The AMC Museum Hangar Digest is published quarterly and is dedicated to the preservation of our airlift and tanker heritage. All articles, unless otherwise noted, are written by the editor.

Viewpoints in this publication are those of the contributing authors and do not necessarily reflect the opinions of The AMC Museum Foundation or of the Museum’s staff.

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Photos are by Jeff Brown, unless otherwise noted.

Cover: Air Mobility Command Museum Restoration Chief Les Polley shows off the horizontal stabilizer for the KB-50J aircraft being brought from MacDill AFB, Florida, where it has been on static display for more than 20 years. The KB-50J will be reassembled to join the AMC Museum’s fleet of refueling aircraft.

Air Mobility Command Museum
Mission Statement

The mission of the Air Mobility Command Museum is twofold:
- To present the history and development of military airlift and tanker operations.
- In a goal closely aligned with the first, to portray the rich history of Dover Air Force Base and its predecessor, Dover Army Airfield.

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What is the Air Mobility Command Museum?

Located in Hangar 1301 on Dover Air Force Base, Kent County, Delaware, the AMC Museum is part of the National Museum of the United States Air Force’s field museum system.

One of the reasons your AMC Museum continues to provide a great educational experience is that we stick very closely to our reason for being.

So exactly what is our “mission”? Broken down by numbers our mission is 70 percent airlift and air-refueling, 20 percent Dover AFB history and 10 percent Air Force general history. Our aircraft and artifact collection sticks very closely to that breakdown. But we work hard to be much more than numbers. We tell the stories of the people who have served in our nation’s Air Force, and we offer the only opportunity for many visitors to see the actual aircraft and meet the people who have served our country.

Hangar 1301 was placed on the National Register of Historic Places in 1994.

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Hangar 1301 was placed on the National Register of Historic Places in 1994.

Although located on Dover AFB property, entrance to the Museum may be made from Delaware Route 9, south of the base. Admission to and parking at the Museum is free and military identification is not required. The Air Mobility Command Museum is open from 9 a.m. to 4 p.m., Tuesday through Sunday. It is closed on Mondays, Thanksgiving, Christmas and New Year’s Day. For more information, call 302-677-5938 or 302-677-5991.

We like to say we are a window to your Air Force. Let us know how we can continue to improve our outreach and family friendly experience.

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Education outreach
AMCM’s Tricia Upchurch brings history to life

By Mauricio Campiño
436th Airlift Wing / Public Affairs

Students at Dover Air Force Base Middle School were recently treated to a special history lesson. Tricia Upchurch was filling in as a substitute teacher at the school when she noticed the students’ lesson plan included reading an article on women in aviation.

She quickly coordinated with teachers and the school principal to set up a second visit.

Upchurch returned to the classroom the following day wearing the uniform of the Women’s Air Force Service pilots of World War II and instantly caught the attention of the students. During her presentation she spoke of the group’s origins in New Castle, Delaware, their training, their many struggles and accomplishments, and their decades-long fight for recognition.

Nicole Jones, principal of the Dover Air Force Base Middle School, said Upchurch’s visit gave the students a new experience.

“Both the students and the staff enjoyed the presentation, but more importantly, it allowed the learning to come to life,” Jones said.

Upchurch is a former elementary and high school teacher from Missouri and arrived at Dover in September 2015 with her husband, an aviator in the 9th Airlift Squadron at the base.

Shortly after arriving, she joined the Air Mobility Command Museum as a volunteer educator. In addition to serving as the Museum’s summer camp teacher, Upchurch handles all educational requests and coordinates educational outreach. Recently, the Museum hosted a group of 55 home-schooled students. Upchurch designed and coordinated the tour and activity curriculum for their visit.

In late 2016, Museum staff came across a replica WASP uniform and decided it would be a great teaching tool. With the help of a few pins and needles, Upchurch made the appropriate adjustments that allowed her to wear the uniform properly.

Next, she started researching the group to prepare for presentations, but quickly found out just how little information was available.

“To be honest I didn’t know very much about the WASPs ... I had one history textbook that had one sentence about them,” Upchurch said. “They are a piece of history that people know very little about.”

Plunging into her self-appointed project, Upchurch since has gathered a wealth of historical information to share and continues to find more. With the success of her first school presentation there now are plans to do them more often.

Upchurch confesses she still gets nervous before every presentation but it’s very rewarding. “I love history and bringing that to life for kids. It’s fun more than anything else.”

Tricia Upchurch, Air Mobility Command Museum’s volunteer educator, poses next to a Curtiss C-46 aircraft during the Aug. 27, 2017, Thunder Over Dover Open House at Dover Air Force Base, Del. She is dressed as a Women’s Air Force Service Pilot, and the plane is the same model flown by WASPs during World War II.

