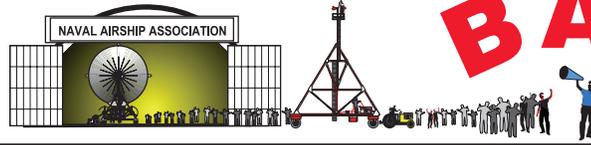


THE NOON



BALLOON



The Official Newsletter of THE NAVAL AIRSHIP ASSOCIATION, INC.

No. 91

Fall 2011



MZ-3A Visits JAX



The late Mike Nerandzic with his Lightship shortly after Cardington Rollout. Mike was lost with his ship while on tour in Germany. Photo by Eddie Lloyd. Below, in happier days, Mike was performing some impressive low flying at Cardington on 24 March just prior to leaving for Damyns Hall. Photo by Steve Buck. These photos and one on page 13 courtesy UK's Airship Association.



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On The Cover: Ken Kula photo: Stephen Huett, Director Navy Airships Systems Engineering Team, and CDR Jay Steingold, CO VXS-1, query Past Pres George Allen about airship operations, 4 APR 2011. See "Cover Story" page 9.



THE NOON BALLOON

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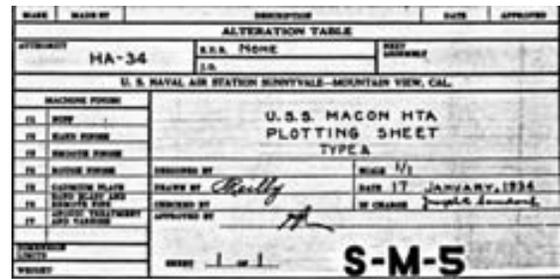
EDITORIAL

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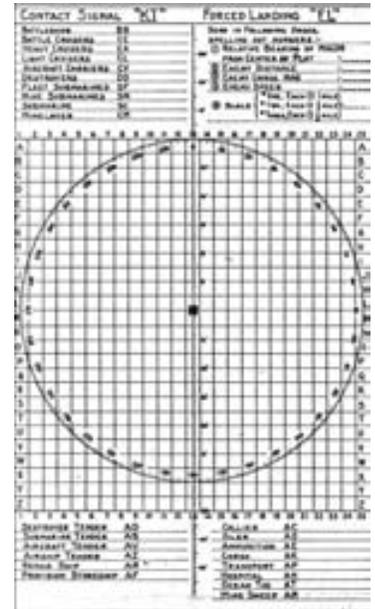
For those of us who also support Pensacola's NAMF with membership, the arrival of their colorful magazine FOUNDATION is a repeating delight. Yet their spring 2011 issue had quite an effect on me, and I felt compelled to comment. In that issue's bio on William Moffett by Hill Goodspeed, the ZR-1 wreck picture caption reads, "...the rigid airships ultimately were impractical, fragile aircraft..." As our late members CAPTs Barkley and Buckley pointed out long ago, "The airship is submerged in its operating fluid. At rest, unlike an airplane, it becomes part of the atmosphere surrounding it. Like the simple balloons [that have since floated around the world], disturbed air brings no harm to the craft... a storm cannot chase an airship..." Moffett was part of the chain of command that forced a Fleet Scout into an inland county fair-driven schedule with capped-off safety valves, political necessities or not.

Every writer is influenced by his sources and entitled to his or her opinion, usually more welcomed when it upholds a publisher's position. Goodspeed also states that Moffett's "...unwavering support of rigid airships, which proved to be unstable platforms that would have been extremely vulnerable in combat, was the only blemish on his service as Chief of the Bureau of Aeronautics." Pages later, the issue's coverage of Newport News Shipbuilding brags USS *Yorktown* was completed in just 16 months. Hardly worthwhile mentioning the flattop had been renamed to replace CV-5, hastily patched up after Coral Sea battle damage so she could be torpedoed and sunk at Midway. Buckley & Barkley, in their 1943 advocacy of a 50-plane, 20 mil cu ft rigid, pointed out that Kaiser had turned out a Zeppelin about every 6 weeks back in 1918. The Germans did so without the peculiar real estate of shipyards and the necessity of having labor on the coasts. Unlike flattops, no airship was ever torpedoed, run aground or sunk by mines. When Zeps did fall in battle, it was a much smaller loss in men and national treasure, and in 1943 it would have been a less painful price for putting a couple dozen planes on target. We have not the space to quote the volumes that have addressed that most common misconception of airship plane carrier "vulnerability," let alone the half weather map fiasco, or grumblings that Moffett's schedule for 4 APR 33 kept McCord from exercising the better part of valor, knowing ditching gear wasn't aboard.

The attitude shown in that issue is often repeated throughout the entire airplane-history museum and media world. Fast on its heels was the only LTA cover story on USNI's NAVAL HISTORY magazine since my own back in 1998. (See page 5.) Inside we find little new, so let me share something new with these gentlemen:



In the NARA's Cartographic Division I was able to find this print requesting the local NASM craftsmen fashion an aluminum "knee-board" chart for Sparrowhawk pilots to record ship observations so details would not fade before Morse-coding back to their flying carrier. The date proves LCDR Wiley and his officers realized during 1933 the airship's airplanes would do the scouting, not the airship itself. (Wiley's epiphany wasn't appreciated topside in time.) Adding strike capability would have been as logical as today's arming of what were at first just unmanned observation drones. Fragile rigids? One does not need a storm to mishandle an aircraft into the surface, but from R-101 and *Akron* to DC-10 AA#191 and Air France #447, shift change is a known favorite for Murphy to take advantage. This media prejudice only strengthens my resolve to make a big-screen movie that would explore what the rigid airship might have been under more enlightened senior leadership here and abroad – let alone simple unfortunate timing of watch rotation.



Sadly my rant on page 33 was put in its place when word of the heartbreaking accident in Germany came in. What the media did with that tragedy was beyond belief – not just lunatics blaming hydrogen, or the obligatory LZ-129 references (thanks to royalty-free available footage) but to the point of inaccurate computer animation that will stick with audiences long after the few hear an official accident report. In these trying times we are so lucky to have our Tech Committee Chairman, Norm Mayer, and we will have his report.

- Richard G. Van Treuren, Ed.

View From The Top: PRESIDENT'S MESSAGE



Reunion! - Tucson, Arizona - May 2-4, 2012

Yes, it's time to start talking about the next NAA Reunion. If you have never been to a Reunion, this may be the one you should attend & if you are a long time attendee, you definitely don't want to miss this one. For starters, if you lived in a part of the U.S. that didn't have the greatest weather last Spring, coming to Tucson in early May, can be a wonderful experience. Sunny and a very dry 80 degrees is the typical forecast. We are staying in the DoubleTree Hotel Tucson at Reid Park (above). A real gem of a hotel, 295 rooms, suites and casitas on 14 acres of beautifully landscaped grounds. An exceptional swimming pool and fitness center. Excellent food service for large groups. The DoubleTree has a reputation, in Tucson, for hosting military reunions. Our NAA Secretary/Treasurer, Peter Brouwer, and I have been making arrangements for this Reunion since April 2011. We have both been impressed with the quality and cooperation of the DoubleTree personnel. There are many things to see and do, in Tucson, and in Southern Arizona. Two of the sites we will see are Davis-Monthan Air Force Base & Pima Air & Space Museum. Davis-Monthan is the home of the famous "Bone Yard". Currently storing 4500 military aircraft, of which 20%, on average, are being reconstructed and returned to military service, both in the U.S. and to friendly nations. Of particular interest to the NAA is the last remaining ZPG-3W car & second deck. (See back cover.) The 309th Aerospace Maintenance & Regeneration Group - AMARG - is in charge of these operations. The ZPG-3W car is not on the regular tour, but through the kindness of Teresa Pittman, AMARG Business Affairs Liaison, we will have special permission to visit and photograph the 3W, BuNo 144243. Immediately next door, is the Pima Air and Space Museum, displaying 300 aircraft on 80 acres, from the 1930's to the present era.

Through Pima Air, we have made arrangements for tour coaches to pick our group up at 0900 at the DoubleTree, on Thursday, May 2, 2012, to do our special tour through Davis-Monthan AFB, bringing us to Pima Air & Space Museum (top, page 4) by 1100 hrs. You may tour the facility at your leisure, followed by lunch at the Flight Grill with pre-ordered box lunches, of your choice. Following lunch, those who desire, will tour the 80 acres by motorized trams with running commentary by Pima Air guides. Our coaches will then shuttle people back to the DoubleTree for some leisure time at the hotel. As I mentioned earlier, there are many things to do in Tucson and the surrounding area. Briefly, there is the Titan Missile Silo & Museum, the only "operational" Titan Missile still on display in the U.S., the Arizona-Sonora Museum - a world-renowned zoo, natural history museum and botanical garden, all in one place, including the Kartchner Caverns State Park, one of the most significant limestone caves in the world, discovered in 1974 by young "cavers" and purchased by the State of Arizona, who spent 30 million to develop the site. More to come, including registration forms in Noon Balloon.

On a very somber note, it is my sad duty to report that on April 2nd, Phyllis Ashford, wife of our past President, Bob Ashford, passed away. This is covered at greater length in this issue, but you will recall that Bob & Phyllis were involved in a serious accident, following our Reunion in Sunnyvale, CA. They both suffered broken necks, but survived. The cause of death was severe bacterial meningitis. Our hearts go out to Bob as he deals with the loss of his dear wife.

Also covered in this issue, is the amazing amount of news coming forth about LTA, both from a military and civilian standpoint. Rather than dealing with a historical part of aviation, we seem to be at the forefront of a whole new era of LTA aviation. Our hardworking "Noon Balloon" editor, Richard Van Treuren, is on a first name basis with many of the key people in LTA developments. As developments occur we will cover them. Also, we hope to have a speaker at the next Reunion from one of the major defense contractors. As always, your letters and photos to the Editor are appreciated and remember to tell your friends about membership in the NAA.

- Ross Wood, NAA President



MEMBERSHIP COMMITTEE UPDATE

So much new information was released in the last update, this one seems to be a letdown. However, the Centennial of Naval Aviation celebration is rolling along and the editors of their newsletter not only printed a version of our LTA Fact Sheet on WW II and the K-type airships, but also covered the MZ-3A on their Then & Now page. We have been told that our other (3) Fact Sheets may also be covered in forthcoming editions.

Speaking of the Fact Sheets, our History section on the NAA website continues to expand with very informative biographies, short videos and articles. NAVAL AIR NEWS printed an article by Don Kaiser and NAVAL HISTORY magazine showed an illustration of a rigid airship on the cover of their June 2011 issue and an excellent article on rigid airships inside. These (2) articles should be available on the website. Please look at the history section and see how easy it would be for you to provide an article or personal experience to be shared. The more information we can publish the more attractive our site and organization becomes to other LTA veterans, historians, researchers and those interested in aviation. Current developments in LTA have again brought attention to the future possibilities of LTA for the military. Our goal is to make the NAA website THE source for Navy LTA.

Small Stores is on a roll. The new ball caps and shirts have been well received. Shirts are currently available in navy blue, but white will be introduced soon. Women's sizes in a variety of colors will also be added soon. Finally, the NAA lapel pin/tie tack is being restocked. Many of you have asked about them as yours were lost or broken through the years. Watch the NAA website for an announcement.

As always, we welcome any comments, suggestions or help in recruiting new members to the NAA.

- Fred Morin, Chairman

SEC - TREASURER'S STRONGBOX

By now, most of you are aware that our next NAA Reunion is being planned for 2012. The reunion will be held at the DoubleTree Hotel (below) in Tucson, Arizona, May 2, 3 and 4, 2012. Further information will be available in future announcements.

The Treasurer's Strongbox has been able to maintain enough funds to continue our programs at present. Your continued support will keep us solvent!

Don't forget to submit your story - it could wind up in print in The Noon Balloon, or on the website, or both.

WELCOME NEW MEMBERS

Jeffrey Matthews, Twentynine Palms, CA
Herbert Race, Leonardtown, MD
George W. Diemer, Marlborough, MA
David Crawley, Orange, CA
Eric E. Heinicke, Ocala, FL
Clinton Duke, New Bern, NC
George Doughty, Dallas, TX
Jay Steingold, California, MD
Erskine "Pete" Ausbrooks, Hendersonville, TN
Clarence E. Roth, St. Louis, MO
Robert Parkinson, Hollywood, MD
Robert Mangassarian, Leland, NC
Ruth Forand Fanelli, New Smyrna Beach, FL

DONATIONS

Walter G. Swistak
Fran F. Mayfield
Erskine "Pete" Ausbrooks, Jr.

- Peter F. Brouwer, Secretary/Treasurer





PIGEON COTE

Maj. Daniel C. Gibson, USAF, BSC, (above) Chief of Flight Safety, Air Force District of Washington e-mailed Fred Morin, “Greetings from (near) our National Capitol! For those that remember my brief spiel during the Reunion banquet last year, airships are back in business in the DoD! You are all aware of the Navy’s MZ-3A (proudly featured in this Noon Balloon) and the Army’s LEMV. The Air Force is also in play with our Blue Devil II (optionally-manned) ISR airship.

I am currently assisting this program and am the Air Force representative to the Joint LTA Aerospace Physiology and Survival Working Group. This working group is charged with developing a Joint Aerospace Physiology (Aero-Medical) and Survival Training Curriculum.

This is why I am writing to ask for your (and the entire NAA memberships’) assistance. We would like to see if anyone out there might still have their training syllabi for the training they went through back in the good ole days. If there are any paper copies available, if anyone could do their best to recreate that syllabi (primarily the water survival portion) from memory and forward it to us, ANY assistance would be GREATLY appreciated!!! I hope this finds each of you and your families well! Until we all meet again in Tucson, UP SHIP!!!”

The Major’s address is: AFDW/SEF,
1602 Brookley Drive, Suite 262
Joint Base Andrews, MD 20762

C.P. Hall e-mailed, “Regarding the cover story in the June 2011 issue of NAVAL HISTORY there is a failing that may draw criticism. Perhaps my observation is best illustrated by analogy. The *Iowa* class battleships of the U.S. Navy and *Olympic* class ocean liners of Britain’s White Star Line have some things in common. Both were large steel ships. Both

were just over 880 ft. in length; in fact the longest of their types when completed. Both had an announced designed displacement of about 45,000 tons as completed. *Missouri* was a battleship while *Titanic* was a passenger liner.

The *Akron*-class Zeppelin Rigid Scouts of the U.S. Navy and *Hindenburg* passenger Zeppelin of the Deutsche Zeppelin Reederei have some things in common. Both were large, duralumin-framed, fabric-covered rigid airships. Both were about 800 ft. in length; in fact the longest of their types when completed. Both had a lifting gas capacity of about 7 million cubic feet. *Macon* was a naval scout while *Hindenburg* was a commercial airliner.

Whether these comparisons are significant, specious, or merely silly, is in the eye of the beholder. What is a curious, undeniable truth is that numerous articles and essays have been written about battleships of the *Iowa* class; most, if not all, never mention the *Titanic*. Numerous articles and essays have been written about airships of the *Akron* class; many, if not most, include a reference to the *Hindenburg*.

