project culminated in June of 1969 when the Air Force selected the McDonnell Douglas proposal, which topped out at 37,500 pages in 382 volumes, and had taken 2.5 million man-hours to produce. The first F-15A rolled out of the factory on June 26, 1972, meaning that as of this writing, the Eagle is celebrating its fifty-first birthday...and it is still in production!

One aside in the presentation had to do with a high-speed test in which a prototype Eagle exceeded Mach 2.5. During an otherwise normal approach and landing, the pilot noticed that the stripes on the runway looked a bit less than straight. He made a safe landing, the aircraft was inspected, and it turned out that aerodynamic heating had partially melted the windscreen and permanently distorted it. A new windscreen



was installed, and the aircraft went on to more development duties, but with a caution regarding approaching speeds so high that the windscreen melted.

The service life of CAM's Eagle was short, but extremely valuable for the purpose of weapons development. 286 made its first flight on June 14, 1973. arrived at Edwards in July 1973 where it served until November of 1980. It became a ground trainer for mechanics at Chanute Air Force Base in 1982 and then went on display in the base museum in 1994. When the museum closed in 2015, 286 was stored in a hangar near St. Louis but never went on display. The National Museum of the United States Air Force loaned 286 to CAM last year and restoration work continues today.

Jim, Gary Naylor and our Eagle (K. Hobbs photo)



Across Africa with Pan Am

Our guest speaker for a special brown bag luncheon on May 31, 2023 was Tom Culbert, retired Air Force officer and instructor pilot on the Boeing B-52G Stratofortress.

During his 21 years on active duty, Tom spent more than half a decade living in and flying over Africa. To prepare him for that unusual assignment, he was selected as one of a small group of Air Force officers trained as "Africanists." He also served for more than six years in the Pentagon where he worked on Africa policy and planning issues for the Air Force and the Office of the Secretary of Defense, in International Security Affairs.

After retiring from the Air Force in 1991, Tom created Aviation Information Research Corporation (AIRC), an organization that provides information and retrieval services for current and historical issues to leading companies and individuals in all sectors of the aviation industry.



Tom Culbert (K. Hobbs photo)

By Dennis Smirl

Tom is also an author. With his collaborator Andy Dawson, he and Dawson wrote and published "Pan Africa— Across the Sahara in 1941 with Pan Am," a book that covers many aspects of Pan American's commercial services across North Africa during World War II from 1941 forward. Tom informed us that Andy Dawson flew and worked in line and staff positions with Pan Am from 1942 until his retirement in 1982, four decades of service with the airline.

During the presentation, Tom shared a number of facts about the early stages of World War II and the legendary contribution of the airline and its heroic personnel.

Tom's presentation was greatly appreciated and was followed by a short question and answer session and a chance for members of the CAM to thank him for such an interesting afternoon. [Editor's note: see John Plumb's review of Tom's book elsewhere in the issue-kd] ◆

Next Membership Luncheon

By Kevin Drewelow

Our next membership luncheon will be on Monday, August 14. Bring a lunch and be in your seat by 11;30. At noon, retired Air Force Reserve Colonel Dewayne "Farmer" Burgess will speak about his experiences flying the Fairchild A-10 Thunderbolt II, better known as the Warthog. Farmer flew the Hawg for 25 years and amassed 3,000 hours on the A-10 during that time, most of it spent with the Air Force Reserve's 442d Fighter Wing based at Richards-Gebaur Air Reserve Base in Grandview, Missouri and later, Whiteman Air Force Base in Knob Noster, Missouri. He retired in 2006 as the 442d Wing Vice-Commander. ◆



Col. Dewayne Burgess (442d FW photo)



Bell UH-1M Huey gunship...While most of us were busy supporting the pancake feed on April 29, Aaron and Paige Adams were working on our Bell UH-1B Huey gunship. Aaron is a Soldier with the 1-1 Attack Reconnaissance Battalion "Gunfighters" of the 1st Combat Aviation Brigade at Ft. Riley, where he maintains Gray Eagle unmanned aircraft systems. We're delighted to have them join the ranks of Combat Air Museum volunteers!

Boeing CH-47D Chinook...Over a dozen Soldiers of all ranks from Ft. Riley arrived at the Combat Air Museum on Friday, June 30 to help Deb work on our Boeing CH-47D Chinook. The Soldiers are members of Bravo Company, 2nd Battalion, 1st Infantry Division General Support Aviation Brigade. Our Chinook, serial number 85-24346, served in Vietnam, Iraq and Afghanistan and Deb was the crew chief on 346 in Iraq in 2005-2006. Museum volunteers Deb, Danny, Dave, Gary, Terry and Kevin unloaded parts from the Chinook to permit cleaning inside. The Soldiers washed the Chinook's exterior and interior and removed the mold that had been inside. CAM provided lunch for the troops, who plan to return soon to help prepare the rotor hubs and blades for reassembly and installation on the CH-47. We're fortunate to have Chinook professionals take an interest in and help work on our Chinook!



Ft. Riley Soldiers wash the Chinook (K. Drewelow photo)

Lockheed EC-121T...Favorable springtime weather allowed Mike Madden, Ted Nolde and Mike Welch to make a lot of progress on our Warning Star. Their bird-proofing



Aaron and Paige Adams (K. Drewelow photo)

efforts have completely displaced the starlings that have called our Lockheed home for generations! The Two Mikes and Ted did not stop there: they applied the Air Force Reserve insignia and tail numbers on the outside of both vertical fins.

