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Lockheed Martin F-35C (CF-01) approaches Naval Air Station Patuxent River. (Lockheed Martin photo)

Lockheed F-35 Program Update

The Lockheed Martin F-35 Program has completed its third year of a five-year development program with a number of significant milestones being achieved

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during 2012. Significant among these were the delivery of 30 operational aircraft to the USAF, USMC, UK RAF and Norwegian Royal Air Force.

The F-35 Lightning II is a 5th Generation fighter, combining advanced stealth with fighter speed and agility, fully fused sensor information, network-enabled operations and advanced sustainment. Lockheed Martin is developing the F-35 with its principal industrial partners, Northrop Grumman and BAE Systems with 11 countries including the U.S. committed to purchasing the aircraft. These are the United States, United Kingdom, Norway, Sweden, Australia, Italy, The Netherlands, Taiwan, Israel, Japan and Canada

The 30 F-35 deliveries in 2012

included 11 F-35A Conventional Takeoff and Landing (CTOLs), 18 F-35B Short Takeoff/Vertical Landing (STOVL) variants, and one F-35C Carrier Variant (CV). Two of the F-35Bs were the program's first two international jets that were delivered to the United Kingdom. All but the carrier variant, known as CF-05, were production aircraft delivered to various bases for operational purposes. CF-05 was built for flight testing and



F-35B, BF-02, performs a STOVL takeoff from the USS Wasp. (Lockheed Martin photo)

Blue colored text have links to relevant information.



Planform view of F-35B, BF-01. (Lockheed Martin photo)

delivered to the System Development and Demonstration (SDD) program. The 30 aircraft delivered in 2012 are more than double the 13 aircraft delivered in 2011.

The 2012 flight test plan called for 988 flights and 8,458 test points by December 31. For the year, the SDD program flew 1,167 flights and tallied 9,319 test points against roughly

60,000 total test points that have been defined. As of the end of 2012, flight testing had completed 21,047 test points, or about 35 percent of the total. The F-35A Flight Science test aircraft flew 291 flights and accomplished 2,573 test points. The F-35B Flight Science test aircraft accomplished 396 flights and 2,443 test points. The F-35C flew 239 flights and tallied 2,247 test points. The Mission Systems test aircraft accomplished 241 flights and 2,056 test points. The F-35B also executed 102 vertical landings.

The cumulative 2012 milestones were achieved through a combination of planned test flights and test points, along with test flights and test points added throughout the year. The flight test program is now more than one-third complete in aggregate with the Air Force's F-35A variant leading the way with 43 percent complete.

"We are completing our third year of on-plan system development performance since the F-35 Program Executive



View of the forward lift fan and intakes of the F-35B. (Lockheed Martin photo)



First flight of the first UK F-35B, ZM135, on July 19, 2012. (Lockheed Martin photo)



First inflight refueling hook-up with F-35A, AF-03. (Lockheed Martin photo)

Office completed its Technical Baseline Review in 2010,” said Orlando Carvalho, Lockheed Martin F-35 program executive vice president and general manager. “We fully expect this to continue in 2013 as we begin flight test of the Block 2B mission system software that will ultimately provide the initial war-fighting capability the Marines need for their initial operational capability. This successful system development progress, a maturing production line and further operational base stand up are all strong indicators of the F-35 program’s positive trajectory.”

2012 Major Milestones:

- U.S. Secretary of Defense Leon Panetta announced the end of probation for the F-35B STOVL, nearly one year ahead of schedule.
- The first two international F-35s were delivered to the United Kingdom.
- The first three operational F-35B STOVL fighters delivered in November marked the beginning of tactical operational training at Marine Corps Air Station, Yuma, Arizona.
- 33rd Fighter Wing at Eglin Air Force Base, Fla., completed its Operational Utility Evaluation (OUE) and Air Education and Training Command (AETC) officials announced that the wing is ready for pilot training in 2013. The wing flew more than 700 sorties in 2012.
- Norway procured its first F-35 commencing the largest public procurement project in its history. The event was marked by Minister of Defence Espen Barth Eide authorizing the order for the first F-35A for the Norwegian Armed Forces.

- Luke AFB was selected for F-35A U.S. and international pilot training. The base will receive 72 aircraft for three fighter squadrons.
- Major flight test accomplishments included the first aerial weapons release for the CTOL and STOVL; the F-35A reached maximum high angle-of-attack milestone in four flights; the first night flight and night refueling missions were accomplished and both the CTOL and STOVL completed air-start testing.
- F-35 program surpassed 5,000 flight hours.



High angle-of-attack test with F-35A, AF-04. (Lockheed Martin photo)

INTERESTING EARLY AMERICAN AVIATION HISTORY

by Denham S. Scott, North American Aviation

Martin

How many of you know that in 1910, mighty Martin Marietta got its start in an abandoned Santa Ana, Calif., church? That's where Glenn L. Martin with his amazing mother Minta Martin and their mechanic, Roy Beal, constructed a fragile biplane that Martin taught himself to fly. From this location he moved the company to a vacant apricot cannery in Santa Ana.

Martin was a showman and he traveled the county fair and air meet circuit as an exhibition aviator. From his air show proceeds, he was able to pay his factory workers and purchase the necessary wood, linen and wire components.

His mother, Minta, and two men ran the factory while Martin risked his neck and gadded about the country. One of his workers was 22-year-old Donald Douglas (who WAS the entire engineering department). A Santa Monica youngster named Larry Bell (later founded Bell Aircraft that today is Bell Helicopter Textron) ran the shop.

Another part of Glenn Martin's business was a flying school with several planes based at Griffith Park, Los Angeles, and a seaplane operation on the edge of Watts where his instructors taught a rich young man named Bill Boeing to fly.