While I would never postulate that a failure to mention the *Titanic* is an omission that somehow unfairly enhances the reputation of the *Iowa*-class battleships; I do submit that the mention of the *Hindenburg* in conjunction with the *Akron*-class is often a slur, a substitute for critical examination, or thought. All too often, serious consideration of the type, the engineering challenges, its unique capabilities (but for what price?), and the intrusions of international, national, and naval politics, are blown off. The alternative is, “The *Akron* and *Macon* both crashed in bad weather. The *Hindenburg* crashed too which proves the point” End of discussion.

In this particular case, I make no claim of such a defamation of naval airships. Norman Polmar is a scholar of known repute as the content of this article demonstrates. It almost appears that the article was completed when someone noticed that, with the photos included, there was a need for one more column to fill the allotted space. To fill the hiatus, comments about the Empire State Building and the *Hindenburg* were trotted out and cut to fit. I hope that I am correct; and that Norman Polmar’s otherwise informative article does not suffer criticism rooted in the analogy offered above.” Ω



Gene Albro sent in a short summary of his LTA experiences: "In 1943, I was a 19-year-old 3rd Class Aerographers Mate when I was assigned to Iburra Field, Recife, Brazil awaiting transfer to Blimp Headron 4, Detachment 41 (it was never referred to as ZP 41 while I was with them). First assignment, Sao Louis, Brazil. My introduction to blimps there was mostly being called out for landing parties, starting with long lines, then short lines and eventually being trusted to be one of the car party.

Sao Luis was a nice liberty town; but, getting there from the base required the truck to pass the Brazilian army barracks. We had to lie down in the truck because occasionally shots would come thru the canvas cover. Their army was trained and equipped by Germany and they were not too thrilled to have Americans there.

I was promoted to second class and transferred to Igarape Assu, 02/35S 050/48W. We were surrounded with jungle. In J. Gordon Vaeth's book, "Blimps and U-Boats," he mentioned "while Amapa was bad, Igarape Assu was worse, only blimps and small planes could land there." It was a hardship base, especially during rainy season. The landing parties were "all hands." We had many landings which required dumping the fuel and coming in fast. The ground parties really had to work hard to stop them while sliding thru the mud; but we always stopped them. We also had "all hands" when we had replenishment of helium by the railroad which ran near the base. Those tanks were heavy! The best part was at chow that evening. Cold beer was served to us, compliments of the Commander. That was the only time in my Navy career that ever happened!

The base was completely isolated and the town had one bar, one general store and no more than a hundred citizens. We usually had two or three K-Ships at the base. I remember one time as I went to take some readings about 5 a.m.; I looked over to the field and saw two K-Ships standing on their nose hooked on the masts. It was quite a sight. I understand the watch standers both fell asleep. There, I got my chance to fly a couple missions. My assignment was observer; but, if we contacted anything I was to man the door position with the BAR or Thompson. We never made a contact while I was with them. The squadron did lose one K-Ship, no casualties. Fortunately, it went down at the shoreline and the Air Force picked up all but the rigger who stayed with the ship until a team from the base made way thru the jungle to pick up all that was salvageable and him. I don't

know what happened with the car and the envelope. It would have been almost impossible to save it without special equipment. The rigger had kept comfortable in a fresh rainwater pool that formed in the collapsed blimp. I never heard of the cause of loss. I don't remember the exact date of the crash, but it was either late in '43 or early '44.



Ed note: That was likely the K-90, seen here at WFL after suffering the indignity of an oil-based engine fire. According to James Shock's US NAVY AIRSHIPS, K-90 was put in the jungle by a horrendous tropical deluge which snuffed both engines. Another NAA vet had also remembered sustenance offered by fresh water collected in a collapsed envelope.

I flew a couple of times with Lt. Bud Coughlin. In April '44, I was picked to attend pre-midshipman school in Asbury Park, N.J. Bud Coughlin's family lived in that town, and, he asked me to stop and see his mother and assure her that he was OK, which I did. I was billeted in the Berkley-Carteret Hotel and I visited her and mentioned to her where I was located. One day I looked out my window and saw a K-Ship moving back and forth in front of the hotel. I couldn't figure what the pilot was doing. The next day, I was called to the C.O.'s office and who did I see waiting to take me on liberty, but Bud Coughlin. He had been transferred to Lakehurst shortly after I left Brazil and he wanted to look me up. I remember we had great liberty together. Bud was a former Marine corporal before he went to flight school, so the difference in rank didn't matter at all. Unfortunately, I lost contact with him. Perhaps one of our members has some information as to where he went after Lakehurst or where he is now." Ω



Bill Walker reported the passing of his mother Shirley, (above left) widow of longtime LTA advocate Hepburn Walker, Jr., Bill's dad. Past NAA Pres. **Bob Ashford** also lost his wife, Phyllis (above, right). **Torp Toleno** e-mailed, "Yesterday I had a call from David Venn. He reported the passing of two association members: Mrs. Max (Dede) Cawley, wife of NAS Lakehurst Executive Officer in the late 50's and early 60's and Glenda Burke Hoke, daughter of CDR Burke, based at Lakehurst in the late 50's and early 60's." Ω



NAA Tres. e-mailed a report on his family's recent Zeppelin NT ride when *Eureka* masted in Florida: "Front to back - **Pete Brouwer**, Kate Prokop, Emily Prokop, Alex Prokop and **Betty Brouwer**. Kate, Emily and Alex are our grandkids. They had a wonderful time. Their heads were out the window and their noses to the glass practically the whole time. They flew over Harry Potter, Hogwarts Castle, SeaWorld, Wet N Wild. Had a great time. Ω



TCOM Recognized by Department of Defense

TCOM and its employees were recognized by the Department of Defense for their hard work, quick response and dedication in the creation of aerostats for use by the armed forces' Persistent Ground Surveillance System (PGSS). "TCOM proved to the Department of Defense, and more important to the troops on the ground in forward operating bases, the crucial role that aerostats play in the military," said Alex Lovett, Special Assistant, Office of the Secretary of Defense DDR&E/RFD, "The United States will never go to war again without aerostats." The aerostats delivered by TCOM measure 22 meters in length and are tethered to the ground via a cable and mooring system. Each aerostat is equipped with cameras that search an area beyond the perimeter of a forward operating base (FOB), supporting military operations. The PGSS aerostats have aided US and coalition forces in locating insurgents' hostile activities. "The information provided by these aerostats has reduced injuries and deaths caused by IEDs by 30%," said Mr. Lovett. "The role that these aerostats play can never be underestimated, and the troops on the ground are certainly grateful."

The company was recognized for its fast turnaround on the PGSS program with President and CEO David Barlow accepting the 2010 Department of Defense Rapid Fielding Award. "This award was made possible by every TCOM employee and their hard work. Barlow said "We're doing more than fulfilling contracts and servicing a client, we're helping keep our troops safe."



Mr. Lovett gave special recognition to TCOM's engineering, production and customer service activities directly associated with supporting the rapid fielding of the PGSS Aerostats. Ω

Hunt Inducted Into Hall of Fame

Embry-Riddle Aeronautical University's former president Jack R. Hunt was inducted into the Florida Aviation Hall of Fame, at the Florida Air Museum (located at the Sun 'n Fun Air Show Lakeland, Linder Regional Airport) May 21, 2011. Hunt, who passed in 1984, was Embry-Riddle's longest-serving president.



In 1957, CDR Hunt commanded the Navy blimp ZPG-2 "Snow Bird" on the longest unrefueled, trans-Atlantic flight in history. The ASW airship flew from South Weymouth, Mass., to the coasts of Portugal and Africa, then turned west and ended the 11-day mission at Boca Chica Field in Key West. For this achievement, he was awarded the Distinguished Flying Cross by Fleet Admiral "Bull" Halsey and later the Harmon Trophy by President Eisenhower. Hunt served as president of Embry-Riddle from 1963 to 1984, during which he relocated the school from Miami to Daytona Beach and watched it become accredited as a full university.



Commander Hunt was represented at the induction ceremony by his widow Lynn Hunt-Doten and her husband, former Embry-Riddle vice president Eric Doten. (Above, center; at left, making the presentation is John Burton, President, SUN-'N-FUN. Partially obscured to the extreme right is David McLay, Director, Florida Aviation Historical Society.) Ed. and Deborah Van Treuren were on hand representing NAA. Other inductees were Colin Kelly and Lawrence Sperry.



Ed. and Dr. **Robert Hunter** recently paid a visit to the campus and entered the school's library (above). Though no university offers an LTA-dominated course for study, ERAU shows notable references to its mentor's airship background. Student studies and artifacts on the LZ-129 are featured in a display case. Probably the only such university to do so, it places the magazine you are holding on its racks (below) alongside pros produced with much larger budgets. There is even a back issue service file dating back to #70.



Meanwhile back at the Florida Air Museum (at the Lakeland airport) one could only expect the collection to be dominated by examples of experimental airplanes. Yet a respectful amount of space is allotted to LTA. Jack Hunt's photo will hang on the wall of fame not far from this display of outer covering, gas cell material, and a propeller from the ZR-1 (below). Ω



COVER STORY

Navy Airship Visits NAS JAX Event

By **George Allen** Photos by Ken Kula



CDR Don Walsh (left) and CDR George Allen visited the MZ-3A at NAS JAX 4 April 2011.

NAS JAX hosted a centennial for all the vintage aircraft associated with Anti Submarine Warfare (ASW) and the MZ-3A represented LTA ASW. It flew in April 3rd for the April 4,5,6, event. NAA member CDR Don Walsh and I planned to visit the ship when the program commenced at 0930 on Monday. Arriving that morning we entered via the VP-30 hangar.

A van carried us on a circuitous route across the field to where the ship was masted. Upon arrival we were met by CDR Jay Steingold, CO of VXS-1. The squadron is located at Patuxant River. The ship hangs at Lakehurst in Hangar 6. CDR Steingold was accompanied by Mr. Stephen Huett, Director Navy Airships, Airship Systems Engineering team. CDR Steingold was a most gracious host and presented me with a MZ-3A ball cap and “tee” shirt. After an hour of “sea stories” I was invited to climb aboard the ship.

What a thrill. It had been over 50 years since I sat in the cockpit of an airship. The last time was August 3, 1960. I was attached to AT&D as one of the five BIS pilots for the ZPG-3W, and my last flight had been in ZPG-2 135447.



George Allen in the co-pilot seat of the MZ-3A at NAS JAX 4 April 2011.

Jay then took my logbook and logged 0.1 hours of special crew time in the MZ-3A. It made the end of a memorable day. Thanks Jay! Tuesday night we attend a dinner along with 500 others. I had a terrific time. Ω





Goodyear Announces Blimp Fleet Replacement

(compiled from press releases & internet reports)

With their existing blimps nearing the end of their life cycles, Goodyear has made a pact with ZLT Zeppelin Luftschifftechnik for new airships. "Our current airships are approaching the end of their life cycle, and we saw this as an opportunity to take the next evolutionary step in our airship program," said Nancy Jandrovic, director of Goodyear's global airship operations. (Above, flanked by Thomas Brand, Zeppelin CEO and Andreas Brand (right).

A prototype of the upcoming zeppelin-based airship, with Goodyear logo, flew around Europe last summer. The new Zeppelin LZ N07-101 airships will be built by teams from both companies at Goodyear's Wingfoot Lake Airship Hangar near Akron, Ohio, Goodyear said. Construction of the first airship will start in 2013. Goodyear said that the new airships will be 246 feet long, considerably larger than the current 192-foot-long ships. The airships will be powered by three Lycoming IO-360 engines and propellers can be tilted up and down, or vectored, which allows the airship to take off and land in smaller spaces. Top speed will be 73 mph compared to 54 mph now. The cabin will be much quieter at 64 to 69.4 decibels compared with 110 in blimps.

The blimps are based in Akron, Pompano Beach, Fla., and Carson, Calif. The first new GY-ZEP is scheduled to fly in early 2014, replacing the *Spirit of Goodyear* that is Ohio-based and scheduled to retire at the end of 2013. The newest Goodyear blimp, the Spirit of Innovation built in 2006 and based in Florida, is to be removed from service in 2017. Its U.S. sibling, the *Spirit of America* in Carson, Calif., is to retire in 2015. The \$21 million cost of each airship, which includes technical support, is worth it, Goodyear spokesman Scott

Baughman said. "We always talked about the value. It's a great value," he said. "You already have 80 years of brand exposure. This will continue that." Goodyear built its first blimp in 1917 and has built more than 300 airships since then. "An event isn't considered truly special unless the Goodyear blimp is there to provide aerial coverage," said Richard J. Kramer, Goodyear chairman, CEO and president. "I am pleased this investment will ensure that future generations will have the opportunity to experience the joy of seeing the Goodyear blimp grace the skies." Ω

Other Zep News...

The AP (6/3) reported the Zeppelin NT, "the largest flying airship in the world is coming to Wisconsin" for the EAA AirVenture show. As of press time Brian Hall e-mailed, "Our next 2 passenger stops are Miami-Ft. Lauderdale Hollywood (starting this coming weekend) and Norfolk (ORF). Then off to NJ (Solberg) and Philly, before heading to the Great Lakes region (Ann Arbor, Grand Rapids, Chicago, Wisconsin, Oshkosh Air Show, Ohio, etc) After that, we head down the middle of the US back to Texas, for 3 passenger stops in Texas, then we head back through AZ and NM (unfortunately no pax stops) to get back to base in October." Ω

The UK's The Register (4/29) reports Moon Express "has announced that it is flight testing new NASA-funded robot moon lander technology aboard a [Zep] with the aid of an iPhone app intended to exploit social networking." The "Mini-Radar" system will be flown on the Zeppelin *Eureka* based out of the Ames Research Center. Moon Express "is headed up by Bob Richards of the International Space University, philanthropist entrepreneur Naveen Jain, and Barney Pell, Chief Architect of Bing Local Search." Ω

SHORE ESTABLISHMENTS – AKRON



The *Eureka* is seen moored on the North side of Akron's iconic Airdock. *Eureka* stopped in Akron overnight as it traveled from Pittsburgh to Michigan, continuing on its tour of the United States. (Eric Brothers photo)



Later this year a project by Lockheed Martin in Akron to build new high-altitude airships for the Army will take a big step forward. That process began as the company rolled out one of the prototype airships for testing at the big air dock in South Akron. Lockheed Martin spokesman Keith Little tells Akron News Now, "We're calling it a concept demonstrator, the third step before the high altitude airship would go into demonstration or testing mode. We're pretty far along on the testing so there should be a test flight later this summer to test all the capabilities of the airship."

