



*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 17.03

17 January 2023

*Lt Col Stephen Rocketto Editor
1st Lt David Pineau, Publisher
Maj Roy Bourque, Paparazzo
2d Lt Joanne Richards, PAO
2d Lt 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*

24 JAN-TRCS Meeting
31 JAN-TRCS Meeting
04 FEB-CTWG SAREX
07 FEB-Staff Meeting
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



*Glenn Tremml and Lois McCallin
Michelob Light Eagle pilots and engines.*

SENIOR MEETING

17 January, 2023

submitted by

Capt Adam Sprepace

C/2dLt Shaffer gave a SDA presentation based around budgeting for a field trip to the New England Air Museum.

Lt Pineau noted that a SAREX is planned for 4 Feb 2023 and expected to include both air and ground components.

Capt Sprepace summarized the updated Ice Patrol schedule.

Lt Pineau reviewed the Squadron 2023 Goals. Attention will be focused on specialty track attainment, promotions, cadet and senior recruitment, and participation in local events.

Lt Pineau stated that duty and committee assignments will be posted later in the week

CADET MEETING

17 January, 2023

submitted by

C/Amn Lucas Dellacono

C/1stLt Fago briefed the cadets about the causes and dangers of carbon monoxide poisoning. It is an orderless, tasteless, and invisible gas but the danger can be mitigated by installing carbon monoxide detectors and being aware of the symptoms of carbon monoxide poisoning.

Lt Col Rocketto presented a half-hour biography of Major General John F. Curry, the first National Commander of the Civil Air Patrol. The first award a cadet receives when qualifying as a cadet airman is the Curry Award.



Lt Col Rocketto presenting biography of General Curry

AEROSPACE CHRONOLOGY FOR THE WEEK

January 18, 1982 – Formation flying demands that strict attention be paid to the formation lead and to maintain position as tightly as possible. Separation is the responsibility of each of the pilots but the over-all maneuvering of the formation is the responsibility of the formation lead. In a four plane formation, the wing and slot pilots take their cues from the lead aircraft which has assumed responsibility for terrain clearance.



The USAF Thunderbirds Demonstration Team was engaged in pre-season practice at Indian Springs Air Force Auxiliary Air Field in Nevada, now Creech AFB. They were flying the Northrop T-38 Talon, an airplane adopted after the 1973 oil crisis for economic reasons. On the down side of a four plane line-abreast loop with a planned pull-out at 100 feet above ground level, something went wrong and all four aircraft impacted the ground at 400 mph killing all four pilots. The Air

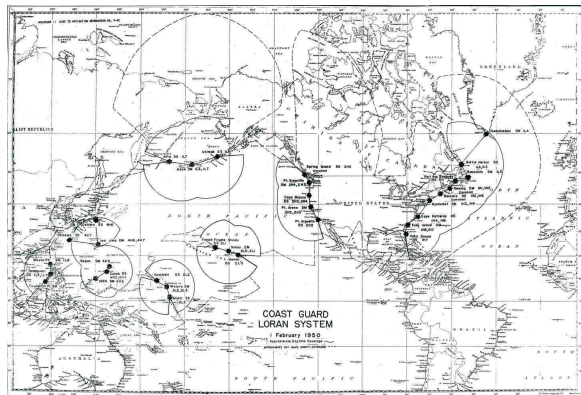
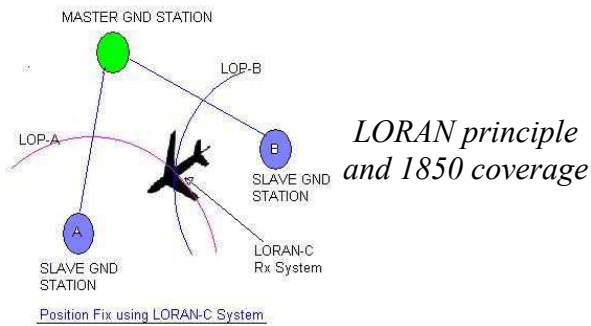
Force attributed the crash to a failure of the control stick actuator jamming the stabilizer in the #1 aircraft.

The incident had been videotaped and two copies existed, all in the custody of General Wilbur Creech, Commanding General of the Tactical Air Command. On April 2, 1984, Creech the crash and fireball tape sequences stating that he was concerned about the privacy of the pilots' families and avoid the possible use of the tapes for journalistic sensationalism. He testified that to his knowledge, he did not know that the families of the pilots and National Broadcasting Company was suing under the Freedom of Information Act for release of the tapes as part of a suit against Northrop. The Air Force did subsequently release the partially erased copy and the Federal Court declared the case moot and dismissed the NBC suit.

