The Combat Air Museum recently received a McDonnell Douglas F-15A Eagle and, as we said in the last issue, it is all Gary Naylor’s fault.

Gary, a retired US Air Force F-15 crew chief, learned last November that “his” F-15C, the aircraft he was personally responsible for several years ago, was taking its last flight to the boneyard where the Air Force would use it to supply parts for other Eagles. We asked the Air Force Museum to loan it to us but it was not possible. They told us F-15A, serial number 71-0286, was available near St. Louis. The Air Force Museum awarded 286 to the Combat Air Museum over three other museums. Thanks to many donors, CAM raised the $21,000 needed to hire Worldwide Aircraft Recovery to transport the Eagle from Perryville, Missouri, to Topeka and assemble the jet.

Worldwide tentatively planned to move the F-15 in August or September, so we were surprised and delighted when Marty Batura, president of Worldwide, called us in early July to say their plans changed and they would deliver the Eagle in mid-July! They even dropped the price when Gary offered to transport the external fuel tanks.

Gary met Marty and his team in Perryville on July 20 and they loaded the jet; the fuselage and stabilators on one lowboy trailer and both wings on another. Gary’s trailer had the external fuel tanks and their mounting pylons. They headed for Topeka the next morning. The route required for their oversize load took longer than going direct on I-70 and they found themselves on the east side of Kansas City just before the afternoon rush hour began. The oversize permit required them to wait until 7 p.m., and they arrived at the Combat Air Museum a bit after 8 p.m. Susan Naylor welcomed the team with a home-cooked meal of lasagna and that ended the evening.

Marty’s team and Gary went to work early the next morning unloading and assembling the Eagle. Mike Welch arranged for a crane from BRB Contractors and by the end of the day 71-0286 was together and standing on its landing gear. Marty and his team departed after another successful move, leaving the installation of a number of minor parts and panels to Gary and his team of volunteers.

Gary keeps in touch with other former F-15 maintainers and they are helping him find parts and fasteners for 286. While all the panels and covers are in place, we lack many of the hi-torque coin slot screws needed to properly secure them, but Gary is confident we’ll round up enough. We’re also trying to source a pair of engine exhaust nozzles and we hope to find them soon.

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From the Chairman’s Desk
By Gene Howerter, Chairman, Board of Directors

What a great time to be a member of the Combat Air Museum! Every day brings something new and exciting. I can’t thank each of you enough who responded to our request, in the last newsletter, for help in acquiring the McDonnell Douglas F-15 Eagle fighter jet, which was produced at the plant in Saint Louis, Missouri. This Eagle was the seventh plane off the production line. We moved the plane from storage in Missouri to Topeka in late July. We want to thank Worldwide Aircraft Recovery, Ltd., of Bellevue, Nebraska for their excellent work in moving and reassembling the historic aircraft. As the jet will be displayed outside, we are having tie-downs fabricated and they will be installed to keep the plane permanently in place. Our intention is to paint the plane back to its original flight test scheme which you can see on our Facebook page. I must admit I am overjoyed when I think of adding this plane to our collection at the Combat Air Museum here in Topeka, Kansas. If you are interested and would like to donate toward the plane, we can always use more funding for painting and restoration of this plane. What a beauty it will be as aircraft takeoff and land on Forbes Field’s runway 3-21 on the flightline side of our hangars. Pilots and passengers will surely take notice!

Speaking of painting a plane, as I write I can see from my office windows through the hangar door windows our Air Force Lockheed EC-121 Warning Star airborne radar aircraft which has been painted for the first time since we flew it in during May of 1981. The restoration team here at the Museum is still completing some sheet metal work on the rudders and adding new decals, but the plane itself looks fabulous. Lockheed built our Warning Star in 1954 and it was last based at Homestead Air Force Base in Florida before going into storage at the boneyard outside Tucson, Arizona. This aircraft was our first choice to acquire for our Museum. Of the 11 available, the only other EC-121 spoken for was one that went to the Helena Vocational–Technical School in Montana, and possibly the one at the Peterson Air and Space Museum in Colorado Springs, Colorado. Those remaining were scrapped. The Warning Star has been a blessing for our Museum as our desire was to have a large plane the public could walk through and see another side of things military men and women train for. Museum members Stu Entz and Tom Gorrell recently restored the interior and it is in great condition with most of the original equipment in place. With the freshly painted exterior markings, along with some restoration yet to be completed, our plane will once again look very attractive to our visitors. The EC-121 has always been a crowd pleaser.

I would like to thank all of you Museum members for your support. Many of you don’t live in the Topeka area and are not able to volunteer here at the Museum; please know you are still a vital component when it comes to helping us keep the Museum alive and well. For all of you who live a little closer to the Museum, we thank you also. Please keep in mind we really need to find more volunteers for our gift shop duties. This job requires individuals who will greet our guests as they arrive and collect the admission fee. This is one of the most necessary volunteer jobs the Museum has. Please give this some thought and plan on offering your assistance. I think you will find that after you are trained you will find this effort
Some among us can remember the day in 1981 when our Lockheed EC-121T Warning Star arrived at Forbes after departing Davis-Monthan Air Force Base in Tucson, Arizona, better known at the “Boneyard.” It flew several low passes before making its final landing and taxied to the Combat Air Museum where its engines shut down for the last time. Volunteers parked it on the east side of hangar 602 where it remains today, and soon placed a staircase at the crew entrance and ran electrical power to the aircraft.

Our Warning Star, Air Force serial number 52-3418, began its life as an RC-121D and entered the Air Force on October 18, 1954. It flew out of east coast air bases from 1955 to 1969, searching the skies for possible incoming Soviet bombers. 418 was converted to the EC-121D standard in 1963, and then to the EC-121T standard in 1969 just before it deployed to Southeast Asia. In 1974, it transferred to the Air Force Reserve and flew missions from Homestead Air Force Base for two more years until it was removed from service and sent to Arizona.

