



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

Lt Col Stephen Rocketto, Editor

srocketto@aquilasys.com

Maj Scott Farley Publisher

Maj Roy Bourque, Paparazzi

C/SSgt Seth Trotochaud, Cadet AEO

C/SrA Robert Jeznach, Cadet PAO

Hap Rocketto, 2nd Lt, AUS, (ret'd.)

Capt Edward Miller, Feature Writers

Issue 13.38

05 November, 2019

SQUADRON CALENDAR

11 NOV-East Lyme M.S. Veteran's Day
12 NOV-TRCS Commander's Call/Promotions
19 NOV-TRCS Meeting/Aerospace
23 NOV-CTWG SAREX
26 NOV-TRCS Meeting
03 DEC-TRCS Staff Meetings
10 DEC-TRCS Commander's Call
17 DEC-Annual TRCS Holiday Party
24 DEC-All aircrews grounded to clear airways
for priority cargo flight.
07 JAN-TRCS Staff Meeting
14 JAN-TRCS Commander's Call
21 JAN-TSRCS Meeting
28 JAN-TRCS Meeting

FRUIT SALE



Eat Healthy

$C_6H_8O_7$ or 2-Hydroxypropane-1,2,3-tricarboxylic
better known as citric acid and encapsulate in
citrus fruits looks good, tastes good and are
healthy additions to your diet to say nothing about
their benefits for the TRCS purse.

One Week to go. Sell Fruit!

CADET MEETING

05 November

Leadership Lesson - Col. Kinch

Lt Col Lawrence Kinch, USAF (ret.) led a Leadership Seminar entitled "Cadets and the Team."

SENIOR MEETING

05 November

STAFF MEETING REPORTS

Department heads reported on the current status of their responsibilities.

Communications Chief Lt Kopycienski noted that 69% of the Squadron are ICUT qualified, 92% of senior members and 34% of the cadets.

Tentative plans for the CTWG SAREX on the 23rd were discussed.

The nature of the mission safety briefs was discussed. There was some feeling that the briefs be brief and pertinent to problems which directly affected the mission and that a checklist of items covered should be standardized.

Kevin Scott, a new member was introduced. He is an army veteran and has worked at Electric Boat and for the State.

QUALIFICATIONS, AWARDS, AND PROMOTIONS

C/CMSgt Cameron Wischman qualified as a Mission Radio Operator.

Lt Michael Kopycienski has met all requirement for Level III, Management and earned the Grover C. Loening Ribbon and achieved the Senior Rating as a communications specialist.

TRAINING

*Emergency Services Familiarization
And Preparation Class
Saturday, 02 November, 2019*

Maj Bourque trained three Cadets, Busher, Jeznach and Alexander in the use of a compass and a phone alert.

Communications Announcement

1st Lt Michael Kopycienski, TRCS Communications Officer and Net Control Officer for the Connecticut Wing announces a new comms initiative. The Wing will run radio nets on every weekday night, different squadrons taking the control duty on different nights.

Lt Kopycienski has distributed schedules, station log templates, and a crib outlining the proper communications protocol.

Capt Charles Johnson, CTWG Assistant Director of Operations for Unmanned Aerial Systems

attended a two day course in New York which focused on “training the trainers” who will be responsible for qualifying seniors and cadets under the regulations established by the new program.

NER TRAINING EXERCISE

01-06 November

submitted by Maj Scott Farley

A Northeast Region Training exercise headquartered at Concord, N.H. was conducted over the time period of Nov1-Nov 6. The objective was to develop interoperability in the NER region. The TRAEX involved all nine NER Wings. The entire exercise was comprised of photography missions with no ground team involvement.

Tasking began on Friday night with pass down of photo targets for CTWG which included 41 individual photo taskings from NER for the CT Wing. Most significantly the Wing also received 29 complex tasking from the CT Army National Guard which were to be conducted using the Domestic Operations Awareness and Assessment Response Tool (DAART) system.