North American F-86D Sabre ejection seat...Our Saturday work crew has been busy with an interesting project. The Museum's F-86H Sabre is missing some parts from its ejection seat, so the fellows who have been assisting Danny San Romani were trying to find a spare seat to use as a parts source. They found someone selling a seat from an F-86D Sabre for \$1100. Gary Smith contacted the seller, told him it was for a museum, and the seller reduced the price to \$800. Gary sent him photos of the volunteers working on the Sabre, and the fellow was so impressed that he agreed to donate the seat to CAM. Steve Kasten met Gary Smith and Joe Wulfkuhle in Kingdom City, Missouri to deliver the seat. It came with the seat cushion which contained a raft and a survival kit, a parachute pack container and some documents. Our volunteers soon discovered the D-model seat differed significantly from the H-model seat, so they have been restoring the D-model seat as a separate project. Danny sourced some replacement shoulder harness and lap belts. The "Sabre Dog" seat will soon join our small collection of other ejection seats. Our thanks to Jonathan Black, Don Dawson, Danny San Romani, Joe Rosenberry, Dennis Smirl, Dominic and Gary Smith and Joe Wulfkuhle for their time spent restoring this worthwhile artifact!





MUSCUM Notes Continued from page 5

"Taps Across America" at CAM...Over 100 people turned out for our annual Taps Across America program on Memorial Day, Monday, May 29. Retired Army Chaplain Colonel Ron Cobb provided the keynote address and retired Air Force Captain Herschel Stroud played "Taps" at 3 p.m. Cadets from the Washburn Rural High School Air Force Junior Reserve Officers Training Corps and the American Legion Post 400 Honor Guard also supported the event.

Signs of progress...Gene Howerter and Dave Murray have been working with Lamar Advertising to improve signage at the Museum. In April, Lamar completed a sign to be installed on hangar 602 on the flight line side. Several volunteers got busy building a frame for the sign: Gene Howerter, Deb Lamere, Mike Madden, Gary Naylor, Ted Nolde and Mike Welch assembled the frame and attached the sign and then installed it above the hangar doors. Knox Signs and Graphics is working on a polymetal sign to be installed on the flight line side of hangar 604 soon.



Hangar 602 sign by Lamar Advertising (K. Drewelow photo)

Hangar 602 main entrance...Volunteers are the backbone of the Combat Air Museum as they showed in May and June. What began as a small project to replace some rotted timbers in the entryway to hanger 602 quickly spun out of control! After replacing the timbers, numerous volunteers tore out and replaced the rotted lattice on the



CAM main entrance today (K. Drewelow photo)

arbor and pergola and dug up overgrown bushes and shrubbery along the sidewalk to the entrance. Mike Welch arranged for BRB contractors to provide a skid steer and donate three truck loads of topsoil while Capital Trucking (a Bettis company) hauled the dirt for free. This work transformed the entrance but more work remains to be done regarding landscaping. More to come!

Young Aviators classes...CAM held its Young Aviators classes in June and July for youngsters aged 9 to 14 and all went very well. The students learned about the forces of flight and aviation weather, flew our flight simulator and made and flew foam plate gliders and coffee filter parachutes. They went on a scavenger hunt and toured a Boeing KC-135 Stratotanker, a Sikorsky UH-60 Black Hawk, the air traffic control tower at Topeka Regional Airport, the Museum of the Kansas National Guard and the Metropolitan Topeka Airport Authority Fire and Rescue station. These and many other activities made for a busy and enjoyable week for all. Museum members Kevin Drewelow, Paul Frantz, Deb Lamere, Bill Newman, Laraine and Rance Sackrider and Chuck Watson all made the classes possible, along with the parents that drove students to our field trips. We look forward to making Young Aviators classes even better next year!



A Test Flight Remembered

It was the morning of June 5, 1948, now 75 years ago, when five brave and experienced flyers walked up to a strange looking aircraft on the tarmac of what is now Edwards Air Force Base (AFB) in the Mojave Desert. The YB-49 "Flying Wing" was an all-wing bomber prototype aircraft, designed and built by John "Jack" Northrop, an aviation pioneer who designed several aircraft during his career including the Northrop P-61 Black Widow, a very effective night interceptor in World War II. His belief was that an aircraft could fly more efficiently as an all-wing design.

Muroc AFB (later Edwards AFB) is located on the Rogers Dry Lake in the Mojave Desert in south central California, about 100 miles northeast of Los Angeles. In 1882, the future base location was an Atchison, Topeka and Santa Fe Railway water stop for their steam locomotives. The area was soon populated after three Corum brothers, Ralph, Clifford, and Effie, built a homestead in 1910 on the edge of the large lake bed, drawing in other settlers to the area. A U.S. Post Office sprang up and required a name for the now growing community. The locals submitted the name "Corum" in honor of the brothers who founded the area; however, it was not approved as a town in north central California had already taken the name. The town leaders then decided to try "Muroc"– Corum spelled backwards–as the name of the new community and it was approved.

In 1932, Army Air Corps Lieutenant Colonel Henry H. "Hap" Arnold, an aviation pioneer and later a five-star general of the Air Force, regarded the unpopulated areas next to the dry lake bed as a perfect place to establish a bombing range and training site for nearby March Field, located just outside of Riverside, California. Early on, Arnold received his flight training from the Wright brothers and he would be instrumental in the advancement of military aviation throughout his career.

After Arnold was promoted to Chief of the Air Corps in 1938, the lake bed itself was viewed as a prime location for testing an aircraft's flight characteristics due to the large areas available for landing aircraft in any direction if needed. However, testing was sidelined at this location as war loomed; on the afternoon of December 7, 1941, the day Japan bombed military targets on the island of Oahu, Hawaii, bombers and crews began to arrive for training. By July 1942 the Army designated the area as a separate base named Muroc Army Airfield (AAF).

