

# VIRGINIA EAGLES

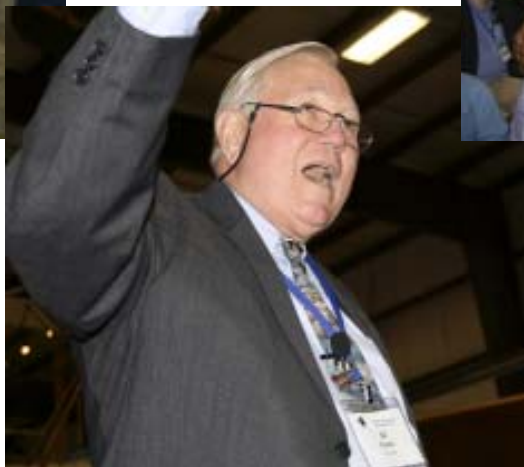


Official Newsletter of the Virginia Aeronautical Historical Society

## Annual Auction & Spring Party



**Come join us for a  
fantastic party!**



**Great Food!  
Fun Auction!  
Great Friends!**

**VIRGINIA EAGLES**  
*The official newsletter of the*



**VIRGINIA AERONAUTICAL  
HISTORICAL SOCIETY**

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**Virginia's  
Aviation History  
Is Calling.... YOU!**

**Join VAHS Today....**

**VAHS Membership Application**

DATE \_\_\_\_\_

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

E-MAIL ADDRESS: \_\_\_\_\_

CHAPTER AFFILIATION \_\_\_\_\_

TELEPHONE #: HOME \_\_\_\_\_

WORK \_\_\_\_\_

AMOUNT ENCLOSED

Please check one:  Cash  Check

Charge:  Mastercard  Visa

Credit Card # \_\_\_\_\_

Expiration Date \_\_\_\_\_

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**Return to:**  
**VAHS**  
**5701 Huntsman Road**  
**Richmond Int'l Airport, Va. 23250-2416**

**Membership Categories:**

- Lifetime Emeritus \$1,500.00 (+)**  
Lifetime membership, lapel pin, 2 VAHS polo shirts, 4 tickets to Annual Meeting or Hall of Fame (one year only)
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1 year membership, lapel pin, 1 VAHS polo shirt, 2 tickets to Annual Meeting or Hall of Fame (one year only)
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- Regular Membership \$ 30.00**  
1 year membership, lapel pin

Shirt Size: M-LG-XL-XXL

***Add your spouse for \$15 more!***

Thanks to Delta Airport Consultants, you can now view the *Virginia Eagles* Newsletter on the Web.

Visit us on the Web at [www.vahsonline.org](http://www.vahsonline.org)  
Click on *Virginia Eagles*

Contact us by mail at:  
**VAHS**  
**5701 Huntsman Road**  
**Richmond International Airport, VA 23250-2416**

e-mail us at [vahs@smv.org](mailto:vahs@smv.org)  
Telephone (804) 222-8690

# Approaches by Air Al

## Some Things Just Can't Stay in Vegas!

In the last newsletter I reported that our Hall of Famer Charlie Kulp was also to be inducted into the International Council of Air Shows Foundation's



Hall of Famer Charlie Kulp reading the last edition of the Virginia Eagles newsletter with Hall of Famer Frank Marshall's widow, Evelyn Marshall.

Air Show Hall of Fame at its convention in Las Vegas, Nevada. We were worried that we would not get Charlie back. He was inducted and did return. However, along with his return came the report from eyewitness Evelyn Marshall (widow of Virginia Aviation Hall of Famer, Frank Marshall) that not only did Charlie receive the well-deserved glory, bring honor to the Commonwealth and to air show aviation, but he also developed "groupies" who followed him around the convention, sought his autograph, and stroked his manly beard. Groupies! WOW! Now, that is really something for us all to aspire to. I am starting a beard now. Go to [www.airshows.aero](http://www.airshows.aero) for the write up on the Groupie Master.

## Thanks to PAM

Those who have attended our Annual Meeting and Auction will know that Phoenix Aviation Managers (PAM) has been a dedicated supporter of this event with the donation each year of an aviation insurance policy, underwritten by Old Republic Insurance Company, which has been auctioned off for the benefit of our Society. On January 20<sup>th</sup> of this year, Jan and I

had to go to Griffin, Georgia on business. On the way we stopped in at Cobb County Airport - McCollum Field (RYY) which is near the PAM



Al & Jan Orgain lunching with Mike Warren (left) and Steve Mitchell (right) at Cobb County Airport - McCollum Field (RYY)

Marietta office in order to visit with them and thank the personnel there. There is a new second floor restaurant on the north side of this airfield called "Elevation" and it overlooks the single runway where corporate jets and small puddle jumpers, like mine (you may be able to see N182PE in an accompanying picture) taxi up. Pilots and passengers walk in for a very pleasant and tasty lunch with an aviation view. We were able to thank, in person, Steve Mitchell, the Director of Claims and Mike Warren also of the Claims Department. Steve Knowle, Senior Vice President who has been instrumental in this policy donation through local USI Insurance Services, was travelling on the day of our visit.

## Dear David

At our Hall of Fame gathering last November, I emphasized the need for our members and other aviators who have stories to tell about civilian or military aviation, to contact David Hahn. David (VAHS Board Member and Chairman of the Archives Preservation Committee) is going to put those stories into book form, suitable for publishing and, more importantly, suitable for passing on to your children and grandchildren. What did you do during the War, Granddaddy or Grandmama? Think of Neil November, one of the heroes of Tantilla Gardens, saving Martha West (then Mrs. John B. Hughes) after

her June 5, 1941 missed approach at Hermitage Field and crash near Broad Street. Think also of Carl Linder (another Tantilla hero), who flew gliders into Europe during WWII. Anyone who has ever talked to Ray Tyson knows that he has an aviation story for every occasion because Northfield, at one time, was the center of Virginia's aviation universe. These yarns will make up one of the three major components of this book. There will be a section on the Hall of Famers. Another section will describe the history of the VAHS and its accomplishments to date. Your tales will be in good company.

You have stories. You need to tell them. Waiting is not an option.

After the announcement at the Hall of Fame gathering, fourteen (14) people reported to David Hahn and the history is growing. You will not like having to explain to your children and grandchildren why you are not in this book. "Shoulda, woulda, coulda." The contact information for David Hahn is as follows:

For Letters:  
David Hahn  
P.O. Box 546  
Sandston, Virginia 23150

For E-Mail:  
C7eca@aol.com

Telephone:  
(804) 399-7426

David has also told me that you do not have to worry about your writing or punctuation skills. He will fix all that in the editing process.

### **You Can't Take It With You!**

Speaking of Martha West brings to mind the Reed West Trust, which has given through a bequest \$317,750.00 to the VAHS. It is a good example and a teaching moment for our Society members.

Bruce Mertens, who is the Chair of the Estate & Tax Planning Practice Group at my law firm, has allowed me to quote him, as follows, with guidance on how you can follow the Martha and Reed West example and remember the VAHS.

Such gifts, often referred to as a "bequest," may include cash, securities, real estate or personal property and can be for a specific amount or for a percentage of your estate.

Your bequest to the VAHS is:

- Tax-wise: a charitable gift through your will or living trust may reduce estate taxes;
- Revocable: you may change the beneficiaries of your estate at any time; and
- Comfortable: a bequest allows you to retain your assets throughout your life.

You can add the specific bequest by amendment or codicil to your existing will or trust by language such as the following:

- I bequeath to the Virginia Aeronautical Historical Society, Richmond International Airport, Virginia, the sum of \_\_\_\_\_ Dollars [or property described specifically, such as "my stock in XYZ corporation"] to be used by the Society in its discretion for its general purposes or
- I bequeath all the rest of my estate [or \_\_\_\_\_ per cent (\_\_\_\_%) of the rest of my estate] to the Virginia Aeronautical Historical Society, Richmond

International Airport, Virginia, to be used by the Society in its discretion for its general purposes.

Other assets, such as retirement accounts or life insurance proceeds, can be directed to the VAHS by beneficiary designation without having to change your will or trust. Your individual beneficiaries who are receiving retirement accounts will have to pay income tax on the account balances as they withdraw funds from the account. If all or a portion of your retirement account is payable to a charitable beneficiary such as the VAHS, those funds will be received in full by the Society without reduction for income taxes.