Upchurch helps a student construct a glider during an Oct. 17 AMCM visit.

Upchurch gives students a tour of the Museum’s C-47, Turf and Sport Special.

Is your name on the bench? Be a part of our AIRCRAFT BENCH PROGRAM

Learn more at www.amcmuseum.org
What’s coming

AMC Museum on track to receive historic refueler

The Air Mobility Command Museum is set to add another “first, last and only” to its fleet of aircraft.

Beginning the week of Dec. 18, the museum began receiving parts of a KB-50J refueling aircraft. The plane, originally a B-50 Superfortress, was an upgraded version of the B-29 Superfortress used in the Pacific during World War II.

This particular aircraft was converted from its role as a bomber to that of an aerial tanker in the 1950s, hence the “KB” designation. Bombers are designated by the Air Force with the letter “B,” while tankers are identified with a “K” prefix.

AMCM Director John Taylor noted this was the oldest remaining aircraft to be converted from a bomber to a tanker. It’s also the last type of aerial refueler used by the Air Force to find a home at the AMCM, making it the only museum to feature all three tanker aircraft used by the Air Force.

“The AMCM is unquestionably the single most appropriate location for this historic aircraft,” Taylor said. “We already have identified a preliminary display position, placing this historic aircraft in line with the two other AMCM tankers, a KC-97 Stratofreighter, and a KC-135 Stratotanker.”

Having all three aircraft allows the museum to put on display a lineage of 60 years of strategic and tactical air refueling aircraft, Taylor said.

“The addition of the KB-50 would give the AMCM the largest collection of tankers in the USA,” he added.

The “J” designation means the aircraft is one of 112 KB-50s upgraded with two jet engines in addition to its four 28-cylinder radial engines. The conversion gave rise to the plane’s “four turning, two burning” moniker used by aircraft crews and maintenance engineers.

But before it can go on display outside the museum, located on Route 9 south of the base, the KB-50J first must be taken to Dover. For that, the 67-year-old airplane needs a little help.

A ‘highly corrosive environment’

Dover’s new KB-50J has spent the last 22 years on display at a memorial air park on MacDill Air Force Base, outside Tampa, Florida, said Steven Ove, historian for the base’s 6th Air Mobility Wing.

“The base commander of MacDill at the time, Col. Charles T. Ohlinger III, and the airpark committee had a vision to expand the park with aircraft to represent each era of the base’s history,” Ove explained. “Once the landscaping of the park was finished, the KB-50J found its way to MacDill in 1995.”

But changes in operations at MacDill meant military maintenance technicians were no longer available to care for the airplane, and responsibility for its upkeep was left to contractors, Ove said.

Over time, it was increasingly evident the plane’s condition was deteriorating due to MacDill’s salty air and humid environment.

“Maintaining the historic static display aircraft in our highly corrosive environment is destructive to these irreplaceable artifacts,” Ove said. “Additionally, the aircraft needs to be restored every so often and it’s not very cost-effective for the base.”

Also, plans to reduce maintenance costs by turning the airpark into a community park meant the KB-50J and another aircraft, an F-16 Fighting Falcon, needed to go.

A restoration challenge

AMCM restoration chief Les Polley is in charge of rehabilitating the KB-50J and getting it ready for eventual display at the museum. A retired USAF master sergeant, Polley has more than 20 years experience in structural repair work.

“Out at MacDill, it was sitting really close to the water and out in the elements,” he said. “We wanted to bring it here and fit it into our collection.”

Beginning in early December, crews from Worldwide Aircraft of Springfield, Missouri, started dismantling the KB-50J. The first parts, the horizontal stabilizer, and the U.S. AIR FORCE

Glenn Chatfield took this photo of the AMCM’s newest acquisition while on leave from the Army in March 1972. The plane was displayed outside the Air Force Museum (now the National Museum of the US Air Force) at Wright-Patterson AFB, Ohio.
The remainder, including the fuselage, was scheduled to be brought up to Dover in January. Once all of the parts are safely at the Museum, Polley’s crew will get the opportunity to see what they’ve got to work with. “We’ll be looking it over structurally and working to stop any corrosion, depending on the type and where it is,” he said. Polley’s first look at the horizontal stabilizer gave him the realization a lot of work needs to be done. A number of structural supports inside the stabilizer were seriously corroded, meaning they’ll have to be replaced. Parts of each elevator -- the small flaps on the rear of the stabilizer -- need to be rebuilt due to water damage.