Throughout the war years bomber crews of various types continued to train at Muroc AAF as well as Lockheed P-38 Lightning fighter crews before transitioning to their combat assignments. However, in September, 1942 the new base received a secondary mission due to its isolated desert By Keith Fulton

location and became the home for the top-secret testing of the first U.S. jet fighter, the Bell P-59 Airacomet. In fact, a fake propeller was affixed to the front of the P-59 as it was towed from a secure hanger facility to the end of the runway for testing to discourage word getting out about the new jet propulsion. Later, with the introduction and testing of the new Lockheed P-80 Shooting Star jet fighter in 1944, Muroc AAF would become the lead base of jet aircraft testing in the United States.

Following the war, the US Air Force (USAF) became its own separate service on September 18, 1947. The actual flight tests would continue at Muroc but the Flight Test Center and Test Pilot School, of the USAF Air Material Command, was still located at Wright AFB, later Wright-Patterson AFB, just outside of Dayton, Ohio where the Wright brothers established the first airfield to test their Wright Flyers.

The test pilot aircrews and maintenance personnel traveled from Wright to Muroc by train, personal vehicle, or military aircraft in a temporary duty (TDY) status to conduct the needed flight testing of the new jet aircraft coming on line at the time. Billets, dining, and other facilities were available for those who chose to live temporarily on base. Some personnel, mostly officers, elected to rent or purchase housing off base and bring their families to California to be closer to their loved ones.

While at this remote base, the airmen found local nightly entertainment at the Rancho Oro Vedre Fly-Inn Dude Ranch (better known as the Happy Bottom Riding Club), owned and operated by Pancho Barnes (born Florence Lowe), a pioneer aviator herself and the founder of the first stunt pilots' union. Here, patrons could enjoy a stay in the hotel, a swim in the pool, a fine restaurant meal, a drink at the bar, participate in weekly rodeo events, or rent a horse for a ride in the desert. A small airstrip was available close by for those who could afford the luxury of a fly-in. In those early days after the war, Air Force personnel became Barnes' main business patrons. She promised a free steak dinner to those who broke the sound barrier. In fact, there was a direct well-traveled "unofficial" path established from the end of the Muroc runway to Pancho's club. Other guests included movie production employees from Hollywood and car crews who raced on the desert flats of the dry lake bed.

In 1952 the USAF wanted to acquire the Barnes' properties for a runway extension. Both parties filed law suits and counter law suits. In 1953 a questionable fire destroyed the ranch properties. After the fire, Barnes won her counter suit and was paid a fair market value for the now destroyed properties. No runway extension was ever built.

The flying wing design was the brainchild of Jack Northrop Continued on page 8



A Test Flight Remembered Continued from page 7

as well as German engineers during the 1930s, each proceeding independently with little knowledge of the other's work. Northrop believed an aircraft could fly faster and more efficiently in an all-wing design. He first tested his theory in 1929 designing and building the Northrop X-216H ("X" for experimental), a single engine pusher propeller (engine in the back) wing prototype but retained a tail assembly with twin rudders and a horizonal stabilizer connected to the back of the wing with twin booms.

By 1940 he again built another small version of his all-wing design in the N1-M (Northrop Model 1 Mockup), a twinengine, pusher propeller, single seat experimental aircraft to test the possibility of an all-wing aircraft. It proved fruitful enough for the Army Air Corps to take notice in the years leading up to the U.S. entering World War II.

In 1940 the U.S. military leadership was concerned that if they entered the European conflict, which began in September 1939 by Germany invading Poland, on the side of the Allies, how they would be able to initiate an effective bombing campaign to destroy the German military might, especially if England was invaded by Germany and occupied, as France had been. In 1941 the Air Corps offered funding for aircraft companies to begin developing aircraft that could reach across the Atlantic Ocean, strike targets in regions occupied by Germany, and return to the United States. Northrop believed in the wing concept, flying with a heavier payload, more efficiently, and an extended range greater than any military bomber at the time.

Now with government funds available, the bomber Northrop proposed to the Air Corps would be designated the XB-35 "Flying Wing" with a length of 53 feet 1 inch and a wing span of 172 feet. The production models, if approved, would have a range of 7,500 miles carrying a bomb load greater than 52,000 pounds. The XB-35 was a four-engine pusher aircraft, each engine turning two propellers in a counter rotating system (one propeller rotated counter clockwise and the second propeller rotated clockwise providing additional thrust) carrying an operational crew of nine: pilot, co-pilot, navigator, bombardier, flight engineer, radio operator, and three gunners. The crew, bomb payload, and fuel were all within the wing; no fuselage or tail section needed.

Also, the government approved funds for three 1/3 scale aircraft (later a fourth was added after one of the first three crashed) designated as N-9M. These smaller aircraft, powered by twin engine pusher propellers, were used as test beds for the "Flying Wing" research and design features and also available for training pilots who would later test and fly the larger "Flying Wing" bomber.

The Army Air Force ordered two prototypes of the XB-35 in 1942 and they were expected to be completed by mid-1944. Design and flight control problems delayed the first flight of the aircraft to June 1946, when it flew from the Northrop



Northrop YB-49 (USAF photo)

factory in Hawthorne, California to Muroc AAF for testing.

While the construction of the first two were well underway, 13 additional "pre-production" YB-35s were ordered by the Air Corps in 1943. (The "X" designation indicated experimental and tested by the manufacturer. The "Y" also indicates experimental but the aircraft had been delivered to the Air Force for further testing and evaluation, and of course the "B" indicated a bomber type aircraft.)

