

CO's Cockpit

By Ron Morrell

One of the best parts of being a member of an organization like the Cascade Warbirds is the gatherings that bring together a huge variety of people. We are of all ages (not to mention the "Crashley" generation) and all kinds of backgrounds. Some of us fly airplanes, some of used to fly and some of want to fly airplanes (if anyone doesn't, didn't or doesn't want to...I well as try to beat the winter weather and fly some more squadron mates around the patch. I will be glad to count of the votes if you will just make your wishes known through email. I would also very much encourage everyone to make the time to attend the squadron meeting on the 12th of October, our first winter meeting. We have a special guest scheduled to attend the meeting, Lt. Col

don't get it!). Our latest gathering was one of the best I have had the privilege of attending. I want to thank everyone that was able to make it to my humble "mancave" (Paine Field hangar 34-2). I especially am grateful for all the help I got from those of you that brought extra chairs, ran back and forth to the gate to escort other attendees to the party place, and the warbird owners (yes, even the "Warrior" owner) who donated their time and fuel to give some our squadron members some formation experience.



944 pilot during WWII. He has agreed to come to our meeting and give us all the time we want to talk about flying unarmed and unafraid in a Spitfire armed only with cameras! Thanks are due to Kent Johnson for making the connection for our squadron. We are working on a plan to possibly have the meeting in a slightly larger venue than the normal meeting room at the Museum of Flight. Stay tuned for further details. One more subject for

this quarter's message

John S. Blyth, a Spitfire

Party time in the man cave... (Ron Morrell Photo)

Thanks to Vic, we had a constant flow of burgers and dogs. Thanks much to Bud for being the first to get the beer flowing out of the Georgetown Brewery keg, as well as the rest of you that tried to make a dent in that fridge full of various beverages! The movie portion of the night was also a great time. Dave brought a CD full of WWII era cartoons and I never realized how old Bugs Bunny was or how much fun was made of the Nazi's back then... I was still sad not to see "Chilly Willy"! The Battle of Britain was a great time for all of us to watch some great flying scenes as well as make fun of the Nazi's from our own perspectives... catcalls were obviously encouraged!.

I hope we can repeat that activity sometime soon. Just as an idea to put forth to the widespread newsletter audience... a "Return from the Reno Air Races party" could be in order at my hangar around the 21st of September!?! What better way to get back together before the first Squadron meeting in October as

from your Squadron Commander. I am in my second summer as the CO. That means that we are NOW in the midst of looking for anyone interested in helping this squadron continue to grow and be relevant to our membership as well to those outside our organization that look to us for guidance and, hopefully, leadership in some quadrants of the warbird community. We have a nomination committee that is looking for the next group of leaders to populate our Board of directors, which includes the Executive Board. Every position is open and we always have those that decide that they have contributed enough and want to make way for the next new person to bring up new ideas. I would love to see our Nominating Committee have to work to talk with multiple candidates and ask many questions before they come up with a slate of candidates that will become the leadership of the Cascade Warbirds for the next two years starting in January of 2014! You are what make this squadron thrive...make it yours!

WARBIRD **FLYER**

★ ★ ★ Cascade Warbirds ★ ★ ★ EAA Squadron 2 Newsletter

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B-17 Visit

By Kerry Edwards

The 2013 visit by the Aluminum Overcast was a real success, filled with new complications, and marked by a solid turnaround in ridership. Despite weather that gave low ceilings and frequent precipitation, there were days with four and five flights that brought an increase in rides of 25 percent over last year.

New to the Seattle stop this year were two days of operations out of the beautiful

facility of Historic Flight Foundation at Paine Field. The highlight of the midweek first time visit was a grand military mess themed gourmet dinner hosted by John Sessions and his staff at HFF. The **Boeing Company**

arranged hourly

busses to the B-17 enabling employees to see a huge element of company history and the Everett community got a new look at an old "heavy".

A light schedule on Friday allowed time for the routine maintenance which usually precedes the Seattle stop. This was followed by a non-routine failure of a boost pump in the tank feeding engine three which canceled a highly anticipated flyover of Safeco Field. Dave Desmon conceived and gained clearances by numerous Federal agencies, insurance carriers, and other elements which could have brought an aerial view to the stadium's new big screen and all were greatly disappointed by the mechanical failure which was resolved about 15 minutes after the precisely timed mission was scheduled to occur.

Cascade Warbirds Day on Saturday saw a display with three Navions, two Nanchang CJ-6s, an IAR-823, an L-3, and the C-182 from the Civil Air Patrol whose cadets have been steadfast contributors to passenger service and safety each year. This was an increase over last year, but shows that we

need greater participation to demonstrate our presence in the community at large.

About 40 members directly supported the Aluminum Overcast visit this year in some way. In addition we had fabulous participation from Ken Wheeler, Elden Larson, Emery Blanchet, and Lou Stoffer. all of them real B-17 crew members who flew many missions during WWII.

A huge contingent from the family of

Event Chairman Warren Nadeau was a part of the visit this year, and despite some recent health issues, Warren joined several Cascade Warbird Marshallers on the repositioning flight to the B-17's next stop in Nampa, ID. Much was learned by all of the participating members this year

and all are looking forward to an even greater event next year.

A Special Thank You...

for gifts to the squadron from two long time members during the visit of the Aluminum Overcast. B-17 navigator Ken Wheeler, who for years has volunteered in uniform to explain wartime experiences, has donated his detailed background graphic display of cutaways, specifications, and insignia, along with its easel. Paul Youman has stepped forward to preserve and store this valuable informational poster for future annual use.

B-17 pilot and Museum of Flight docent, Elden Larson, brought a rubber stamp of the image of a B-17 to this year's event and it made a great hit with small children and their families as their inked hands made a quick connection to the big airplane. Mary Lee Edwards is holding this for use at the next visits of the Aluminum Overcast. 🗘



Ops Tempo

By Dave Desmon

Flying Season is Officially HERE! We kicked off in fine style with the 1st ever Cascade Warbirds Flyin, BBQ, and Movie Night! About 50 members joined us for some formation flying practice, airplane rides for members, a great BBQ with food supplied and lots of extra potluck dishes (YUM!) followed by a screening of the movie "The Battle of Britain" (Preceded by a WWII Cartoon, of course!)

The site was CO Ron Morrell's great hangar at Paine Field, with a view of the Sunset and the main runway. A great time was had by all, and plans are already in

work for a reprise, sooner, rather than later. Stay tuned! July will also bring the start of the Airshows in earnest.

Many of these have further information on the Cascade Warbirds Website. Rumor has it that we are invited to Tacoma Narrows for the "Wings & Wheels" Show on July 6th – Contact CO Ron if you are interested.

