



# HERITAGE FLIGHT MUSEUM

Where History Flies in Skagit County

Member Newsletter

Spring 2020

## Let's Start Being Who We Can Be

By Greg Anders, Executive Director

The Heritage Flight Museum has been around for many years. We have never had a facility like we have now, yet we hope to add one more facet to make us who we really could be. With the opening of our new bathrooms and concrete steps taken towards building our dedicated Maintenance Hangar, it is time to start looking to what we can be.

**A flying museum:** We have always been about our aircraft telling their story in the way it is best for an aircraft to tell its story: by flying. Our maintenance staff has done a fantastic job keeping our aircraft airworthy, and our pilots have consistently produced excellent flying demonstrations with an impeccable safety record.

**A community cultural asset:** We have so many stories to tell around the aircraft that it is sometimes hard to tell any of them right. But the best stories tie our aircraft to the great people that flew them. And what better stories are there than ones that include our local residents? Many of our displays tell the stories of local veterans such as Cdr. Harry Ferrier, last survivor of the Battle of Midway.

**An events center:** The financial realities of events centers have pushed almost all of these Skagit Valley resources out of the market. It is our hope to profitably host large events as a sustaining financial engine within our museum.

**An educational resource:** My biggest hope is to have the

administrative foundation to not only manage the museum and events center, but to support an effective STEM education program. This is what we could really be about within the community. Our schools do a great job, but HFM could provide a focus and context sparking incredible interest in many facets of the STEM curriculum.

**A unique Library:** It has been an interesting and not-fully-anticipated experience to be the focal point of a collection of some incredible books and research material. Our library went from just a few donated books to an interesting story of its own when combat fiction writer Mark Barent donated his Vietnam War research library. It is a fascinating look behind the writing of his great series of books.

**A photographer's resource:** Our location on the south side of Skagit Regional Airport has become legendary amongst Aviation Photography groups.

**A community partner:** There are many facets of being a great community partner. One of the most prominent is that the Museum can help tell the broader story of Skagit Valley. When we talk about Skagit Valley being a seat of innovation in farming and manufacturing, telling the story of the Apollo Space Program can give a perspective and focus to that story.

I look forward to expanding our functionality into these many possibilities.

### Capital Campaign in the Post COVID-19 Economy

It is too early to understand the long-term economic impact of COVID-19, and the less-heralded oil production battle between Russia and Saudi Arabia. But it's clear there will be impact on our supporters' ability to find the resources to support us as they might have been able to a few weeks ago. Every little bit helps. We are well on the way to a successful campaign but we have a long way to go. As we experience the repercussions of the economic shock that started 8 Mar with oil production wars and continued with COVID-19, we will have great challenges completing the Campaign. All of us can at least help get the word out.



[www.heritageflight.org](http://www.heritageflight.org)  
360-424-5151



# Volunteer Spotlight

## Jim Phillips

When HFM received a recent donation of more than 200 unlabeled model aircraft, Jim Phillips stepped up to help identify them. It is a job he's well suited for, and one he loves doing. Jim really knows his aircraft, whether by sight or by sound.

As a child, he lived in the south end of Seattle, where he would sit on the roof with his brother and watch planes take off and land at SeaTac and Boeing Field. He learned to identify aircraft by sound and to distinguish between civilian and military engines.

One day in the 1970s, he heard a jet heading out over Puget Sound. Although he couldn't see it through the clouds, it sounded to Jim like a Sabreliner. When the sound of the engine stopped abruptly, he figured the pilot had cut back on the throttle.

But when the news announced a missing Sabreliner an hour later, Jim

called Civil Air Patrol and advised them to search a mile north of the West Point Lighthouse for the missing aircraft. They actually found it **two** miles north of the lighthouse. Jim has a pretty good ear.

Jim served in the Civil Air Patrol and Air National Guard. His experience in aviation extends to jumping out of airplanes, which he has done 37 times. He credits divine intervention for allowing him to survive his adventurous former hobby.

He worked at Boeing for 25 years. In 1966, he was a wind tunnel model maker. He returned to Boeing again in the mid-1980s, entered a class to become a sheet-metal bench mechanic and was later offered a job.

In 1989, he relocated to the Everett plant, switched to tool making and worked on the 747, 767 and 787. Jim took pride in his work, especially in light

of the fact that his employee number was stamped on every tool and part he made, making him accountable if the part failed.

Jim retired from Boeing in 2011. He was inspired to join HFM's Volunteer Corps after learning about HFM founder Bill Anders' connection to Apollo 8 and the Panay Incident.