This equipment transmits live video feed of the photography mission to the client. Those 29 missions were complex in that any one task included many targets, e.g., “conduct video starting Rt 32 in Mansfield down to New London, to include Rt 14 at Windham, to Rt 49 connection and down to the RT 95 connector.” The flight time for these targets were well over 2.5 hours. The further challenge was that there are only 2 DAART units in the Wing and one was not not fully operational.



*Lt Sprecace
plans a
DAART
mission.*

There were seven Wing aircraft supporting these qualified. missions. The following nine seniors from CT 075 supported the TRAEX

02 November

Maj Paul Noniewicz-Wing Air Operations Branch Director (AOBD), SM Jeremy Minter-Mission Staff Assistant (MSA), SM Jason Otrin-MSA, Maj Keith Neilson, Mission Pilot (MP), Lt David Pineau-DAART Operator (DO), Maj Farley MSA

03 November

SM Jeremy Minter-Mission Scanner, Lt Adam Spreccace-MP, Maj Scott Farley-DO

04 November

Lt Adam Spreccace-MP, Maj Scott Farley-DO

Lt Michael Kopycienski operated radios on both high frequency and very high frequency bands and served as a communications unit leader, net coordinator and TRCS Mission Base operator during various stages of the exercise.

In the end, all 29 DAART related tasks were completed over a 4 day period with crews from Groton and Oxford. The Groton aircrews completed approximately 13 of the total 27 taskings.

*Aerospace Training
Aerospace Education Program for Senior
Members*



Better known as “the Yeager,” the AEPSM requires senior members to learn about the history and technical aspects of aerospace science. It is a roughly parallels to the aerospace education program demanded of cadets.

Thames River's latest member to earn the ribbon is 2d Lt Likuvi K. Chebelyon-Dalizu. He joins SM Jason Otrin, 2d Lt Stuart Hanke, an 2d Lt Joshua Snow who have also earned the award this year.

The Squadron now has 88% of its senior members

PUBLIC AFFAIRS

*Red, White, and Blue Mass
03 November, 2019*

The Squadron joined with armed forces members and parishioners at St. Patrick's Cathedral in Norwich in a mass honoring Army, Navy, Marines, Air Force, Merchant Marine and Coast Guard members who have fallen in service to our country.



TRCS members who participated in the processional were Cadets Rathbone, Ceniglio, Trotochaud, O. Busher, J. Busher, Jeznach and Morse. The Senior contingent consisted of Rathbone, Ceniglio, Trotochaud and Bourque.

AEROSPACE EDUCATION PROGRAM

Lt Col Rocketto is CTWG Point of Contact and Lead Mentor for Project Starbase, a Department of Defense initiative whose mission statement in part is “to expose our nation’s youth to the technological environments and positive civilian and military role models found on Active, Guard, and Reserve military bases and installations, nurture a winning network of collaborators...”

Starbase offers its services in 33 states and territories with 66 different locations. Last year, 93,133 students participated.

Connecticut's Starbase center is at the National Guard facilities at Bradley Airport. Participating

schools send classes to Bradley for a one week program.



Rubber band powered models, Bernoulli demonstrators, and the coupling of a gyroscope and a rotating disc are part of the CAP developed Starbase program.

After school programs are run at Duggan Elementary School in Waterbury and Jamoke Academy Charter School in Hartford. The CTWG Sikorsky Squadron is responsible for Duggan and Thames River, with assistance from the Royals teaches at Jamoke. Each session is one hour long and runs for seven weeks in October and November.

CALIFORNIA'S AERIAL FIRE DEPARTMENT

A lot of ink has been spilled reporting the wild fires raging in California. Arguments about the root source of the fires rage hotter than the fires themselves. A lot of California forests and wild lands are ripe for fires, primed by and whipped up by the hot dry Santa Ana Winds which flow down through the passes in the Transverse range of mountains to the east. Ignition by lightning, careless campers, shorted utility lines and arsonists can result in raging infernos which defy the best efforts to control and extinguish them.

Conservations, preservationists, the lumber industry, electrical utility companies, zoning officials, and California's legislature are engaged in a "blame game" not pertinent to this feature article. What is pertinent is California's airborne response to the fire danger.