Bruce also tells me that if there is a desire to make the VAHS a beneficiary of any Retirement Plan, that this can be done easily through a beneficiary change form obtainable through your plan administrator (or in the case of an IRA, the account sponsor). The form will lead you through what you need to do thereafter.

Bruce also points out that life insurance which you no longer need because of changed family situations can make an excellent gift with no adverse impact to your family. Simply designate the VAHS as a beneficiary of all or part of a policy or give a paid-up policy to the VAHS.

Real estate that has become too expensive or cumbersome to maintain is another property form that can be given by an outright gift of transfer. In the alternative, the donor may maintain a life estate, enjoy the property for the rest of the donor's lifetime while receiving a current income tax deduction based on the value of the remainder interest, and still benefit the VAHS.

There are other more involved ways to do these things which, as a litigation lawyer, I am not capable of explaining, but your favorite estate expert can. Or you can call Bruce Mertens at 804-783-7203 or e-mail at [BMertens@SandsAnderson.com](mailto:BMertens@SandsAnderson.com). Mention that you have received this information through the VAHS Newsletter and he will be glad to

give you some hints about what you can do to help the Society and perhaps lessen your estate's Tax Footprint.

Al Orgain  
VAHS Chairman  
(804) 783-7243  
[AOrgain@SandsAnderson.com](mailto:AOrgain@SandsAnderson.com)

*Law Office Address:*  
Sands Anderson PC  
801 East Main Street  
Post Office Box 1998  
Richmond, Virginia 23218-1998

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## **Today's News is Tomorrow's History**

Help your Society's effort to record and preserve the history of aviation in the Commonwealth. You can help by clipping and sending any newspaper articles relating to your local airport, aviators or related events to the VAHS office. Also welcome are any photos of Virginia airports or anything concerning Virginia aviation history. We will file and scan the information so it will be available on our website.

# Van's Vectors

The only thing that is constant is change itself! We all know this to be true, yet we always get comfortable with the status quo and expect things to go on indefinitely. This is especially true when everything is going our way and with Al Orgain as our chairman for the last 8 years, things having been going just great!



Well, Al is stepping down as Chairman and he will be missed. The Society has flourished under his leadership and is stronger financially, in membership and by reputation. While Al's shoes will be hard to fill, the VAHS has a very strong Board with many active members and is staged to continue its growth to even new heights.

Don't miss the annual meeting and auction on April 17<sup>th</sup>. There isn't a better evening anywhere for \$15 and our new Chairman will be elected by the Board of Directors and announced that night.

Van Crosby  
VAHS President  
(804) 200-5213  
van.crosby@usi.biz

Business Address:  
USI Insurance Services  
4880 Cox Road, Suite 102  
Glen Allen, Virginia 23060



## New Feature!

Starting with the next edition, we will be adding a new feature to our newsletter. There will be a section set aside for "Letters to the Editor". Please take the opportunity to send me a note and tell me what you think.

Thanks and I look forward to hearing from all of you!

Jennifer Melton  
Editor

## HELP WANTED!

**The VAHS marker committee needs suggestions for future historical roadside markers. Topics can be locations, events or individuals. The only stipulation is that the event must be older than 50 years. In the case of individuals, they must be deceased.**

**Suggestions can be sent to Bill Schultz at [wschultz5@cox.net](mailto:wschultz5@cox.net) or by phone at 757-258-8875.**

## **Genevieve Krimm Orange**

### **1923 - 2010**

Genevieve Krimm took her first flying lesson at Hermitage Airport in Richmond on December 6, 1941, the day before Pearl Harbor. She had always been fascinated by airplanes and wanted to travel, so she thought she'd put the two together. She applied to Eastern Airlines as a stewardess but at the time airlines only hired registered nurses and you had to be 21 years old, of which she was neither. Genevieve decided that since she couldn't ride airplanes for a living, she would pilot one.



She promised her parents that she would pay for her own flying lessons. Before giving her permission to learn to fly, her mother made Genevieve agree "to always wear a dress, so the men will know you are a lady."

In 1942, she was one of twelve women, including Virginia Hope and Martha West, to organize the Richmond Women's Flying Club. In 1943 she got her instructor's rating at Hermitage Airport and in 1942 and '43 she served as a lieutenant in the Civil Air Patrol. She became Richmond's first female flight instructor and trained hundreds of pilots during the '40s. During the mid-1940s she was an instructor at the old Peninsula Airport in Newport News.

She took a break from flying when she married and began her family. Following her divorce she worked briefly as an executive secretary, but decided to return to the flying world.

In 1953, Genevieve became one of the first women corporate pilots in the country when she accepted a job as co-pilot to pilot Alex Lowery aboard a twin engine Lockheed Lodestar owned

by Virginia Beach railroad heir William K. Ryan. With this job, she was able to follow her dream of travel. She flew to such places as the Florida Keys, Cuba, Canada and Haiti.

Her flying career ended in 1955 when Ryan became too ill to travel and the plane was sold. She got remarried to Earnest Orange and her flying career ended. Genevieve would have liked to have been an airline pilot, but in those days they would not have even considered a woman.

Genevieve became the first female president of the VAHS and was a long time member of the Board of Directors of the VAHS. She passed away Sunday, February 21, 2010 in Mt. Pleasant, SC. She will be greatly missed by all who knew her.



Virginia Aeronautical Historical Society

**Annual Auction and  
Spring Party**

**Saturday, April 17, 2010**

**5:30-9:00 p.m.**

**Virginia Aviation Museum**

**Lots of wonderful Auction Items!**

**A Fun time!!!**

**Lots of Door Prizes!**

**Open Bar and Heavy Hors D'oeuvres**

Tickets are \$15.00

Call **Jennifer Melton** at (804) 222-8690 or email her at [vahs@smv.org](mailto:vahs@smv.org) to purchase tickets or donate items.

# Mark your calendar for April 17<sup>th</sup>!!

The Virginia Aeronautical Historical Society will again hold its Annual Spring Party and Fund Raising Auction on Saturday evening April 17, 2010 from 5:30 – 9:00 p.m. at the Virginia Aviation Museum.

With your help and support this event has become the premiere aviation social event of the year. In 2009 over 200 members and guests enjoyed an evening filled with food and fun while providing much needed support for the programs of the VAHS. This event is open to everyone, not just VAHS members, so plan to bring a guest to enjoy the open bar, heavy hors d'oeuvres and some friendly bidding competition during our silent and live auctions. Again this year, for your enjoyment, we have the privilege of presenting “Fast Tongue Al”, aviation’s finest auctioneer, as he provides both entertainment and excitement during the voice auction portion of the evening. You do not want to miss this spectacle!

Tickets for the evening are \$15 per person and include the open bar and heavy hors d'oeuvres plus a raffle ticket for a chance to win several door prizes. Tickets are available from Jennifer Melton at the VAHS office 804-222-8690.

We are off to a great start with some fabulous items up for bid but we still need your help in soliciting or providing donations for the auction. Aviation related items are great but any type of item is welcome for our auction. Last year through your support we raised a record amount to support the VAHS in its mission to preserve Virginia’s rich aviation history and we hope we can count on you this year for a donation.

Contacts for auction donations or questions are:

Scott Gross: j3cub@cox.net  
Charlie Williams: cw4cjw2@aol.com  
Tom Woodburn: wacoc5@verizon.net  
Carl Fisher: carlf2@prodigy.net  
VAHS office 804-222-8690, vahs@smv.org

Give us a call if you need help transporting a donated item. We request that all donated items be at the museum by April 14, 2010. All donations are tax deductible. Receipts will be provided.

Thank you for supporting The Virginia Aeronautical Historical Society.

# Chapter Reports

## Northern Neck/Middle Peninsula

Contact:

Cary L. “Doc” Broadway – President  
P.O. Box 32  
Merry Point, Virginia 22513  
(804) 462-0319  
e-mail: docnsue1938@earthlink.com

Meetings are held the 3<sup>rd</sup> Thursday of each month at the Pilot House Restaurant in Topping, Virginia at 12:00 p.m.