**Heritage Flight Museum depends on volunteers in many areas of operation. If you have a skill and some time to share and would like to experience the rewards of being part of the HFM team, contact volunteer coordinator Grant Reefer: [volunteer@heritageflight.org](mailto:volunteer@heritageflight.org)**



## Who's Who at HFM

**Bill Anders** - Board Chairman  
**Greg Anders** - Executive Director  
**Alan Anders** - Maintenance/Operations Director  
**Julie Shelby** - Chief of Staff  
**Karen Hicks** - Events Manager  
**Grant Reefer** - Volunteer Coordinator  
**Cassidy Moore** - Chief Mechanic  
**Syd Slade** - Avionics Technician  
**Tiffany Hamilton** - Collections & Exhibits  
**Marne Cohen-Vance** - Visual Media  
**Neal Padbury** - Building Maintenance

# Hasselblad: The Earthrise Camera

By Marne Cohen-Vance

The 1968 flight of Apollo 8 ushered in the reality of human travel between celestial bodies. In this inaugural voyage, the crew had much to accomplish, with no guarantee of—or precedent for—a safe return. If getting themselves to the moon and back weren't challenge enough, a unique opportunity to further science as the world's ambassadors was not to be squandered.

The Apollo 8 crew became the first to directly see and photograph the moon's far side. The moon, however, was not the main subject of the trip. On December 24, astronaut Bill Anders used a Hasselblad camera to capture the luminous, living Earth rising above the moon's horizon in all her glory, seen from this perspective for the first time. This Earthrise photo remains one of the great legacies of the mission.

Many of the cameras used in the Mercury, Gemini, Apollo and Space Shuttle missions were built by the Hasselblad company based in Gothenburg, Sweden. In the 1940s, Dr. Victor Hasselblad created a single-lens 6 x 6 cm mirror reflex camera with interchangeable lenses and magazines. The latest Hasselblad model in 1968 was the 500 EL, with an electric film-winding mechanism replacing the hand crank on previous models. It is the size of a small loaf of bread and weighs about 5 pounds with lens and film.

Hasselblads were used on NASA missions from 1962 onward, including Apollo 11's first moon landing. Because weight was so critical on the return trip, cameras that made it to the moon were abandoned on the lunar surface. As of

today, there are 12 Hasselblads still on the moon, left behind by various Apollo missions.

NASA worked with Hasselblad to modify the 500 EL cameras for better performance in space travel. The NASA Electric Data Camera was coated with anodized aluminum to dampen reflectivity. Locks for the film magazines and levers on the lens f-stop and distance settings were enlarged to

facilitate handling in pressurized suits and gloves. Special thinner film allowed more picture capacity per roll. The reflex mirror viewfinder was removed to make the camera lighter.

The astronauts of Apollo 8 shared their already-cramped capsule with a black and white television camera, a 16mm movie camera and two Hasselblads, both with Planar f2.8/80mm lenses, and an additional Sonnar f5.6/250mm telephoto lens plus seven magazines of 70mm film created especially for the mission. The film was Kodak Panatomic-X 80 ASA black and white, Kodak Ektachrome SO-168 and SO-121, and Kodak 2485 16,000 ASA.

The Apollo 8 mission returned more than 800 photographs that

were developed using special emulsions. These pictures captured undiscovered far-side features, improved on the resolution of the earlier Lunar Orbiter photos and recorded potential landing sites for later missions. But the most enduring image would have to be this: our first planetary selfie, putting our fragile, unique and isolated home sphere in perspective like nothing had before.



HFM's collection includes this 1968 Hasselblad 500 EL



The Earthrise photo taken by William Anders

# Why Can't I Bring My Pet to the Museum?

Man's best friend is a delightful companion who cheerfully tags along wherever we go. Why can't he tag along to Heritage Flight Museum? He sure hates to miss out on a good time.

The best way to answer this question is to look up the FAA's wildlife strikes online database. However, I can't recommend it as an enjoyable light read for animal enthusiasts.

HFM is located alongside a working runway. People may be aware that airplanes and birds sometimes collide in the air, which isn't good for either party. However, one might be surprised to learn that the annual tally of unscheduled meetings of aircraft and critter includes the wingless as well. Dogs, cats, moose, horses; yes, even alligators and many others can meet with tragedy on a runway.

According to the FAA's database, a small number of dog strikes are reported each year. HFM does not want to be the cause of a rise in that statistic, so we do our part for pooches by keeping them off our guest list. This is the reason your dog (unless it happens to be a service animal as defined by RCW 49.60.040) will have to forego a trip to the museum.



## Name That Aircraft!

HFM has instituted a new contest for aviation geeks. At the beginning of each month, we place a model aircraft in a display case at our front desk and post a photo of it on Facebook. A correct identification of this aircraft enters contestants (that aren't staff or volunteers) into a drawing for one free admission to the museum.