July 13 & 14 is Warbird Weekend in Grangeville, ID. They are offering rooms, gas, food and rental

cars for Warbird Pilots. FMI: http://www.facebook.com/ warbirdweekend.idaho or contact the event coordinator: Melisa Bryant (208) 983-8302 melisa@ida-lew.org

Arlington has also invited Warbird Pilots to attend, and is offering a Sat eve BBQ and 10 gal of gas if you sign up in advance with Barb Tolbert.

July 20 is the St. Maries, ID Flyin. FMI: Contact CWB Member John Koelbel (asiauctions@ earthlink.net)

July 27th is the Friday Harbor Fly-in FMI: Contact Member John Geyman (jgeyman@u.washington. edu)

Aug 10-11 is the new date for

the Olympia Warbird Airshow. This is the West Coast qualifying Event for the "Warbird Wings" and a "Max Effort" Event. If you are interested in attending, Contact me – DaveDesmon@Yahoo.com.

Aug 17th we have been invited to the CFB Comox,



B.C. Airshow with the Snowbirds. At least SOMEBODY

still has a Military Jet Formation Team Flying!! Comox is being VERY generous with rooms, gas, food, and even a donation to the Sqn, so we'd really like to put on a good show for them. I'll walk you through the Border Crossing, it's not that big a deal. We do need to get copies of your insurance sent in to them before July 15 – so it you are interested in going, and haven't already talked to me, let me know NOW! DaveDesmon@Yahoo.com.

Aug 24-25 is Madras, OR, and Republic, WA.

Aug 31 – Sept 1 will once again be Vintage Aircraft Weekend at Paine Field, so mark your calendars now!

Sept 7th looks like a new show at Skagit.

Lastly we had a special request from the City of Kent, WA. to do a Military Fly-over for a Ceremony to rename a road "Veterans Drive" to honor our Vets. Sequestration eliminated any active duty fly-overs, yet they still wanted some Air Power. The timing



PAINE FIEL

was not very good for most of our members, a weekday at midday. We put out the call, and it was answered by Rich Alldredge who rounded up some WWII Primary Trainers,

> and did all the coordination with the Kent Officials AND SeaTac Tower – since they were in SeaTac's Class B Surface Area, right next to the Airport! In an Open Cockpit Bi-Plane!! I wonder when the last time THAT Happened was?? Rich's Wingman was Curt Kinchen, and George Renquist was all set to join them, too, only Curt couldn't crank George's Manual Starter fast enough to get George's Stearman fired up. "Top Cover" for the intrepid Rag-Wing Aviators

was provided by Michael Kopp in his T-28. THANKS, all of you! You did a great job, and the City Officials of Kent were very pleased. "BZ"!

Looking forward to seeing you all around the Pattern! 'til then; Keep 'em Flyin'!! 🗘

Squadron News

BOUNTY PAID

Quick, take a glance at the mailing label. Is the date December 2012? Then we haven't received your 2013 dues yet. Please remit \$20 to CWB, 1066 Yates Road, Oak Harbor, WA 98277, or a "Regrets" email to Fred at fred@fcsmyth.com. P. S. We only mentioned "bounty" in an attempt to get you to read this entire paragraph. If you'd just send us your money, we wouldn't have to resort to these artifices.

RENO OR BUST

We still have reserved box seat tickets available for folks who are interested in attending the races in September. Tickets are \$340 for the entire week and this includes reserved parking and pit passes as well as front-and-center seating. For more info, contact Fred at fred@fcsmyth.com. Also, Betty has arranged preferential hotel rates at Circus Circus for squadron members. If you need more hotel info, contact Betty at betty.sherman@frontier.com.

SCHOLARS ARE BUSY

Three of our scholarship winners started their Private Pilot Ground School training in June. Bridget Heiland, Corey James, and Alex Joens will spend six weeks in class and then have the opportunity to take two instructional flights. We look forward to hearing how they are enjoying the program and, even more so, whether they will continue their flight training. Good luck to you!

Our other four scholars are scheduled to start their studies later this summer. We'll report back to you as they progress.

UPDATE EMAIL ADDY

Have you recently changed your email address? If the only time you hear from us is through this quarterly newsletter, then we're probably using a discontinued address of yours. Update us at Fred at fred@fcsmyth.com. But, of course, that's only if you want to hear from us.

SIGN ON TO FACEBOOK

Your stodgy old squadron is making its way into the mainstream social media. Log on to our web page, scroll to the bottom of the framesindexnew.html page and register on our membersonly FB page. You can keep track of members comings and goings, opinions, comments, likes and dislikes, etc. But more importantly, you can either offer an empty seat in your airplane if you're headed to one of our events or you can search for an empty seat in members' airplanes if you'd like to attend one of our events. We're trying to spread the wealth as well as the joy. Be sure to join us.

WELCOME ABOARD

We say "Hello" to the following new members and welcome them into our midst:

Art Best	Kirkland, WA	
Dennis O'Keefe	Tierra Verde, FL	
(He's the father of member and Piaggio		
P-149E owner Kevin)		
Rajiv Sarathy	Medina, WA	
Sam Warren	Stanwood, WA	

Be sure to introduce yourself when you meet one of these folks and make them feel a part of our family.

RECRUITING

Our organization is only as good as the individuals who take the time to make us relevant. Thus, we can never have too many people who are wishing to learn of the heritage we honor. When you are out and about your local community or even stuck in a far-away airport or elevator, keep an eye open around you to see just who might make a worthy addition to our group. And don't forget the warm feeling you'll experience if you decide to sponsor their first year's membership. We're just saying . . .

AIRPLANE FOR SALE

NANCHANG CJ-6A • \$92,000 • AVAILABLE FOR SALE OR TRADE • Well maintained and routinely flown CJ-6A. Stock Airframe with 620 hrs on the HS-6 engine and approx. 3700 on the airframe. The best upgrades including: "Smokin' Airplanes" smoke system, Auto plug conversion from World Wide Warbirds, Electric primer/ fuel boost pump, internal mounted scuba bottle back-up, all new rubber. Looking to change my ramp presence into a T-28. Looking for a solid, flying, "A" model T-28 as a trade if the numbers work or I'll sell and find my Trojan later. Airplane always hangared and makes it to most of the Pacific Northwest flying festivities. • Contact Ronald A. Morrell, Owner - located Renton, WA Telephone: 425.463.6519

I've Never Been That Kind of a Person: A Profile of Fred Smyth

By Peter Stekel

Everybody in Cascade Warbirds knows Fred Smyth - that's Smyth and Enot Smith. Fred is the guy you see at every meeting always cajoling you to pay your dues or inveigling you to attend the yearly CWB holiday party. He's also the one who runs the raffle every meeting. He collects your money if you're going to the Reno air show. At every fly-in, Fred is the guy running around making sure of everything that needs making sure of. And, as Cascade Warbird Adjutant/Finance Officer, Fred also keeps the books.