Restoration crews can use a number of chemicals to stop the deterioration, but in some areas, the damage is so severe new parts must be fabricated to bring the plane up to Air Force standards for display of heritage aircraft.

How long it will be until a reassembled KB-50J sits on the ramp outside the AMC Museum is one question Polley can’t answer yet. He emphasizes that while this aircraft never will fly again, the idea is to make it look like it’s ready to take to the air. “We’re looking to eventually restore the exterior and interior of the aircraft,” he said. That includes rebuilding the cockpit and replacing any missing instrumentation.

“People will be able to come in and they’ll get a walk back in time by seeing what the actual aircraft looked like,” he said. It’s a job his restoration experts have managed before with a number of the museum’s aircraft, and Polley expects no different outcome this time. “I’m looking forward to it,” he said. “It’s part of the challenge for the restoration guys to figure out what we’re going to do and how we’re going to pull it off.”

This article includes information provided by Airman 1st Class Ashley Perdue of the 6th Air Mobility Wing Public Affairs office, MacDill AFB, Florida.

### Ralph Pettersen on the scene at MacDill AFB

AMCMF member Ralph Pettersen visited MacDill AFB where a crew from Worldwide Aircraft Recovery was in the last stages of disassembling the KB-50J for its trip to Dover. Here is what he saw.

Work was to be completed on taking apart the aircraft in mid-January with those components not already flown to Delaware scheduled to be loaded onto trailers for the trip north.

There were 370 B-50s built by Boeing at Seattle between 1947 and 1953. The MacDill aircraft is serial 49-0389 and it was delivered to the Air Force in December 1950 as a B-50D-125-BO.

After serving as a strategic bomber at Hunter AFB in Savannah, Georgia, it was converted to a KB-50D aerial tanker in 1955. In 1958 Hayes Aircraft Corporation converted the aircraft to a KB-50J, with the addition of two General Electric J-47 jet engines.

The aircraft’s final assignment was with the 431st Air Refueling Squadron at Biggs AFB, El Paso, Texas. The 431st was the last unit to operate the KB-50J and flew its last KB-50J refueling mission Jan. 26, 1965.

The AMCM’s new aircraft was flown from Biggs to the USAF Museum at Wright Patterson AFB, Ohio, Feb. 17, 1965, by Maj. Anthony C. Pronier and a select crew.

Displayed outdoors at the USAF Museum for 30 years, it was disassembled and moved to MacDill AFB in late 1995 for display in the base’s new Memorial Park. The aircraft was marked as KB-50J 48-0114, which was curious since 48-0114 did not appear to have any special history. During the day of my visit to MacDill, the four-man Worldwide crew was reassembling the wings. The four R4360 engines and two jet pods along with the tail section, refueling pods, flaps and control surfaces had already been removed and were either awaiting shipment to Dover or already had been shipped. The jet pods and tail planes were sent north the day after Christmas and the engines departed in early January.

While disassembling and moving a KB-50J would be a daunting task to most, it’s just another day on the job for the guys from Worldwide. Over the past 30-plus years Worldwide has disassembled, moved and reassembled an impressive array of large aircraft including EC-121, C-133, C-97, C-130, XC-99, XB-47 and C-124 aircraft. The bottom hatch was open and I got the chance to take a quick look at the aircraft’s interior.

It is an amazing time capsule and, other than more than 50 years of accumulated dirt and grime, it was essentially complete and probably not too different from when Maj. Pronier and crew flew her to Wright Patterson AFB.
FOUNDATION NOTES
By Don Sloan

Like many of you, my mailbox frequently has one or more solicitations for dollars from a variety of different organizations. While many of those groups are of interest to me, I realize (also, like many of you), that there are lots of places for my money to go. I have to prioritize.

That being said, I DO pick a few charities that I think do great work in areas that are important to me. But I also do a little further research. Do they use the money to enhance their (my) mission? Are they good stewards of their (my) money? Am I able to see results and do those results make me happy?

When the AMC Museum Foundation sends out our annual fundraising solicitation, we realize it’s very important that we’re able to provide the right answers to those very same questions. Looking at the results of our very successful 2017 Annual Fundraising Campaign, it appears that many of you think you’re getting the right answers to those questions. We had 127 donations totaling nearly $13,000.

Our breakdown shows there were 49 persons who donated $100, 10 who contributed $150 to $250, and three $1,000 donors, with the average donation being just over $102.

As in the past, we added a perk for this year’s campaign for the 108 donors who gave us $50 or more. Each had a chance for a donated 1941 Stearman (PT-17) flight or a giclée from our Aviation Art Series. This year’s winner was retired USAF Col. Robert W. Ginn from Tucson, Arizona, who chose a giclée. He expressed a bit of dismay that we didn’t have any C-133 Cargomaster paintings, as he spent a bit of time flying those a few years ago.