The aircraft has remained outside for the last 46 years (including its time in Arizona), enduring and suffering from the cycle of Kansas weather. Several CAM volunteers did a fine job of restoring the interior several years ago but found the prospect of painting the aircraft to be quite intimidating. Museum board member Wes Barricklow worked on the aircraft and repainted the radome, but the project clearly required more than one person. Another board member lit the fire that resulted in the transformation of our Lockheed from a faded and neglected ramp queen to the elegant Cold Warrior that it once was. That board member was Mike Welch.

After leading and helping our “Fix-It Friday” maintenance team with several hangar improvement projects, Mike wanted to turn the team to repainting the EC-121. Mike talked to Phil and Walker Gray of Gray & Company Painting of Topeka. They offered to paint and mark the Lockheed for $27,000. Our board of directors approved the project in May and work began on the last day of that month.

Terry Smith with Gray & Company arrived early that morning and began power washing the Warning Star. He had to start early due to the excessive heat and only missed a few days due to rain. The EC-121 is a large aircraft and Terry power washed every business day through June 10. The Metropolitan Topeka Airport Authority noticed our increased water usage and sent a team to the Museum to check for a broken water main! The wash exposed some markings lost long ago to time and the elements; we photographed them and researched them to see if they were on the aircraft during the last two years of its service life while assigned to the Air Force Reserve.

Masking and sanding followed washing. Terry, Ted Nolde and Mike Welch spent the next ten days masking markings, insignias and servicing placards all over the aircraft. This labor intensive hard work paid off later in the process.

By June 20, it was time to spray primer and that meant closing the parking lot in front of hangar 602 to avoid getting overspray on the cars of our volunteers and visitors. We placed signs and cones asking people to park in the lot across the street, but the quantity and location of the large trailers sharing the lot inconvenienced everyone and led to some long walks to reach the Museum. But everyone was friendly and cooperative and happy to see the EC-121 coming back to life! Randy McPhail joined Terry and the two applied primer and then paint, completing that step by July 6.

The primer and gloss grey made an amazing visual impression compared to the Lockheed’s former faded appearance but the work continued. Another round of masking led to painting leading edges black to represent deicer boots. National insignias, “USAF” and U.S. AIR FORCE” emerged over the next several days. While the painters were making amazing progress on the flight line, Danny San Romani was bead blasting corrosion inside the EC-121’s rudders.

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Volunteers are the backbone of the Combat Air Museum and they’ve been very busy over the last few months. As described elsewhere in this issue, our Lockheed EC-121 Warning Star and McDonnell Douglas F-15A Eagle have been our main focus this summer, but our volunteers accomplished much more than that.

**North American F-86H Sabre...** Danny San Romani continued working on the Sabre, spending time bead blasting corrosion inside the right wing and applying primer afterwards. Deb Lamere has been assisting him with installation of the gunsight which had been removed to allow access to the forward side of the instrument panel. For an aircraft that spent many years at an aviation maintenance school, the cockpit is remarkably complete!

**Republic F-84F external fuel tanks...** Bob Eichkorn loves our Thunderstreak but always thought it was incomplete without the standard pair of external fuel tanks. He spent many months searching for a pair of tanks and finally found them in Michigan. That museum had no use for the tanks and, with our permission, coordinated the transfer of them to the Combat Air Museum through the Michigan and Kansas surplus property offices. And as if that wasn’t enough, Bob and Dave Anderson drove to Michigan, loaded the tanks and delivered them to CAM on July 1! Bob’s not done yet; he’s tracking down the pylons required to mount the external tanks and he also hopes to find a pair of pylons that mount further out on the wing to carry bombs! We are grateful for Bob and Dave’s devotion to our Thunderstreak!

**3D printed rotary engines...** Deb Lamere is making progress creating a pair of 3D printed engines for our Morane and Nieuport replicas. The engines need to be 76% and 86% scale to fit in the aircraft cowlings, so they are not identical. Some print jobs have not gone to plan, but between her research, sharing information with the manufacturer and online 3D printing groups and routine communication with Huw Thomas, the Museum member who printed our first engine and gun, she has adapted and overcome each setback. It’s fascinating to watch the printer in action and to see the final part emerge from the printer!

**Airport beacon loaned to CAM...** The Metropolitan Topeka Airport Authority has placed a vintage airport beacon on long-term loan with CAM. The Westinghouse 36” diameter beacon had been used at Topeka’s Billard Airport, and may possibly be the first beacon installed there, dating to the 1930s. If so, this lamp showed the way home to countless Topeka-bound pilots over many decades. One bullseye lens is broken but it appears complete otherwise. We plan to clean, restore and display it with a much less powerful lamp than was used before.

**Lockheed EC-121 fairing...** Phil Gray mentioned a small fairing on the spine of the EC-121 was badly damaged. Kevin Drewelow removed the fairing, which was fiberglass. Decades of exposure to the sun and elements had damaged it beyond repair so Kevin gave it to Joe Wulfkuhle. Joe is an experienced Airframe and Powerplant (A&P) mechanic with remarkable fiberglass skills. Days later, Joe returned with a new fairing, ready to paint and install!

**B2 maintenance stand...** Several years ago, we received a B2 maintenance stand from the Kansas Aviation Museum. This stand will reach 20 feet above ground and has been very helpful during work on the EC-121. Decades of outside storage severely corroded the steel pipes that support the removable railings that surround the work platform. Danny San Romani removed the corroded tubes and had Don Dawson turn down some bar stock to the correct diameter to fit inside the railings. They cut them to length and installed them on the platform in place of the tubes. This important stand is once again safe to use, thanks to the ingenuity and effort of our volunteers!

