

Missions for America
Semper vigilans!
Semper volans!



The Coastwatcher

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

C/A1C Justin Ketcham, Reporter
Lt David Meers & Maj Roy Bourque, Papparazis

Vol. VII, No. 32

12 September , 2013

SCHEDULE OF COMING EVENTS

17 SEP-TRCS Meeting
21 SEP-CTWG pilots meeting at MMK
21-22 SEP-CTWG Squadron Leadership Course
24 SEP-TRCS Meeting
28 SEP-Cadet Ball-USCG Academy

05-06 OCT-CTWG Corporate Leadership Course
09-10 OCT-CTWG Unit Commander's Course
12 OCT-Groton Fall Festival-Poquonnock Park
19 OCT-CTWG Field Trip-Intrepid Museum
26-27 OCT-TLC Course-Camp Niantic

CADET MEETING

10 September, 2013

Four cadets were promoted. Austin Eichelberg received the Feik Award and advanced to C/SrA.

Aston Foley qualified for the Arnold Award and was promoted to C/A1C. Cadet Virginia Poe received the Curry Ribbon and her C/Amn insignia. C/2dLt Brendan Schultz, completing Administrative Officer service received the silver "pips" of a C/1stLt.



Cadet Eichelberger reports.

Mrs. Foley pins new stripes on Cadet Foley's collar.



Cadet Poe is congratulated by Squadron Commander Noniewicz

TRCS's newest C/1stLt, Brendan Flynn and Maj Noniewicz.



TRCS WEEKEND ORIENTATION FLIGHTS

The Squadron flew eight cadets in four sorties over the 7th and 8th of September.

On Friday, Captain Farley flew three trips. Cadets Don and Michael Hollingsworth completed the first Syllabus Lesson #6 on a round trip to Willimantic. Cadet Poe also flew on a #6 lesson to Meriden accompanied by Cadet O'Toole who completed lesson #9. The last Saturday flight was another Willimantic hop with Cadet Johnstone doing lesson #9 and Cadet Conway completing lesson #6.

On Sunday, Maj Noniewicz flew with C/CMSgt Trotochaud, lesson #9, and Cadet Conway, lesson #6 to Willimantic and back.

SENIOR MEETING

*10 September, 2013
Commander's Call*

Maj David Stansfield, visiting from the 103rd Composite Squadron reported details of the last Squadron Commander Call at Wing. The next meeting of squadron commanders will be held at the group level. Recruiting and Retention will be emphasized. Operation qualifications, approvals and documentation must meet the standards set by regulations.

Maj Stansfield also discussed the upcoming Training Leaders of Cadets Course scheduled for Camp Niantic on the 26th and 27th of October. Details are contained in a separate article in this issue.

Deputy Cadet Commander Emily Ray reported that the squadron will participate in the Groton Fall Festival on 12 October from 1000 to 1600. We will set up an information and recruiting booth manned by both cadets and officers. Specific details will be announced in a subsequent issue.

2dLt Meers reported on the status of the Subordinate Unit Inspection filings which are due at the ends of the month. Departments with outstanding paperwork have been notified.

Maj Noniewicz led a discussion about the current flying schedule. The Squadron is slated for six Long Island Patrol missions in the next week and four hours of emergency service flight training.

2dLt Charles Dickenson presented the safety briefing on the themes, "driving while drowsy" and precautions to take when threatened by lightning.

TLC COURSE OFFERED

CT Wing Cadet Programs will be holding a Training Leaders of Cadets course on Oct 26 and 27th at Camp Niantic.

The Wing is looking for members who are willing to teach one to two of the modules and for course enrollees.

The course will be held in one of the new building and billeting will be provided for those who wish to stay over.

Great Start Weekend will be providing meals for the TLC class. The cost for the weekend is \$25.

\$25 with meals provided

If you are available and interested in teaching or attending please contact Maj David Stansfield at: dstansfield@veeder.com or

Cell: 860-305-8018

GROTON FALL FESTIVAL

The Squadron will participate in the Groton Fall Festival on 12 October from 1000 to 1600. The booth will be manned by cadets and officers. A booth will be set up and information about CAP will be offered and recruiting materials will be provided.

Displays of past activities and demonstrations of CAP skills will also be part of the day's activities. Squadron members who are interested in assisting should contact 2dLt Ray.

AEROSPACE CURRENT EVENTS

LADEE LAUNCHED

The Lunar Atmosphere and Dust Explorer (LADEE) was launched from the Mid-Atlantic Regional Spaceport, Wallops Island, Virginia on Friday last. The spacecraft is designed to gather information about the lunar exosphere and surface dust.

AOPA INVESTIGATING FEDERAL AGENTS SEARCHING GENERAL AVIATION AIRCRAFT

The Aircraft Owners and Pilots Association has filed a federal freedom of information request and is asking congressional support to stop agents of the US Customs and Border Protection Agency (CPBA) from warrantless searches of private aircraft.