On behalf of the Museum, the Foundation and our volunteers, we like to offer our heartfelt thanks to Col. Ginn -- and ALL the rest of you.
The first few years we tried this fundraising avenue, our average was about $2,500. By expanding our mailing list YOU have increased our five-year average to nearly $12,500! Well done! You’ve done your part. It’s up to us to do ours.

You can trust that the Air Mobility Command Museum Foundation will continue to use our (YOUR) money to enhance our mission of being an aviation and aerospace, education, scientific, cultural, historical and inspirational facility for the general public and the Air Force community.

You can trust that the spending of our (YOUR) dollars is being constantly scrutinized, in order to ensure that it’s being used as effectively and as efficiently as possible.

And finally, every time you view our website or our Facebook page, every time you read the Hangar Digest, and every time you visit our great AMC Museum, you should be able to see the consequences of your donations.

Looking at the results of this annual fundraiser, it must be making you happy!

Looking forward, we have a lot on our plate for 2018. Here’s a preview, and be sure to mark your calendars:

- Collector’s Day, 9 a.m., Saturday, April 14
- Open Cockpit Day, 10 a.m., Saturday, April 21
- Open Cockpit Day, 10 a.m., Saturday, May 19
- PT Cruiser Car Show, 7 a.m. until 3 p.m., Saturday, May 19
- June Summer Camp — date to be announced
- Open Cockpit Day, 10 a.m., Saturday, June 16
- July Summer Camp — date to be announced
- Open Cockpit Day, 10 a.m. Saturday, July 21
- DelRods Car Show, 8 a.m. until 3 p.m., Saturday, July 21
- August Summer Camp — date to be announced
- Open Cockpit Day, 10 a.m., Saturday, Aug. 18
- 911 Memorial Ceremony, 10 a.m. Tuesday, Sept. 11
- Open Cockpit Day, 10 a.m., Saturday, Sept. 15
- Car Show, 10 a.m., Saturday, Sept. 15
- Open Cockpit Day, 10 a.m. Saturday, Oct. 20
- Veterans Day Ceremony, 10 a.m. Saturday, Nov. 10*
- Santa Claus visit, 11 a.m. to 2 p.m., Saturday, Dec. 1
- Santa Claus visit, 11 a.m. to 2 p.m. Saturday, Dec. 15
* - This date is tentative; it may be held Sunday, Nov. 11

Thank you for your support.

Fly safe!
Don Sloan

Hai Tao Li, of Bridgeville, Del., shows his parents, Yumei Cho and Shisen Li, around the ramp outside the AMC Museum, with volunteer Larry Phillips explaining the various aircraft. Mr. and Mrs. Li are from Mudanjian, China.
Featured aircraft

C-60 Lodestar: not the biggest nor the fastest

When it comes to biggest, fastest and best-known, the AMC Museum’s C-60 Lodestar, tail number 42-55918, doesn’t fit any of those categories. But it is one of the rarest of surviving World War II aircraft and gives the Museum another claim to fame: with the Lodestar on board, AMC visitors now can see every significant airlifter built by the Lockheed corporation since World War II.

Those include the C-5A Galaxy, C-121C Super Constellation, C-130E Hercules, plus the C-141A and C-141B Starlifter. Lockheed also built the T-33A Shooting Star, displayed just outside the Museum’s parking lot.

An honorable lineage

Like many cargo aircraft used during the Second World War, the Lodestar had its beginnings as a civilian airliner, the Lockheed Model 14, which in itself had developed from an earlier version, the Model 10 Electra.

A modified version of the Model 10 was flown by Amelia Earhart on her failed mission to fly around the Earth in 1937, and a version of the Model 14, dubbed the Super Electra, was used by Howard Hughes in a 1938 effort to circumnavigate the Northern Hemisphere. The Model 14 was a twin-engine, all-metal single-wing aircraft that featured Lockheed’s distinguishing H-tail upright stabilizer and rudders.

In its earliest form, the Lodestar was known simply as Lockheed’s Model 18, distinguished from its predecessors by a longer fuselage and slightly greater passenger carrying capacity. The first Model 18, a modified Model 14, flew in September 1939, with the first completely new example taking to the air five months later.

The Model 18 was not as large nor as efficient as its main competitor, the Douglas DC-3, and proved only a mild success when offered to civilian airliners. Sales to the US Army Air Forces and the US Navy, as well as the air arms of other nations, helped bolster its reputation as a reliable cargo carrier and small passenger transport.