**CAM on the road...** The Combat Air Museum had the pleasure of traveling to three locations recently to tell our story. Kevin Drewelow, Deb Lamere and her service dog Genesis, set
Jon Boursaw became a member of the Combat Air Museum ten years ago; many members know he regularly volunteers in the gift shop and also serves on our board of directors. ‘Service’ sums up Jon’s life, beginning with his Air Force career to directing both, in turn, the Prairie Band and Citizen Potawatomi Nations, and later involvement in many area historical and military organizations. Jon spoke about his Air Force career at our bimonthly museum membership luncheon on Monday, June 13.

After graduating from Topeka’s Highland Park High School in 1957, Jon attended Washburn University where he also joined the Air Force Reserve Officer Training Course (AFROTC). When he graduated, he received his commission as a second lieutenant in the Air Force along with his bachelor’s degree in business administration.

Jon had many interesting experiences over the next 24 years as he progressed from second lieutenant to colonel. He shared some of his favorite anecdotes with us.

2nd Lieutenant Boursaw’s first duty station was St. Albans Air Force Station in Vermont. He said he was so new he didn’t even have a nametag yet! He was there during the Cuban Missile Crisis and found himself carrying a loaded .45 pistol.

Lieutenant Boursaw soon found himself at McChord Air Force Base in Washington where he served as the protocol officer for the commander of the 25th Air Division, Air Defense Command. At that time, the commander was Major General Henry Spicer, who had briefly commanded the 37th Fighter Group before his P-51 Mustang was shot down and he became a guest of the Luftwaffe at Stalag 1. Jon said, “I had never spoken to a general before, now I worked for one!” Some of Jon’s other duties as assigned included playing hearts on Friday nights and cribbage on Sunday afternoons with General Spicer! Jon met and had breakfast with General Maxwell Taylor, the US Ambassador to South Vietnam at the time, one of many interesting people Jon would meet throughout his career.

Royal Canadian Air Force Base North Bay in Ontario was Jon’s home for three years where he supported the North American Aerospace Defense Command (NORAD) as a detachment commander. One of the perks of his job was the occasional business trip in the back seat of the squadron’s Lockheed T-33 Shooting Star.

The Air Force sent Captain Boursaw back to the Sunflower State in 1968 as one of two senior class instructors in the AFROTC program at Kansas State University. Jon and his family bought a new house within walking distance of the new football stadium. Jon noted that the K-State football program at the time was such that the parking lot was rarely full; today on game days the current homeowner parks cars in the front yard and sells hamburgers in the driveway! Jon’s young son’s babysitters included a Miss K-State and two cheerleaders. K-State’s AFROTC program was ranked as the best in the nation during Jon’s time in Manhattan.

The war in Vietnam was still underway but winding down when Jon found himself at Udorn Royal Thai Air Force Base in northeastern Thailand where he was the headquarters squadron commander, working for Colonel Charles Gabriel, commander of the 432nd Tactical Reconnaissance Wing. Drug use was widespread in the American military at the time and personnel actions consumed much of Jon’s time. On one occasion, Col. Gabriel ordered Jon to complete a discharge in one day. Jon’s counterparts said it couldn’t be done, but Jon delivered the completed paperwork to Col. Gabriel at 8:30 p.m.; Col. Gabriel signed it and told Jon, “I didn’t think you could do it.” Col. Gabriel later became General Gabriel, Chief of Staff of the Air Force.

Jon’s next stop was the Pentagon where he was handed the job of converting the Air Force from licking stamps to using postage meters because the Air Force’s annual budget for postage went from $12 million to $34 million. Another part of the solution was to use United Parcel Service and a new startup company called Federal Express. UPS and FedEx still keep the Air Force flying today!

The Boursaw family later moved to Norton Air Force Base near San Bernardino, California for the next four years where Jon would command the Directorate of Management Support and Center Squadron at the Air Force Inspection and Safety Center. His first commander was an avid golfer and Jon said, “Several of us quickly learned to have clubs and golf clothes in our cars.” That changed quickly when the next commander took over with a business before pleasure outlook!
Retired U.S. Army Colonel Ron Cobb was the guest speaker for our August brown bag luncheon meeting. A chaplain (Christian Church, Disciples of Christ) with 30 years of experience in the active duty U. S. Army, Army Reserve and Army National Guard, Colonel Cobb is the author of six books, the most recent of which covered the U. S. Army’s 35th Division’s peacekeeping mission at Eagle Base in Bosnia-Herzegovina.

Colonel Cobb has served as a Christian Church Disciples of Christ minister for 54 years and for the past 8 years has served as minister at the Horton First Christian Church Disciples of Christ. He has also worked as a therapist at Valeo Mental Health and Menninger Psychiatric Hospital and in his own clinic. In addition, Ron is a student of Russian history and wrote a thesis on Alexander Solzhenitsyn.

Ron shared with us some of the highpoints of his career. Working at Menninger’s on the fateful date of September 11, 2001, Ron was quickly called to active duty. Employing his skills to the best advantage, the Army assigned him as a counselor where he counseled troops involved with 9-11 in groups and then worked with other personnel, training them on the most efficient counseling techniques.

Moving a bit closer to the present, Ron talked about the situation in Ukraine and gave us some real insight into the personality and goals of Vladimir Putin. Originally a KGB operative rather than a military expert, Putin appears to have involved Russia in a war he can’t win. In terms of goals, Ron suggested that Putin aspires to be Peter the Great while the Ukrainians just want to be left alone to tend to their farms and businesses. In an obviously very moving moment for him, Ron went on to compare Ukrainians to Kansans, saying that both groups are very similar in their goals, aspirations, and beliefs.

