

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



## The Coastwatcher

Weekly Magazine of the Thames River Composite  
Squadron  
Connecticut Wing  
Civil Air Patrol

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### BULLDOG EDITION

**TONIGHT'S MEETING HAS  
BEEN CANCELLED DUE TO THE  
WINTER STORM PREDICTION!**

#### SCHEDULE OF COMING EVENTS

25 JAN-TRCS SAREX  
28 JAN-TRCS Meeting

22 FEB-CTWG SAREX-HFD  
26 APR-CTWG SAREX-GON  
16-21 JUN-Tri-State SAREX  
23 AUG-CTWG SAREX-HFD

### CADET MEETING

21 January, 2014

No meeting. Weather cancellation.

### SENIOR MEETING

21 January, 2014

No meeting. Weather cancellation.

### GLIDER SCHOLARSHIPS AVAILABLE



*A CAP LET L-23 Super Blanik*  
(Photo by Paul Noniewicz)

The Michael Wallace Memorial Scholarship Fund will be awarding two \$1,000.00 grants this year. The deadline for receipt of Scholarship applications is March 15.

Each grant is for grant is for \$1,000.00, to be paid to a flight school or club for the benefit of the recipient of the scholarship. Applications for the grant are due by March 15, 2014. The grant will be awarded by April 30, 2014.



*Good  
Instruction,  
Good Aircraft,  
Good Times!*  
(Photo by Lenny  
Kimball who cleverly  
includes himself!)

Students 14 to 22 years of age are eligible to apply. Cadets should talk to their parents about this program. The scholarship is open to those who are already in flight training and those who are interested in starting flight training.

You can obtain information and an application form by going to: [www.cypresssoaring.org](http://www.cypresssoaring.org) and clicking on the “scholarship” button.



*On tow!*

**TRCS FLYING GLIDERS AT THE NER CENTER OF EXCELLENCE**



*Instructions*

*Tow breaks left and down as glider breaks right and up.*



*First flight*



*Final Approach*



*Piper PA-25 Pawnee two plane and Schweizer SGS 2-33 poised for take-off.*

*Ecstatic Cadet Daniels, having landed, envisions future as USCG Cadet and an aviation career.*



*Wing runner stabilizing aircraft at start of tow,*



*And a flight debriefing follows.*

## AEROSPACE CURRENT EVENTS

### **Artificial Satellites in the News**

#### *ESA's Rosetta*

The European Space Agency's Rosetta spacecraft, destined for a rendezvous with Comet Churyumov–Gerasimenko next August, has been reactivated after spending almost three years in hibernation.

Launched from Europe's spaceport in Kourou, French Guiana, on March 2, 2004 on an Ariane 5G rocket, the mission is planning to orbit the comet and then land a probe to sample its composition. Scientists believe that the material is some of the oldest in the solar system and information gained will help to answer questions about the initial conditions prevailing at that time.

#### *NASA TDRS Launch Scheduled*

An Atlas V Rocket is expected to loft a Tracking and Data Relay Satellite on Thursday, the 23<sup>rd</sup> of February. The TDRS system consists of a family of orbiting satellites and ground stations. Data from low altitude satellites which cannot contact ground stations due to horizon limitations on the VHF and UHF line-of-sight capabilities can transmit the data upward to a TDRS unit which will relay the information to another TRDS unit or a ground station. This ensures real-time transmission reception.

#### *Secret DOD Launches from Wallops*

The US Department of Defense launched three Terrier-Orion sub-orbital rockets in a 20 second period on 15 January. The rockets were staged from NASA's Wallops Island, Virginia facility on the Delmarva Peninsula.



*The rail-launched spin stabilized Terrier-Orion being launched from Wallops Island.*

*(NASA Photo)*

The Terrier-Orion is a ton and a half missile which can carry an 800 lb payload to an altitude of 50 miles or a 200 lb payload to 124 miles. The Terrier main stage is a variant on the US Navy's Terrier surface to air missile which was manufactured by Convair. The Orion upper stage uses the engine from a US Army Hawk surface to air missile which was originally built by Raytheon.

## AEROSPACE HISTORY

### **A Photo-Essay on USCG Aviation**

#### *Part III*

#### *Post WW II and the Turbine Era*

The exigencies of World War II brought the Coast Guard an order of magnitude increase in its aircraft fleet. Nonetheless, most of the equipment received tended to come in small lots and as “hand-me-downs” from other services. Two versions of the Stinson Model V-76 came their way, the OY-1 and the OY-2 Sentinel, differing only in the voltage of their electrical systems.

The Stinson, having served as a liaison with the Army as the L-5, were mostly stationed at Elizabeth City and one of their primary duties was tracking down “moonshiner” for the Alcohol and Tobacco Unit of the Internal Revenue Service.



