



CONTRAILS



Volume 11 Issue 3

“Information for and about our Volunteers”

Fall 2008

FROM THE ACTING EXECUTIVE DIRECTOR

Yvonne Morris

Well, the weeds are sprouting on the grounds of both museums, sweat is constantly beading on our foreheads, and Santa came to see us for a party. It must be summer here in Tucson, AZ.



Despite the heat, our Aircraft Collection continues to grow and represent a diverse world of aerospace technology. Look for a Russian MIG-29 Fighter and an Air Force MH-53 PAVE LOW Helicopter to arrive in the fall. The restoration department is working hard and by the time you read this, the Grumman F7F *Tigercat* and the Sikorsky CH-54 *Tarhee* should be back on display with fresh paint. The price of gas kept a larger number of restoration volunteers in the area for the summer and we are grateful for all the extra help they provided. Additionally we had six summer interns from the Aeronautical Engineering program at the *IPSA Institut Polytechnique des Sciences Avancées* in Paris, France who also contributed to our restoration program, while having an opportunity themselves to put theory into practice.

Moonlight MADness at the Titan Missile Museum continues to be a hit with families from all over southern Arizona. The installation of additional lighting really upped the “Wow!” factor for nighttime viewing of the missile in the launch duct. Check the calendar of events for upcoming dates, and remember, Moonlight MADness is free to members. I’m also pleased to report that the Titan Missile Museum was recently featured on the Anthony Bourdain travel show *No Reservations* on the Travel Channel.

I know you all are curious about the search for a permanent Executive Director. The Board of Trustees is on hiatus for the summer, and will meet again in late September. At that time they will form a search committee. As I’ve said to many of you, I’m just holding the fort until a permanent Executive Director is found, and I have no intention of applying for the job. I enjoy working with everyone at Pima, but Titan is my home, and I’m looking forward to going back.

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In closing I want to thank you all for your past and future support.

I’d especially like to thank everyone who has dropped by or called me to offer congratulations and their support during this time of transition for the Foundation. The Foundation continues to move forward, and the staff and volunteers continue to challenge the status quo. All of you are doing a fantastic job, and I’m extremely proud to know and work with all of you.

THE FOUNDATION CORNER

By: *Mina Stafford*



Items Applicable to both TMM & PASM

Summer Survivor's Picnic

Thank you all for coming to the Summer Survivor's Event on July 24th. We all enjoyed a little Christmas Cheer in July especially with the unseasonal visit from Santa. I enjoyed the chance to thank everyone for all of the work they do during the summer and all year round.



I took the opportunity to present 33 individual volunteers with President's Volunteer Service Awards issued by the President's Council on Service and Civic Participation on behalf of the President of the United States. Each volunteer received a letter from the Volunteer Center of Southern Arizona, a certificate signed by the President, and a service pin. These awards were presented to volunteers who worked at least 500 hours during the 12 months between April 2007 and April 2008. The following volunteers received these awards.

Buzz Bertolino, William Burgin, Don Campbell, Mary Ellen Conrado, Frank Davidson, Pat J Donovan, Martin Kalish, George Kircher, Jack Matteo, Bill McGuire, John Moffitt, Ted Schmidt, Bob Strand, Howard Fox, Frank King, Richard Peterson, Ed Cullen, Harvey Diesner, Bill Earle, John Sprengle, Mac McFadden, Martin Keimon, David Jester, James Dahl, Patricia Johnson, John Keagle, Jack Day, Jim McMillan, Ed Smith, Brad White, George Birch, Calvin Tidwell, Bill Beauvais.



Thank you to Finley Distributing, Cox Communication, and M3 Engineering for donating money to help pay for this event.

Volunteer Presentation Series

We are looking forward to a great season of volunteer presentations starting in September. The schedule is as follows:

September 20th – Brigitte Howells “Women Who Fly & the 99’s”

October 18th – Ed Sanford “Cruise Missiles”

November 15th – Chuck Osborn “Airline Flying”

December 20th – Chuck Mitchell “The F-16”

January 17th – Charles “Norm” Stevens, Author of “An Innocent at Polebrook” and WWII Bombardier in the 8th Air Force

Please contact Mina Stafford at 618-4819 if you need more information. Remember volunteers, visitors, members and guests are welcome to attend. And if you would like to do a presentation or know of someone who could give a presentation in 2009 we are currently looking for speakers.

Volunteer Field Trips

The first field trip of the season is scheduled for September 18th to the Aerospace and Mechanical Engineering Labs at the University of Arizona. Please stay tuned for further details. I am still putting together the details for the future field trips. If anyone wants to help me with these arrangements please contact me. I want to provide a variety of field trip opportunities so that everyone will find at least one of them interesting.