California is the only state in the union to establish its own aerial fire fighting force. The CAL FIRE Aviation Management Program is a branch of the California Department of Forestry and Fire Protection. Other states rely on national resources as does California also. Established in 1958, CAL Fire employs 130 contractor pilots, maintenance, and support personnel and boast of a fleet of 48 aircraft, 23 air tankers, 13 tactical planes, and 12 helicopters. The aircraft are stationed at 13 air attack bases and and ten helitack sites. The annual budget for CAL FIRE is around \$20 million a year.

Tactical planes survey the fire and direct the air tankers and helicopters to areas upon which they drop either water or retardant. Retardant is a slurry consisting of a salt compound, water, a thickening agent and a dye.

The history of aerial fire fighting in California can be traced back to 1931. Starting in the 1950s, agricultural spray planes and a small number of air tankers were on call. Modified military aircraft started to appear: TBM Avengers, B-17s, PBYs, P2V Neptunes C-119s, and the F7F Tigercat.

In the early 70s, California turned to the Grumman S-2 Tracker, a former piston engine carrier-based anti-submarine plane. Ultimately, New acquisitions were converted to turbine power and 23 S-2Ts are now in service.



S-2T dropping retardant.

The Air Tactical aircraft were originally mostly Cessna 182s and 210s. A lot of 20 twin engine Cessna O-2s were purchased from the Air Force and served for 20 years. In 1993, CAL AIR replaced them with 16 OV-10s from Navy stock.



North American OV-10 Bronco Tactical Aircraft

The first helicopters were a potpourri of contractor-owned whirly-birds: the Bell 47, Jetranger and 205, Hiller FH1100 and Aerospatiale Alouettes. Helicopters not only drop water and fire suppressants but also transport ground crews to “hot spots” and move equipment and supplies. In 1981, a lease of Bell UH-1F Hueys signed and they were used for 10 years.

When the lease expired, California qualified for a lot of UH-1H airframes offered by the Department of Defense to the US Forest Service. The new aircraft had more powerful engines installed and a new more robust transmission and tail rotor system. These “Super Hueys” provided the performance needed in the hot and high conditions prevalent at many California fire sites.



Hueys use “bambi buckets” or if equipped with external tanks, reload by snorkeling water while hovering.



California can also call on national resources such as National Guard and USAF Reserve C-130s fitted with the Modular Airborne Fire Fighting System and private contractors.



Lockheed Hercules on a Water Drop.

10 Air Tanker Carrier has signed contracts for exclusive use of the DC-10 “Super Tanker” at about \$5 million per year.



A Douglas Super-Tanker” making a spectacular down-hill run on a fire.

Other companies can supply variations of the Air Tractor AT-802 or Evergreen's Boeing 747-200.



Given that the damage costs attributed to the wildfires runs into the billions of dollars, the aerial firemen of CALFIRE are a cheap investment.

AEROSPACE CHRONOLOGY

November 6-A Big Date for First Flights of Some Interesting Aircraft.

- 1924-First flight of the Dornier Do J Wal – One of the most successful flying boats ever built, the Wal (Whale) used two engines mounted on a pylon above the fuselage in a tractor-pusher arrangement. Claudius Dornier's patented hull mounted sponsons provided stability on the water.

The aircraft was produced both as a military and commercial version with a number of different kinds of engines and manufactured in Spain, Japan, the Netherlands, and Italy under license. The Wal is best known for a number of historic flights and missions including transits of the South Atlantic and a catapult assisted air mail service between Africa and South America.



Amundsen's Wal after and emergency landing on the polar ice. It took three weeks to repair the aircraft and clear a runway.

A Wal catapulted from the station ship MS Schwabenland.



- 1929-First flight of the Junkers G.38 – Only two of these four engine transports were built in Germany and six in Japan but its unique blended wing fore-shadowed designs which came after and are under consideration even today.



It's thick fuselage cum lifting surface allowed on-board mechanics to service the engines in flight and the passengers, seated along the leading edge of the wing, had a pilot's eye view of the journey.

