Missions for America
Semper vigilans!
Semper volans!

Publication of the Thames River Composite Squadron
Connecticut Wing, Civil Air Patrol
http://ct075.org.
300 Tower Rd., Groton, CT

Issue 17.05 31 January 2023

Lt Col Stephen Rocketto Editor
1st Lt David Pineau, Publisher
Maj Roy Bourque, Paparazzo
2d Lt Joanne Richards, PAO
C/2dLt Stephen Buchko, Cadet AEO
C/Amn Lucas Dellacono, Cadet PAO
Capt Edward Miller, Features
Maj Scott Farley, Roving Correspondent
Shawn Terry, Automated Sciences, IT Guru

\
04 FEB-CTWG SAREX
05 FEB-Color Guard Practice-Danielson
07 FEB-Staff Meeting
11 FEB-CTWG Cadet Winter Social
14 FEB-Commander's Call (Valentine's Day)
21 FEB-TRCS Meeting (Fat Tuesday)
28 FEB-TRCS Meeting
18 FEB-Cadet Meeting-Leadership
23 FEB-Senior Meeting
24 FEB-Cadet Meeting
02 MAR-Senior Staff Meeting
03 MAR-Cadet Meeting

I credit Andrew Carnegie with being the most important influence on my early life through the library he had donated to Ishpeming—as he had in many other small towns whose natural resources had helped build his fortune.
-Clarence L. "Kelly" Johnson-

SENIOR MEETING

31 January, 2023
No Meeting

CADET MEETING

31 January, 2023
submitted by C/Amn Lucas Dellacono

The meeting had three sessions. First, C/2dLt Stephen Buchko presented a current events briefing in which he described one of the aircraft under development by a company which is producing hydrogen-cell power plants, one of which is currently installed in a Do 228 test bed aircraft.

The second part of his briefing explained one company's project to built an autonomous cargo aircraft, one which will fly unmanned and capable of making its own flight decisions.

C/Maj Noah Bosse made an excellent presentation about goal setting and time management. He used the acronym SMART (**S**pecific, **M**easurable, **A**ttainable, **R**elevant, **T**ime-specific) to guide goal choice. Cadets were then offered an opportunity to set a goal using the SMART acronym.

Aerospace Education was the theme of the third session. C/CMSgt Nicholas Buchko leaded a cadre of cadet mentors, C/1stLt Matthew Fago, C/1stLt Stephen Buchko and C/2dLt Mitchell Rathbone to run a STEM exercise which practiced experimental procedure by constructing paper helicopters, flying them under specific conditions, and recording and reducing the data. The

workshop will be continued in future sessions by modifying the aspect ratio of the helicopters to determine its effect on flight characteristics.

Cutting the template, measuring the span and launching the helicopter.
(Credits: Dellacono)

MISSIONS

Ice Patrol
28 Jan., 2023

Major Farley and Lt Schmidt flew a 1.3 hour sortie of the Eastern Sector on Saturday. No ice was observed.

READER COMMENTS

Time to catch up on some Reader's comments.

I believe that the IT problem has been solved and you should be able to access back issues of The Coastwatcher which you may have missed during my struggles with mastering the system.

Dale Miller writes that there is a documentary, "Good Night Oppy" on Amazon Prime which details the remarkable journey of *Opportunity*. You should also note that there is a lot of historical cinema available on *You Tube* which is related to what appears in the "Aerospace Chronology" section.

Col Larry Trick sends in a couple of worthwhile comments. The A-10 was first equipped with the Vulcan but later used the GAU-8 Avenger cannon. He also noted that the BAC 111 is a twin engine aircraft.

Finally, Eric Thompson corrects my German spelling. "Forked Tail Devil" is *der Gabelschwanz Teufel* and the Dornier Do 335 is the Pfeil. Fat fingers, poor eyesight and haste leads to typo and proofreading blunders.

AEROSPACE CHRONOLOGY FOR THE WEEK

February 1, 1964 – To deflect the claim, by presidential candidate Barry Goldwater, that the United States is falling behind in weapons system development President Lyndon Johnson publicly acknowledges the existence of the CIA's Lockheed A-12 reconnaissance aircraft but shows a picture of the YF-12.

How Can You Confuse Them? *(Credits: USAF)*

Six months later, Johnson announced the existence of the RS-71 but called it the SR-71 and so the Blackbird got a new designation.

RS, SR! What's In a Name?

