



Missions for
America
Semper vigilans!
Semper volans!

24 JUN-TRCS SAREX
14-20 AUG-CTWG Encampment
19 AUG-National Aviation Day
09 SEP-CTWG Smallbore Rifle Clinic
23 SEP-WAA Young Eagles
06-07 OCT-AOPA GON Fly-in
21 OCT-CTWG Smallbore Rifle Clinic

CADET MEETING

06 June, 2017

The Coastwatcher

Official Publication of the Thames River
Composite Squadron
Connecticut Wing
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Issue 11.20

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CALENDAR

See the Squadron Calendar for Meeting Details

11 JUN-Retirement of Colors-Groton Elks-1330
13 JUN-Commander's Call
Cadet Char. Dev. & Promotions
17 JUN-Commander's Cup Rocket Contest
19 JUN-01 JUL NER ES Training
20 JUN-ES Training
Cadet Aerospace or Emergency Serv.
27 JUN-ES Training
Cadet Aerospace or Emergency Serv.
25 JUN-WAA Pancake Breakfast
23 JUL-FAA Av. Career Ed. Academy

Cadets engaged in rocket building, studying and testing to earn emergency services qualifications

COMMUNITY SERVICE ANNOUNCEMENT

Our cadets have been asked to present and retire the colors on June 11th at the Groton Elks Lodge.

The ceremony starts at 2:00 PM EDT. All cadets and their families are welcome to attend. There will be free food.

Event Details:

Date: June 11th, 2017

Meeting Time: 1:30 PM EDT

Location: 700 Shennecossett Rd, Groton, CT.

Uniform: Dress Blues

Ending Time: Estimate of 4:00 PM EDT

NEAM/SPRINGFIELD VISITS

Ten Squadron members visited the New England Air Museum (NEAM) and the Springfield Armory National Historic Site on Saturday. The trip was sponsored by the Hartford Chapter of the American Institute of Aeronautics and Astronautics (AIAA). The event was organized to support CAP's and the AIAA's Aerospace Education and Science, Technology, Education, and Mathematics initiatives.

James Skiff, Maj General USAF (ret'd) spoke about his experiences flying the F-100 Super Sabre in Europe and the F-4 Phantom in South East Asian combat. Dr. Roger Van Dyke, Commander, USN (ret'd), who flew the A-4 Skyhawk spoke about Edward Heinemann, the designer of the Skyhawk and how he and his design team optimized it for aircraft carrier operations. Lt. Col. Carl Stidsen, USAF (ret'd) NEAM's reference librarian guided the cadets through the the Museum's CAP display which includes the original Sikorsky S-39 amphibian which performed a spectacular rescue of a downed aviator off the Maryland coast in World War II.



Lt Col Stidsen points out CAP memorabilia to Cadets Shafer and Kirkpatrick

The Squadron then drove to the Springfield Armory National Historic Site to learn about the “American System” of manufacture, a technological leap forward which transformed the Connecticut River Valley into the Silicon Valley of the 19th century.

Ranger Susan Ashman and her colleagues explained the harnessing of the Mill River to provide the energy for forging and machining the components of military firearms. A video on the history of the Armory followed.

The cadets then toured the museum viewing the specialized tools used at the armory and the displays illustrating the development of firearms for the United States military.



Dr. VanDyke and the A-4

General Skiff speaks about combat flying in the F-4.



Cadet Kirkpatrick tries on the F-100 Super Sabre.
(Photo Credit Maj Roy Bourque)



Cadet Sergeants Benjamin and Daniel Ramsey study the intricacies of the Thomas Blanchard's lathe, an 1819 machine which automatically shaped gun stocks.



The final stop was at the “Organ of Muskets,” inspired by the Henry Wadsworth Longfellow's hymn to peace, The Arsenal at Springfield.

The event was led by Maj Roy Bourke and C/Maj Daniel Hollingsworth and organized by Lt Col Stephen Rocketto. Cadets attending included C/CMSgt Hannah Ramsey, Sgts Benjamin and Daniel Ramsey, and Cadets Hayden Kirkpatrick, Caleb Shafer, Ian Diaz. And his grandfather, Fred Guile.

SENIOR MEETING

06 June, 2017

The status of squadron goals was examined. Ninety five percent of the seniors have earned the Yeager and `100% are ICUT qualified. All but one cadet has received his first orientation flight.

SM Heard reported on the squadron preparations for National Aviation Day in August

Heard will also determine the needs for maintenance of our facilities, prepare a list, and set dates for the work.

Lt Col Bright announced a prospect for a recruiting visit and will plan the details.

Capt Miller briefed the Squadron on our schedule for upcoming Long Island Sound Patrols.

Majs Neilson and Noniewicz tendered comments on Form 5 flight rules for those members preparing to qualify or re-qualify as pilots.

Maj Lintelmann, finance officer, reported that our income and expenses are nominal.

CURRENT AND NOT SO CURRENT EVENTS

NASA will celebrate June 11th with a rocket launch to honor the 75th anniversary of the birth of the Editor of *The Coastwatcher*.