*The OY series was derived from the Stinson Model 105 Voyager.  
(Photo Credit: USCG)*

In 1951, the Coast Guard adopted another amphibian, one which became a standard bearer for USCG SAR and was lovingly nicknamed “The Goat.”

“The Goat,” first officially called the UF-1G was the a product of the “Grumman Iron Works” on

Long Island. Her popular name was the Albatross and she later became, after the designation system was changed as the HU-16. Almost 90 eventually entered Coast Guard service, mostly as transfers from the USAF where they were called the SA-16.

The Albatross performed brilliantly over two decades, rescuing sick or injured sailors, searching for missing aircraft or ships, and hunting smugglers.



*In 2011, San Francisco aircraft 7226 proudly proclaimed 221 years of USCG service and the 75<sup>th</sup> anniversary of Coast Guard aviation.*

That same year, the Coast Guard acquired an unusual pair of aircraft for administrative support aircraft for Washington headquarters.

As is common, the official designations changed four times. The aircraft were Martin 4-0-4 airliners, the first pressurized aircraft in the Coast Guard fleet. First known as the RM-1 and the RM-1G, their VIP interiors gave them the status of executive transports so the designator became RM-1Z. In 1951, the Department of Defense standardized names of all service aircraft and they then were known as the VC-3A.

*The Martin 4-0-4 was fitted with an aft "airstair," one of the first aircraft to be so equipped.*

*(Photo Credit: USCG)*



The Coast Guard love affair with fixed wing

amphibians and flying boats did not end with the Albatross. In 1954, they received seven Martin P5M-1 Marlins from the US Navy. These Navy patrol bomber were converted to the P5M-1G. Later, the Coast Guard received four more, the P5M-2G. The Marlins were high maintenance aircraft with high operating costs and they were all returned to the Navy in 1961.



*An Elizabeth City based P5M-1G. Note the position of the horizontal stabilizer and elevators.*  
*(Photo Credit: USCG)*

*T-tailed P5M-2G on the slipway at Elizabeth City. The Marlin was the last USCG flying boat.*

*(Photo Credit: USCG)*



A long range aircraft was needed for search and rescue, fisheries protection, and the International Ice patrol. The PB-1Gs and R5Ds were all either retired or getting "long in the tooth." So the Coast Guard actually ordered new aircraft, their first turbine powered planes, the Lockheed Hercules, a legend in its own time.



*Remember, 90% of that berg is underwater!*  
*(photo credit: PO1/C Brandon Brewer)*

The usual alphanumeric scramble occurred over the designation. The original planes carried the R8V-1G designator which then became the SC-130B and finally settled on the HC-130B moniker.

As early Herkys were retired, newer models were placed on the line and the "H" and "J" model is now currently in service. The planes are equipped

to drop life rafts, pumps, or oil dispersants.

Two unique modifications deserve mentions. One was the EC-130E equipped to calibrate LORAN stations. The second is the ECV-130 which was fitted out with the radome from an E2C Hawkeye.

*The experiment was designed to create a command and control aircraft for anti-smuggling duties.*



*(Photo Credit: USCG)*

The need for supplying outlying LORAN stations and remote USCG bases saw the Fairchild C-123B Provider transferred from USAF stores in 1958 and ultimately 15 were on charge. Some were based overseas, notably Naples, Italy and Guam in the Marianas archipelago.



*This Provider is retired at AMARC in Tucson.*

The year 1963 saw an upgrading in the executive transport for both the Commandant and his boss, the Secretary of the Treasury. A Grumman Model 159 entered service as the VC-4A, Gulfstream I.



*The CG VC-4A, 02, taxis out at Groton.*

Six years later, in 1969, the turbojet powered Grumman 1159, VC-11A Gulfstream II, became 01 in the Coast Guard fleet.

The search for a suitable medium range search aircraft to replace the Albatross in the early 1970s found the Coast Guard evaluating both the Cessna 500 Citation and the Israeli Aircraft Industries 1123 Westwind.



*The Citation name was applied to a wide range of Cessna products.*

*(Photo Credit: USCG)*

The Westwind had a convoluted manufacturing origin. Originally the first jet from Aero Ted Smith's Commander, it found itself orphaned when North American-Rockwell bought out the company. North American was producing a similar product, the NA-265 Sabreliner, and ran into an anti-trust block by the government and consequently sold the design to Israeli Aircraft Industries.



*Israel, threatened by terrorist raids landing on beaches did adopt the 1123 as a maritime surveillance aircraft and dubbed it the Sea Scan.*

*(Photo Credit: USCG)*

After testing, both the Citation and the Westwind were rejected by the Coast Guard for their specialized missions.

Beech Aircraft re-entered the Coast Guard inventory with the T-34C Turbo Mentor. The Aircraft was an upgrade of two earlier versions which were powered by Continental piston engines producing around 200 HP. The "C" model used a Pratt & Whitney of Canada's PT-6, capable of over 700 shaft horsepower but derated to 400 SHP.