### Chapter Update

For our February luncheon, we had the pleasure of a presentation by John Beal, Colonel, USAF-Retired, from Hampton. John had a fantastic career by the fact that he flew just about the whole spectrum of fighters from the ‘60s through the ‘90s. Of particular interest to me was his time in the F-104, making me very, very jealous. It was a fighter that ALL fighter pilots always wanted to fly. For March, Lt. (Navy) Bryan Pinckney, an F/A-18 Weapons System Officer from Oceana Naval Air in Norfolk will brief us on his tours in Iraq and in April we are planning for a charter bus trip to the Udvar-Hazy Air and Space Museum at Dulles.

Cary “Doc” Broadway  
President

## Northern Virginia Chapter

Contact:

Bill Schultz  
Chapter Development Chairman  
(757) 258-8875  
e-mail: wschultz5@cox.net

## Williamsburg “Eagles” Chapter

Contact:

Phil Brown – President  
114 Walnut Hills Drive  
Williamsburg, Virginia 23185  
(757) 253-0379  
e-mail: williamsburg-aeronautics@cox.net

Meetings are held the 3<sup>rd</sup> Wednesday of the month at 10:00 a.m. at the Williamsburg Airport.

### VAHS Eagles Chapter 2010 1<sup>st</sup> Quarter Activity Report

**December 2009** – Our annual Christmas party took place after the first installment of “STUKA PILOT”, a presentation based on Hans Rüdél’s the autobiography. The party luncheon, catered by Charley’s (the airport restaurant) was thoroughly enjoyed by 54 attendees.

**January 2010** - The January “Twenty Ten” meeting commenced promptly at “Ten Hundred” with Vice President Stan Lewis leading the Chapter in The Pledge of Allegiance with an “OOH RAH” at the conclusion!

This month’s talk was a continuation of December’s presentation, “STUKA PILOT” about WWII German aviator Hans Ulrich Rüdél (1916-82). His military career was complex, dangerous and intriguing. Chapter President Phil Brown brought to life how a young man who initially had difficulty adapting both to piloting and the demands of the then-typical military lifestyle eventually excelled in combat aviation.

He was thought of as a ‘weird duck’ for not carousing and drinking with his squadron mates. Considered timid as a child, he determinedly toughened himself by devotion to sports and went on to be an aggressive

Stuka and FW-190 pilot on the Eastern Front. The JU-87 Stuka could be configured in various roles from being a dive bomber that had near vertical delivery capabilities (60-90 degree dives) with a speed of 170 knots to one that could carry underwing two massive tank-killing cannons (with 6 shots/gun) in shallow dives with low 3 “g” pull out limits and max speeds of about 130 knots. When attacked by enemy fighters, a cannon-carrying Stuka pilot needed great piloting skills to avoid being shot down.

Rüdel first experienced combat aviation as a reconnaissance observer during the invasion of Poland. Though a designated pilot, he was considered insufficiently skilled to fly in combat. After Poland fell he was assigned to remedial Stuka training following which he was only allowed to fly more training, maintenance and ferry flights. By the time Germany invaded the Soviet Union Rüdel finally mastered all phases of flying the Stuka but was not officially so recognized. Ferrying a repaired aircraft to the Eastern Front shortly after the invasion provided him an opportunity to beg for and receive a chance to prove himself on a combat flight. He succeeded admirably and was soon acknowledged as the most skillful if somewhat overly aggressive and still inexperienced squadron pilot.

Over the next four years he flew 2,530 missions in Russia, Ukraine, Crimea, Rumania, Hungary, the Baltic States, and Germany. He destroyed more than 2,000 ground vehicles (included 519 tanks), 70 boats, 1 battleship, 2 cruisers and 9 aircraft. His extraordinary combat success was acknowledged with the award of more decorations than any other WW II German veteran. Rüdel’s achievements were gained by a remarkable combination of devotion to fitness, tenacity and toughness under harsh living conditions.

Despite contracting jaundice and suffering many wounds, including severe injuries to his feet while

escaping Russian capture, shoulder wounds from small arms fire, face and hands wounds from flak shrapnel, a severe leg wound from machine gun rounds, and severance and loss of a leg from a 40 mm round, he resumed flying each time without waiting for proper healing. On 32 occasions he was shot down or forced down by ground fire. He successfully rescued 6 downed Stuka crews from behind enemy lines!

High level combat awards were presented by Hitler to Rüdel on a number of occasions. He refused to accept them unless he was allowed to return in a flight status to his men and squadron. Since Hitler couldn’t bear to tell him no, after their meetings high level officers would be instructed to forbid Rüdel more combat flying. Rüdel ignored these prohibitions and devised several ruses to hide his continued flying. Hitler’s conversations with Rüdel lasted as long as an hour while accurate but discouraging intelligence straight from the front was conveyed – information his generals did not provide out of fear or ignorance.

Rüdel was captured once by the Russians after landing to pick up a downed Stuka crew. After initiating an escape attempt he was shot in the shoulder but continued to run without boots and the winter clothes which had been taken from him. During the next two days he descended a cliff by hand-over-hand grasps of thorn bushes, swam a 600 meter wide ice choked river, spent several nighttime hours warming up in bed between an aged peasant couple in their hut, and trudged barefoot the entire 50 kilometers back to his unit. The other aircrew members perished during this escape.

At war’s end Rüdel surrendered to U.S. forces rather than to fall under Russian occupation. He took 3 JU-87’s and 4 FW-190’s to an American airfield, purposely collapsing the landing gear on taxi-in. His reception was marked by theft of his personal items

and a refusal to properly treat his infected and severely painful leg stump.

As a post-war POW in England and France he was repeatedly refused medical treatment for his leg, in spite of the best efforts of Group Captain Bader. After many months he was hospitalized in Germany where he received proper care. Upon release from captivity he went into the business world for several years. Then, moving to South America for four years assisted the Argentinean aircraft industry and formed a nascent national socialist party with other German expatriates. He returned to Germany to enter politics but fared poorly in the 1953 elections. Returning to the business world, he experienced success and continued to ski, climb mountains and play tennis in spite of his wartime injuries.

**February 2010** – Maj. Matt Martin, USAF, Branch Chief for Air Force Predator (MQ-1) and Reaper (MQ-9) drone aircraft explained how the capability for drone surveillance and attack missions was developed and how they



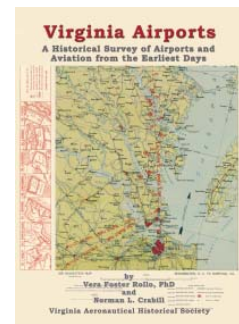
Maj. Matt Martin, USAF

are expected to evolve in the future. His enthusiasm, presentation skill, knowledge of minute details, and an ability to clearly understand and answer questions led to extensive discussions with the audience both during and after the presentation. Many of the 64 attendees followed Matt downstairs for lunch at Charley's in order to continue their conversations. Matt finally was allowed to leave for return to Langley at 1:30 PM.

**March 2010** – The presentation for our March 17<sup>th</sup> meeting, "Flight Testing the F-16", will be presented

by Chapter member Lt. Col. Tuck McAtee, USAF Ret. He served as a developmental, engineering and operations test pilot for the full scale F-16 in a unique, multi-national program which conducted "off-site" test flights flown from Norway, Denmark, Germany and England. Parallel engineering and operational testing of a new U.S. fighter aircraft, both on and off-site, had never been done before. Tuck will discuss the reasons for, challenges of and advantages conferred by this test methodology.

Respectfully Submitted,  
Dick Pitman and Philip W. Brown



## VIRGINIA AIRPORTS

by

Vera Foster Rollo & Norman L. Crabill.

THE most in-depth historical survey of our Virginia airports, aeronautical events, and the people that make it happen, from the earliest days of aviation in the Old Dominion. Extensively researched and detailed with many never-before-seen aerial maps of airports from the beautiful Shenandoah Valley to the Tidewater area of Virginia. 8 1/2 by 11 paperback. 244 pages and is packed with b/w photos and illustrations. It can be purchased from the publisher for \$25 per copy (U.S.) which includes shipping and handling. Order at Virginia Aeronautical Historical Society, 5701 Huntsman Road, Richmond, Virginia 23250-2416 or call (804)222-8690 or email [vahs@smv.org](mailto:vahs@smv.org).

