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Steve Hinton flying the Planes of Fame Air Museum's Boeing P-26A "Peashooter" over Duxford during the 2014 Flying Legends Air Show. (All photos by the author)

FLYING LEGENDS, RAIN OR SHINE

By Frank B. Mormillo

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Reportedly, when Stephen Grey first began to host (in conjunction with the Imperial War Museum), the Fighter Collection's annual Flying Legends Air Show more than a quarter of a century ago at the historic Duxford Airfield in the United Kingdom, he picked the second weekend in July for the event because that time frame historically offered the best chance of good weather. Of course, the United Kingdom is known for its variable weather patterns, with rainy and cold weather often rearing its head even in the summer months. Furthermore, the weather can literally change within minutes. "If you don't like the weather now, just wait about 20 minutes," is a common expression in the UK.

But, for the most part, Grey's scheduling for the event that has come to be known as the premier warbird show in Europe has proven to be a good decision. Even when rain, thunder and lightning did rear their heads, there have generally

been enough breaks in the adverse weather to get on with the show. During the 2014 Flying Legends Air Show over the weekend of July 12-13, the weather was pretty good on Saturday, though Sunday saw an alternating mixture of high temperatures and heavy rains. Yet, the weather was acceptable when the warbirds took to the sky, even on Sunday afternoon.

The mornings at Flying Legends afford the audience opportunities for close-up flight line tours of the participating warbirds, strolls through numerous vendor booths containing all sorts of aviation collectibles and related merchandise, and visits to the Imperial War Museum's collections of historic aircraft, military vehicles and the American Air Museum in Britain. There are also opportunities for scenic rides in historic biplanes and training planes. But, the real air show action begins at 2:00 p.m. each afternoon.

[Blue colored text have links to relevant information.](#)



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A surprise visitor to the 2014 Flying Legends Air Show was the Boeing P-26A “Peashooter” from the Planes of Fame Air Museum. The only original P-26 still flyable, the “Peashooter” was shipped from its home at Chino, Calif., to Duxford specifically for the show. Planes of Fame Air Museum President Steve Hinton flew a very nice display with the P-26 on Saturday; but, because of a strong crosswind on Sunday, after taxiing out for take-off and evaluating the conditions, he was forced to bring the “Peashooter” back to the flight line and park the airplane. The “Peashooter’s” narrow-track landing gear makes crosswind landing and takeoff operations a bit problematic.

Other stand-outs at Flying Legends this year included a Curtiss P-40C Tomahawk that had recently been restored for The Fighter Collection by Matt Nightingale’s California Aerofab crew in the United States, the Super Constellation Flyers Association Lockheed C-121A Super Constellation “Star of Switzerland,” a quartet of Supermarine Spitfire Mk.1s (there were a number of other later mark Spitfires at the show

1. *The Fighter Collection’s Curtiss P-40C Tomahawk and Curtiss Hawk 75 preparing to take off from Duxford.*
2. *The Breitling-sponsored Super Constellation Flyers Association’s Lockheed C-121A Super Constellation “Star of Switzerland” was an impressive sight in the sky over Duxford.*
3. *A common and popular feature at Flying Legends Air Shows, military re-enactors posing with the warbirds at Duxford during the morning flight line walk.*
4. *The Fighter Collection’s Vought/Goodyear FG-1D Corsair in action during the 2014 Flying Legends Air Show.*
5. *Laurel and Hardy look-alikes posing with girls in period dresses. These guys really looked like the original comic duo.*
6. *Warbird enthusiasts getting a close-up look at the Boeing B-17G Flying Fortress “Sally B.”*



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as well), a paired aerobatic routine featuring The Fighter Collection's Grumman FM-2 Wildcat and Grumman F6F-3 Hellcat, a pair of Hispano Buchons (Spanish-built version of the German Messerschmitt Bf 109) being pursued by North American P-51 Mustangs and a very sprightly display by the Flying Bulls' North American B-25J Mitchell.

Of course, there were many other types of aircraft in action as well during the three-hour production that concluded with the traditional Flying Legends Balbo in which most of the participating fighter planes took to the sky for mass flyovers before breaking up into individual flights for run-ins to the landing break. Rain or shine, Flying Legends is always an impressive event. →

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7. "Sally B," the only Boeing B-17G Flying Fortress still flying in Europe, being escorted by North American P-51D and TF-51D Mustangs.
8. The Fighter Collection's Grumman/General Motors FM-2 Wildcat and Grumman F6F-3 Hellcat in action together.
9. The Red Bulls' North American B-25J Mitchell performing against a stormy backdrop.

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AAHS President Jerri Bergen briefs the attendees on the state of the AAHS and its plans.

AAHS ANNUAL MEETING IN REVIEW

On February 7, the AAHS held its annual meeting at Flabob Airport in Rubidoux, California. This meeting was held in partnership with the Antique Airplane Association, and the International Stinson Club, and featured a full day of activities and hangar flying. The event was attended by approximately 95 members and friends.

Attendees were provided with a detailed overview of the restoration of a Stinson 108 that is being performed at Flabob, primarily by a group of high school students, led by Flabob resident Jan Buttermore. Buttermore and Roger Farnes walked the attendees through the history and efforts associated with this restoration, answering numerous questions about the project.

