



Missions for  
America  
*Semper vigilans!*  
*Semper volans!*



*Cadet Munzer  
Practicing Rocket  
Science*

## The Coastwatcher

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

LtCol Stephen Rocketto, Editor  
[srocketto@aquilasys.com](mailto:srocketto@aquilasys.com)

Lt Col deAndrade, Publisher  
Lt David Meers & Maj Roy Bourque, Papparazis  
Hap Rocketto, 2nd Lt, AUS, (ret'd.), Features  
Capt Edward Miller, Features

Issue 11.11

28 March, 2017

### Errata

A mistake occurred in last week's "Promotions" section. C/Amn Kirkpatrick and Munzer was incorrectly identified. And here they are again.



### CADET MEETING

*28 March, 2017*

C/2dLt Ryan Poe conducted an aerospace lesson  
Squadron rocket building continued.

### SENIOR MEETING

*28 March, 2017*

Squadron Commander J. Scott Farley briefed the Squadron on the salient points covered in last Saturday's pilot meeting in Meriden.

Capt Edward Miller reviewed the grid search and discussed the steps to set it up as a flight plan in the G1000 navigation system.

### PILOT MEETING

*25 March, 2017*

The meeting was held at Meriden-Markham Airport. Airport Manager Capt Connie Castillo and 1st Lt Joe Lavoie and Cadet Brandon Sosa, all members of the Meriden squadron provided a most hospitable venue as well as a most satisfactory menu.

Lt Col Roger Malagutti CTWG Standards/Evaluation Officer, discussed a number of critical flight and administrative issues: Memory items on the emergency checklist, water survival training, the survival kit now mandated to be aboard each aircraft, entering fuel and expense data into WIMRS, and locating aircraft checklists and aircraft performance data on eServices.

Maj Johnny Burke, Assistant Standards/Eval Officer briefed the pilots on the nuances of the G1000 electrical panel and the logic of the circuit breakers and bus bar system.

Lt Col Darren Cioffi Wing Director of Operations reported that CTWG is, for the last reporting period, number two in the United States for logged pilot time and accumulative airframe time.

Cioffi emphasized the importance of entering complete and legible data on aircraft logs and fuel strips, always remembering that the physical and electronic copies must remain legible.

His final remarks concerned the new status of our expense allowances given the restrictions of the national “continuing resolution” decision on appropriations.

Pilots and crew with a counter-drug rating met separately with Maj Charles Kruzshak.

A high point in the meeting was the introduction of C/MSgt Olivia Cretella, 186th Composite Squadron who soloed last Tuesday. Chief Cretella's instructors were Maj Malagutti and Capt Castillo. Castillo praised her as an “excellent student.”



*CFI Castillo and the newly fledged Olivia Cretella share a moment.*

Cretella said the her first foray alone was “nerve racking and rough” but “quickly improved and built her confidence as a pilot.”

Cadet Cretella has been accepted at the United States Air Force Academy and is a credit to here squadron and her wing.

TRCS members attending were Majs Farley and Neilson and Lt Col Rocketto.

## WATER SURVIVAL TEST

*26 March, 2017*

Ten squadron members gathered at the Waterford High School swimming pool to take the required practical test needed to hold a water survival endorsement on the 101 card. Nominally, the pool test requires a 50 foot swim, 10 minutes of treading water, and boarding a life raft. Squadron Commander Farley, already qualified, acted as skills evaluation trainer.

Nine members took the plunge: Lt Cols Kinch, Doucette, deAndrade, Bright, and Rocketto, Lts. Pineau, Crandall, and Schmidt, and SMs Heard and Spreace.



*Lt Cols deAndrade and Kinch act as helmsman and navigator. Engineman Lt Crandall provides the motive power.*

*(Photo Credits: Scott Farley)*



*Théodore Géricault  
Raft of the Méduse*

*“We said there warn’t no home like a raft, after all. Other places do seem so cramped up and smothery, but a raft don’t. You feel mighty free and easy and comfortable on a raft.”* (The Adventures of

*Huckleberry Finn/Mark Twain*



*Schmidt, Rocketto, and Pineau practice a technique for moving while keeping the group together.*

### UPCOMING EVENTS

02 April

#### **Orientation Flights**

Contact [srdschmidt@gmail.com](mailto:srdschmidt@gmail.com)

08 April

**Squadron Leadership School (SLS)** is designed to (1) enhance a senior member's performance at the squadron level and (2) to increase understanding of the basic function of a squadron and how to improve squadron operations.

Contact: [christina.paulsen@snet.net](mailto:christina.paulsen@snet.net)

15 April



The Connecticut Rifle and Revolver Association Junior Division will sponsor a **high power rifle training clinic** at the Bell City Rifle Club in Southington. Students will receive instruction in the operation of the AR-15 rifle and will fire the rifle at 200 yards.

The event will run from 0900 to 1300. There is no charge. This is not a CAP sponsored event but cadets are invited to participate. The entry fee is \$10. Contact Lt Steven Schmidt, Deputy Commander of Cadets to sign up.