The program was once code-named, perhaps facetiously, as “Oxcart,” and was a replacement for the more vulnerable U-2 “Dragon Lady.”

Several companies took up the challenge to produce a stealthy Mach 3+ reconnaissance platform capable of cruising at altitudes of 85,000 feet or higher. Kelly Johnson and the Lockheed's Advanced Development Projects won the prize.

The *Archangel* family, an early program code-name, consists of seven different related aircraft which emerged from Lockheed's Skunk works during the 1960s. The first aircraft was the CIA funded and flown A-12 Cygnus, a single seat Mach 3+ reconnaissance aircraft. She first flew in April of 1962. Thirteen were built. It was the fastest and highest flying member of the family. However, it was retired due to the need for a platform which could carry more sensors, economics and Air Force politics.

One AT-12B Trainer was built and nicknamed the “Titanium Goose.”

An attempt was made to develop an interceptor version., the YF-12. The first flew in August of 1963 but it was a victim of economics and a changing defense policy.

The SR-71A Blackbird is the best known member of the family. It was first flown in December of 1964 and 32 entered the Air Force Inventory.

A decision was made to use Mach 3 drones for reconnaissance and they were to be launched from a version of the SR-71, the M-21 drone carrier. Two were converted from A-12s and after one was lost in a launch accident the idea was abandoned.

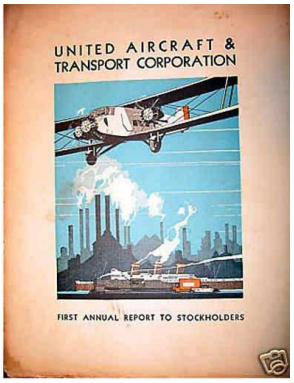
However, the drone, designated D-21, first flown in December of 1964 had a production run of 38 and they were modified with a solid rocket booster for launching from B-52s. They were used operationally but their poor success rate led to cancellation of the program.

The SR-71B was a two seat trainer which first flew in November of 1965. Two were built.

And then there was the SR-71C “Frankenplane.” The aircraft was assembled from the forward fuselage salvaged from the first YF-12A and the rear fuselage from the SR-71 static test model.

and speaking of names.....

February 2, 1929 – The Boeing Airplane and Transport Corp. changes its name to United Aircraft and Transportation Corp. and by the end of the year had expanded its operations to include Chance Vought Corp., Hamilton Metalplane Division, Boeing Aircraft of Canada, Stout Airlines, Northrop Aircraft Corp., Stearman Aircraft Co., Sikorsky Aviation Corp., Standard Steel Propeller Co. and Pratt & Whitney Aircraft Co.



SIKORSKY

PRATT & WHITNEY USA
DEPENDABLE ENGINES

February 3, 1884 – Birth of Lt. Gen. Frank Maxwell Andrews.

In 1918, Maxwell, 34 years old, left the cavalry and earned his Junior Military Aviator rating. He served in a number of administrative posts and in 1935 received a temporary promotion to brigadier general and an appointment to commander of the newly formed General Headquarters Air Force. The organization has a semi-autonomous existence and was charged with operating independently or in cooperation with the ground army. It was a first step towards and independent air force operating under the control of air-minded officers.

Andrews was an advocate of the strategic bombardment and the B-17 but ran into heavy opposition form the new Army Chief of Staff, General Malin Craig. He lost the initial battle and the Army bought the less effective twin engine Douglas B-18s. However, Andrew managed to finesse a contract for 13 Y1B-17s and they entered service trials.

His advocation of heavy bombardment and his open criticism of government policy rankled the upper echelon of the War Department and at the end of his four year term as Commanding Genera GHQAF, he lost his temporary rank of major general, reverted to a permanent colonel and was exiled to San Antonio, a fate which had previously befallen Billy Mitchell.

However, the next Chief of Staff, General George Marshall recognized Andrews abilities and vision and he rose swiftly, being given more and more important commands. In 1943, Andrews, now a lieutenant general, replaced Dwight Eisenhower as commander of all U.S. forces in the European theatre. General George C. Marshall later remarked that Andrews was the only general he had a chance to groom for a possible Supreme Allied Command later in the war.

But five months later, on an inspection tour, the B-24 in which he was flying crashed in Iceland and he was killed. General Eisenhower resumed command in Europe and rose to become Supreme Allied Commander.