A catered lunch was held in EAA Chapter 1's hangar that was highlighted by Wayne Donaldson's Stinson SR-5E, a former grand champion award winner at the EAA AirVenture in Oshkosh. Lunch was followed by a talk by Jonna Doolittle Hoppes, granddaughter to Jimmy Doolittle. Jonna provided a unique insight into her grandfather's life highlighted through personal stories and recollections. AAHS president Jerri Bergen provided attendees with an overview of the current status of the AAHS, along with our plans and future directions. Jerri ended her presentation by recognizing the many people instrumental in helping organize and run the annual meeting.

Earl C. See was recognized with a lifetime achievement award. Earl has been an AAHS member (No. 459) since 1958. Over the years he has authored more than 40 articles, served on the Society's board of directors, and provided invaluable assistance to the *AAHS Journal* and *FlightLine* newsletter editor through proof reading. One of the reasons that these publications are held in such high regard can be traced to his efforts to assure we have a quality error-free product.

The recognitions were followed with the raffle of door prizes that included a framed, signed print by AAHS member Lloyd S. Jones of a YB-49 flying over the desert while casting a B-2 shadow (see the back cover of *AAHS Journal*, Vol. 58, No. 1, Spring 2013), a signed print by Michael Machat, an aviator's "grab bag" of goodies provided by the Av8tor Shop, Cable Airport, a beautiful mahogany scale model of a GeeBee R-2 donated by ScaleCraft and an aviation novel written and donated by Lloyd Jones.

Following this, the meeting broke up into two groups – the ramp watchers who migrated out to the flight line and a group that toured the Flabob Wathen Replica Racers hangar. This latter group was led by John Lyon, who provided historical and building background behind these aircraft that included a deHavilland DH.88 Comet, 1934 Schoenfeldt "Firecracker,"



AAHS Treasurer welcomes attendee Bert Zimmerly.



EAA Chapter 1's hangar was the focal point for the meeting.



Caudron C.460 and Roscoe Turner's Meteor.

The event wrapped up with a wine and cheese hour provided by AAHS member Les Whittlesey and CalAero (host of last year's event). This proved to be a great way to wind down a great day of aviation socializing and historical exchanges.

Keep your calendar open (early February) for next year's meeting. If everything falls into place, as we hope it will, this meeting will be held in a very unique setting that you'll definitely want to attend. →

Photos Clockwise from Top Left:

- John Lyon conducting a tour of the Wathen Replica Racers collection. (Caudron C.460 in foreground).
- Students working on the Stinson 108 restoration.
- Jonna Doolittle Hoppes talking about her grandfather, Jimmy Doolittle.
- Attendees enjoying the catered luncheon.
- Serving line for the luncheon.
- Attendee being presented with an autographed print by Michael Machat.
- Earl See won the GeeBee model donated by the Av8tor Shop.
- This Beechcraft D-17S was one of a number of aircraft to be seen on the Flabob ramp that day.



WHERE HAVE ALL THE PILOTS GONE?

by John Hazlet



Think back to general aviation's halcyon days in the mid-1970s. Cessna was building 3,000-plus 172s every year. Airports all over the country were like my home field, El Monte, California: Two large flying schools and a couple of smaller ones kept two pilot examiners on that airport busy giving check rides. Nice new two-seat trainers rented for about \$20 or \$30 an hour, with \$10 for the flight instructor. There was a two or three month wait for an airplane tie down spot on the open ramp, and people waited more than a year for a T-hangar. Many military pilots were getting out of the service. There were way more aviators than there were jobs available for them.

That abundant pilot supply made the U.S. unique in the world, and our aviation industry had grown used to it. The airlines could pick and choose among hundreds of well-qualified applicants. You didn't have a chance of getting hired unless you had about 5,000 hours of flight time and a four-year college degree, and significant experience in large airplanes helped.

At this same time, foreign countries had no major general aviation base like America's, and their airlines – JAL, Lufthansa, etc., were sending pilots to the U.S. for *ab initio* training: They arrived here with zero flight time, and – having acquired U.S. Commercial, Instrument, and Multiengine pilot certificates – departed for brief transition training in their home countries followed by copilot or flight engineer jobs in big jets at their national airlines.

Jump ahead to the year 2014. At El Monte, there are two small flight schools and no pilot examiners on the field. The few careworn training airplanes are 30 or 40 years old and well over the 10,000 flight hour mark, interspersed with even fewer new simple four-seaters whose quarter-million-dollar acquisition prices have driven rental rates up into the \$150-per-hour range. Whereas I used to have 15 full time flight instructors, today if you'd like a flying lesson they'll call in a part-timer at \$50 an hour. There were nearly 40 Designated Pilot Examiners in the Van Nuys General Aviation District when I moved there in around 1980; today it's called the Flight Standards District, but the demand for pilot certification check rides has dropped so low that fewer than 10 examiners easily handle the load. At

most general aviation airports in the U.S. there are numerous empty tie downs available, and many T-hangars are being rented out for non-aviation uses. The cost of training for the former airline pilot entry level job "ticket," a Commercial Pilot certificate with Instrument and Multiengine ratings, has grown to \$100,000 or more.