Drilling down a bit to illustrate his points, Ron told the group that the Ukrainians are suspicious of political operatives and prefer to have more chaplains and fewer operatives.

Ron told the group some very interesting facts about the Russian military. First, he mentioned the failures of the Russian training methods which allow for an acceptable loss rate among recruits of 5% crippled or killed. The next consideration is the amount of crime within the Russian military which includes buying, selling, and using what in Western civilization are considered hard drugs. The officers apparently turn a blind eye or eventually become involved in the criminal acts.

Ron then mentioned Putin’s erroneous contention that the North Atlantic Treaty Organization (NATO) is a weak organization and the fact that Putin’s acts have strengthened NATO. Ron also told us that logistical support for Russian troops in Ukraine is all but non-existent and growing worse as Russian troops continue to use munitions that once used will remain out of stock for as long as the conflict continues.

Ron ended his presentation with an informative question-and-answer session in which he expanded on some of the historical facts about Russia that he has learned and acquired through his extensive research.

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Continued from page 2 Chairman’s Desk

very rewarding in many ways. Contact us at 785-862-3303 or by e-mail at office@combatairmuseum.com.

The December membership meeting will take place on Monday, December 12th and it will open with a potluck meal. The line will open for dining at 11:30 sharp so you should plan on having your food contribution here by 11:00. Now, to not create more confusion, the February 13th, 2023, membership meeting will revert to a brown bag meal. Mark this on your calendar.

We will return to our regular winter museum schedule for January and February 2023. The museum opens to the public at noon for those two months before returning to the regular season’s schedule on March 1. We hope to see you at the Museum often!
Senator Moran Comes to CAM

By Kevin Drewelow

The Combat Air Museum had the pleasure of hosting Jerry Moran, the senior United States Senator from Kansas on August 17. Senator Moran had been to CAM before to serve visitors at our annual pancake feed, but this was his first opportunity to see our collection. During his two hour visit, Senator Moran asked a lot of questions about our displays, how we fared during the pandemic and he took an interest in Deb Lamere’s experiences as a veteran and the story of her involvement with our Chinook, both in Iraq and again at the Combat Air Museum. We appreciated him taking the time to visit and learn about the Combat Air Museum!

After the first class ended, Chuck said he had a few other ideas about changes to make and I invited him to write them down. He gave me his list three days before the next class started. It was a significant change and my immediate reaction was that we had no time to implement such a revision. After I read his suggestions however, I realized we couldn’t wait to implement them. We eliminated all but two PowerPoint presentations, replacing them with discussions at various aircraft, outdoor activities and more hands-on activities. The feedback from kids and parents was all positive. Some of the parents asked if we offered a similar class for parents! Chuck’s four decades of classroom experience were invaluable and we’re looking forward to next year’s classes!

CAM hosted two videos... CAM hosted a pair of video productions recently. In July, the Kansas Department of Education shot a short “TOP GUN: Maverick”-inspired back-to-school video for students, parents, teachers and administrators. Dr. Randy Watson, Kansas Commissioner of Education and several administrators and students had a good time shooting an amusing segment with an aviation theme to get everyone excited about going back to school. CAM provided the venue, props and our flight simulator to help them pull it off. You can see the video here: https://www.youtube.com/watch?v=OYz73T7m8 In September, the US Marine Corps Reserve unit based at Forbes asked to shoot a Toys for Tots promotional video sponsored by Lewis Toyota. Their video production team completed the shoot in two hours in hangar 604 and we’ll post the video on our Facebook page when it’s released.

Young Aviators classes... Museum Deputy Director Dave Murray has been running our summer Young Aviators classes for many years, but was not able to support them this year. A number of Museum members thought the show must go on, so we naïvely chose to do it ourselves. We quickly learned that Dave had made it look easy and we faced a steep learning curve. Both classes were full and we got started. I felt fortunate to have retired school teacher Chuck Watson helping. At the end of the first day’s class, he noticed a couple of kids who were shy and not engaging and asked to change the seating order. I agreed, and the next day those two kids were in the thick of things and enjoying themselves. He adjusted a few other things throughout the class which improved the learning experience for all our students.

New personnel door in hangar 602... Nathan Benfield and Gary Naylor replaced the personnel door in one of the hangar doors in hangar 602. They used a spare door we had and installed it in no time. We hired JB Turner to trim out the new door and then Nathan and Gary returned to install a new screen door.
Dozens of people observed Memorial Day at the Combat Air Museum on Monday, May 30 at our second Taps Across America ceremony.

Washburn Rural High School Junior Air Force Reserve Officer Training Corps cadets posted the colors and retired them at the end of the ceremony.

Combat Air Museum member Sergeant Deb Lamere, US Army (Retired) provided some brief remarks before she introduced our keynote speaker, Major Jordan Clark, Commander of Kansas Army National Guard Army Aviation Support Facility #1 at Topeka Regional Airport, next to the Combat Air Museum. Major Clark is also a CAM member.

Major Clark offered a definition of war and some reasons we go to war. He said, “If you are here you understand what today is about and who it is for.” “Although many do not return, many more do not return whole. The burden of loss and of war leaves many with scars that do not show and require a healing that does not come quickly if it comes at all.

I ask you this Memorial Day to also honor the wounded and to reach out to those you know who may be in need so that we may continue to learn from them every day, not only remember them on this day.”


This brief but poignant ceremony underscored the meaning and importance of Memorial Day, especially at the Combat Air Museum.