The B-24D, named *Hot Stuff*, was the first heavy bomber to complete 25 combat missions with the 8th Air Force and was scheduled to return to the United States for a bond raising tour. The second aircraft to complete the full tour, the *Memphis Belle*, took its place.

Hot Stuff

And so the "fickle finger of fate" placed Dwight Eisenhower in the Oval Office and the Memphis Belle occupies an honored place in the Museum of the USAF's World War Two Gallery.

February 4, 1948 – John F. Martin makes the first flight of the Douglas D-558-2 Skyrocket. Martin was a former United Airline pilot who joined Douglas in 1940.

Martin has a 15 year career and flew almost every aircraft built by the company.

Douglas built three Skyrockets for the Navy. The first flight was a ground take-off using a turbine engine but for most of its career, the Skyrocket's were air launched from a Navy P2B (B-29) and used rocket power.

The trio made 313 flights for the Navy and NACA and all survive to this day. Its most notable achievement occurred on November 20, 1953 when Scott Crossfield exceeded Mach 2 for the first time.

February 5, 1925 – TravelAir Manufacturing Company was founded in Wichita by a trio of young aircraft builders, Clyde V. Cessna, Walter Beech and Lloyd Stearman.

Cessna, Beech and Stearman

The company was a major produce of civil aircraft in the 6 years before the Great Depression. Their most famous product were the Type R "Mystery Ships which broke the military monopoly on air racing excellence. All three of the principals of Travel Air went on to form their own companies.

February 6, 1938 – First successful in-flight separation of The Short-Mayo composite (Short S.21 Maia flying boat and Short S.20 Mercury seaplane).

Mercury Casts Off from Maia

Transatlantic commercial flight required a large amount of fuel. At the time, Sir Alan Cobham and his company, Flight Refueling Ltd., was developing a system using using a looped hose trailed by the receiving aircraft which was grappled and pulled into the tanker. A number of flights were successfully made but World War II brought and end to the experiments.

A Handley Page HP.54 Harrow refuels the Short Empire Flying Boat Cabot using a looped hose and grapple.

However, Maj. Robert H. Mayo, the Technical General Manager of Imperial Airways came up with a unique idea. Takeoff of a heavily loaded flying boat requires a great deal of fuel. Jet assisted take-off, JATO, was years in the future.

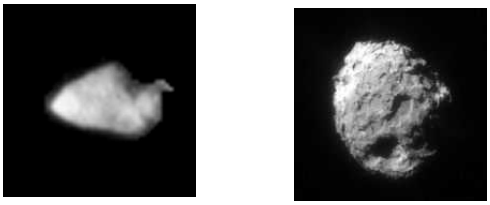
Mayo proposed that the trans-Atlantic aircraft could be carried aloft on the back of a mother ship. The combined power of both aircraft would be sufficient for a climb to cruise altitude and then the aircraft would separate. The aircraft carried piggy-back would have a reserve of fuel that had not been expended for the take-off.

The system was called the Short-Mayo Composite and consisted of a one-off Short S.21 derived from the C-Class Empire flying boats and named *Maia* and a Short S.20 seaplane named *Mercury*. *Maia* was equipped with four Bristol Pegasus engines each developing 919 hp. The much smaller *Mercury* also had four engines, Napier Rapier's supplying 365 hp apiece.

On July 21, 1938, the first successful commercial flight occurred. Mercury was air-launched over Foynes Harbor, County Limerick, Ireland carrying two crewman, 1446 gallons of fuel and just over a ton of mail, newspapers and newsreel footage. She flew 2,930 miles and after 20 hr 21min landed in Montreal. This was the first non-stop commercial east to west transatlantic flight by a an heavier-than-air machine.

Left to right: Captain A.S. Wilcockson (in command of Maia) Captain D.C.T. Bennett (captain of Mercury) First Officer Harvey (Mercury) First Officer B. Frost (Maia)

February 7, 1999 – Another NASA/JPL tour de force commences when the space probe Stardust is launched aboard a Delta II rocket. Over the next twelve years, it gets data about asteroid 5535 Annefrank, collects dust from the coma of comet Wild 2, collects samples of cosmic dust and in 2006, returns the samples to earth which are landed in Utah.



Annefrank and Wild 2 *(Credits: NASA/JPL)*

Capsule Recovery in Utah *(Credit' NBC News)*

The spacecraft then continues on and conducts a flyby of comet Tempel I in 2011 before decommissioning and entry into a solar orbit.

Temple I *(Credit: NASA/JPL)*