Some pundits who take a quick look at the statistics (including, unfortunately, the Government Accountability Office in a recent report to Congress)¹ will tell you that there are lots of pilots coming out of U.S. schools with Commercial-Instrument-Multi qualifications. But a close look reveals that more than 80 percent of those people are from foreign countries, supported by foreign funds, destined for airline jobs in their home countries, and will never enter the U.S. pilot job market. At one large non-university-affiliated flight school, among more than 100 trainees, only three were U.S. citizens preparing for airline careers in this country.²

Meanwhile, airline aviation is struggling out of a period driven by deregulation and years of economic recession and upheaval. Mergers, bankruptcies, extended furloughs (airline-ese for layoffs), pay and work rules concessions, loss of pensions, labor actions, grueling schedules, and other problems have taken the luster off of airline flying as a career.

In February 2009, Colgan Airways Flight 3407, operating under a code share agreement with Continental Airlines, crashed at Buffalo, N.Y., killing 50 people. In the aftermath of that accident (whose chief probable causes included improper stall recovery procedures and pilot fatigue) a group representing the families of the people who died applied heavy pressure on Congress to implement changes that – they hoped – would prevent such accidents in the future.

This resulted in the passage of Public Law 111-216, whose primary thrust was to force the Federal Aviation Administration to implement regulatory changes in minimum qualifications for airline copilots. Under the "old" rules, copilots ("first officers" or "FOs" in airline-ese) needed a Commercial Pilot certificate with Instrument and Multiengine ratings – obtainable in 300 or less hours of flight time – followed by completion of the airline's training, and a proficiency check ride. The new rules

require FOs to have Airline Transport Pilot (ATP) certificates and a minimum of 1,500 hours of flight time.³ Additional stringent requirements were added to the ATP qualification process, including training in advanced flight simulators and high altitude operations. Unfortunately, the public law and resulting regulatory changes did little to directly address the probable causes of the Colgan crash – but they suddenly opened a 1,000-hour-plus gap between the old and new minimum flight hour requirements, with no quick way to fill it. The additional training and flight time resulted in such massive cost increases that many pilots already in the pipeline for airline careers abandoned their goal because they could see no way of paying off the training costs in a reasonable period, considering entry level airline pay scales.

In short, America's built-in supply of qualified airline pilot candidates is drying up.

As of this writing (in late 2014), although the shortage has not reached the major trunk carriers,⁴ regional airlines are no longer looking at “in” baskets full of qualified pilot resumes. Instead, one regional is offering a \$15,000 “signing bonus” for ATP-qualified pilots who will come to work for them. The airline will enroll flight instructors early in their careers (well below the 1,500 hour threshold) in its health and travel benefits programs in exchange for a commitment to come to work when they accumulate the requisite number of hours. Other, similar incentive programs are in place or appearing throughout the regional airline industry in an attempt to attract pilots from a diminishing pool.⁵

Contract air feeder carriers that provide overnight package transportation for integrators such as UPS and FedEx between major hub airports and smaller communities, and Scheduled Commuter operators (governed by Part 135 of the Federal Aviation Regulations)⁶ providing passenger air service (including government-subsidized contract Essential Air Service) to small communities, are the hardest hit, because pilots who meet their minimum hiring requirements⁷ are eligible, or nearly eligible, for jobs flying passenger jets at the regional airlines – which, as already mentioned, are desperate for pilots and offer better long-term career prospects. As a result, the feeder and Scheduled Commuter operators are so short of pilots that they are canceling flights and parking airplanes. These companies are often the first rung on the ladder leading to a major airline flying career, and theirs is an environment in which pilots gain invaluable experience of scheduled operations on dark and stormy nights – dealing with load and weather issues, airplane and air traffic control problems, instrument flying and management of cockpit priorities – a much richer flying atmosphere than grinding around the traffic pattern in clear weather giving flight instruction, or towing a banner. Loss of these jobs drains the pipeline of seasoned pilot candidates for the regional carriers . . . a problem today which will eventually reach up to touch the country's trunk airlines.

So: Where does the industry go from here?

There has been some talk of a federally subsidized aviation academy, possibly in cooperation with large university flight training programs, but in the current economic climate, and considering stringencies in the FAA's funding base, it does not appear likely that the program will get financial support.

The Air Line Pilots Association, a union representing a number of major and regional airlines' pilots, indicated in a recent editorial⁸ that the issue would be resolved if the airlines would just pay their pilots more money . . . but the problem

can't be solved that easily.

Market pressures *will* eventually level the playing field. However, it will be a protracted and multi-faceted process.

The first problem is that the gestation period between a new pilot starting flight training, and reaching the 1,500 hour experience threshold, is between five and ten years – depending chiefly upon how often the trainee can fly and how quickly he or she can spend money. Thus, if wages were so significantly increased as to precipitate a major influx of career-minded student pilots, the results would not *begin* to be felt for at least five years.

Secondly, the increased cost of pilot wages will force air carriers to re-think the economic viability of their routes. In the case of the package express integrators, some of the shorter air feeder routes' packages will sacrifice a few hours of early delivery and travel by truck, instead of airplane, to and from the hub airports. For the Part 135 Scheduled Commuters (who typically operate airplanes with nine or fewer passenger seats, flown by a single pilot), the less profitable routes – including, inevitably, some Essential Air Service-subsidized routes – will be dropped and those communities will lose airline service. For the regional airlines, again, the leanest routes will be canceled or combined with other routes to reduce demand for air crews, and in each case the airplanes will be parked or sold.

