

aloft

THE MUSEUM OF FLIGHT MAGAZINE

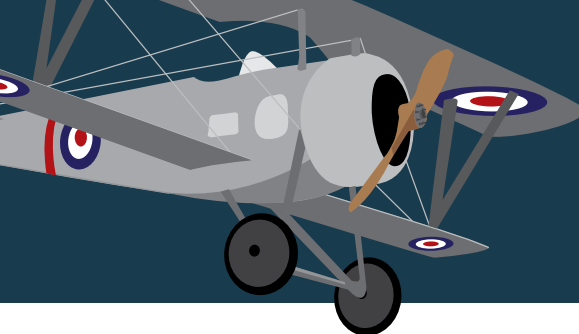


Lt Tyler Davies

U.S. NAVY
Blue Angels

U.S. NAVY
Blue Angels

U.S. NAVY
Blue Angels



MEMBER EVENTS

For all events, please RSVP to membership@museumofflight.org.

Upper-Level Member Exclusive!

SEAFAIR Celebration

Friday, August 3, 2018
11 a.m. to 2 p.m.

Calling all Flight Leader, Barnstormer, and Barnstormer Gold members!

It's time for our annual Seafair Celebration, and you're invited to watch all the Blue Angels action from the Museum balcony.

Reservations are Required.

REGISTRATION OPENS ON JUNE 25TH AT 9AM AND IS EXPECTED TO FILL QUICKLY.
Register online at: museumofflight.org/BlueAngelsMemberParty with your membership account. Reservations may also be made by calling our offices at 206.764.5711.

Space for this exclusive event is strictly limited to two adults & any children and/or grandchildren under the age 18 per membership.



Want to see artifacts in the Museum collection not normally on view?

Join us for *Coffee with the Curator*. You're welcome to bring your lunch—coffee and dessert is on us! Featuring Red Barn blend coffee, available exclusively in our Museum Store. **RSVP to membership@museumofflight.org to attend.**

Special Location!
THE NORTH AMERICAN T-6 TEXAN

RESTORATION CENTER & RESERVE COLLECTION
2909 100th St. SW, Everett, Washington
Friday, July 20 | Noon to 1 p.m.

Please join us at the Restoration Center and Reserve Collection on Paine Field in Everett this July for a very special presentation on the North American T-6 Texan. Curator Emeritus Dan Hagedorn will share a history of the aircraft type, discuss the Museum's T-6, and members of the Collections Department will share other T-6-related materials in the Collection. You'll have the opportunity to get up close and see the Museum's T-6, as well as all the other aircraft at the Restoration Center.

Special Location!
THE G. HARRY STINE MODEL ROCKETRY COLLECTION

2ND FLOOR SOUTH VIEW LOUNGE
Friday, August 17 | Noon to 1 p.m.

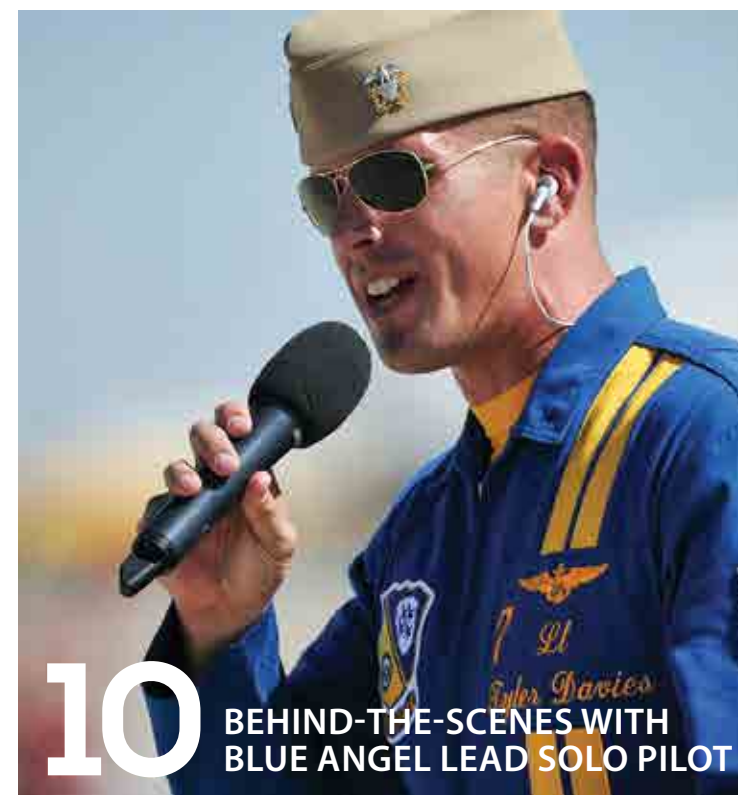
G. Harry Stine was a model rocketry pioneer and the founder of the National Association of Rocketry (NAR). His significant collection includes over 1,000 model rockets and small objects, as well as extensive research, archival, and library materials. Through a generous donation by the NAR and targeted funding by the Museum, the Collections Department will be launching a multi-year project to process, re-house and fully catalog the collection. Collections staff will share unique items from the collection and discuss the process for developing large-scale projects of this kind.

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MEMBER EXCLUSIVE!

STANLEY KRAMER

"IT'S A MAD, MAD, MAD, MAD WORLD"

© UNITED ARTISTS

MEMBER MOVIE NIGHT
IT'S A MAD, MAD, MAD, MAD WORLD

In this 1963 American epic comedy film with an all-star cast, a colorful group of strangers embark on a madcap treasure hunt for \$350,000 in stolen cash using planes, automobiles, children's bicycles, and pursuit by foot! *Rated G.*

WILLIAM M. ALLEN THEATER
Friday, July 13 | Movie starts at 6 p.m.
Doors open at 5:30 p.m.

Sponsored by:

STEM Starters will return in September!

STEM starters

ALOFT STAFF:

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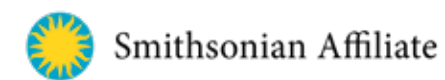
On the cover: Lt. Tyler Davies, lead solo pilot from the U.S. Navy flight demonstration squadron, the Blue Angels, salutes maintenance personnel prior to a demonstration. (U.S. Navy photo by Mass Communication Specialist 2nd Class Jess Gray/Released)

Questions or Comments?
Email us at aloft@museumofflight.org



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NOTE: In our May/June 2018 issue, there was a typo in the May Calendar on page 17. The Memorial Day Ceremony start time was 11 a.m., not 2 p.m. as stated in the listing. We apologize for any inconvenience.



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THROUGH HIS LENS

MATT HAYES

THE MUSEUM'S ACCOMPLISHMENTS of the past couple of years—in collections, exhibits, education, and more—have been exhilarating. And from a photographic perspective, it is hard to rival additions like the vast expanses of the Aviation Pavilion or the soaring majesty of SpaceShipOne reflected in the windows of the Charles Simonyi Space Gallery.

When we installed the grandiose F-1 engine in the APOLLO Gallery in 2017, we expected it to be a photographer's favorite. And it has been. But during the same time we had another installation: about 16,000 pounds lighter and sitting outside. Standing all of 3 feet tall, this statue of a young girl flying a 747 model quickly became one of our most photographed items. Among all our stunning exhibits and historic aircraft, this little monument has visitors lining up for photos during our busiest days.

For me, this rendering on a simple concrete pedestal and often dripping with rain is an everyday reminder that even the smallest gestures of inclusion can have a huge impact. We say we want to help everyone to follow their dreams to be an engineer or an astronaut or a pilot, but it's even more important to show it. This bronze statue of a small girl with dreams of flight reflects the important work being done by Museum mentors and volunteers who are working to introduce underrepresented communities to the wonder of flight. This statue also reflects the stories we choose to tell and the heroes we choose to highlight. These examples of inclusivity are integral to being sure we can truly welcome, teach, and learn from all.

A very special thank you to the men and women of Northwest Airlines, to whom the statue is dedicated, and the artist, Nick Legaros, who donated it.

Cheers,

Matt Hayes, President and CEO



CREDIT: MATT HAYES



Museum Flashbacks

TOP LEFT: Young people made new android friends at the Museum's first R2-D2 Builders Club Expo. The diminutive robots offered children the perfect combination of wisdom and playfulness from someone their height. • Museum Docent and retired Boeing engineer Barry Latter was interviewed in our Boeing 747 prototype for a new BBC documentary, *Giant in the Sky—50 Years of the Jumbo Jet*. The show premiered on May 26 on BBC World News TV across 200 countries. The Museum's Deputy Curator, John Little, was also interviewed for the program. The channel reaches around 290 million people each week. • The summer began with the unveiling of the Museum's newest exhibit, *Vietnam Divided: War Above Southeast Asia*. The May-June Aloft offered the full backstory of the exhibit, but now we can see that with this exhibit within an exhibit, the Great Gallery looks better than ever! Read about the grand opening on page 21. • Before the *Vietnam Divided* exhibit could be installed, floor space was cleared by hanging the YO-3A to a new location above the displays. • Hundreds of fans, including these Vietnam veterans, were here for the B-52 welcoming ceremony as the 170 ft. fuselage arrived via truck and custom trailer on the morning of June 3. The Stratofortress lived up to its name of *Midnight Express* as it made most of its freeway journey from Paine Field, Everett during the pre-dawn cover of darkness. • The Charles Simonyi Space Gallery was the scene of Yuri's Night at The Museum of Flight on April 14. The 21+ dance party and international celebration of spaceflight was sold out well in advance, and its success means you had better get your tickets for next year's Yuri's Night as soon as they become available!