# Calendar of Events

## **April 17, 2010**

**VAHS Annual Auction and Spring Party** will be held at the Virginia Aviation Museum from 5:30 – 9:00 p.m. The VAHS Annual Meeting will be held just prior to the party at 5:00 p.m. Tickets are just \$15 for an evening of fun, food and friends. There will be a silent auction as well as a live voice auction with “Fast Tongue Al” as auctioneer again this year. Contact the VAHS office at (804) 222-8690 or e-mail at [vahs@smv.org](mailto:vahs@smv.org) to purchase tickets.

## **May 8, 2010**

**3rd Annual Operation Cow Drop** sponsored by Chick Fil-A at the Hanover County Airport (date tentative). Local charity fundraiser event in which numbered tickets are purchased and assigned to a toy stuffed Chick Fil-A Cow with a parachute. About 1,000 cows are then dropped over the Hanover Airport and those landing closest to the Cow’s Eye marker are selected for prize drawings. A community open house takes place at the airport at the same time with child friendly games and activities.

## **May 22-23, 2010**

**Virginia Regional Festival of Flight** will be held at the Suffolk Executive Airport from 8:00 a.m. until 5:00 p.m. on Saturday and 8:00 a.m. until 4:00 p.m. on Sunday. Dedicated display areas for ultralight/light aircraft/powerd parachutes and showplanes (including homebuilts, antiques, classics, and warbirds). Radio controlled aircraft displays. Pancake breakfast Saturday and Sunday mornings from 8:00 a.m. until 11:00 a.m. Youth tent with activities for young people. Vendors, exhibitors, forums, and workshops.

## **May 22-23, 2010**

**Warbirds Over the Beach Show** will be held at the Virginia Beach Airport. Gates open at 8:30 a.m. each day and airplanes will begin flying at 1:00 p.m. each afternoon. Plenty of on and off-site parking.

Bring your beach chairs and camera. Dinner: Saturday afternoon steak dinner at 4:00 p.m. Music: 7:00 p.m. dance band. During the airshow weekend, arrangements have been made for three pilots to bring in their authentic North American AT-6 military trainers and a PT-19 primary trainer. For information on rides in these aircraft contact their owners directly. For the AT-6 plane contact - [www.PlaneView.aero/rides.htm](http://www.PlaneView.aero/rides.htm) or [www.TexanFlight.com](http://www.TexanFlight.com) or call (757) 647-8127. For the PT-19 plane contact [www.BayAviationOnline.com](http://www.BayAviationOnline.com) or call (804) 436-2977.

## **June 6, 2010**

**New London Fly-In** will take place from 8:00 a.m. until 4:00 p.m. at New London Airport in Forest, VA. All day family fun — aircraft displays, kids bomb drop, old engines, old cars, all American breakfast and lunch. Kids games. For more information contact David Miller at 540-586-5155 or [millerrv6@verizon.net](mailto:millerrv6@verizon.net) or [newlondonairport.com](http://newlondonairport.com).

## **June 19, 2010**

**Become A Pilot Family Day** will be held from 10:00 a.m. - 3:00 p.m. at the NASM Steven F. Udvar-Hazy Center in Chantilly, VA near Washington Dulles International Airport. The event features educational activities and an outdoor aviation display with dozens of visiting vintage, recreational, military, and homebuilt aircraft. Visitors can talk to pilots and find out what skills are needed to fly. Inside the Center, visitors can test their piloting skills in flight simulators, meet model airplane experts, and hear a variety of guest speakers. The event is free and open to the public. Parking is \$15.00. For more information visit [www.nasm.si.edu/becomeapilot](http://www.nasm.si.edu/becomeapilot)

## **Ongoing Events:**

**Pancake Breakfast at Franklin Municipal Airport** takes place the fourth Saturday of each month (from 8:00 - 10:30 a.m.). Sponsored by EAA

Chapter 1377 and Old Dominion Squadron CAF. For more information call (757) 562-8764.

**Fly-In 2009 at Twin County Airport (KHLX)** will take place the second Saturday of every month April through October. Everyone is welcome for food, drinks, and fellowship. Food served from 11:00 a.m. - 2:00 p.m. All proceeds go to Local EAA Chapter 1426. For more information contact Brian Sutphin (276) 733-4198.

**Pancake Breakfast at Mecklenburg-Brunswick Regional Airport** takes place the first Saturday of each month (from 8:00-10:00 a.m.). Breakfast and social hour with regularly scheduled live presentations by FAA and/or NTSB. Sponsored by Mecklenburg-Brunswick Regional Airport and The Club/Lake Gaston Resort. For more information contact (434) 729-2591 or AVCAirport@buggs.net

**Soup-on-Sunday at Campbell Field Airport (9VG)** on the Eastern Shore of Virginia will take place each Sunday from noon-3:00 p.m. For more information visit the website or contact Gordon Campbell at (757) 442-7519.

**Friends of the Petersburg Pilots Association** holds a breakfast from 8:00-10:00 a.m. the third Saturday of each month at the Dinwiddie County Airport. For more information call (804) 861-9915.

**Lonesome Pine EAA Chapter 1416** invites pilots and guests to attend free "Hotdogs & Hangar Talk" beginning at 11:00 a.m. the third Saturday of each month at Lonesome Pine Airport (follows the EAA Chapter Meeting at 10:00 a.m.). For more information contact Bob Spera, Director, Liberty Flying Service, (276) 328-5300 or liberty@mounet.com or visit www.libertyflying-service.com.

**Flying Circus Airshow** (Open every Sunday, May through October) including precision aerobatic and formation flying, wing walking, hot air ballooning, skydiving, and antique open cockpit airplanes. Biplane rides are available before and after every

show. Gates open at 11:00 a.m. Show starts at 2:30 p.m. \$10.00 for adults and \$3.00 for kids. Group rates available. Concession stand, picnic grounds, gift shop. Picnic pavilion available for party rental. The Flying Circus Aerodrome is located at Rte. 17 and Rte. 644 (Richie Road) in Bealeton, Virginia. For more information visit www.flyingcircusairshow.com or call (540) 439-8661.

**World War II Veterans Honor Flights** via DCA Air Carriers take place each Saturday and Wednesday April-May and Sept.-Oct. from 9:30 a.m. to 6:00 p.m. at Ronald Reagan Washington National Airport Terminals A, B, & C. Sponsored by US Airways, AAL, Delta, and Air Tran. Between 100-450 WWII veterans are flown to DCA via charters from various east coast airports to visit the WWII Memorial on the Mall in Washington, DC. Numerous air carriers fly-in vets on chartered flights while other passengers warmly cheer and welcome them back to DCA. 7700+ WWII vets flew into DCA on 64 charter flights during 2009.

### **Regular Meetings:**

**Virginia Aeronautical Historical Society - Northern Neck-Middle Peninsula Chapter** meets at the Pilot House, Hummel Field, in Topping, Virginia in the "Eagle's Nest" at 12 Noon on the third Thursday of each month unless otherwise posted. Pilots can fly-in and park at the door of the restaurant. Visitors are welcome at these luncheon meetings. There is an interesting speaker from the field of aviation each month. Come visit the "Eagle's Nest" at any time and see the collection of aviation art and other memorabilia.

**Williamsburg Chapter of the Virginia Aeronautical Historical Society** meets the 3rd Wednesday of each month at the Williamsburg-Jamestown Airport in the upstairs meeting room at 10:00 a.m. Call (757) 229-1597 or (757) 220-9115 for information.

**Ninety-Nines - Hampton Roads Chapter** meets the first Monday of each month at 7:00 p.m. alternating between Newport News-Williamsburg Airport and Norfolk International Airport. For more information, contact Linda Mathias (757) 242-3491 or Edith Fischer (757) 877-4127.

**Ninety-Nines - Shenandoah Chapter** meets the third Sunday of each month at 2:00 p.m. at the Shenandoah Valley Regional Airport. All women pilots and student pilots are welcome. Contact Sara Fultz (540) 896-9842 or Jackie Estes (540) 347-5679, to confirm meeting date in the event of late changes.