Lifetime AAF Membership Volunteers

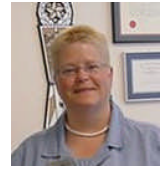
Jacque Thomas, Carl Weinert, William Naskoviak, Doug Runt, Al Mosher

AFF Calendar

- September 1st – Labor Day (Admin Closed)
No AMARG
- September 13th – New Volunteer Orientation
9:30am Stitt Auditorium
- September 20th – Volunteer Presentation Series
10:00am Stitt Auditorium
- October 11th - New Volunteer Orientation
9:30am Stitt Auditorium
- October 18th - Volunteer Presentation Series
10:00am Stitt Auditorium
- November 8th - New Volunteer Orientation
9:30am Stitt Auditorium
- November 8th – Runway to the Stars 6:00pm
- November 11th – Veteran’s Day (Admin Closed)
No AMARG
- November 15th - Volunteer Presentation Series
10:00am Stitt Auditorium
- November 20th – Thanksgiving MUSEUM
CLOSED (Admin closed)

**TMM
DIRECTOR’s CORNER**

By Yvonne Morris



Greetings from Down Under—down under at the Titan Missile Museum, that is.

**TITAN MISSILE MUSEUM VOLUNTEERS
OF THE MONTH**

- May: Frank Gibson**
- June: Norm Goetz**
- July: John McGee**
- August: Bill Crossley**

MILESTONES

The following Titan Volunteers reached significant milestones in this reporting period.

- Len Defendorf 3000 Hours
- Sam Densler 500 Hours
- Dwight Mears 1000 Hours
- Dave Runt 2000 Hours
- Clif Sonberg 750 Hours
- Hayward Sumner 250 Hours
- Steve Taylor 750 Hours
- Bob Williams 5000 Hours
- Herb Wolfe 250 Hours

Congratulations to all of you, and thanks!

WELCOME NEW VOLUNTEERS

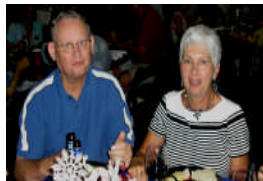
Please welcome the following new volunteers at the Titan Missile Museum:

- Rey Johnson, Briefer
- Bob Knies, Briefer
- Fred Bader, Docent
- Larry Fieland, Docent
- Brad Clark, Docent

We’re excited to have all of you join the Titan Team. Welcome!

WELCOME HOME

Maggie Austin is home safe and sound from Iraq, and will be back to touring soon. Welcome back Maggie!



**VISITOR NUMBERS FOR
MAY – JULY, 2008**

May: 3579 Visitors (3% over last year)

June: 3039 Visitors (2% decrease)

July: 3450 Visitors (2% over last year)

**TITAN MISSILE MUSEUM ON THE
ANTHONY BOURDAIN TRAVEL SHOW,
NO RESERVATIONS**

The Titan Missile Museum is now almost too hip for words. We were recently featured on the Anthony Bourdain Travel Show, *No Reservations*. Apparently the episode is quite popular now because it also featured ex-heavy metal rockers Alice Cooper and Ted Nugent. If anyone had asked me 20 years ago if I thought Alice Cooper, Ted Nugent and a Titan II missile had anything in common, my response would have been to die of laughter. Live and learn! For those of you who missed it, here's a link to our segment of the show.

<http://www.youtube.com/watch?v=75ECqhxnc0&feature=user>

COMING SOON

The Titan II Handbook by Titan Archivist, Chuck Penson, is at the printer and coming to a book store near you by early fall. This is an excellent handbook on the Titan II, full of pictures and blueprints, and written in a style that makes it easy to read. Congratulations Chuck. Great job!

DEEP THOUGHTS

A few weeks ago, the Rio Rico Fire Department conducted a confined spaces training at the Titan Missile Museum. As part of their training, Chuck Penson got to achieve one of his long time dreams. He's wanted to explore the depths of the Hard Water Tank for a number of years now. This is the 100,000 gallon water tank that is mounted to the walls of the launch duct between levels 3 and 7. That

means the tank is four stories deep. Well, Chuck finally got his wish. As part of the training exercise, Chuck was lowered into the Hard Water Tank and he made it all the way to the bottom of the tank. Way to go Chuck!

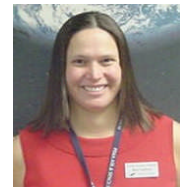


THANK YOU!!!

Thanks to all of you for holding the fort while I'm managing the big picture. You folks are the best!

**PASM
COORDINATOR'S
CORNER**

By Mina Stafford



Thank you for all of your support and flexibility this summer. As we start a new fall season there are a few reminders I need to make. In case there is an emergency at the museum I need to have accurate emergency contact information for all of the volunteers. So if you have not already filled out one of my Contact Information Forms please do so as soon as possible. They are available in the volunteer trailer.

Also there is constantly maintenance and construction going on at the museum so please show caution around moving vehicles and equipment. Help the exhibits and restoration staff keeps visitors safe, also.

Two big thank yous to Ed Sanford and Bob Kurneta. Ed donated a new bookshelf to the Volunteer Lending Library and Bob donated 3 window air conditioners to the volunteers. The bookshelf is already in the library with books in it and the air conditioners are in storage

awaiting assignments. Thank you guys.

Since the last Contrails I put Volunteer Update binders in each Hangar and volunteer duty station. These books are meant to help spread information. Please check it at the beginning of every shift. I plan to update them on a weekly basis.

Thank you for helping make our museum one of the best in the world!