After the war and with the jet age now upon the Air Force, funding was approved to modify two of the thirteen YB-35 airframes currently under production to include eight jet engines: four turbojets installed internally on each side, instead of the piston engines and counter rotating pusher propellers that were eventually found faulty on the XB-35s. This new design was designated the YB-49 "Flying Wing" and was first flown in October 1947. Identifying numbers for the two were **Ship One** (tail # 42-102367) and **Ship Two** (tail # 42-102368). The test pilots later referred to the two aircraft simply as **One** and **Two**.

A big difference in the "Flying Wing" (both the -35 and -49 airframes) cockpit design was the pilot in command sat in the forward center section of the aircraft with a bubble type canopy covering the pilot's station for unlimited visibility 360 degrees. The copilot's seat was located immediately to the right, adjacent to the pilot's seat, however, it was three feet lower, within the leading edge of the wing itself fitted with plexiglass panels for visibility forward, above, and below. Cross-cockpit voice communications were difficult to say the least without the aid of the aircraft interphone system.

Another presumed design difference, then in conventional bomber type aircraft of the era, was the location of the individual throttles for each of the eight engines. The flight engineer's station had full control of the eight individual throttle levers controlling the thrust of each engine. Once the pilot set the engine power for the different phases of flight it was the job of the flight engineer to fine tune the throttle levers to make sure each engine provided the same amount of



thrust. The pilots themselves only had two levers for throttle control located on the overhead panel, above the pilot's seat, instead of on the center console, one controlling all four engines on the left side and one lever controlling the four engines on the right side.

The aircraft looked so futuristic that movie producers used USAF file footage of a YB-49 during takeoff and a straight and level sequence for a bomb run during the production of the 1953 movie "War of the Worlds" based on the science fiction novel written in 1895-97 by H. G. Wells.

On Saturday June 5, 1948, the sun rose at 5:39 a.m.

The five crew members arrived at Test Daniel Forbes (Operations to re-brief their flight scenario so all on board were familiar with the flight test cards that were made available to them the previous day.

Major Daniel Forbes, a Kansas native, left college to join the Army Air Corps as an aviation cadet on June 5, 1941, the day before his 21st birthday. His career throughout the war was primarily in the reconnaissance role, flying large bomber type aircraft photographing the battlefields below; first in North Africa and Sicily then during the advancement in the Pacific against the Japanese Empire. Immediately following the war, the aircraft he piloted photographed the third and fourth atomic bomb blasts at the Bikini Atoll test site during Operation Crossroads in the South Pacific in July, 1946. After test pilot training he joined a small group of pilots testing the new jet bombers to be considered by the Air Force. Forbes was married, just 3 months, to the former Hazel Moog.

Captain Glen Edwards was born in Canada before his family moved to California. He also joined the Air Corps as an aviation cadet prior to World War II. A month after receiving his bachelor's degree in chemical engineering he joined the service in June, 1941 to fly. After his training as a light bomber pilot, he and his unit were sent to North Africa and later Sicily, where he completed 50 combat missions. Edwards returned to the U.S. just before Christmas 1943 where he remained in a flying status, in various roles, before eventually completing test pilot training in Class 45, the first class offered and taught by the Army Air Force. As one testing new advanced jet bombers, and other aircraft types, the USAF sent him back to school studying at Princeton University where he obtained his aeronautical engineering degree. Edwards was single.

Lieutenant Edward Swindell, a Virginia native, served three years in the U.S. Army as an enlisted man in the mid-1930s. Soon after the United States entered the war, Swindell resigned his civilian employment at a Navy shipyard and rejoined the Army. He was soon offered a class slot at Yale University as an aviation cadet flight engineering officer.



Daniel Forbes (USAF photo)

After his graduation in 1945 he received his commission as a second lieutenant and was sent to Germany for a year as part of the occupying allied forces. He returned to the U.S. and immediately reported to the Flight Test Center as a flight engineer in the bomber test program. Swindell was the flight engineer on the B-29 mother aircraft that dropped the famous Bell X-1, piloted by Captain Charles "Chuck" Yeager, that eventually broke the sound barrier on October 14, 1947. Swindell was married to the former Edna Hayman in 1942. The couple had one child, Carol Lynn, born in 1946.

Mr. Clare Leser, an Illinois native, attended Notre Dame University, graduating cum laude

in 1947 with a bachelor of science degree in aeronautical engineering. During his college years he also enlisted in the U.S. Navy V-12 program earning a commission in the Naval Reserve upon graduation. Leser was hired as a civilian aeronautical engineer in the U.S. Air Force Flight Test Center at Wright AFB. Leser and Edwards had worked together on other test projects and was on this flight to monitor test equipment. Leser was single.

Mr. Charles LaFountain, a New York native, was accepted to Rensselaer Polytechnic Institute and studied aeronautical engineering. LaFountain also enlisted in the U.S. Navy V-12 program and earned his commission in the Naval Reserve upon graduation. He was hired as a civilian aeronautical engineer in the Air Force Flight Test Center at Wright AFB. It is believed LaFountain, new to the bomber test program, was a late addition to the flight crew to observe Leser in his role monitoring the test equipment installed in the aircraft to collect valuable data obtained during the test flight. LaFountain was single.

After the crew briefed at Test Operations, their next stop was the weather station to receive their weather briefing for the flight.

From the wunderground.com web site; on this day at Muroc AFB the temperatures would be cooler than normal, at 8:00 a.m. the temp was $56^{\circ}F$ with a high to be $75^{\circ}F$ at 4:00 p.m., a nice day for the southern California desert environment. (The historic average temperatures were listed as high $88^{\circ}F$ and low $61^{\circ}F$, also from wunderground.com).