Later, Boeing bought one of Glenn Martin's seaplanes and had it shipped back to his home in Seattle. At this same time, Bill Boeing hired away Martin's personal mechanic. Later, after Boeing's seaplane crashed in Puget Sound, he placed an order to Martin for replacement parts.

Still chafing from having his best mechanic "swiped," (a

trick he later often used himself) Martin decided to take his sweet time and allowed Bill Boeing to stew for a while. Boeing wasn't known to be a patient man, so he began fabricating his own aircraft parts, an activity that morphed into constructing entire airplanes and eventually the Boeing Company we know today.

After WWI, a bunch of sharpies from Wall Street gained control of the Wright Brothers Co., in Dayton, Ohio, and the Martin Co. in Los Angeles and combined them as the Wright-Martin Company. Wright-Martin began building an obsolete biplane design with a foreign Hispano-Suiza engine. Angered because he had been out maneuvered with a bad idea, Martin walked out taking Larry Bell and other key employees with him.

From the deep wallet of a wealthy baseball mogul, Martin was able to establish a new factory. Then his good luck continued, when the future aviation legend Donald Douglas was persuaded by Glenn to join his team. The Martin MB-1 quickly emerged from the team's efforts and became the Martin Bomber.

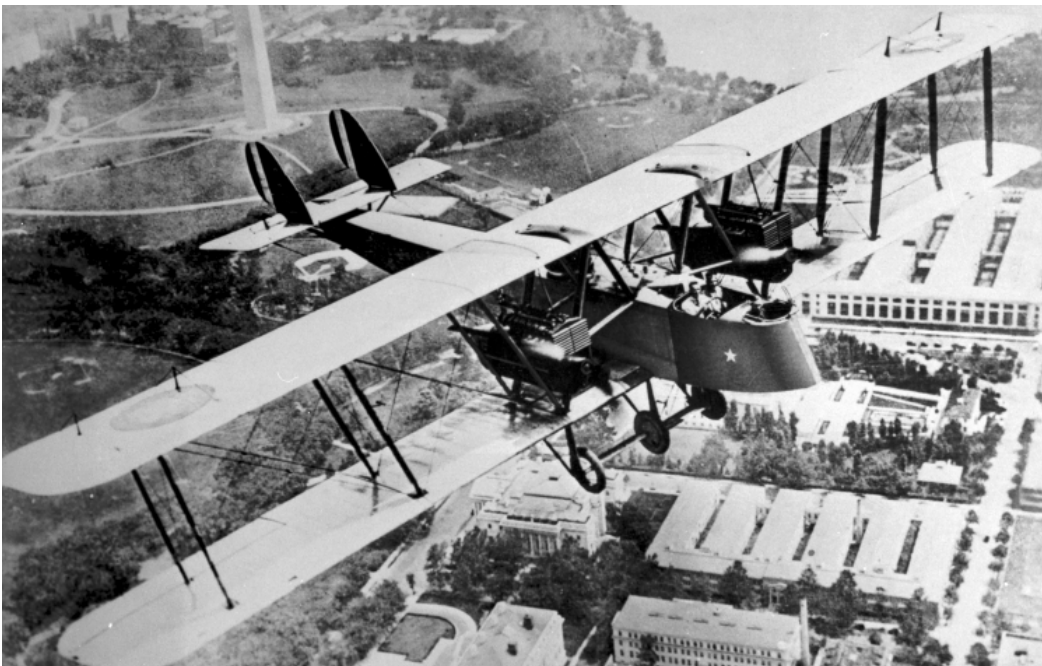
Although too late to enter WWI, the Martin Bomber showed its superiority when Billy Mitchell used it to sink several captured German battleships and cruisers to prove its worth. Mitchell was later court-martialed for his effort and for several other vocal positions he took that offended (threatened) superior officers

Douglas

It has often been told how Douglas Aircraft started operations in 1920 in a barber shop's backroom on Los Angeles' Pico Boulevard. Interestingly, the barber shop is still operating.

Flashing back to 1920, Donald Douglas had saved \$60,000, returned to Los Angeles and rented a barber shop's rear room and loft space in a carpenter's shop nearby. There he constructed a classic passenger airplane called the Douglas Cloudster.

In 1922, Donald Douglas won a contract from the Navy to build several torpedo carrying aircraft. While driving through Santa Monica's wilderness, Douglas noticed an abandoned, barn-like movie studio. He stopped his



The Martin MB-1's design was created by a team of engineers that included Donald Douglas. (AAHS photo archives, AAHS-20395)



Claude Ryan used this Douglas Cloudster to operate his San Diego to Los Angeles airline prior to building his own aircraft. (AAHS photo archives, AAHS-P005385)

roadster and prowled around. That abandoned studio became Douglas Aircraft's first real factory.

With the \$120,000 contract in his hand, Douglas could afford to hire one or two more engineers. My brother, Gordon Scott, had been schooled in the little known science of aviation at England's Fairey Aviation, so he hired Gordon.

My first association with the early aviation pioneers occurred when I paid my brother a visit at his new work place. Gordon was outside on a ladder washing windows. He was the youngest engineer – the windows were dirty - and Douglas Aircraft Co. had no money to pay janitors.

Gordon introduced me to a towhead guy called Jack Northrop, and another chap named Jerry Vultee. Jack Northrop had moved over from Lockheed Aircraft. All of them worked together on the Douglas Aircraft's World Cruiser designs.