Volunteers of the Month

June – Midge Bevilacqua

July – Pat J Donovan

August – Ken Hollett

New PASM Volunteers

- Patrick Donovan (TR)
- Min Johnson (Ex. Maint.)
- Susy Dusz (GR)
- George Felton (H3/4)
- Bill Preble (RS)
- Toni Cappelli (RS)
- Jim Haines (EX)
- Robert Rubino (Space Gallery)
- Jerry Natt (GR/H3/4)
- Derek Campbell (Ex. Maint.)
- Jim Hartigan (H3/4)
- Barry McCormick (Space Gallery)
- Mike Soukup (Ex. Maint.)

Visitor Counts

- May 2008 – 12,024
- June 2008 – 11,297
- July 2008 – 9,293
- Cumulative Total = 3,954,332

PASM Milestones

250 Hours

Dennis Brindle, Gary Fielding, Bailey Layfield,
Terry Lingrel, Dick Sharp, Robert Walsh,
Marian Walsh

500 Huors

Ken Hollett, Carroll Oquest, Thomas Rehm

750 Hours

Keith Connolly, Beverly Heise,
John Isgrigg, John Keagle

1000 Hours

Jack Day, Carl Weinert

1500 Hours

David Jester, John Sprenkle

2000 Hours

Jim Ostheimer, John Victor

3000 Hours

Ron Kovar, Mac McFadden, John Moffitt

5000 Hours

Don Snover

9000 Hours

George Kircher

12000 Hours

Bob Strand

14000 Hours

Bill McGuire

30000 Hours

Bill Burgin

Needed Donation

- Golf Cart for 6 or more passengers
- 6ft by 3 ft bookshelves for the Volunteer Lending Library
- Carpet or tile for the Volunteer Trailer

PASM Calendar

- September 1st – Labor Day (Admin Closed)
No AMARG
- September 10th – Volunteer All Hands Meeting
10:00am Stitt Auditorium
- September 13th – New Volunteer Orientation
9:30am Stitt Auditorium
- September 18th – Volunteer Field Trip
- September 20th – Volunteer Presentation Series
10:00am Stitt Auditorium

September 29th – Team Leader Meeting
9:00am Red Trailer
October 8th - Volunteer All Hands Meeting
10:00am Stitt Auditorium
October 11th - New Volunteer Orientation
9:30am Stitt Auditorium
October 18th - Volunteer Presentation Series
10:00am Stitt Auditorium
October 27th - Team Leader Meeting
9:00am Red Trailer
November 8th - New Volunteer Orientation
9:30am Stitt Auditorium
November 11th – Veteran’s Day (Admin Closed)
No AMARG
November 12th - Volunteer All Hands Meeting
10:00am Stitt Auditorium
November 15th - Volunteer Presentation Series
10:00am Stitt Auditorium
November 20th – Thanksgiving
MUSEUM CLOSED
November 24th - Team Leader Meeting
9:00am Red Trailer

STUFF FROM YOUR FELLOW VOLUNTEERS

Here are a few words from an anonymous docent.

When going to your duty station or going to lunch or going to the restrooms. You see paper or trash laying there on the floor or outside on the grounds please pick it up and dispose of it in a trash container.

Let’s be proud of our museum and help keep it tidy.

Finish with a Flourish! By Rick Felker

Every day you can hear our volunteers say “Thanks for coming in today,” or “Come back and see us.” But is there more we can do to encourage

our guests to make our museums more than a once-in-a-lifetime experience? It may depend on what they hear from us last.

One of Mina’s great training references is the Docent Handbook of the National Docent Symposium Council. In addition to a comprehensive look at all other aspects of teaching and talking to museum visitors, the Handbook points out that the way we tour guides “sign off” can be important.

If you give a tram, AMARG, walking or school tour, do you offer a recap at the end? The visitor has been exposed to a lot of information: what do you want your tour audience to remember? What was the significance of what they saw, both to them personally, and to society as a whole? What aspect of your tour was good/one of a kind/funny/serious? What was it about your tour that should give them a reason to come back?

One of the axioms of oral presentations is “Tell ‘em what you’re gonna tell ‘em, then tell ‘em, then tell ‘em what you told ‘em.” Who knows—you may have had a better organized tour commentary than you thought! There may be a recurring theme in your narrative that helped you put it together. And looking for ways to summarize your tour at the end may help you “back in” to identifying that theme.

If the key to discussing each exhibit is answering the unspoken visitor question “So what?”, then recapping the objective of your talk, or even simply asking “What will you remember about today’s tour?” may give a visitor all the answers he or she needs to decide why to come back and see us again. So wrap up your part of our visitors’ museum experience with care—and they’ll be back for more.

If you are interested in reading the rest of the Docent Handbook, contact Mina in the Volunteer Trailer. She can loan it to you.

AMARG and Greeters

By: Bill McGuire

Our AMARG riders set another record for July and that makes seven months in a row that new records were set. We are our way to another new record also in August. Thanks to all the AMARG docents who are with us for the summer for their hard work. We also want to thank the "greeters" at the front entrance who braved the hot, sticky and wet weather to help us set those new AMARG records. Patricia Johnson on Mondays and Wednesdays, our new member, Jerry Nutt who also works on Mondays, John Keagle who does Tuesday and Thursdays, Frank King and Dick Casey who do Wednesdays, Felice Rolles on Thursdays, and Mac McFadden and Lee Vensel for the hard work they do on Fridays. Without the "greeters" we would not obtain those new AMARG records.