Born in 1948 in Oregon, Fred's father was a Army Air Corps pilot and his mother was a WASP - though he didn't know about his mother's role in World War II for many years. Fred's father was severely injured during a training flight and never flew for the military afterward, spending the balance of the war in Alaska in a non-aviation position.

Before World War II, Fred's mother did office work for Standard Oil. After graduating, in late 1944, from the Sweetwater, Texas, flying school, she was posted to Douglas, Arizona. Most of her assignments involved "Ash and Trash," taking people from Point A to Point B. She continued flying after the war, working for an aircraft distributing company, demonstrating aircraft to potential companies. She continued doing this until getting married. She last piloted an airplane in 1947.

In 1951 the family moved to

Washington, his mother's home state, and Fred came along with them. They settled in on Whidbey Island where Fred's dad helped found a flying club in the mid-1950s. Fred can remember flying a few times with his dad but aviation talk was not a big topic around the dinner table.

Given this background, you would think that Fred's interest in flying came from his parents but he says, "Not at all." He didn't even know his mother was a pilot until learning about it in 1967. "I did not go into aviation except that the army sent me a letter to take the draft physical."

In 1966 Fred graduated high school and matriculated to Oregon State University, studying math and science. He did well in math, physics, and chemistry in high school and not so well in liberal arts or, "the things I didn't like!" He "rushed" at a fraternity his first year at OSU but, after a disagreement, separated from the brothers the following spring. NO ST

Fred Smyth (Fred Smyth Photo)

Moving from the frat house and into a dorm his sophomore year, he changed his major to something easier than math - business administration - but, "I was easily distracted, oh boy oh boy!" At the end of the term, "I had three hours of 'C' and six hours of 'D' and six hours of 'F!"" The "C" was in Air Force ROTC. In late December, 1967 the college administrations suggested that Fred leave OSU. They said, "There are people here who would like to learn and you're obviously not one of them so please go away."

Fred entered night school but the college still sent a letter to the army saying that he was no longer an OSU student. This was a significant event because the Vietnam War was happening. Anyone in college automatically had a student deferment from the draft. No college meant no deferment. It was in February of 1968 that Uncle Sam sent Fred a kind, but firm, letter asking him to come in for his draft physical. His future a foregone conclusion, Fred visited his Army recruiter instead. There he took the WORWAC (Warrant Officer Rotary Wing Aviator Course) test. To his surprise he scored best-ever in the state of Oregon and was told, "You could go to flight school!"

Fred says his background has always been, "Rather than having a dream or a goal someplace - I've never been that kind of a person - I'm doing whatever I'm doing. And if something pops up on the horizon I take a look at whether I'm interested in going in that direction." When the army suggested flight school, Fred followed that direction because it appealed to him.

After training at Fort Polk, LA, for basic, Fort Wolters, TX, for Primary, and Fort Rucker, AL, for Advanced, Fred Smyth was commissioned as a warrant officer and winged as an aviator in May, 1969. He was then assigned to Vietnam, HHC, 1st Bde, 1st. Air Cav. "I flew peter pilot (second in command) for a couple weeks and when the CO learned I was single, he offered me Scouts." Scouts were dangerous, much more dangerous, than what Fred was already doing, flying for headquarters company, and he jumped at the chance to fly the left seat, "Without some grouchy old CW-2 or CW-3 beside me." This gets back to what Fred said earlier about not setting goals for himself but waiting to see what opportunities or experiences present themselves.

As for the danger aspect, single men in Vietnam were often asked to volunteer for more dangerous assignments. This was not because it was thought nobody would care at all if they were lost but, "They would care less," Fred said. "That was standard knowledge. Common knowledge."

Fred was checked out in the Hughes OH-6A and was a LOH pilot. "We were out of Tay Ninh and flew two-ship scout missions interdicting anything

we could find." Six weeks later, with only 100 days in-country, the danger of his assignment caught up to him. It was September 19, 1969. Fred was flying a two-ship reconn mission - "Reconning by drawing fire." One ship flew low, drawing fire and the second ship flew cover, above. If - when - the low ship draws fire, the high ship drops down to fly wing. For this instance, "There was a ground company of friendlies who had made contact with the enemy. They asked us to come down and reconnoiter the bad guys to give some Intel to the good guys so they would know how to deploy themselves." Fred flew left echelon off the lead ship.

They were maneuvering among the trees, the pilot flying from the right seat with his gunner on the left side of the ship. "Our standard procedure is to always turn right so that we don't run the risk of firing on the helicopter in front of us." As they were juking and jiving around the lead ship turned left, not right! "Since we're flying left echelon, I have no place to go." That is,

the lead ship turned into Fred's helo, forcing him to either collide or come to a complete stop. So, he stopped. "And they shot me out of the air."

The damage report on Fred was pretty serious. He took one round through the left knee, breaking everything in there but avoiding the patella. But the round blew the head off Fred's femur. He took another round through his left arm which broke the humerus into five pieces while also severing the radial nerve.

If being wounded in action wasn't bad enough, Fred had to get wounded in the left arm and leg. "You increase power in a helicopter with left arm. The right arm is used to steer. And when you increase power with your left hand, you have to counter the torque with your left foot." With no control of the left side of his body, "I flew it into a tree."

Here's where it got a bit sticky. "All the helo's blades came off and the ship when straight down to the ground." The friendlies are on their way over to the crash site to pick up the pieces but before they get there the enemy arrives. "My E-5 buck sergeant behind me, who has been running the M-60 machine gun, gets out his .45 and shoots two gook dead just meters away and earns himself a silver star for saving the two of us."

Fred was eventually medi-vac'ed and went through surgery. Next up was eight weeks in the hospital in Camp Zama, Japan, before being repatriated to Madigan Army Medical Center in Tacoma. He was 21 years old.



I've Never Been That Kind of a Person (continued)

The army sent Fred home with a medical discharge and the Veterans Administration stepped in with an offer to send him back to school. Fred jumped at the chance. A lot of water had flowed under the bridge since Fred had been asked to leave OSU due to failing grades and he was extremely motivated to do well. As far as Fred is concerned, the VA does good things and, "I have no arguments with the VA. I could tell you good thing after good thing after good thing." He's concerned about the VA today, though. "They've been overwhelmed the last 15 years," especially since George W. Bush cut

the VA budget each of his eight years in office.

After a stint in junior college Fred enrolled at the University of Puget Sound (UPS) and graduated in 1972 with a degree in business administration. He turned down opportunities to participate in the Rhodes Scholar program and the new law school at UPS in order to pursue a Masters in Business Administration. He had his eyes on the prize of teaching in business school.