With war already raging in Europe and the Pacific, and American participation seen as almost inevitable, the War Department requisitioned many civilian Model 18s; powered by a pair of 1,200 hp Wright 1820-89 engines, they were designated the C-56. Several variants followed with the C-60 label awarded when Lockheed switched to the Pratt & Whitney R-1830 Twin Wasp engine.

Counting a number of changes made during its lifetime, Lockheed built more than 325 Lodestars.

Very pleasant to fly

Although they served well, the Lodestars were becoming obsolete as the war progressed and following the cessation of hostilities they were declared surplus and sold to private owners.

Many continued to serve after the war as cargo transporters, and with highly modified interiors, as private executive aircraft.

There are less than a dozen C-60s flying today.

One of those is the Goodtime Gal, tail number 42-56005, flown by the Commemorative Air Force’s Houston, Texas wing.

“The C-60 is a hoot!” remarked John Bixby, a commercial airline pilot who joined the CAF in 2010. “It’s a good-looking, nice looking airplane.”

Bixby and fellow pilot John Cotter are some of the few pilots today who know what it’s like behind a Lodestar’s controls.

“It’s a nice-flying airplane, very responsive, the controls are well balanced, not heavy on the ailerons,” he said.

Bixby admits he’s never flown the Lodestar’s pre-war competitor, the DC-3 or its wartime version, the C-47, but thinks Lockheed was ahead of its time in designing the Model 18.

“I’ve heard the DC-3 handles like a dump truck, but this one is very pleasant,” he said.

However, the Lodestar has its own particular characteristics, he said.

“You have to watch for a pitch change when you put the flaps down,” Bixby said. “It pitches up a bit so you have to be quick on the trim to get the nose back down.

“If you’re expecting that, you can mellow it out with the trim tabs,” he added. “But that’s just a little thing.”

Although the CAF has a mechanic for its C-60, Bixby has helped with some maintenance tasks, including sheet metal repairs.

“It’s a fairly reliable airplane,” he said. “The electrical system is simple and the brakes are good. When you’re landing, you just touch the brakes and it stops.”

Fixing the C-60 also is relatively easy, Bixby said.
The stripped-down C-60 is towed through the streets of Robins AFB, Georgia, on its way to being loaded aboard a Dover AFB C-5M.

"There aren't too many nooks and crannies you can't get into," he said. "If you need to change an engine, you just pull the cowling, open up the engine and there it is.

"One cool thing is the cargo compartment in the nose," Bixby added. "You need a ladder to get up there, but once you're in it you can stand up. If you look aft, you're looking at the back of the instrument panel, so access for that is really great, too."

Although once modified as research aircraft and even used by skydivers, the Goodtime Gal has been returned to its military configuration, Bixby said.

"It's pretty much stock," he declared.

Although completely airworthy the aircraft has been grounded for the past two years by a paperwork snafu: many of the previous modifications weren't properly documented, Bixby said. "It's authentic, it's good to go, but we have to come up with a flight manual for the aircraft, so access for that is really great, too."

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With continued work, Bixby hopes to get the aircraft ready to go again during 2018.

**Museum to Museum**

The AMCM’s Lodestar was built in 1943 and served at US Army Air Forces bases in Alabama during World War II. Sold to Capital Airways in 1946, it went through a succession of civilian owners until 1990 when it was acquired through the USAF Heritage Program and went on display at the Museum of Aviation at Robins AFB, Georgia. The C-60 came to the AMCM in October 2014 when the Robins museum began downsizing its collection.

Since it no longer was flyable, the Lodestar was taken apart, and the entire fuselage and inboard wing sections -- with the two Wright R-1820 engines still attached -- carefully squeezed inside a Dover AFB C-5M.

Les Polley, the AMCM’s restoration director, was part of the team that brought the Lodestar to Dover.

A retired master sergeant with more than 20 years experience in aircraft structural repair, this mission still was a first for Polley.

"It was a bit of a headache," he admits. "This was the first aircraft I’d ever taken apart. We were going off manuals from the 1940s."

Once the outboard wings were removed, retired loadmaster Jon Andrews and former Museum director Mike Leister developed a plan to fit the C-60 into the SuperGalaxy.

"The aircrew was saying it wouldn’t fit," Polley recalled. "But we went down there and they loaded it aboard with about half-an-inch to spare on either side. There really was no margin for error, but we did it without damaging either aircraft."

Once in Dover, Polley’s crew improvised procedures to re-install the wings, using a forklift and back muscle power to get everything lined up.

"It was fun to take it apart and put it back together," he said.

Unlike the CAF’s Lodestar, the Museum’s aircraft had been upgraded with an executive transport package. The small cargo deck windows were replaced with long, rectangular versions and a carpeted interior installed, complete with leather seating, a couch, and toilet.