Arizona Astronauts and Test Pilots

By: Earl Larsen

The following article is about the last of the nine major exhibits contained in our Space Gallery. The common thread linking these test pilots and astronauts together, though not native Tucsonans, has been a combination of their early education, training and operational flying in both the military and civilian sectors, or they have retired here.

Our first display is a mockup of an early crash test sled in use during the 1950's/1960's. It replicated the sensation of landing an experimental aircraft at Edwards AFB dry lake bed (a very hard landing I might add).

Next is a model of a Kellet XR-8 helicopter, developed in 1943 to compete with the Sikorsky family of helicopters. Failed test flights, however, led to the development of the XR-10, which unfortunately, had a tendency for the blades to touch during autorotation that proved fatal for test pilot Dave Driskill. Kellet abandoned his helicopter development effort, and Charles Kaman established Kaman Aircraft in

Connecticut which continues today; it develops and produces modern special helicopter craft.

Following are some of the accomplishments and careers of several Arizona Astronauts and Test Pilots.

Dave Driskill. He was coined the "man who discovered the North Carolina banks by air". After a bit of barnstorming he provided the first commercial flight service for 4 years out of Norfolk, Va. During the 1930's, as chief pilot for the National Park Service, he shuttled mail, supplies, payrolls, and passengers between Civilian Conservation Corps camps in the Outer Banks region. Then, in 1942 he was assigned by the Department of the Interior to patrol the Arizona/Mexico border. He died in a helicopter test flight in 1946.

Frank Everest Jr. After a very distinguished WWII combat record in both the European and Pacific theaters and having been shot down over China, resulting in internment until the end of the war, he returned to the US where he began a long and most noteworthy period in aircraft flight testing. He served from 1946 – 1957 at the Air Force Flight Test Center, Edwards AFB, where he flew many X-series and century-series aircraft. Perhaps best known for his accomplishments in the X-series aircraft, he established an unofficial altitude record of 73,000 feet in an X-1, and an unofficial speed record of 1957 MPH in an X-2. Details of these accomplishments are also contained in our X-Plane exhibits in another section of our Space Gallery. After varied assignments in the US and overseas, he became the Director of Aerospace Safety, and afterwards served in the Pentagon and MAC.

Gary Sanders. Entered the Air Force in 1968 he completed F-100D training at Luke AFB and flew 200 combat missions in Vietnam. Leaving the Air Force in 1979, he went with Lear Jet in Tucson until returning to the Air Force in 1983. He then served in both Desert Shield and Desert

Storm until retirement in 1993. He returned to Lear Jet and in 2005 formed his own company, Sanders Aero Services, where he continues to fly to this day.

Steven Smith. Worked for NASA in the Mission Operations Directorate, then attended astronaut training and subsequently flew on STS-68, 82, 103, and 110. During these flights he worked on both the Hubble Space Telescope and the International Space Station (ISS). He is presently working on detached assignment as manager of the NASA Automated Transfer Vehicle Launch for the ISS.

Frank Borman. After graduation from the United States Military Academy (USMA), the California Institute of Technology, and the Harvard Business School, he entered the USAF in 1950. During his twenty year career he was an operational, instructor, experimental test pilot and an astronaut. Frank flew twice during our space program, on Gemini VII and as Commander, Apollo 8, the first Apollo mission to circle the moon. He was on the accident investigation board for the Apollo 1 fire and became resident manager and field director of the Space Station Task Force. After leaving the Air Force and NASA he became chief executive officer at Eastern Air Lines and was appointed Special Presidential Ambassador to seek release of POW's from N. Vietnam. Frank Borman is further exhibited in our gallery in photos of the Apollo 8 crew, and as presenter of the piece of moon rock to PASM on behalf of NASA. This rock is on display in the Space Gallery.

Artifacts on display which complement the above astronaut and test pilot exhibits, include test pilot and military patches, flight suits and jackets, photographs, a flight helmet and oxygen mask, models of the X-2, NF-104, XR-8, and an overhead mock-up of the Crash Test Sled.

Continental Motors... The Rest of the Story...

By: Joe Pacholec

The last issue of Contrails presented the history of Continental Motors from its founding in 1902 through to its golden anniversary in 1952 at which time the company had grown to be the world's largest independent producer of engines for Agricultural, Transportation, Aircraft, Industrial, and Marine applications having produced over 7 million engines bearing its Red Seal trademark and those of its Wisconsin and Gray Marine subsidiaries.