An official of the CBPA claims that such searches are allowable as “ramp checks.” The AOPA counters that “ramp check” authority is designed to promote the safe operation of aircraft, not serve as a tool for criminal investigation. Furthermore, ramp checks are conducted by the Federal Aviation Administration, not law enforcement agencies.

During a ramp check, a pilot may be required to provide his pilot certificate, medical, a photo identification card and certain aircraft documentation.

The AOPA has received complaints from around 40 pilots who have been accosted by federal agents and request that any pilots who wish to file a report about similar actions contact the AOPA.

NASA OPERATED GLOBAL HAWKS UTILIZED TO RESERCH HURRICANES

Two Northrop-Grumman RQ-4 Global Hawks are stationed at Wallops Island to study hurricane formation. Many Atlantic Hurricanes form over the heated waters off the west coast of Africa.



A Global Hawk in a Wallops Island hanger. The aircraft are assigned to Dryden Flight Test Center and are utilized for a wide range of research missions.

(Photo by America Space Mark Usciak)

Operating in conjunction with manned hurricane hunting aircraft and the National Oceanic and Atmospheric Administration's weather satellites, the UAVs fly 24-28 hour missions at altitudes of 60,000 feet. Each aircraft carry different remote sensing equipment including Doppler radar, microwave radiometers, lightning detectors, and sounding systems.

AEROSPACE HISTORY

The following article will appear in two parts. The final section will be published in the next edition of The Coastwatcher.

Three Easy Pieces

A Rough History of Unmanned Aerial Vehicles

Colloquially known as drones, unmanned aircraft are sometimes described as unmanned aerial vehicles (UAVs) or remotely piloted vehicle (RPV). They come in a variety of species and sizes. Perhaps the most simple are the U-control and free flight aircraft models flown by aviation enthusiasts. More sophisticated UAVs are radio controlled (R/C) from ground or airborne stations and range from those flown the local hobbyist to those employed by government agencies, and commercial enterprises. Perhaps the most sophisticated of all are the autonomous UAVs which can be pre-programmed for specific missions and even allowed alternative options given certain pre-established conditions.

Most of us have launched UAVs. Paper airplanes, balsa wood gliders, model rockets, and helium filled balloons are all UAVs. One can even bend control surfaces on our heavier than air models or weight the balloons to allow them to follow a flight plan of sorts. Some of us have worked with U-control and R/C aircraft. The most advanced modelers have achieved remarkable flights. A

retired metallurgist and life-time modeler, Maynard Hill, legally blind, built TAM-5, *The Spirit of Butts Farm*, the 25th iteration of his original attempt, and flew it from Newfoundland to Ireland.

Piece One

A Father-Son Team and the Inventive Charles Kettering

The first piece of this essay about the history of UAVs goes back a century to 1908 when a brilliant engineer, Dr. Elmer Sperry inventor of the gyrocompass, considered the problems of controlling an aircraft in flight. His gifted son, Lawrence, captivated by the siren call of aviation, built and test flew his first aircraft in 1909. In 1913, Lawrence enrolled in Glenn Curtiss's flying school in Hammondsport, New York and earned FAI License #11. At the age of 20, Lawrence was the youngest airplane pilot in the United States



Elmer Ambrose Sperry demonstrates a simply gyroscope. His adaption of the gyro led to advanced navigation and stabilization systems for ships and aircraft.



Lawrence Burst Sperry in the cockpit.

Elmer continued the development of his aircraft control system and developed a three axis gyrostabilizer system which in June of 1914, his gifted son, Lawrence Sperry, installed in an aircraft. He then demonstrated what was the first automatic pilot at the *Concours de la Sécurité en Aéroplane* (Airplane Safety Competition) near Paris, France winning a \$10,000 prize.

World War One, the War to End All Wars, broke out in August of 1914. The United States did not enter into hostilities with the Central Powers until 1917 at which time Lawrence founded the Lawrence Sperry Aviation Company in Farmingdale. The first project was the development of an “aerial torpedo,” for the US Navy. Curtiss built five of these flying bombs and they were successfully tested in 1918.



The Curtiss-Sperry Aerial Torpedo. Five were built and tested but experimentation ceased when World War I ended.

At the same time, Elmer was collaborating with Charles Kettering of Dayton, Ohio. Kettering was another prolific inventor who is credited with the electric cash register, the automobile self-starter, leaded gasoline, and freon. He designed a competing “aerial torpedo” for the US Army. Elmer Sperry designed the stabilization system and Orville Wright was the aeronautical consultant.

Note the rivalries: US Navy vs. US Army, Wright vs. Curtiss, and father vs. son!



The Kettering Bug never saw combat. It was designed to carry a bomb load on a certain azimuth. After a pre-established time, the wings were released and the bombs would strike whatever was below. The German V-1 used a similar system except that engine cut-off, controlled by a timer, caused its final dive.