Various industry associations, companies, and individuals are seeking relief in the form of exemptions from the regulations, rule changes, or changes in the Public Law – but these processes move very slowly and stand a strong chance of being rejected unless they include compelling features supporting public interest and maintenance or improvement of safety standards.

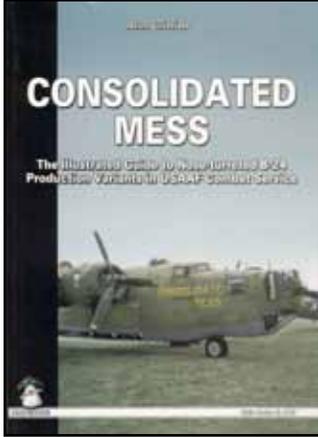
In summary, we'll wind up with higher transportation costs, less service, and – over a period of years – a gradual increase in the pilot supply as more people are attracted by the improved wages and operating conditions – but it won't happen this year, or next year! →

Endnotes

- 1 GAO Report to Requesters: Aviation Workforce: Current and Future Availability of Airline Pilots; February 2014
- 2 Survey of non-college-based flight academies conducted by Regional Air Cargo Carriers Association. See also An Investigation of the United States Airline Pilot Labor Supply, <http://www.aabi.aero/AirlinePilotLaborSupply1.pdf>
- 3 There are limited provisions for reduction in the 1,500 hour total flight time requirement in exchange for certain costly, university-based integrated college degree/flight training programs, or military flight training. See 14CFR61.160.
- 4 Late note: As of early 2015, major trunk airlines are beginning to have “no shows” in their new-hire pilot training classes – something unheard of in previous decades, when a training class date at a major airline was a rare and precious item.
- 5 While these airlines decline to be mentioned by name, their incentive programs are well known throughout the air carrier industry.
- 6 Technically, 14CFR135.
- 7 Requirements for the single-pilot Scheduled Commuter operators' captains are the same as for regional and major airline copilots: 1,500 hours and an ATP certificate. For the Part 135 cargo carriers, the minimum is 1,200 hours with a Commercial-Instrument-Multiengine certificate – but that is only 300 hours below the minimum for the regionals.
- 8 Moak, Capt. Lee, “Viewpoint,” Aviation Week & Space Technology, 15 September 2014

Book Reviews

Consolidated Mess, The illustrated guide to Nose-turreted



B-24 Production Variants in USAAF Combat Service, by Alan Griffith. Mushroom Model Publications, distributed by Casemate Publishers and Book Distributors, L.L.C., 908 Darby Rd, Havertown, PA 19083, www.casematepublishing.com, 2012. ISBN: 978-83-61421-16-0, Softbound 8"x11.5", 192 pages, Photos, Illustrations, Appendices.

We who are interested in aviation history appreciate authors like Alan Griffith who

have the tenacity to do the research and put together the detailed and illustrated documentation needed to preserve aviation history accurately – in this case the B-24. Why the B-24?

On December 29, 1939, the XB-24 prototype took to the air, the first of over 19,000 B-24s produced by five different manufacturers at the height of production. It soon became apparent in combat that the glass-nosed B-24s (and B-17s) were vulnerable to head-on attacks. The need for improved aircraft armament led to a multitude of changes. In addition, the B-24s used in the Pacific required different modifications than those used in Europe. To further complicate matters, some parts built by Ford at Willow Run were not interchangeable with those built by Consolidated in San Diego.

Because of the number of changes and modifications to the original B-24, the author concentrates in this book solely on the external differences among US Army Air Forces' combat B-24 turret-nosed versions and not the greenhouse Ds, Es, and Gs, nor the C-87s, C-109s, F-7s or trainers. All but a very few of the 192 pages in this book are filled with images and illustrations. The appendices include production Serial Numbers, where they were built and other pertinent information such as a section on the B-24 "Zwilling" (twin) and the B-24N.

The B-24 went through more turret changes than any American combat aircraft before or since. Not counting the B-24N, PB4Y-1 or -2, the B-24s covered in the book used:

- Three different nose turrets,
- Three belly gun configurations,
- Four different models of the Martin -3 top turret, and
- Five different tail gun turrets/configurations.
- In addition, there were two modification packages for the waist gun position.

There were four different production variations (H, J, L and M). They were built at Consolidated/San Diego (CO), Consolidated/Fort Worth (CF), Ford/Willow Run (FO), Douglas/Tulsa (DT), and North American/Dallas (NT). Only the J version was built at all five plants. The M version was only built at the CO and FO plants.

Depot Level modifications were carried out at Hawaiian Air Depot/ Fairfield Air Depot (HAD/FAD) and the Middleton Air Depot/ Oklahoma City Air Depot (MAD/OCAD). The

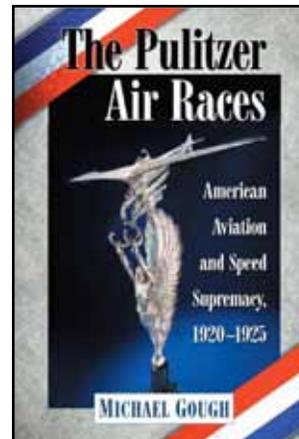
B-24 modifications in the Pacific and CBI differed from those in Europe and the Mediterranean. Then there were the numerous Field modifications. Keeping track of all the changes and variations was a logistic challenge. No wonder the author chose to title the book "Consolidated Mess."