German was Jon’s next assignment where he became the Chief of Protocol for Headquarters United States European Command in Stuttgart. During his 2.5 years there, he met and escorted a star-studded roster of military and civilian leaders, dignitaries and celebrities such as former ambassador Shirley Temple Black, Secretary of Defense Casper Weinberger, Chairman of the Joint Chiefs of Staff General David Jones and many others.

“Best assignment of my career” is how Jon describes his next assignment, at Aviano Air Base, Italy, in northeast Italy at the foot of the Alps. His responsibilities concerned everything except the flightline and flight operations. Jon implemented a policy, as Col. Gabriel had done in Thailand years before, requiring senior leaders, both officers and enlisted, to eat in the base chow hall; remarkably, the food quality and facility cleanliness quickly improved!

The final stop in Jon’s Air Force career was at Scott Air Force Base, Illinois near St. Louis, Missouri where he was the Director of Administration for the Military Airlift Command. He was responsible for over 5,000 people worldwide and had to travel frequently to Europe, Hawaii and across the United State.

Jon retired from the Air Force in 1986 and, 13 years later, returned to Topeka where he is still serving in a range of administrative, military and historical roles for the Potawatomi Nation and other organizations. The Combat Air Museum is fortunate to count such a person as Jon as a member and volunteer.
As a fifty year fan of the famous McDonnell F-4 Phantom II, I always enjoy telling Combat Air Museum visitors about the exploits of our own F-4D Phantom, serial number 66-0268, better known by its nose art, ‘Wichita Lineman.’ 268 gained some dubious notoriety while at McConnell Air Force Base with the 184th Fighter Group, Kansas Air National Guard when a student crew accidentally flew through high power lines while exiting the Smoky Hills gunnery range near Salina. The Phantom suffered some wing and pylon damage and returned to base with a length of wire, thus earning the nickname it carries to this day.

When the 184th “Flying Jayhawks” switched to F-16s in the ’90s, both the Combat Air Museum (CAM) and the Museum of the Kansas National Guard (MoKNG) were lucky to receive examples of the historic aircraft; 268 to CAM and 65-0801 to the MoKNG. 801 was credited with a MiG kill by the only Air Force pilot ace of the war, then Capt. Steve Richie. Both airplanes were flying with the famous 555th Tactical Fighter Squadron known as the “Triple Nickel,” the highest scoring unit of the war, operating from Udorn Royal Thai Air Force Base.

After many years of frustration for American combat crews caused by political constraints on rules of engagement and repeated bombing halts, 1972 saw the start of renewed action up north with Operation Linebacker. A major goal of the campaign was crippling the North Vietnamese air force and shooting down their MiG fighters. Problems had always arisen in doing so due to the fact American pilots had to close to visually confirm the nationality of the other aircraft, thus putting themselves in dogfighting range of the highly maneuverable MiGs and their own weapons, which the hulking F-4s could not turn with. American losses were high but help was on the way.

One new top secret device was added to Triple Nickel Phantoms. Engineers had come up with a device known as the APX-80 that could spot the enemy aircraft from beyond visual range by reading the Identification Friend or Foe (IFF) transponder codes used by the enemy aircraft without the MiG pilots knowing they were being painted on the F-4 radars. Known simply by its code name "Combat Tree," the APX-80 was first installed on eight Phantoms of the 55th resulting in a quick uptick in MiG kills by the crews. Although a couple of the first planes so equipped were lost in combat, the edge moved in the Americans’ direction and enemy forces were stymied as to how they were suddenly being seen and shot down. Another ten Phantoms were quickly equipped with Combat Tree capabilities, including CAM’s aircraft 268 and the MoKNG’s 801 from the first batch. When our F-4 later tangled with a MiG-21 over Hanoi, it was armed with the APX-80. On October 12, 1972, Captains John A. Madden, pilot, and Larry Pettit, weapons system officer, downed a North Vietnamese MiG-21 fighter. They accomplished this by maneuver alone, causing the enemy fighter to fly into the ground while trying to evade the Phantom.

Local Air Force legend and museum friend Colonel Roger Locher and his pilot, Major Robert Lodge, were flying APX-80 armed F-4 65-0784 when they shot down their third MiG on May 10th, only to be surprised by a MiG-19 that gunned them down. Locher ejected and then survived 23 days on the ground, avoiding capture before finally being rescued in a dramatic and incredible effort from under the nose of the enemy. Major Lodge, however, had been quite vocal about how he would never bail out to suffer capture and torture because of secrets he knew of, more than likely that of Combat Tree. He died in the crash and his remains were repatriated many years after the war.

The continued use of APX-80 helped throughout Linebacker II and for the most part destroyed much of North Vietnam’s air force, forcing them to keep most of their MiGs...
Across the Pond:

**Battle of Britain Air Show 2022**

By Richard Knight, CAM's UK Correspondent

On a visit to this year's Battle of Britain air show held in the United Kingdom (UK) at Lashenden Airfield, Headcorn, I was interested to see a Bücker 131B Jungmann in amongst the lineup of classic World War II aircraft on show. This German-designed plane was used by nearly all of the Luftwaffe’s primary flying schools during the war as its basic pilot trainer in the same way that the Royal Air Force (RAF) used the Tiger Moth.

The flying qualities of the Jungmann are splendid and we had a great aerobatic display when it flew at the show. With its light weight, agility and 12G strength, it became the most sought-after aircraft for primary training in the mid-1930s. Air Forces in Switzerland, Czechoslovakia, Hungary, South Africa and Spain adopted it before World War II. During and after the war, many other countries bought or built them under license, including Yugoslavia, Brazil, Uruguay, Chile and Japan.