**Ninety-Nines - Virginia Chapter** meets the third Saturday of each month at various airports around the state. All women pilots and student pilots are invited to attend. For more information call Betty Vinson (804) 541-0590 mornings, (804) 732-1833 afternoons and evenings or e-mail: [bettyvinson@firstsaga.com](mailto:bettyvinson@firstsaga.com).

**Peninsula Airport Commission Meetings** are held the third Thursday of every month beginning at 8:00 a.m. in the Commission Room at the Newport News-Williamsburg International Airport. The meeting is open to the public.

**Wingnuts Flying Club** meets on the first and third Tuesday of each month at 7:00 p.m. in the Chesterfield County Airport terminal building. See the web site at [www.wingnutsflying.com](http://www.wingnutsflying.com).

**Civil Air Patrol - The Newport News Composite Squadron** of the Civil Air Patrol meets every Tuesday evening at 6:30 p.m. at 904 Bland Blvd on the grounds of the Newport News-Williamsburg International Airport. All aviation enthusiasts interested in search-and-rescue and young people ages 12-18 interested in the Cadet Program are invited to join. For details visit [www.vawg.cap.gov/newportnews](http://www.vawg.cap.gov/newportnews)

**Civil Air Patrol - Leesburg Composite Squadron** of the Civil Air Patrol - Adult members meet the first

and third Tuesday of the month and cadet members meet every Tuesday at 7pm at the Leesburg National Guard Armory. We welcome anyone interested in Search & Rescue and aviation. Details and directions at: [www.leesburgcap.org](http://www.leesburgcap.org)

**Shenandoah Valley EAA Chapter 511** meets at 7:30 p.m. on the third Tuesday of each month at the Shenandoah Valley Regional Airport. For more information visit [www.geocities.com/ea511va](http://www.geocities.com/ea511va).

**Experimental Aircraft Association (EAA) Chapter 231** meets at 7:00 p.m. on the second Wednesday of each month at the rear of the Virginia Aviation Museum (except for February which is designated for the Annual Dinner). For more information and to confirm meeting date and time visit [www.eaa231.org](http://www.eaa231.org).

**The Orange County Airport Boosters Association, Inc. (OCABA)** holds its monthly organization meeting on the first Saturday of each month. Welcome to all supporters of Orange County Airport (KOMH). See <http://www.ocaba-omh.org> for more details.



# Virginia Aviation History Project Report



## The NASA F53

By Norm Crabill and Ron Smith, NASA Retirees

In the late 1970s, I (Norm) was Head of the Special Projects Office of the Flight Research Division at the NASA Langley Research Center. One of our flight projects was the Storm Hazards Program. We developed this program in response to a request from the National Transportation Safety Board to investigate the problems airliners were having in summertime operations in and around thunderstorms. Our search for a suitable vehicle to do this included a B57 at Langley, an F4 somewhere, and at NASA's Lewis Laboratory at Cleveland, Ohio a single seat F106A and a two seat F106B. I selected the F106 type for its configuration simplicity (no horizontal tail to come off in extreme turbulence) and its availability, since Lewis had no immediate plans for them. The B model provided a rear seat for an equipment operator and a better windshield and canopy design to withstand lightning effects. The aircraft was eventually flown to LaRC in January 1979, not without some problems. Over Richmond, in the face of falling hydraulic pressure, the ferry pilot blew down the landing gear and the RAM Air Turbine for back-up electrical power and successfully landed at LaRC. After he shut down on the ramp in front of the NASA hangar, the ramp was drenched with hydraulic fluid.

The Langley pilots complained to me about "the piece of junk" I had given them and said they would never fly

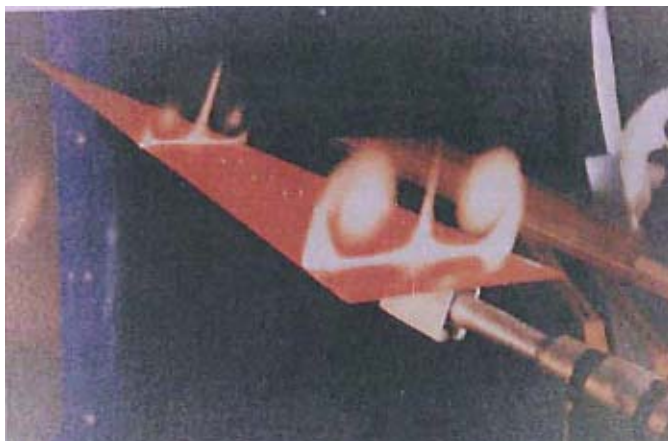


Figure 1 - Flow visualization showing two symmetric vortices on top of a 72 degree sweptback delta wing with no leading edge flap, as tested in the ViGYAN Low Speed Wind Tunnel by Dr. D.M. Rao

it. I told them the airplane would be completely refurbished and hardened against the effects of lightning by consultant Andy Plumer of Lightning Technologies of Pittsfield, MA. And we did. Bob Peterson of the electronics shop completely redid all electrical systems and avionics, and Crew Chief Mike Klebitz reworked all other systems, including eventually a new engine, until it was in first class shape. We installed a 10 channel digital recorder with nanosecond time resolution on loan from the Air Force Weapons Lab at Kirkland AFB, Albuquerque, and flew it altogether in about 200 flights from 1979 through 1987, getting struck by lightning 700 times, including 72 times in 40 minutes over New Bern NC, a record. And the pilots loved it; they actually kept track of who got the most

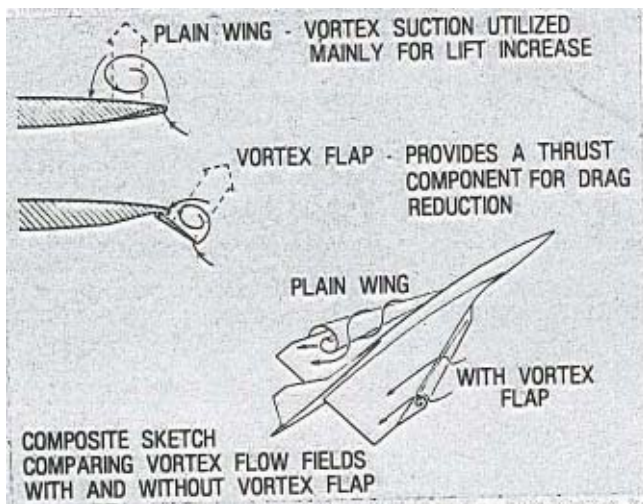


Figure 2 - The Leading Edge Vortex Flap Concept, courtesy Dr. Rao

listened with amazement at what he wanted to do, and the innovative way he wanted to test the airplane in the Langley Full Scale Tunnel.

Here is Ron's story:

My history with the F106B began when I was at NASA Headquarters in the Systems Division, Military Technology Branch, and I was asked to review disposition of the two F106 aircraft at the NASA Cleveland Laboratory – either for research flights at Langley or at NASA's Flight Research Center in California. The plan for Langley's Storm Hazard Program as outlined by Norm was definite and made technical and timely sense, while FRC simply wanted the aircraft for some future, undefined, uses.

I recommended that the office responsible for the disposition of all NASA aircraft send it to Langley and so it was, arriving in January 1979.

In about 1982, I accepted a job in Joe Stickle's Flight Research Division at NASA Langley in Norm's Special Projects Office. I was interested in doing some flight test work on an idea that many Langley experts had recommended: a leading edge flap on a delta wing that would significantly improve the lift to drag ratio, leading to improvements in steeper climb-outs with reductions in takeoff noise and field length, maneuvering, and low-speed loiter characteristics. Projections, based on the work of NASA researchers like Dr. John Lamar, Dr. Neal Frink, and James Hallisy with Computational Fluid Dynamics flow models and model tests in wind tunnels, predicted improvements of as much as 40% on highly swept (40 to 70+ degree) wings. Figure 1 shows a visualization of

strikes. Phil Brown, recently inducted into the Virginia Aeronautical Historical Society Hall of Fame, was the pilot on that record breaking flight.

So, what has all this to do with the "F53"? Well, we later got the F106A from NASA Cleveland and used it for spare parts for the F106B. At one time we had four F106's in the NASA Langley hangar, including one from the AFB at Minot ND that we hated to touch – it was the General's airplane and was in perfect shape. But we needed it for spare parts to keep the F106B flying.