I had the distinct pleasure of spending time with Ed Heinemann who later designed the AD, A3D and A4D. He told me how my dad would fly out to Palmdale with an experimental aircraft they were both working on. They would take it for a few hops and come up with some fixes. After having airframe changes fabricated in a nearby machine shop, they would hop it again to see if they had gotten the desired results. If it worked out, Mr. Heinemann would incorporate the changes on the aircraft's assembly line. No money swapped hands!

Lockheed

The Lockheed Company built the first of their famous Vegas in 1927 inside a building currently used by Victory Cleaners at 1040 Sycamore in Hollywood, California.

At home after work at Douglas and on weekends, Jack Northrop designed a wonderfully advanced streamlined airplane. When Allan Loughead (Lockheed) found a wealthy investor willing to finance Northrop's new airplane, they linked up and leased a Hollywood workshop where they constructed the Lockheed Vega. It turned out to be sensational with its clean lines and high performance. Soon Amelia Earhart and others flew the Vega and broke many of aviation's world records.

In May 1927, Lindbergh flew to Paris and triggered a bedlam where everyone was trying to fly everywhere. Before the first Lockheed Vega was even built, William Randolph Hearst had already paid for it and had it entered in an air race from the California coast to Honolulu (The Dole Race).

In June 1927, my brother, Gordon, left Douglas Aircraft to become Jack Northrop's assistant at Lockheed. While there, he managed to get himself hired as the navigator on Hearst's Vega.

The race was a disaster and 10 lives were lost. The Vega and my brother vanished. A black cloud hung heavily over the little shop. However, Hubert Wilkins, later to become Sir Hubert Wilkins, took Vega #2 and made a successful polar flight from Alaska to Norway. A string of successful flights after that placed Lockheed in aviation's forefront.

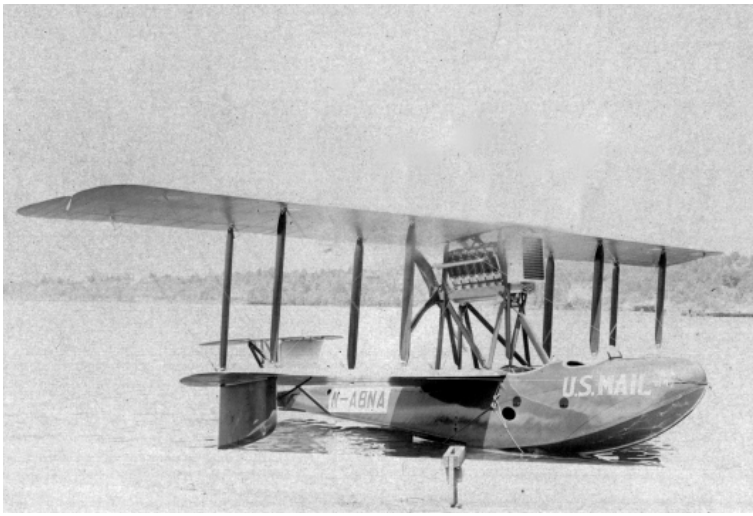
I went to work for Lockheed as its 26th employee, shortly after the disaster, and I worked on the Vega. It was made almost entirely of wood and I quickly became an amateur carpenter.

Ryan

In 1922, Claude Ryan, a 24-year-old military reserve pilot, was getting his hair cut in San Diego, Calif., when the barber mentioned that the "town's aviator" was in jail for smuggling



An early Lockheed Vega 5, s/n 7, whose design was developed by Jack Northrop while he was working at Douglas Aircraft. (AAHS photo archives, AAHS-25327)



Bill Boeing got tired of waiting for parts for his Martin-built aircraft and eventually started building his own such as this 1919 B-1 (Model 6). (Photo from the Hayden Hamilton collection)

Chinese illegals up from Mexico. Claude found out that if he replaced the pilot sitting in the “pokey,” that he would be able to lease the town’s airfield for \$50 a month - BUT he also needed to agree to fly North and East - BUT not South!

A couple of years later, Claude Ryan bought the Douglas Cloudster and used it to make daily flights between San Diego and Los Angeles. This gave Ryan the distinction of being the first owner/operator of Douglas transports. Claude Ryan later custom built Charles Lindbergh’s ‘ride’ to fame in the flying fuel tank christened: *The Spirit of St. Louis*.

Northrop

Northrop’s original location was an obscure southern California hotel. It was available because the police had raided the hotel and found that its steady residents were money-minded gals entertaining transitory male hotel guests.

Boeing

A former small shipyard, nicknamed *Red Barn*, became Boeing Aircraft’s first home. Soon, a couple of airplanes



North American’s first original design was the 1934 NA-16 trainer, the prototype NX2080 seen here. (AAHS photo archives, AAHS-P005003)



The influence of the Lockheed Vega can be seen in Northrop’s Alpha 2, NS-1/NC11Y. (AAHS photo archives, AAHS-11539)

were being built inside, each of them having a remarkable resemblance to Glenn Martin’s airplanes that, interestingly, had its own remarkable resemblance to Glenn Curtiss’ airplanes.

A few years later, when the Great Depression intervened and Boeing couldn’t sell enough airplanes to pay his bills, he diversified into custom built speed boats and furniture for his wealthy friends.

North American

A young fellow called ‘Dutch’ Kindelberger from Cleveland, Ohio, joined Martin as an engineer. Later, as the leader of North American Aviation, Dutch became justifiably well-known on his own right.

General Motors acquired North American Aviation in 1933, combining it with their acquisitions of Fokker Aircraft, Berliner-Joyce Aircraft, Pilgrim Aircraft, and Thaden Aircraft. They hired Dutch Kindelberger away from Douglas to run it. Dutch moved the entire operation to Los Angeles where Dutch and his engineers came up with the P-51 Mustang, the B-25 Mitchell and the F-86 Sabre among other North American famous designs.