The reason the Jungmann was so popular is that it’s a simple airplane with interchangeable upper and lower wings, making them faster to manufacture and repair. Each wing panel, uncovered, weighs only 25 pounds. The resulting four ailerons contributed to its maneuverability, which came in handy for several German Jungmann pilots when they found themselves surprised by British Hawker Typhoon fighters over Paris in World War II. All but one of the Jungmanns escaped by making tight turns around the Eiffel Tower! At war’s end, most German Jungmanns were destroyed; however, because it was such a good aircraft the Swiss Air Force used them until the early 1960s. At that time, they were still being manufactured in Spain. As the air forces retired them, private owners collected them where they are appreciated to this very day. G-BTDZ being flown at the air show by owner Richard Pickin was built in Spain by CASA in 1937.

In the UK, RAF trainee pilots started on the Tiger Moth and, if successful, moved on to advanced flight training in the American T-6 Texan/Harvard single wing trainers. This training often took place in the US or Canada. The German Luftwaffe used a similar progression with initial training in the Focke-Wulf Fw 44 or the Bücker 131 Jungmann and then moving on to planes like the Arado Ar 96 for advanced training.

You can find a great article by L.F. Sarjeant on the amazing Jungmann at [https://rclibrary.co.uk/files_titles/1835/Profile_222_Bucker_Bu131_Jungmann.pdf](https://rclibrary.co.uk/files_titles/1835/Profile_222_Bucker_Bu131_Jungmann.pdf)

Visitors were also lucky to have a Messerschmitt Bf 109 flying in a dogfight with two Spitfires at the show, although this Bf 109 was built in Spain after the war by Hispano in the 1950s. Having these two iconic World War II planes flying together showed how similar in looks they were, and I marveled at how a Spitfire pilot would be able to recognize the foe from afar if its markings were not clear. The most noticeable difference from the ground was the sound each plane made. The characteristic “deep throated” growl of the Spitfire’s Merlin engine is unmistakable, and you know one is around from the sound long before you can see the plane. The Bf 109 had a high pitched whine which, after some research online, I found comes from the supercharger. That said, the Bf 109 was arguably a better plane, slightly faster at altitudes below 20,000 feet with a better climb rate and better dive rate. The Spitfire’s agility, particularly its tighter turn circle, was what made the British fighter a very credible combat aircraft against the Messerschmitt.

The highlight of the afternoon’s display was the arrival of the last airworthy B-17 Flying fortress bomber in Europe, “Sally B,” expertly restored and maintained by the Sally B Charity. I understand that there are about nine airworthy B-17s flying in the US. The grass airfield at Lashenden would not support takeoff and landing of this mighty aircraft but it flew from its UK base at the Imperial War Museum, Duxford, to the display and gave a good 20 minutes of flying over the area. The sound and sight of this great aircraft flying a few feet above our heads was truly amazing and made more so as it was twinned with a C-47 Skytrain, more commonly called a Dakota in the British world. The air show organizers wanted to pay tribute to the United States Army Air Force in Europe during World War II and these two remarkable planes were a fabulous memorial to the American aircrews who flew them. ◆
I’ll review two aviation books I donated the Combat Air Museum’s library.

The first is one that includes lots of flying details mixed with personal insights into combat aviation, but from the point of view of a Royal Air Force F-4 Phantom and Jaguar pilot. “F-4 Phantom, a Pilot’s Story” by Robert Prest, keeps you on your seat’s edge through early training and years of flying intercepts and scrambles over the North Sea and in Europe, many in typical horrible British weather in solid instrument conditions that can down a crew with no warning. Along with years of active flying, Prest also talks of dangers faced teaching air combat tactics and in working with American and other allied pilots in Germany. An English pilots’ aviation terms dictionary would make it a bit easier read, but the book is still an exciting one.

The second paperback is by Don Brown and World War II Army Air Force pilot Captain Jerry Yellin entitled, “The Last Fighter Pilot.” The story traces his war flying P-51 Mustangs in training and on to the Pacific during the last few months of the war up to and including the very last mission over Japan a few days after the atomic bombs were dropped. He starts his combat by landing on Iwo Jima while it was still being taken from its defenders, to B-29 escort duty and at the end being turned loose to roam at will for strafing targets on the deck. Everyone is familiar with the bloody toll taken on both sides’ ground forces, but even near the end the Navy and Air Force lost many crews to ground attacks, anti-aircraft fire, weather and mechanical issues...with many simply disappearing at sea. The book ends with Yellin and his best friend, Lt Philip Schlamberg, flying the very last mission on August 15, 1945, missing the long awaited radio call that the war was over, from which only Yellin will return. Yellin wrote the final chapter many years later when he and his wife visited Iwo Jima and Japan, and his reconciliation with his memories and an accidental but happy meeting with a Japanese man of his own generation.

Where’s My Copy of Plane Talk?

Three and a half years ago, we made a significant change to Plane Talk when we introduced the current format that Nels Anderson created for us. We made another change, moving Plane Talk from bimonthly to quarterly publication. Creating each issue is time consuming, and it seemed that we’d no sooner completed one issue and sent it off for publishing then we were starting the next. We believe moving to a quarterly publication schedule will provide more time to prepare each issue. Plane Talk will expand from 12 to 16 pages, providing more space to expand coverage of events.

When Nels passed away two years ago, his daughter-in-law, Jennifer Anderson, kindly took his place as our creative talent and has done a fine job for us. She recently changed professions and increased demands upon her time have caused her to relinquish her Plane Talk responsibilities. Fortunately, Megan Garner, a professional creative and the daughter of Gene Howerton, chairman of the Combat Air Museum, has agreed to look after Plane Talk. We look forward to working with Megan as 2023 approaches.