One day, Ron Smith, one of my cohorts in the Special Projects Office, came into my office and asked if he could have the F106A, the second airplane we got from NASA Cleveland, for a wind tunnel project. I

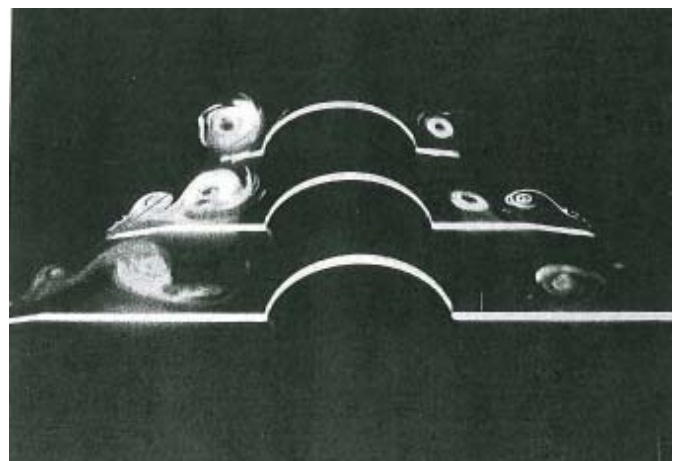


Figure 3 - Illustration of the multiple vortices on the top of a 60 degree swept delta wing model with leading edge flaps in a wind tunnel. The flow is from the top of the picture toward the bottom of this view. The white stripes running left-to-right (span-wise) show the position of the light sheet that also illuminates the vortices at three positions along the chord of the delta wing. Courtesy of Dr. Rao, ViGYAN.

flow over a 72 degree swept delta wing model in a wind tunnel, revealing two strong vortices; the pressure in these vortices is well below static pressure, contributing to the lift force. If these vortices could somehow be moved outboard onto a forward facing flap as shown in figure 2, these low pressures would provide a force acting forward, opposing the drag, and thereby increasing the lift/drag ratio.

More tunnel tests on more moderately swept wings with leading edge flaps showed not just one vortex lying neatly on the leading edge flap, but multiple vortices. In figure 3, a view from the rear of a 60 degree swept delta at three positions along the wing-body configuration with a leading edge flap shows these multiple vortices, some affecting the flow over the leading edge flap.

A large scale proof-of-concept test was needed, and the F106B workhorse was ideal for that purpose. But before fitting such a device to the flight aircraft, I (Ron) proposed that we test it in a wind tunnel on the F106A we had for spare parts. The full-size airplane was too big for even the Langley Full Scale Tunnel, so I proposed we test half of it, mounted sideways on a platform in the tunnel. Which we did, see figure 4. That's NASA's Long Yip standing beside it, so you can see how even half of it fills the tunnel.

We eventually developed a flap configuration that gave significant improvements: L/D max went from about 6 to about 8.5. So we installed it on the F106B research airplane and test flew it, figure 5. Test pilot Phil Brown reported "...although pitch stability was reduced by adding the vortex flap,... the airplane has been, so far, only slightly more demanding to fly than the basic airplane and considerably easier to control than the simulator predicted." Final analysis of the flight data indicated a "...significant increase in sustained turn capability, e.g. an increase of 28% at Mach 0.7...." [Chambers] However in-flight flow visualization techniques showed multiple vortices, with one originating ON the leading edge flap near the fuselage and migrating OFF the flap to run nearly DOWNSTREAM over the wing to the trailing edge, with another vortex originating farther along on the leading edge flap, and so on, along the entire leading edge. Figure 6 shows this in the flow patterns etched in an oil film on the flap and upper wing surface, similar to the flow pattern depicted in the model test shown in figure 3.

**Figure 5 - The Leading Edge Flap installation on the NASA F-106B parked on the ramp at NASA Langley Research Center in 1988. Tufts have been installed to aid in flow pattern visualization.**



**Figure 4 - The F-53 in the Langley Full Scale Tunnel in 1984. That's NASA Engineer Long Yip standing next to it.**



Although the original analytical models predicted a single vortex would lie neatly on the flap as



**Figure 6 - Flow patterns etched in an oil film on the flap and upper wing surface after a flight indicate multiple vortices originated on the flap and swept back over the wing, unlike the single vortex lying neatly on the flap as predicted by the early flow models.**

depicted in figure 1, in the flight test with the multiple vortices the actual performance was very close to that predicted with the single vortex. “...These complex flow fields continue to challenge the capabilities of wind tunnels and Computational Fluid Dynamics ....” [Chambers]

The final resolution of the Vortex Flap Experiment was that the flight tests gave confidence in the concept (even with the realities of the multiple vortices), but nevertheless we were too late to impact the next generation fighters, e.g. the F-22, as they went on to emphasize

supersonic cruise, stealth, and supermaneuverability with vectored thrust.

The better knowledge derived from the flight test results and, later, comparison to the theory and model-derived estimates, made ready the tools of the technology of vortex control for that next generation aircraft at low speeds, even if not at transonic speeds.

Norm’s closing remarks:

After the F106A was cut in half and tested in the Langley Full Scale Tunnel, I got a call from one of the pilots at NASA Cleveland, saying, if we were done with the F106A, they’d like it back for some flight test work they had in mind! After a moment, I said something like “... both halves?” and went on to explain the good use we had put that airframe to.

So, that’s the story of the NASA F53 – it was one half of a Convair Delta Dart F106A!

The flight test airplane, the F106B, NASA tail number 816, is on display in the Virginia Air & Space Center in downtown Hampton Virginia, showing its use in both the Storm Hazards Program and the Vortex Flap Program. It is there for all to see.

**Reference:**

Chambers, Joseph R.: Innovation in Flight - NASA SP 2005-4539

	<p style="text-align: center;"><b>Engineering Test Pilot</b>  <b>The Exceptional Career of John P. “Jack” Reeder</b>          by  <b>Mark Chambers</b></p>
<p>Read about the Virginia Aviation Hall of Fame’s 2005 Inductee John P. “Jack” Reeder’s career as a test pilot at NACA/NASA. To order your copy, contact Jen Melton at (804) 222-8690 or vahs@smv.org. \$20 plus tax and shipping.</p>	



Jim Hall

## From Cubs to Mosquitoes to NACA and NASA

by Norm Crabill

Born Nov 21, 1921 in Brooklyn, NY, James Rudyard Hall was raised in Flatbush, a 1-hour bike ride from the site of Floyd Bennett Field (FBF). In 1931, at age ten, Jim, with two other boys, rode their bikes to FBF for its grand opening with a promise of a 750 plane fly-by which didn't happen because of very bad, stormy weather. Nevertheless, there were many aircraft on static display on the ground and in hangars and Jim was able to walk around them, touch them, and sit in the cockpits. Most of them were biplanes, including the fabric covered Curtis Condor. Jim said the sight of all those airplanes, and the smell of the dope, got him and he knew airplanes were it for him.



Google Maps

Location of Floyd Bennett Field - black line with arrow is Flatbush Avenue along which Jim rode his bike in 1931.

Jim read aviation magazines, including stories about WWI in the Flying Aces Magazine, Model Airplane News and others. He built models and biked out to FBF as often as

he could. As he got older, he worked in a deli to earn money to learn to fly there, starting at age 15 in a 40 hp J2 Cub with a climb rate of 100 fpm on a hot day. FBF had 3 paved runways, but they used the grass. He soloed in that J2 and got his license at age 18.



Aerofiles.com

A J-2 Cub - type that Jim soloed in at FBF

He went to Brooklyn Polytechnic College in mechanical engineering with 2 or 3 courses in aero. As a freshman, he got 55 hours in a Stearman at FBF thru the CPTP. In his sophomore year, age 19, he applied through the Clayton Knight Commission to become a pilot in the British Royal Air Force. He fulfilled a promise to his mother that he would finish two years of college before leaving for the RAF to fly Spitfires, and then, as a civilian, he took a boat bound for England in May or June of 1941. As luck would have it, that boat didn't make it to England on that trip, but put into Halifax, Nova Scotia, due to a

Cradle of Aviation Museum, Garden City, NY



A 1929 Stearman at Floyd Bennett Field in front of Hangar #5. This early type may represent the Stearman Jim got his 55 hours in basic training in through the CPTP. This photo was kindly supplied by the Cradle of Aviation Museum, Garden City, New York, after Ray Tyson suggested I call them for photos of Floyd Bennett Field in the 1930s.