*This privately owned T-34C is painted in heritage colors and was on display at EAA's Oshkosh extravaganza.*

In 1976, The retirement of the aging HU-16 Albatross and the lack of a suitable replacement led to an interim solution. The USCG had evaluated, in 1958, the Convair 240/340 series, two USAF C-131E models which were delivered to the Coast Guard instead. These were apparently returned to the Air Force and never used operationally by the USCG.



*(Photo Credit: USCG)*

The 340 had a slightly longer fuselage than the 240 but was almost identical in all its other physical features. The original maritime designation was R4Y-1 and R4Y-2 but the C-131 alphanumeric became standard for all services. In 1976, the Convair returned when almost two dozen were recovered from AMARC in Arizona, modified, and added to the USCG fleet.

The aircraft were known as the HC-131 Samaritan and served for about five years until the HU-25 came on line.

The HU-25 Guardian acquisition in 1982 was unusual. First, the aircraft was neither a hand-me-down nor a plane commonly used by some other service. In fact, the USCG was the only military user of the jet. Second, the plane was manufactured in France by Dassault Aviation.

Dassault produced and assembled the aircraft. Their Falcon 20, which was then partially disassembled and shipped in C-130s to Little Rock, Arkansas for modifications which included large search windows, hard points under the wings, and specialized electronic equipment.



*Cape Cod based Guardian*

Nine of the Guardians had long range search radar, a forward looking infrared sensor, and secure communications gear to combat drug smugglers. These were known as HU-25C Interceptors.

The last of the HU-25s will be phased out this year after over three decades of service.

Drug smuggling seemed to be driving Coast Guard Air Operations. In 1986-1987, the Department of Defense transferred two Schweizer RG-8A Condors to the Coast Guard. Some sources say that the Coast Guard have operated a total of three of these aircraft. One went down over the Caribbean with the loss of two crewmen.

The Condor is a SA-37A Schweizer motorized sailplane modified for law enforcement and military use. The USAF experimented with similar concepts in Vietnam, the idea being to operate a very quiet low altitude surveillance aircraft over enemy positions. The USAF called it the TG-7A and it flew as part of the USAF Academy sailplane training program.



*(Photo Credit: USCG)*

*The USCG version carried extra fuel, enormous mufflers, a special propeller and low rpm engine, and sensor package.*

The frantic search for a solution to the aircraft smuggling drugs led to another radical Coast Guard plan. In 1987, the borrowed two Grumman E-2C Hawkeye airborne early warning aircraft from the Navy.



*(Photo Credit: USCG)*

The aerial smugglers would depart from their Caribbean and Central and South American bases and flying low, cross the borders of the United States, often landing in out-of-the-way airports or improvised fields.

Hawkeyes, stationed over the Caribbean and Gulf of Mexico would stand a good chance of spotting the intruders and direct law enforcement units to intercept them.

Additionally, a series of aerostats were also deployed, each carrying radars capable of discriminating small aircraft attempting illegal crossings.

Initially, the Coast Guard faced a multitude of problems operating the aircraft. Suitable bases were often fully occupied and neither hangars nor offices were available. The availability of trained crews also caused difficulties. Navy Flight Officers were given direct commissions into the Coast Guard in order to operate the radar systems. Avionics technicians were also enlisted.



*Eventually eight Hawkeyes were operational as Coast Guard Airborne Warning Squadron One with a permanent base at San Augustine, Florida.*

The unit was disestablished in 1991.

Coast Guard support of their southern US and Caribbean operations required a small transport aircraft so in 1991 they leased a Spanish designed CASA C-212-300 Aviocar. When the lease expired, the aircraft was returned.



*As the C-41A, rumor has it that CASAs are flying with USAF Special Ops!*

*(Photo Credit: USCG)*

In 1998, two more aircraft showed up in Coast Guard colors. One was the twin engine version of the Schweizer Condor, designated RU-38A Twin Condor.



*(Photo Credit: USCG)*

The plan involved converting the single engine RG-8A into a twin engine aircraft. Basically, what evolved was a vehicle which bore superficial resemblances to a Cessna 337 Skymaster with a central fuselage, a tractor and a pusher engine, and twin booms, the tricycle landing gear.

The Twin Condor was optimized to produce a low noise signature and the booms carried radar, infrared sensors, and television cameras. The operation plan would have the aircraft transit to the area of interest using both engines for speed and safety over water. When on site, the rear engine would be shut down and the aircraft set up to operate in its most quiet mode.

The second aircraft acquired in 1998 was a Gulfstream III or VC-20A, a collaboration between Grumman and Gulfstream Aerospace. Gulfstream Aerospace originated when Grumman split off its military and civilian business, shifting the civilian aircraft to a factory in Savannah,

Georgia. Grumman then sold Gulfstream to American Jet Industries which in turn was acquired by Chrysler who sold it to General Dynamics!