The birthday candle is a Terrier-Malamute two stage sounding rocket composed of a 1st stage Convair Terrier and a 2nd stage Thiokol Malamute. The mission payload is unusual.

The payload consists of ten soda-sized cans. The cans contain small amounts of barium, strontium, and cupric oxide which when dispersed, in the ionosphere, at an altitude of about 100 miles will interact and form luminescent red and bluish green clouds. .

The artificial clouds will be visible from the surface as far north as Connecticut and ground stations will track the motion of the particles. Subsequent analysis will yield data valuable for studying the magnetic field of the earth.



A Terrier-Malamute Launch (Photo Credit: NASA)

The launch has been scrubbed four times either for cloudy weather or boats in the impact area. Launch time is around 0445 EDST. If you are interested, details can be obtained at www.nasa.gov/wallops.

The timing of this event has without doubt been scheduled to coincide with the Editor's natal day anniversary to honor his role in the 1970-71 Barium Ion Cloud experiments.

The launch rocket was a National Advisory Committee on Aeronautics design constructed by Ling-Temco-Vought. It was named the SCOUT for Solid Controlled Orbital Utility Test vehicle. (NASA funding approval is helped if one has a clever acronym for the project.)

The four stage SCOUT carried 40 pounds of barium to an altitude of 20,000 miles at which point the barium was released into the ionosphere. The barium ionized and formed a purple cloud which eventually extended for a distance of about 20,000 miles.



The Scout was capable and did place objects into orbit. She was launched 99 times with only 11 failures. The 76 foot long rocket served the space program for 35 years.

(Photo Credit: NASA)



The cloud is aligned with one of the magnetic field lines of the earth. The "bulge" forming on the lower right side of the cloud is the barium which did not ionize, reflecting sunlight and falling under the influence of the earth's gravity.

cloud and the analysis of the data revealed scientifically interesting features of the ionosphere.



The "once and future" Editor manning the computer controlled image intensifiers and camera on a mountain top in inflation wracked and pre-revolution Chile. (The Editor takes responsibility for neither the national fiscal disaster nor the soon to be revolution.)

The Editor not only had a role in administering a barium enema to the earth but as a side light, was a principle in construction the most expensive camera tripod in history. But that is a story for another day.

AEROSPACE HISTORY

Obscure Beech Aircraft

In 1932, Walter Beech and his wife Olive Ann founded Beech Aircraft in Wichita, Kansas. Wichita has been a hot bed for the manufacture of aircraft. Cessna, Laird, Stearman, Travel Aire, Boeing, and Lear have had or still have plants there.

Beech's first aircraft was the Model 17 Staggerwing. W

by the model numbers started at 17 is interesting. Walter Beech had been a principal officer with Travel Aire and later Curtiss-Wright and CTWG historian Lt Col Carl Stidsen has argued that 17 was a continuations of model number from these two predecessor companies.

The Beech model numbers of aircraft which were actually produced are more or less sequential up to 100 at which point Models 390, 400, 1900, and

2000 show up. But interestingly, some of the aircraft which they did produce are little known. This article will explore the world of the obscure Beechcrafts.

The first one is Beechcraft's attempt to design a combat aircraft, the **Model 28** of which two were built and named the XA-28 Grizzly by the Army. At that time, the standard attack aircraft was the Douglas A-20 Havoc.

Military doctrine called for a new aircraft capable of attacking armored vehicles and concrete pillboxes. The Grizzly was armed with a 75 mm (3 inch) cannon mounted in the nose paired with two .50 cal machine guns. Remotely controlled ventral and dorsal turrets each carrying two .50 caliber guns served as defensive armament.



The Grizzly
(Photo Credit: USAF)

But military doctrine changed, the Grizzly was redundant and more important was competing with the B-29 for the Wright R-3350 engines. It was no contest. One aircraft was scrapped and the second disappeared in the fog or wartime production.

The second of these is the **Model 34** Twin Quad. Only one was built and it first flew in 1947. Beech was planning on filling the niche for the proposed “feeder” airliners. The aircraft companies had anticipated a boom market but most of them were disappointed. The North American Navion and the Republic Seabee reached limited production but the Grumman Kitten, Piper Sky Sedan, Sky Coupe, and Sky Cycle were stillborn.

The Model 34 was designed to carry 14 passengers and it had two unusual features. It sported a V-tail familiar on the early Bonanzas but the engine layout was radically different from common practice. The Model 34 looked like a twin engine airplane but it had four engines buried in the wings each pair of which drove a single propeller through a complex gear and clutch arrangement.



Twin Quad
(Photo Credit: Beech)

However, the market failed to materialize and the single Model 34 and two partially finished prototypes were scrapped.

Beech's 1982 **Model 38P** Lightning was another on-off. The P stood for pressurized. The aircraft was a single engine turboprop, initially with a Garrett engine which was replaced in 1984 with a more powerful Pratt PT-6. Unfortunately, the mid 1980's was a bad time for aircraft sales. Liability concerns caused Cessna to suspend production of their single-engine line. The pressurized high performance single engine aircraft's time had not yet come.