The takeoff surface winds indicated 15 knots (18 mph) from the southwest gusting to 22 knots (26 mph). It was a clear day with visibility of 40 miles. The altimeter setting for takeoff was 27.48" Hg. The winds at altitude are not available from the web site.

The winged aircraft, "Two" as it was known, was parked on the ramp, fueled and ready to go. The crew may have stopped at the dining facility to get a jug of coffee and possibly a lunch *Continued on page 10*



A Test Flight Remembered Continued from page 9

or a few snacks for the flight that was scheduled to last about three to four hours.

Tony Moore, a California native and a friend who originated the "X-Hunters", an aviation archeology team who investigates past aircraft crash sites, logs their research, and donates their finds to museums, told me he came into contact with a former member of the first jet test program, the Bell XP-59 Airacomet. Mr. Don Thomson was a test engineer who actually flew in a modified version of the XP-59 during some of its first test flights. A 20-inch hole was cut into the nose of the aircraft, just forward of the cockpit, where a small windscreen, seat and instruments were placed. Thomson monitored instrumentation during the initial flight tests and recorded the data.

The reason I bring Thomson into the story is that he told Moore he witnessed the YB-49 crew board the aircraft and waited around to watch the "Flying Wing" takeoff that fateful morning of June 5, 1948. He and a couple of others who accompanied him were leaving the base to eat breakfast at a local restaurant a few miles from the airfield. They watched the aircraft fly off until it was out of their view before leaving for the restaurant. After finishing their breakfast and walking to their vehicle Thomson witnessed a smoke plume several miles in the distance. The group decided to investigate knowing that the YB-49 was the only aircraft scheduled to fly that morning. They were able to travel to the hillside location of the crash site. 12 miles northwest of Muroc AFB, and found the aircraft completely destroyed and engulfed in flames. Debris was scattered over a large area of the desert location. The only thing recognizable was a coffee jug observed within the debris area.

It is not known what actually occurred that caused the YB-49 to break apart in flight, as both outer wing sections were found a few miles away from the crash site. The "Flying Wing" hit the earth in an inverted attitude. All five crew members stayed with the aircraft and perished as the result of the crash and fire.

The following is a statement found in the official accident report of the Aviation Safety Network: "Crashed owing to catastrophic structural failure during a scheduled test flight. Both outer wing sections separated from the airframe during the pull-out from a dive which was believed to have followed an intentional stall. Pilot Major Daniel Forbes, copilot Captain Glen Edwards, Lt. Edward Lee Swindell and two other aviators killed."

The three primary test pilots for the Bomber Test Section at Muroc AFB were Chief Pilot Major Robert Cardenas, Forbes, and Edwards. The three of them coined the name "Los Tres Amigos" and were involved in the testing of several of the new jet bomber aircraft starting in 1947, including the North American XB-45 Tornado, the Convair XB-46 and the YB-49.

Major Bob Cardenas was born in Mexico before his family moved to California. As the top student in his high school class, he was selected to attend San Diego State University. In 1939 Cardenas joined the California National Guard and elected to enter the aviation cadet program in 1940, graduating in 1941. He remained stateside during the beginning years of the war instructing basic flight trainees and was instrumental in developing the glider pilot program of the Army Air Corps. Cardenas flew heavy bombers later in the war from a base in England; on his 20th mission he was wounded as his Consolidated B-24 Liberator was shot down by flak. After successfully completing the bomb run in his damaged bomber, he and the entire crew were able to bail out. Cardenas eventually made it back to England with the aid of the French underground. He returned to the United States and was assigned to Wright Field as a test pilot. Cardenas, the Officer in Charge of the X-1 supersonic flight program, was also the aircraft commander of the B-29 launching the Bell X-1 on all of Yeager's flights. Cardenas went on to serve in several command and staff level positions before he retired from the Air Force in 1973 at the rank of brigadier general.

During a previous test flight, in early May 1948, Cardenas was seated in the pilot's station and Forbes in the copilot's seat (it is unknown who else was on board, crewing the flight engineer's station or if civilian engineers were present monitoring test equipment). Cardenas stated to me that he and Forbes attempted a stall maneuver in the all-wing aircraft as part of a normal test format. A conventional aircraft is constructed with a cockpit area in the front, large winged surfaces providing lift, a fuselage extending further to the rear of the aircraft and a tail section with rudder and horizontal stabilizers to further stabilize the aircraft while in flight. During a stall test maneuver, the aircraft is slowed to the point that not enough airflow is available for the wings to provide the proper lift and keep the aircraft airborne. As a conventional aircraft slows the nose of the plane rises in its attempt to provide the necessary airflow over the wings. Also, during this time, a buffeting vibration starts occurring at the rear of the aircraft and as the plane continues to slow the nose rises and the vibration moves forward, eventually where it is felt in the cockpit. Once completely stalled the plane begins to fall out of the sky. The stall recovery process in a conventional aircraft is to lower the nose, level the wings, apply the necessary power and return to the assigned altitude.

During this test flight in May 1948, Cardenas and Forbes attempted to stall the "Flying Wing" starting at 20,000 feet altitude. The leading edges of the winged surface did rise as *Continued on page 14*



Into the Blue: Life *at the* Air Force Academy

By Cadet 2nd Class Remington Stiles

In the summer between their second and third year at the Air Force Academy, cadets have three summer periods. One requirement is that cadets participate in an operational Air Force base visit, where they spend three weeks at an Air or Space Force base. This provides an opportunity to learn more about military life from the officers and enlisted mentoring them.