*VC-20A*  
(Photo Credit: USCG)

As might be deduced from the “V” prefix, the aircraft's primary function was the transport of the Commandant and Secretary of Homeland Security for by now, the USCG been moved to the US Department of Homeland Security.

The need for a long range executive transport led to the purchase of the Gulfstream V in 2002 and a second one later. They are styled “command and control transport” for travel by high ranking government officials.



*A G-V, VC-37A sits on the ramp at Groton.*

The newest primary training aircraft for Coast Guard aviation, the T-6A Texan II, honors the heritage of the famed North American T-6 (SNJ) Texan of World War II. However, the new ship is turbine powered and a modification of Switzerland's Pilatus PC-9 which is manufactured in Wichita by Beechcraft, formerly known as Hawker Beechcraft, formerly known as Raytheon Aircraft, formerly known as Beechcraft. What comes around goes around!

*T-6A visiting GON for Coast Guard Aviation Day.*



The Coast Guard trains with Navy, Marines and Air Force aviation candidates at Whiting Field in Florida or NAS Corpus Christi, Texas.

The need for a medium range command and control aircraft led to the lease of a Bombardier CL-604 and styled militarily as the VC-143A. It arrived in December of 2005 as a holiday present for an admiral and a cabinet member whose positions are obvious to the discerning reader.



*The design originated with Canadair who used the noted Bill Lear as a front man.*

The last aircraft to join the Coast Guard is another foreigner, the HC-144A Ocean Sentry produced by European Aeronautic Defence and Space Company N.V., commonly known as EADS, the same consortium which bring us the Airbus.

The HC-144A is a medium range search and rescue aircraft based on the CN-235 military transport and can find a distant ancestor in the CASA 212 Aviocar which the Coast Guard tried out in 1991.



The rear ramp allows easy roll-on/roll-off changes of specialized equipment pallets which allow for satisfying a wide range of mission objectives.



*The “front office” is glass but security considerations prevented photography of the working spaces aft.*

As the last HU-25 Guardians are phased out in the next year, the Ocean Sentry will assume all of its former roles.

Two other features of the Ocean Sentry are its 10 hour loiter time, almost double the endurance time of the Guardian, and its short take off and landing ability.

One final note. Recently, the USAF mothballed its entire fleet of Alenia C-27J Spartans, an intra-theatre transport to be operated by the National Guard in support of the US Army.



*Ohio Air National Guard C-27J*  
*(photo by SSgt Joseph Harwood)*

The original procurement of aircraft went to the US Army which ran a one year test was run in Afghanistan and the Army, exercising tactical control of the aircraft, flew over 3,000 sorties.

There were all kinds of proposals as to the final role of the Spartan including one which assigned it to Connecticut's own 103<sup>rd</sup> at Bradley.

The Air Force gained control of the entire fleet and then sought to cancel the entire contract for new aircraft citing excess airlift capacity and budgetary restraints. This maneuver is somewhat reminiscent of the USAF takeover of the Army's C-7 Caribou force in Vietnam.

At last word, a total of 21 aircraft have been mothballed at AMARG in Tucson and word is that seven have been assigned to US Special Operations Command and four more are due to be delivered this year.

Alenia, to protect its future production, has announced that it would not provide support for any of the aircraft if resold to international

customers.

As for the financially challenged Coast Guard...They have announced that they wish to acquire the fourteen mothballed Spartans to outfit three of their air stations. The claims is that they are needed to buttress their maritime patrol missions and save \$500 million in capital acquisition costs. The plan is to save money by limiting the HC-144 purchases to 18 aircraft and filling in the gap with the free acquisition of the Spartans.

However, the US Department of Agriculture's Forest Service also wants some of the Spartans. Their most likely employment is to haul smokejumpers and cargo to wildfire sites. A recent compromise which is under debate in Congress will give the USCG the 14 Spartans and transfer some surplus USAF C-130s to the Forestry Service.

This episode is the second chapter of the USAF entanglement with the Spartan. In 1990, the Air Force purchased ten Alenia G.222 aircraft as a Rapid-Response Intra-Theater Airlifter. These were designated as the C-27A. The aircraft were bedded at Howard Air Force Base in Panama but later disposed of them.



*C-27A one of ten G.222s stored at AMARG in 1999 after a past DOD flirtation with the aircraft.*

The next edition of The Coastwatcher will carry Part IV-USCG Rotary Wing Aircraft

*Much of the information was drawn from two sources. The first is Arthur Percy's U.S. Coast Guard Aircraft since 1916, Airlife, 1991. The second is the US Coast Guard website, <http://www.uscg.mil/history/aviationindex.asp>*