We welcome your feedback on these changes as well as your suggestions as to stories you’d like to see in upcoming issues: just email Plane Talk’s editor, Kevin Drewelow, at director@combatairmuseum.com or call him during business hours at 785.862.3303.
December
12–Membership Potluck Luncheon
25–Christmas, Museum closed

January 2023
1–New Year’s Day, Museum closed
2–Winter hours begin, Museum open noon-4:30 p.m.

February
1–Winter hours continue through the end of the month
13–Membership Brown Bag Luncheon

March
1–Regular hours resume, Museum open 9 a.m.-4:30 p.m.
12–Daylight Savings time begins

Calendar of Events

Visitors

1,441 people from 40 states, Austria, Canada, the Czech Republic, Great Britain, Honduras, Mexico, the Netherlands and Saudi Arabia visited the Combat Air Museum in May.

In June, 1,351 visitors from 42 states, Puerto Rico, Washington, D.C., and Belgium, Great Britain, India, Moldova, the Netherlands and Scotland toured your Museum.

1,765 people from 40 states, Canada, Colombia, Finland, Germany, Great Britain, India, Mexico, the Netherlands, New Zealand, Panama, Romania and Switzerland visited the Combat Air Museum in July.

In August, 1,526 visitors from 37 states, Washington, D.C., China, Germany, Great Britain, Indonesia, Mexico, Netherlands, South Africa, South Korea, Spain and Sweden toured your Museum.

New & Renewing Members

New:

Renewing:
Warning Star

The rudders were fabric covered in service, and the temptation to recover them for authenticity was strong, but we chose to replace the fabric with aluminum for durability, as most museums have that display Warning Stars and Constellations outdoors. Additionally, as the EC-121’s tail extends over a grass-covered slope, it would be extremely difficult to erect scaffolding every few years to remove and install the rudders after recovering since the fabric deteriorates after exposure to sun and the elements.

Once Danny finished blasting the rudders, other volunteers stepped up. Mike Madden, assisted by Joe Wulfkuhle and Dale Gay, began the arduous task of replacing some damaged skins and fitting the new sheet metal covering on the rudders. Dale is a licensed airframe and powerplant mechanic who retired from Trans World Airlines (TWA) after many years. In fact, TWA was just getting rid of its last Lockheed Constellations, the civilian version of our EC-121, when he went to work at the airline. Exposure to the elements damaged a small fiberglass fairing on the Warning Star’s spine beyond repair. Joe took it home and returned a few days later with a perfect replacement! Aircraft structural and sheet metal work is incredibly labor intensive but these three fellows jumped right in and are making great progress.

Back on the flightline, Phil Gray, one of the founders of Gray & Company, began to work on the detail painting on July 21. He arrived early every morning to beat the heat and soon the red propeller warning stripes, Air Force Reserve (AFRES) banner, and many other smaller markings appeared. Phil painted the propellers and applied the Hamilton Standard decals that Wes Barricklow provided to each of the 12 propeller blades. Phil’s work continued into August when he and the rest of the crew were awaiting additional stencils and markings. But there was other work to do.

Our EC-121 has been home to countless generations of starlings for the last four decades and by late August it was time to bird-proof the airplane. Mike Welch, Ted Nolde and Gary Naylor took on the task. They obtained some netting and used it to keep birds out of the landing gear wheel wells. The team chose rabbit fence or screen material to keep birds out of the engine nacelles and inlets, but it was necessary to clean out the nest materials, droppings and remains from the cowlings. Opening one engine after another, these brave souls let the nest material fall to the ground and then used a variety of tools to extract the remaining materials packed into cylinder head cooling fins, around the intake tubes and in the many other small crevices around the engines. Years of exposure to this mess severely corroded many of the engine rocker covers which will eventually require replacement. The team then used a power washer to complete the cleaning process.

After power washing inside the cowlings, Mike discovered the nasty mess had spattered all over him. When he got home, his wife Carla refused to let him in the house until he tossed his smelly, nasty t-shirt in the trash! Then she marched him straight to the shower!

Gary Naylor, Mike Welch, Nathan Benfield and Ted Nolde closed the cowlings and began installing the anti-bird screens. Danny San Romani measured and produced a template for making circular screens that, once cut, fit perfectly in the cowlings where air once flowed to cool the engines in flight. They used the same material to keep birds out of the carburetor air inlets in the top of the cowls too.

The next step is to elevate the Warning Star just enough to get the tires off the ground. Ted Nolde designed some very robust support stands that will support the EC-121 with an inch of clearance. Mike Welch turned to Jon Hass, founder of HME, Incorporated, to fabricate the stands. HME made the fixtures to moor our Boeing CH-47D Chinook helicopter two years ago, and they were kind enough to help us once again. Jon gave Ted’s drawings to Cody Wasson, HME’s project coordinator, and before long Mike loaded the completed stands on his trailer and delivered them to the Combat Air Museum! We’re grateful to HME for the generous donation of their time, materials and expertise. At some point in the future we’ll elevate the Lockheed with lifting bags, place the stands on their spots and lower the aircraft onto the stands.

We’re not finished yet. The rudders will require installation once they are complete and the team will install several markings once they become available. We have some sheet metal and corrosion work still to do, but 2022 will be known as the year the Combat Air Museum transformed the EC-121 from a faded eyesore into a fitting tribute to the veterans and Cold Warriors that flew, maintained and supported this aircraft as it watched the skies, keeping us safe.◆
Ways You Can Support the Combat Air Museum

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.

**Dillon’s Community Rewards Program**

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 [www.dillons.com/account/enrollCommunityRewardsNow](http://www.dillons.com/account/enrollCommunityRewardsNow) 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 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!

**Amazon Smile**

AmazonSmile is a website operated by Amazon with the same products, prices, and shopping features as Amazon.com. The difference is that when you shop on AmazonSmile, the AmazonSmile Foundation will donate 0.5% of the purchase price of eligible products to the charitable organization of your choice.