My visit was to Joint Base Langley-Eustis in Virginia, home to several F-22 Raptor squadrons, the F-22 demonstration team, and two intelligence wings. During our trip we



Remington's T-38 flight (R. Stiles photo)

were able to learn about a wide array of career fields in the Air Force firsthand. For myself, visiting the F-22 squadrons was moving. One of the experiences that inspired me to join the Air Force was an F-22 demonstration I saw at a local airshow with my family.

Fortunately, my time wasn't all PowerPoint and briefings, there were several hands-on activities. We were able to observe the fueling systems at work, build a computer from components, operate a forklift, and even take a flight in a T-38.

While the experiences I had informed me of the many career options in the Air Force, the interaction I had with people at Langley was much more valuable. They answered questions on everything from training, to professionalism, life as a lieutenant, and more. These interactions helped bridge the gap between my isolated experience at the Academy and the Air Force's bigger picture.

The whole experience will help me later this year when I will be making the decision to commit to the Air Force and submitting my job preferences. This exposure provided me crucial information for these life-changing decisions.

[Ed. Note: Remington is beginning his third year at the Air Force Academy and still volunteers at CAM whenever he is in Topeka] \blacklozenge

New & Renewing Members

New:

Maverick Adams | Brian & Connie Bryant | Col. Anthony DeJesus KSANG/USAF (Ret.) | Shawn Guinty | Wm Jeff Kahrs & family | Steve Kasten | Ariel Morris & family | Michael Spangler & family | Hannah & Denton Hurley

Renewing:

Bill Ankenbauer & family | Duane Armfield &
family | SSG. David Baker | Gary T. Bender |
Lynne Bourne | James & Susie Brewer |
Shelly Buhler & family | Debra Butz | John
Capra | Ron Cates | George Catt | Donald &
Shirley Crenshaw | Michael & Tammie
DeBernardin | Leon Dultmeier | Phil &
Darlene Elwood | Paul & Betty Frantz | Tom
& Diane Gorrell | Tim Graham | Henry
Hickey | Dan & Janet Hinnah | Klio & Mary
Jo Hobbs | Hannah & Denton Hurley |
Col Paul Idol & family | Joseph Ledbetter &

family | Mike & Karen Madden | Michael Martin | Patti Mellard & family | Amanda

- Miracle & family | Bill & Toni Newman | Carl Phillips & family | Jim Pinegar & family |
- John Plumb | Lt Col Thomas & Carole Rost | Robert Runion | Ashleigh Rutherford & family | Earl Sadberry | Darrell Schmitz | Austin Sinkler & family | Dennis & Marise
 - Ann Smirl | Gregory Smith & family | Joe
- Stellwagon | Capt. Herschel Stroud & family | Joe Taylor & family | Chester & Mary Thompson | Larry & Diane Todd | Joe & Peggy Turner | Mark Washburn & family |

Chuck Watson | Steve & Rosie Williams |

Dr James Young & family



Pilot's Notes: a Book Review

"Pan-Africa - Across the Sahara in 1941 with Pan Am" by Tom Culbert and Andrew Dawson

Reviewed by John Plumb

This is a short review of the 1998 book, "Pan Africa – Across the Sahara in 1941 with Pan Am" by Tom Culbert and Andrew Dawson. They wrote an interesting and thoroughly documented account of a cooperative venture between the United States, Britain and Pan American Airways that took place in 1941 and 1942. This venture began as the British, and subsequently American forces needed new routes to move their aircraft, personnel and supplies to certain areas of military conflict.

In early 1941 the British were engaged with Axis forces in the desert west of Egypt. Later on, United States and other Allied forces were also engaged with the Axis in Africa.

The original route to resupply Allied forces was through the Mediterranean Sea, but this became too dangerous because of German and Italian submarines. The route along the west coast of Africa was also a submarine nightmare. Even without the submarine threat, the southern route around Africa took months for shipping, much too long.

In June of 1941, the British Royal Aeronautical Society invited Juan Trippe, the president of Pan American Airways, to give the annual Wright Brothers Lecture. Having traveled to London in one of his Boeing 314 flying boats, his comments were well received.

Following the dinner, Air Ministry staff asked Trippe to discuss the type of equipment the British might use to conduct aerial resupply

operations to and through Africa. "Trippe reportedly mentioned that an efficiently-run air route passing through central Africa and using modern equipment and airline-like operations would reduce significantly the delivery time for military equipment."

Before the long evening was over, Trippe was then summoned to No. 10 Downing Street where he sat down with Prime Minister Winston Churchill and discussed ways to establish and operate an air route across Africa!

"Although the original purpose for establishing the route was to assist the British, the U.S. Army Air Corps had become increasingly interested in the benefits of establishing an African air route." Returning to the United States, Trippe was asked to consult with James Forrestal, President Roosevelt's right-hand man and other government officials. "They wanted to know the specifics of how Pan American Airways (PAA) would operate a trans-African air route. They asked Trippe to delineate the requirements for such a route and to stipulate the budget required to get the job done."

All this resulted in agreements, commitments and contracts between PAA, the United States and Britain. "Pan-Africa, Ltd.'-as the Pan American subdivision was called-transcended the immediate task."

They built and maintained airfields for ferrying combat aircraft, delivered essential military equipment, provided aircrews as needed, carried vital raw materials back to America and later evacuated military and civilian personnel from Burma.

The air route eventually extended from Natal, Brazil to Bathurst (now Banjul), The Gambia, on the west coast of Africa, across central Africa and eventually to Kunming, China or north to Kuybyshev in the former Soviet Union, and points in between.