6-7 May

**Corporate Learning Course (CLC)** SLS completion is a prerequisite for completing Corporate Learning Course (CLC). The CLC is designed to explain how a wing operates in each of CAP's major mission elements and how mission support functions support these mission elements.

Director: Lt Col Heather Murphy, CAP email: [pdo@ctwg.cap.gov](mailto:pdo@ctwg.cap.gov)

Uniform of the Day: Air Force Blues, Corporate Gray/White or CAP golf shirt/gray pants combo.

This class is no cost and will be comprised of two days of on-site classes, details of which will be emailed to the students once registered.

For further information send an email to [pdo@ctwg.cap.gov](mailto:pdo@ctwg.cap.gov)

20 May

The annual CTWG conference will be held at Bradley International Airport and will feature seminars, expositions, and cadet activities.

Sign up at the address below.

<https://www.eventbrite.com/e/connecticut-wing-fly-in-conference-tickets-32390432656?aff=es2>

17 June

The 12th annual CTWG Commander's Cup Rocket Contest will be held at the CATO launch site, 0800-1300 in Durham Connecticut. Participation by cadets will fulfill many of the requirements for building and launching rockets for the CAP Rocketry Badge. Entry is free for

both squadrons and individual cadets.

The Rules of Engagement, scoring criteria, and hints on how to build successful rockets have been sent to all squadron aerospace officers and commanders.



*Thames River  
Composite Squadron  
Commander's Cup  
Team-2014*

(Photo by Lt David Meers)

### CURRENT EVENTS

The vernal equinox (Northern Hemisphere) occurred at 10:29 UTC on March 20th. The Sun is directly over the equator and moving north. This event marks the first day of spring. In the Southern Hemisphere, it is the first day of fall, their autumnal equinox. The period of light and dark is equal at this time and the rising point of the sun each morning is due east and is moving northward. At noon, the elevation of the sun is around 48 degrees. Plants are germinating and it is a time of rebirth.

Over the next 12 months, the following will occur.

On around June 21st, the summer solstice, the sun will directly over the Tropic of Cancer and its rising point will seem to be in about the same direction for a few days. It will be at its furthest north rising point. It will then start moving southward. This will be the period of longest daylight. At noon, the elevation of the sun will be approximately 67 degrees. This is the first day of northern hemisphere summer. Fertility is celebrated and it is a favorite time to get married.

On or about September 21st, the autumnal equinox, the sun will be over the equator. Light and dark periods will be equal. The sun will rise due east and as the year progresses, rise further to the south. Noonday sun will have an elevation of

around 48 degrees. Autumn commences and the harvest is celebrated.

December 21st, the winter solstice, will find the sun over the Tropic of Capricorn and our winter starts. The period of darkness is the longest of the year and sects celebrate the time with festivals of lights. For a few days, the sun seems to rise at the same point on the horizon and then starts moving north. The sun's noonday elevation is around 23 degrees.

Spring is on its way and the cycle of the seasons resumes. The four key points of the cycle are depicted below. Each picture was taken around sunrise looking east. Note the relative positions of the sun to the eastward pointing bridge on each of the four dates. North is to the left and south is to the right.



*Spring Sunrise-  
The Vernal  
Equinox*

*Summer Sunrise-  
The Summer  
Solstice*



*Autumn Sunrise-  
The Autumnal  
Equinox*

*Winter Sunrise-  
The Winter  
Solstice*



## AEROSPACE HISTORY

### *Frankenplanes*

Victor Frankenstein's monster was a collection of body parts probably scavenged from graveyards, charnel houses, and dissecting rooms. From time to time, an aircraft is so assembled with parts salvaged from other planes. These are Frankenplanes and here are a few of them.

### *Fisher XP-75 Eagle*



The Eagle was designed by the Fisher Body Division of General Motors. The Army Air Force was looking for an aircraft which could function as an interceptor. The engine was the experimental Allison V-3420, a mating of two 12 cylinder Allison V-1710 engines mounted on a common crankcase at a 30 degree angle. The two crankshafts of the V-1710s were geared together to drive the single propeller!

In order to save design money and time, Fisher engineers cobbled together the tail from a Douglas A-24, the Army's version of the SBD Dauntless, the outer wing panels of a Curtiss P-40 Warhawk, and the undercarriage from Vought Corsair. The engine was midship mounted and delivered power to two counter rotating props via a long extension shaft, à la P-39 Airacobra. About a dozen or so were manufactured but they were found deficient. The experimental engine and the propeller gear box were guaranteed sources of problems. But more important, it lackluster

performance was found wanting compared to aircraft such as the Mustang.

### *Rockwell-MBT X-31*



*(Photo Credit: USMC)*

The firms of Rockwell and Messerschmitt-Bölkow-Blohm collaborated to produce an experimental fighter for the testing of flight control systems to test maneuverability at high angles of attack.