"AK" THE CODE

QUESTIONS ANSWERED BY: JOHN LITTLE, ASSISTANT CURATOR AND RESEARCH TEAM LEADER AND GEOFF NUNN, ADJUNCT CURATOR FOR SPACE HISTORY



THE MCDONNELL F-4C PHANTOM II IN OUR T.A. WILSON GREAT GALLERY, THE MUSEUM OF FLIGHT

Q: AT THE BEGINNING OF WORLD WAR II, WERE THERE MORE AMERICAN WOMEN WITH PILOT'S LICENSES THAN WITH DRIVER'S LICENSES?

A: Not sure where this question came from, but you can definitely hear glasses clinking in the background, which means it's a job for Bruce Florsheim, the ace of our research team. Bruce found that, according to Molly Merryman, *Clipped Wings: The Rise and Fall of the Women Airforce Service Pilots (WASPs) of World War II*, there were 2,100 American women with pilot's licenses in 1941. By contrast, *Public Roads: A Journal of Highway Research and Development*, (Vol. 37, No. 5), states: "The users of the [American] highway system in 1940 were represented by 45 million licensed drivers, of which 24% were women." So, check my math, but at the beginning of World War II, women drivers in the U.S.A. outnumbered women pilots by about 5,143 to one. Clink!

Q: WHY CAN YOU SOMETIMES SEE THE MOON DURING THE DAY?

submitted by Khai Tang, age 4

A: There are two things about the Moon that allow us to sometimes see it during the day—its brightness, and its orbit around the Earth. The Moon orbits the Earth, just like the Earth orbits around the Sun. This means that sometimes it is on the same side of the Earth as the Sun, sometimes it's on the opposite side,

and sometimes it appears at right angles to the Sun. This orbit is what makes the Moon appear to change shape—its phases. While the Moon orbits the Earth, the Earth spins, which is what gives us day and night. As the Earth spins, the Moon is typically above the horizon for about 12 hours a day and below the other 12 hours. Right now, in the middle of summer, the nights are less than 12 hours long, so the Moon will always be above the horizon and can be visible for at least part of the daytime. When the Moon is near its new Moon phase, it is too close to the Sun in the sky during the day to see. During a full Moon, it's opposite the sun, and so usually only visible at night. But when the Moon is midway between these cycles, the side facing Earth is bright enough to be seen for part of the day, but the Moon is far enough from the Sun so as not to be overpowered by the Sun's light.

Q: ON THE TAIL OF THE MUSEUM'S MCDONNELL F-4C PHANTOM II, WHAT DO THE LETTERS "AK" MEAN?

A: In the United States Air Force, the two-letter Tail Code normally indicates the Wing to which an aircraft belongs and where that Wing is based. For example, a B-52 with "MT" on its tail is based at Minot Air Force Base, North Dakota, whereas a B-52 with "LA" on its tail is based at Barksdale Air Force Base, LA. In 1967, the Museum's Phantom was assigned to the 366th Tactical Fighter

What's new in the collection?

BY: CHRISTINE RUNTE, REGISTRAR

Toward the end of World War II, Boeing began looking at other products that it could build besides aircraft. Some of these products were so secretive, they were developed at "Boeing's hidden cave." According to Carl Cleveland's book, *Boeing Trivia*, chief engineer Ed Wells selected a special group of engineers to send to an offsite office, referred to as "the cave" to design any type of product other than aircraft. This eggbeater with a pistol grip was a result of one of the team's brainstorming sessions in that offsite location. Most of the products that they dreamed up, however, did not go into development. The eggbeater was acquired by Jack H. Caldwell some time during his career at Boeing. Jack Caldwell began his career at Boeing during the 1950's as a mechanical engineer in the Boeing Turbine Division and retired from the 757 program after a 40 year career. This eggbeater has been in the Caldwell family for over 40 years. Ed Caldwell is the son of Jack H. Caldwell.



THE MUSEUM OF FLIGHT COLLECTION

Wing's 389th Tactical Fighter Squadron. At that time, the USAF was just beginning to use Tail Codes, and the 389th TFS assigned a unique Tail Code to each airplane within the squadron. The 389th's Tail Codes all began with the letter "A," with the second letter designating the individual airplane within the squadron. Thus, "AK" indicated "389th TFS, eleventh airplane." In 1972, the USAF began assigning Tail Codes to Wings, not to Squadrons or individual airplanes.



STUDENTS FROM THE MUSEUM OF FLIGHT THROW BALSA GLIDERS WHILE ROCKING AVIATOR SUNGLASSES./ALASKA AIRLINES

FROM THE CLASSROOM TO THE HANGAR

ON SATURDAY, MAY 5 students from some of our education programs—the Michael P. Anderson Program, Aeronautical Science Pathway and Amelia's Aero Club—joined more than 1,000 youth from throughout the Puget Sound area to get a behind-the-scenes look at careers in aviation at Alaska Airlines' 10th annual Aviation Day. That morning, our students took their experiences with flight from the Museum to the Alaska Airlines hangar at SeaTac Airport to network with pilots, mechanics and engineers while participating in fun activities that they wouldn't be able to do anywhere else: gliding down an evacuation slide, practicing a 737 landing in a simulator, and performing maintenance checks with Alaska Airlines mechanics. The Museum of Flight also had its own booth at Aviation Day along with a host of other organizations like Horizon Airlines, Boeing, the Federal Aviation Administration, and the National Association of Rocketry.

In the midst of doing tours of military aircraft, meeting air traffic controllers and building gliders, our students immersed themselves in the world of aviation while bonding with youth who share similar dreams. "The best thing about Aviation Day," says Vice President of Education Reba Gilman, "is that it gives students a chance to see themselves in the aviation field. When a young person can experience first-hand what that career is like, they feel more confident in pursuing their dreams." And that, Gilman adds, is the goal of nurturing students at the Museum and pursuing partnerships with world-class aviation companies like Alaska Airlines.

Learning Annex Set to Open

NEW CLASSROOMS ARE APPEARING on the north end of the Museum's East Campus, across from our Lockheed Super Constellation. These new rooms, dubbed the Learning Annex, have space for up to four classrooms stocked with brand new equipment and technology with a capacity of 30 students each. The Annex will leap into service almost immediately as campers fill the rooms. "Because of these classrooms," said Aerospace Camp Experience Coordinator Emily Simmons, "we are able to add 15 new camps this summer. Record breaking!" The Learning Annex will see educational activities year-round starting with ACE and Western Aerospace Scholars during their summer residency program.



STAY UP-TO-DATE by liking and following our new **Boeing Academy for STEM Learning Facebook and Twitter** pages to keep up with news, updates, and videos about our hands-on education programs.



IMMERSIVE HIGH SCHOOL INTERNSHIPS

THE BOEING HIGH SCHOOL INTERNSHIP PROGRAM is a partnership program in its sixth year with the goal of introducing high school students to both the Boeing Company and the aerospace industry. The program has hosted 87 interns to date, and for 2018 it opened 11 positions to Museum program participants in Western Aerospace Scholars and Aeronautical Science Pathways.

Each student selected is treated as a Boeing employee, providing students a real taste of the industry. These paid interns are given workstations, badges, and ownership of projects to complete, with mentors to guide them through. Internships range from program integration, to electrical engineering, to manufacturing research and development, and are located at both Boeing's Renton & Tukwila locations. These high schoolers will work with Boeing this summer with titles like "737 Production Engineer," "Structural Analyst," and "Program Management Integrator."