"Unfortunately in the spring of 1973 my grandfather died (Fred's father had died many years before) and my aging grandmother had no one." Fred left school to take care of her and never got back to it, having finished 80% of the degree requirements. "It's one of only a few failures in my life," he philosophically says.

By 1976 Fred was living in Ketchikan, Alaska, working for Temsco Helicopters, a company that rented helicopters on a monthly or seasonal basis to "all comers." Fred spent five glorious years flying with the helo air taxi. "I could not believe you could be paid to do this kind of work."

Following that Fred did a three year stint with the construction company, Seley Incorporated, flying helicopters and float planes. Around 1984 Fred's past caught up to him when the company owner "learned of my education and job experience and I ended up as CFO of his organization."

In 1989 Fred left Alaska for a position as COO at a computer company in Minneapolis. After finishing that contract in 1991 he retired and moved back to Puget Sound, settling in on Whidbey Island. There he joined the Navy's Whidbey Island Naval Flying Club so he could fly recreationally. After three years, "The Board of Directors, mostly retired Navy captains, asked me to manage the club. That was based on me being an aviator and also my experience in Alaska as a CFO." With a trace of humor he added, "There was some thought that I knew how to run a company." Fred served as the manager from 1994 until 2001.

Enter Dave Desmon, Ops Officer for Cascade Warbirds, into Fred Smyth's story. "I met Dave the first year I was in the club." Dave liked to rent the Naval Flying Club's T-34. "He was an early joiner of Cascade Warbirds and he convinced me I should bring the T-34 to flying events." Desmon also convinced Fred, with very little arm twisting, to join CWB. Dues at the time were \$15/year.

In the nearly 20 years that Fred Smyth has been active in CWB he's seen two significant changes in the group. "The paid membership has almost tripled. Oftentimes we now have 50 people at our monthly meetings."

A second big change involves the aircraft types that members fly. "Members used to own bigger airplanes. We used to have fly-ins where members would bring in Wildcats, T-28s," and other big airplanes. "We had four or five members who owned Trojans and would bring them to events. Now, we're almost only liaison."

This change in airplane size owned by CWB members opens up a different horizon for the group. How does the organization move its focus from providing "classic" war birds at events to education? "I've had people approach me at our fly-ins asking where are the warbirds? No matter what your feeling is for, say, Stearmans - and I love them, they're great airplanes - a lot of people don't consider them warbirds." People want to see the big airplanes - Mustangs and Spitfires - they have seen in movies. That is their concept of what a warbird is or ought to be.

"We are so blessed right now to have Anders's outfit (Heritage Flight



(Fred Smyth Photo)

Museum in Bellingham) and Sessions's outfit (Historic Flight Museum at Paine Field) to support what we do with their collections. They have many unique airplanes."

Fred Smyth has been married to his wife, Anita, for 36 years. They have no children. Beside his work with CWB, Fred is active in many other pursuits including providing care for his mother, and helping Anita take care of her mother. For the past three years Fred has become deeply involved in genealogy. Both Fred and Anita love to travel and take overseas holidays nearly every year. So far they've visited France, Japan, Ireland, Spain,

> Portugal, Italy, Morocco, Germany, and Austria. They assiduously avoid the tourist haunts wherever they go. "We like to tour the country, not the tourist spots." They like to stay away from the crush of crowds and avoid places that have become commercialized.

Fred holds an Airport Transport Rating -Rotorcraft Helicopter license with Commercial Privileges, Airplane Single Engine Land and Sea, plus Instrument Airplane - Airplane. To date, his flight time exceeds 4,000 hours. Fred is also a Certified Flight Instructor - Airplane Single Engine and Rotorcraft-Helicopter.

Fred's decorations include the Air Medal, the Purple Heart, and the Distinguished Flying Cross.

Fred Smyth, the man who said he's never been the kind of guy to set goals, has set out a goal for Cascade Warbirds. "We have to get enough donations so CWB can afford to pay the operating expenses of our members who attend our approved

events." This means paying for member's gas and hotels. Not many members are aware of this, because it's history but, "We went through a phase in our history where we would charge a fee to air shows and fly-ins for our members to show up. Not a lot of people know that."

Much has changed since those days. Air shows at Fairchild and Hillsboro used to cough up a hefty fee to entice CWB to participate. They also covered expenses for pilots. Not any more because, "They don't want to pay us \$2000 to see 14 Navions, liaison airplanes, or CJs show up," because that isn't what the people who come to the shows want to see. It gets back to Fred's comment about Mustangs and Spitfires and what the general public considers a warbird to be.

Changing this myth of what a warbird ought to be is another goal of Fred's. That's why he is such a supporter of the CWB education program. "If we cannot get back to our members owning larger warbird airplanes then I have only the one thrust. Which is education." To that end CWB supports a high school education program.

The school program has expanded this year. "One of our seven awardees is actually a senior at Brigham Young University and is receiving a flight scholarship to cover ground school and a couple of flights."

Not only that, "We've also expanded to include a tool reimbursement program for students enrolled in A&P courses." These are 24 month community college courses in airframe and power for aviation mechanics which will lead to a license to work on airplanes. Students taking A&P courses are required to buy \$2000 worth of tools. "Our scholarship program now includes a reimbursement towards 50% of the first year's tool cost."

And where does the money come from to support the expanded CWB education program? The 225+ dues paying members of CWB contribute \$20/ year to the organization but it's the B-17 Aluminum Overcast that brings in the lion's share of our operating costs, and it can be a substantial amount. This money comes from our share of what people pay to fly on the B-17 along with a share from the airplane's PX plus what visitors pay to walk through the airplane. Income from Aluminum Overcast is dependent on weather and how many people show up to see it.

For a fellow who says he isn't the kind of guy to set goals and who would rather see what life offers him, Fred Smyth has set some pretty big goals for himself and Cascade Warbirds. Let's see what we can do to help Fred achieve those goals. O

Operation Midway: The Battle of Midway from the Japanese Navy's perspective (Part III) By John Clark

Five minutes: The time to boil a kettle of water, a short drive to the corner store to pick up the morning newspaper, the time it takes to drag the mower from storage and fill it with gas before mowing the lawn. In just five minutes the strength of Imperial Japanese Navy went from near absolute supremacy in the Pacific to collection of burning steel vessels that would soon take their power and might to the bottom of the sea. With those ships went the country's hopes of expansion and aggression in the Eastern Pacific.

Recapping parts I and II (Available in the Cascade Warbird Flyer Oct 2010 and April 2011 editions, respectively, at: http://www.cascadewarbirds.org/ newsletterarchives.htm)

June 4th, 1942: The Imperial Japanese Navy, with the strength of four fleet carriers, two battleship divisions, an invasion force and numerous support divisions, brought a mass of firepower with which to secure Midway Island as a Japanese base and lure the American fleet out to their final destruction. This Japanese fleet had set forth from the home islands to continue the eastward Japanese expansion into the pacific and to deliver a fatal blow to the US Navy. This was Operation:MI or Operation:Midway.