An event had occurred in 1951, which would have a profound effect on the future of Continental Motors. Its subsidiary company, Continental Aviation and Engineering (CAE), entered the jet age. CAE's Vice President of Engineering, Mr. Carl F. Bachle, saw that a need for small jet engines was developing in the U.S. but what was available was not entirely satisfactory. He visited a French company, Societe TurbomecaS-at-founded by Joseph Szydlowski (Contrails Vol 11 Issue 1) that had developed a series of small and medium size gas turbine engines which had vastly reduced the previous serious penalty small turbines had to pay in fuel consumption to the point they were almost break-even with the big turbines. Their engines also had long service lives, ability to use a wide range of fuels, small size in relation to power, very favorable power-to-weight ratio and interchangeability of parts between various models. CAE's parent company purchased the exclusive U.S. manufacturing rights to a family of eight gas turbine engines and sub-licensed CAE to produce the Turbomeca engines. CAE quickly found applications for these engines. The Palouste compressed air generator went into the MA-1 trailer and versions of the Marbores turbojet engine with the official U.S. designation J69 went into the Ryan Aeronautical Company "Firebee" target drones and the Cessna T37 trainer. As production increased, it became apparent that a new facility would be required and in 1955 CAE took over an existing government owned plant in Toledo, Ohio.

Continental continued to develop and improve their product lines through out the 50's. Aircraft engines received fuel injection systems, turbo supercharging, and reduction gear systems that allowed the crankshaft to turn at a different speed than the propeller output shaft. New

engines and components were developed and modifications were made to existing models for Industrial, Agricultural, and Transportation applications. The family of air cooled military engines for tracked vehicles received fuel injection and supercharging. With supercharging, the AVSI- 1790 tank engine power was raised from 810 to 1000hp. CAE also started development on a new multi-fuel diesel engine for military trucks, in addition to modifying the gasoline AVSI-1790 into the first air cooled diesel engine for a tank.

Although Continental was constantly adding to and improving their product lines, sales which had peaked at 350 million dollars at the height of the Korean war dropped dramatically after the armistice and flattened out below 150 million through the decade into 1962 when the company celebrated its 60th anniversary. Profits were down to 2 cents on the dollar and dividends were reduced from 60 cents per share down to 40 cents.

Rising labor costs, shrinking profit margins and increasing competition had become major problems. The company and its management were aging. However, despite reduced business volume and profits, net assets had increased about 25% in ten years to \$50 million. Although Continental's book value was \$15 per share, its stock was selling for \$10 which made it an attractive investment. Continental was ripe for a take-over.

Emtor, Inc., an investment company which owned 26% of Ryan Aeronautical Co. had studied Continental Motors and saw a potentially rewarding investment for itself acting through their stock interest in Ryan. They convinced Ryan to buy Continental stock starting in 1961 and by Oct. 1965 Ryan held 50 % of the shares. Ryan replaced many of the senior Continental managers with their own people and began the turn around to improve sales volume and profits. With the advent of the Vietnam War, military sales for both Continental and Ryan boomed. By 1968, Continental had sales of \$300 million with net income of \$7 million. By late 1968, the combined Ryan-Continental group's financial, production and technical success, with a business volume which had grown to \$430 million that year, made the parent Ryan Aeronautical Co. a prime target for acquisition. Enter Teledyne, Inc.

In 1960, Dr. Henry Singleton and Dr George Kozmetsky formed a company called Teledyne. The first product line developed was semiconductors and other electronic components. By acquisition of other companies, Teledyne then expanded into metals and other industries. Arrangements were made for a friendly buyout of Ryan. On Jan. 2, 1969, Ryan became a subsidiary of Teledyne, Inc and the purchase included Ryan's 62.2 % ownership of Continental. Teledyne purchased additional shares of Continental stock and by Dec. 1969 the remaining stock-holders had approved the merger. Continental Motors Corporation ceased to exist.

Under Teledyne's concept of decentralized management, Continental became three separate autonomous and self sufficient separate companies reporting to Teledyne corporate. Teledyne CAE took over all turbine engine business and moved to Toledo when the Detroit facility was closed in 1970. Teledyne Wisconsin Motors concentrated on their family of industrial air cooled engines. Teledyne Continental Motors took over all of the other engine products for aviation, military and civilian applications.

Does any vestige remain of Continental Motors today? The answer is yes. A company by the name of Wisconsin Motors, LLC continues to offer an industrial line of air cooled engines ranging from 9.2 to 65hp. under the Wisconsin name and two liquid cooled 4 cylinder engines of 72 and 74hp. under the Continental label. Teledyne Continental Motors which is part of Teledyne Technologies, Inc. designs and manufactures piston engines for general aviation aircraft and is based in Mobile AL. Teledyne Turbine Engines, also a part of Teledyne Technologies, is still developing small gas turbine engines for a variety of applications and is still based in Toledo, Ohio.

A future article will go into greater detail about the gas turbine engine history of Teledyne Turbine Engines.

Source: "CONTINENTAL! Its motors and its people" by William Wagner

Meeting Lt. Ishimoto

By: Shel Coudray

Ever since the newly acquired, WWII Japanese fighter plane, a Nakajima K1-43 11b Hayabusa or "Oscar" was brought into Hanger 4, I have been obsessed by it. I just can't stay away from it. It is the first airplane of its type that I have seen in 64 years. It is fascinating for me to stand back, squint my eyes, and let my mind drift back to those days spent in the top gun turret of a B-24 Bomber. The best I could come up with was a mission flown on May 29, 1944 over Saipan. That day we were attacked by numerous, rarely seen "Oscars."