A perusal of the aircraft reveals a somewhat familiar shape but much of what was used is not open to a quick visual inspection. The F/A-18 contributed to the forward part of the fuselage and the F-16 share may be found in the landing gear and a number of engine accessories. It is somewhat ironic that the two aircraft which were the fly-off competitors for the USAF lightweight fighter contract served together as sources of parts for the X-31.

The Cessna Citation contributed the main wheels and brakes. Parts from the B-1, F-20, and TKF-90 and Eurofighter Typhoon were all used to provide flight tested components.

The computerized control system operated the canards and the engine baffles and the aircraft exhibited amazing flight characteristics such as controlled flight at a 70 degree angle of attack. Only two were built and one was lost in a crash. The survivor is on exhibit in Germany.

*Hiller X-18*



*(Photo Credit: USAF)*

Hiller Aircraft built a single example of a transport design for the testing of vertical and short take-off and landing operations. For the usual reasons, to save time and money, The fuselage was from a Chase YC-112 Avitruk, a forerunner of the Fairchild C-123.

As with the X-31, two competitive aircraft contributed parts to the X-18. The Convair XFY-1 and the Lockheed XFV-1 tail-sitting fighter prototypes “donated” the engines and counter-rotating gear boxes and propellers

The testing program was a rocky road and eventually the aircraft was mounted in a ground frame for a facsimile of flight. At the end of the program, the single example was scrapped but valuable data led to future V/STOL design successes.

A similar design is the Kaman K-16B now at the New England Air Museum. The Kaman engineers mated a Grumman Goose amphibian with a tilt rotor wing and engines.



*Kaman K-16B at the New England Air Museum*

*Bell X-14*



*(Photo Credit: NASA)*

Bell's Model 68 was another foray into vertical take-off and landing aircraft.

Not designed for speed, it was an open cockpit twin engine aircraft using rotating vanes to control the direction of thrust. The X-15 was modified twice and served the with NASA for 24 years. The pilots who were to test the Hawker P.1127, the early version of what would become the Harrier, came to the high planes of California for familiarization in thrust directed flight.

Two Beech aircraft contributed the bulk of the parts to construct the X-14. The wings, ailerons, and landing gear were from a Bonanza and the empennage came from the T-34.

### *Conclusion*

The construction of Frankenplanes has been a mixture of success and failure. But the basic concept, use flight tested airframes, control and engine components, and any other part deemed useful, can save money and time.

### **AEROSPACE CHRONOLOGY**

01 April, 1939-First Flight of the prototype of Jiro Horikoshi's masterpiece, the Mitsubishi A6M Zeke, better known as the Zero.



*Model AM76,  
Mitsubishi*

02 April, 1937-Svenska Aeroplan Aktiebolaget (SAAB) established in Trollhattan, Sweden.

*The first aircraft produced by SAAB, the S-17B*



05 April, 1976-Howard Hughes goes West.



*Hughes at the controls of the H-4*

03 April, 1933-Two modified Bristol aircraft make the first flight over Mt. Everest.



(Photo Credit: David McIntyre with S.R. Bennet)

06 April, 1982-First Flight of the Myasishchev VM-T Atlant, makes its first flight carrying a payload. It transported Energia booster rockets and the Soviet's Buran Space Shuttle



(Photo Credit: Dmitry Pichugin)

04 April, 1933-Rear Admiral William A. Moffett, promoter of naval airpower and 72 officers and men go West when the USN dirigible, USS Akron crashes off the New Jersey coast.



*Rear Admiral Moffett-note the Medal of Honor earned at Vera Cruz, Mexico. (USN Photo)*

John Phillip Sousa's march, "The Aviators" is dedicated to William J. Moffett, the man responsible for Sousa's commission in the American Navy during World War I. [

7 April-First Flight of the Northrop SM-62 Snark



*The Snark was the only surface-to-surface **cruise missile** with such a long range that was ever deployed by the U.S. Air Force. As Lewis Carroll pointed out "...some Snarks are highly dangerous Boojums"*

8 April 1931 (USA) — Amelia Earhart climbs to a record altitude of 18,415 feet in a Pitcairn PCA-2 Autogiro. (Or is it an autogyro?.)



*(Photo Credit: Purdue University)*

9 April 1960 (USSR) — The giant Tupolev Tu-114 “Rossiya” sets a new world speed record for propeller-driven airplanes of 545.07 mph. It was carrying a 55,116-pound payload at the time and flew around an official 3,107-mile closed circuit in the USSR.



10 April, 1963-First Flight of the EWR VJ 101 tilt jet, the first supersonic V/STOL aircraft.



*(Photo courtesy of Ralf Manteufel)*

11 April, 1952-The Piasecki CH-21 Shawnee makes its first flight.



12 April 1911 – Lieutenant T. Gordon Ellyson became the Navy’s first pilot.



*“Spuds” Ellyson-Naval Aviator #1  
(Photo Credit: San Diego Air and Space Museum)*