Summary

Interestingly, just a handful of young men played roles affecting the lives of all Americans -- as it initiated the southern California metamorphosis, from a semi-desert with orange groves and celluloid, into a dynamic complex, supporting millions.

Although this technological explosion had startling humble beginnings, taking root as acorns in a barber shop’s back room, a vacant church and an abandoned cannery, but came to fruition as mighty oaks.

Source: Adapted from a Denham S. Scott article that appeared in the North American Aviation Retirees’ Bulletin.

They Wanted Wings – Military Aviators

A little over 100 years ago, the U.S. Army created the Military Aviator rating and published on April 20, 1912, the requirements to qualify for the rating. These requirements included:

- Attain an altitude of at least 2,500 feet.
- Pilot an aircraft for at least five minutes in a wind of 15 mph velocity or greater.
- Carry a passenger to an altitude of 500 feet, with a combined weight of pilot and passenger of 250 pounds or more, and make a dead-stick landing to within 150 feet of a designated point.
- Make a military reconnaissance flight of at least 20 miles cross-country at an average altitude of 1,500 feet.

The very first rating was issued to Lt. Henry H. Arnold (later General of the Air Force) on July 5, 1912.

Even though the rating was created, it would not be until May 27, 1913, that the War Department through General Order No. 39 would certify 24 officers including Arnold as “qualified,”



and authorize issuance of a certificate and badge. A number of designs for the badge were considered before the War Department chose the design of an eagle holding Signal Corps flags in its talons, suspended from a bar embossed with “Military Aviator.” It wasn’t until September 29, 1913, that a group of 14 aviators still detailed to the Signal Corps was recommended to receive the badge. Capt. Charles DeF. Chandler and Lt. Thomas DeW. Milling, both of

whom had received the first rating with Arnold in 1912, were issued the first two gold proofs of the badge. Eventually, all 24 officers, or their survivors, certified by G.O. No. 39 were issued the badge.

In 1914, the Aviation Section, U.S. Signal Corps, was established by Congress replacing the Aeronautical Division. At this time, two levels of qualification were specified in the War Department Bulletin No. 35, issued on May 4, 1914. These qualification levels were Junior Military Aviator, to be held by aviators below the rank of captain and Military Aviator for those of rank of captain or above. By law, the Military Aviator ratings were limited to 15 aviators.

Ironically, this change automatically reduced the ratings of 24 existing Military Aviators because of an additional requirement of three years of experience as a Junior Military Aviator before being eligible for the Military Aviator rating. It would not be until 1917 that the original group would reacquire their ratings and associated flight pay increase.

The First 24

- | | |
|--------------------------|--------------------------|
| 1. Henry H. Arnold | 13. Hugh M. Kelly |
| 2. Paul W. Beck | 14. Roy C. Kirtland |
| 3. Lewis H. Brereton | 15. Frank P. Lahm |
| 4. Joseph E. Carberry | 16. Samuel H. McLeary |
| 5. Charles DeF. Chandler | 17. Thomas DeW. Milling |
| 6. Carleton G. Chapman | 18. Joseph C. Morrow Jr. |
| 7. Herbert A. Dargue | 19. Hollis L. Muller |
| 8. Townsend F. Dodd | 20. Joseph D. Park |
| 9. Eric L. Ellington | 21. Henry B. Post |
| 10. Benjamin D. Fulois | 22. Fred C. Seydel |
| 11. Harold Geiger | 23. Walter R. Taliaferro |
| 12. Lewis E. Goodier Jr. | 24. Robert H. Willis Jr. |

[Editor’s note: There are confirmed reports that there was a 25th badge that was awarded to Col. Charles B. Winder, Ohio National Guard, who qualified as a MA on June 5, 1912. It has been speculated that because he was National Guard, and not regular army, he was overlooked by early researchers. Reports that Frederic E. Humphreys also received a Military Aviator rating have not been substantiated, even though a portrait of him at Ft. Belvoir shows him wearing what appears to be the aviator badge.]



Henry H. (Hap) Arnold wore his Military Aviator badge throughout his career. Here we see him in a post-WWI photo wearing both his Military Aviator badge and the newer style wings & shield adopted during WWI. (U.S. Army photo from the AAHS collection)

Donations

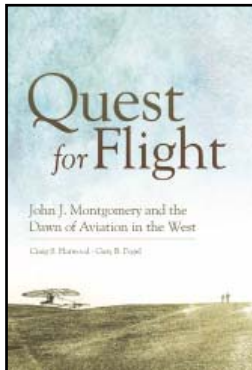
The following members have made generous donations to the AAHS. These donations go into the general fund to help pay the costs of producing the *Journal* and *FLIGHTLINE*. All monies are used to support this activity and no salaries are paid to any board member even though many hours are spent by these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

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Book Reviews

Quest for Flight, John J. Montgomery and the Dawn of Aviation in the West, by Craig S. Harwood and Gary B. Fogel.



University of Oklahoma Press, Norman, Okla., 2012, ISBN: 978-0-8061-4264-7. Hardcover, 6"x9" with dust jacket, 256 pages, 36 B&W photos. \$29.95

Most histories of aviation start with the Wright brothers' flight in 1903 and ignore the work of many others prior to that. Authors Harwood and Fogel's *Quest for Flight* provides a much needed beginning to the history of aviation. The book is primarily about John J. Montgomery's successful study in aerial navigation and his work with gliders, but it also addresses other aviation pioneers such as of Otto Lilienthal, Octave Chanute, and many others including the Wright brothers.