To use the B-24 on the cover of the book as an example, the author wrote, "The photo that wrote the book... one of at least six different B-24s named 'Consolidated Mess.' If only making a brief glance one might think this is a Ford L, or an M, yet the nose configuration is clearly Consolidated. What's going on? This is B-24J-100-CO 8AF 44BG 50BS 42-100429, field modified with a smaller version of the navigator observation window seen on Ford's late Ls and all their Ms. In addition, it has armored side and front center windshield windows. Also, it has the St. Paul 'bay window' enclosed waist gun modification as does the aircraft in the background. 'Mess' also sports the Consolidated-style camouflage demarcation. All this and more, read on!"

This book is for serious aviation historians and master model builders as well as those interested in the B-24 for personal reasons.

by Larry Bledsoe

The Pulitzer Air Races, American Aviation and Speed Supremacy, 1920-1925, by



Michael Gough. McFarland & Co., Inc., Box 611, Jefferson, NC 28640, www.mcfarlandpub.com, 2013. ISBN 978-0-7864-7100-1, Paperback, 9"x6", 60 plus B&W photos, 5 drawings, bibliography, appendices and indices, 238 pages.

Author Michael Gough points out that while there are numerous books on the National Air Races, the Bendix and the Schneider trophies, almost nothing has been written about the Pulitzer Air Races of the early 1920s. While they are briefly covered in books on Golden Age air racing, Gough's book is the first to focus exclusively on the Pulitzers.

The Pulitzer Air Races were established in the early 1920s to help foster and develop the growth and development of American aircraft technology and to help promote that on a world-wide basis. The aftermath of WWI found the United States as an "also ran" relative to aviation technology. For many in the country of the "birth place of aviation," this was an untenable situation. The Pulitzers, among them, felt that sponsoring aviation events would help rectify this situation and re-establish the United States as a world leader. Little did they know the success they would have.

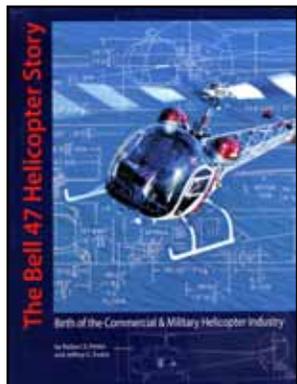
There would be only six Pulitzer races held – 1920, 1921, 1922, 1923, 1924 and 1925. By 1926, both public interest and government sponsored development had waned to the point that continuing to hold an annual event was cost prohibitive. But, the successes these six races fostered helped propel U.S. technology back a top standing in the aviation world. This started with the 1920 race, where first place was taken by an American built and piloted plane setting a new world closed-

course speed record. Two Pulitzer racers, mounted on floats and flown as seaplanes, would go on to capture two Schneider Trophy Races, helping propel American aircraft design and engine development to the front of the world by the mid-1920s. Only six races, but the fallout from them help change the U.S.'s role and position in the world of aviation.

The author takes the reader through each Pulitzer race, examining all points from site selection to the actual races. He also presents the impact each race had on both the participants, spectators and sponsors. This well written book helps shed light on a period of air racing that played a significant role in the American aviation development, but has been almost forgotten and definitely overlooked by aviation historians. Whether you are interested in air racing or just early aviation history, Gough has put together an excellent, well researched and written work that should appeal to your interest.

by Hayden Hamilton

The Bell 47 Helicopter, Birth of the Commercial & Military Helicopter Industry, Robert S. Petite and Jeffrey C. Evans.



Graphic Publishers, 2510 N. Grand Avenue, Suite 104, Santa Ana, CA 92705-8753, 2013. ISBN 978-10882824-43-8, Hardcover, 8.5" x 11", numerous color and B&W photos and drawings, bibliography, appendices, indices, 730 pages.

Everything you wanted to know about the Bell 47, and many interesting facts that you probably didn't know are covered in this

work. The authors take you through the design, construction and testing of one of the world's first commercially developed helicopters. The reader is provided with insight into the trials and tribulations faced by the engineers trying to develop and introduce a new form of commercial flight at a time when there were almost no applicable regulations governing the certification, operation, training and maintenance for this type of aircraft.

The book is full of fascinating facts, one of which is no one can say for certain exactly how many Bell 47s were built - factory, under license, and "home grown" (it is known that a number were built from spare parts). While the authors are able to provide what they feel is a very close estimate, they concede that a few could be either be double counted or have been missed. They have done an excellent job of sleuthing out this information using multiple information sources.

Whether you need a detailed reference work on the Bell 47, or just want to learn more about the development and growth of the helicopter industry, this book is a definite resource for your library.

by Leland Pugsley

American Military Aircraft 1908-1919, by Robert B. Cassari. Aeronaut Books, 82936 Plymouth Dr., Indio, CA 92203-4000, www.aeronautbooks.com, 2014. ISBN 978-1-935881-13-1, Hardcover, 8.5"x11", numerous (too many to count)



B&W photos, 16 color plates, bibliography, appendices, indices, 752 pages. \$100.00.