Off to a poor operational start with delays for the screening and Midway attack forces, the IJN fleet staff was forced to adjust their invasion plan to do more in a shorter time. Surprise had to be complete and the threat great enough to draw US forces into battle. The IJN fleet had sailed into and through some very poor weather, hampering light signal communications (during the radio blackout) and eastward progress. Once free of the storms, a strike on the two main islands of Midway was launched in the pre-dawn darkness. Danger lurked in the clouds and shortly after the strike's launch, the first sighting of the Japanese Fleet was made by one of the two that would unfold throughout the next five hours.

The Japanese Carrier Division was not subject to just two attacks as known in the popular retelling of the battle; those of the ill-fated VT-8 Devastator squadron and the Dauntless dive bombing attack. Rather, the Japanese fleet was under nearly constant attack for the four hours preceding the dive bombing attack finale. The US Army, US Marines and US Navy all participated. The attacks originated from the base on Midway and launched prior the strike on the island. The Japanese had some fortune that morning with an out-of-position scout plane that spotted an American fleet of surface ships.

Part II of the Operation:Midway article closed on a time line immediately after the fifth American attack on the IJN carrier divisions and saw the impending return of the Japanese attack force from Midway at approximately 8:30 am. Time will reverse to capture the affects of the attack on Midway and a resumption of the battle.

IJN Carrier Doctrine and the Midway Attack

Imperial Japanese Navy doctrine split the carrier aircraft into two divisions with two carriers making up each division. Each aircraft carrier carried approximately the same number of aircraft (between 54 and 65) with forces evenly split between dive and torpedo/level bombers with quantities at a nominal 18 a/c each. The exception was the carrier Kaga, whose larger hangar deck accommodated an additional 9 torpedo bombers. As one division launched it's Type 99 dive bombers, the other would launch the Type 97 level/torpedo bombers. Thus, a reserve strike force was held with the same composition being readied for launched on the next coordinated strike.

The first wave's attack on Midway had been completed by 6:45am in two parts. First, the Type 97 "Kate" level bombers had hit their targets from highaltitude and immediately afterward, the Type 99 "Val" dive bombers zeroed in on the remained targets amidst the smoke left by the first strike. The anti aircraft fire had been fierce and effective with many airplanes receiving damage; 11 fatally. The sections reformed for their return flight within view of towering palls of black smoke rising from the western Sand Island at Midway. Yet, there were considerable amounts of infrastructure as well as gun emplacements that remained untouched in the attack. For a landing assault to be successful there was much work to do to minimize the islands' defenses. Few enemy US aircraft were sighted on the ground (these were in the air attacking the Japanese fleet) with the effect of leaving Midway's counterstrike capability completely intact in the eyes of the Japanese commanders. Another attack would be required, as messaged from strike commander Lt. Tomonaga.

The reserve force contained the best of the Japanese naval pilots and it would be their job to attack Midway for a second strike or launch against any USN forces, if discovered. Carrier force commander Admiral Nagumo ordered the use of the reserve force to act upon Tomonaga's recommendation. Efforts were soon underway to arm this attack force with high explosive ordnance for ground targets. Tomonaga himself led the remnants of the first wave back to the carriers to re-arm and refuel.

Scout 4 and Decisions

Then, at approximately 8:30am, shock. The delayed scout plane from the heavy cruiser Tone reported enemy ships; among them, an aircraft carrier. Based on the scout's estimated position, Admiral Nagumo was made aware that the enemy carrier was just 200 miles from his fleet and within striking range. The very surprise that he had hoped to spring upon the US Navy comes full circle. Yamamoto's battleships were too far away to engage before the day was over. If Nagumo's aircraft were capable of reaching the enemy fleet at this distance, the reciprocal was true.

> At this time, Nagumo has questions and needs answers to make an important decision. Did the Americans receive the message sent by their PBY flying boats earlier that morning? Were they able to ascertain an accurate position of his fleet and did they spot his own carriers? If the enemy carrier was seen with an empty deck, does that mean that a launch has occurred? Or, if the US Navy operates with a similar doctrine as the Japanese Imperial Navy, are all of the aircraft below decks being armed for an imminent launch?

It is full daylight now with continually clearing skies punctuate with low cloud layers and small cumulus above 3500 meters. Nagumo's Strike force cuts through the moderate swells and the carriers prepare to turn into the 5 knot wind. The first strike is returning from the attack on Midway and the pilots in these aircraft are eager to land. In addition to their low fuel state, a large percentage have damage and several aircrews are wounded.

A crucial decision must still be made. Will the attack on the carrier be made with the second Midway strike force now below decks, fully armed but loaded with high explosive ordnance for ground targets? Nagumo would have to launch immediately in order to recover the returning strike once the decks have cleared. Alternatively, can he recover the first strike while re-arming the bombers below decks with torpedoes and armor piercing bombs enabling a mass two-division launch? For Admiral Nagumo, the decision for all practical purposes was made during planning Operation:MI. The destruction of US Navy's carriers is the prime objective of the Midway Operation. The position of an enemy carrier is now known and he must expend every effort toward that goal. The best way to ensure victory is with an overwhelming attack using his entire force of aircraft properly armed for the task. One should not go into battle with a dull sword.

Orders were relayed by signals from the Akagi to the other three carriers; Kaga, Soryu and Hiryu. Aboard the Hiryu, Admiral Yamaguchi was furious upon receipt of the message. Yamaguchi had also received the scout's radio reports of the enemy carrier location. There was no time to wait! In his mind, all available aircraft should be launched with their current weapons loads as soon as they could be brought up on deck. To Yamaguchi, waiting only decreased the possibility of tactical surprise and allowed the enemy fleet to operate in an offensive posture.

> Make them defend themselves and with luck, render that enemy carrier useless for offensive air operations. Following with a second strike using anti-shipping weapons will allow a decisive blow to be made. Waiting only brings the unknown and four ships full of awesome aerial firepower not performing what they were designed to do: Attack!

Contintued on page 10

Gertrude's Last Flight

By Ed Rombauer

In my flying career I have had airspace disagreements with several of our feathered friends of the sky. Generally, they concede the airspace to my mega-tons of aluminum flying machine and live to tell of the near miss to all their fellow bird-brains. Occasionally, when like human pilots they fail to pay attention and there is a collision between bird and aircraft, the kamikaze-like collision does serious damage to both the bird and the airplane. This is understandable when you realize that the destructive power of even a small bird is tremendous when the collision speed

is increased. I remember seeing the damage to the leading edge of an F-4U's wing after colliding with a medium-sized bird at an airshow a few years ago. What looked like the strongest part of the wing, on an aircraft built for combat, had a basketball sized dent in it. I'm glad that I didn't have to explain to the museum why their million dollar aircraft was now sporting a new bird created modification.