Today aspiring pilots are first taught how pitch, yaw and roll are used to control flight, as well as how lift is generated as air is passed over an airfoil. But in the 1880s no one knew that. Montgomery was among the first, if not *the* first, to discover the importance of wing camber for lift in his 1883-86 experiments. In the beginning, would-be aviators quickly learned the need for pitch and yaw to have some control on flight, but obviously that wasn't enough. Montgomery finally successfully demonstrated three-axis control of flight in 1905 (i.e., successful aerial navigation), something the Wright brothers didn't have in their first powered heavier-than-air flight in 1903. This book takes you back 130 years and is written from the perspective of those living at that time, with the understanding that what is common knowledge today was yet to be discovered.

Montgomery was the son of Zachariah Montgomery, a prominent California lawyer, legislator and writer. In the 1880s John Montgomery became intrigued with manned flight and started his scientific approach to solving the problem of aerial navigation at his family's Fruitland Ranch in Otay, Calif., which is now in Chula Vista.

Montgomery performed his first experiments in 1883-86 using different glider designs, and was able to glide short distances after he discovered that a cambered wing, instead of a flat wing, was necessary to provide lift. Glides, yes, but controlled flight was still an elusive quest.

Few knew of his experiments that were carried out in secret for two reasons. First, he wanted to patent his design when he was satisfied with the results and because of that was reluctant to share his findings with others. Montgomery was also well aware of the ridicule other aviation pioneers endured at that time by people who were closed-minded about individuals who thought they could fly.

In 1893 Montgomery attended the World's Columbian Exposition in Chicago. Two items on the agenda that were of interest to him were a lecture on electricity and an International Conference on Aerial Navigation. Although unplanned, Montgomery did give a lecture about his experiences at the conference and gained recognition for his work.

Montgomery took a position at Santa Clara College, which provided him with a lab and an opportunity to continue his experiments. Between 1893 and 1905 the world saw an increasing awareness of the possibility of manned flight. There were parachuting jumps from balloons, primitive dirigibles, and of course the Wright brothers' flight in 1903. But the problem of achieving stable and controllable flight was still yet to be solved.

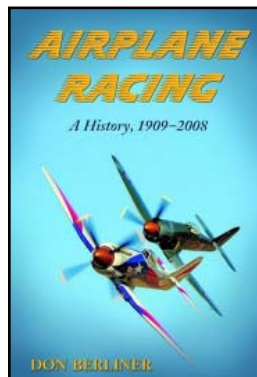
In 1905 Montgomery, using aviator Daniel Maloney flying a 42-pound glider, conducted a series of flights at Aptos that started when the pilot cut loose from a hot air balloon. Each flight began at increasingly greater heights and ended with a drop from more than 3,000 feet. Maloney was able to demonstrate complete three-axis control during each flight.

On March 25, 1905, Montgomery held a press conference after Santa Clara College officials persuaded him to do so. Montgomery and Father Bell provided first-hand accounts of the just-completed Aptos Flights and the precedent of controlled high-altitude flight. They also provided background on John's heretofore unpublicized activities in aeronautics. This public disclosure was not only a matter of due diligence by Montgomery but also served to cement his position as an independent originator of aeronautics.

It's obvious that the authors, Harwood and Fogel, have done a significant amount of research for this book, and it provides a definitive biography of John Montgomery and his work. It is interesting to note that Harwood is the great-great-grandson of Zachariah Montgomery. This book takes the reader back in time before the Wright brothers' first flight to meet earlier aviators and their contributions. Congratulations to the authors on this comprehensive volume on man's "Quest for Flight."

Larry Bledsoe

Airplane Racing: A History, 1909-2008, by Don Berliner.



McFarland and Company, www.mcfarlandpub.com, Box 611, Jefferson, NC 28640. 2010, ISBN: 978-0-7864-4300-0. Softcover, 6x9, 266 pages, photographs, index. \$35.00

As I prepared to return to Reno for the 2012 National Championship Air Races, I picked up Don Berliner's excellent summary of the first 100 years of air racing, *Airplane Racing: A History, 1909-2008*. This volume reminded me of the long safe history of air racing; I only wish that the members of the media had access to this volume before they wrote about the tragic event of September 2011.

Don Berliner faces a difficult challenge in trying to summarize 90 years of air racing in under 300 pages; however, he does a fine job with this task. Berliner organizes this study into four sections - each section based upon the dates of competition. Berliner further divides each time period into distinct categories, such as the Schneider Cup competitions, the Thompson Races, and various other races. The author begins with the first race at Reims in August 1909, when aviation was still in its infancy and where much of the challenges faced by the pilots was to take off, fly briefly and then land in one piece! By the end of this study of air racing, pilots are closing in on the

elusive 500 mph mark.

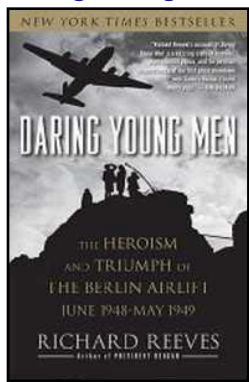
The book is a great introduction to the sport of air racing with brief over views of every air race competition that has occurred up through 2008. However, because Berliner covers such a wide period, he is not able to discuss specific races in great depth. He does touch on the highlights of each event and lists the winners and those that figured prominently in the race. The author should be given credit for taking care to include all of the race classes, not just focusing on the most prominent classes.

I only wish that Berliner would have had more time to discuss the implications of air racing on military and commercial aviation during the inter-war period. The Schneider Cup competitions and Pulitzer Trophy Races were used by the military and manufacturers to test engines and aerodynamic advances during the 1920s and 1930s. Many of the advances first seen at the air races would be applied in the design of WWII fighters and bombers. Following WWII, the aircraft manufacturers withdrew from air racing. Then after the tragic Cleveland Race of 1949, the military also withdrew their support.