The first flight of a PAA-Africa aircraft is credited on October 1, 1941. The contract ended on December 15, 1942 when the U.S. Army Air Forces took over.

The chapters of the book describing the development and operation of the route were fascinating. Overcoming the adverse weather conditions as well as the desert itself were challenging. The book is replete with observations and anecdotes from actual participants and includes many priceless photographs. Your reviewer recommends this accounting of a little known but important bit of our aviation history.

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202 **In Remembrance** Calendar of Events

Dennis S. Lamberd

August 1, 1940-May 21, 2023 U.S. Air Force veteran 1958-1963 CAM #5371



Michael J. Murray January 17, 1947-April 26, 2023 Melbourne, Australia CAM #6498



Carlene B. Vaughn April 15, 1933-June 24, 2023 CAM #5283



The Combat Air Museum was saddened to hear of the passing of one of our loving members, Carlene Vaughn. Carlene, the spouse of another one of our faithful members, the late Jack Vaughn, was a proud member of the Combat Air Museum. Each day Carlene always asked Jack for the latest news from CAM when he returned home from the Museum. She would always want to be the first to read the Museum's newsletter when it was published; in fact,

she always made sure Jack paid his Museum membership dues on time so she would not miss getting the newsletter. It was always our pleasure to correspond with Carlene after she relocated to the Kansas City area. We always made sure Carlene got her newsletter even after she moved. We dedicate this newsletter to the memory of Carlene and Jack, RIP.

August

14-Membership Luncheon, Brown Bag Retired Air Force Reserve Colonel Dewavne Burgess will discuss his career flying the Fairchild A-10 Thunderbolt II "Warthog" ground attack aircraft

September

16–Be Filled of South Topeka Plane Pull **23**–Girls in Aviation Dav

October

- 1-3rd Annual Car Show
- **9**–Membership Luncheon, Brown Bag Officers from the U.S. Army Command and General Staff College at Ft. Leavenworth will talk about their experiences in the military

November

23–Thanksgiving; Museum closed

December

11–Membership Luncheon, Pot Luck **25**–Christmas: Museum closed

Visitors

1,485 people from 36 states, Washington, D.C., Australia, Austria, Canada, Germany, Great Britain, Greece, Ireland, Kazakhstan, Mexico, Nepal, Poland, Scotland, Sweden and Ukraine visited the Combat Air Museum in April.

In May, 1,249 visitors from 38 states, Washington D.C., Belgium, Czech Republic, Germany, Great Britain, Mexico, New Zealand, South Korea and Ukraine toured your Museum.

1,548 people from 40 states, Puerto Rico, Washington, D.C., Australia, Canada, Germany, Great Britain, India, Mexico, the Netherlands, South Africa, South Korea, Ukraine and Venezuela visited the Combat Air Museum in June.



A Test Flight Remembered Continued from page 10

predicted. As the -49 reached its stall speed, without warning it simply flipped over and started to tumble to the ground. The g-forces inside the aircraft were so great that it pinned all the crew to their seat belt/shoulder harnesses, no one could leave their seat to bail out, even if that was an option. As the aircraft continued to fall toward the ground end over end (like a leaf falling from a tree) Cardenas, seated in the pilot's station, did not know exactly what to do to recover the aircraft to a controlled attitude. Knowing that he could recover from a spin from spin tests performed on previous test flights, he thought about applying power to one side of the aircraft and reached up during the violent rotations he was now encountering. Cardenas was able to reach and advance one throttle lever, located over his head, and increase the thrust to all four jet engines on the left side of the plane. Once power was applied the -49 flipped around and started a spin maneuver from which Cardenas was able to recover the aircraft at about 800 feet above the ground.

Once on the ground both Cardenas and Forbes agreed that a stall maneuver would not be attempted again in the YB-49 until further flight evaluation and research could be completed to determine a viable procedure for recovery. Cardenas included in his report, "this aircraft is not to be intentionally stalled" before he departed to Pancho's for a well-deserved drink.

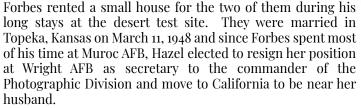
Cardenas soon left the California desert environment as he had orders to the University of Southern California for further studies in obtaining his engineering degree. But first, he headed to Dayton to marry his sweetheart, the former Gladys Gisewitee. He left command of the bomber test program to Edwards after he had just completed his advanced education.

It is possible since Edwards had just completed his degree in aeronautical engineering from Princeton, he may have discussed the stall maneuver with Forbes and wanted to experience it himself to come up with a recovery process.

Again, this is all speculation as no one survived the flight that day in June.

Days prior to the fateful June 5, 1948 test flight, Forbes and his wife Hazel had planned a birthday celebration for the evening of Saturday June, 5, 1948. He would turn 28 years the next day, on Sunday, and the newly married couple planned to depart for Los Angeles as soon as Forbes returned from his flight and spend the night on the town. I am sure the other members of the crew, Edwards, Swindell, Leser, and LaFountain had plans as well that evening, possibly joining the Forbes in his birthday bash.

Forbes' wife Hazel recently traveled cross country to join her husband in the desert. Glen Edwards (USAF photo)



While waiting for Dan to return that Saturday afternoon, Hazel told me, unfortunately she was instead visited by the base commander and Air Force chaplain as word spread of the crash. The days that followed were a blur to her: she remembers being driven home to family in Ohio by a friend and later the arrival by train of the Forbes casket at the railroad station in Topeka, and later, the funeral services at the Overbrook, Kansas cemetery.

Before even starting his university class studies, Cardenas was summoned back to Muroc AFB as the lead investigator of the crashed YB-49 and ordered to finish the flight tests of the remaining Flying Wing himself.