200 HOURS

Gordon Bennett
Anna Bidot
Paul Bloch
Javari Bogan
Beau Cannon
Kent Carter
Gregory Cassell
Stephen Cavit
Abigail Chang
James Farris
J Edward Gallant
Jeffrey Haddock
Cheri Hennessey
Milad Heydari
Tricia Ing

Richard Hand
Steven Hanley
James Hendrickson
Zandria Hopper
Matus Koronthaly
Paul Ladniak
Stephen Little
Lorin Long
Renee Marshment
Richard Nelms
Chelsea Olson
Paul Rubin
Marva Semet
Naomi Shuler
Wesley Soper
Clayton Stott



1,000 HOURS

Fred Kleinschmidt
Jeffrey Landrum
Tatyana Leshchinskaya
Gerald Lorch
Keith Mann
Dolores Martinez
Maurice Mayben
Wesley Moore
Fred Morrison
Ethan Otto
Gary Ray
Keith Ritala
Paul Rubin
Denise Schroeder
Dale K Smith
Erika Tedin
Allen Torstenson
Roger Townsend
David Waggoner
Roberta Waggoner
Donald Weber
Jack Yager
Jason Yee
Soyeon Yi

John Blum
Michael Burns
David Cable
John Cotton
Leslie Czechowski
Buck Dissel
Key Donn
George Eastman
Jon Fehrenbach
William Hardrath
Mary Hoy
Rick Hylton
Calvin Kam
Steve Kim
Lottie Kinney
Stephen Little
Thomas Locke
Michael Martinez
Richard Mattern
Barton Norton
Jim Platt
Raymond Robins
John Roten
Anthony Roth
Robert Salling
William Woodman



VOLUNTER PROFILE

HONORING OUR Volunteers

BY: BECCA HARMSSEN, VOLUNTEER SERVICES SPECIALIST

IN LATE AUGUST 2017, I WAS HONORED to join the Volunteer Services Department at the Museum. Since that time, I have become more familiar with the large volunteer and with community here, with each volunteer I meet, I am always impressed by their dedication, enthusiasm, and passion. From our docents, gallery ambassadors, and pavilion ambassadors, who make each and every visitor feel welcome; to our restoration volunteers, who ensure that every aircraft in our collection looks like it just rolled out of the factory; to our Collections, Library, and Archives volunteers, who assist in documenting and preserving the Museum's countless artifacts. Our volunteer

corps is one of the Museum's most valuable resources. They range in age from 14 to 96 and donate their time, service, and expertise to every department, from Accounting to Marketing.

On May 10th, Volunteer Services held its annual Volunteer Recognition Dinner. Over 400 volunteers and their guests dined beneath the Blackbird to enjoy a well-deserved thank you in celebration of their enormous accomplishments over the previous year. Many volunteers received lifetime achievement awards for service ranging from 200 hours to over 10,000 hours! Together, these volunteers gave over 99,200 hours of service in 2017.

Without them, The Museum of Flight would most certainly not be the world-renowned institution that it is today, and we cannot thank them enough for all that they give. So, thanks again, volunteers, for all you do and for your continued support in ensuring that the Museum will continue to grow and prosper in the future!

The Volunteer Services Department thanks the following organizations for their contribution and continued support in making events like the annual Volunteer Recognition Dinner possible:

- Northwest Railway Museum
- Museum of Glass
- Burke Museum
- LeMay-America's Car Museum
- Historic Flight Foundation
- Lakewold Gardens
- Seattle Aquarium
- LeMay Family Collection Foundation
- Wing Luke Museum
- Pacific Science Center
- Flying Heritage and Combat Armor Museum
- Bellevue Arts Museum
- The Center for Wooden Boats
- Randy's Diner
- Washington State Historical Society
- Northwest Trek Wildlife Park
- Seattle Art Museum
- Nordic Museum
- Henry Art Gallery
- McCormick & Schmick's
- The Museum of Flight Staff



2,000 HOURS

Thomas Allan
Marlene Angell
Hal Breier
John Fuller
Frank Ghosn
Bernard Green
Karl Moore
David Papenhausen
Dick Paul
Richard Petrut
Gordon Pfister
Carlos Pianelli
Gordon Umino
Michael Wickline

3,000 HOURS

Charles Fitzgerald
Paul Harvey
Richard Heasty
Michael Richardson
Woody Sillifant
William Simons
Mack Van Wyk

4,000 HOURS

Ed Davies
Michael Gutzman
Catherine Hall
Ray McCaw
Bartholomew Mendonca
Wayne Whitcomb

5,000 HOURS

Paul Lehtinen
James Marich
Peter Milns
Bob Semlow
John Storz

10,000 HOURS

Alex "Sandy" Morton

OPPOSITE PAGE: 5,000 HOUR AWARD WINNER, BOB SEMLOW (LEFT). • 5,000 HOUR AWARD WINNER, JIM MARICH (RIGHT). • 2,000 HOUR AWARD WINNERS - BACK ROW, LEFT TO RIGHT: KARL MOORE, MATT HAYES (CEO), BERNARD GREEN, GORDON PFISTER, THOMAS ALLEN, CLARK MILLER (STAFF). FRONT ROW, LEFT TO RIGHT: RICHARD PETRUT, JOHN FULLER, HAL BREIER, MARLENE ANGELL, CARLOS PIANELLI, MICHAEL WICKLINE.

ABOVE: 5,000 HOUR AWARD WINNER, JOHN STORZ • A VIEW OF THE ATTENDEES DINING UNDERNEATH THE BLACKBIRD • VOLUNTEERS BERNARD GREEN (LEFT), MIKE MARTINEZ (CENTER) AND WILLIAM STAAAB (RIGHT) ALL SMILES. • 10,000 HOUR AWARD WINNER, ALEX "SANDY" MORTON WITH TOM CATHCART (LEFT) AND MATT HAYES (RIGHT) • LONGTIME VOLUNTEERS LOIS WILSON (FRONT) ACCOMPANIED BY HER HUSBAND RIDLEY WILSON AND GUESTS.

PHOTO CREDITS: THE MUSEUM OF FLIGHT

BEHIND-THE-SCENES WITH

Blue Angel

LEAD SOLO PILOT LT. TYLER DAVIES

BY: IRENE JAGLA, CONTENT MARKETING MANAGER

WE ALL KNOW AND LOVE THEM: the Blue Angels soaring in perfect precision above crowds of adoring fans. But who are the pilots who fly these planes, and what's it like preparing for show day? I had the pleasure of talking with one of them, Navy Lt. Tyler Davies, #5 Lead Solo who is in his third and final year with the Blue Angels. He filled me in on his history, what happens on show day, and the best parts about being a Blue Angel.

I WANT MORE OUT OF THIS

Eighteen days after high school graduation, Davies joined the Navy and became an aviation electronics technician. He worked on F-14s, F-18s, Prowlers, C-130s, E-2s and C-2s (among others). After multiple deployments as an enlisted sailor, Davies realized that he wanted more out of his Navy career and reconnected with his dream of being a pilot. While he was stationed at Point Mugu in California, Davies talked to his distance learning advisor who told him that he had to obtain a college degree before taking his place in the pilot's seat.

Davies took on a demanding schedule to get his college degree in two years: working from 7 a.m. to 4 p.m. and taking classes from 5 p.m. to 10 p.m. from Monday through Friday. How did he get through it? "Work smarter, not harder," Davies says.

Even with his hectic schedule, Davies assembled an officer program package and was selected for flight school, where he practiced on the Cessna 172, the T-34C and the T-45C. He finally achieved his goal of being a pilot on an aircraft carrier, the USS Carl Vinson in 2011, before becoming a flight instructor. All of his hard work paid off: in 2015 he was selected for the ultimate flight demonstration team—the U.S. Navy Blue Angels.

PRE-SHOW RITUALS

Just because Davies has reached his dream doesn't mean that his work ends. His days are still incredibly busy, and they usually begin at 5:30 a.m. "Mornings vary for each Blue Angel pilot depending on his or her position," says Davies. "But as the Operations Officer for the team, I have to manage 35 different shows each year simultaneously. I usually start each day with email to make sure I answered everyone's questions so the

show can go off without a hitch." After attending to his inbox, Davies grabs coffee and a light breakfast before heading to the gym where he focuses on legs, abs and upper body exercises to combat those g-forces.

ON-SITE PREPARATION

After Davies completes his routine, he joins the rest of the team in a police-escorted caravan to the show site. To ensure that the crowds don't have to wait for the show to start, the team plans ahead for traffic and manages travel times accordingly.

Once the team arrives on site, the pilots get into show mode. "That's our compartmentalization time frame," Davies explains. "No matter what's going on—stuff at home, bills, or the car is broken, or you didn't sleep well or whatever—that hour allows us to clear the mechanism per se. It's time to really focus on the flight."

From there, the team signs the aircraft discrepancy book for the aircraft and completes all the paperwork necessary to get the demonstration going. Before showtime, the support officers talk with the show coordinators, making sure that the airspace is sanitized.

Before taking to the skies, though, the crew considers the weather conditions and adjusts plans accordingly. "It boils down to where the clouds are," Davies says. "If the clouds are up high, then we can do a full high show. If the weather degrades, lower and lower, then we have different shows that we would do based on how much vertical up or altitude we have available."

POST-SHOW ROUTINE

After the show, the pilots go directly to the crowd line for autographs, followed by an intense hour and a half debriefing where they dissect and analyze every mistake—even the ones that the spectators don't see. But there are some tell-tale signs of a screwup if you're watching closely. "If someone turns their smoke off during a maneuver, a lot of people think that there's something wrong with the smoke, but that's us calling ourselves out saying we're out of position. We will not turn our smoke back on until we get back in position. That's the level of professionalism that we hold ourselves to."





THE U.S. NAVY FLIGHT DEMONSTRATION SQUADRON, THE BLUE ANGELS, FLY IN FORMATION OVER LAKE WASHINGTON DURING SEATTLE'S 68TH ANNUAL SEAFAIR FLEET WEEK.
(U.S. NAVY PHOTO BY MASS COMMUNICATION SPECIALIST 2ND CLASS JACOB G. SISCO/RELEASED)



AN EVENING WITH THE BLUE ANGELS

Once the debrief is complete, the team attends community events in the afternoon and evening where they showcase what the Navy and Marine Corps are all about. Davies sees these events an opportunity to connect with younger audiences. Although he's there to inspire kids to achieve their dreams, Davies is just as inspired by the interactions he has with his young audiences. "When I ask them 'What do you want to be when you grow up?' I get the most amazing answers," Davies reveals. "They say 'I want to be an archaeologist! A marine biologist!' I didn't have any of those answers at that age. And it doesn't matter where we go—you can be in a rural town or a big city—the children are so inspired." These conversations have shown Davies that when an adult looks a child in the eyes and says they believe in his/her potential, that child becomes much more motivated to pursue his or her dreams.