- 1935-First flight of the Hawker Hurricane Although overshadowed by the glamorous Spitfire, the Hurricane was the mainstay of the Battle of Britain, scoring 60% of the aerial victories.



Prototype Hurricane (Credit: Imperial War Museum)

Sydney Camm, Hawker's brilliant designer pushed for a Rolls-Royce Merlin equipped monoplane consisting of a steel structure and wood and fabric covering. This not only allowed construction by relatively

unsophisticated workers but also meant that battle damage was relatively easy to repair, an important consideration when the RAF had its back to the wall and needed both quantity production and fast return to service of damaged aircraft.

- 1942 – First flight of the Heinkel He 219 Uhu (Eagle-Owl) – The Uhu was a twin-engine two seat night fighter. It carried the highly effective Lichtenstein S-2 radar and was equipped with the then unusual tricycle landing gear and an ejection seat.

Note the nose mounted radar antennae



The Uhu was not produced in the numbers needed to combat RAF's massive night bomber raids. The commander of the German night fighter force, Josef Kammhuber promoted the aircraft but Erhard Milch, the officer responsible for aircraft production used his authority to cancel the contract so less than 300 ever left the factory.

- 1957-First flight of the Fairey Rotodyne – The Rotodyne was a compound gyroplane. For take-landing, and hovering the rotor was driven by power from the wing mounted turboprops. No engine drove the rotors directly. The turboprops fed a mixture of fuel and compressed air to the jets at the tips of the rotors. Once in horizontal flight, all of the engine power was applied to the propellers and the rotor was driven by the airstream and provided lift. Performance was excellent. The

Rotodyne set a class speed record and it could hover with only one engine operating.



Like wartime Germany, the post-war British aviation industry and government ministries were wracked by contentious political, economic, and strategic wrangling which directly impeded the adoption of the Rotodyne. The aircraft construction was subsidized by the government and only one was built. British European Airways had contracted for six Rotodyne's but cancelled the contract due to the high noise level created by the tip jets. Fairey could find no other customers and the airframe was broken up.

Nov 7, 1849 – The First Italian War of Independence pitting the Austrian Empire against the Kingdom of Sardinia, the Kingdom of the Two Sicilies, the Grand Duchy of Tuscany and the Papal States.

The Austrian Navy was blockading Venice and used the *SMS Vulcano* as a balloon tender. Unmanned hot air balloons carrying explosive charges were launched from the ship into the fickle Adriatic winds.

The details are not clear but the balloons may have been about 25 feet in diameter and carried five bombs of about five pounds each with half-hour time fuses

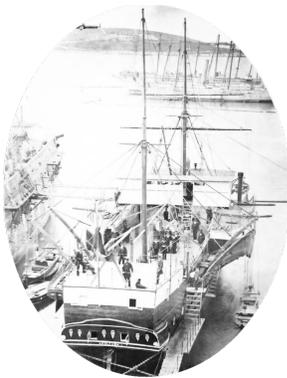
One bomb hit Venice but a change in wind direction sent some of the balloons back towards the Austrians. This was the first use of balloons as bomb carriers and the first use of a ship to

launch them.

Artist conception of the attack on Venice.



(Credit: the Sheila Terry Science Library)



The Balloon Tender Vulcano

Another singular event is celebrated on November 7th. In 1910, celebrated pilot Didier Masson made the first flight of a somewhat unusual aircraft from Garden City, New York. What was unusual about the aircraft was that it was first designed by a woman, E. Lilian Todd.

Todd is shown at the controls of her aircraft but she was not a pilot and did not fly it.



Todd had a string of inventions to her credit, a typewriter copy-holder, a sundial, a cannon triggered by solar power, and a cabinet with a built-in folding table. Her aircraft work was supported by Olivia Sage, the widow of Russell Sage, a New York financier and politician.

November 8, 1881 – Robert Estnault-Pelterie is born. Estnault-Pelterie had a life-long interest in aeronautics and astronautics! His first glider was based on the Wright design using wing-warping. The design was unsuccessful but led to his invention of the aileron. He continued making innovations, inventing the “joystick” flight control and an unusual engine design.