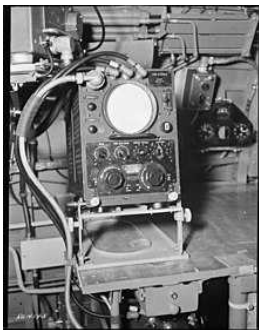
The crash called into the question the existence of the military aerial exhibition teams. They were costly and risked lives. There had been 36 major accidents killing 24 Thunderbird pilots between 1953 and 1981. But others saw the value of the teams for public relations and recruitment. Creech testified before Congress. Creech, a former Thunderbird went before Congress and gave detailed testimony about the safety and training which any team member underwent. His efforts contributed to saving the team and Congress passed Resolution 248 stating that "The Congress hereby affirms its strong support for continuation of the Thunderbirds program." The 1982 season was cancelled but the Thunderbirds were reconstituted, assigned the F-16 and expanded to a six plane exhibition. For his efforts, Creech is known as the "Father of the Thunderbirds."

January 19, 1946 – The Navy and Coast Guard staged the first public demonstration of LORAN at Floyd Bennett Field in New York.

LORAN, an acronym for **L**On **g**RAnge Navigation is system which uses the difference in time received from three different transmitters to determine a position fix.



There were three different versions used operationally, Loran-A, B and C. The improved version, Loran-C came into use in the 1950's and used a low frequency signal around 100 kHz with a position accuracy of around 0.1 miles at best. The range at which a usable signal can be received is around 2000-28000 nautical miles depending upon the time of day, atmospheric conditions and distance from the transmitters.



Bulky and heavy WWII Loran and the solid state units of the 1970s.



The system was open to civilian use in 1974 and systems were developed which were lighter and more user-friendly than the military equipment. With the arrival of GPS, most of the stations were decommissioned. However, the vulnerability of the GPS network to jamming and spoofing has raised new interest in a new back-up LORAN system.

The high dependence on GPS navigation, position location and timing by almost everyone has created a single point of failure which can shut down most of the critical systems upon which we depend. For this reason the U.S. Navy has re-instituted training in celestial navigation as a fall-back system and development work is continuing on enhanced LORAN, eLoran.

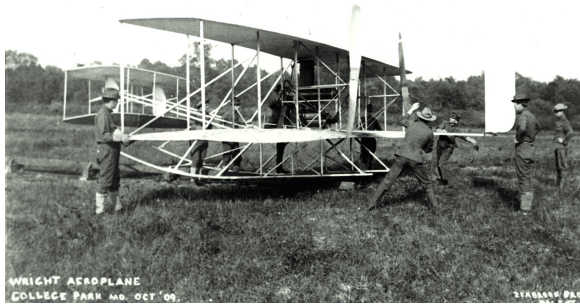
January 20, 1941 – Frederick Erastus Humphreys Goes West. Humphreys was one of the original three military pilots trained by the Wright brothers and the first to fly solo.



The 1909 contract for \$30,000 between the US Army and the Wright Brothers for *Signal Corps (S.C.) Number 1* included a provision to train two military officers as pilots. Originally, Lieutenants Frank Lahm and Benjamin Foulois were assigned but Foulois was tasked to attend an aeronautics conference in Europe so Lt. Humphreys was substituted.

The training was held at a rudimentary field at College Park, Maryland. On October 26, 1909, Wilbur Wright decided that Humphreys was ready

to be fledged and Humphreys made a three minute solo. By the end of the day, both he and Lahm had each made three flights and Wilber "certified" them as pilots. Humphreys received FAI Airplane Certificate No. 2 They continued to fly practice flights until November 5th when the aircraft was wrecked with both Humphreys and Lahm aboard but neither man was injured.



The aircraft was repaired and Lt Foulois was sent with it to Fort Sam Houston, Texas to continuing training in better weather. His orders from Brig. Gen. James Allen, Chief Signal Officer of the U.S. Army was to "Take plenty of spare parts and teach yourself to fly."

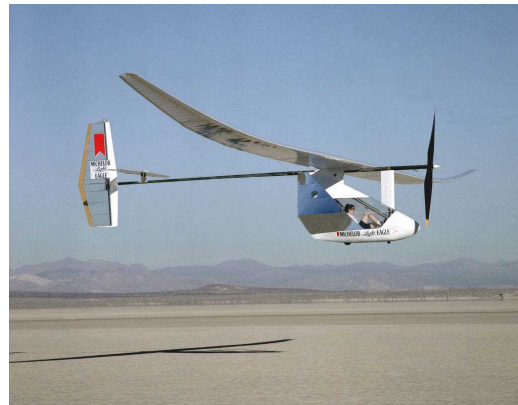
Humphrey returned to his original branch, the Corps of Engineers but resigned in 1910 to work in his family's business. But the bugle called and in 1915, he joined the New York National Guard and served in Mexico chasing Pancho Villa.



World War I returned him to aviation. He was transferred to the Air Service and sent to Massachusetts Institute of Technology for advanced technical training and the assigned to McCook Field, Dayton, Ohio to work in the Engineering Division of the Technical Section.

Demobilized in 1919, he returned to the family business in New York and an appointment as Colonel of the 102nd Army Engineers retiring as a brigadier general.

January 21, 1987 – World records for women are set by Lois McCallin flying the Massachusetts Institute of Technology's Michelob Light Eagle human powered aircraft. The new records are straight-line and closed circuit distance records and the duration record for women of 4.25 miles, 9.59 miles and 37 min 38 seconds respectively. McCallin is a systems analyst and licensed pilot.