Little says once an airship prototype passes all the Federal Aviation Administration flight tests the company can begin producing the new airships, which will fly at 60,000 feet and serve as reconnaissance and support platforms for the U.S. military around the world. (Akron News Now) Ω

Ewa, Hawaii

Via an e-mail we were made aware of the site http://www.december7.com/1941/Ewa_Navy/index with its rare images and information concerning the rigid airship mast first erected for ZR-1. The mast was later lowered for ZRS-5 with added mooring circle. Excerpts: Ewa is one of Hawaii's oldest airfields and was built in 1925 to be a mooring mast [base] for the Naval Airship program. Not used for that purpose, it became a Marine fighter airfield in 1941, just in time to see major combat during the Pearl Harbor attack. The Marines adapted the mast into a control tower as the former Class B airship base became the birthplace of USMC Air Pacific (below)... Marine pilots that faced highly experienced Japanese pilots at Wake and Midway Island battles had minimal flight experience with out-classed older planes.



"A very major and crucial moment has arrived in the preservation of Ewa Field and its battlefield history. This Ewa Field area, since the based closed in 1952, has very large numbers of endangered bird. The Navy has hired an historic preservation officer to conduct a "Section 106", required by Federal Law, to access the historic and preservation value of the Ewa Field site."



"Often overlooked is the number of pilots who were injured or killed in training crashes." (SBD recovery, above.) Ω

Moffett Field



2005 AERIAL IMAGE BY PICTOMETRY.COM

The project will be divided into six zones across the 1,133-foot-long hangar. Work will start from the south end and progress northward. Once restoration is completed in the current zone, work will begin on the next.

Siding to start coming off Hangar One (excerpt)

by Daniel DeBolt, Mountain View Voice Staff

A Navy contractor will begin tearing the toxic laminate siding off of Moffett Field's Hangar One on Wednesday, beginning a process that is expected to turn the massive icon into a bare skeleton by early next year.

Scott Andersen, Navy Base Realignment and Closure coordinator for Moffett Field, said in an e-mail that workers were expected to begin to remove siding on the southern end of the hangar Wednesday, working from the top down.

U.K.-based Amec Environmental has been contracted by the Navy to do the work, and has already conducted an extensive demolition of the hangar's interior buildings. The move comes after years of work by local community leaders to save the landmark building. While the frame will receive a new coating of paint to help protect it from corrosion, the situation has not pleased historical preservationists, including **Bill Wissel**, member of the Moffett Field Historical Society [& NAA].

"Without the protective siding, the skeleton structure will be exposed to the elements and will begin to deteriorate pretty quickly," Wissel said in email. That will mean visual blight and safety concerns. Birds nesting in the bare frame could be a hazard for planes landing at Moffett. It won't be long before public opinion shifts and there will be an outcry for complete demolition. That's the "demolition by neglect" concern that everybody has been voicing for the past few years.

Funding to re-skin the metal skeleton has yet to be secured. President Obama's budget proposal for next year includes \$32.8 million to allow NASA to restore and reuse the hangar, which may be cut in another budget battle with Republicans next year.

The Navy has said that it needs to remove the siding now because a temporary coating is failing which could allow toxics from the hangar to collect in storm drains.

Hangar One preservationists had a small victory in March when the Navy announced that it was working with NASA to keep Hangar One's unique wire reinforced corrugated windows in place during the siding removal instead of destroying them. But on Tuesday Andersen said that plan is still not set in stone, but should be resolved by the end of the month. The windows were designed to withstand the explosion of a 1930's airship filled with hydrogen.

The 200-foot-tall hangar was built during the depression to hold the U.S.S. *Macon*, an airship used by the Navy between 1933 and 1935. The floating aircraft carrier held several small planes that could be deployed from its belly. It crashed off the coast of Point Sur in 1935.

Earlier this month NASA Ames sent out a "Request for Information" to obtain vital information about the contractors who may soon be able to bid on Hangar One's restoration. Responses are due April 19. NASA wants new metal siding and roof and a restoration of the hangar's historic windows and estimates the project's cost at "over \$25 million." A similar Request for Information was sent to contractors last year but received few responses and some were incomplete, NASA officials said.

Wissel said that he remains hopeful. "Hangar One was assembled by a lot of the same guys who built the Golden Gate Bridge and the Oakland Bay Bridge," Wissel said. "A lot of the same construction companies were used. There is as much history in Hangar One as any structure in the bay area, and it can't be replaced."

Wissel added that because of the many proposed uses for Hangar One, including an air and space museum, "Hangar One is one of the few that stands a chance of paying for itself." Ω

TECHNICAL COMMITTEE

Work continues toward tight deadlines for development of the LEMV airships by the Northrop Grumman company and on the Blue Devil airship by the MAV6 company. The first of three LEMV airships is scheduled to be delivered to the U.S. Army in November 2011 followed by deployment to Afghanistan for a Joint Military Assessment in 2012. In less than four months they completed their System Readiness Review, Initial Baseline Review and Preliminary Design Review and passed its Critical Design Review in February 2011. A similar schedule exists for delivery of the Blue Devil. Although both airships will fly similar missions they differ in design. The LEMV will feature a three-lobe envelope, built by ILC Dover, enabling 40% of its lift to be generated by aerodynamic forces. This arrangement allows higher payloads to be carried with a smaller airship. The Blue Devil uses a conventional nonrigid envelope fabricated by TCOM Lp. Both airships will operate at 20,000 ft. altitude using wide-area sensors and advanced communication architecture. Northrop Grumman received a \$517 million for 3 LEMV airships. The single Blue Devil project cost \$211 million.



The Lockheed Martin Corp. using the technology developed from its P-791 experiments plans to build a larger "Sky Tug" hybrid (above) under contract from Aviation Capital Enterprises in Canada. It would use a three-lobe envelope 1.4 million cu. ft. in volume, 370 ft. in length and carry a payload of 20 tons. The first airship would be demonstrated under an experimental license. A second ship would be used for certification tests in late 2012 and cost \$86.2 million.

Development of the SkyHook hybrid by Boeing for SkyHook International Inc. has halted due to lack of funds. This heavy-lift aircraft would combine helicopter and airship components to transport up to 53 tons over the undeveloped Canadian North.

The Goodyear Tire and Rubber Co. plans to replace its GZ-20 nonrigid airships with Zeppelin NT07-101 semirigid. These will be assembled at Goodyear's Wingfoot Lake base beginning in 2013 replacing the Wingfoot Lake *Spirit of Goodyear* followed by the *Spirit of Innovation* based in Pompono Beach, Florida and *Spirit of America* in Carson City, California. The new airships will offer significant improvement over the old fleet with more seats, higher speed and state-of-the-art in controllability. Each airship will cost about \$21 million. [See page 10]

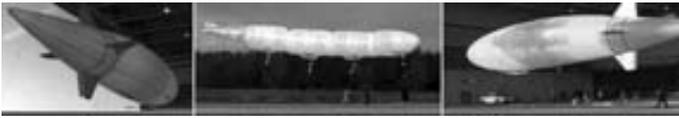


Goodyear also had leased two A60+ airships from the Lightship Europe Ltd. (top) These 70,000 cu. ft. airships will tour the U.K. and European countries. They are named *Spirit of Safety I* and *II*. Their mission was to encourage safety on the highways.

Zeppelin has started work to rebuild NTO7 No. 02 which was the airship purchased from Zeppelin by the Japan Nippon Aircraft Company (below) until bankruptcy and repurchased by Zeppelin. First flight is planned for April 2012. It is already planned for the summer of 2012 for science flights over Italy and northern European countries. It will incorporate new materials in its structure. Lockheed Martin expects to launch its HALE-D unmanned airship this summer for a stratosphere flight.



A Zeppelin airship was engaged in an endurance and distance flight beginning on March 23 and landing March 24 having covered 783 NM in 24 hrs., 40 minutes. A crew of three participated. They departed with 1140 kgs of fuel and landed with 450 kgs, enough for an additional 10 hrs.



The Sanswire Corp. announced that the company has completed initial U.S.-based test flights of the STS-111 UAV under flight tower control. Following additional systems tests, the partners will commence integration of equipment into the payload bay and commence flight tests with the goal of operating at 10,000 - 15,000 ft. through the control of a certified UAV ground control station.

Small Airships – The Ogden, Utah police have been experimenting with a 52-ft. nonrigid airship outfitted with two cameras and capable of flying at 40 mph at 400 ft. altitude. The blimp was developed by the Utah Center for Aeronautical Innovation and Design at Weber State Univ.

The University of Delaware recently acquired a 60-ft. remote-controlled blimp. It operates at altitude of 500 meters with payloads up to 100 lbs. It has a volume of 8,000 cu. ft. It is powered by 2 3W motors which can drive it up to 25 kts. It was built by Galaxy Blimps in Dallas, TX.



SAD NEWS: One of the A60+ Lightships leased by Goodyear was attempting a landing at the Reichelsheim aerodrome north of Frankfurt, Germany, and impacted the ground severely. The landing gear was damaged along with the engine support structure. The damage created a fuel leak and fire which quickly spread to the car. The pilot realized the danger and shouted to the three passengers to jump to the ground about six feet. The change in weight caused a rapid rise so that further safe exiting was not possible. The fire rapidly consumed the airship and killed the pilot. An official investigation will be conducted.

- Norman Mayer, Chairman



Blimps Compete Above New York

By Mary Grady

In a rare event last staged 25 years ago, three blimps competed in a race above New York's Hudson River, launching on July Fourth. The race took place about 5 p.m., with fair blue skies and balmy weather, covering about three miles from start to finish. The three ships rendezvoused at about 1,000 feet above the Statue of Liberty, then raced up the river to the finish line at 59th Street, near the Intrepid Sea, Air and Space Museum. The blimp sponsored by Horizon Blue Cross Blue Shield of New Jersey, which has a top speed of about 36 mph, came in first, followed by Hangar 1 Vodka and DirecTV. Three blimps in one place may not seem like a large field, but since there are only two or three dozen airships in the world, they represented a significant gathering.



Terry Dillard, pilot of the winning blimp, told AVweb it was “perfect weather for blimping” on Monday. He said the trick to winning is to maintain a level altitude and fly straight. There was no handicapping, and “bigger is not always an advantage,” he said. The event is “a little like taking elephants to a horse race,” he said, but plenty of spectators turned out and enjoyed it, and he expects the race will now become an annual event. All three ships were built by the American Blimp Corp. The Blue Cross blimp, an A-60 model, is 132 feet long. It carries a pilot and four passengers, and is based in Newark, N.J. The Hangar 1 blimp, also an A-60, flies from Alameda, Calif. The DirecTV airship, based at El Segundo, Calif., is a larger A-170 model, 178 feet long, which can carry eight passengers plus a pilot. Ω

SHORT LINES

Alcoa Develops New Alloy For Planes

The AP (6/10) reports Alcoa said Thursday that it has developed new alloys and engineering techniques that will give it a chance to compete against the non-aluminum parts increasingly used by airplane makers. The article notes plane makers like Boeing and Airbus are using “a carbon fiber composite” in their newer planes instead of aluminum. Under the new process, Alcoa has reduced the weight by 10%. The company said the new improvements are targeted at short-range aircraft. John Byrne, Boeing’s director of aircraft materials and structures for commercial airplanes, said “Boeing is delighted to hear about the investments and advances Alcoa and other raw-material suppliers are making”. According to the article, while Boeing has made no decision about its materials for future planes, it is always looking at these types of developments. According to the WALL STREET JOURNAL (6/10, Matthews), the new technique is part of Alcoa’s effort to reclaim aerospace market share. Under the new process, Alcoa has mixed alloys like titanium to reduce the weight, make it less corrosive, and increase the time needed between maintenance checks... In a seemingly related story, Reuters (6/3) reports Boeing CEO Jim McNerney said Thursday at a conference that the composite-rich Dreamliner program will not initially make a profit, but he also did not specify at what point it will do so. Ω

Student Team Uses Textiles To Solve Exploration Issues / Self-Healing Sensor / Diamond Aerogel

R & D Magazine (5/31, Barnhill) reported a team of students from North Carolina State University are examining “advanced textile materials” as a way to “tackle life-support challenges that the aerospace industry has been grappling with for decades.” The team “designed a 1,900 ft² inflatable living space that could comfortably house four to six astronauts” with “flexible” materials that could protect astronauts from radiation and meteorites. They also used advanced materials to improve Sabatier reactors that produce water from carbon dioxide and hydrogen. The students “believe their redesigned Sabatier reactor would be more feasible to carry along on a future space shuttle.” Plastics Today (6/16) reported North Carolina State University scientists have developed “a sensor that can measure strain in structural materials and is capable of

healing itself, allowing for continued collection of data that can help determine structural safety in the wake of earthquakes, explosions, or other unexpected events.” The sensor has an “ultraviolet (UV)-curable resin” that can fill in a break and harden when exposed to the UV light. Kara Peters of North Carolina State said this material could be used in the event of bird strikes on airplanes one day. POPULAR SCIENCE (5/14, Boyle) reported Lawrence Livermore National Laboratory scientists have developed a “diamond aerogel” that combines the properties of both materials. The team “started with an amorphous carbon aerogel precursor and placed it in a diamond anvil cell, which is used to subject items to prodigious pressures... about 200 to 250 times the pressure at the bottom of the Mariana Trench.” The materials alone “have interesting qualities, so a substance that combines their properties could be useful for, say, optics, quantum computing or structural engineering, among others....” Ω

F-35 To Have Some Nanocomposite Components

FLIGHT INTERNATIONAL (5/26, Trimble) reported, “Lockheed Martin has revealed the F-35 Lightning II will be the first mass-produced aircraft to integrate structural nanocomposites in nonload-bearing airframe components.” The plane will feature “thermoset epoxy reinforced by carbon nanotubes” in the “wingtip fairings beginning with low-rate initial production (LRIP)-4 aircraft”, said Travis Earles, a manager for corporate nanotechnology initiatives. The material could also be used for other parts as well. The company also “has invented a process that dramatically reduces the cost to build carbon nanotube composites for aircraft structures, Earles said.” The article noted this is a “relatively new” process. Ω

Nine-Year-Old Makes Historic Balloon Flight

The AP (6/5) reported, “Nine-year-old Bobby Bradley floated into history early Saturday, taking off solo in a hot air balloon and landing perfectly about a half-hour later to become the youngest trained pilot to accomplish such a feat.” According to the article, Bradley “proved any doubters wrong” with the successful flight. The article noted Bradley launched with “three other balloons whose pilots included a designated balloon examiner for the Federal Aviation Administration and a balloonist who helped make Bradley’s special ultra-light craft.” Ω



Airship Venture Stuck On Ground At Toledo (Excerpt) by Jon Chavez, Blade Writer

Three years ago the inventor of an experimental airship designed to haul cargo moved his fledgling company from northeast Ohio to the Toledo area in hopes of elevating his unusual business idea past the start-up phase. Despite numerous meetings with potential investors and assistance from local development agencies, Ohio Airships Inc. remains grounded, figuratively and literally. The company's 110-foot long Dynalifter prototype has proved it can maneuver on a flat surface, but it has yet to fly after five years of development because the company cannot pay for the insurance that would allow the Federal Aviation Agency to clear it for an inaugural test flight. "It's extremely frustrating. We've put a lot of effort into this," said David Miller, a former business development manager for the Regional Growth Partnership's Rocket Ventures fund who is now working with Bob Rist, Ohio Airships founder and Dynalifter inventor, to move the company forward. Computer models say the \$500,000 billowy craft, which looks like a white loaf of French bread and is a hybrid between an airplane and dirigible, will soar nicely once it gets the chance to go airborne. But what is keeping the Dynalifter grounded, besides the FAA, is financing, said Mr. Miller, who began working with Mr. Rist two years ago. Ω

Sanswire: Renamed Airship Makes Test Flight

(Marketwire - 03/28/2011) – Sanswire Corp, unveiled the company's new UAV – "Argus One." The introduction of *Argus One* follows the company's recent filing of a provisional patent application in the United States for the new airship design and illustrates the uniqueness of the company's UAV design...follows years of research and development by the company of alternative LTA technologies and solutions and combines innovative approaches to LTA technology proprietary to Sanswire... As part of this refocused business strategy, the company

has entered into a Settlement Agreement with TAO Technologies that, among other things, terminates all existing agreements between the parties and provides for the dissolution of the Sanswire-TAO joint venture... *Argus One* was developed for Sanswire under contract by Eastcor Engineering, a US Department of Defense prime contractor, specializing in high technology engineering products and services...