It was an unusual mission in terms of purpose. It was not for dropping bombs and destroying the enemy, but for taking photographs prior to a planned invasion. It was a joint service mission, three US Navy unarmed photo aircraft and six heavily armed Army B-24 bombers, a total of nine aircraft. The B-24's all with double loads of ammunition, to act as fighter escort.

At briefing, prior to takeoff, we were given the following information:

Saipan, in the Marianas Islands, has a large training base for advanced pilots with hundreds of fighter aircraft of all types. Many are late model "Oscars" and will be flown by students who have never flown in combat before. We have no other information..

It took us 13 hours to fly from Kwajelain to Saipan. Once the photos were taken we were to continue down to the Admiralty Islands, re-fuel then fly back to the Marshall Islands. This is the longest recorded bomber mission of WWII; a total of just over 21 hours.

The three flights of three planes quietly entered the air space over Saipan at about ten thousand feet when all hell broke loose. It was the first time we encountered "Box Barrage" type AA-Fire. We had to fly straight and level and, of course, they eventually boxed us in. It was terrible. We were all hit with numerous pieces of flack. One B- 24 had a direct hit and lost a wing, three men bailed out just as the plane exploded. Our Operations Officer Capt. Stoddard, against all rules,

left the formation to try to protect the airmen in the chutes from being strafed by the out of control student pilots. The last thing we saw was a group of about a dozen fighters who had Capt. Stoddard's plane surrounded. We watched the huge Bomber roll over on its back, hit the water and explode.

When we reached the end of our photo run, the navy planes, which were lighter and faster, left the formation, dove down to water level and then left the area as fast as they could. Since their photos were the primary purpose of the mission.

Our four remaining B-24s also dropped down from 10,000 feet to just above sea level, then tightened up the formation as tight as possible. This limited the attacking fighters access to us since they could only approach us from above, an area where we had the most firepower to protect ourselves. It was reported at that time there were over 100 enemy planes in the air all attacking us from above. The official total kill for the mission was 55 enemy fighters. It was indeed, a prelude to the invasion of Saipan, later called the great Marianas Turkey Shoot.

With this information in hand, it was now time to re-visit Hanger 4 to see if there really is a connection between the May 29, 1944 mission and the newly acquired "Oscar". Its 14 cylinder, twin-row radial engine dominates the front of the aircraft. Opposed to that domination are the two small caliber machine guns on top of the cowling. It was definitely under-armed.

As I looked at this somewhat fragile aircraft, I heard myself say, in a somewhat monotone voice: "It must take enormous courage while sitting out there in the sun to suddenly rev up the engine, jam the stick forward and dive down on a formation of heavily armed four engine bombers."

At that moment, out of the corner on my eye I noticed a slight movement at the tail of the "Oscar". Then I heard a heavily accented oriental voice say --"*or perhaps a death wish is more appropriate*". It was silent for a moment, but I was not surprised to see a short stocky person in a worn leather-flying jacket – an old leather flying helmet and goggles quietly step out from behind the tail of

the aircraft.

"Hello Sheldon". As he spoke, he brushed his soft, leather-flying helmet off. His face was horribly scared and one eye partially closed. "Do you remember me? I'm Lt. Ishimoto. I was an instructor pilot on Saipan. It was over Saipan on May 29, 1944 when you killed me. You took my life away as I was trying to do the same to you. Strange as it might seem, I have lived vicariously through you all these years, by watching you. I didn't die. I lived through your life.

"Sheldon, you must recall those last moments as vividly as I do. The fight was essentially over, your four remaining B-24's were no longer in formation - they were strung out for several miles, racing away from Saipan. Most of our remaining student pilots had returned to the airfield.

"By now your crews must have thought the game was over. I was very low on fuel and was about to return to the airfield when I noticed the last plane in line - your airplane number 155 had feathered an engine, and the nose turret had its guns pointing down as if the gunner had left the turret or was re-loading. I decided to take advantage of the opportunity. I made a snap decision. Since I was also just above the water, I turned and with full throttle cut diagonally out in front of you. We had a mile between us when I turned toward you, head-on. We were racing towards each other. At 100 feet you must have seen me, but there was no place for you to go. I fired both guns as I pulled up to skim over the top. That's when your nose turret came to life. A short burst with those twin 50s took my left wing off and my canopy with it. My aircraft was on its side, the remaining wing sticking straight up.

"At that point it appeared as though time had slowed down as the wreckage of my plane was in the slipstream of your B-24. It got as far back as the top turret then stopped. The two 50 caliber machine guns were slowly rising - the ends of the barrels only inches from my face. Our eyes locked. You had a frightened but determined look. I thought for a moment you would spare my life—it was not to be. You squeezed both triggers and blew me away.

"Well, Sheldon, that's the way I remember it, One of us lived One of us died It could have gone either way"

By now it was getting dark and I was exhausted.

"Let's go over and sit at the desk," I said. "we both need a rest" I led the way. I assumed he would follow. I turned to look at him. He was nowhere in sight. I sat down.

