



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
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LtCol Stephen Rocketto, Editor
srocketto@aquilasys.com

C/SMSGt Michael Hollingsworth, Cadet Reporter
Lt David Meers & Maj Roy Bourque, Papparazis
Hap Rocketto, Feature Editor

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SCHEDULE OF COMING EVENT

30MAY-Clean-up 0900 until noon

13 JUN-TRANEX-HFD/MMK

14 JUN-Cadet Competition

11-12 JUL-Vietnam 50th-103rd Airlift Wing-BDL

TBA-CTWG TRANEX-HFD/GON

25 JUL-CTWG Conference-HFD

01-08 AUG-CTWG Encampment

TBA-NER Cadet Competition

21-23 AUG-CTWG/USAF Evaluation

15-23 AUG-NER Glider Academy@KSVF

26-29 AUG-CAP National Conference

12 SEP-Cadet Ball-USCGA

CADET MEETING MINUTES

26 May, 2015

Submitted by

C/SMSGt Daniel Hollingsworth

The Cadets did drill test. C/Airman Basic Christopher Nunez, C/Amn Donny Divano, C/A1C Ryan Schantz, and C/A1C Sitz all passed their drill test. C/SMSGt John Meers led the exercise.

After a safety lecture, the cadets moved all the tables, chairs, cabinets, and desks to the back room. 2D Lt Crandall and Maj Borque started the process of removing the old tile.

SENIOR MEETING MINUTES

Senior Staff Meeting

26 May, 2015

Officers worked to clean out their work areas and bag trash. The dumpster is due on Friday.

LONG ISLAND SOUND PATROL

The inaugural missions of the Long Island Sound Patrol (LISP) were flown by Thames River Composite Squadron over the Memorial Day holiday weekend.

LISP is funded by the Connecticut Department of Emergency Management and Homeland Security and operated in cooperation with the U.S. Coast Guard Sector Long Island Sound. Patrol objectives include boating safety, monitoring of port infrastructure and bridges, and prevention of illegal bilge dumping. The flights are conducted on week-ends from May to September and cover Long Island Sound between Fishers Island to Bridgeport.

The first flight of the season was on Saturday afternoon with Maj Paul Noniewicz as pilot-in-command, Lt Col Richard Doucette as observer (radio-navigation) and Lt Col Stephen Rocketto as scanner and airborne photographer.



The largest ship observed was the tanker Falcon Nostos, registered in Liberia, owned by a Greek firm, and operated by a consortium of companies headquartered in Athens and Cyprus! The tanker was at anchor in New Haven Roadstead waiting for a berth to open.

Sunday's early flight was flown by Lt Col Thomas Wisehart with Rocketto as observer. Part of the mission was observation of the Connecticut River as far north as Goodspeed.

Noniewicz, Lt Col Lawrence Kinch, and Rocketto manned the third flight. A radio call indicated that two people were in the water of Greenport but by the time we arrived, they had been rescued. However, later, the crew spotted what appeared to be two beluga whales. News reports had said that a pod of three juvenile belugas has been seen south of Newport headed west. These may have been what the crew spotted but the identification could not be confirmed due to the altitude which safety demanded the flight be flown.



This may be a picture of two of the whales. One is obvious at top center and a second one is at one o'clock relative to the first whale.

The last two flights of the holiday weekend were on Monday. Maj J. Scott Farley led Doucette and Capt Edward Miller on the early patrol but unusual was reported. Not so for the afternoon flight. Wisehart, Kinch, and Rocketto picked up a message that two people were in the water off Sag Harbor. Once again, the plane sped towards the reported location and once again, a radio report indicated that both people had been rescued but they were still searching for a dog! After a trip up the Thames River, the aircraft was flown to Hartford-Brainard for an oil change and the crew returned in another plane.

While aloft, the crew monitor both the marine and aircraft emergency frequencies. The altitude flown allows reception of methods from as far north as Boston and as far south as New Jersey. Most of the distress calls involved mechanically disabled motorboats, boats aground, and fuel starvation. Commercial services are generally called to solve these problems.

RIFLE SAFETY AND MARKSMANSHIP

The CTWG sponsored a rifle shooting event for Cadets on Saturday morning. Sixteen Cadets from the 103rd out of East Granby and Meriden's Silver City Squadron participated.

The Quaker Hill Rod and Gun Club and the Friends of the NRA sponsored the activity and provided free range time and equipment. Ammunition was provided through the generosity of Capt Carol Whelan of the 103rd.

Cadets first received a safety briefing and explanation of the fundamentals of marksmanship. Each Cadet was then given the opportunity to fire 60 rounds in two relays of 30 rounds each. Scores were recorded and Squadrons will be notified if their Cadets qualified at some level for a Winchester-NRA marksmanship medal. Twelve Cadets qualified at the Pro-Marksman level and are qualified to wear the badge

Ernest Mellor, George Planeta II, Jonathan Planeta, James Planeta, and Jay Lavoie, all experienced competitive riflemen coached. Lt Col Stephen Rocketto was Range Safety Officer.