POPULAR SCIENCE (4/21, Dillow) reports, "The tadpole-shaped airship formerly known as STS-111, currently known as *Argus One*, and commonly referred to as the sperm blimp, has completed initial flight tests and is on its way to the US Army's Yuma proving ground to undergo military testing." TAO Technologies developed the *Argus One*, which the article notes "is intended for deployment as a surveillance and communications relay drone, but the company (companies?) behind it haven't been exactly on the up and up." Ω

Aeros Developing New Rigid-Hulled Airship

POPULAR SCIENCE (5/7, Boyle) reported Aeros "is working on a new airship design that could solve one of the biggest problems facing buoyancy-aided aircraft-how to control floatworthiness without wasting fuel." At Aeros, Igor Pasternak is designing a "rigid-hulled airship" that compresses helium to control the buoyancy. Possibly next year, Aeros "will test a ship called the Pelican, a 230-foot-long, 600,000-cubic-foot rigid air vehicle with the" Control of Static Heaviness (COSH) system. While there are "some issues to iron out... changing gas density to control buoyancy seems like a novel solution to an old problem." Ω



Balloonsat High-Altitude Flight Finalists

SPACE (5/11) reports NASA is launching four experiments developed by high school students “as payloads in a NASA-built helium weather balloon” as part of the Balloonsat High-Altitude Flight contest. The four teams were chosen from a field of 22 entries and will now be in Upper Sandusky, Ohio, on May 19 for the launch. The article notes Glen Research Center scientists “will evaluate each of the four teams on active participation during the launch. They will also assess the students’ research presentations and written reports about the final results of their experiments.” A winner will be announced in July. Ω

NASA Research Balloon Lands In Australia

The Australian Broadcasting Corporation (4/21) reports, “A massive scientific balloon which was part of a research project for NASA has touched down in Longreach in central-west Queensland.” Balloon Launching Centre spokesperson Ravi Sood noted the balloon had to be destroyed as part of the program because it “can be used only once, so once you start inflating a balloon you have to use it and then you destroy it.” Ω

Cape Cod robot helps find missing U-boat

(Globe Staff) Hydroid Inc., a Bourne-based manufacturer of autonomous underwater vehicles, or AUVs, said that one of its AUVs was used by the Royal Netherlands Navy in finding a

missing World War I German submarine off the coast of Terschelling off the Dutch coast. Hydroid said that its REMUS 100 AUV aided in



the discovery of U-106, a submarine that had been missing since October 1917 when it struck a mine. The Dutch navy located the missing submarine off the Netherlands, Hydroid said. The REMUS vehicle and Dutch navy divers descended 40 meters to explore the area where a brass plate bearing the serial number of the submarine was eventually discovered, the Hydroid press release said. “After further exploration as well as confirmations from the German Ministry of Defense and the families of crew members, the submarine was positively identified as the German U-106.” Ω

Balloons vs. Buffoon: Aerial Propaganda Hits Kim Jong Il (Internet)

The United States may be hooked on “internet freedom” as its method of choice for undermining dictatorships. But activists in South Korea are using a hybrid of old-school and new technologies to get the word out in North Korea against Kim Jong Il and his pals: balloons packed with paper and digital propaganda. South Korean activists floated another cluster of balloons packed with pro-democracy and anti-regime news into North Korea today, defying the “Hermit Kingdom’s” threats to shell them into oblivion for the aerial info-war tactic. This latest balloon salvo also carries some nastygrams making fun of Kim Jong Il and his family... Ω

Companies Developing New Diesel Engine

The Wired (3/7, Paur) “Autopia” blog reported Austro Engine and Steyr Motors are developing a version of the Stery M1 diesel engine that will be “the most powerful diesel-aircraft engine available, and it also will burn the standard jet fuel used by turbine aircraft, which is much more widely available than aviation gasoline.” The 280-horsepower diesel engine is being developed for use on Diamond’s Future Small Aircraft. Diamond also “plans on flying the new engine on a DA50 later this year.”

EADS Develops New Process, H2 Fuel Tanks

POPULAR SCIENCE (3/8, Boyle) reports EADS engineers have developed a new Additive Layer Manufacturing process that has allowed them to “grow” a bicycle made of nylon” that they claim has the strength of steel. Similar to the way a 3-D printer works, the “process makes objects that are 65 percent lighter than traditionally machined objects, and uses about one-tenth the materials.” The new bike “actually consists of six separately printed pieces, including moving parts in the wheels.” ATW online (2/15, Thomas) reports, “EADS claims that nanotechnology may pave the way for new hydrogen storage tanks that could enable use of the fuel on aircraft.” The company is working with the University of Glasgow and the Hydrogen Horizons on the new tanks. The researchers “are seeking funding from the EU to build a Europe-wide team of academic and industrial partners to examine the wider issues related to using hydrogen on an industrial scale to power aircraft and car engines.” Ω

HISTORY

The World's First Strategic Terror Bombing Attack
By Herman Van Dyk; his are drawings ©2000



This map of Venice and its surroundings shows the protected position of the city. Note the massive causeway to the mainland, which was breached.

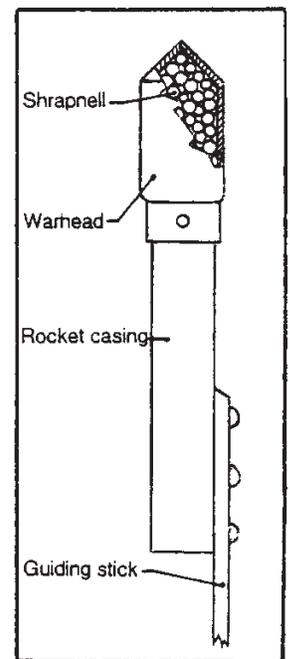
Austria, a medium-sized, land-locked country in central Europe, at one time in history Austria was what we now call a “superpower.” Through marriages and wars, the Hapsburg dynasty had expanded the country until it included most of Europe and stretched from eastern Germany to the Adriatic and almost to the Black Sea. Many different origins of people from different backgrounds and languages, religions, customs and interest under one dictatorial ruler, Emperor Ferdinand von Hapsburg, couldn't be forced into a harmonious and stable country. In 1848, local groups of Germans, Poles, Czechs, Croats, Magyars, Serbs, Slavs, Venetians and others rebelled against the authoritarian Hapsburg Regime. Emperor Ferdinand von Hapsburg stepped down in favor of his nephew, Franz Jozeph, who forced Chancellor Prince Klemens von Metternich to resign. The citizens of Milan and Venice quickly followed the uprising and in March 1848, declared the “Guerra Santa” (holy war) against Austria.

Venice is located in the northwest corner of the Adriatic on a few islands in the beautiful natural harbor of Laguna Veneto. For hundreds of years it was close to the world's most important trade routes between the Roman Empire, Carthage, Alexandria, Tyre, Constantinople, Odessa

and later to India and the Orient. The city was built on several islands in the bay and the wealth of its citizens was reflected with beautiful houses, palaces, churches and other buildings. To prevent periodic flooding, the Venetians started to build seawalls in 1752 and with that also came strong fortifications, an arsenal and large shipyards. In 1846, a major causeway constructed to the mainland and Venice connected to the Italian railroad system. Austria, not wanting to lose Milan and Venice, immediately dispatched an army under the command of Field Marshall Radetzky (1766-1858) who suppressed the uprising in Milan in 1848. Venice, on the other hand, was not going to be that easy. Due to its location, the strong fortifications and the determination of its citizens, Venice succeeded in keeping the Austrian beleaguering forces, under the command of Count Thum, at bay. The Venetians proclaimed their city an independent republic under the leadership of Daniele Marin (1804-1857).

Rockets had become the “atom bomb” of the 19th century. In 1814, the British brought this weapon to bear against Fort McHenry at the battle of Bladensburg,

as we all remember from history. Austrian artillery officers had learned about these terrifying new weapons and didn't want to be left behind in this weapons race. Artillery Major Vincenz Augustin (1780-1859) studied the British rockets and then formed his own rocket corps whose first task was to improve the British design and develop superior models. Austrian military forces were large and strong; their artillery, at that time, was considered to be the very best in the world. Austria had bought the best available



guns from the famous Krupp factory in Germany and from them developed their own improved versions. Not only the artillery, but also their rocket forces were considered to be the best and most organized in the world. So, when the Austrians beleaguered Venice, they had the world's most advanced guns and rockets in their inventory. The big problem that they faced was that the range of their guns and rockets was insufficient to reach Venice at a distance of 5,000 feet. The Austrian Navy was no match for the fortifications of Venice.



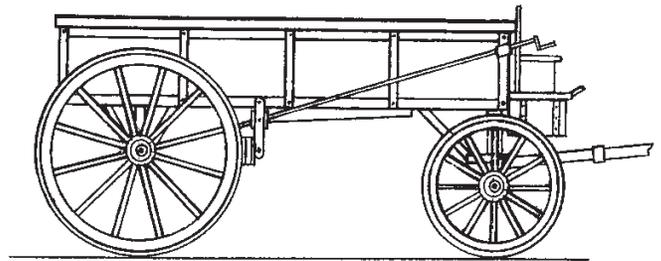
Franz Uchatius
Feldmarchalleutnant

Signed portrait of Feldmarchalleutnant Franz Freiherr von Uchatius, courtesy Army Historical Museum, Vienna, Austria

It seemed that a stalemate had been reached until someone seriously suggested forcing Venice into submission by bombing it from the air. (Imagine that in 1849!) During the spring of that year, an artillery officer, 1st Lieutenant Franz Uchatius, had conceived the idea to suspend bombs beneath balloons, let them float over the target and automatically release the bombs over the city. Preliminary tests had been conducted by 1st Lieutenant Franz Uchatius and his brother, 1st Lieutenant Josef Uchatius, under the direction of General Major von Hauslab. These tests had shown the feasibility of the invention. Emperor Franz Joseph had been informed of these experiments and immediately suggested to Field Marshal Radetzky to bring this idea into practice as soon as possible. Radetzky put the overall responsibility for this exciting weapon on Field Marshal Lieutenant Baron Vincenz Augustin, who had earlier forged his own rocket forces into a formidable weapon. On March 17, the well known and capable artillery officer, 1st Lieutenant Franz Uchatius, was ordered to design an operational version of his test models and demonstrate that a city the size of Vienna could be successfully attacked from the air. The lifting capacity of the balloons had to be established and the influence of the direction of the wind at different heights had to be determined. All expenses, which until then had only amounted to 196 Florin, were to be carried by the artillery corps. The results of these tests had to immediately be reported to Field Marshal Lt. Augustin at the artillery headquarters

in Vienna. While 1st Lieutenant Franz Uchatius was still working on the design, all materials for the balloons and bombs were already acquired and transported to the arsenal in Vienna where the balloons and bombs were to be manufactured.

A better choice than Franz Uchatius could not have been made. He was born on October 20, 1811, in Theresienfeld and when he was 18 years old, he joined the artillery corps. He studied physics, chemistry and mathematics and also attended the Polytechnical College in Vienna. In 1841, he was transferred to the gun factory in the arsenal, where he studied metallurgy and engineering. He soon demonstrated his abilities by successfully modernizing the entire factory and the various manufacturing processes. Only nine days after he had been given the go-ahead, on March 26, Uchatius



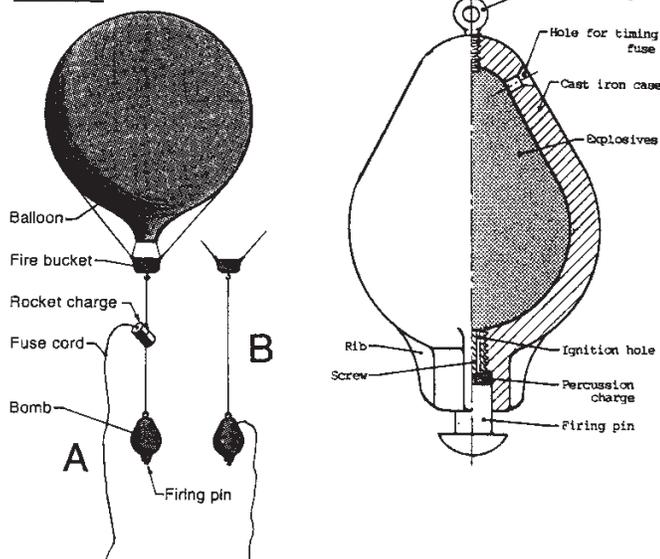
reported to his superior Augustin at the Artillery H.Q. that these further experiments had been successful which warranted the start of the manufacturing of the operational version of the balloons.

Typical four-horse cart used to transport balloons and bombs.

Three weeks later, the first batch had been completed and on the afternoon of May 15, Uchatius released the first four trial balloons from a hill, "Lauerberge", southeast of Vienna. The Montgolfiere-type balloons were made from paper and had a diameter of 5.7m, (18.7 feet). They carried 15kg, (30 lb.) of fuel and instead of a bomb, a 15kg (30 lb.) sandbag. The amount of fuel carried was sufficient to keep the balloon in the air for 30 minutes. The flight characteristics, such as the speed, the horizontal, as well as the vertical flight paths, were carefully monitored and recorded. During this test, the sandbags were dropped 16 minutes after take-off. It was clearly shown that all bombs would have fallen within the limits of a city the size of Vienna. The balloons came down at a distance of between

9,500m and 10,600m, (6 and 6.6 miles) after a flight of approximately 30 minutes at an average height of 2,000m (6,500 feet). The sandbags, released 16 minutes after take-off, reached a distance of between 5,550m and 6,040m (3.5 and 3.8 miles). The wind speed measured with a wind velocity meter, was 10m/second, (30 feet/second). The dispersion of three of the four balloons was within 336m (1,200 feet). For that time, these results were rather impressive! A fifth balloon, released at a later time, covered a distance of 13,700m, (8.6 miles), in 27 minutes with a wind velocity of 16m/second, (50 feet/second). Field Marshal Lt. Augustin happily reported the good news to the War Ministry in Vienna. As could be expected, after learning of these successes, Field Marshal Radetzky, under the heading of "Urgent", ordered Augustin to accelerate the manufacturing of the balloons as much as humanly possible and rush them with the proper instructions for their use to the front near Venice. Immediately after receiving this letter, dated June 6, 1849, Augustin issued an order to Uchatius to have 100 balloons constructed for which the materials were already on hand.