"It doesn’t look anything like it did in 1942, its more from the 1960s," Polley said.

He plans minor work using Lockheed’s blueprints to touch up the interior, but nothing more.

"We don’t have any plans to bring it back to any level than that," he said.

With the Museum having a complete C-60 in its collection, it has come under the care of volunteer Brian Roth, who in 2016 was named the aircraft’s crew chief.

Now semi-retired, Roth came to Delaware to near his family.

"One thing that attracted me to the area was that I would be able to volunteer at the Museum," he said.

Although he has no military background or flying experience, he was happy to be put in charge of the venerable Lodestar.

"I didn’t have a lot of background on it, but I’ve done some research and read up on it," he said. "I’m responsible for keeping an eye on it and seeing if it needs any work."

Roth has been kept busy. He’s learned there are leaking seals around the cockpit windows, which resulted in a need to replace part of the wooden floor, which had rotted. He’s removed, repainted and replaced the control yokes and plans some internal painting over the summer.

"We hope to get it finished this year," Roth added. "It’s actually not in bad shape."

Roth has found Museum visitors seem interested by the plane’s retro interior, with its green and brown cloth seating, vinyl soundproofing, faux wood paneling, curtains and cigarette ashtrays.

"Most people think it’s pretty luxurious, and it was for its day," he said.

"One thing people find fascinating it that it’s got a toilet in it," Roth said. Although no one has tried to put the fixture to its intended use, he had to take precautions.

"I had to put a chain across it because people would slam the lid down," he said. I had to do something about that.”
C-60 Lodestar
Dover AFB and USAF history

Doolittle Raider reflects on avenging Pearl Harbor

Revenge is a dish best served cold.

It’s doubtful Lt. Richard Cole had that old saying on his mind in April 1942, but to the airmen following him and Lt. Col. James Harold “Jimmy” Doolittle, revenge seemed an appropriate sentiment.

For months after the Dec. 7, 1941, surprise attack on Pearl Harbor, the American military clamored for some way, any way, to strike back at the seemingly unstoppable Japanese war machine. Imperial forces had scored victory after victory in the Pacific, and there was seemingly little the United States could do.

Doolittle, 600 miles off the Japanese coast and at the controls of a B-25 Mitchell bomber, with Cole as copilot, was about to remind the warlords they weren’t invincible.

Broomsticks for tail guns

Beginning with its first flight on Aug. 19, 1940, over the course of the Second World War, the Mitchell bomber proved itself as one of the Allies’ most versatile aircraft.

A Dover engineer, working out of the 4146th Base Unit, which used Hangar 1301 - now the AMC Museum -- supervised the installation of a rapid-fire rocket launcher aboard the Mitchell during a mission to Burma. An improved design later was incorporated into the aircraft.

The B-25 also operated anti-submarine patrols out of Dover Army Air Field, arriving May 16, 1942, just one month after the Doolittle raid.

Although the Japanese assault on Pearl Harbor resulted in more than 3,500 casualties and the loss of 17 ships, including eight battleships, their forces struck while the Navy’s aircraft carriers were at sea, allowing the entire fleet to survive.

About a month after the attack Navy Adm. Francis Low proposed using one of those carriers, USS Hornet, and a fleet of B-25s to launch a raid on the Japanese mainland.

It was an unprecedented idea. No one ever had flown land-based aircraft from a Navy carrier. Because the planes could not return and land, everyone knew it would be a one-way mission.

But no one at the time considered it a suicide operation, said author Jim Scott, a 2016 Pulitzer Prize finalist for his book, “Target Tokyo.”

“There was, of course, a plan for these bombers to land on primitive runways in China,” Scott said. “We now know how ill-prepared the Chinese airfields were to receive the bombers, but on paper at the time, the mission appeared feasible, dangerous certainly, but survivable.”

To accomplish the operation, Doolittle chose the five-man Mitchell, despite the fact it had yet to see combat. Doolittle realized the Mitchell’s small size meant that with skilled pilots at the controls it could conceivably take off from a moving ship in the middle of the Pacific Ocean and successfully deliver its deadly cargo to the Japanese islands.

To save weight and increase its range, each aircraft was equipped with extra fuel tanks and its bomb load reduced by about 1,000 pounds. They also were stripped of almost all armament; to fool any pursuing Japanese aircraft, the Mitchell’s twin rear guns were replaced with painted broomsticks.

Delaware’s Mitchell

Larry Kelley, founder and executive director of the Delaware Aviation Foundation, owns one of the world’s few airworthy B-25s.