On July 16, 1949, the then-Topeka AFB located just south of the city was officially renamed Forbes AFB in honor of Major Daniel Hugh Forbes, Jr. The Distinguished Flying Cross was awarded to Forbes, posthumously, and presented to his mother, Hattie Forbes, during the base renaming ceremony.

Forbes AFB was once one of the largest bases in the Strategic Air Command (SAC) in the U.S. during the Cold War, with two fully equipped bombardment and reconnaissance units, and, at one point in the early 1960s, a missile squadron manning 9 Atlas nuclear-armed intercontinental missile sites located throughout northeast Kansas.

On December 8, 1949, then-Muroc AFB was officially renamed Edwards AFB in honor of Captain Glen Walter Edwards. During a ceremony on January 27, 1950, a plaque was unveiled: "A pioneer of the Flying Wing in the western skies, with courage and daring unrecognized by himself."

> This plaque is now located in front of the headquarters building of the Air Force Flight Test Center at Edwards AFB. The base remains the center of flight testing for the USAF and other services with the Air Force Material Command Test Center. Test Pilot School, and also NASA's Armstrong Flight Research Center.

> A few months after the crash of the YB-49, on February 9, 1949, Cardenas piloted Ship One, breaking the transcontinental flight record from Muroc AFB to Andrews AFB, Maryland, flying the distance in four hours and 25 minutes. However, this record lasted only a few minutes as it was broken again by a Boeing XB-47 Stratojet also flying the same Continued on page 15





Ways You Can Support Combat Air Museum

Dillon's Community Rewards Program



If you shop at Dillon's and have a Plus Shopper's Card, you can help support the Combat Air Museum with just a phone call or a few keystrokes. Dillon's Stores donates millions to non-profit organizations. Our Museum benefits from CAM members who have registered with Dillon's Community Rewards Program. Enrolling in this program will not increase your grocery bill and will not affect your fuel points.



Enrolling in the Community Rewards program is a one-time event and no longer requires annual registration. If you've already signed up, no further action is required. Go to <u>https://www.dillons.com/i/community/community-rewards</u> to create a Dillon's account before enrolling in the Community Rewards program. You can also call **800.576.4377** and the Dillon's customer service representative will register you. You'll need to provide them with the Combat Air Museum's new five-character Non-Profit Organization (NPO) account number, **GA302**. Thanks to your generosity, each quarter the Museum receives a check from Dillon's that really helps us maintain the collection and facilities and provide the classes and service our visitors enjoy. Last year, Dillon's donated \$815 to CAM; that amount is less than the previous year because we have fewer donors than before. If you haven't joined, why not take a few moments now to do so: Dillon's and CAM will do the rest!

Volunteer

The Combat Air Museum exists solely upon the money we raise from admissions, donations and gift shop sales. We rely on volunteers to run our gift shop, and the need for these volunteers has become even more urgent. We'll train you for this crucial and enjoyable task. If you could spare one day a month, please call the Museum Monday through Friday between 9 a.m. and noon at **785.862.3303** and ask for Nelson, our office manager and volunteer coordinator.

A Test Flight Remembered Continued from page 14

route in under four hours. This trip to Andrews was a scheduled static display of the future U.S. Air Force bomber fleet for presidential and congressional leaders as well as media review. The aircraft included the YB-49, XB-47, Convair B-36 Peacemaker, and other aircraft. During his tour of the YB-49, President Harry Truman turned to Cardenas and said, "It looks pretty good to me, I think I'm going to buy some of these." Cardenas had to bite his tongue as he had submitted a negative report on the Flying Wing's ability to be an operational bomber the week previous. Truman then said, "Let's have this whippersnapper fly this thing down Pennsylvania Avenue," which he did, avoiding the Capitol dome at the last minute as he was attempting to dodge tall radio towers along the way.

Ship One eventually met its fate on March 15, 1950 during a high-speed taxi test when the nose gear failed and the aircraft was destroyed in the resulting fire (all crew were able to exit the aircraft with no injuries). Cardenas had already determined the YB-49 was not a suitable platform for an operational bomber the year before in his report to the Flight Test Center, so after the second accident occurred the program was cancelled and all remaining Northrop "Flying Wing" bomber aircraft currently in production or conversion were ordered destroyed.

[Ed. Note: Keith is a retired KC-135 boom operator and DESERT STORM veteran who has done extensive research on the history of Forbes Air Force Base and the life of Major Daniel Forbes] ◆





Visit the Combat Air Museum for fun, information and an educational experience.



By Flight Mechanic E. Sykes (1942)

Wherever you walk, you will hear people talk, of the men who go up in the air, of the daredevil way, they go into the fray; Facing death without turning a hair.

They'll raise a big cheer and buy lots of beer, for the pilot who's come home on leave, but they don't give a jigger, for a flight mech or rigger, with nothing but "props" on his sleeve.

They just say "Nice day" – and then turn away, with never a mention of praise, for the poor bloody erk, who does all the work, and just orders his own beer – and pays!

They've never been told, of the hours in the cold, that he spends sealing Germany's fate, how he works on a kite, till all hours of the night, and then turns up next morning at eight.



He gets no rake-off, for working 'til take-off, or helping the aircrew prepare, but whenever there's trouble - it's "Quick at the double", the man on the ground must be there.

> Each flying crew, could confirm it as true, that they know what this man's really worth, they know that he's part of the RAF's heart, even though he stays close to the earth.

He doesn't want glory, but please tell his story, spread a little of his fame around, He's just one of a few – so give him his due, and "Three Cheers for the man on the ground!"