Fortunately, while I have had many close encounters with birds, there were only a couple of what I would call "memorable events." One incident that I remember involved a B-727 landing at San Francisco airport one afternoon. SFO has to be the home base for seagulls with large flocks of them camped on the approach end of the runway. As the old aircraft neared the approach end of the runway, the



Red Skelton with Gertrude and Heathcliff

passengers in the back of the plane reported hearing a loud thump on the rear top of the fuselage. Once at the gate we had the mechanics go up in a boom lift and inspect for any signs of damage. After inspecting the top of the back end and peering down the center engine inlet, they reported that there was no damage and that the bird had probably bounced off the fuselage and was now conveniently long gone. About an hour later we started our takeoff run on our way to Seattle. The aircraft seemed just a little slow to accelerate, but then we were using a reduced power setting and the degraded performance was not unusual with heavier loads. Just before rotating for the takeoff, and seeing the end of the runway draw closer, I gave up all pretense at economy and pushed the thrust levers up to maximum takeoff power. As the 727 began its climb away from the runway there was time for one quick look at the engine instruments where I noticed that the center engine exhaust temperature was slowly rising past the red line limit. With a smile I pulled back the power on the engine and turned to the co-pilot and said, "I know where that seagull went!"

That one gull had taken out the first three stages of the compressor blades in a bullet proof engine which we ran at reduced power for two more hours. As the mechanic told me, "these engines are built like a tank." For a week as I

walked by the shop where they

repaired it, I could smell the strong odor of a pureed seagull and his last fish dinner.

My most memorable and heart stopping experience involving a bird strike, however, was a few years ago while flying my own aircraft, a U-8F Army Seminole / Queenair built "like a tank" by Beechcraft. I have named my unlucky seagull Gertrude after the characters Gertrude and Heathcliff portrayed by one of my favorite comedians, Red Skelton.

It was one of those typical Pacific Northwest days that we get all too often, not too nice, and not too bad, light rain showers in the early part of the day and then broken lower clouds at night. With the warmer temperatures during the day the cloud cover tended to be more than high enough

for VFR flight in the Puget Sound basin. The event that we had flown in for was a squadron dinner in the town of Port Townsend located a few miles from the airport. That afternoon was spent at the airport swapping stories and lies with the other pilots and their wives who would be attending the dinner that evening. As I would be flying back south later that night I was glad to see that the afternoon showers were disappearing and leaving behind a thin broken ceiling; weather would probably not be a problem when it was time to return home.

Riding into town late that afternoon for the dinner, I became caught up in the camaraderie and conversation of the evening. The food, drink and flying conversation had a boisterous effect on all of the alpha pilots gathered at the table. As the hour grew later, the stories grew longer and finally I found myself checking the time on an ever frequent interval; my day would not be over until I had flown back to the comfort of our home airport.

The clock was now nearing the bewitching hour as I enlisted the help of a couple of wives to drive us to the airport (I suspect that they were the designated drivers). Getting into the car for the trip to the airport I looked up at the very dark sky to try and determine the height of the overcast; surprisingly it was quite good. A few minutes later, however, as we stood by the side of the plane, I noticed the first signs of fog forming across the runway. A sense of urgency set in as we hurried to get the airplane ready for takeoff before we were fogged in. of the airplane. The sound was so loud that it almost gave me a literary flashback to bomber missions over Germany, however as I recovered and remembered that we were not in a combat zone my first reaction was that we had blown the right engine. I had visions of oil and pieces of aluminum streaming out of the hole where a cylinder had been attached. Turning to the pilot next to me I said, "What happened?" thinking that since he had just completed the annual inspection he would have some logical explanation. However since the engine readings were rock solid and there had been no yaw to the twin engine aircraft, it was looking less and less like an engine problem and more like something had happened to the airframe.

The remaining twenty minute flight to the airport was spent wondering

how much damage we had sustained. Notwithstanding our very nervous passenger in the cabin, the rest of the flight was uneventful if not apprehensive.

It would not be until we pushed the airplane into the hangar under the lights that we were able to see what had happened. Nothing! But close — it seems

supercharged Lycoming's screamed as they pulled us down the runway just ahead of the zero visibility fog, which was rapidly forming. Departing the runway we were now free to continue down the Sound on our south bound flight. In the inky blackness of the midnight sky, what had seemed like

The big



Ed Rombauer's U-8F Seminole (John Clark Photo)

an adequate ceiling for VFR flight was in reality a lower marginal ceiling that forced us down to a thousand feet. No problem. With a capable airplane and my trusted co-pilot / mechanic in the right seat, I could turn on the autopilot and relax while we concentrated on navigating down the Kitsap Peninsula in the rural darkness.

The lights of Seattle illuminated the sky under the lower overcast as we continued on past the central part of the city. Ahead I could see the brightly lit last ferry boat of the night as it prepared to dock at the north end of Vashon Island. In a few minutes we crossed over the stern of the ferry and turned southwest, changing from the city-illuminated water to the darkness of the land. It was at this moment that there was an extremely loud explosion on the right side like Gertrude was making a midnight garbage run on the last ferry of the night when her airspace and ours conflicted. There was blood, feathers and guts just above the co-pilots windshield at the point of initial contact which threw the gull into the VOR antenna and from there into the vertical fin. Two inches lower and Gertrude would have been inside. Who says birds don't fly at night?

Heathcliff: Look Gertrude there's the Ship of Fools Gertrude: Oh Heathcliff, how do you know that's the Ship of Fools Heathcliff: They're all looking up.

Fly Safe. 🛇

However, the order was issued: land the first strike and re-arm the reserve force for anti-ship action. In the next half hour, the first Midway attack wave landed and the second wave of airplanes had been re-armed. To save time, the removed ordnance was staged against the hangar walls rather than being brought back to the weapons storage spaces below decks. All of the aircraft maintenance crews were needed for servicing, loading and refueling of the returning wave. The removed ordnance and proper disposition would wait until the aircraft had launched.

Attacks on fleet resume

After turning the fleet into the wind to land the returning strike, Nagumo found that waiting for the unknown did not take long. At 09:15, the escorting heavy cruiser Chikuma spotted 15 low level aircraft 20 miles off the bow to the northeast. The attacking flight was made visible to the combat air patrol fighters through a method that worked well during radio silence. Large caliber rounds fired by the Chikuma impacted the water near the approaching attack aircraft. Destroyers layed down smoke screens in an attempt to shield the carriers from visual detection. Anti-aircraft fire arced from both the Chikuma and Tone until the combat air patrol could make their attacks.