THE MIRACLE WORKERS

But kids aren't the only ones who inspire Davies in his work as a Blue Angel. As a former aircraft technician, Davies appreciates the difficult work of the maintenance crews, who he describes as miracle workers. "We have people all over the country who are flying to get parts, or getting an engine, and working around the clock to fix the jet that broke down half-way through the flight." Their tenacity in tackling seemingly insurmountable technical challenges enables the Blue Angels pilots to do their jobs. Davies adds that the maintenance crew's commitment shows that the Blue Angels are, in his eyes, the greatest organization in the world. "If you can model what this team does on a daily basis, any organization is guaranteed success."

SO YOU WANT TO BE A BLUE ANGEL?

The team is currently in its applicant season for 2019 and applicants follow the team to show sites to get a feel for where they might fit into the organization. In selecting new recruits, the Blue Angels consider the applicant's reputation for safety and run some personality tests of their own to see how someone's temperament will mesh with the team. Personality is a huge portion of the team's success. "Calm, cool and collected is always going to prevail," Davies advises. "If you have a hothead on the team or if you are always on the defense, that's going to create a bit of conflict. Then, throughout the season, that little bit of conflict can turn into bigger problems."

As appealing as it may sound to wear the blue and gold suit and fly a jet, it doesn't make for a lifelong career. Blue Angels are only hired for two or three-year stints before they cycle back into the Navy or Marine Corps. This strategy ensures that when people see the Blue Angels fly, they're always seeing the most current representation of the Navy and Marine Corps pride and professionalism.

TOP: LT. TYLER DAVIES NARRATES A PRACTICE DEMONSTRATION. (U.S. NAVY PHOTO BY MASS COMMUNICATION SPECIALIST 2ND CLASS DANIEL M. YOUNG/RELEASED)

BOTTOM: AVIATION ELECTRONICS TECHNICIAN 1ST CLASS BLAKE MUCH STRAPS SOLO PILOT LT. TYLER DAVIES INTO HIS JET. (U.S. NAVY PHOTO BY MASS COMMUNICATION SPECIALIST 2ND CLASS IAN COTTER/RELEASED)

PAGE 11: AVIATION ORDNANCEMAN 1ST CLASS BRANDON BATES PREPARES LEAD SOLO PILOT LT. TYLER DAVIES FOR LAUNCH. U.S. NAVY PHOTO BY MASS COMMUNICATION SPECIALIST 2ND CLASS JESS GRAY/RELEASED)

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Blue Angel

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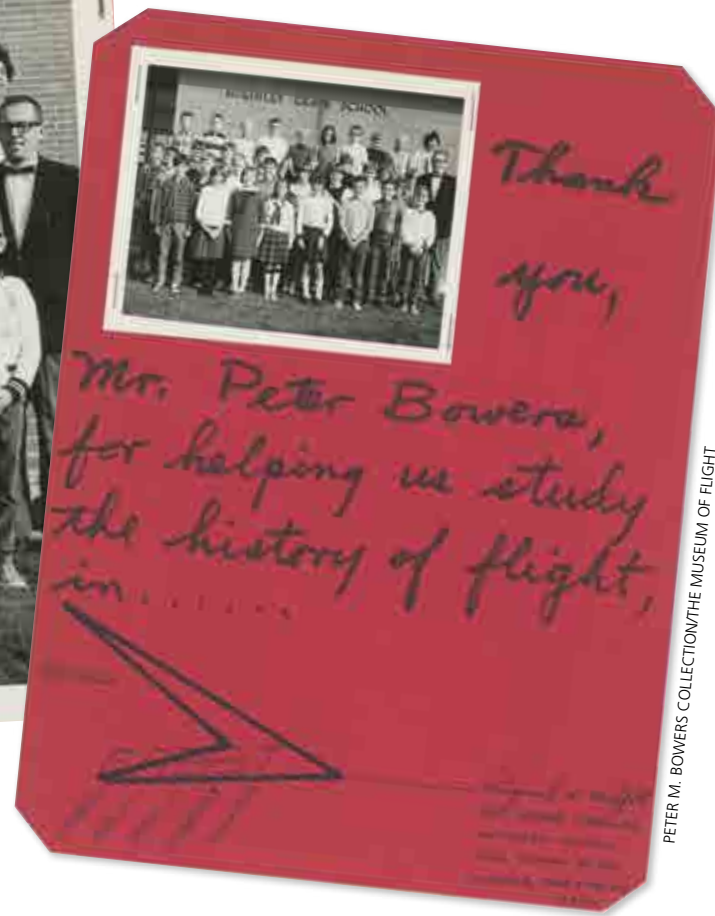
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PETER M. BOWERS COLLECTION/THE MUSEUM OF FLIGHT

MUSEUM MUSINGS

From the Archives: A Class Act in Aviation History

BY: DAN HAGEDORN, CURATOR EMERITUS

SINCE I RETIRED IN MAY 2016, I have been assisting our wonderful Collections Department Archives Team in processing the collection of one of our founders—and my own personal hero—the late Peter M. Bowers (Accession 2008-3-31).

We have completed most of the huge photographic print series and made a good start on the correspondence series. Pete appears to have known everyone and the dates in the series range from 1945 to the very month of his last flight, in early 2003. To say that it has been educational is an understatement, and the sheer breadth of his knowledge of aviation history, generosity, and modesty in the face of what was obviously a worldwide following has been evident throughout this process.

But in March, we came across a package mailed to him from Raymond W. Moffitt who, as of March 27, 1968, had been a fifth grade teacher at the McKinley Elementary School in Olympia. Mr. Moffitt was clearly an extraordinary teacher and he appears to have been an active member of the Pacific Northwest Aviation Historical Foundation (PNAHF) at the time as well, the organization from which the Museum evolved.

In his letter, Moffitt reminded Bowers of the chats they had shared regarding what he was trying to bring to his students, and asked for Pete's help with a new project, which was being labeled "FASST—Famous Aero-Space Struggles & Triumphs."

The teacher and his fifth graders—34 boys and girls—had written a script and wanted Bowers to tape record them for a drama they wanted to produce. By the standards of today it comes across as a bit of a hoot, and I doubt that any fifth graders would be on-board with it as

written these days, but Bowers found the time to make the tape, much to the gratification of the boys and girls at McKinley, who sent him a personalized "Thank you" for his efforts.

The introductory exchanges on the recording pretty much say it all:

[Pete Bowers]: "O.K., you sky-happy McKinley pilots...let's get down in flying position on our stomachs! I'm Mr. Pete Bowers of the Boeing Airplane Company to say that the pilots, I mean the EARLY pilots, laid down to control their airplanes."

[Sam, a Student Actor]: "Great guy wires and warped wings! I'm not going to get into that thing laying down!" [a picture of the Wright Flyer is projected on the screen as the tape rolls]

The rest of the script is more of the same and, based on the letter from Moffitt, Bowers really got into the act and had fun with the kids.

And there were five separate scripts that followed: one about the first flight around the world in 1924; one about Jimmy Doolittle; one supposedly with Amelia Earhart's sister, Muriel; another with balloonist Jeannette Piccard from NASA in Houston; one with a Cessna executive; and one with Roscoe Turner.

The series gained the attention of the National Aerospace Education Council (NAEC) in Washington, DC, which featured their project in its newsletter for January 1968.

Those students, probably 11 years old in 1968, would be grandparents by now and maybe, just maybe, some are Members—who recall with a smile their corny STEM lessons of 50 years ago, and a legendary aviation historian who helped bring it all to life for them.

CALENDAR OF EVENTS

July



SPECIAL EVENT
Independence Day Celebration
"The 27 Flags"

Members of Skyway Post 9430 of the Veterans of Foreign Wars honor the Nation's birthday with a salute to all 27 versions of our nation's flag. From the first 13-star flag in 1777 to today's 50-star flag, the presentation of each iteration is accompanied with the story of its symbolism.

T.A. WILSON GREAT GALLERY
Wednesday, July 4 | 11 a.m. and 2 p.m.



FILM SCREENING
Vietnam Film Series:
Platoon

Our summer film series continues its exploration of the Vietnam War. Other films in the series include *Full Metal Jacket* and *We Were Soldiers*. A Vietnam veteran from the Distinguished Flying Cross Society will introduce each film. *All movies rated R.*

WILLIAM M. ALLEN THEATER
Saturday, July 18 | 2 to 4:30 p.m.



LECTURE
Remembering the Last Flight of the Space Shuttle

Aviation writer and "space geek" Steve Kessinger provides an amazing behind-the-scenes view of the missions STS-134 and -135 as they prepared for launch at Kennedy Space Center and looks back on the end of the Shuttle program.