N241FS lists its manufacturer as Richard L. Bayles.

(Photo Credit: markheggaircraft.com)

The FAA data base shows that N6738V is a Model 38P but it is deregistered. However, N241FS, registered in the experimental category may be the same airplane. The 38P was derived from the Beech Baron and 38V's fuselage and

landing gear look like that of a Baron.

Beech revisited the concept of two engines driving one prop with its **Model 40**. In 1948, The company took its highly successful Bonanza and mounted two engines in the nose, one on top of the other. The engines were the 180 HP Franklin flat six. This did require some cowl modifications. However, certification rules required a firewall between the two engines and development of the aircraft was halted. The gear box which linked the two engines to one prop was a complexity which more than one company struggled with and failed to find a viable solution.

Beech was producing well accepted training aircraft for the Air Force and Navy, the T-34 Mentor series, Beechcraft Model Number 45. They were piston or turbo prop aircraft. Seeing an opportunity for jet powered training aircraft, Beech invested its own money to produce the **Model 73 Jet Mentor**.



Model 73 at the Kansas Aviation Museum

In the end, Cessna won the contract with its T-37 Tweet. The Model 73 did go through a number of design changes, mainly to the location of cockpit and engine air intakes. The sole example now resides at the Kansas Aviation Museum.

The model numbers of Beech Aircraft do not seem to be sequential. The early first production number, the Model 17 Staggerwing is explainable because of Walter Beech's associations with Travelaire and Curtiss-Wright as explained previously. Later model numbers might be explainable because of the changes in ownership and mergers: Raytheon, Hawker Beechcraft, and

finally Textron which ironically also owns Cessna. They may also be a result of production lines in both Wichita and Liberal Kansas.

The latest aircraft model numbers jump from the hundreds to the thousands. Their cash cow, King Airs, are listed as 90, 100, 200, and 300. Two business jets, the Premier and the Beechjet are 390 and 400 respectively. And then there's the 1900 Airliner and the 2000 Starship. In addition, aircraft such as the 19-24 Musketeer family were 1960 designs but the iconic Bonanza, Models 35 and 36 stem from the 1940s. And the Model 33 Debonair precedes the Bonanza from which it was derived?

Another source of confusion is the two Jayhawks. The twin engine Raytheon Hawker-Beechcraft is the military T-1 Jayhawk. And then here is the Beechcraft AQM-37 Jayhawk, a target drone. When companies change hands, corporate memory is lost.



Will the real Jayhawk stand up



A final anomaly is the **Model 16**. One would expect that it would precede the Model 17 Staggerwing which made its first flight in 1932. A Curtiss-Wright CW-16 did fly in 1931. But, the Beech Model 16 appeared in 1970! It is described as a slightly smaller version of the Model 19 Musketeer Sport.

According to one story, Olive Ann Beech did not like it and only one was produced. The FAA data base carries it as a deregistered aircraft, N9716Q. Like the Model 40, it is so obscure that research could not turn up any pictures of either of them. Any reader who can assist is invited to do so.

AVIATION CHRONOLOGY

09 June, 1927-The first temporary flight restriction (TFR) is mandated when President Calvin Coolidge issues the first executive order restricting airspace when aircraft are forbidden to fly over Washington, DC during the celebration of Charles Lindbergh's return from Paris after his solo North Atlantic crossing. Ironically, the celebration of Lindbergh's flight restricted flying over the District of Columbia!

☐ A year later, the Army asked for \$25,000 to buy a squadron of airplanes. Coolidge retorted, "Why can't we buy just one aeroplane and let the aviators take turns flying it?"

10 June 1953-Scott Crossfield flies the last flight for the #3 Douglas D-558-1 Skystreak.



The original #3 Skystreak at the Carolinas Air Museum, Charlotte, N.C.

11 June 1971-Shelia Scott makes the first flight by a light plane from equator to equator via the North Pole. She flew a Piper PA-23D Aztec.



12 June 1979-Paul MacCready's "Gossamer

Albatross," flown by Bryan Allen becomes the first man-powered aircraft to cross the English Channel making the trip in 2h 49m.



Gossamer Albatross at the Udvar-Hazy Annex, National Air and Space Museum

13 June, 2013-The Canadian AeroVelo Atlas man powered helicopter flies for 64 seconds and attains an altitude of 11 feet to win the American Helicopter Society International's Igor I. Sikorsky Human-Powered Helicopter Competition by flying for at least 60 seconds and achieving an altitude of 10 ft.



The Atlas is a quad-rotor design, 121 pounds, mounted on a 50x50 meter frame. The pilot powers the four rotors with a modified bicycle..
(Photo Credit: Vertiflite)

14 June, 1919 - John Alcock and Arthur Brown pilots a Vickers Vimy from Newfoundland to Ireland, first non-stop crossing of the Atlantic Ocean by aircraft.



The picture is a commemorative postal cover. Enlarge the image and look closely at the names of the two RAF pilots who flew the Phantom which carried the cover over the Alcock-Brown route.