AEROSPACE CURRENT EVENTS

Autonomous Helicopter Operations

The flights of the Northrop Grumman X-47B to and from an aircraft carrier and its performance in recent aerial refueling tests have captured the attention of the aviation community. Lesser known are the experiments of two Connecticut aerospace companies, Kaman and Sikorsky, flying autonomous helicopters.



An Omega Air Refueling Company KC-707 makes the first transfer of fuel to the Navy's X-47B. (US Navy Photograph)

Remote controlled (RC) aircraft have a long history, over 100 years. Notable examples are the de Havilland Queen Bee, an RC version of the Tiger Moth flown by the Royal Air Force as a target, the Unmanned Aerial Vehicles which have found favor with the military as intelligence gatherers and weapons carriers, and the civilian RC hobbyists.

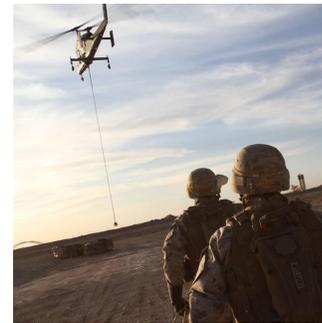
There are three broad categories of UAVs. The first is those vehicles controlled directly by an operator who is not in the aircraft. The most common example of this activity is the civilian

RC hobbyist.

A second category is an UAV which is preprogrammed to fly a specific mission profile. During the Vietnam War, the USAF conducted aerial reconnaissance using the Ryan 147 series of drones. These drones were launched, flew a preprogrammed course, and returned to a recovery point.

The third category with which is the focus of this article is the autonomous UAV. An autonomous UAV which has the capability of making “decisions” to independently alter the details of its mission without external intervention.

Kaman Aerospace has worked with Lockheed Martin to modify the K-Max helicopter to fly autonomously. Two of the aircraft have been tested under combat conditions in Afghanistan, delivering munitions, water, and food to USMC forward operating bases.



Marines in Helmand Province watch autonomous K-Max deliver a sling load of supplies. (Credit: (Cpl Lisa Tourlet, USMC)

The K-Max needs a ground based operator with visual contact at take-off and destination but enroute, it operates autonomously, recalculating its route to avoid hazards, avoiding no-fly zones, or assuming control in case of a lost communications link.

The Marine Corps has expressed some satisfaction with the unmanned K-Max but has withdrawn them from theatre.

In 2014, the Army awarded a contract for demonstrations of K-Max capabilities transporting the unmanned ground vehicle known

as the Squad Mission Support System (SMSS).

The SMSS is an unmanned remotely controlled all-terrain ground vehicle. Tests were conducted at Fort Benning, Georgia and the results are under study.

Sikorsky is using company funds and money from the Army and The Defense Advanced Research Projects Agency (DARPA) to develop an autonomous helicopter based on the model S-67 (UH-60 Blackhawk). Preliminary tests in 2014 used a modified S-76 for demonstrations of autonomous obstacle avoidance and selection of landing sites.

Agreements have been made with a number of sub-contractors to enhance the autonomous capabilities of the Blackhawk. One of these programs involve Carnegie Mellon University researchers investigating the feasibility of surveying contaminated territory using an unmanned ground vehicle and an autonomous Blackhawk.



Blackhawk makes an autonomous low altitude test flight through a canyon in California's Diablo Mountains. (Photo Credit: Sikorsky)

A second program involves logistics. Sikorsky believes that it can modify unmanned UH-60As to transport cargo at five dollars per ton mile, the same cost as that incurred using five ton trucks. Flight tests are planned next year.

If analysis indicates positive test results, Sikorsky will proceed with the development of advanced systems.

AEROSPACE HISTORY

AIR CARGO Part I

*A Photo Essay
by
Stephen Rocketto*

As previously reported in *The Coastwatcher*, the first air cargo flight was made in 1920 when the Wright Brothers contracted to carry 200 pounds of silk from Dayton to Columbus.

Air cargo is a big business and priority goods are flow on daily intercontinental, continental flights and local flights. Fresh fruit and flowers from South American, automobile parts, aircraft sub-assemblies, pharmaceuticals, and live animals are just some of the goods carried.

FedEx and UPS are familiar U.S. carriers but less familiar names such as Cargolux and DHL also ply their trade along the aerial highways. Major carriers also carry cargo, sometimes in the holds of their passenger aircraft and sometimes in dedicated freighters.

The aircraft run the gamut is size and type. At the top of the scale are the huge Anatov An-225 Mriya, the Boeing 747 series, and the Boeing B-337 Super Guppy. Retired turbine powered airlines such as the Douglas DC-10, Boeing's classic 707 and the 727 "three-holer" will all be found on the cargo ramps. The Cessna 208 Caravan is in wide-spread use as feeders to the larger aircraft. FedEx utilized over 250 Caravans to feed cargo into its hubs.