CHARLES SIMONYI SPACE GALLERY
Saturday, July 21 | 2 to 3 p.m.



LECTURE
How a Flying Eye Hospital is Changing the Way the World Sees

This panel discussion explores how non-profit Orbis International fights avoidable blindness around the world and explains what it took to convert an MD-10 aircraft into the world's only mobile, fully accredited Flying Eye Hospital. Self-guided public tours of the aircraft will be available Saturday and Sunday.

WILLIAM M. ALLEN THEATER
Saturday, July 28 | 2 to 3:30 p.m.



WELLS FARGO

FAMILY EVENT
Wells Fargo
Free First Thursday

On the first Thursday of each month, the Museum stays open late—and admission is FREE. Enjoy the Museum's Great Gallery, Personal Courage Wing, Simonyi Space Gallery, Aviation Pavilion and more from 5 to 9 p.m., courtesy of Wells Fargo. The Museum Store and Wings Café will also remain open for extended hours.

MUSEUM-WIDE
Thursday, July 5 | 5 to 9 p.m.

WEEKEND FAMILY WORKSHOPS

Constellations:
Pictures in the Night Sky

Some of the oldest stories in the world can be seen in the night sky. Hear how people have used the stars to instruct and entertain each other.

T.A. WILSON GREAT GALLERY
Saturday and Sunday,
July 1, 7-8, 14-15, 21-22, and 28-29
11 to 11:45 a.m. and 1 to 1:45 p.m.

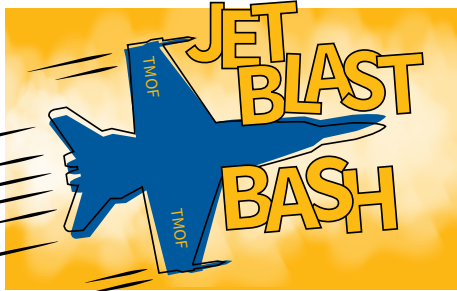
Summer Family Fun

Aviation and aerospace activities, stories, and crafts for the whole family!

T.A. WILSON GREAT GALLERY
July 4-27 | 10:30 a.m. to 3:30 p.m.
Tuesdays, Wednesdays, and Fridays only

Explore the exciting world of flight in fun hands-on workshops. Open to all ages and free with admission. Groups with 10 or more children, please call ahead to make sure we can accommodate your group. Contact: Interpretive Programs Coordinator at 206.768.7187.

August



SPECIAL EVENT

Jet Blast Bash Seafair Celebration

The Museum celebrates Seafair and the Blue Angels at our annual Jet Blast Bash. The Museum becomes the backstage of the Boeing Seafair Airshow for this 2-day event. Watch the airshow performers come and go while enjoying outdoor family activities, live music, food and drink. Special guests include SR-71 pilot and author Brian Shul. Make the Museum your aviation destination for Seafair!

EAST PARKING LOT
Saturday and Sunday, August 4-5
10 a.m. to 4 p.m.



WEEKLY AEROSPACE UPDATE Get the latest news in astronomy, aviation and spaceflight from our own experts. Q&A follows. **Every Saturday at 1 p.m. in July and August** in the Charles Simonyi Space Gallery.

**IN VIETNAM
 THE WIND
 DOESN'T BLOW
 IT SUCKS**



Stanley Kubrick's
FULL METAL JACKET

FILM SCREENING

Vietnam Film Series: Full Metal Jacket

To support the new Vietnam exhibit and "Project Welcome Home," we continue a summer film series that explores the Vietnam War. An introduction to each film will be provided by a Vietnam veteran from the Distinguished Flying Cross Society. Other films in this series include We Were Soldiers. *All movies rated R.*

WILLIAM M. ALLEN THEATER
Saturday, August 18 | 2 to 4:30 p.m.



SPECIAL EVENT

Wellspring Ensemble

The Museum is pleased to host a musical performance by Wellspring Ensemble, a new group in the Seattle choral scene! Made primarily of music majors, music educators, and musicians, they will present "Celestial Beauty," the idea for which had its origins in a dream!

Two Showtimes!

SIDE GALLERY
Thursday, August 2 | 6 to 7 p.m.

WILLIAM M. ALLEN THEATER
Saturday, August 25 | 2 to 3 p.m.



FAMILY EVENT

Wells Fargo Free First Thursday

On the first Thursday of each month, the Museum stays open late—and admission is FREE. Enjoy the Museum's Great Gallery, Personal Courage Wing, Simonyi Space Gallery, Aviation Pavilion and more from 5 to 9 p.m., courtesy of Wells Fargo. The Museum Store and Wings Café will also remain open for extended hours.

MUSEUM-WIDE
Thursday, August 2 | 5 to 9 p.m.

WEEKEND FAMILY WORKSHOPS

Phases of the Moon

The Moon is our closest celestial neighbor. Learn how the moon changes its appearance throughout the month and then make a craft showing its 8 major phases.

T.A. WILSON GREAT GALLERY
Saturday and Sunday,
August 11-12, 18-19, 25-26
11 to 11:45 a.m. and 1 to 1:45 p.m.

Summer Family Fun

Aviation and aerospace activities, stories, and crafts for the whole family!

T.A. WILSON GREAT GALLERY
August 7-24 | 10:30 a.m. to 3:30 p.m.
Tuesdays, Wednesdays, and Fridays only

Aviation Pavilion Maker Hangar

Be sure to stop by the Maker Hangar in our Aviation Pavilion for hands-on activities. Learn about 3D printing, circuits, drones, soldering, and more!

Every Day in July & Aug. | 10 a.m. to 4 p.m.
Excluding August 4-5 during Jet Blast Bash.

Explore the exciting world of flight in fun hands-on workshops. Open to all ages and free with admission. Groups with 10 or more children, please call ahead to make sure we can accommodate your group. Contact: Interpretive Programs Coordinator at 206.768.7187.

Junior Aviators

Blue Angel Manuever Word Search

Can you find them all? Words go up, down, and backwards. Answers on page 21.

D Z Y P V U F R P J Z K Q Q W R C G S G
 T D Y I B L E V R A F E L B U O D P T G
 H B S P L D M Z K D B O I P D C Y Z A E
 T U P F G B A Z F S E A K C S P M L L K
 Q J L R X H B D S S T I G R R T R P L M
 H T I R A G M A X I X U X Y U N X I O B
 X L T F J D B B W E U G H T U N I L R A
 X D S Q F S D V S I L E D R U E L F L Z
 H B P O V E R U N D E R P A S S N U A C
 D G K P E C H E L O N P A R A D E F C D
 F S Y W J G B P Q A T R A N L C U F I H
 A B J K Z V S A I L E R O N R O L L T F
 E C B S M P L Q O M X Y Z C C F M X R O
 U Z E U T G C T Z A W K E Y Q D S F E K
 T F I E A S N E A K P A S S W D K M V U
 V M M W P D X J T D I A M O N D L O O P
 V J T V M N K Z L L O R D E T R E V N I
 S Q S G R T P Q B K X Q E E V C D M H B
 H C T I P L A C I T R E V X L E T X F T
 K X R K C B W L Y I F J K J F N B C A F

Aileron Roll
 Over Under Pass
 Diamond Loop
 Splits

Fleur de Lis
 Inverted Roll
 Double Farvel
 Echelon Parade

Sneak Pass
 Vertical Roll
 Vertical Pitch



Not actual size. Enlarged to show detail.



BOOK RECOMMENDATION

Fighter Planes

SCHOLASTIC BOOKS

FROM THE VERY FIRST WWI fighter planes to modern stealth aircraft, this book illustrates the history and fascinating facts behind the world's fastest and deadliest fighter planes. You'll see charts that show how a jet engine works and comic book-style illustrations that detail aerial fighter tactics. This book will help you discover the answers to questions like: What weapons does a fighter plane carry? How do you get to be a fighter pilot? If you're excited to see the Blue Angels and dream of your own flying career, then *Fighter Planes* is the book for you! Available in our Museum Store and online at museumofflightstore.org.

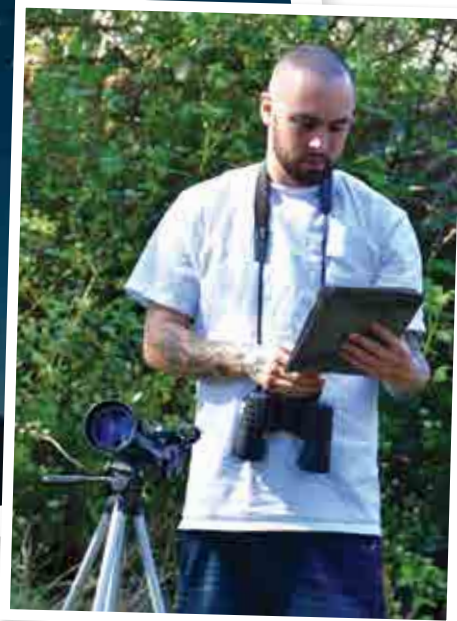
TOY FROM THE COLLECTION

Little Lockheed SR-71

In celebration of Jet Blast Bash and Seafair, here is one of the Museum's tiniest toys! This little Lockheed SR-71 toy is made of metal and is just a little over two inches long—that's 1/1000th of the size of the real thing! If you look closely, what makes this toy unique is that it is actually a MD-21 Blackbird, just like ours in the T.A. Wilson Great Gallery! Mounted on the back of the M-21 is a D-21 drone, just like ours, but painted silver. There are three wheels that turn on the bottom, so this miniature jet can taxi across the floor. This tiny toy was donated to the Museum in 1991 by an anonymous donor.