Nearly thirty Type Zero fighters (named for and designed in the year of the Japanese calender 00) found and dove down in succession upon their targets with practiced precision. By firing the cowl mounted 7.7mm machine guns first, the target could be ranged before the Zero's most lethal weapon was employed. The highly effective but limited load of 20mm cannon rounds (60 rounds per the two wing-mounted weapons) meant that only a couple of runs could be made on each of the sturdy American aircraft. It often took the

entire six and half seconds of firing time to inflect fatal damage on the American Devastators.

The carrier Soryu, along with the other three carriers, reacted to the attack by maneuvering independently in efforts to make a torpedo strike as difficult as possible. Only one torpedo bomber released it's weapon just under 1000 yards from the starboard bow of the Sorvu in a failed attack. This was the only aircraft to penetrate the defenses. The fighters patrol was highly effective and destroyed all of the enemy torpedo aircraft including the one retreating after it's weapon release. The Zero pilots marveled at the suicidal tactic of sending attack aircraft without fighter cover. This surprised them,



Japanese aircraft carrier Kaga (US Navy Photo)

for they had been told that Americans had no heart for battle and would run if threatened. (This was the famed attack of VT-8 led by Lt Cmdr Waldron which included Ensign George Gay who survived and saw the entire battle from the water.) Those Japanese pilots with fuel and ammunition remaining climbed back to their assigned altitudes to resume their patrols.

At 09:40 and just minutes after the previous attack ended, another set of low flying airplanes was spotted (VT-6 from the USS Enterprise); this time by the heavy cruiser Tone. The fourteen aircraft approached low from the southeast and split into two groups. The first crack in the Japanese defense had occurred allowing a nearly unhindered approach by the patrolling Zeros. Lookouts on the Kaga saw two of the aircraft launch their torpedoes from the stern and starboard side. Both missed. The same lookouts watched several torpedo bombers that survived the anti-aircraft fire disappear just above the waves to the east.

Yet another battle was occurring dozens of kilometers south of Nagumo's carrier force. The Japanese destroyer Arashi had spotted and attacked an American submarine, giving Nagumo time to sail out of range with a turn to the Northeast from their previous east by southeast course. Contact was lost and the destroyer captain ordered a flank speed return to catch up with the rest of the fleet.

Japanese carriers in the first half of 1942 were not equipped with

radar. In addition, most of the aircraft did not have radios installed. As a result, detection of air and surface threats was performed with high-power binoculars and the naked eye from the surface fleet. Thus far, all of the attacks had developed from low to medium altitudes with one exception: A flight of aircraft, thought to be bombers, were seen to be departing the area at very high altitude (these were actually VF-6 Wildcats). Zero's launched from Soryu set off to intercept but lost their quarry which disappeared to the east.

A Japanese gunner aboard the Imperial Japanese Navy carrier Kaga looked out over the increasingly calming seas and dissipating clouds. It has been a long morning though barely half over. After many unsuccessful attacks by low and medium level US Navy attack aircraft and US Army level bombers, a quiet briefly settled over the fleet. Almost two dozen Zero-sen fighters are flying combat air patrol overhead while others are landing on the four carrier decks to refuel and re arm. Preparations are being made below decks to lift the next strike on the narrow elevators to the flight deck. The fleet steadies on a north by northwest course with the occluded morning sun off their sterns. Maybe, the gunner's mate thought, we'll have some time for a proper meal. His reverie is disturbed by the muffled sound of nearby cruisers firing their main batteries.

In a scene replayed from almost an hour earlier, the screening force of heavy cruisers spotted and directed fire upon fifteen aircraft approaching

> low from the Northeast. Nearly twenty Zero fighters spotted the blue torpedo bombers at 2500' along with two close Wildcat escorts and four additional Wildcats covering from above and behind (this was VT-3 and VF-3 from the Yorktown). The Zeroes started their attacks on the stubby slow fighters which would surely would be no match for their superior machines. From above and behind, the Zero fighters cascaded down in succession in high-side attacks on the hapless Grummans. The Zero pilots felt the escorting fighters could be eliminated either by destruction or by forcing them to dive away. The number 4 Wildcat in the formation was shot down but then the

unthinkable happened.

The Zeros were suddenly under attack themselves. The formation of three Wildcats broke into the next attacks and the lead reversed his turn to put a low angle burst into the first Zero that overshot. It caught fire and fell away. The next Japanese fighters to attack found that they were facing near head-on passes by the remaining three F4F's. Every time an attack was attempted on one Grumman fighter, another US Navy fighter would bear in as though a ramming was intended. Those Japanese pilots that pressed their attack were being shot down with seemingly few hits from the American machine guns. There simply weren't enough of their own patrol fighters in the immediate area to overwhelm the Wildcats and attack the bombers. The fight dropped lower and lower. The Zero pilots could now see their intended targets above their altitude, still heavy with torpedoes and flying on a steady course away from the fight toward the carriers.

Other fighters in the Japanese combat air patrol spotted the torpedo bombers as they bored toward the fleet. The Zero patrols were losing their cohesion and did not have time to form up for a coordinated attack. The first Zero latched onto a Devastator and was met with the crossing fire from two rear gunners before falling away. Another Zero that pulled up too sharply after his run was met with a nearly 90° deflection shot from one of the closeescort Grummans. The Japanese pilots continued to attack and slowly picked apart the bomber formation until just five Devastators disappeared into a cloud layer at 1500'. The Zeros still outnumbered the remaining Grummans by more than four to one. Many 7.7 mm machine gun hits were observed on the US Navy fighters but they refused to succumb to the light caliber fire. Some of the Wildcats ducked into the clouds and the remaining Zero CAP fighters turned back toward the fleet when it was clear that another attack was developing.

Beginning of the end

Above the Kaga and Akagi in Carrier Division 1, now in the southwest corner of the carrier fleet, a high altitude formation of 30 aircraft was spotted arriving from the south. The time was 10:22 am and the bombers were setting up their attack. The ships began to maneuver independently in an attempt spoil the bomber's aim. By the time the anti-aircraft gunners swung their weapons up to meet the overhead attack, the first aircraft were already well into their dives.

The largest of the four carriers, Kaga, was the target. Small formations appeared to stop moving in the sky until they pulled out of their dives, streaming vapor from the wing tips as they did so. Small shapes departed the aircraft and appeared to grow in size with no other perceptible motion. At 10:24am, a cascade of four shattering impacts rocked the Kaga and sent shock waves throughout the ship. Five additional near misses sent waves of water spraying over the flight deck. The ship that emerged from this fusillade

of debris and spray was not the same that entered. The bombs that hit were nearly evenly placed along the length of the flight deck. They all penetrated to the upper maintenance deck. The combination of aircraft munitions that were set off in secondary explosions and the still operating aviation fuel lines actively fed the fires.