In 1913, he published calculations about rocket engines and remarks about the energy needed to get a vehicle to the moon. He also proposed using the energy from radium to power a space vehicle.

By 1929, he conceived of the ballistic missile and the next year started experimentation with rocket engines using liquid oxygen, gasoline, and tetranitromethane. An explosion cost him three of his fingers. At this point, his theories were far in advance of the technology available but his work made him a seminal contributor to developments in aeronautics and astronautics.

November 9, 1932 – Wolfgang von Gronau, co-pilot Gerth von Roth, radio operator Fritz Albrecht and mechanic Franzl Hack in a Dornier Do J named *Gronland Wal* completed the first flight around the world by a seaplane.



US Army Air Corps Photo of Wal Approaching Manila.

The flight departed from Sylt, Germany on July 21, 1932 and proceeded westward across the Atlantic, arriving back home 111 days later. His route took him through around 20 countries and over 40 stops.



Postal covers were used by round-the-world flyers to help pay expenses. This is one carried by Gronau on the Manila-Shanghai leg.

November 10, 1942-*Operation Torch*, the invasion of North Africa. The escort carrier *USS Chenango* launches 72 Army Air Force P-40 Warhawks sending them to the newly liberated airbase at Port Lyautey, French Morocco.



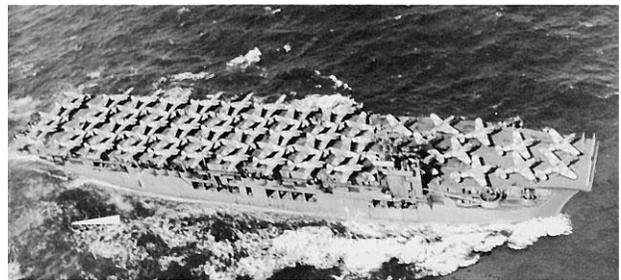
A P-40 departs.



Note the U.S flags on the aircraft.

Earlier in the war, the British Navy had attacked the Vichy French naval bases in North Africa, killing many French sailors. The invasion force feared fierce French resistance to the British. US aircraft were clearly marked with the hope that this would lessen French hostility to an American force.

The normal aircraft complement was a mix of around 30 Grumman Wildcats and Douglas Dauntless dive bombers. For the North African invasion, she was “filled to the gunwales” with the Warhawks making a hard day of work for her catapult crew.



The ship was originally the *Esso New Orleans*, an oil tanker. The Navy purchased her and used her as a fleet oiler before converting her to an escort aircraft carrier.

November 11-13, 1935 – Jean Gardner Batten becomes the first woman to fly solo across the South Atlantic, taking 2 days 13 hours from Dakar in Senegal, Africa to Brazil. Flying a Percival Gull, she also breaks the speed record for the crossing by a day!



*The huge bomb bay of the Lancaster had to be modified to take the Tallboy.
(Credits: Imperial War Museum)*

Twenty-nine RAF Avro Lancasters using the 12,000 pound Tallboy bomb scores two hits and a near miss which caused the ship to capsize taking 1,000 of the crew with her.

In a two year period, Batten, a New Zealander set five other world long distance records including England to Australia, Australia to England, England to New Zealand and Australia to England, a second time.



The *Tirpitz* was the largest battleship built in Europe. Its presence in the Norway fjords were a continuous threat to the North Atlantic supply convoys and the British had to devote extraordinary naval and air resources to prevent a *Tirpitz* sortie.

Known as the “Greta Garbo of the Air,” she incurred some notoriety, borrowing money from male aviators whom she left in the lurch afterwards. Her life ended in Majorca, Spain. Bitten by dog, she refused treatment and died and was buried in a pauper's grave under her middle name, Gardner.



Before!

Nov. 12, 1944 – *Operation Catechism*-After repeated attacks by miniature mini-submarines and aircraft, the German battleship *Tirpitz* is sunk.

After!