Every item available for purchase on [www.amazon.com](http://www.amazon.com) is also available on AmazonSmile ([smile.amazon.com](http://smile.amazon.com)) at the same price. You will see eligible products marked “Eligible for AmazonSmile donation” on their product detail pages. You use the same account on Amazon.com and AmazonSmile. Your shopping cart, Wish List, wedding or baby registry, and other account settings are also the same.

To shop at AmazonSmile simply go to [smile.amazon.com](http://smile.amazon.com) from the web browser on your computer or mobile device. You may also want to add a bookmark to [smile.amazon.com](http://smile.amazon.com) to make it even easier to return and start your shopping at AmazonSmile. On your first visit to AmazonSmile [smile.amazon.com](http://smile.amazon.com), select “Combat Air Museum” to receive donations from eligible purchases before you begin shopping. Amazon will remember your selection, and then every eligible purchase you make at [smile.amazon.com](http://smile.amazon.com) will result in a donation. To get started, visit [https://smile.amazon.com](https://smile.amazon.com)

**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 under current conditions. We’ll train you for this crucial and enjoyable task. If you could spare one day a month please call the Museum at **785.862.3303** and ask for Nelson, our office manager and volunteer coordinator.
An Eagle for Gary

We’re learning a lot about 286 and its role in the F-15 flight test program. Kristina Hampton is the Manager of Collections and Special Projects/Exhibits at the St. Louis Science Center, where our Eagle came from. She sent us their file of information about 71-0286 and it’s been fascinating to read. Much of the material has to do with the testing of various missiles and other external stores. Jim Means was a Raytheon flight test engineer involved in testing AIM-7F Sparrow air-to-air missiles on the Eagle. Gary emailed Mr. Means and received a reply. Jim is delighted to learn 71-0286 will be restored and displayed. He has extensive files and photographs of 71-0286 and other Eagles gathered during the flight testing phase at Edwards Air Force Base half a century ago. Although he was there to support Sparrow tests, he has answers to nearly every question that comes up about the jet...like its wooden wingtips!

We were surprised to find a pair of rotted and deteriorated wooden wingtips among the many miscellaneous parts. We assumed they were fitted at the museum for some reason. Jim Means explained the jet flew with those wooden wingtips. Engineers learned a lot during the flight test phase and had to quickly fabricate and install new parts to try new designs, and wood was ideal for some of those parts, including wingtips. Jim’s daily log of the flight test days are full of problems encountered during test flights and the frequent, ingenious solutions that engineers quickly implemented.

By mid-September, Gary wanted to power wash 286 to remove the peeling, spurious Thunderbird paint scheme. Bruce Wanamaker at Kansas Rental West, kindly loaned a hot water pressure washer to us and what a difference it has made! The water blast quickly removed the white Thunderbird paint along with the underlying grey coat, revealing the original Air Superiority Blue and DayGlo fluorescent orange flight test scheme! Gary, Mike Welch, Gary’s wife Susan and her brother Max Lorentzen have all spent considerable time hanging on to the wand, patiently removing the old coats of paint. The water blast process removes the paint from a small area and is a very labor intensive, time consuming process but it is transforming the appearance of the Eagle. It has exposed long lost placards, panel numbers, servicing information and distinctive “NO STEP” markings all over the jet. We’re photographing and documenting these markings in order to return the jet to its original appearance.

Once we select its final parking spot, we will moor or tie down 286 and continue with airframe maintenance. We will gather more photos and data to document markings prior to painting the Eagle in the spring or summer. Be sure to visit the Combat Air Museum soon to see the Eagle for yourself!

In Remembrance

Charles “Chuck” Urban
U.S. Navy veteran
CAM #3738
December 3, 1933 – September 18, 2022

The Combat Air Museum was saddened to hear of the passing of fellow member and good friend Chuck Urban on Sunday September 18, 2022. Chuck and his wife Marlene have been volunteering at the Museum for many years, working our gift shop and greeting guests to the Museum. Both were always present for our regular membership lunch meetings where they helped set up, served food, and cleaned up afterwards.

Chuck and Marlene were involved in running a local antique business, which meant they would often find items which could be used in the Museum one way or another. They were always on hand to organize and assist with the Fly-In Market at the annual Celebrity Pancake Feed. As this list could go on and on, I can only finish by saying Chuck was a dedicated member of the Museum who mowed the Museum grounds and always lent a hand when needed. We thank you Chuck for your service to your country, as well as to the Combat Air Museum. R.I.P.
Visit the Combat Air Museum for fun, information and an educational experience.

Sonnet to a Windsock

Bravo canvas on a thousand breezes borne,
Now on some scrapheap destined to be thrown,
By bullets riddled, and bomb splinters torn,
These fateful months you faithfully have flown.

For bloodshot eyes within the circuit flying,
The wind’s own eye precisely you have found;—
Young men—and some are hurt and some are dying,—
At ninety knots they glide from air to ground.

Towards you my visored friends, with one last glance,
Unleashed their Merlins—took off into cloud,
James fell in flames and Christopher in France,
For Peter and for Simon sea was shroud.
Shall ‘danger-money’ workmen end your year?
‘Give it to me please!’ Young voices fill my ear.

—W. D. O’Hanlon

“W. D. O’Hanlon was the chaplain at RAF Biggin Hill from 1940 to 1942. At the end of 1940 the Works Department replaced the windsock at the north end of Biggin Hill airfield, not fifty yards from the bomb shelter where forty WAAFs were killed in one of the many raids this key fighter base suffered [during the Battle of Britain].”

From “Give Me the Wings: A Celebration of English Aviation Poetry” by Martin Barraclough