Wikipedia

**DH82A Tiger Moth, similar to what Jim flew in the RCAF in Oshawa, Ontario, Canada**

advanced training in Harvards, a great airplane. In August 1942, he earned his RCAF Wings as a Sergeant Pilot after 200 hours of Canadian training, plus his civilian time. The wings were sewn into his uniform, as shown in Jim's picture here.

Based on his good performance, he was assigned to a Curtiss Warhawks Squadron in North Africa. At last, real action in the offing ... but the Air Ministry cancelled that and said, due to his good

submarine scare. So there he was in Halifax, on his own as a US citizen, for several months.

So his next step was to enter the Royal Canadian Air Force. His ground school and flight training was in Oshawa, Ontario, in Tiger Moths on skis (no brakes and not much directional control on the ground). Then on to the Dunnville Unit, also in Ontario, for



<http://harvards.com/content/view/2/27>

**Jim did his Advanced Training in the North American Harvard in RCAF insignia at Dunnville, Ontario, getting his wings after 200 hours.**

performance, he was to report to Prince Edward Island in Nova Scotia for Navigator training for a Special Forces Assignment, (the Special Forces assignment never came). Jim enjoyed navigator training anyway, made the most of it and became a good navigator, including celestial as well as dead-reckoning. But - time was going by and the war was passing.

He went to Glasgow, Scotland, from Halifax on the original Queen Mary with 13,000 other assorted troops. The ship had no escorts and so the trip was just a high speed dash, but luckily there were no sub sightings. So at last he was on the soil of the British Islands.

Of course, the first hurdle in Britain was more training, this time in a training squadron with the twin-engine Air Speed Oxford with two 180 hp engines. The training was routine, with lots of one-engine-out events at one of the many airfields in the Midlands.

Finally in October 1942, he got into operations in the 407th RAF Squadron at Birchem-Newton in the Midlands, serving with lots of Canadians and some Australians and New Zealanders. Jim was the only US member in the Canadian Contingent. Each had a shoulder patch that showed his country of origin.

Now they were given lovely flying Lockheed 14's modified to the wartime Hudson configuration. With turrets and bomb bays and cruising at 140 knots, the crew consisted of two pilots, a navigator, and one gunner in the upper turret midship. With an endurance of 2 1/2 hours, they flew from "Wash" in England with two 250-pound bombs against coastal shipping near the Frisian Islands off the Dutch coast. Initially they were successful,

but soon the German ships were armed and provided with German escorts, and the Lockheed losses went up. Nevertheless, they were in action for three months with 30 crews and 12 planes; Jim flew 8 sorties successfully, but 18 crews were lost, so the unit was dissolved in the fall of 1942 as no longer effective.



Wikipedia

**Action:** Jim flew the "lovely flying" Lockheed Hudsons for 8 successful bombing sorties against Germans shipping near the Frisian Islands off the Dutch Coast.

When a German sub sank a British aircraft carrier and a cruiser in the main naval base at Scapa Flow, Scotland, and escaped, the Royal Navy demanded a standing patrol outside Scapa Flow. Ever resourceful, the RAF had 500 Whitleys, built in 1932, to which they added tanks, radar, and guns. The Whitleys flew at 120 knots with, according to Jim, the worst flying qualities ever built. Jim was assigned to fly these antiques on anti-sub patrol at 5,000 ft with their Mark I side-looking radar with no PPI display. When a target was spotted on the Mark I, the orders were to turn 90 degrees and fly directly toward the target at lower altitude and home in on it using the forward-looking Yagi in the nose and drop charges when over the target. Amazingly, it worked! Jim was checked out on the ground and then began flying patrol in the worst weather (January 1943) from a base at Wick some 150 to 200 miles

<http://www.historicaircraft.org/British-Aircraft>



**The Airspeed-Oxford-V, Jim's first multi-engine type training in the British Midlands**

[http://aircraft-list.com/db/Armstrong\\_Whitworth\\_Whitley](http://aircraft-list.com/db/Armstrong_Whitworth_Whitley)



From “lovely flying” to “the worst flying qualities...”, but 100 of those Armstrong Whitworth Whitleys provided an effective standing patrol outside Britain’s Scapa Flow Naval Base. Jim flew in this operation from January 1943 for 4 months, in night and in the worst weather; with engine failure and Me 110s to add to the problems.

engine-out events. There was no hiding place for these courageous pilots, even at night. These patrols lasted 4 months to the Spring of ‘43.

After that, it was back to the Midlands to fly two-engine Wellingtons in the Bomber Command. Especially compared to the Whitleys, the Wellingtons were remarkably sturdy airplanes, with steel geodesic frames even though they were cotton covered. The Wing had three squadrons with 15 planes each and the Commanding Officer was a Squadron Leader, equivalent to a US Army Major. The airfield was quite basic. There were some hangars for maintenance, which was done at the squadron level the first year, then at the Wing level. But no hangars to store the aircraft; they were simply tied down, usually in revetments. For protection, there were 50 caliber machine guns and 20 mm cannon around the field, but luckily no Luftwaffe raids ever hit the airfield.

<http://www.airforce.forces.gc.ca>



The sturdy Vicker Wellington type which Jim flew 12 sorties to the Ruhr in Germany from tie-downs in open fields in the Midlands.

<http://www.aviation-history.com/avro>



Twelve more missions to the Ruhr, this time in the 4-engine Avro Lancaster

Equipped with two 1,500 hp sleeve-valved Bristol Hercules engines, the Wellingtons had four guns in the rear and two in front and could carry 8,000 pounds of bombs at 140 kts - lovely, although the float carburetors didn’t take negative g’s well. Approach was at approximately 95 kts, with touch-down at 80-85 on the concrete runways. In all, Jim flew 12 sorties to the Ruhr in these machines.

Two months later, the Wellingtons gave way to the 4 engine Lancasters, with 1,500 hp liquid-cooled Rolls-Royce engines. They carried 16,000 pounds of bombs, 2 guns in the nose, 4 in the mid-up, and 4 in the tail, all 30-caliber. The airplane required a crew of seven. It took a month to convert, training at the same airport in the Midlands where he had flown the

Wellingtons. In two months, the unit flew twelve more missions to the Ruhr with 10% loss due to weather, inexperience, and some enemy operations. Some planes just didn't come home. All this flying in the Wellingtons and Lancasters was at night, with celestial navigation when able and with dead-reckoning when needed. It was dangerous flying; there was lots of traffic, but no lights, no radio, and no navigation beacons. The pilots used Aldis lights to signal the tower. Runways had lights on, and those lights at the many airports in the Midlands helped navigation at night that summer of '43. It was during this time that Jim was commissioned as Flying Officer rank. The missions were very difficult. The British night bombers didn't fly formation like the Americans did. Each night bomber sortie was an individual flight, with all planned to converge over the target within a 10 to 15 minute time from three general routes. But it never seemed to happen exactly like that. It was usually chaos over the targets, which were inevitably hard to find. Jim had a few close calls; he escaped from a few FW 190's and was coned (caught in several search lights) by enemy searchlights a few times. The standard enemy attack mode was from the rear and their next choice was from below as the British airplanes had no belly gunner. But Jim's crew was very good; navigator, gunners, and pilots all did lots of practice when not on sorties. They had no mid-air and never saw enemy jet fighters in these night operations.

After two months with Lancasters in the Bomber Command, Jim was moved to the Coastal Command on anti-sub patrol over the Biscayne Bay, in a re-born special wing of the 407th Squadron, where enemy subs were sinking half the ships coming across. The Germans were having a field day. Their subs were traveling on the surface at night, going fast and far and recharging their batteries on diesel, and then submerging for daytime operations on batteries, sinking allied ships far from where they had been the day before. Wing Commander Leigh's idea was to modify surplus Wellingtons with PPI equipped Mark III radar and put a 14-inch search light in the never-used belly turret. The pilot would fly at 1,000 feet until the sub was spotted on the Mark III, then he would lower the light, go in at 50 feet, and drop a stack of depth charges when flying over the sub. At first it worked very effectively - a cake-walk really. Even though the Germans began to install 20mm cannons on the subs, it was a very effective operation. In Jim's 500 hours at this mission, he got shot at some but from that point on, the Germans sank very few allied ships. The issue for the Wing was that it had to maintain a presence over the Bay at all time, and weather and night operations were the biggest source of casualties. This carried Jim through the Spring of '44 (D Day was June '44).