Not to scale.



(L) Two types of balloon-borne weapons: A, explosive; B, shrapnel. (R) Half-section view of bomb construction. The explosives could be mixed with shrapnel such as small lead balls.

The very first decision that 1st Lt. Franz Uchatius had to make was whether to use hot air or hydrogen balloons. Hydrogen balloons require cumbersome gas generators and large amounts of heavy materials, such as scrap iron, sulfuric acid and lots of water for the dangerous and very slow process. Chances were great that by the time the balloon was filled, the wind had

changed direction. Obviously, the only sensible choice was to use Montgolfieres, or hot air balloons, which drove the second decision, the materials to be used for the envelopes. Uchatius chose papers as the most suited, since they were low cost, readily available and easy to work with. The paper was reinforced with strips of cotton. The shape of the balloon was spherical with a slight pear shape at the bottom. It had a diameter of 5.7m, (18.7 feet), and a height of 6.3m, (20.6 feet). Its volume was 97m³ (3424 cubic feet) which gave it a maximum lift of 32kg (68 pounds). The bottom edge was held open by a wooden hoop. A fire bucket was suspended some distance below the opening. It consisted of a rather flat iron bucket filled with 9kg (20 pounds) of charcoal and a 3.4kg (7.5 pounds) heavy mixture of cotton and fat. With the exception of the cotton, the whole thing was very much like a well used barbeque set in our own backyard! The amount of fuel was sufficient to keep the balloon in the air for a period of 33 minutes maximum. This, and the velocity of the wind, determined the maximum operational range. The bomb was suspended from a lug that was attached to the bottom of the fire bucket. A complete balloon, including the fire bucket, could be built by 5 men in a single day at the cost of 9.36 Florins!

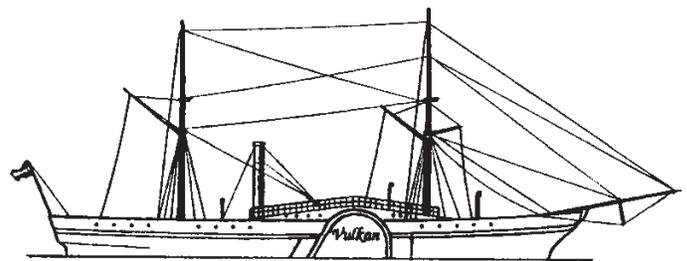
The bomb consisted of a pear-shaped, thick-walled cast iron shell with a suspension lug screwed into the top and the fuse into the bottom. The ignition charge was held between an insert screwed into the bottom and a mushroom-shaped firing pin. Three small holes, drilled through the insert, led from the ignition charge to the main explosive charge. The firing pin was held in place by a clip. The explosive charge consisted of 80 parts saltpeter, 12 parts of sulfur and 14 parts of charcoal. An extra hole was cast in the wall of the shell near the top. It could be used to fill the bomb with explosives and/or additional shrapnel, such as 500-600 small lead balls (shot) or small pieces of scrap metal. The bomb could be used in two different ways: (a) as a regular bomb that detonated on impact or (b) as a shrapnel bomb that exploded above ground before impact. In this fashion, it became the forerunner of a modern anti-personnel device. To use it this way, the timing fuse had to be inserted in the explosive charge through the extra hole near the top. The timing fuse consisted of a very slow burning fuse cord. Knowing the burning rate of this cord, the velocity of the wind, and the distance to the target, the required length of the fuse cord could be easily calculated. It was very

important that the composition of this cord was very precise and homogeneous. Fortunately, the Austrians had become experts in the field of explosives because of their extensive development work on rockets and artillery in the years prior to this war.

If the bomb was required to explode on impact, then a different technique had to be used. In this case, an extra explosive charge was attached to the suspension cable of the bomb halfway between the bomb and the fire bucket. The timing fuse now led to this explosive and when time ran out, the explosion shattered the suspension cable and released the bomb. At the same time, the explosion ripped the balloon apart and the red-hot fire bucket became an instant incendiary device. There is some evidence that rocket war heads were occasionally used instead of bombs. Part of the rocket propellants could have been used to sever the bomb suspension cable. The process of launching an operational balloon from start to release took approximately 30 minutes and consisted of the following steps: 1. Determine the direction and velocity of the wind, the distance to the target and move the launching equipment to a location upwind from the target. 2. Release a trial balloon, observe and plot its flight trajectory and determine the flight time to its target. 3. Correct the location of the release point and set up the windshield. This windshield protected the balloon on three sides and the top. The Austrians referred to it as a "Tent". 4. Place a fire bucket with a balloon on a cart inside the tent and inflate the balloon. 5. Attach the bomb, calculate and cut the length of the fuse cord and attach to the bomb. 6. Roll the cart with the inflated balloon out of the tent, light the timing fuse and release. 7. Observe the trajectory of the balloon and time that the bomb is dropped. 8. Correct the location of the release point and the length of the fuse cord, if necessary, for the next balloon.

Another officer had to be trained in the state of the art of aerial bombing who could take over the responsibilities of Uchatius at the arsenal. This was also an artillery officer, 1st Lieutenant Portsch. As soon as 1st Lt Portsch was ready to take over, 1st Lt. Uchatius and his brother had to leave Vienna and rush to artillery headquarters in Mestre, taking the 14 balloons, which had already been completed, with them. They were expected to arrive at the headquarters in the villa "Casa Papadopoli" in Mestre within four days. Mestre is located on the western approach to the causeway which connects Venice with the mainland. Next, they had to

reconnoiter the terrain, study the direction and velocity of the wind and conduct experiments with some of the balloons they had brought with them. The results had to be reported to headquarters immediately. The 100 balloons, which had been ordered, had to be completed within 10 days and rushed to the front without delay! After 1st Lieutenant Portsch had become thoroughly familiar with this new technology, the two Uchatius brothers left for the front, leaving Portsch in charge of a great number of craftsmen who were laboring to construct and equip the 100 balloons within the allotted time. First Lieutenant Portsch also had to organize a special balloon corps and thoroughly train the men in their new profession. By June 28, the new unit reached the coast of Laguna Veneto. It was an impressive demonstration of organization and improvisation. Designing a balloon that automatically drops a bomb on a city from a distance of several miles is not that easy. A free-flying balloon is like a cork in the ocean and will travel wherever the elements take it. So, the only way it could be directed to fly over a city was to release it at a point exactly upwind from its target. The wind, however, frequently shifts direction, which, in turn, necessitates frequent changes of location for the release point. The military unit that released these bombs, therefore, had to be very mobile. Everything was loaded on a number of standard ammunition carts, each drawn by 4 horses. One cart was loaded with 100 neatly folded balloons; two carts carried 50 fire buckets each; one cart was loaded with 60 bombs and another with 40 bombs and a folded wind screen.



Side view of SMS VULCAN (or Vulkan), Austria's newest and fastest warship, used as a balloon-launching platform, most likely from the rear deck. It seems likely that some of the rigging had to be taken down in order to create a clear path for the balloons to take to the air. It is very unlikely that the tent could have been used aboard or perhaps a sail could have been raised to protect the balloon during its vulnerable phase. Changing the point of release must have been a relatively easy matter for the ship.

For several weeks now, ever since arriving at the gates of Venice, the Uchatius brothers were ready, but still waiting, impatiently, for favorable winds in order to release their first balloon. It wasn't likely to change soon, either. It was very frustrating! If soldiers of any nation have to be idle for a long period time, they then get bored and start drinking, gambling and fighting amongst each other. It is very bad for moral and discipline. Something had to be done. If the enemy couldn't be attacked from the west, then perhaps they could somehow be attacked from the east. The commander of the Austrian Navy, Vice-Admiral Field Marshal Lieutenant von Dahlerup was contacted, and suggested to release the balloons from his latest and fastest ship, the SMS *Vulkan*, which was to be supported by a few frigates. The *Vulkan* was a paddle-steamer also equipped with auxiliary sails. Steam engines were the latest in propulsion, but not yet fully trusted. Soon the entire balloon corps with all their equipment was on their way to the port city of Trieste. Trieste, located on the northeast corner of the Adriatic, was Austria's navy base. There, Uchatius and part of his balloon corps boarded the *Vulkan* and left port.

The first balloon was released on June 20, but wasn't successful. A few days later, on July 3, a second trial balloon proved that the wind was very favorable, so a second balloon, this time with a bomb, was prepared and released. The wind, fortunately, had not shifted and the balloon flew in a straight line toward its target and dropped its bomb at approximately 2 p.m. It exploded in Murano, the island just north of the city. It was the beginning of a new era.



Contemporary artist's view of Venice during attack by artillery and rocket forces, as well as by balloons, which are visible in the dark skyline.

Other balloons quickly followed, some more successful than others, until a period of very bad weather

prevented further operations. On July 2, the weather improved somewhat and a few more were released, one of them exploding in the market place in Venice. The bombs used until then were explosive types, but on July 15, the balloons were for the first time equipped with shrapnel-type bombs. They were designed to explode in the air before they hit the ground in order to maximize the effects of shrapnel. Among the places hit were the arsenal and Lido, the famous island to the east of the city. Another bomb exploded at a height of 500m (1,500 feet) above the public gardens. This was at a distance of 6,400m (4 miles) and 23 minutes from its point of release. This balloon reached a maximum height of 1,500m (4,900 feet). The shrapnel consisted of 500-600 small lead balls. Although the damage caused was negligible, it certainly was a remarkable feat. Unfortunately, the number of balloons released is not known nor how many landed in the Adriatic or in the Laguna Veneto. Then the weather deteriorated and turned into a storm. The SMS *Vulkan* and a frigate lost anchor and were forced to head for port. It was the end of the world's first aerial attack. Once in port, the navy was able to acquire new anchors from a British ship, but the weather didn't improve for some time and when it did, the artillery and the rocket forces had taken over the initiative. The effect of the aerial bombardment on the population varied greatly. According to the captain of a British ship, the *Frolic*, which was in Venice at the time, the population almost panicked when the first balloons neared the city. However, after they found out that the damage caused was negligible, part of the population watched the approach of the following balloons with great interest and hilarity.

To the artillery officers, it had seemed that the aerial bombardment alone could never force the Venetians into submission, so they had not been idle. The range of a ballistic missile is the greatest if it is fired at an elevation of 45 degrees. The gun barrels of the Austrian heavy guns, (24 "pounders") could not be elevated that much. Therefore, heavy wooden frames were constructed which lifted the forward part of the guns enough for the barrels to be raised at an angle of 45 degrees with the horizon. In effect, the field guns had been converted into howitzers. They were located near the port city of Marghera. Several heavy mortars were located on the western part of the damaged causeway. All artillery units were under the overall command of the then famous Field Marshal Lt. Baron Augustin. Also, the rocket forces had not been sitting idle all those weeks. They

had equipped small boats with rocket launchers. Firing a rocket doesn't produce a recoil, as a gun does, so there was no danger that the firing of a rocket would capsize the boat. With the artillery and rocket forces now ready for action, the balloon corps returned to Vienna.

During the night of July 29, 1849, ten heavy guns and seven heavy mortars opened fire against the Venetians. The range of the guns was 2,000m (5,000 feet), which brought two-thirds of the city within range. During the first 24 hours alone, the Austrians had fired more than 210 rounds into the defenseless city. The population fled in panic to the eastern part of Venice, trying to find shelter in the now over populated areas. The Venetians had no defense against the artillery and rocket bombardments. It was only a matter of time that hunger and disease forced the courageous defenders into surrender in August 1849.



Contemporary artist's view of Venice during the world's first aerial attack 15 JULY 1849. The Lido, which was hit by a bomb, is in the lower left foreground. The causeway, leading to the mainland, is in the lower left corner (ref. map). Courtesy LTAI.

With this attack to try to force the enemy city into surrender, by the use of fear and anxiety, the Austrians stepped into a new era; the era of terror bombing. The world would never be the same.

In 1859, an alliance of France and Italy defeated Austria and Venice and became part of the Italian Kingdom. At a meeting of the Austrian Military-Scientific Society on December 16, 1870, in Vienna, the topic was the application of balloons in times of war. General Major Baron von Ebner gave a speech about the balloon attack on Venice in 1849 and the terrible effects it could have had on the population. He believed that no population in any part of the world could withstand a prolonged indiscriminate bombardment like that. He wondered why this terrible weapon was not being used in the war raging at that time (1870). Was it because of humanitarian reasons or for fear of self being attacked in retaliation? "Deterrent" had become a fact of life!

Acknowledgement

Researching the history of the world's first aerial bombardment turned out to be a major effort. Most of the important information is recorded in (162 years old), original documents in possession of the War Archives section of the Austrian National Archives in Vienna, Austria. These consist of orders, letters and accounts written by the officers who participated in the events and whose names have been mentioned above. They are handwritten in the old German type script which was no longer taught in school after World War II. Deciphering these scripts, which today most German-speaking people are no longer able to read, was extremely difficult and time consuming.

Among the original records that survived the last 150 years in an Austrian archive is a fascinating document made up by the Uchatius brothers. It shows the plotted graphs of the course and elevation of the first four test flights. The first balloon malfunctioned, but the other 3 followed a remarkable similar pattern and came down to earth only 420 klafter apart. Complete information about each balloon was recorded; typically, the balloon diameter (18 feet), the weight of the charcoal, 15 pounds with a 5 pound charge of a mixture of fat with cotton, a 30 pound load, a wind speed of 30 feet/second, duration of 32 minutes, maximum elevation 2030 klafter and a distance flown of approximately 5,000 klafter. A graph shows several names written in the Donau River around the target. They may be the names of small islands or ships.