For a new fan of air racing, I would strongly recommend this easy to read, concise history. Many of the aircraft and pilots discussed in Berliner's chapters on the National Championship Air Racing are still active today. Hopefully, there will be a continuation published in another 20 years to mark the 125th anniversary of air racing.

Christopher Trobridge

Daring Young Men, The Heroism and Triumph of the Berlin Airlift, June 1948—May 1949, by Richard Reeves. Simon and Schuster, New York, NY, www.simonandschuster.com, 2011, ISBN 978-1-41654-119-6. Hardcover, 6"x9," 316 pages, 25 photos. \$28.00



Daring Young Men is the passionate story of the 1948-49 Berlin Airlift, where the USSR used the war-torn city as a pawn in the Cold War of post-WWII. The Soviets took one-third of the old Germany that included the original capital of Berlin, which

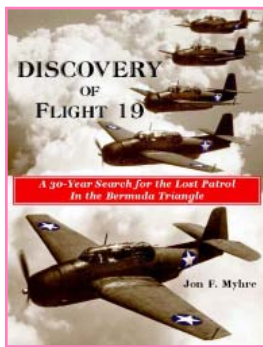
was also divided among the Allies. The access highway now closed, the only choices were to have the Soviets control the food supply, or begin a long-term airlift to save the people in the American, British and French occupied sections of that city.

Richard Reeves has authored 10 books on history and America including three Presidential biographies. His treatment of 300 pages does have nearly 10 percent illustrations although clustered in the typical center signature. Yet he tells the deeply moving story of danger for the American flyboys, and the literal rescue of nearly three million German citizens, through more than 500 flights each day for almost a year.

Reeves presents a well crafted story and is refreshing for its easy reading style. Chapter heads are adorned with comics of the period and numerous personal accounts make the story come alive. It is a rewarding story.

Douglas Westfall

Discovery of Flight 19, by Jon Myhre. The Paragon Agency, P.O. Box 1281, Orange, CA 92856, www.SpecialBooks.com. 2011, ISBN 1-891030-58-2. Paperback, 8.5"x11," 201pages, 100+pictures, 35 maps, exhibits, illustrations, index, Bibliography. \$25.00



This is the story of an investigation by the author, Jon Myhre, into the disappearance of a U.S. Navy flight that departed NAS Ft. Lauderdale, Florida, on a routine training mission during the month of

December 1945.

During the mission, the flight leader became disoriented and lost track of his position for undetermined reasons, which led to the eventual loss of the entire flight of five Grumman TBF Avenger torpedo bombers and their crews. In the years following this incident, a great many theories have been put forth as to the fate of Flight 19.

What makes this book both interesting and important is the method the author uses to discover what really happened to Flight 19. He uses his experience both as a military and commercial aviator, to complete a detailed accident investigation.

This includes a description of and the history of the aircrews, their training, the aircraft, navigation, weather, radio logs, search & rescue procedures, and eye witness reports when available. He also includes detailed maps and charts to back up his theory of what occurred and why. The only criticism I have is that I sometimes found it difficult to correlate the very detailed maps with the text. I would have preferred to see a little less redundant map detail, and a more descriptive title on each chart.

This book goes a long way toward debunking the now famous Bermuda Triangle myths, and explains the tragedy in terms of a military aircraft accident. Rather than UFOs, the cause now appears to be the usual issues of aircrew training, such as poor flight planning, navigation and communications proficiency, and a general let down in safety standards following the end of WWII.

I highly recommend this book, and I feel that John Myhre has indeed solved the mystery of Flight 19.

Addendum to *Discovery of Flight 19* from the publisher. It is a short eight-page summary in which the author states that there was a survivor to the incident. The summary reviews details of the Flight 19 episode that were already included in the original book. The author then names the survivor as SSgt George R. Paonessa, who was assigned as radio operator aboard TBM FT-36 (Capt. Powers). Some evidence is then presented, such as a telegram to his brother, supposedly from Paonessa, stating that he was very much alive, and some other data that would indicate he survived. No explanation is given as to how or why Paonessa would choose to disappear. The addendum ends with a statement: "An investigation is in progress." If SSgt Paonessa did survive and disappear, then his story should make for some interesting reading. Stay tuned.

[Editor's note: SSgt Paonessa was listed as the radioman on FT-36, a TBM-1E, BuNo 46094, piloted by Marine Capt. Edward Joseph Powers along with Sgt. Howell O. Thompson, gunner.]

Paul Butler

Folded Wings

Herman L. Schreiner (AAHS Member 5491): Flying under the radar, we somehow missed the sad passing of Herm on October 10, 2011, at the age of 90. Herm was a long time supporter of the AAHS. During his membership, he contributed over a dozen articles to the *AAHS Journal*, including an excellent three-part series on the history of WACO Aircraft Company. He also served on the advisory board to the Society.

Arthur F. Livergood (AAHS Member 9806):- 90, of Elyria, Ohio, passed away November 8, 2012, at Life Care Center of Elyria. He was born November 11, 1921, in Richmond, Ind., and moved to Steubenville, Ohio, as a child, graduating from Steubenville Wells High School in 1940. He served with the U.S. Army Signal Corps and Air Corps in Iceland during WWII. He was a student of aviation history, a pilot and a member of the Experimental Aircraft Association and the American Aviation Historical Society.

Their contributions and support will be missed.