It was close to 8:00 o'clock when a noise startled me. It was security checking the doors. That dream seemed so real. On the way out, I slowly walked by the "Oscar". I noticed something on the wing. It was the old leather-flying helmet.

Ps. Since the survivors of the May 29, 1944 photo mission were awarded a special Joint Service Commendation Medal, I wish to share mine with Lt. Ishimoto.

Book Review by Ed Sanford

Night Fighters, by Bill Gunston and published by Sutton Publishing Limited. This book is subtitled 'A Development and Combat History', and comprehensively covers the subject, from night air combat experience in WWI, through the doldrums of the interwar years into the explosion of technology, tactics, and doctrine brought on by WWII, further doldrums, an enlightenment, and the present situation as of the book's publishing date (2nd edition 2003). The author is a recognized aviation historian. He has a lively style, and being a Brit, is closely aware of the failures of dogmatic, unimaginative positions held by the Brit government and military. (Dogmatic, unimaginative action can bring about promotion, but not necessarily success in the job) He points out the advances brought on by American involvement during WWII, spreading accolades and opprobrium where they belong (in his opinion).

Gunston starts by covering 'Riddles of the Night Sky'. He enumerates lapses by the Brit Powers That Be that caused considerable lapses in the prosecution and defense of the night air war. He goes on to describe the RAF efforts to destroy Zeppelins in WWI, the development of radar (concepts and technology of which were available in WWI!), the deployment of technology, &cetera, and does it all in a humorous, lively style

that lets the dead fall where they may – he pulls no punches.

This is an important book, an easy read, that I recommend to all Volunteers. I have loaned this

Book Review by Ed Sanford

“Air Force Spoken Here”; General Ira Eaker & the Command of the Air, by James Parton, is a biography of Ira Eaker, LtGen USAF (Ret) written by the person who was Eaker’s aide for 4 years during WWII. It describes his life from the early years in rural Texas and Oklahoma through his death in 1985 at age 89, but the bulk of the book deals with his Army Air Corps/Air Force career. The title comes from Eaker’s desktop sign.

Many may be unfamiliar with General Eaker. His name isn’t as well-known as that of Billy Mitchell, the Wright brothers, or Charles Lindbergh – but he shares something unique with those four gentlemen (and only those four) – he is also the recipient of the Congressional Gold Medal as “Aviation Pioneer and Air Power Leader”. Many other awards came his way, including a fourth star long after retirement (courtesy of the efforts of Barry Goldwater) and the Wright Trophy, aviation’s top prize.

Eaker’s military career began when he enlisted in the Army upon the US entry into WWI. Most of his college classmates enlisted immediately on our declaration of war, and Ira Eaker was already a leader. He was commissioned a Second Lieutenant, took the test, and a Regular commission came through. His introduction to Aviation, his further aeronautical adventures, including his activities with the ‘Question Mark’, are well documented. He was a contemporary and colleague, with Spatz, Arnold, Doolittle, Barksdale, Westover, Andrews, and other air notables. It was surprising (to me, anyway) that he fought for, and finally was allowed to matriculate into a degree program in Journalism, because he knew that public relations were going to be important to the fledgling Army Air Corps.

He co-authored a book in 1936 (with Hap Arnold) entitled ‘This Flying Game’, aimed at encouraging young men toward aviation.

Eaker was not flamboyant. When asked to speak at a welcoming dinner when he arrived in England during WWII, he said ‘We won’t do much talking until we have done more fighting. When we leave, I hope you will be glad we came.’, and sat down.

Parton doesn’t stop with Eaker’s building of the Mighty Eighth Air Force and further WWII duties as commander of the Mediterranean Air Force. Eaker got into the international political arena when he had to go to Moscow to negotiate for Russian support for ‘shuttle missions’, where B-24’s and B-17’s flew from Italy to Russia, dropping bombs on the way. Eaker was tired after WWII and retired to allow younger souls move up. He got into the aerospace business and saved the Hughes aircraft company from bankruptcy. He wrote aviation-oriented columns. He was involved in air-related activities all of his adult life. His integrity is beyond question. He refused many offered positions, because he believed that they were paying for his reputation and rank rather than his expertise. He was a real unsung hero. I strongly recommend this book, located in the South Library of the Ruby Lounge.

Book Review by Ed Sanford

Point of The Spear, Covey FAC Association, published by Trafford Publishing. This book is a compilation of anecdotes about the experience of Forward Air Controllers (FACs) operating out of air bases in northern South Viet Nam, during the Vietnamese war. It was edited by those who lived it. FACs have been called the most courageous group of professional aviators in the world. It is an outstanding book, and should be read by EVERYONE, not just those who might be interested in FACing, or the Vietnamese war, or warfare in general – EVERYONE! The book was conceived in 2000 after the first FAC Reunion. I am really, truly, glad they did.