SUMMER Sightings

BY: IRENE JAGLA, CONTENT MARKETING MANAGER



COURTESY, JACOB HIATT

WHEN THE NIGHT SKIES ARE CLEAR and the warm air beckons, it's the perfect time for star gazing, or for you more adventurous types, keeping an eye out for unidentified aerospace phenomena (UAP). If you're inclined to explore the night skies in search of answers about what's really out there, Lynnwood-based researcher Jacob Hiatt has some advice for you.

For the past two years, Hiatt has completed over 40 investigations with the Northwest UAP Studies Group, a local chapter of a global initiative called The Unidentified Aerospace Phenomena (UAP) Observations Reporting Scheme, which facilitates the reporting and collecting of UAP sightings. Inspired to pursue more in-depth study of UAP after some of his own personal experiences, Hiatt assembled a crew of fellow investigators and collaborators to gather more evidence of what he believes to be intelligent life from other places in the galaxy.

"UAP is not your grandmother's 'UFO,'" Hiatt explains. "UAP is more of a current, scientific term." The phenomena that Hiatt and his crew witness are not metal saucers with little green men in them, nor are they satellites, helicopters, or any other kind of traceable flying object. These soundless UAP don't seem to have any gravitational effects and can move with ease in any direction. They often change course randomly, sometimes hovering in a stationary position for thirty minutes to an hour before zig-zagging to another point in the sky.

Hiatt and his team use an array of equipment and technologies to track UAP: a telephoto lens, binoculars, thermal camera and apps like Flight Radar and Planet Finder. With Flight Radar's business package, Hiatt gets critical information about what's happening in the sky he's observing, like types of aircraft, their speeds, whether or not they're military or

civilian and it even adds details about the kinds of cargo being carried. Of course, not every aircraft registers a flight plan, so the app doesn't track 100% of aircraft in the sky, but it's better than pure guesswork. Planet Finder calibrates with your phone and shows the locations of planets, stars and satellites, which is fun even if you're not searching for UAPs.

This equipment helps Hiatt complete observations and formulate his theories about UAP, "a style of craft that has been documented as far as we can go back." He has developed a few hypotheses about UAP characteristics and their purpose. UAP are most likely plasmatic craft and deploy a photon or light-based propulsion system to travel. Since most of the universe consists of plasma, it's possible that UAPs are siphoning off this energy to power their visits. For Hiatt and his investigators, the plasma theory explains another observable characteristic of UAP: they don't reflect light, which means they cannot be metallic.

So what are the origins of UAP? It's likely that they are drone-type machines from other areas of the galaxy, either programmed to complete specific maneuvers or controlled by a source in their home galaxy. If this seems far-fetched, consider that the space exploration group Breakthrough Initiatives launched Starshot in 2016, a \$100 million dollar research program with the goal of launching light-propelled spacecraft to Alpha Centauri to seek scientific evidence of life beyond Earth. Keep in mind that Stephen Hawking endorsed Starshot, and the New Space industry is making waves each day, with Blue Origin and SpaceX launching rockets and payloads into space. In light of these developments, Hiatt observes that "if we found a planet that has civilization and intelligent life, and we could send something

to go take a peek at that, we would do it tomorrow. Curiosity is universal, and we're a big curiosity on their [UAP] part."

Currently earning his Bachelor's degree in Education with a focus in planetary science, Hiatt emphasizes that he is not a conspiracy theorist. In fact, he's tried partnering with some established UFO groups but was disappointed in their focus on past sightings and self-promotion. "I don't buy flying saucers, I don't buy alien abductions, and I don't buy Bigfoot" says Hiatt. In his quest for more concrete evidence of UAP, Hiatt is planning a weather balloon launch experiment that will gather real-time data about what may be getting captured on his thermal cameras.

And he's not the only one having these experiences. In March 2018 the *Washington Post* published a story about an F/A-18 fighter pilot witnessing a tic-tac shaped craft flying across his course on the East Coast. This report came in the wake of the widely publicized release of the Pentagon's Advanced Aviation Threat Identification Program, which ran from 2007 to 2012 to study unidentified flying objects.

With these recent reports coming to light, Hiatt feels emboldened to pursue his next project: a documentary that outlines his experiences with UAP and his theories on what they are. He is currently in talks with planetary science experts at Harvard University who will review his footage and offer their own evaluations. Hiatt's goal is to distribute the documentary to as many viewers as possible to expand the knowledge base about UAP, and he says he remains open to all perspectives. "I would love for someone to tell me that what I'm seeing is not what we think it is."



MARS INSIGHT back to the red planet

BY: GEOFF NUNN, ADJUNCT CURATOR FOR SPACE HISTORY

NASA'S NEXT MARS LANDER, CALLED INSIGHT, launched from Vandenberg Air Force Base north of Los Angeles, California early on the very foggy morning of May 5. It was the first planetary mission launched from the West Coast, and the lander was carried into space aboard a United Launch Alliance Atlas 5 rocket.

InSight, which is short for Interior Exploration using Seismic Investigations, is currently in the middle of its cruise to Mars. The spacecraft is scheduled to land on Mars' Elysium Planitia in November. Once on the ground, InSight will use subsurface probes to study Mars' interior. InSight will use a seismometer to listen for earthquakes and a heat probe to measure how heat emerges from the planet's core to the surface. NASA describes the mission as giving Mars a checkup—taking its pulse and temperature. InSight is accompanied on its flight by the first two interplanetary CubeSats—tiny spacecraft officially called MarCO A & B (for Mars Cube One). The MarCO spacecraft, nicknamed for the Pixar characters Wall-E and Eva, will fly past Mars and act as a communications relay for InSight during landing.

SOLUTION FOR JUNIOR AVIATORS WORD SEARCH

D Z Y P V U F R P J Z K Q Q W R C G S G
 T D Y I B L E V R A F E L B U O D P T G
 H B S P L D M Z K D B O I P D C Y Z A E
 T U P F G B A Z F S E A K C S P M L L K
 Q J L R X H B D S T I G R R T R P L M
 H T L R A G M A X I X U X Y U N X I O B
 X L T F J D B B W E U G T U N I L R A
 X D S Q F S D V S I L E D R U E L F L Z
 H B P O V E R U N D E R P A S S N U A C
 D G K P E C H E L O N P A R A D E F C D
 F S Y W J G B P Q A T R A N L C U F I H
 A B J K Z V S A I L E R O N R O L L T F
 E C B S M P L Q O M X Y Z C C F M X R O
 U Z E U T G C T Z A W K E Y Q D S F E K
 T F I E A S N E A K P A S S W D K M V U
 V M M W P D X J T D I A M O N D L O O P
 V J T V M N K Z L L O R D E T R E V N I
 S Q S G R T P Q B K X Q E E V C D M H B
 H C T I P L A C I T R E V X L E T X F T
 K X R K C B W L Y I F J K J F N B C A F



VIETNAM DIVIDED Opening Weekend

ON MAY 26TH, 2018 the Museum held the official ribbon cutting and opening for the new exhibit Vietnam Divided: War above Southeast Asia in the T.A. Wilson Great Gallery. In attendance were Vietnam veterans and their families, as well as docents, volunteers, and staff who helped create the exhibit.

The Museum's Executive Director, Matt Hayes, gave an introduction to the new exhibit followed by talks from Chris Mailander, director of exhibits; Peder Nelson, exhibit developer; and Capt. Paul Bloch, Museum docent and a member of the Vietnam Exhibit Committee. The ribbon was ceremoniously cut, opening a new chapter in the Great Gallery's first 100 years of aviation story. The new permanent exhibit highlights the Museum's collection of aircraft and artifacts interpreting the technology and tactics used during combat air operations in the Vietnam War.

DID YOU KNOW...

Our Blue Angel, Holly, was delivered to us without engines or afterburner nozzles (turkey feathers). Those feathery metal tubes are very distinctive parts of the plane, so a new set was fabricated by a craftsman on the East Coast. They were made to be fastened to the engines though, so our clever volunteers including Tom Elliot, Fred Morrison and Dennis Dhein improvised some new attach points inside of the fuselage—a job that required some contortions in the plane's cavity.



2018 Pathfinder Award Recipients

The Museum of Flight's Annual Pathfinder Awards honors individuals with ties to the Pacific Northwest who have made significant contributions to the development of the aerospace industry.

BY THE 2018 PATHFINDER INTERNS:
BRIGITTA NGUYEN, DAVIE ROSS, AMRIT SINGH, AND BRAEDEN SWANSON

The Museum will honor these individuals at the 37th Annual Pathfinder Awards on Saturday, October 6, 2018. For details about the Pathfinder Awards Ceremony and Banquet or information on past recipients, visit museumofflight.org/Pathfinder.