Jim's next stop was Cairo, Egypt, on a ferry flight in a Wellington. Stationed at Kilo 40 outside Cairo, he spent some months ferrying all kinds of aircraft around the Middle East, and as far as Bombay. He flew bombers, fighters and anything that needed to be someplace else, including Beaufighters, Hurricanes, and Mosquitoes with just a cockpit check-out, then GO.



<http://www.aviation-history.com>

**Change of pace for Jim. From Kilo 40 station outside Cairo, Egypt, Jim ferried many different types of aircraft all over the Middle East, with only a cockpit checkout on the ground, including this Bristol Beaufighter type.**

Then the RAF was notified about a big sub threat in the Gulf of Aden; Japanese subs were sinking many Allied ships. The RAF called in a New Zealand Air Marshall and told him to generate a defense as soon as possible. He called in about 80 airplanes - Wellingtons (including Jim's), plus others, to Aden. He placed supply bases every 300 miles along the shore and set up defense perimeters to store munitions and supplies. The Wellingtons landed on the beach and the crews camped there, waiting for orders. Some were based on Sokatra Island off the Horn of Africa. In 4 to 6 months, they had eliminated that threat (end of '44).

<http://www.aviation-history.com>



The Hawker Hurricane, one of the types Jim ferried in the Middle East

Then, it was back to England on the ship “Ile de France” and assignment to an operational training squadron in Ayershire, south of Glasgow, on the west coast. There he trained new crews on the wonderful but obsolescent Wellingtons; that wonderful trouble-free medium bomber. The war in Europe ended while he was there (VE Day May 8 '45).

By the end of the war, Jim had 3,500 hours total time in the RCAF, still an American in the RCAF. By then, most other Americans had transferred out of the RCAF and RAF into the US Air Corps. Jim had offers to do that, but he would have been sent to

Texas as an instructor and decided there was just no motivation at all to do that. But with the end of the war, Jim was on the first list to go back to Canada on the way to the Orient. When the atomic bomb was dropped on Nagasaki, Jim requested demobilization, and one week later was on his way home.

Back in Brooklyn, he considered the airlines, but didn't have as much flight time as many of his potential competitors, so he went back to Brooklyn Polytechnic and got that Aero Engineering degree in '48, which at that time was mostly a course in Applied Structural Mechanics. So in June 1948, he was hired by NACA.

Out of money, he rode his motorcycle from New York to Virginia and planned to work at NACA for only a year, then go to an aero job somewhere in California, but he stayed. The work in the Pilotless Aircraft Division at NACA Langley was ideal - that was the Golden Era of testing aircraft configurations at transonic and supersonic speeds using rocket-boosted models with telemeter down-link. During Jim's first year, the PARD Chief, Bob Gilruth, would come by and sit down by the desk of each of his people and discuss what they were working on. (Gilruth moved to Langley HQ and later started the Space Task Group and the Manned Space Center at Houston.) The work also included, among other things, the four-stage solid propellant Scout satellite booster rocket and the early work on the

Mercury program. Jim married Mary Louise Albritain in 1952; she was a “computer” at the 9-inch Supersonic Wind Tunnel in the era when computers wore skirts. They have 4 sons and 11 grand children. Jim got his Masters in Aero Engineering in 1958 from Virginia Tech by taking night school in the NACA Extension Program. Retiring in 1992 after 44 years of service, Jim finished up in the NASA Flight Research Division in the hangar at NASA Langley in Hampton working on Langley's Boeing 737 and 757 flight projects.



This de Havilland Mosquito is another of the many types Jim ferried in his Middle East tour.

**Author's post script:** I met Jim in 1949 when I came to work at the PARD at NACA Langley. To me, he was one of those experienced guys who made things work around the office. I don't remember Jim talking much about his war experiences then. I saw him recently at the funeral of Hewitt Phillips, another NACA old-timer, and asked him some questions. This story, which I never knew before, is the result. It just had to be told.

**Sources:** Interview with James Rudyard Hall, September 20, 2009, at his home in Newport News, Virginia. Bill Schultz of the JGG Chapter supplied the J-2 photo, and all the other photos from the Tiger Moth to the Mosquito.



## Did You Know?

Flight catering began in 1919 when the first passenger service was established between England and France. The passengers enjoyed game dishes and cream tea during the two hour flight. In the U.S., United Airlines lays claim to the first meals on planes, having required their co-pilots in the early 1930's to serve cold chicken and coffee to passengers on their west coast flights. They also built the world's first airline flight kitchen in 1936 in Oakland. But Virginia wasn't far behind. Did you know that Virginia was the birthplace of an early and one of the most successful airline catering companies in the world? This information comes from Perry Crabill of Winchester, VA. In 1927, J.W. Marriott and his wife Alice opened an A&W franchise in Washington DC, later renamed Hot Shoppe, and by 1932, the Hot Shoppe chain had grown to seven restaurants in the Washington area. One of these Hot Shoppes was located near Hoover Field, an airport located at the present-day site of the Pentagon. Established in 1926, the airport had quickly become a hub of aviation for Washington and by 1930 was supporting 50 sightseeing flights and 30 commercial flights each day, including flights by Luddington Airlines to New York "every hour on the hour." Luddington Airlines was later bought out by Eastern and in 1935 American Airlines entered the market with service to Chicago, Cincinnati, and Indianapolis.

It was during this time that the seed was planted for in-flight catering. On a visit to the restaurant near Hoover Field, Marriott noticed that airline passengers would come into the Hot Shoppe, order food for take-out, and carry it with them onto the airplanes. Ever the entrepreneur, Marriott approached Eddie Rickenbacker, head of the Eastern Transport Co. (later Eastern Airlines) and suggested that the airline would benefit by serving a meal on-board the airplane. The two signed a contract and in 1937, Marriott established the In-Flight Catering Division of Hot Shoppes. Their first customers were Eastern, Capital, and American airlines and within a year, the company was servicing 20 flights daily. In-Flight Catering grew into one of the largest airline catering companies in the world and in 1945 became one of the first airport terminal food-service companies when it expanded to include a restaurant at the Miami Airport. The company continued as part of the Marriott Corporation until 1989 when it was sold and renamed Caterair International; in 1995, it was absorbed by LSG/SkyChef.

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Flight Catering, by Peter Jones

# Mystery Plane

Well another contest and another winner. Seems that Dick Hague has come thru the door first...again. In fact he was the only respondent this time. I'm getting closer to that clean sweep that I hold out hope for from issue to issue.

The aircraft is the French Dewoitine HD-731. A purpose built 2 man reconnaissance aircraft. Only one aircraft was built. It first flew on March 11, 1941.



Jan/Feb/Mar Mystery Plane

Strangely enough, when Vichy France signed the armistice with Germany they were allowed to continue building aircraft such as the very fine Dewoitine D-520 fighter...almost the equal of the BF-109. That agreement also obligated the French to build 2000 aircraft for the Germans at a later date. This probably had a lot to do with the French losing interest in a reconnaissance aircraft with a 330 hp engine that could only make about 180+ mph.

This month's offering is a one-off that was intended to be a suitable fighter for a country not known for producing great fighters. This aircraft first flew in 1938 and when using a PW R-1820 engine that had an airspeed of about 360 mph and a rate climb of 3500 ft/min... better than either the Spitfire or the Hurricane at that time which was about 2600 ft/min. So let's give it a shot and see what you come up with.... Good luck.



## New Mystery Plane

This will be the last time we will use this single plane format for the Mystery Plane contest. In the next issue we will offer two unknown aircraft that will both require identification. Also starting with the next issue there will be a limit on the number of times a member may win in any one year. One prize per person per year which means only one free annual membership (or whatever gift is being offered per person per year).

Of course that doesn't mean that members can't continue to participate to show off their informative aviation skills. Good luck and good hunting,

Bill Schultz,  
Mystery Plane Editor

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