When the Great War ended, so did the development of the two UAVs. However, some research and development continued. Most of that work was still-born. The concepts were too far in advance of the available technology.

But Lawrence Sperry was not idle. Between 1915 and 1923, he had credit for 23 patents including the band and turn indicator and the artificial horizon. He also designed a plane, the Sperry Messenger. He used one of the planes to commute from his home near Prospect Park in Brooklyn to Farmingdale.

On December 23, 1923, with 4,000 hours logged, the 31 year old inventor left England in one of his Messengers for the short flight to France. It was a

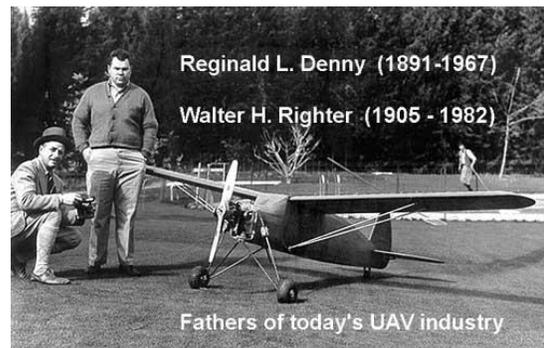
foggy day and he never arrived. His body was recovered 19 days later.

Piece Two

Reginald Denny, Ronald Reagan, and Marilyn Monroe

Not all Hollywood aviation heroes are figments of a screen writer's imagination. Jimmy Stewart flew B-24s with the Eighth AF in Europe. Jackie Coogan flew assault gliders with the First Air Commandos in Burma. Tyrone Power was a USMC transport and patrol plane pilot in the Pacific. Wayne Morris was a US Navy fighter pilot and ace and Gene Autry flew cargo over The Hump. Other actors flew as aircrew. Charlton Heston, Richard Boone, Charles Bronson, Paul Newman, Jack Palance, and Clark Gable to name just a few.

But one Hollywood personality made important contributions in the field of UAVs and his role is little remembered today. Reginald Denny was an English actor, scion of a theatrical family, whose stage and movie career spanned seven decades. During World War I he served as an observer and gunner in the Royal Flying Corps. His interest in aviation paralleled his film career and in the mid 1930s, he formed Reginald Denny Industries and opened up a model plane shop in Hollywood. A consummate craftsman, he was an early member of the Academy of Model Aeronautics and has been installed in the Model Aviation Hall of Fame.



(Photo Courtesy of CTIE, Monash University, & Russell Naughton)

In 1938, Denny teamed up with Walter Righter. Righter had graduated from the California Institute of Technology and had been employed as an engine designer by the Kinner Airplane and Motor Corporation. He became interested in miniature engines and when Denny sponsored a contest for the development of a reliable model engine, Righter entered and won. The engine, branded the Dennykite had a production run of over 10,000.

Around that time, another model hobbyist, a ham radio operator named Kenneth Case, developed a radio control system for model airplanes which he demonstrated to Denny who saw its military applications. The military was interested and was seeking a realistic target to use in training anti-aircraft gunners. Denny, Case, and Richter designed the RP-1, an RC aircraft with a nine foot wingspan and a 2.5 horsepower engine. The test, held at Twentynine Palms, was successful and led to a 1940 contract for the OQ-1 and the birth of the Radioplane Corporation. Five years later, when World War II had ended, Radioplane had produced almost 15,000 drones for the Army and Navy.



A Radioplane OQ-19B aerial target on display at Camp Niantic. Between 1955 and 1958, 10,000 were built for the USAF. The aircraft's designation was later changed to the MQM-33 and it was also known to the Navy as the KD2R Quail.

The Navy, following the Army lead, contracted for thousands of drones which they designated the TDD-1. These were produced in the old Timm Aircraft factory at the nearby Van Nuys Airport where many young women were employed in assembly and parts inspection. The Army's First Motion Picture Unit, stationed at nearby Culver City, was the Army Air Force Unit charged with producing training and propaganda films. The core of the unit were cinema professionals: actors, writers, directors, and camera and prop men. One project was a morale boosting article for *Yank Magazine* which would highlight the role of women in the work force.

The movie actor, Ronald Reagan, now an AAF Captain, sent army photographer David Conover to take pictures of women at work in the Radioplane plant. He spotted the 19 year old Norma Jeane Dougherty and was taken with her beauty. Sensing something special, he took some color photographs and encouraged her to seek a career in modeling. Norma Jeane signed with the Blue Book Agency, bleached her hair blonde, screen tested with 20th Century Fox, and changed her name to Marilyn Monroe. Radioplane had produced a swarm of drones and one queen bee.



One of Conover's "discovery" photos of Marilyn Monroe, taken at the Radioplane factory.

The second part of this article will appear in the next edition of The Coastwatcher.