If one looks at some of the non-scheduled and smaller operations, you can find Lockheed Electras, Douglas DC-3s, and many variations on the Convair 340 series. Small scale specialized markets such as islands and remote villages might be served by DeHavilland Beavers and Otters, the Britten-Norman Islander, the Cherokee Six or the Cessna 206. If there is a market niche and a suitable cargo aircraft, some entrepreneurial spirit will manage to obtain finance and commence

operations.

Many years ago I flew air taxi and commercial operations under Federal Aviation Administration Regulation Part 135. The smallest aircraft we used were the Cessna 206 and Piper Cherokee 6 with occasional usage of Cessna 172s and Cherokee 180s. The largest aircraft which we ever used were the Piper Aztec and the Beech Model 18. Cargos varied. My log indicates that I flew animals, corpses, motorboat engine components, automobile parts, mooring line, submarine parts, gold and currency, cancelled checks, and bank computer tapes to name some of them.

The following set of photos are a sample of the many fixed wing aircraft types employed in commercial air cargo operation.

The Early Days



Records do not indicate the aircraft but the Wright Model B is the likely first cargo aircraft.



The German Junker 34 first flew in 1926 powered by a Connecticut built P&W R-1340 engine. It found favor as a load carrier and the float equipped model above carried Canadian registry.



In the late 1920s this example of Giuseppe Bellanca's Model 66 Aircruiser flew uranium oxide ore in Canada. The extraordinary valuable radium was extracted from this ore and profits more than covered the cost of air transportation. Note the triangular shaped "lifting strut."



The classic Beech 18 first flew in 1937 and still flies today. The ski-equipped "Beech on a Stick" is on display at the Canadian Bush Plane Heritage Centre in Sault Ste. Marie, Ontario, Canada



The Dutch born Robert Noorduynd designed the versatile Norseman which first flew just before the outbreak of World War II. Popular band leader Glenn was lost when the Norseman in which he was being transported disappeared over the English Channel. A friend of the Editor, Mike Hirsch, was flying for the Orange Parachute Center in Massachusetts when the engine failed. All ten aboard survived the crash landing and Mike praised the aircraft structure saying, "She was a good airplane and she saved us all."

World War II Surplus



The Editor found this abandoned Grumman Model G-15 Duck bearing a US N-number near Leticia, Columbia. The operator had used the aircraft to fly to Amazon River villages and collect tropical fish which were then trans-shipped to the US market. As the J2F, the Duck served in all four U.S. military services in WW II.



The immortal DC-3, developed as a passenger plane for TWA can claim to be the aircraft which started the modern air travel industry. Over 10,000 were built during World War II and after the war, declared surplus and sold cheaply, she became a popular cargo carrier for numerous non-scheduled and charter operations. She is still in service today, 80 years after first flight.



“Smuggler's Row” at Asuncion, Paraguay's airport. Three B-25s and what looks like a Lockheed Electra and two Lockheed Lodestars, sans engines, are visible.



High on the Bolivian Altiplano, a North American B-25 Mitchell and a Curtiss C-46 Commando are employed carrying fuel and sundry supplies to this 12,000 foot high air strip.



Another Bolivian registered aircraft, a Boeing B-17 was used to fly frozen beef between Santa Cruz and La Paz.



US military requirements yielded the Fairchild C-82 Packet. The packet first flew at the very end of WWII and met a need to load bulky cargos by utilizing straight through loading through doors which opened in the at the end of the fuselage. This is one of ten Packets which Cruzeiro do Sul operated from the late '60s to 1970.

Post War Props



In 1947, the Soviet Union's Anatov Design Bureau produced a winner in the AN-2 (NATO Code Name Colt). Over a 45 year production run, some 18,000 were manufactured.



In 1946, the Bristol 170 entered service and was an airborne ferry, flying automobiles between Great Britain and the Continent. The nose opened to allow easy entry for bulky cargo.



The same year yielded the Douglas DC-6A, a pressurized and improved follow-up the to great DC-4. The A model had both a cargo door and two ton capacity lift elevator.



A year later, deHavilland of Canada introduced the remarkable DHC-2 Beaver, the standard by which bush planes are measured. Two Beavers of Westcoastair taxi into a Victoria, British Columbia wharf.



The Beaver's big brother, the DHC-3 Otter appeared in 1951. This aircraft was used by Island Airlines on the shortest scheduled airline run in the United States, Port Clinton, Ohio to Kelly Island and the Bass Islands, a 12-15 mile flight.

The employment of the piston powered, propellor driven cargo plane, often the conversion of a retired airliner, continues to this day. Among the planes still flying are the Lockheed Constellation, the Boeing C-97, the DHC Caribou, and the Convair 340-440 series.

The second part of this photo-essay will appear next week and will take a look at turbine powered freighters and some local cargo outfits.