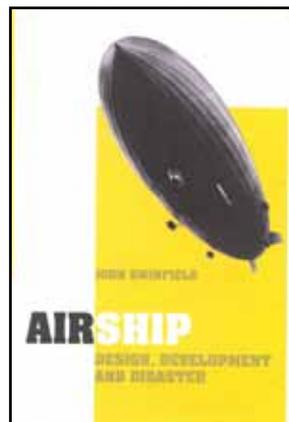
The first 57 pages of the book focuses on the development, equipping and training U.S. military aviators from the acquisition of American air services' first aircraft, through WWI and a summary of the WWI programs for both the Army Air Service and the U.S. Navy. The next 500 pages look individually at every American aircraft type

procured by the services. This is followed by individual profiles of the English, French and Italian aircraft that the services acquired and operated. The 18 pages of Appendices are, themselves, a wonderful reference source for aircraft serial numbers, combat squadrons and the aircraft they flew, inventories and local designations used during this period. Also included within the appendices are 16 pages of color drawings illustrating paint schemes and markings of various types.

If you are looking for THE definitive book on U.S. military aviation from its beginning up through WWI, this book is a must have. AAHS member Robert Cassari has assembled this wonderful reference work during a life-long passion for early American aviation. While seemingly pricy at \$100, it would take you an indeterminate number of books to cover what you'll get in this one volume.

by Hayden Hamilton

Airship Design, Development and Disaster, by John Swinfield. Naval Institute Press, 2012. ISBN: 978-1-59114-034-4, Hardbound 6"x9", 336



pages, photos, illustrations, epilogue, appendices, endnotes, bibliography, index. \$29.95.

On September 24, 1852, Frenchman Henri Giffard flew a steam-driven, non-rigid airship on a 17-mile journey for the first powered lighter-than-air vessel flight in history. However, it was the Germans who developed large, rigid airships and by 1914, they were making regular military and commercial flights. High altitude German airships were used to

bomb England during WWI.

For the next 35 years, first Germany, then England, and finally the United States built and flew rigid airships. While some, but not all, of the airships ended in spectacular disasters, they managed to find awesome acceptance by the public and were the cause of much political squabbling in the military about which branch should have them, and among politicians over funding.

Non-rigid airships had envelopes inflated solely by pressure of gas. Rigid airships had envelopes stretched taut

Book Reviews (Continued on page 10)

Just When You Thought You Had It All Figured Out

Just when you thought you had it all figured out on who really made the first controlled powered flight, here comes a new piece of information. At the 102nd Indian Science Congress held in early January 2015 in Mumbai, India, former pilot turned author Anand J. Bodas and Ameya Jadhav presented a research paper in which they claim that -- Move over Wright brothers! -- it was Shivkar Bapuji Talpade who first flew a flying machine over Chowpatty in 1895, eight years before the American siblings.

They assert that this “flight” was apparently based on sage Bharadwaja’s aviation knowledge, which included “war planes” and aircraft doubling up as “submarines.” Maharishi Bhardwaj — a sage of the Vedic period (around 1500 - 500 BC) — had laid down as many as “500 guidelines” on flying in one of the ancient Hindu texts going back much before Leonardo da Vinci’s 15th century ideas for flying machines and the American Wright Brothers’ first flight in 1903. Bodas then raised eyebrows further by claiming aviation technology existed in India as early as 7,000 BC, though he did not explain his evidence for this theory.

Captain Bodas claimed that Maharishi Bhardwaj spoke of “aeroplanes that travel from one country to another, one continent to another and one planet to another.” Bhardwarj also cited 97 reference books for aviation, according to the authors. Bodas adding that some of the “jumbo” airplanes of ancient India had “40 small engines” and could move not only forward but backward as well.

So now we have a whole new area of *First-in-Flight* to investigate and validate? Or, possibly we have just another case of folklore being mixed with science? →

Book Reviews (Continued)

around a metal frame that used gas bags filled with hydrogen or helium. Rigid airship history is the focus of this book. Strangely enough, only non-rigid and semi-rigid airships have survived the test of time.

As the book title suggests, Swinfield discusses the different German, English and American, designs and why design changes were sought. A large portion of the book covers the financing and construction of the English behemoth airships R100 and R101. One man, Sir Barnes Wallis, designed the R100 and oversaw its construction and development. The airship R101, with all the latest technological devices, was designed and built by committee and with government oversight. The results were quite different from the R100.

Each nation achieved some success with their airships. It was the Germans who achieved the most noteworthy commercial successes. The *Graf Zeppelin* made a round-the-world flight and regularly scheduled commercial flights between Europe and South America. The *Hindenburg* made flights to South America and across the North Atlantic before its spectacular Lakehurst, N.J., disaster in 1937.

The author identifies the key players: the designers, politicians for and against, the financiers and the aircrews that flew these leviathans of the air. He covers their accomplishments as well as their disasters and why they occurred. Weather was the airships’ primary archenemy that caused most of the spectacular disasters. The author points out that it was the human factor, that often failed to understand or ignored the limitations of rigid airships and how they should be used, that led to disasters, like the *USS Macon*.

The author has done extensive research for this book, and it shows in the depth of details he includes. The book is fully referenced with newly discovered first-hand material and a detailed bibliography. From a historical viewpoint, this is a good read because it tells the airship’s story, its potential and disasters, as well as the people involved and their achievements. Some of the details, especially about the British financing of its rigid airship program, was a bit tedious at times, but shows how those obstacles were overcome.

by Larry Bledsoe

Want to help your Society?