PHIL CONDIT

RECIPIENT IN THE OPERATIONS CATEGORY

YOUNG PHIL CONDIT WAS FIRST INSPIRED to pursue aviation after witnessing a magical moment at the San Carlos Airport: his grandfather, at the bright age of 60, taking his first flying lesson in a Piper Cub. This moment galvanized a future Pathfinder to a career that culminated in leading a major aviation company committed to safety, culture and quality. It also set a pattern of lifelong learning, harvesting experience from one event to inspire how to approach the next.

Phil's infatuation with aviation matured from papering a PanAm route map on his bedroom wall, to flying lessons at age 15 and earning a private pilot certificate. He completed a degree in Mechanical Engineering at UC Berkeley and a Masters in Aeronautical Engineering at Princeton. At Princeton, he met Cortland Perkins, a professor and famous authority in aviation. Perkins became Phil's mentor and told him, "Get out of here... You need to make things." Condit took the advice and joined Boeing in 1965 starting as an aerodynamicist on the SST.

As a young engineer, Phil's managers and colleagues recognized exceptional technical and project management skills. These attributes resulted in an assignment as a 747 high-speed aerodynamics lead engineer in 1968, only three years after joining Boeing. In this role, he led the solution to one of the most vexing problems facing the 747's introduction into service: the wake vortex generated by the 747 on approach creating unsafe conditions for following, smaller aircraft. It was possible that the 747 might be banned from operations by some nations. Phil led the team that conducted an airplane test program using a 737 and negotiated an acceptable solution for all concerned. The result: operational practices that today still prevail using the designation "Heavy" to describe aircraft with significant wake vortices.

In 1973 Condit was offered a job in Boeing's marketing department, facing a decision that might make or break his career at the company. Despite advice from a top engineering executive that "if you leave engineering, you will never be allowed back," Phil accepted the offer and spent time on the Quiet Short Haul program and then in marketing management supporting 727 product innovation and sales campaigns. He came to realize that the breadth of the Boeing team was much larger in scale than any single person or function.

In 1974, Condit was selected for the prestigious Sloan Fellowship program at MIT, where he acquired a new appreciation of leadership and business practices that would later serve him well.

He returned to Boeing as manager of new program planning and a year later became director of program management for the 707/727/737 division. In 1978 he was appointed chief project engineer of the new 757 program. This assignment was an opportunity to inspire a collaborative culture within the larger scope of the Boeing Company. He led the implementation of a common pilot type-rating for the 757 and 767 airplanes after a Presidential Task Force on Crew Complement delivered its finding that two-crew aircraft were as safe as three-crew. The 757/767 Common Type Rating was a breakthrough and stimulated sales of both models. On the 757, along with technical leadership of a new airplane, Phil implemented numerous 'people first' and team-based initiatives. Maxims such as "Never shoot the messenger," "Make all decisions at the lowest level possible" and "Work the problems, not each other" revolutionized airplane development at Boeing. These initiatives led directly to the Working Together Principles later incorporated on the 777 Program.



COURTESY OF THE BOEING COMPANY

After leading the 757 program, the Renton Division and the BCA Sales organization as a vice president, Phil was selected as executive vice president of BCA. Then came one of those magic moments when he agreed to lead the new 777 program. His technical experience coupled with a conscious intention to instill a sense of community and transparency made the 777 program unique as a technological, cultural and business success, producing the world's longest range, twin engine, fuel efficient, two-aisle aircraft. The 777-program motto truly communicates Phil's vision and heart: "People Working Together to Produce the Preferred New Airplane Family." This vision is detailed in the PBS special *21st Century Jet*.

In 1992, Condit was selected as President and then in 1996 as CEO of Boeing. Under his leadership "Vision 2016" was created: "People Working Together as a Global Enterprise for Aerospace Leadership." Recognizing the cyclical nature of both the military and commercial business sectors, Condit led the acquisitions of Rockwell Aerospace and Hughes Space and Communications, and the merger with McDonnell Douglas. The resilience of a broader business framework for Boeing has been validated during subsequent industry volatility.

How to capture the essence of Phil Condit? To quote Jim Guyette, the UAL executive who cosigned the 777-launch document: "Phil Condit is one of those very rare leaders who excels at each, dreaming and doing, and has the ability to join them together. A very special talent. A Pathfinder." And examples of this talent abound. Phil invoked the arts with musicians to celebrate the rollout of new airplanes, a poet to help managers find the leader within, and an author/filmmaker to reveal team identities. The heart of his stewardship is seen in the 777 rollout ceremony, witnessed by Condit, fellow employees, their spouses and their children. The image that inspires: workers of different backgrounds and skill sets in an audience with wide-eyed children on their parents' shoulders reaching eagerly for the fuselage. Their fingerprints bear out Phil's observation—"That's when you know you've done it"—and are testimony to his place among the Pathfinders of this industry.

DENNIS O'DONOGHUE

RECIPIENT IN THE FLYING CATEGORY

TWO-TIME BOEING VICE PRESIDENT DENNIS O'DONOGHUE embodies the definition of servant leadership as a previous Marine Corps pilot, NASA and Boeing test pilot, and his impact on flight test engineering and corporate leadership has redefined the aerospace industry.

The oldest of seven siblings, O'Donoghue grew up on a farm outside of Pittsburgh with the freedom to explore both nature and his own imagination. His father, Thomas O'Donoghue, emigrated from Ireland to the United States with little formal education, even less money, but a wealth of ambition. He eventually established his own farm, construction company and a successful restaurant business. His father's strong work ethic would come to have a profound impact on O'Donoghue's own career. From a young age, O'Donoghue remembers his captivation with flying. He recalls growing up with the excitement of the space race and was 14 when his uncle Tony took him on his first flight. With goals of earning a degree in engineering and becoming a test pilot, he successfully pursued an appointment to the United States Naval Academy. O'Donoghue attributes much of his success to the Academy, which taught him the importance of prioritization, confidence in one's abilities, trust, communication and discipline; and, he says with a smile, "the ability to rest under virtually any circumstances, acquired by sleeping under the deck of an aircraft carrier while an F-4 Phantom lands."

After graduating with a mechanical engineering degree, O'Donoghue flew in the Marine Corps for fourteen years, serving as a fighter pilot and instructor pilot on many aircraft types including the AV-8 Harrier. He attended Navy Test Pilot School and gained extensive experience in vertical and short takeoff/landing aircraft as an AV-8B Harrier II test pilot. For his Master's thesis O'Donoghue created and demonstrated a voice-controlled avionics system for fighter aircraft; a similar system would end up in the Joint Strike Fighter (JSF) program and the F-35 Lightning II.

Ever interested in learning and research, O'Donoghue's ambition and curiosity led him to NASA and a career of experimental flight test and space support missions. He experienced some of the riskiest flying of his career during microgravity missions in a DC-9, developmental flights in the YAV-8B Harrier variable stability aircraft, and research flights in a Twin Otter to explore how airfoil icing affects stability and control of fixed-wing aircraft.

One day in 1996, O'Donoghue got a call from Boeing with an offer to be the chief test pilot for the X-32B, the Short Take-Off and Vertical Landing Concept Demonstrator aircraft of Boeing's Joint Strike Fighter program. Before accepting the position he researched the JSF program, but he wasn't sold. He was also offered opportunities testing Boeing Commercial Aircraft (BCA) jet transports. This offer produced a career-defining decision for O'Donoghue: signing on to a company with broad product offerings in both civilian and military markets. He accepted the BCA job and then was loaned to the Defense & Space side of the company for the X-32B development program, where he was deeply involved in its design and development and led the flight-testing.

Flight-testing endowed O'Donoghue with many priceless lessons. As he says in a list of 10 things he learned from his flight test career, "If a design engineer tells you that a failure scenario 'simply cannot happen,' assume that it will." A specific incident stands out in his memory. During a routine test flight of the X-32, a warning indicator light informed him that the wheel brakes had failed. However, this was not the only problem



COURTESY OF THE BOEING COMPANY

afflicting that flight. O'Donoghue had to land the plane with failing flight controls, a consequence of seemingly unrelated systems interactions. He landed successfully, overcoming a scenario that engineers said had a minuscule chance of occurring.

Following work on the X-32, O'Donoghue transitioned into BCA and was promoted to a leadership role as the deputy project pilot for the Sonic Cruiser and 787, and then as chief pilot of production flight test. In 2005, he left Boeing for a year to be the director and chief pilot for Eclipse Aviation. When he returned to BCA he became vice president of Flight Operations. In 2009, he was assigned the daunting task of integrating all laboratory and flight test activities in support of commercial airplanes, military aircraft and space programs, into one company-wide test organization which would become known as Boeing Test and Evaluation, now the largest and most diverse T&E organization in the industry. The effort required the realignment of over eight thousand pilots, engineers, technicians and mechanics located across 92 sites in the U.S. and around the world. When he retired in 2017 he was vice president and chief engineer for Boeing Defense, Space & Security, responsible for the functional leadership of 22,000 engineers.