### Winner's Corner

**January: Dave Van Horn**

**February: George Tufnail**

**March: Go to our Facebook page to enter the March contest**



March Mystery Aircraft



February: Sukhoi SU 12



January: Grumman AF-2W Guardian

# HFM Aircraft Swag from I Love a Hangar

People who intend to look their best at air shows should check out the new HFM aircraft merchandise from [Iloveahangar.com](http://Iloveahangar.com). The employees and volunteers of Heritage Flight Museum have put in a huge order for spring fashion must-haves right off the runway: Val-Halla, The Proud American

and Hog Wild Gunner theme sneakers. The shoes are available in men's, women's and children's sizes, and matching theme duffels are available in large and small.

Here's a hot tip: fans and supporters of HFM can use the code HFM20PCOFF when ordering online

for a 20% discount, subject to one use per customer and valid **April 1 through October 1**.

Not only will everyone be looking good on the tarmac this Fly Day season, but a portion of every purchase will be donated back to HFM to help keep our warbirds flying.



## 2020 Fly Day Schedule

**April 18** - "Knock Off the Moss"

**May 16** - "Training for War"

**June 20** - "Honoring Veterans"

**July 18** - "Combat Search and Rescue"

**August 15** - "Victory in the Pacific"

**September 19** - "Warbird Weekend"

**Hours:** 10:00 am to 4:00 pm

**Admission:**

Adult - \$12

Senior (60+) - \$10

Military/Veteran - \$5

Child (5-17) - \$5

Child (4 & under) - FREE

Member - FREE

Flying is subject to pilot availability & weather: please check our website for unexpected cancellations.

# Welcome to the Attic

By Tiffany Hamilton

## The Norden Bombsight



Welcome to the attic! This is a new section of the newsletter where we tell about a special item in HFM's collections that stands out as an especially interesting/important piece. A good first example is the Norden Bombsight.

The Norden Bombsight was developed by a Swiss engineer named Carl Norden who began designing it in 1920. Basically an analogue calculator, the Norden Bombsight had the ability to adjust for air density, wind drift, airspeed, and groundspeed.

By improving the accuracy of bombs dropped, Norden created a device which he believed would lower suffering and death tolls by making the bombs hit only their intended targets and minimize collateral damage to nearby churches, schools, homes, etc.

The Norden Bombsight had two main parts, a sight head and a stabilizer. It became so popular that by 1943 nearly 2,000 Norden Bombsights were being produced each month.

This piece of equipment was deemed so important to United States military forces that it remained heavily guarded and shrouded in secrecy. Carl Norden himself was always accompanied by two bodyguards, and the bombardiers who used the machines were ordered to destroy any bombsight that might fall into enemy hands.

Despite their efforts, a German spy known as Herman Lang, employed by Carl Norden himself, passed on knowledge of the bombsight to other

German agents in the Duquesne Spy Ring. This resulted in the Germans creating a bombsight of their own with similar properties.

The Norden Bombsight was used in planes including the B-17 Flying Fortress, the B-29 Superfortress, and saw action throughout WWII, the Korean War, and Vietnam. Ninety percent of the bombardiers of WWII first encountered the bombsight in their training on the AT-11.

Its moment in history: on August 6, 1945, a B-29 bomber called Enola Gay dropped the first atomic bomb on Hiroshima, Japan. On August 9, 1945, a B-29 bomber called Bockscar dropped the second atomic bomb on Nagasaki. The bombsight used: the Norden Bombsight. As a result of the bombings, Japan surrendered September 2, 1945.

HFM has an exhibit dedicated to the Norden Bombsight in our WWII exhibit area. Come by to check out this historic piece of machinery for yourself.

## Become an HFM annual member or donor



HERITAGE FLIGHT  
MUSEUM

### MEMBERSHIP

#### Choose Membership Level:

- ☐ \$35 Individual
- ☐ \$60 Family (2 adults + children under 16)
- ☐ \$25 Student
- ☐ \$25 Veteran & Active Military

#### Affiliation:

- ☐ Air Force
- ☐ Navy
- ☐ Army
- ☐ Marines
- ☐ Other
- ☐ New Membership
- ☐ Renewal

### DONATION

#### I/we are enclosing a gift of:

- ☐ \$1000   ☐ \$500   ☐ \$250   ☐ \$100   ☐ \$50   ☐ \_\_\_\_\_

Please print and return form to: Heritage Flight Museum, 15053 Crosswind Dr., Burlington, WA 98233. Thank you for your support! The Heritage Flight Museum is a non-profit 501(c)(3) organization. Your contribution is tax deductible.