How about reviewing a book? Just let Hayden Hamilton (webmaster@aahs-online.org) know and he’ll send you a book. The only catch is that you have to write a short book review (as shown in this *FlightLine*) and send it back to us. Hayden will let you know what titles are available.

Or, if you have read a good book lately, let other members know about it by writing a short book review of it. Again, contact Hayden for details and titles - don’t want to have you writing a review of a book that has already been reviewed.

AAHS FlightLine Sign-Up Reminder

For those that want to be notified by email when the next issue of the *AAHS FlightLine* is posted, please register your email address online. You can do this by going to the AAHS website “home page.” At the bottom of this Web page is a link and instructions that will allow you to register your email address. This is an “opt in” program. Only those that request notification will receive one. The AAHS will not use your email address registered here for any other purpose than to notify you of a *FlightLine* posting. You have control and may remove or change your email address at any time. Remember that the electronic version of the *AAHS FlightLine* is in color.

Folded Wings

Doolittle Raider Passes

Then there were three:

Lt. Col. Edward J. Saylor, 94, passed away on January 28, leaving only three remaining Doolittle Raiders. Saylor was the flight engineer on the 15th B-25 that bombed targets in Kobe, Japan. They were forced to ditch in the East China Sea but all made it to shore where they spent several weeks dodging the Japanese until finally making it to safety.

Saylor remained in the Army Air Service (later the USAF) after the war, accepting an officer's commission. He retired in the 1960s holding the rank of lieutenant colonel. After retiring, he spent much of his time talking to students and others about his experiences.

Age and illness have whittled down the Doolittle Raiders to the point that in 2013 three of the remaining four held their final reunion. At this reunion, they somberly toasted their departed comrades sipping 1896 Hennessy Very Special Cognac from the silver goblets inscribed with their names.

Legendary Test Pilot Dies

Fitzhugh "Fitz" Fulton, a highly-decorated Air Force and NASA test pilot, died on February 4 at the age of 89. Fulton joined the Air Force in 1943. He flew 225 Berlin Airlift missions from 1948-1949 in C-54s. During the Korean War, Fulton flew 55 combat missions in the Douglas B-26 Invader and was awarded the Distinguished Flying Cross and five air medals for combat heroism.

In 1952, Fulton graduated from the USAF's Experimental Test Pilot School (later honored as the school's first "distinguished alumnus"). He is credited as one of the "greatest multi-engine test pilots of his generation" and was awarded an additional three Distinguished Flying Cross medals for his test pilot work. Fulton was chief of the Bomber Transport Operations Test Division at Edwards AFB, Calif., and was the only USAF pilot to fly the nuclear-powered NB-36H, according to his profile in the National Aviation Hall of Fame. He set an international altitude record of 85,360 feet flying the B-58 in 1962 and was awarded that year's Harmon International Aviation Trophy for his work with the program.

After a 23-year Air Force career, Fulton became a civilian research pilot for NASA. He participated in tests of the 747 shuttle carrier aircraft, the XB-70 prototype supersonic bomber, as well as the YF-12A and "YF-12C" (SR-71A). By the time he retired from NASA in 1986, Fulton had more than 15,000 hours in over 200 types of aircraft.

From *Air Force Magazine* - "Daily Briefing"

Col. Dean Elmer Hess

Retired Air Force Col. Dean Elmer Hess, who helped rescue hundreds of orphans in the Korean War and whose exploits prompted a Hollywood film starring Rock Hudson, has died at age 97.

Hess died March 2 at his home in Huber Heights, a suburb of Dayton, after a short illness, his son Lawrence Hess said Thursday.

Hess, an ordained minister, was a U.S. Air Force lieutenant



Maj. Dean Hess, second from right, points out a target area on map as he briefs two South Korean pilots just before take-off as Brig. Gen. Kim Chung Yui, right, chief of staff of the Korean air force, looks on. (Photo by Jim Pringle/AP)

colonel when he helped arrange evacuation of Korean orphans from their country's mainland to safety on a coastal island, according to the National Museum of the U.S. Air Force.

He was a significant figure in Air Force history, and his efforts to help Korean children are a "shining example" of the Air Force's humanitarian airlift capabilities, museum historian Jeff Underwood said.

"What is less well-known is the instrumental role he played in training the fledgling South Korean Air Force," Underwood said in a statement.

Hudson, one of Hollywood's top leading men, portrayed Hess in the film *Battle Hymn* in 1957, a year after he starred alongside Elizabeth Taylor and James Dean in *Giant*.

Battle Hymn also was the title of Hess' autobiography. He used the movie and book proceeds to build an orphanage in South Korea, his son said.

He was a humble man who loved children and never cashed in on his fame according to his son Lawrence Hess.

A medal presented to Hess by South Korean President Syngman Rhee in 1951 for his service during the war is displayed at the museum near Dayton. Other Hess artifacts there include a flying helmet that he wore in Korea and that Hudson wore in the movie, which also featured Martha Hyer as his wife and Alan Hale Jr. as a mess sergeant.

The museum said Hess and Lt. Col. Russell Blaisdell, a chaplain, devised a plan to transport hundreds of orphans to refuge on the coastal island as part of Operation KIDDY CAR. U.S. planes airlifted the children, and the men arranged food, money and clothing contributions for them, the museum said.