There is a brief history of the events leading up to the war, and a brief history of the growth of FACing, as well as a description of the airplanes, the Ho Chi Minh Trail (the 'Trail'), and Special Operations Group (SOG) troops and mission. For those who don't know, the air-to-ground war was run by the Forward Air Controller, an Air Force pilot flying low and slow, who obtained and maintained contact with ground troops to direct airborne assets into the fray. They also free-lanced, looking for targets of opportunity, like NVA tanks and such. Their hairy adventures are related, first person, in this book, and really generate tremendous respect and admiration for the class of aviators who took on this duty. SAMs, AAA and even AK-47's were used against them, and they were easy targets, since they were low and slow. Often they were called on to bring strikes in 'Danger Close', to the extent of putting ordinance on their own troops positions when they were being overrun.

This book has been placed in the Volunteer North Library by Rick Felker, who has a story in the book. I will repeat. EVERYONE should read this book.

MEET YOUR PASM VOLUNTEERS



Carter Harrison

Carter was born in 1936 in Montclair, New Jersey. After two years in the army he went to Antioch College and Stanford University where he earned 3 degrees in civil engineering. Carter taught civil engineering at Auburn University and worked for a series of consulting engineering

firms in Portland, Oregon.

During that same period he taught night classes at Portland Community College. Just before retiring in 1995, he was the District Engineer for the Clackamas Water District in Portland.

Before settling in Tucson, Carter and his wife Connie toured the USA in a travel trailer for 6 years full time on the road. They now live in The Lake at Castle Rock in northeast Tucson.

Carter began his service at the Pima Air and Space Museum in 2002, giving both adult and school walking tours.



William (BILL) Proft

Born March 24, 1924 in Orange, NJ, Bill attended West Orange schools and Seton Hall Prep. He graduated from Rutgers Univ. in 1950 with BS in Bus Adm. Then employment at US Rubber Co, Mechanical Goods Div. and the company's Footwear Div. all in the Wage Standards Dept. Next came a job with A.G. Spalding Bros. sporting goods and Production Control. Bill joined his father's business of Direct Mail Fund Raising and List Management but returned to the production environment in 1966 with Warner-Lambert Pharmaceutical Co. in the manufacturing arm followed by ten years as Mgr., Facilities Planning and then as Mgr., Administrative Services in Corporate Headquarters retiring in March 1986.

Early 1943 Bill applied for Aviation Cadet Training. Graduated from high school in June '43 he was sent to Jefferson Barracks, MO. Spent six steamy, hot weeks at Jefferson

Barracks before going on to College Training Detachment at Butler Univ., Indianapolis, IN. Bill's next move was to SAACC (San Antonio Aviation Cadet Center) for classification. He opted for pilot training but an earlier knee injury surfaced and one of the classification staff suggested he would have a much greater chance of survival elsewhere; so he chose navigation.

Bill graduated from San Marco, TX in October 1944 and the AAF elected to send the entire class to radar training at Victorville, CA for two months; then more training at Boca Raton, FL before joining a crew at McCook AFB, NE. The crew trained at McCook and Vernam Field, Jamaica before another stint at Victorville for additional exposure to use of the new radar. Bill ended up as Radar Bombardier on this crew using this new APQ 7 Eagle Radar for night bombing; the primary mission of the 315th Bomb Wing. In June we picked up our B-29B at Henderson, KS and headed out for Northwest Field, Guam via Mather Field, Honolulu and Johnson Island.

Four months of navigation training down the drain? Not so! Those long missions of night flying provided ample opportunity for celestial navigation. Bill teamed up with the navigator and give him a steady flow of star fixes. On occasion They would switch positions giving Bill the chance to do some plotting. Flew on three combat missions, one being the final mission of the war, and, one POW supply mission. The beauty of that last mission came as we passed by Iwo Jima and picked up the news that Japan had accepted unconditional surrender.

After the war, Bill was assigned to the 4th Emergency Rescue Squadron. His first station assignment was Kwaj which overlapped with the arrival of Operation Crossroads in the spring of '46. The CO of this group, Gen. Ramey, decided

to retain two crews to fulfill a role he felt important to his mission. This turned out to be a fortuitous step as they witnessed first hand the Baker Day, under water, explosion at Bikini Atoll. In August '46 it was back to Guam, then Saipan to board a slow boat to the states and on to Ft. Dix for discharge, and Rutgers Univ.

Married in February '56; Bill and Barbara raised a family of four boys who are all married and with family (twelve grandchildren). They live in Mesa, AZ, Vermont, Connecticut and Hong Kong. Barbara and Bill have lived in Green Valley since '95. He started at PIMA August '97 in Hangar 4, and, now divides his Tuesdays between Hangars #4 (AM) and #1 (PM).

Last Flight

Since the last issue of Contrails we have discovered that a member of our PASM family has passed.

Delbert J. Light

Beginning in Jan 42 Del served in the USAF for over 30 years. He flew many different aircraft in both training command and operational units. Del held both a commercial and an instrument pilot's license.

Del passed as a result of a heart attack on Memorial Day, 26 May 2008 in his summer home town of Liberty Lake, WA. He started at PASM in Dec 96 as a member of the Presidents Plane Team. After the VIP Circle Team was disbanded Del joined the Hangar ¾ Team. Over the years this very knowledgeable snow bird donated 2,353 volunteer hours to the museum and he will be missed.