O'Donoghue's success as a Boeing executive stems from a unique approach to leadership and desire to understand and leverage the identity, purpose, principles and culture of the organization he leads. He accepts that the leader at the top cannot possibly control everything and instead allows conditions for leadership to emerge at all levels of the organization. He views large organizations as complex living systems that, given proper stewardship, organically adapt to changing conditions and respond more quickly and effectively to sudden shifts and emergent needs. His strong belief in pushing decision-making down to the working level, while engendering a high level of trust and open dialogue at every level of the organization, are hallmarks of his leadership. His credo: "Being present in the moment is a key trait and quality of a good and effective leader."

O'Donoghue is a multifaceted individual, a confident leader across multiple settings and a role-model for corporate America. His dedication and transformative contributions to aerospace technology are the embodiment of a Pathfinder: an example for future pilots who aspire to accept responsibility for leadership in aviation.

HISTORIC LANDMARK



THE MUSEUM OF FLIGHT

MUSEUM NEWS

Red Barn Historic Landmark

BY LOUISA GAYLORD, DEVELOPMENT COMMUNICATIONS COORDINATOR

THIS MARCH, THE WILLIAM E. BOEING RED BARN earned a notable distinction: the Tukwila Landmarks Commission voted to add it to the list of official historic landmarks within the City of Tukwila. Originally built in 1909 as part of the Heath Shipyards along the Duwamish River, the Red Barn is one of the most iconic and recognizable buildings on the Museum's campus at Boeing Field. When the United States joined World War I in 1917, the newly-formed Boeing Company secured a contract for 50 Model C aircraft from the U.S. Navy. Over 300 workers set up shop to fill the order, and the Boeing Airplane Company took off. Although the Red Barn served as the Boeing Company's headquarters until 1929, it was nearly demolished in 1975. The Museum recognized the historic significance of the birthplace of the Boeing Company and had the intact building floated down the Duwamish River on a barge to its current location. The structure was restored in 1983 to its original splendor and became the first building on the Museum's campus. In 2003, the Red Barn was designated a historic aerospace site by the American Institute of Aeronautics and Astronautics. "The Red Barn is a chance to be imbued with the pioneering, entrepreneurial spirit of William Boeing," says Boeing Company Corporate Historian Mike Lombardi. "It's the starting point of an incredible, inspirational journey where you can sense the hopes and dreams of those first employees."

★ CELEBRATE INDEPENDENCE DAY ★

With a Tribute Gift—In Honor or in Memory of someone who helped preserve our freedom. **Online tribute gifts may be made at museumofflight.org/Donate.** Checks may be sent to The Museum of Flight at 9404 E Marginal Way S, Seattle, WA 98108. For more information, please call Dana Flanegin at (206) 768-7134, Monday-Friday.



GRADUATING SENIORS of Raisbeck Aviation High School gathered for the dedication of "The Space Between," the corridor joining the school and the Aviation Pavilion that symbolizes the nexus of STEM education, aerospace and art. Artist Sherry Raisbeck was on-hand to unveil a new painting for the school, Orion's Cosmic Angel.

UNSHAKEABLE GREAT GALLERY

FOR FUTURE GENERATIONS, by former executive director Howard Lovering, is full of unexpected stories about the Museum. Back in February 2001, a magnitude 6.8 Nisqually earthquake hit the Puget Sound region. Boeing Field experienced extensive damage from the quake that caused closures of the airport, runways and taxiways. The Museum, on the other hand, with its massive steel and glass Great Gallery, emerged unscathed from the quake. A staff member watching the Great Gallery during the quake saw all the aircraft swinging in unison, and some of the smaller aircraft continued to sway for a few minutes after the quake subsided. The exceptional engineering behind the Great Gallery ensured that the precious artifacts enclosed within it were undamaged by the disruption. This piece of behind-the-scenes Museum history—and many more!—is available exclusively in *For Future Generations*, available now in our store and online at museumofflightstore.org.

A FITTING TRIBUTE

BY: SANDRA DOLESE, CFRE, CSPG, PLANNED GIVING PROGRAM MANAGER

RESILIENCE, SURVIVAL AND BRAVERY characterize Bill Wilson's service in the U.S. Air Force during the Vietnam War. Although he remembers being treated well upon his return, Wilson acknowledges that not all soldiers were given the welcome that they deserved. That's why he's proud to give to *Project Welcome Home*.

During the war, Wilson was assigned as F-111A Pilot/Weapons System Operator and deployed in October, 1972 with the 429th Tactical Fighter Squadron of the 474th Tactical Fighter Wing to Takhli Royal Thai AFB, Thailand. Lt. Wilson flew 34 successful combat

missions over Vietnam before going missing in action (MIA) on December 22.

His last mission was part of Operation Linebacker II, launched by the U.S. on December 18, 1972 to bring North Vietnam to the negotiating table and release the nearly 600 American POWs held captive. During the 11-day bombing campaign, more than 1,300 sorties were flown by B-52s, F-4s, and F-111s over the Red River Valley near Hanoi.

On December 22, Lt. Wilson and Capt. Bob Sponeybarger attacked cargo docks at Hanoi while flying at near-supersonic speed only a few hundred feet off the ground. After

destroying the target, the right engine of their F-111 "Jackal 33" caught fire. "That's serious at 300 feet, at night," Bill remembers. "There were a lot of people firing up at us and it was probably a 50mm machine gun that hit us."

The two crewmen ejected seconds before the plane crashed in a fiery blaze. They drifted to the ground amid gunfire. Following protocol, they split up with the intention to stay within 100 yards of each other. After two days, Capt. Sponeybarger was captured leaving Wilson alone with his .38 revolver, a survival knife, radio, no food and very little water.

Bill Wilson spent Christmas hungry and hiding in enemy territory. Jolly Green Giant helicopters made two unsuccessful attempts to rescue him. The first was impossible due to weather and the on the second attempt the helicopter was met with enemy fire. After five days without food or water, Bill managed to get liquid from a palm tree. On December 29, 1972, Wilson was captured, blindfolded, and transported to the Hanoi Hilton where he joined Sponeybarger as a prisoner of war.

After 92 days in captivity, Wilson boarded the last C-141A out of Hanoi on March 29, 1973 headed for freedom. The POWs deplaned at Clark Air Force Base in the Philippines and were greeted as American heroes much to Wilson's surprise. Stateside, they were hosted by President Richard Nixon and Henry Kissinger at The White House.

After the war, Bill continued his service with the U.S. Air Force and the Air National Guard. Boeing hired him as a flight deck design engineer on the first electronic flight instruments and automatic navigation systems in the mid-1980s. Wilson was lead engineer for cockpit design on the X-32 Joint Strike Fighter Concept Demonstrator and worked on F-22 Raptor Pilot Training Systems.

Bill joined the Museum's docent corps after a 27-year career. When he's not spending time with his wife, Gayle, and the three children and four grandchildren they share, Bill enjoys sharing his knowledge of aviation with Museum visitors as a docent.

Bill recently made a tax-wise gift to support the Museum's *Project Welcome Home* by making a direct transfer of his IRA's minimum required distribution. "I'm proud of this Museum for building the Vietnam Veterans Memorial Park. It's a nice recognition that many of us didn't receive after the war."



COURTESY: BILL WILSON

Tribute Gifts

In Memory

In memory of Michael P. Anderson
Harold L. "Mitch" Mitchell, USAF (Ret)
and Kelly Mitchell

In memory of Vern W. Atwood
Michael and Shelly Atwood

In memory of Harold (Gordie) Gordon Bloom, Jr.
Molly Blume

In memory of Inga L. Bolang
Fred and Karin Harder

In memory of Stan Brewer
Mariale Brewer

In memory of Thomas W. Burns
Rosann Holowach

In memory of Jonathan R. Burton
Harold L. "Mitch" Mitchell, USAF (Ret)
and Kelly Mitchell

In memory of Richard L. Durham
Anonymous

In memory of Thomas E. Edmonds
Jeffrey and Cherie Ohlson

In memory of Elsie and Harry Gambini
Rosemary and Larry Brester

In memory of Shawn Gloyer
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Matthew MacDonald

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In memory of Sanford (Sandy) E. Holzer
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Paula Clark

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Sarah Jane and Jeff Hoppe

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Nancy Penrose

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In memory of Paul B. Smith
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In honor of Joe Crecca
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In honor of Captain Dixon
Brandon Shelton

In honor of the Docent Program
Monique Mobley

In honor of Jim T. Farmer
Matthew and Amy Rudolf

In honor of Flight Operations Engineering (FLOE)
David Lawicki

In honor of Donald E. Forbes
Jean Brittingham

In honor of Glenn E. Gray
Jerè Thornton

In honor of Skyla and Penton
Lynn Zachow

In honor of Carter Harrington
Matthew and Amy Rudolf

In honor of Matt Hayes
Carrie Hayes

In honor of The Kniker Family
Matthew Kniker

In honor of Robert (Pete) J. Parcells
Rena Clark

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George Petoff

In honor of James B. Stapleton
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In honor of Carol Thomson
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In honor of Lois and Ridley Wilson
Jim and Linda Gough

In Memoriam

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