Mission for America

Semper vigilans!
Semper volans!

The Coastwatcher

Newsletter of the Thames River Composite Squadron
GON
Connecticut Wing
Civil Air Patrol

S. Rocketto, editor
srocketto@aquilasys.com

website: http://cap-ct075.com/default.aspx

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SCHEDULE OF COMING EVENTS

May

20 May-TUE-Blues/Moral Leadership
27 May-TUE-BDU/Ground Team Training
30 May-1 June-FRI-SUN-Ground Team Training

Long Term Planning

Jun-SAT-Wing Rocket Competition (Date TBA)
15 June-Bradley Open Cockpit Day
28-29 June-Quonset Air Show
4-13 July-Wing Encampment
21-23 July-AIAA AE Conference-Hartford
19 July-SAREX
20-24 July-AIAA A/S Education Conference
27-28 Sep-Squadron Leadership School
18-19 Oct-Corporate Learning Course
22-23 Nov-Unit Commanders Course
6-7 Dec-Training Leaders of Cadets Course

ACUT

Both C/SMsgt Michael Molinari and Captain Rocketto attended the Advanced Communication User Training in Middletown on 10 May and were certified.

CADET MEETING MINUTES
13 May, 2008

C/MSgt Molinari mustered the Cadet Squadron and led the formation in the Pledge of Allegiance and the Cadet Oath.

Testing was conducted and preparations for the Rocketry Contest were continued.

CADET AND SENIOR GROUND TEAM TRAINING

The Danielson Squadron is sponsoring a weekend ground training program running from Friday afternoon, May 30 to Sunday June 1. A wide range of activities is planned and will get Cadets and Seniors signed off on many of the requirements for ground team participation.

Cadets must have reached the Curry level in order to participate and have passed the ES 116 test.

We will be camping out. Cadets should bring a 72 hour pack. Any Cadet or Senior lacking equipment should contact Capt Rocketto.

Cadets and Seniors should go to the Squadron Website at http://cap-ct075.com/default.aspx for instructions and easy access to the ES116 test.

KUDOS

Cadet George Barberan of New London High School and Cadet Timothy Plourde of Montville High School both have been inducted into the National Honor Society at their respective institutions.

Cadet Alexis Wojtcuk was commended for her work in the radio room during the Guided Training Exercise on 3 May.

SQUADRON COMMANDERS CALL
13 May, 2008

The following items were discussed:

1. The Long Island Sound Patrol commences on 24 May. Current Mission Pilots, Observers, and Scanners are urged to respond to Col Kinch's call for volunteers immediately. Thames River Composite Squadron has been assigned the following dates: May 24, 25, 26, 31, June 1, 7, 8, August 23, 24.

2. The Danielson Squadron is hosting a ground team training weekend from30 May, 1800 to 1 June, 1200. Cost is $10 to cover food. Senior Members interested in attending all or part of this Ground Team Training should contact Capt. Rocketto by 20 May.

3. Ground Teams have been requested to hold and document safety briefings before deployment using Wing forms 62A and 62B.

4. Capt Noniewicz presented a safety briefing on flight line procedures.

5. Each Senior Member is requested to obtain an Emergency Services Specialty Track Rating at the Technician Level and one other Specialty Track Rating which will be based on personal interests and Squadron needs.

6. The schedule of Wing professional schools was announced and is printed in the Long Term Scheduling section above. Details of each school will be published in *The Coastwatcher* in sufficient time for interested Officers to enroll.

7. Pilots who fly C17 missions are requested to pay the required fee monthly.

8. Col Kinch discussed the Squadron Goals which were published in the 11 April edition of *The Coastwatcher*.

9. Capt Rocketto will meet with those Officers who wish to be prepped to take the test for the "Yeager" Award. The session will be held at our mutual convenience and should run for no longer than three hours which will include a session for refreshments. Please contact Capt Rocketto at the email address on the masthead and state what evenings or weekend dates are most convenient. He will then contact you with details.

10. Maintenance on the Squadron trailers must be accomplished before the onset of hot weather. Priority will be given to patching roof leaks and installing our new sign. Maj Bourque will arrange to wash and wax the van. Capt Noniewicz will schedule a day to wash and wax the aircraft.

11. The audit reports which Col Wisehart previously distributed need to be completed and reviewed immediately.

12. Please review the schedule for upcoming events. We are eager to have more Senior participation in scheduled events.

13. Several fund raising schemes were discussed and will be announced if adopted.

NATIONAL INCIDENT MANAGEMENT SYSTEM (NIMS) TRAINING

Emergency Services personnel must, at a minimum, complete IS-100 and IS-700 on-line exams by 31 December in order to remain on mission status. Check the bulletin board to determine what additional tests may be required for your Specialty Qualification.