New Membership Type Available

The AAHS has expanded its membership offering to include an e-Membership. E-Members have all the privileges and access as a regular membership with one important distinction – printed copies of the *AAHS Journal* will not be mailed to them. Instead, e-Members will be able to access all of the *Journal* content online with email notices being sent to them on the release of each issue. The Society is able to offer this membership level at a significantly reduced cost due to the savings realized in printing and postage. The e-Membership fee is \$25.00 per year worldwide, and is available by signing up online.



Martin RB-57F, 65-13295, over Eielson AFB. (USAF photo from NARA, AAHS-P011991)

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.

AAHS FLIGHTLINE

American Aviation Historical Society

President: Jerri Bergen

Vice President & Chief Publication Officer: Albert Hansen

Managing Editor: Hayden Hamilton

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President's Message

A new year! With our first AAHS Board meeting already behind us, we've identified several exciting projects to initiate and other existing projects to keep moving. One initiative we're sticking with is the re-integration of AAHS chapters and headquarters. We're working on several fronts to improve the AAHS's *value-add* to chapters, while maintaining the unique personality of each chapter organization. These include building a Chapter Speakers Bureau, Chapter web pages, and localized member lists. I am also hoping to get the opportunity to meet with each chapter and get to know what you think is helpful from a chapter perspective. With this improved toolkit, we will also launch a local headquarters chapter, giving our local members a chance to regularly meet and socialize with other AAHS members. Fortunately, we've got many aviation venues here in Southern California, and I look forward to exploring them as an AAHS chapter!



Member Larry Klingberg with his AMA award-winning scratch-built Sikorsky S-29-A. (Photo by Jerri Bergen)

We will publish an outline of these and other strategic initiatives in an upcoming newsletter as part of our Five-Year Plan, built last year and approved by the Board.

We are going to work hard this year to increase AAHS visibility throughout the aviation community, through increased participation at air shows, more advertising and publication of articles and links with related organizations. The Aeronautic Modeling Association (AMA), via Tim Albright, kindly let us share booth space at this year's AMA Convention, held at the Ontario Convention Center, California. There we met modelers from all over the United States, building 1/72 scale up to half-scale models of aircraft of every make and model. We met with other organizations, such as RC clubs, airport associations and others who share our interests. The AAHS has many resources that can assist modelers in researching details for aviation modeling projects. AAHS member Larry Klingberg won first place in the Military Class for his 1/6 scale scratch-built model Sikorsky S-29-A. The wingspan is over 12 feet wide! Larry also won 3rd Place in the Civilian Class for his 1/3rd scale Monocoupe. If you know of a related aviation group that might find our organization resources helpful, we'd look forward to speaking with them.

Finally, and most exciting, the Board is investigating the potential of hosting a formal Annual Meeting next year (tentatively January 25 – 26, 2014), to include speakers, a dinner, and field trips. So keep your calendars open around this time! We'll have more on this later.

Blue Skies ahead!

Regards,

Jerri Bergen
AAHS President

Wants & Disposals

DISPOSAL: *AAHS Journal* Winter 2012 (Vol. 57, No. 4) featured an article about aviation pulp artist Frederick Blakeslee along with two covers reprinted on the inside front cover. These two Blakeslee originals, along with several others are available for sale.

Also for sale are a large number of flying pulp magazines, most of which are in good to very good condition.

These items come from the collection of Herman Schreiner (see *Folded Wings* this issue).

Interested parties should contact:

Carlton Schreiner
6218 Oak Way
Paradise, CA 95969
E-mail: CarltonSchreiner@gmail.com

WANTED: I am researching items on the Piper L-4 Grasshopper liaison aircraft. During WWII, these were carried (assembled, ready to fly) on especially modified ships with the airplanes stacked, nose down. There was a "ramp" down the middle of the ship from which the L-4s were launched. There was no recovery capability other than ditching.

Anyone with information about these ships: what they were called, and/or, especially, are there any known sources of info or pictures?

Tony Stinson
Ulladulla, Australia
E-mail: tonyhelen9@bigpond.com

WANTED: For research project on Lockheed T-33s on the Civil Register. Kodachrome slides or B&W negatives of the following aircraft:

N154, N156, N156Y, N350S, N401S,
N62278, N650, N651, N9123Z and N9126Z.

Have quality Kodachrome slides and B&W negatives to trade. No digital images, please.

Douglas E. Slowiak
PO Box 42133
Mesa, AZ 85274
E-mail: vortexphoto@aol.com

DISPOSAL: 31 years of the *AAHS Journals* for sale; 1979-2009. Complete EXCEPT for Winter '08; Winter '02; Spring '00; Winter '99; Spring, Summer and Fall of '91; Spring '88;

and Summer '80 (nine issues). All are in excellent condition, no torn covers or pages. Make offer. You pay shipping (these are HEAVY).

John Lauber
Vaughn, WA 98394
Phone: (253) 884 0807 or
E-mail: jlauber@ix.netcom.com

DISPOSAL: Original black and white negatives on U.S. military and civil aircraft from the early 1960s to 1980s period, mainly 120 / 620 size, at \$3 each plus postage. You choose aircraft types, and I will reply with number of negs available that have different serials. Also free list of aviation books, magazines, photos including poster size, etc., for sale upon request. For inquiries by U.S. mail, please include a self-addressed, postage-paid envelope.

Robert Esposito
409 Orchard Ave.
Somerdale, NJ 08083
E-mail: baesposit@verizon.net
Phone: (856) 627-5872

WANTED: Seeking information and/or images of the aircraft built by Lt. Melvin B. Asp. He built three aircraft that I am aware of, the first in 1922 at Ellington Field that won the Southern Aerial Derby, held in Houston in 1922. The aircraft was sold that year to an American aircraft manufacturer, I believe it may have been used as a base for the Cox-Klemin XS-1, but I have not confirmed this. The second and third planes were built at France Field, Panama C. Z., between 1925 and 1927. His first two planes had a Lawrence 3-cylinder radial engine, the third plane had an inline engine. Any information related to this subject would be greatly appreciated.