Soryu, in Carrier Division 2 with the Hiryu, was maneuvering against the five torpedo planes that made it through the Zero CAP. Overhead, 17 high level bombers were seen approaching from the northeast (this was VB-3 from the Yorktown). The bomber's forward progress ceased as nearly vertical dives commenced. Anti-aircraft gunners fired during the ship's maneuvering but were largely ineffective. Aircraft now appeared to surround the Soryu from above and came down from several directions. Several of the aircraft did not release bombs at the completion of their dives. Of the bombs released, three scored direct hits and those hits were devastatingly effective.

Two of the bombs exploded through the flight deck with one of these also shattered the ship's small bridge. The third bomb descended through the flight deck, through the upper hangar bay and finally exploded in the lower hangar. A cascade of explosion from the aircraft being armed with torpedoes gutted the ship. Black smoke and steam imediately erupted from the engineering spaces as the boilers lost pressure. The ship slid to a halt under it's growing black and white plume.

Aboard the Akagi, the lookouts saw three of the dive bombers over the Kaga pull out of their dives far too early to release a weapon. Once in position overhead, these three aircraft dropped nearly straight down and grew larger and louder by the second. Three bombs fell free and continued to fall in formation. Nearly instantaneously the bombs exploded. One bomb hit near the waterline at the port stern and another scored a near miss in the water just yards from the port-side bridge. Water shot up and soaked the flight deck and gunner crews. The remaining bomb found it's mark in the center of the ship's flight deck.

This 1000lb bomb exploded amidst the maintenance hangar deck after penetrating through the edge of the center elevator. The blast ripped into the confined space. The fueled airplanes not destroyed by the blast started burning which fed the ensuing inferno. High explosive bombs temporarily stored along the hangar walls began to cook off and released devastating shock waves and shrapnel throughout the hangar deck. Decks above and below buckled under the extreme stresses. Watertight doors could no longer be closed by damage control teams. Those aircraft maintenance personnel and ships crew that were not killed immediately would eventually succumb to the heat, toxic smoke, and lack of oxygen. The air itself seemed to be on fire. Those that tried to run across the armored decks above the fires found the soles of their shoes melting under them. The stern hit at the waterline created enough damage to later make the Akagi's steering unresponsive.

Hiryu did not escape the attacks. Though the ship was protected from high flying dive bombers in the low visibility of a rain squall, the five remaining torpedo bombers approached from the east (VT-3). Free to maneuver, Hiryu's Captain Kako commanded the ship to a west by north west course. This put the Devastators in a tail chase which reduced their overtake speed to a mere 60 knots. Kako was also successful at presenting a poor angle for a torpedo attack. All five torpedoes were released at close range but none detonated. Anti-aircraft batteries fired furiously at the approaching aircraft but each attacker departed the area undeterred by the 5-inch shells and rapidfire 25mm cannon rounds. Hiryu survived this with most of it's remaining strike aircraft intact. However, six of her Zero fighters and five Type 97 (Kate) torpedo bombers were lost in the day's air battles and the Midway strike. More seriously, 17 highly experienced fighter and bomber crews were lost in these battles.

The remaining Zero pilots on combat air patrol, no doubt infuriated by the condition of the fleet, sought to find and destroy the departing US Navy

> aircraft. The dive bombers and torpedo bombers flew just above the water to help defend against low-side attacks. The Zero fighters were able to catch the slow Devastators but the remaining machine gun rounds did not do enough damage to bring these airplanes down. The Dauntless bombers presented a far more difficult target. Free of their bombs and low on fuel, these aircraft had nearly the performance of a fighter with one key difference; a tail gunner armed with two 0.30 caliber machine guns. Against the Dauntlesses, with full ammunition loads and defensive formations in places, the Zero pilots faced highly effective gunners. Their cross fire sent several Zeroes into the ocean. The chase was soon abandoned due to low fuel and depleted ammunition. Those Zero pilots that could not find the remaining carrier Hiryu ditched near friendly ships in hopes of rescue. Of the 36 Zero-sen fighters that started the day, fewer than a dozen remained for any follow-up CAP and strike escort duty later in the dav.

Dauntless dive bomber (John Clark artwork)

The once proud Japanese Mobile Force, and now former Carrier Divisions 1 & 2, ceased to exist at approximately 10:29 am The flagship Akagi continued to sail at a battle speed but fires below created a black smoke trail that escaped from the now gaping hole where the center elevator had fallen. Her crew kept the boilers stoked though a command for straight running from a starboard turn irreversibly jammed the port rudder. Aboard Soryu, now dead in the water, the fires steadily expanded from bow to stern and down to the engineering spaces. The order was given to abandon ship by Captain Yanigimoto who shortly thereafter succumbed to the fires. Kaga was still capable of some forward speed, albeit at a very slow rate. Her fate, however, would not happen slowly. The leaking aviation fuel from damaged hoses and pipes that had not burned was being vaporized in the heat of the confined hangar spaces. When the vapors met open flame, the results were cataclysmic. The ship, as seen from the rest of the fleet, disappeared in blinding white flash that forced huge amounts of debris up and outwards. The sides had been blown out and let in fresh oxygen which further stoked the fires. Only Hiryu was left and fleet staff would soon direct two counter strikes on the US fleet before they lauched counter strikes of their own.

In the next installment, we will look at the last hour of that morning and the 48 hours that followed. \bigcirc





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13	American Heros Air	
15	Show at MoF	
13-14	Warbird Weekend	
	Grangeville, ID	
19-21	Concrete	
20	Heritage Flt Museum	
	Open House at BLI	
20-21	Alberta Int'l Airshow	
26-28	Southern Oregon Air	
	Festival at Medford	
27	Friday Harbor Fly-In	
26-28	Tri-City Water Follies	
29-1Au	g Oshkosh 2013	
<u>August</u>		
2-4	SEAFAIR	
6	BC Aviation Museum	
	Open House	
9-11	Abbotsford	
10-11*	Olympic Airshow	
	Olympia, WA	
17	Comox	
17	Heritage Flt Museum	
	Open House at BLI	
17 10	"Props and Ponies"	
17-18	Chilliwack Flight Fest	
23-24 Madras, OR		
September 31-1* Vintage Aircraft		
51-1	Weekend @ PAE	
6-8	Hood River Fly-In	
11-15	Reno Air Races 2011	
21	Heritage Flt Museum	
	Open House at BLI	
<u>October</u>		
12*	Squadron Meeting at	
	Museum of Flight	
19	Heritage Flt Museum	
	Open House at BLI	
* Demotor Mon Effort End		
* Denotes Max Effort Event		
See Website for Detailed List		

Akagi under B-17 attack during Battle of Midway (US Navy Photo)

WARBIRD FLYER, July 2013

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