In order to take the NIMS on-line course and test, you should go to the following website:

http://training.fema.gov/

Click on the green box at the top, "FEMA Independent Study." Then click on the "NIMS Courses" in the red box. This will bring up a listing of the offerings.

UPCOMING AVIATION EVENTS

Cadets and Senior Members are encouraged to attend two June events with aviation themes.

On June 15, The New England Air Museum will host an open cockpit day. We can get free admission since Cadets will have parking duty and Senior Members will supervise. The day allows time to visit the aircraft displays and exhibits and need not be a whole day affair.

On 28-29 June, the Rhode Island National Guard will be hosting its annual Quonset Air Show with a wide range of flying and static displays. Moreover, this year's show will feature The Red Arrows, the precision flight team of Great Britain's Royal Air Force. They fly BAE T1/T1A Hawks from which the U.S. Navy's T-45 Goshawk has been adopted. The aircraft are painted a brilliant red and the maneuvers utilize up to *nine* aircraft at a time. Enhancement is provided by white, red, and blue smoke.

In the past, our Cadets have camped overnight and done flight line guard duty and first aid duty under Senior supervision. Cadets and Seniors are invited to participate in this year's air show. Contact Capt Rocketto at the masthead email address if you are interested.

HISTORY OF LONG ISLAND SOUND PART I-GEOLOGY

For the second summer, CTWG has been tasked with assisting the U.S. Coast Guard in patrolling Long Island Sound in order to protect boaters and the environment. This series of two articles will discuss the topography, geology, and social history of the patrol area. This year, the area has been extended.

A typical patrol from Groton commences just south of Fisher's Island with a southbound leg towards Montauk. The first turn is westward and the course will take the patrol over the north end of Gardiner's Island and Greenport to a point about midway between the old Griswold and Mattituck airports. A slight jog to the WSW follows the mid course of The Sound until a northward turn occurs near Beltt Intersection, just shy of a line extending from Port Jefferson to on Bridgeport. The patrol continues north towards Milford and then turns to an ENE course parallel to the Connecticut shoreline, turning eastward just southeast of Falkner Island. The last leg brings the aircraft back to the starting point south of Elizabeth Airport on Fishers Island.

The geological history of the patrol area is extraordinary and owes most of its topography to the effects of continental drift and glacial modifications. The complexities of 500 million years of geologic activity are not within the scope of this article. Nonetheless, it is sufficient to say that the region known as Connecticut is a result of titanic forces which fractured the super continent of Pangaea and the subsequent weathering and glacial activity.

The basic rock structure of the patrol area in the Long Island Sound Basin consists of metaphoric bedrock, schist and gneiss, which can be found along most of the shoreline of Connecticut.

However, on two occasions, two glacial events modified the topography created by tectonic forces. The first occurred about 150,000 years ago and the second about 20,000 years before the present. As we fly on a typical patrol, we can see evidence of these geologic events.

Consider a departure from Groton to the south. The Thames River which lies due west of the airport is a tidal estuary fashioned by glacial activity. The lower base of the U.S. Submarine Base lies on a glacial peneplane, the region is strewn with glacial erratics, and the evidence of a southward passage of the glaciers may be observed not only in the scratched upper surface of the rock but in the glacially plucked southern

ends of some of the exposed bedrock. However, we will try to restrict our discussion to those features observable from patrol altitude.

Fisher's Island, directly in our path, is the western end of a geological feature called the Charlestown Moraine. The advancing movement of a glacier pushes vast amounts of material in front of it, much like a bulldozer. This material forms what is called a terminal moraine and consists of unconsolidated materials, some derived from rather distant sites. Just east, a long spit of land, called a trombolo, stretches out from Watch Hill, Rhode Island and helps to protect Stonington Harbor.

During the last ice age, the ocean might be found as much as 100 mi to the south of its present position and the Sound region was a glacial lake. The lake gradually drained but as sea level rose, it started to fill the old lake bed. However, the Connecticut coastline has been protected from the brute force of the open ocean by Long Island and this resulted in the rather small enclosed beaches. Compare these to the extended barrier island beaches visible due east along the coast of Rhode Island. These beaches are a product of the longshore current, the coast wise vector component of incoming waves, which transports and deposits sand to form the islands and the inner lagoons.