Piloting a B-25 is not much different than sitting behind the controls of its contemporaries, the B-17 Flying Fortress or B-24 Liberator, Kelley said.

“It is not a hard airplane to fly,” he said. “You literally have to manhandle the aircraft, but once you learn it, it’s a relatively easy aircraft to fly.”

But it does require some elbow grease to manage a smooth flight, Kelley said.

“It’s a heavy airplane and there are no boosted controls, no hydraulics, it’s all cables and bell cranks,” he said.

Kelley bases his Mitchell, dubbed “Panchito,” at the Delaware Coastal airport in Georgetown, Delaware, and it makes regular appearances at air shows and special events, including the 2017 “Thunder Over Dover” airshow.

A pharmacist by trade, Kelley has been flying for more than 50 years and considers the Mitchell one of his favorites. Although

Lt. Richard Cole in 1942

Panchito never saw action, it was built as a fully combat-ready aircraft. It was used for training until 1958, when it was sold and turned first into a fire bomber and then a mosquito-sprayer.

It was restored to flying condition after sitting for years in a museum, Kelley said. Since one of the owners at the time had a friend and pastor who had been a gunner on the original Panchito, he named his Mitchell in honor of the original plane.

An unexpected complication

Doolittle had a long and distinguished career as both a military and civilian aviator before he was chosen to lead the highly classified raid, and Cole was well aware of Doolittle’s reputation.

“When we met Col. Doolittle, I knew his background and generally from the newspaper articles what kind of a man he was,” Cole said in an interview from his Texas home. “I knew all about his flying escapades and the different types of airplanes he flew.”

Each crew member on the raid was a volunteer for what was advertised as a “secret, dangerous mission,” and Doolittle put the men through weeks of training which included takeoffs from a simulated carrier deck.

None of the volunteers knew their true destination until the planes were loaded aboard the Hornet and it steamed into the western Pacific.

The plan was to launch the aircraft about 400 miles from the Japanese coast and drop incendiary and explosive bombs over Tokyo and other targets. The planes were to head to airfields in parts of China free from Japanese control.
Things did not go as planned. On April 18, 1942, still about 600 miles from Japan, the Hornet and its task force was spotted by a Japanese patrol boat. Although the boat was destroyed, Doolittle feared it had given away the Hornet’s position to the Japanese navy. After the war, it was learned a garbled message actually had been sent but the boat was sunk before it could be retransmitted.

Despite knowing his men could not make it to safe airfields in China and would have to ditch their aircraft in occupied territory, Doolittle launched the raid. With Cole by his side, his was the first Mitchell to leave the Hornet, taking off in a squall with Doolittle timing the takeoff so the carrier’s bow was pointed up when he left the flight deck.

No small talk

Despite the importance of the mission, Cole said there was very little small talk with Doolittle during the inbound flight.

“This was a time when second lieutenants were to be seen and not heard,” he said. “Col. Doolittle was not a chatty man. He didn’t talk just to be talking, so the cockpit was very quiet, just questions and trying to maintain contact [with other aircraft] without speaking.

“Once we got off the carrier, it was strictly manhandling the airplane,” Cole said. The automatic pilot and bombsight had been removed to save weight, he said.

Despite the lack of chatter, he had a lot of things going through his mind, Cole said.

“I was thinking of all sorts of horrible things happening to me besides being scared. But I finally settled down to a ‘so far, so good’ basis and let her go that way,” he said.

The plane arrived above the Japanese capital around 12:30 p.m. local time. There was little resistance during the bomb run and Cole got a good look at the country-side below.

“Our target was in the northwest part of Tokyo because the original plan was to be flown at night,” he said. “But having to arrive over Japan at high noon, it was very picturesque, beautiful country-side. People were swimming and working on boats, playing baseball. That part of it was very nice.”

Because they were carrying incendiary bombs, “Our mission was to set Tokyo on fire,” he said. Being first on the scene, the fires would provide good targeting for subsequent aircraft, he said.

Minor material damage, big morale boost

After dropping their bombs, Doolittle, Cole and the rest of the crew continued on until they ran out of fuel and bailed out over Tiamushun mountain in eastern China. The plane crashed nearby, but the entire crew was picked up and escorted to safety.

Fourteen of the remaining 15 aircraft also crash-landed in China when their tanks went dry; one diverted to Vladivostok in Russia where its crew was interned for more than a year. It was the only Mitchell to survive the raid intact.

Three of the 80 men died of injuries from ditching, and four were captured and held as prisoners of war. Of those, three were tried and executed by the Japanese military. Despite all of the bombers making their targets, Doolittle considered the mission a failure because every aircraft had been lost. He returned to the United States, thinking he would be court-martialed.