The Michelob Light Eagle (MLE or Emily) was the prototype for the Daedalus 87 and 88 aircraft . In 1988, Daedalus 88 piloted by Kanellos Kaneliopoulos duplicated the mythical flight of Daedalus from Crete to Greece, 72.4 miles in 3 hours 54 minutes, an energy expenditure equivalent to two back-to-back marathons!

The aircraft fuselages were fabricated from carbon fiber tubes, had polystyrene ribs and 0.3 mylar skin. The Michelob Light Eagle weighed in at 92 pounds. Daedalus 867 and 88 weighed 69 pounds. Wing span was approximately 112 feet, equivalent to that of a Boeing 737-800.

January 22, 1987 – Glenn Tremml flying the Massachusetts Institute of Technology Michelob Light Eagle sets a world closed circuit distance record for human-powered aircraft of 36 miles. Tremmel was a Milford, Connecticut resident and is now an emergency medical physician.



January 23, 2007 – First flight of the Lockheed Martin CATBird, an acronym for *Cooperative Avionics Test Bed*. The aircraft was a highly modified Boeing 737-330 used as a testbed for the development of avionics for the F-35 Lightning II. Externally an F-35 nose and a pair of canard wings were installed. The cockpit was set up as an F-35 and the fuselage carried an array of electronic racks for the various test equipment.



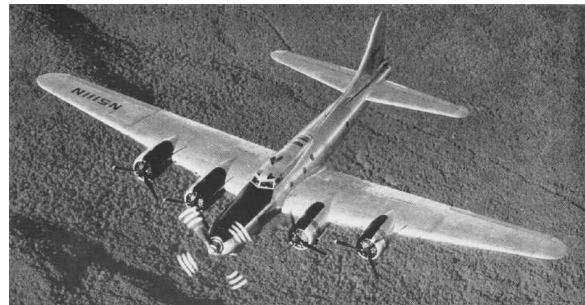
It is a common practice in the industry to modify standard aircraft as test beds for engines, aerodynamic experiments and electronics research. One such example is the Gloster Meteor F8 fighter which had a second pilot position grafted onto its nose in which a pilot would lie flat. The experiments evaluated the effects of acceleration and inertia induced forces upon a pilot flying in a prone position.



Pratt & Whitney Canada used a Boeing 720 as an engine test bed. At one point it had a turboprop mounted in the nose and a small turbojet installed in a pod on the starboard side of the fuselage aft of the cockpit, a total of six engines altogether.



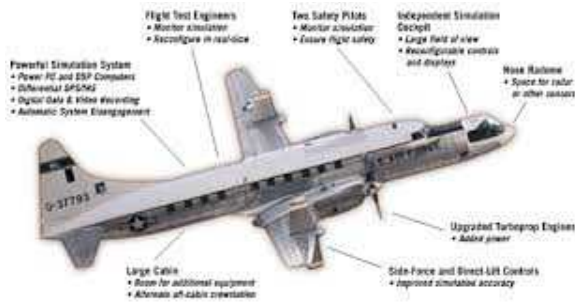
The New England Air Museum one had the Pratt modified Boeing B-17 with a turboprop mounted in the nose. The engine was powerful enough to keep the aircraft aloft even though the four piston engines were shut down.



Pratt & Whitney T-34 turboprop engine. (Credit: USN)

Cornell Aeronautical Laboratory (Calspan) flew a Convair NC-131H Total In-Flight Simulator (TIFS) for the Air Force. Over the years, it was used to mimic the behavior of a wide range of new designs before the prototypes were built. These included the Space Shuttle, Northrop Tacit Blue stealth demonstrator, and the C-17.





January 24, 1943 – President Roosevelt and Prime Minister Churchill's wartime strategy conference in Casablanca Morocco conclude. Joseph Stalin, who was an enthusiastic supporter of aviation, did not attend. He was aerophobic although he did fly to the later in the year from Baku to Tehran to meet with Roosevelt and Churchill. He flew in a Soviet Air Force C-47 with a heavy fighter escort.



FDR and Winnie

Roosevelt flew the Atlantic crossing to Morocco aboard a PanAM 314, the Dixie Clipper. In Gambia, he transferred to a TWA C-54 Skymaster for the last leg of the trip.. This was the first official flight by a sitting U.S. President. Churchill flew in on a Consolidated LB30 Liberator II named Commando.

The most important agreement which was made concerning aviation at Casablanca was the joint British-American strategic bomber offensive against Germany with the Royal Air Force bombing by night and the U.S. 8th and 15th Air

Forces bombing by day.

The Aircraft Used by Churchill and FDR



Commando. Note the single vertical tail which will be adopted by the PB4Y-2 Privateer. Credit: Brock F J (Fg Off), Royal Air Force Imperial War Museum



The Skymaster was commanded by Capt. Otis F. Bryan.



Dixie Clipper, Commanded by Captain Howard Cone, landing at Bathurst, Gambia