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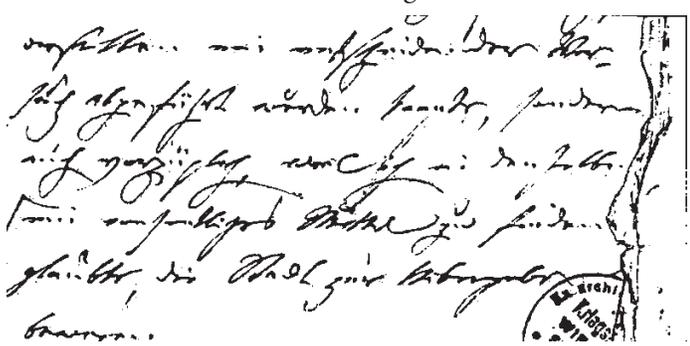
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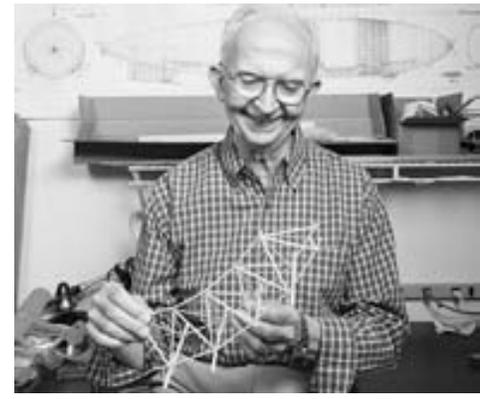
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Fraction of a typical order handwritten in the old German type script by Field Marshall Radetsky to 1st Lt Franz Uchatius. Ω



POPULAR SCIENCE: When retired computer engineer Jack Clemens did the math, he realized that a working model airship would have to be at least 20 feet long. Anything smaller and the weight of the frame would negate the lift of the gas. But he also couldn't go any larger; a 20-foot-long airship would just fit, on a diagonal, inside his two-car garage.



Clemens copied the *Macon's* exterior look, the number of motors and helium bladders, the internal frame, and more. But there were a few necessary deviations. He tried to find a way to house the propellers' motors inside the airship, as in the original, but the extra connective parts would have added too much weight. Ultimately he placed each motor on the exterior by the propeller it controls.



Clemens used a standard R/C controller, which sends commands to a radio receiver installed in the airship's control cockpit. Ω



Memoir of
Lieutenant Daniel
R. Cavalier, USNR,
Naval Aviator,
Lighter-Than-Air

A year or so before we entered WWII, congress established a military service Draft Board and I was old enough to be in the first draft. In my second year at Peabody Institute in Baltimore, Maryland,

I received notice to report to the Draft Board. After a physical exam I filled out a request to finish the semester before reporting for active duty. On Sunday morning, December 7, 1941, I was having breakfast at a corner drugstore on Charles Street and heard on the radio Japan's bombing of Pearl Harbor. The next day the United States declared war on Japan. A couple of days later, Germany and Italy declared war on the United States.

Early in 1942, before the semester ended, I decided to try to get into the aviation program for the Army Air Corps and was all set to take the exam, but a friend of mine, who I met on a bus one day, told me that he had taken the exam for the Naval Aviation Cadet V5 Program. I decided to take that exam first. I passed and was sworn into the Navy V5 Naval Aviation Cadet Program two days before I was to report for the draft. While awaiting active duty, the Navy offered me a summer program called "Pre- Preflight School" on the Hyattsville Campus of the University of Maryland. I accepted and moved into the dorms. In addition to heavier than air flight training, I took a number of courses in navigation, naval history, U.S./Enemy aircraft identification, meteorology and ship identification. I took my final checkout flight at Schram's Airport in Hyattsville, which consisted of confidence maneuvers (doing figure eights, turning the nose up and flipping the plane downward, etc.). After 6 hours of duel flight training, I was sent aloft without ever having landed a plane by myself. Two unsuccessful attempts to land the Piper Cub, I was about to give up, take the plane to 4,000 feet and jump out. I was wearing a parachute. However, on my third attempt, I landed sideways, did a ground loop and got safely down. My flight instructor immediately took me up again and showed me how to use the rudder to land the plane. I

received my private pilots' license on 12 August 1942.

In September 1942 I received orders to attend Preflight school at the University of Georgia in Athens, Georgia. One of the first things we had to do was to have a short-arms inspection (physical examination, bending over with our pants and shorts down) and cadets who were not circumcised were encouraged to have their peckers plucked for health reasons. The Navy's athletic program was headed up by Commander Jack Dempsey, a former heavyweight boxing world champion. The academic and athletic programs were very intense and I did quite well in both areas. Along with a lot of physical activity, like an obstacle course, we played football, coached by former all-American football players and took boxing lessons from a former boxing pro. I was on the wrestling team and in my first bout, my opponent jammed his head into my ribs and cracked several of them. It was painful and ended my wrestling career. We also had lots of academic studies like aerodynamics, meteorology, enemy aircraft identification, naval history and US Navy aircraft ID, ship identification, and power plants, etc. On Thanksgiving Day we were repairing a road on campus and I thought what the hell am I doing here, repairing ditches? One day, my squadron leader, Lieutenant Dixie Howell, an all-American football player, approached me and said that five cadets had been selected to be offered lighter-than-air flight training, and I was one of them. He said it was a special honor. I could turn it down if I wanted to, but he urged me to accept the offer. I had never seen a blimp and my only recollection of a dirigible was the *Hindenburg* disaster in the 1930's. I was sent to Lakehurst Naval Air Station.

Our L-ship flight instructor was a Warrant Officer. Landing our 250-foot-long airship was a challenging operation that required a large and strong ground crew. I remember a serviceman hanging onto a bar in the lower front of the gondola and the blimp suddenly lifted off the ground. He slipped off and was killed. In June 1943, I was in the second graduation class, received my Ensign commission and flight wings and joined Squadron 12 at Lakehurst. We were flying K-ships, and were involved in antisubmarine patrol and escort duty. Our flights were long, 12 to 16 hours and we flew every other day, fanning the ocean, identifying ships and looking for enemy submarines. We had to sleep in the hangar the night before a flight. Engines were being tested all night long and the noise kept us awake. We were awakened at 12:30 AM, briefed about our flight course and other activities in the area we were to cover, such as other aircrafts and ships. We usually took off by 1:30 AM. One



way we could stay awake was to drink black coffee, strong enough to paint the bulkhead. Some flights were so rough that before we got to our patrolling area most of the crew had thrown up. In the first six months I had accumulated over 1,000 hours of flight time. Around three months after I received my commission, I was appointed to senior pilot and got my own crew.

One interesting flight was copiloting a blimp down to Hampton Roads, Virginia, a large Naval shipyard and escorting an Essex Aircraft Carrier up to New York Harbor. At times, we were literally flying below the flight deck. We talked about what it would be like if we had an emergency and had to land our ship on the deck of the carrier.

One Saturday morning I was to take a K-ship training flight. I informed Naomi Steven (my girlfriend, a ballet dancer that I met when I was a student at Peabody Institute), and my mother that I could not come down to Washington that weekend. At the last minute, my flight was switched and we had to stand inspection in the hangar. When the replacement crew moved out of the hangar, they waved to us and yelled from the open windows in the blimp's gondola, how unlucky we were to have to stand muster in our 'Navy Blues.' About 15-25 minutes after they took off, we were told that the blimp collided with [another blimp] and all the crew members were killed. The crash hit the news media. I was standing inspection and could not call (no cell phones in 1943) my mother or Naomi about the crew switch. I was in a state of panic. After we were dismissed, I tried calling my mother and Naomi and did not get an answer. I had the weekend off and decided to head down to Washington as soon as possible. In order

to get to Washington from Lakehurst, I had to take a bus to Philadelphia and then a train to Washington. I started out as quickly as I could and arrived in Washington late that afternoon. My mother was at the USO Servicemen's Club at the Jewish Community Center on 16th Street where she volunteered. I had not been able to contact her, but I did get Naomi and we headed down to the USO immediately. In the meantime, my mother heard about the crash and was trying to reach me. When we walked in, newspaper reporters and photographers were there talking to my mother, I thought she was going to faint. It was the first time my mother met Naomi. She told me that she was the kind of girl I should marry. December 5, 1943 Marriage: Naomi was 18 and I was 22.



Five days after we were married Naomi was in terrible pain, and I took her to the Lakehurst base hospital. They could not diagnose the problem. Finally, an ambulance took her to a hospital in Philadelphia and from there to Baltimore where her family doctor was located. Naomi was diagnosed with a disfunctioning kidney, full of puss. The surgeon who would remove the kidney said she probably had the problem for a long time and was lucky to be alive.

I don't know why the Lakehurst doctor grounded me, and since I could not fly, I thought it was OK for me to go to Baltimore and be with Naomi at the hospital. I was so

distraught, I did not think about contacting the squadron commander to get his permission to go off the base. Ensign John Vaughn, a fellow officer and friend (John was a roommate and was Best Man at our wedding), called me at the hospital and told me that he was asked to find me and that I was AWOL. If I didn't come back to Lakehurst immediately, I would be arrested and court-martialed. I rushed back to the base and was not allowed to leave the base for a week. I was very upset and finally after, a week, allowed to go see her in the hospital where she was slowly recovering from the operation. I limped up on the bed and held her in my arms.

In the meantime, March of 1944, I was given orders to take my crew to South America. On the way to our new base in Fortaleza, Brazil, we were to go through anti-sub school in Key West, Florida. Naomi was out of the hospital after surgery, and in 11 days was able to accompany me, weak as she was, to Key West. My copilot, Adam Koblitz, who was married four days before us, decided to bring Anita, his new wife and two friends, Sandy and Seena Leff, recently stationed at Richmond Naval Air Station, also joined us. We were able to spend a couple of days in Miami before reporting to Sub School in Key West on March 12. Our training program lasted 10 days. We tracked subs, practiced dropping underwater detonators and spent a number of days in the subs, below the surface, practicing maneuvers and how to avoid detection. I found the subs cloistered, hot and uncomfortable. The only way to cool a bit was to stand

directly under a vent. I felt sorry and proud of the crews, their quarters were very cramped and some of their bunks were opposite torpedoes. After the sub program, Naomi returned to Washington and stayed with her mother and we left for Fortaleza, Brazil, located in its northeastern quadrant.



Flying down to Fortaleza in a Navy DC-3 was quite an experience, sitting in bucket seats along the bulkhead of the aircraft. We were in the air for 16 hours. Looking over the wing, I could see some very beautiful clouds, a tropical thunderstorm, very dangerous to fly through. The flight was mighty rocky and the bucket seats were very uncomfortable. The center aisle of the plane was loaded with equipment.

As I stepped off the plane, that evening in Zandery, Dutch Guiana, I saw a coral snake about two feet from where I was standing. Needless to say, I had a hell of a time sleeping that night. We left Zandery early the next morning, March 23, for our base in Fortaleza, Brazil. NAF Fortaleza was officially established on November 26, 1943. It supported ASW patrols in offshore waters in conjunction with the seaplane squadrons based in nearby NAS Port of Spain, Trinidad. Northern Brazil was the closest point between the North and South American continents. Prior to WWII, Germany had close ties with the Brazilian government. I was told that the Germans built many of the harbor and port facilities and trained their Army. I did notice how similar the Brazilian military uniforms resembled German Army uniforms. Vargas, the head of the Brazilian government, was a dictator and apparently made a deal with the United States to get the German military out of Brazil and provided the United States with facilities to organize its task forces for the invasion of North Africa. Lighter-than-air's primary task was to protect our convoys from U-boat attacks. Once the U.S. had a stronghold in Casablanca, airships would escort the task force until airplanes stationed in North Africa could take over the mission. Fortaleza was a small seaport on the northeastern part of the country. I estimate the population in 1944 between 75,000-100,000. The 2006 census population was over 1.9 million people. There was a lot of poverty, many people lived in shacks without water, electricity or bathroom facilities and many of the streets were mud surfaced. However, the downtown business sector was quite nice with a beautiful small central park. Close to the equator, it was extremely hot in the summer.



Our base was dominated by Maranguape Mountain west of the city. It had no hangars and our airships were masted on the tarmac. On my longest flight, our mission was to escort a Naval Task Force eastward and to protect it against enemy submarines. If we made contact with a

sub, we were to execute an immediate bombing run. Our ship was armed with two [350] pound Torpex underwater detonators, a 45-caliber machine gun, a BAR rifle and Radar. We met the convoy at about 1:30 AM and began our search pattern, crisscrossing the task force and searching to the north and south of the convoy's course. We were told to stay with the ships until we were relieved and could return to our base. About 8 PM, my crew was exhausted and I decided to rotate the men so that each crew member could get some rest. We had one bunk on board and a couple of bolted deck chairs. I set up a rest rotation for the crew. My crew consisted of eight members; the captain (me), the copilot, the navigator (three officers), and five enlisted men. Around midnight, we got a message from the base to stay with the fleet because they had information that there were enemy submarines in the area. We flew the rest of the night. My rest rotation was the last and I crawled into the bunk and immediately fell asleep. At dawn, my copilot awakened me and said that we had been relieved and could head back to our base. I asked what our position was and no one knew where the hell we were. Actually, I could not blame the crew. We were flying all over the place, and we were not given the fleet's course. We were not allowed to use any radio aids to determine our location. Well, we didn't have to be too smart to know that the sun rises in the east and we were somewhere east of the landfall. We made landfall three hours later, determined that we were north of Sao Luiz. We landed, refueled and took off for Fortaleza.

When we were transferred to Salvador (Ipitanga Naval Air Station), Bahia, Brazil, 1944, we found Salvador had an upper and lower city. The way you could get from one level to the other was by an elevator that jutted out over the two parts of the city. It was roughly 4 to 6 stories high. The upper city, where most of the city was located, was a very beautiful colonial city. The Cathedral, called the "Gold Cathedral", because of its gold-tiled dome and gold mantle pieces. It was built in the 1530's and it still had the original hand-pumped organ on the upper choir loft. One of the monks played it for me. Most interesting in Salvador were the Bahianas, descendants of Portuguese slaves who wore unusual clothing and many still practiced voodoo. One Tenente Manero was in charge of the Brazilian army base in Salvador. I don't remember how I met him, he was a Calvary officer and on days off I would meet him and we'd ride beautiful Argentine military stallions.



The base was also a camp for interned Germans who may have had connections with the Third Reich. A few of them, wearing only underwear, would approach me, spoke very good English, claimed they were innocent of any spying for the Nazis, said they were teachers and wanted to know what I could do to help them. What made Tenente Menero famous was the capture of a former Brazilian officer by the name of Lampion. Lampion was considered a kind of Robin Hood by the jungle Indians. He decided to become a militant activist for the suppressed and ill-treated Indian tribes. Lampion went into the jungle and joined up with the Indians. He and a group of Indians would raid a plantation, kill its owners and take everything they could carry, including food, back to their hideouts deep in the jungle. These raids and killings went on for several years and the government was frustrated with its inability to track down Lampion and his desperadoes. Finally the government chose Tenente Menero to lead a small group of military men into the jungle to track down these outlaws and bring them to justice. The jungle was so dense that it took Menero over a month to travel ten miles into the area where they believed Lampion was operating. Tracking Lampion was a difficult task, since he continually moved his base of operations. Finally, one night Menero was able to surround Lampion's camp. He was inside the tent with his mistress and Menero ordered all of the criminals to surrender. They did surrender, but Menero was afraid that it would be impossible to safely bring the captives physically back through the jungle to his military base. He decided to shoot all of them, decapitate them and bring only their heads back as proof of the capture of Lampion and his cohorts. I saw the heads lined up in a glass showcase in Menero's office. About ten years after the war, Life Magazine did a spread on Lampion, the Robin Hood of Brazil.