Denny Cole
E-mail: user776289@aol.com

DISPOSAL: 90-year collection of aviation related items that include limited edition prints, posters, hardback and paperback books, 35mm color slides and B&W negatives, magazines, color and B&W photographs and a complete set of *AAHS Journals*. Some of the books are rare. Also available are diecast and built-up plastic models. For inventory listing, please contact me.

Paul L. Schiding
301 Queensdale Dr, Apt. F
York, PA 17503
Tel: (717) 741-1086 [1:30-5:00 p.m. or 6:30-11:30 p.m., Eastern]

New Members

Jim Stearman
Fullerton, CA 92832

Ryan C. Reeves
Laveen, AZ 85339-3428

Mark Meltzer
Palo Alto, CA 94301-1307

Wesley D. Blasjo
Lake Mathews, CA 92570-9470

Bob Chase
La Puente, CA 91746

Robert Jordan
Jurupa Valley, CA 92509

David Juranich
Yorba Linda, CA 92886

Richard McVickar
San Diego, CA 92111

Robert T West
Manchester, MO 63011-4218

Anew Vision
32-447 Siepraw, Poland

Jim Azelton
Newnan, GA 30263

Fred Jackson
Westport, CT 06880

Nigel Wilson
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Myrtle Beach, SC 29588

Sandra O'Connell
Ashburn, VA 20147

David Tunison
Cincinnati, OH 45241-1347

Pat Carpenter
Vancouver, WA 98662

Ronald A. Bailey

James Pryor
Canal Fulton, OH 44614

Ronald G. Plante
Bettendorf, IA 52722-2117

Malcolm Stride
Aylesbury, Buckinghamshire HP21
9LT
United Kingdom

Kevin Keaveney
Marietta, GA 30060

David Lovell
Amarillo, TX 79124

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.

C. M. Williams
Marietta, GA 30068

Brandon Clyde
Fullerton, CA 92832

Charles Bertrand
Montmorency, 95160
France

Randal Marbury
Great Mills, MD 20634

Barry Clayton Newburn
Spotsylvania, VA 22551

James Nicoletti
Wantagh, NY 11793

Mike Williams
Fayetteville, GA 30214

David Dawson
San Luis Obispo, CA 93401

Wayne Morgan
Wilton, New South Wales 2571
Australia

Edward H. Feege
Severna Park, MD 21146



1948 Atlas H-10, N37463, was originally fitted with two 145-hp Continental O-300 tandem-mounted engines driving counter-rotating props. Designed by Max Harlow based on his PJC-2 design. This 1967 photo was taken in Long Beach, California. Aircraft was later converted to a single engine/prop design. (Photo by Stephen Miller, AAHS-P015192)

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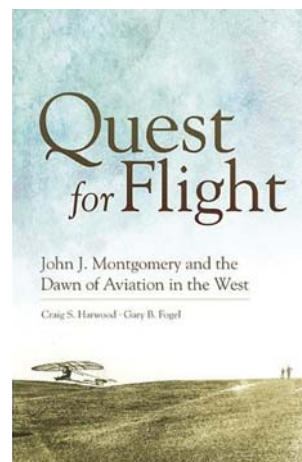
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AAHS Photo Archive CDs Series

The Society has recently started development of a series of photo CDs. These CDs contain high-resolution scans of negatives, slides and prints from the AAHS Image Library. The resolution of these scanned images is sufficient to make an 8"x10" photographic quality print. Each CD focuses on a particular aspect of American aviation history - be that a particular manufacturer, type or class of aircraft.

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

- 1001 Douglas Propeller-Driven Commercial Transports
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- 1009 Lockheed P-38/F-5
- 1011 Curtiss Transports
- 1021 Boeing Propeller-Driven Commercial Transports
- 1031 Golden Age Commercial Flying Boats

These CDs are available to members for \$19.95 (\$29.95 non-members) each plus shipping (\$2.50 U.S., \$5.00 International - add \$1.00 for each additional CD). Order forms are available online and on request, but a note along with your donation specifying your particular interest is sufficient.

Proceeds go to support the preservation of the photo archives. Do you have a particular interest or suggestion for a CD in this series? Drop us a line or email the webmaster (webmaster@aahs-online.org). We are currently researching the possibilities of offerings covering the following areas: Connies Part II, XP-56, Northrop X-4, Bell Aircraft, and Early Lockheeds.





American Aviation Historical Society

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Please enroll me as a member of the AAHS. Enclosed is my check (money order or bank draft) for dues as checked below. I understand that I will receive all issues of the *AAHS Journal* published to date during my membership year, plus all issues of the *AAHS FLIGHTLINE* (Downloadable from the AAHS website). Individuals joining after October 1, will have their membership begin the following year, but will receive the Winter issue of the *Journal* as a bonus. I also understand that renewal is due at the end of the calendar year in which membership will expire. (Valid through 2013)

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NEW MEMBER DRIVE

The AAHS is entering its sixth decade of operation and continues to face the challenge of sustaining its membership.

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Did you know that more than **50 percent of all new members** learned about the AAHS from a friend?

Do you have friends who are interested in aviation history?

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If each member enlists one new member, we would double our membership. Then we will be able to reduce membership rates - tangible "payback" for your efforts to help expand the Society's membership.

Make it a commitment to **recruit one new** AAHS member this year!

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