“We felt pretty good about the mission because we did exactly what they wanted us to do, and came out of it unscathed,” Cole said of his crewmates. “We couldn’t understand why he felt that way. He worried more about losing the 16 airplanes and the crews than he did about himself.”

The American public went wild following news of the successful raid. Although it was little more than a pinprick to the Japanese military machine, it proved the enemy was not unbeatable and was a huge morale boost. In response, the Japanese redeployed some of their forces, unknowingly weakening defenses, a decision that proved disastrous only two months later with an American victory during the Battle of Midway.

A promotion for Doolittle

Doolittle was feted upon his return to the United States, being promoted directly from lieutenant colonel to brigadier general. President Franklin D. Roosevelt personally presented him the Medal of Honor, while all of the Raiders were awarded the Distinguished Flying Cross. Those who were injured or killed also received the Purple Heart Medal.

Except for an eight-month interrogation, Cole remained in the Air Force, retiring as a colonel in 1962, and now lives outside San Antonio. He celebrated his 102nd birthday in September and is the last surviving member of what now are known as Doolittle’s Raiders.

“Without blowing my own horn, I felt good that I was able to do my job and that the rest of the guys were able to do their jobs in a successful, straightforward manner,” he said.

That’s a good feeling, Cole added.

Cole only saw Doolittle occasionally, particularly during annual reunions, but he reserves his highest praise for the man he describes as “a pack of dynamite.”

“I don’t think there are enough descriptive words in the dictionary to describe the type of man he was,” Cole said. “He was a man of all seasons.”


Four B-25s, including Delaware’s Panchito, fly over the NMUSAF in April 2017 as part of the 75th anniversary of the Tokyo raid.
Our AMCM members: they keep us flying high

Our annual listing of Air Mobility Command Museum members represents those whose support makes this facility possible. Airmen, former airmen, members of the Air Force’s sister services and civilians, they truly represent everyone whose spirits fly with those who guarded and still guard our nation’s skies.

So here’s to all of you and all you do for the AMC Museum!

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Flight Crew Member

Squarem Commander


Group Commander
John L. McClure, Robert C. Monroe, Robert J. Penny, Keith D. Wentzel

Wing Commander
James Runk, C. Joseph Styles

Life Member
Eleven members of the 512th Aircrew Reunion Association got together Dec. 7 to present a $2,437.95 check to the AMCMF, money gathered during the wing’s first reunion celebration, held in April 2017. More than 300 current and former members of Dover AFB’s USAF Reserve wing were in attendance.

It was just like old times as former 512th Airlift Wing members got together Dec. 7 to present a check to the AMC Museum Foundation. From left are, Dave Burke, Steve Pennypacker, Paul Gillis, Lee Pennypacker, Ed Perkowski, Matt “Jim” Schack, Jackie Benton, Bill Benton, Jim Schultz, and Gene Proctor. Shellie Schack appears to be hiding behind the check.
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AROUND AND ABOUT YOUR AMC MUSEUM

John Wiesen III left, brought his son, John IV and grandkids Charlotte, 6, and Logan, 2, from their Middletown, Del., home to tour the Museum's aircraft. “We came during the summer and it was really hot,” the elder Wiesen said. “But today is nice, so we thought we’d come back.”

The Orr family of Chadds Ford, Pennsylvania, tries an unusual selfie. “We were looking for a Daddy Adventure Day for the family,” said John Orr, left. The family, from left, includes Nicholas Orr, Tanya Cranmer, and Nate Orr.

Ben Reiser, 9, of Willow Grove, Pennsylvania, checks out the flight engineer’s station aboard the KC-97 Stratofreighter. “His grandfather lives in Lewes, Delaware,” explained mom Kristyann Reiser, “and we thought this would be a fun day.”

Four-year-old Ellis Dower of Smyrna, Delaware, looks like he’s discovered what’s under the floorboards of the museum’s C-124A. His dad works on C-130s for the Delaware Air National Guard, so Ellis always is asking how things work,” mom Brittany Dower said.

Tour guide Bill Whited gets a look at photos taken by Smyrna’s John Weik when Weik took a flight on a B-17 Flying Fortress. “That was something I could cross off my bucket list,” Weik said.

Bob and Amy Hansen of Seaford, Delaware, learn about the C-9 Nightingale aircraft from tour guide John Masters. “We come here often,” Mr. Hansen said. “We think it’s an incredible museum.”
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436th Airlift Wing Commander Col. Ethan Griffin brought his young family to see Santa (AMC Museum Director John Taylor) during the Jolly Old Elf’s annual holiday visit: from left are Cole, wife Erin, Paxton, and Talon.