In the late fall of 1944, I flew a ship for major overhaul down the South Atlantic coast of Brazil to Santa Cruz Naval Station, 30 miles south of Rio. The commanding officer in charge of maintenance estimated that the repairs would take three to four weeks. I decided that the crew should go up to Rio for some R&R. I arranged to come to the base once a week and check on maintenance progress. I had each man in my crew check in with me twice a day so that we could leave as soon as the ship repairs were completed. The trip to Rio from Santa Cruz, by train, loaded with peasants, chickens, ducks, pigs and personal belongings, on a narrow (O track) gauge, Victorian vintage railroad took eight hours to cover the 30 miles to Rio. My crew and I stayed in Rio until the ship was ready to be flown back to our base in Salvador. I had an aircraft camera onboard the ship and took some pictures along the way. There was no gasoline available for civilian automobiles. When I got to Rio, I was astounded to see charcoal fires burning in the trunks of cabs all over town. I don't know how it was done, but the charcoal was converted to fuel that powered the engines. I wouldn't even pretend to guess the number of cars that caught on fire. If I had to ride in one, I certainly would have carried a fire extinguisher. In about three weeks, I received a call from the maintenance squadron commander that our ship was ready to return to our base. I took the train down to Santa Cruz the next morning and inspected the blimp repair manifest. Everything checked out and I signed for the release of the ship. I called my crew and had them return to Santa Cruz immediately. We took off early the next morning and arrived in Salvador that evening.

Several months after returning from Rio, I was ordered to Maceo, Brazil, where in November 1944 I was shore patrol officer. At 15:44, Saturday, 25 November 1944, while shore patrol officer, I was summoned to the beach by an enlisted man, who said that a Brazilian girl had drowned and in an attempt to save her, he himself was nearly overcome by the heavy surf and undertow. Several Navy personnel, who were swimming in the vicinity, immediately swam to the girl, who by this time had lost consciousness and was floating head down in the water. The three men brought the girl to the beach in spite of the heavy undertow which had dragged her quite a distance from the shore. When I arrived, after running a distance of approximately 300 yards from the USO to where the incident occurred, the men had just brought the girl out of the surf, laid her on the beach and had begun respiration. I immediately examined

the girl and there was no indication of life. I organized my shore patrol men in a circle, kept the Brazilians back, and proceeded to apply a rhythmical method of respiration. The girl had swallowed a great deal of water and after 20 to 30 minutes of respiration she began to take great gasps. The breathing was still not normal and she took one breath to every five or six normal breaths. We all alternated giving her the prone pressure method of respiration, and I placed the girl's head on the back of one hand and stationed a man at her head to watch her tongue. After 45 minutes of respiration without interruption, the girl began to breath without assistance. We continued the process until we were sure she was all right. In the meantime, I sent to the USO for blankets and asked for a doctor who had been sent for immediately after she was brought to the beach, but the doctor had not arrived. We finally carried the girl 50 yards up the beach to higher ground, laid her down, head downhill to help stimulate the circulation of blood. We then rolled her into a blanket and moved her to the USO. She was breathing normally although she was still unconscious and was suffering from shock. The Brazilian doctor arrived just as we got her to the USO and I turned the patient over to him. He stretched her out on the floor and gave her an injection of medication for shock. After the stimulant took effect he drove her to the hospital in a cab. We never saw her again.



A few weeks later, our squadron was called to muster and the skipper presented us with a commendation for saving her life. When I returned to my squad, the enlisted men were quietly chuckling and when I asked them why, they told me she was one of the town's favorite prostitutes.

Venereal disease was rampant in the small towns of Maceio/Caravelles, and the Navy decided to put the 'houses of ill repute' off limits. If a sailor was caught in one of the houses and developed a venereal disease, he would be court-martialed. So, as shore patrol officer, it was my responsibility to patrol the area and keep the enlisted men out of the houses, a task worthy of a platoon. When on night duty, I would stand in a darkened doorway under an overhang across the street from a row of houses and watch the action as sailors jumped out of cabs and ran into the houses. It was a game of touch and go. I'd wait about 20 minutes and then proceed to visit each of the 'paradise parlors'. I'd go from bedroom door to door, bang on the door with my night stick, and announce that the shore patrol would be coming through in ten minutes. Then I would go out, cross the street and watch the flurry. Sailors came running out in under shorts, shirt and pants in hand. I never did put a guy on report.

Caravelles was a small auxiliary base south of Maceo. The base was about ten miles from the town, if one could call it that.



While stationed there, two events happened that may or may not be worth writing about. The first incident involved some of our men who were target practicing in the jungle that surrounded the mat. Apparently, one of the bullets ricocheted, struck an old woman and killed her. There was a large (for the area in which she lived) public disturbance

around her house. We were very alarmed and thought our base was going to be attacked by a bunch of Brazilian peasants. Our skipper met with the woman's family and I don't know what actually happened, but things quieted down. I had the duty one night when our chief reported that one of our weapons carriers had disappeared. We searched the base and the perimeter and the vehicle was gone. We did a head count and found that one of the enlisted men was missing. Obviously, he had stolen the carrier. I decided to take a jeep and search the town for the man and the missing vehicle. The only way to get to the town was through a narrow trail in the jungle, hardly wide enough for the jeep. I took an enlisted man with me to help clear any debris in our way and to help with the

search. We arrived in the town around four a.m. Caravelles was a jungle nightmare with a row of shacks facing a river. I was told that its claim to fame was that an Italian pilot landed his pontoon plane on the river and it was the first airplane to land in Brazil. It was really a dreary site with a mist coming off the river enveloping the dawn. The first place we searched was on a small railroad platform. Bodies were sleeping all over the platform and we'd awaken a person and ask if they saw an American. One fellow told us to look in the row of houses along the river. When we got to the area the weapons carrier was parked on the mud street. We began knocking on each door and shouting "esta Americana aqui". Finally we got a "si" answer and we had our man. I handcuffed him and attached him to the side of the jeep and drove back to the base. The man we caught did develop a venereal disease and was court-martialed and sent back to the States.

We lived a sordid life in addition to our flight duties. The year 1944 seemed to fly by, and I don't mean that as a pun. The holidays were approaching and the skipper wanted to have a New Years' celebration at the base BOQ. The captain asked me, (I was the BOQ duty officer) to put together a party and he would invite some of his Brazilian friends to join us. A short distance from the base there was a large ranch owned by some very wealthy Brazilians who raised the most beautiful orchids I had ever seen. To prepare for the event, I flew up to Balem in a Navy plane and filled the bombay with lots of libation and goodies for our party. Needless to say, we very quickly forgot our loneliness and the good folks at home. Shortly after New Years, the skipper told me that he had selected me to go to Lakehurst to attend an advance navigation school and I would return to Maceo when the program ended.

In 1995, I was able to find Adam Koblitz, my copilot, who lived in Cleveland, Ohio, through the LTAS. Naomi and I arranged to meet him and Anita for lunch in Pittsburgh. It had been over 50 years; we hardly recognized each other,



but smoozing, especially each of our memories of our longest flight, was fun. Our stories in some areas didn't match. Adam recalled sitting at a table playing cards when someone came up and emptied a pillowcase containing a huge snake (a nine-foot Boa Constrictor) on the table.

Then there was the time when someone's pet monkey bounced over the wall (walls didn't reach the ceiling) from the bed in one room to the bed in the next room down the length of the building. Another time, Adam and I had to see a dentist, and when we got there, there was a foot-pedal drill, state of the art! It was a nightmare to drill and fill a tooth. He also recalled eating at a nice restaurant in Salvador right on the edge of the cliff of the upper city, overlooking the ocean. As we ate dinner someone would deliver bloody sides of beef, hanging over the carrier's bloody shirt, through the dining room. A lovely sight to see while having a steak dinner.



In January 1945 I left Maceo, Brazil in a Navy DC-3, stopped in Belem and overnighed in Trinidad. The next morning, a Navy plane flew to Miami. Just as I was leaving Maceo the Brazilian orchid growers gave me a box with a dozen orchids in a variety of colors and four caged parakeets to take to my wife. By the time I arrived in Miami the orchids had shriveled and the parakeets were taken away from me by the customs health inspectors. The first thing I did when I landed was to have a glass of milk. It tasted better than a scotch and soda. Powdered milk was the stuff we had in S. A. and it was like drinking Milk of Magnesia. I've never had a glass of milk that tasted like nectar and I relished each mouthful. I caught a late afternoon domestic flight to Washington. When I arrived, there was a large snowstorm and it took me until midnight to get to my parents' house. I only had my summer khakis and damn near froze to death. The minute I arrived, I called Naomi. She was in College Park, Maryland, normally a 25-minute drive from Washington, staying with her mother while I was overseas. I borrowed my father's car and drove through the driving snowstorm to pick up Naomi and bring her back to my parents' house. It was around four in the morning by the time we got back. I don't remember how I got an automobile, but Naomi had saved enough money for us to buy a used Dodge sedan. When I went overseas, I sent Naomi my flight pay and just took the 20% flight and overseas pay for living expenses. We were subject to gasoline rationing. It was difficult to get fuel to drive up to Lakehurst when it was time for me to

report to the navigation school. We found a furnished apartment in Lakewood, New Jersey. The apartment was across the lake from the town. Lakewood was a small resort town and lots of New Yorkers would come down on the weekends. I don't recall the family's name that owned the Lakewood Hotel, but whenever we went there for dinner, they always picked up the check. They were extremely generous to men in the military.

The navigation program would last two months and then I would have to go back to Brazil. The program was intensive and we were in class eight hours each day, five days a week. We also had to fly on some of the weekends. We focused eight hours a day on the navigation program, including dead reckoning, radio aids, Link trainer and celestial navigation. We also studied a brand new navigational device called Loran. The instructor mentioned that there was a possibility that we would fly a ship to North Africa. Our final exam was to use a variety of navigational aids to fly from Lakehurst to Hawaii. We were to return to our squadrons, set up a navigation retraining program for all pilots who were required to attend the sessions. At the end of the project, fortunately, instead of going back to Brazil, I received orders to report to Richmond Naval Air Station, near Miami. I reported for duty at Richmond in the early spring of 1945. In addition to my flight duties, I was to set up a navigation program for all the officers on the base. In addition to the officers' program, I set up a volunteer class for enlisted men who were interested in learning the rudiments of navigation. Lieutenant Commander Nahigian was the Squadron Commander. In addition to anti-sub, rescue and escort missions, we took a lot of flights to the Nassau area with a group of scientists on board. They were involved in developing magnetic torpedo devices. The ship was equipped with special tracking equipment and cameras and we'd work with cruisers and submarines. For example, a cruiser would launch a torpedo and the scientists would track and photograph its course towards the submarine. It would circle around until it was in line with the subs propeller and then run straight for the sub. An exercise that scared the hell out of my entire crew was an A/S Rescue Operation. I'm sure it was thought up by a genius that a blimp could perform like a helicopter. We would lower a huge ballast bag, attached by a long rope to the aft end of the gondola, into the water to slow down the ship, and gradually lower it so that we could hover over the target and drop a rope ladder to rescue someone in the water.



Late April of that year, I received orders to report to Lakehurst for temporary flight duty. Naomi and I headed north and again rented a small furnished apartment in Lakewood. Our Navy set up a barrier patrol around New York Harbor, placing [MAD] picket boats around Barnaget Light at the entrance to New York's Harbor. We were to maintain air patrols 24 hours a day. If one of our ships picked up a contact, we were to immediately make an underwater detonator run. A flight I will never forget was the night of May 5th, 1945, we patrolled over the New York Harbor area with a Navy captain on board. He was head of North Atlantic meteorology. The night was black as coal and thunderstorms were racing through the area. We were supposed to operate at 500 feet above sea level. The altimeter we had on board was a barometric pressure unit. With air pressure changing dramatically and zero visibility, we were never sure how high we were flying or whether our blimp would crash into the sea. The storm caused our blimp to rock and roll and bounce all over the place. Of course, we were all sick as dogs and the crew had thrown up several times. On the way back to the base we heard rumors that Germany had capitulated.

Around July of 1945, I returned to the Richmond Naval Air Station. The Flagler Hotel, on Miami's inland bay, was taken over by the Navy. They had a two-story group of one-bedroom apartments facing south on the grounds of the hotel. Naomi and I were able to get a first-floor apartment. Our Squadron flew patrols around the Miami area and flew into San Julian, an American base near Guantanamo Bay, Cuba. We flew a number of flights to the Nassau area with a number of scientist and cameras onboard. We'd meet several U.S. Subs and Destroyers and track underwater magnetic

torpedoes launched by the ships. The scientists would observe and photograph the torpedoes as they circled and headed for the tail end of the subs.

On September 14, 1945, I was on duty at the Richmond NAS when we received word that a hurricane was heading towards the coast of Florida. The center of the storm was to cross the south end of the state. Our three hangars were supposed to be hurricane-proof. Planes (approximately 400) flew up from Boca Cheeca and Boca Raton and were battened down in the three enormous hangars. We also had blimps moored in each hangar. The commanding officer on duty decided that married men could go home and single men would standby as the hurricane approached. He gave us permission to pull the cars we would not need for transportation into the hangars, so there were approximately 50 cars in the hangars as well as the aircrafts. A co-officer, who lived in the same complex, suggested I drive my car into the hangar and he would drive us home. We took off for Miami as the winds and rain began picking up. My friend, Sandy Leff, a Lieutenant Commander in the maintenance (HEDRON) squadron, had the duty and remained on the base. Because the base would have been shorthanded, several of the married officers had to remain on duty as well. Upon arriving home, we had a leisurely dinner, and listened to the news on our radio. The storm was moving fast and gaining momentum. Suddenly the winds changed and the eye of the storm was heading straight through our base. Winds increased up to 150 miles-an-hour. We were concerned, but not terribly worried since the hangars were hurricane-proof. A Navy requirement was that all the aircraft had to be fully fueled and crews had to standby the ships in order to fly them out to safety in case of an emergency.

After dinner, Naomi and I gathered the wives in our apartment. As the storm approached and the news became more intense, the wives became very anxious about the safety of their husbands who were still on the base. Around ten o'clock we heard over the radio that there had been a fire on the base but no details were given as to what had happened. Around 11:30 p.m. word came over the radio that one of the hangars was in flames. Needless to say, we were all very agitated and went up to the second floor balcony of the building to look in the direction of the base. Even in the raging storm we could see the fire 20 miles away to the south of us.



The situation with the wives became extremely tense. I had tried a number of times to get through to the base to talk to anyone who would answer the phone. But all telephone connections were down. My co-officer (can't remember his name), and I decided to drive to the base and call the men's wives as soon as we knew what happened. We tried to assure them that their husbands were safe. We left about midnight and drove through the storm all night, dodging trees that were down and all kinds of debris flying across the road in front of the car. When we finally arrived at the base, about six o'clock in the morning, it looked like an atomic bomb was dropped on top of it. All three hangars had disappeared. The place was in shambles. The only building standing, was the BOQ and a large number of people were huddled inside. The base was completely destroyed. What had happened?