Lawrence Hess said he accompanied his father to South Korea in 1999 and saw Koreans' respect for him.

"It was like traveling with a rock star," he said.

Hess, who was born in Marietta, flew 250 combat missions in Korea and 63 missions in WWII. He is survived by three sons, a daughter and several grandchildren and great-grandchildren. His wife, Mary Hess, died in 1996.

by Lisa Cornwell, Associated Press

President's Message

Our new year is already in full swing. With our delayed *Fall/Winter Journal* just out - we are ahead of the curve, slightly, for the rest of the year's publications. We also just wrapped our very enjoyable AAHS Annual Meeting at Flabob Airport, where we met many AAHS members and made some new ones. It was a real treat to listen to Jonna Doolittle Hoppes recount her personal stories of her "Gramps" and "Granny" Doolittle, during their 70-plus year marriage. It was also a pleasure to recognize the efforts of Earl See, a longtime member (since 1959), with a Lifetime Achievement Award. He's given 40-plus years of volunteer service, through written articles, Board membership and currently providing an invaluable service in proof reading the *AAHS Journal* and *FlightLine*. We can't have come this far without the help of people like Earl.



AAHS president Jerri Bergen presenting Earl See with a Lifetime Achievement Award in recognition of his 40-plus years of volunteer service to the Society.

Our 2016 Annual Meeting is already being planned and with some tenacity and a little luck, our meeting will be held at one of the most historic aviation sites on the west coast! Stay tuned for more details.

This year will see us busy with our existing projects and some important new ones. Two projects begun last year are moving forward this year; to get all the AAHS material cataloged; both library and photos, and to include this material into an electronic cataloging system that can be easily searched online.

We've got a few new volunteers that have already helped make a big dent in the project. Bob Palazzola has taken the lead in setting up a process for books to be easily and quickly logged and cataloged, while Robert Littlefield and Nicole Metgraff, new members both, have been steadily "tagging and bagging" each book for placement on the shelves.

A new project that will be of long lasting benefit to AAHS is the planned move of AAHS headquarters, announced at the Annual Meeting. The AAHS Board agreed that AAHS would generate more partnerships, identify more new members and recruit more volunteers if we were situated in an aviation-friendly environment, such as an airport or museum, as opposed to our current location in an industrial park. We have yet to choose a location but it will remain in Southern California. Sites being evaluated include Chino Airport, Flabob Airport, March Air Museum, Yanks Air Museum, and others. Our current lease is up in two years, so we have time to use up our current letterhead, and it is likely we'll keep our existing P.O. Box for continuity.

All of us at the AAHS office have enjoyed hearing from members and encourage you to tell your aviation experiences via the *AAHS Journal*. Help is available if you'd like some assistance with typing, editing, or putting your thoughts together.

Jerri Bergen
President

Donations

The following members have made generous donations to the AAHS. These donations go into the general fund to help pay the costs of producing the *AAHS Journal* and *FLIGHTLINE*. All monies are used to support this activity and no salaries are paid to any board member even though many hours are spent by these individuals in promoting and maintaining the Society.

Our appreciation and thanks go out to these individuals and to anyone else whom we may have inadvertently overlooked.

Scott Andrae

Harold D. Andrews Jr.

Gloria Aughenbaugh

Dale W. Becker

John F. Bessette

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New Members

Editor's Note: Due to search engines extracting and indexing personal information, the AAHS will no longer publish detailed addresses. Please contact the office if you wish to contact a member.

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Robert L. Carter
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MOVING???

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Wants & Disposals

DISPOSAL: Back issues of the AAHS Journal. I'll sell them to whoever makes an offer. I've been a member for 40 plus years. Will ship by USPS "Media mail" to keep the costs down. Regards;

- | | |
|-----------------------|------------|
| 1990 Vol 35 # 2 | 2008 all |
| 1997 Vol 42 # 4 | 2009 all |
| 2003 Vol 48 2 & 3 | 2010 2 & 3 |
| 2004 all | 2011 all |
| 2005 Vol 50 1,2 and 3 | 2012 all |
| 2007 all | 2013 all |

Dick Capon
recb727@comcast.net
 772-220-8046

WANTED: Photos of B-29s (EB-29) configured for electronic intelligence gathering. In particular, I'm looking for photos of two particular aircraft.

- 45-21812.....was a TB-29 (Trainer) converted to RB-29.
- 45-21871.....listed as B-29F and modified into EB-29
 ...also saw it recorded as EB-29F.

There possibly another four that are unknown to me and unable to find data on them. Robert Mann's excellent work, and what B-29 books I have so far, do not list ANY Ferret or "Elint" B-29s, but these are known to have operate from Ladd Field, Alaska.

David Stern
bellbrass.bell@yahoo.com

AAHS FlightLine

American Aviation Historical Society

President: Jerri Bergen
Vice President & Chief Publication Officer: Albert Hansen
Managing Editor: Hayden Hamilton

The AAHS *FlightLine* is a quarterly electronic publication of the American Aviation Historical Society and is a supplemental publication to the AAHS *Journal*. The *FlightLine* is principally a communication vehicle for the membership.

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As of this date, the following CDs are available. Each CD contains between 70 and 140 images depending on content.

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