Here's what we were told: One of the men, standing by a ship in one of the hangars, saw the roof start to peel off. He immediately notified the duty officer (my friend Sandy) and all the personnel were immediately ordered out of the hangars. A number of the men were stretched prone on the mat, or holding on to the trunk of palm trees, as the wind blew the fire and debris over their heads. It was a miracle that only one man was lost. When the ceiling beams fell and struck the aircraft, the planes, loaded with high-octane fuel, blew up and nearly all of the cars were lost by fire and falling beams. Tucked in the corner of hangar number one were five automobiles, one of which was my car. A beam had flattened the roof, but miraculously the tires were still inflated. My greatest loss was all of my flight gear and more important, my Navy Flight Log, which listed all of my flight records. I

estimate that I had over 3,600 hours in the air, but no longer had the data.

The Navy had established an ALNAV that pilots would earn flight points for every year they flew, and if they reached 49 points, they could not be transferred to another base. I had earned 49 points, so I could not be transferred. Around the end of the week of the storm, the Navy got the pilots together and offered us assignments in the regular Navy. I was told I would go to Corpus Christi for dual-engine flight training. In other words, we could build a career as naval officers in the regular Navy. It really was an exceptional offer, considering that most naval officers spent four years at the Naval Academy in order to receive commissions. If we did not choose to do so, we would be released to 'Inactive Duty status, awaiting Active Duty'. I decided that I did not want a career in the regular Navy, so within 30 days, November 1945, I was out of the service. Since I was an early volunteer for the aviation program, the Navy paid me an annual bonus of \$500.

I had my car towed into a repair garage in Miami. They jacked up the roof and riveted a piece of plexiglass for a windshield and Naomi and I took off for Washington. The catch-22 was that because I was on inactive duty status waiting for reassignment, I could be called back to duty at any time. I kept my fingers crossed when the Korean war broke out. I finally received my Honorable Discharge from the Navy, 17 December 1957.

One nice thing that happened when I was discharged, was the bonus I received, \$1500 for every year I flew (three years, seven months on Naval active duty). We felt like we were rich. Naomi and I left Miami and headed north with a nice little nest egg. So, we had plenty of money to head home and take care of us until I got a job.

During the three years and seven months I was on active duty in the United States Naval Reserves, I was stationed at the following Naval Air Stations: ZP 12 Lakehurst, and Cape May, New Jersey. ZP 15 Glynco, Georgia; ZP 21 Richmond, Florida. Key West, Florida; ZP 41 Fortaleza, Brazil. ZP 42 Salvador, Bahia, Brazil; Maceio, Brazil. Caravelles, Brazil. Ω

Ed. note: Photo page 29: 1st Class PO on Dan's left appears to be late NAA member and benefactor James Johnson, who recalled his role in the woman's beach rescue...can anyone verify it is Johnson in the photo with Dan? How about the other fellow?

MEDIA WATCH

Our own **Donald Layton** was given the Thornton D. Hooper award for Excellence in Aviation History by the League of WWI Aviation Historians. Don's winning article, "The Great Airships of the Great War" appeared in the Spring 2010 issue of their magazine OVER THE FRONT.

The Spring Issue of NAMF's FOUNDATION, devoted to this year's celebration of 100 years of Naval Aviation, has a bit more to say than one might glean from a casual flip through the colorful and well-researched pages. Its treatment of airships would expectedly reflect the 1911/HTA vs. 1917/ LTA first flights respectively. It might also offer a reminder that we are a small fish in a big pond.

We all love full-color splash pages; the issue's art pictorial is devoted to ASW aircraft. P-2s and P-3s, although never having attacked an enemy sub in combat, are each shown three times. Perhaps the K-ship painting the NAA commissioned and donated was not the photo-realistic sharp image the art director was looking for – or perhaps airships just aren't part of the big picture.

I found it humorous that a dramatic painting is captioned "The big, tough Martin flying boats..." because the first item in on the coming attractions page shows one such boat lying on the ocean bottom promising we'll see "...a veritable PBM graveyard." Not much discussion will center on some flying boats' reputation for mid-air gas tank explosions, sometimes mentioned when the "Lost (Avenger) Squadron" is recalled. Let's not get started on the safety record of HTA ASW in general or the Privateer/Liberator (two paintings) in particular, least a game of "one upmanship" recall how many bright young men were slaughtered in ASW HTA accidents without firing a shot.

FOUNDATION's new Editor, retired Marine Col. D.J. Kiely, invites readers to the Truculent Turtle article "...demonstrating the reach of the Navy's newest patrol bomber." Ms. Diane Segal's article states, "The Turtle was modified to remove all armament and combat equipment. Extra fuel tanks were loaded in practically every spare space in the aircraft... 2,200-gallon tank in the bomb bay... an 858-gallon tank in the lengthened nose... a sonobuoy chute fitted with a tank holding 128 gallons..." Some would argue such a test of pilot

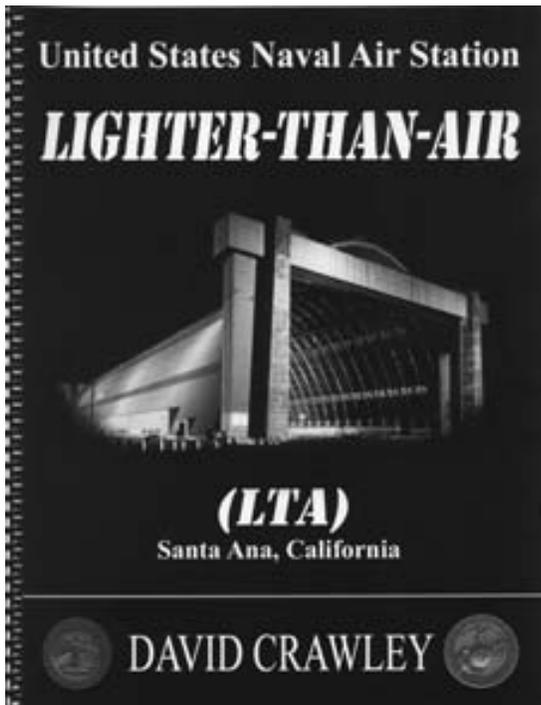
endurance was more of a stunt than the *SnowBird's* record time-distance flight, but the complete fully restored 'Turtle hangs prominently in the new Hangar One expansion, while most of 'Bird was sold as scrap for lack of restoration funds. (We do have a beautiful nose clip thanks in part to NAA member efforts.)

The Foundation and Museum were created to chronicle Naval traditions, so arguably such publishing and actions are seen as correct. LTA always was the "poor relative", CAPT **M. H. Eppes**, USNA '35 who served on surface vessels, flew the tricky Corsair off flattops in the South Pacific, witnessed the Japanese surrender, won the Harmon Trophy, etc. etc., was certainly a well-rounded naval officer. In his passionate 1958 plea to CNO not to throw away the unique LTA asset, Eppes noted, "The unaccountably low esteem held for blimps by many naval officers... has created an atmosphere wherein one who 'goes to bat' for airships is often under some suspicion as to his intelligence or his basic loyalty to the Navy..."

Our few members who can be counted on to regularly criticize NOON BALLOON are invited to contribute better content, and they have done so. Likewise, I feel qualified to comment on FOUNDATION because I have repeatedly submitted photo-rich LTA articles, and they all have been published there in a timely, respectful manner. I'm only sad that all the NAA's swimming against the tide has not made much of a splash in the group we look up to. Vol. 32, No. 1 impresses me that NAA still has a lot of work to do.

AIAA's AEROSPACE AMERICA is regularly giving LTA non-crash mentions in their history sections of late. Recently the first transatlantic crossing of LZ-129 marked its 75th anniversary and likewise the 25th anniversary of Roger Munk's first Skyship was noted. The May 2011 issue of POPULAR SCIENCE devotes two pages to new LTA without claiming LZ-129 exploded. Not surprising USNI's PROCEEDINGS lists ten significant USN aviation events (some spanning decades) without LTA. However BALLOONING's May/June 2011 issue features a nice two-page color spread on the Navy's aviation centennial, with beautiful color photos ranging from ZTFs to our current MZ-3A and the aforementioned *SnowBird* nose clip display. There is a token airplane picture!

- **R G Van Treuren, Ed.**



United States Naval Air Station (LTA)
Santa Ana, California, By **David Crawley**
Reviewed By **C. P. Hall II**

There are several ways to approach any specific branch or episode of aviation history. One can focus upon the people, upon a single class of aircraft, a sub-set of a class of aircraft, or even a specific individual aircraft within a specific timeframe. The book here reviewed approaches aviation history with a primary focus upon the Naval Air Station at Santa Ana, California, and its two wooden-framed hangars. Airship Patrol Squadron 31, (ZP 31) is a significant but secondary focus while other base occupants, lesser facilities, and auxiliary facilities are of minor interest but not forgotten.

David Crawley begins with an assessment of the Japanese submarine threat to the west coast and a record with photos of actual operations undertaken. This threat was enough to justify a substantial expansion of LTA facilities on the west coast in 1942. The Naval Air Station at Santa Ana was part of this expansion. There follows two chapters about site selection and construction. The base was operational by October 1, 1942, though the process of upgrades and improvements continued for sometime after that. The operations of ZP-31 begin late in 1942; by which time the Japanese have far more pressing needs for their submarines than raiding our west coast. There is, therefore, very little about actual encounters with any enemy and considerable space devoted to the nuts and bolts of LTA activity. There are chapters devoted

to various wartime operations. As this is a book about LTA on the North American West Coast, there is the mandatory chapter about "The Ghost Blimp" L-8. The incident is well-reported; there are no new revelations. Patrol procedures from the main and auxiliary bases are covered in considerable detail.

After reading this book, I feel that I know more than I did before about: How helium is purified, the difficulties of rescuing downed personnel with the original equipment provided, and modifications which improved the process, the initial experiments involving landing K-29 on the CVE U.S.S. *Altahama*, the use of the Del Mar Auxiliary Air Field as an "on location" site simulating a blimp patrol base in India in the MGM feature film "This Man's Navy."

The book is an 8½ x 11 softcover, spiral wire-bound, 154 pages with numerous photos, maps, drawings, a few cartoons, and reproductions of newspaper clippings. Many of the photos seem to be published for the first time. Here is my problem: The cover photos are gorgeous. Inside the reproduction quality of photos, maps, and drawings is best described as inconsistent. Some photos are clear and crisp, others are not - a few to the degree that one wonders why they were included. In our day, based upon the technical achievements in photo restoration and reproduction, one expects more. Large drawings of large structures have been reduced to fit the page to a point that some content is lost. Several maps are included but one that shows where the subject bases are, in relation to the coast of California, is absent. The text offers that Sunnyvale is near San Francisco and this base was to extend coverage to the Los Angeles area. Perhaps Californians know where this is and, since the rest of us should be watching "90210" and/or, "The Real Housewives of Orange County," we should know too?

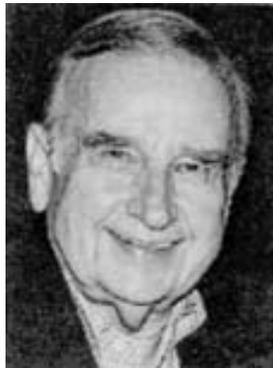
In conclusion, I recommend the book. It is a pleasant, informative read which adds to our knowledge of LTA history and, my knowledge anyhow, of details of operational methods. There are many photographs, a number of which have not been published elsewhere, maps, aerial photos of the base, and architectural drawings of the buildings, all of which should qualify this as a source document for those curious about World War Two LTA. This book is being sold by the author. The price is \$24.95 plus \$4.95 S&H. Orders may be sent to: David Crawley, 692 N. Adele #10, Orange, CA 92867. Phone inquiries can be made to (714) 538-0628. E-mail inquiries to no405dc@att.net Ω

BLACK BLIMP

Robert Joseph “Bob” Andersen passed 16 MAR 2011. Shortly after graduating high school WWII broke out. Bob joined the Navy and was stationed at Moffett Field, assigned Navy Airship Rigger 2nd Class flying blimps, also winning the Naval Fleet Boxing Championship in the 147 lb. division. Postwar he was inducted into the San Mateo County Sports Hall of Fame for his contribution to the sport of boxing. Bob is survived by two sons, three daughters and a number of grand and great-grandchildren. Ω



Robert Eugene Simpson, 86, passed on 2 MAR 11. Enlisting in the US Navy in WWII, he was later designated a Naval Aviator at Lakehurst the day of his marriage, 4 APR 44. He served in ZP-51 at Trinidad and outlying bases before transferring to HTA in the Pacific. Postwar education led to his running several successful businesses. Simpson is survived by his wife of 66 years Juantia, three sons and numerous grandchildren. Ω



Siegfried H. Geist, 76, passed 27 APR 11. “Sig,” whose father had worked on the LZ-129, was very active with the LTAS and NAA; TNB readers are familiar with his many reports from Germany. Ω



READY ROOM

4-6 DEC 2011 - Airships to the Arctic VI, Seattle, Washington. The sixth Airships to the Arctic conference explores the forward and backward linkages of the emerging airship industry. Opportunities that do not exist today. <http://airshipstotheartic.com/> Ω

18-19 NOV 2011 - DGLR - Workshop XIII - “The Future of LTA - New Aspects and Trends” - DEUTSCHE GESELLSCHAFT FOR LUFT - UND RAUMFAHRT - LILIENTHAL - OBERTH E.V. Aachen, Germany. Ω

May 2-4, 2012: NAA Reunion - Tucson, Arizona HQ Hotel – DoubleTree (see page 3). Schedule includes visit to last remaining ZPG car at Davis-Montham (back cover photo) and tour of Pima Air Museum. Registration form online or in TNB No. 92.

12th September 2012: 9th International Airship Convention at le Centquatre in Paris, France.

Lighter Side



We’d heard about those late Goodyear “hotdog on a roll” designs... ☺

Errata

Last issue we incorrectly stated Mike Rentell’s Airship Association post. Mike is Treasurer of AA. AA Secretary is Martin Hill. Also, the Nelson Grills photo on page three (by **Eric Brothers**) was taken at the Akron Reunion in ’97, not AZ as stated. We regret the errors. Ω



Our good friend in the U.K., Dr. Giles Camplin, sent along a series of prints (which appear to be made from slides) of American airships operating with Fleet vessels. Ed. had carefully studied the largest possible enlargement and reached the conclusion these are 4Ks. Ed. guessed it's some sort of Navy Day or 4th of July type celebration, owing to the pleasure craft in the water. Can anyone shed some light on location, time, etc.? And below, from about the same time period...





NAA President Ross Wood examines the last remaining ZPG car, ZPG-3W Bu No 144243, at Davis-Monthan Air Force Base. See inside for details of how we'll visit her during the upcoming NAA Reunion. The September '11 issue of AVIATION HISTORY calls it simply a "gondola from a U.S. Navy early-warning blimp."