South of Fisher's, the patrol turns west and Long Island Sound, bounded by Connecticut to the north and Long Island itself to the south becomes visible.

On the large scale, Long Island itself is part of two terminal moraines. The Harbor Hill Moraine forms the north shore and north fork ending at Orient Point. The Ronkonkoma Moraine is the central spine of Long Island and extends out to Montauk Point.

The entire region was once a huge freshwater lake called Lake Connecticut. When the spillway, in the vicinity of The Race, just west of Fisher's Island eroded, the lake emptied, and the next rise in sea level formed the salt water sound.

The patrol passes north of Gardiner's and Shelter Island and crosses the North Fork of Long Island over the village of Greenport. As you cruise along the northern shore of Long Island, you will observe the eroded bluffs of the Harbor Hill Moraine and several large boulder fields along the water's edge. If the weather is good, you may be able to see the barrier beaches and lagoons which form the south side of Long Island.

The patrol heads out offshore and then, midway between Madison, CT and Mattituck, NY, makes a slight kink to the west southwest.

A turn north is made in the vicinity of Beltts Intersection. New Haven Harbor lies at the one o'clock position. This region of the coast is somewhat different from the rest as it consists of a red sedimentary rock rather than metamorphic materials. You can also observe the parallel structure of the red hills which run north to south, the prevalent grain on Connecticut topography.

Turning eastward to parallel the Connecticut coast, places the Thimble Islands to port and Falkner Island ahead.

The Thimble Islands and Falkner Island are outcroppings of granite bedrock, good example of a glacially determined topological feature. They are drowned drumlins, hills formed by glacial action and then turned into islands by the subsequent rise of the sea.

Continuing our voyage eastward, one can view a plethora of small bays, alluvial deltas, and cobble beaches, all children of glacial activity modified by water and wind actions over eons. Hammonassett State Park is a fine example of this type of topography.

Continuing east, the Connecticut River appears. The mouth of the Connecticut River is dominated by a sandbar which was formed as the result of the actions of the longshore current on the residue of a moraine. The river itself is a tidal estuary until you reach the falls near Windsor Locks.

Tidal marshes are common and are the products of deltas, the outwash of melting glaciers, which buried the bedrock in sand and gravel. These deposits gave a foothold for organic materials which developed into the nutrient rich marshlands.

Finally, we pass Niantic Bay and Millstone Point. As you approach Groton, you pass Goshen Point and Waterford Town Beach. The immediate offshore area is treacherous and somewhat dangerous for larger craft. Bartlett's Reef, Goshen Ledge, Sarah Ledge, and the Rocks called Shore, Middle, and Rapid are all marked by buoys or lights. These are remnants of ridges which, although trimmed by glacial activity, are still high enough to form hazards to maritime navigation.

The last stages of the approach into Groton allow us to observe the airport and the Pouquonnock River and Bluff Point which lie due east. The flat plain of the airport itself is probably an alluvial deposit from the glacial period and a gift to the aviator.

GROUND OBSERVER CORPS REDUX

One of the more interesting aircraft companies was DeHavilland of Canada. They originally were a subsidiary of DeHavilland of Great Britain and built a number of aircraft under license until the end of World War II with their main manufacturing facility at Downsview near Toronto. After the war, they developed a number of their own designs and also built the CS2F Trackers under a license from Grumman. Subsequently they were acquired by Boeing and finally Bombardier. This article will briefly examine the eight aircraft designed and produced in Canada. They were all successful designs and generally demonstrated outstanding STOL performance.

The DHC-1 Chipmunk was a single engine two seat training aircraft equipped with a 145 HP engine.

Chipmunk at Canada's National AF Museum

The DHC-2 Beaver is the paradigm of bush planes. Operating on wheels, floats, or skis and powered by a P&W 450 HP Wasp, Jr, and capable of lifting a half-ton payload, it was operated by the United States military as the L-20 and later, as the U-6, and is flown by certain CAP units.

Beaver on amphibious floats at GON

The equally versatile DHC-3 Otter, powered by a P&W 600 HP Wasp carried twice the payload of its smaller brother. The U.S. Army operated it as the U-1.

Island Airways Otter at Port Clinton, Ohio

The first DHC twin engine design was the DHC-4 Caribou. It was powered by P&W Twin Wasps. Mainly used as a tactical transport by the military, it carried the CV-2 designation when operated by the U.S.Army and the C-7 designation with the USAF. The CT AVCRAD at GON flew one for some time and it is now on display at the New England Air Museum.

CT AVCRAD Caribou while still at GON

The success of the Caribou led to the design of the T-tailed Buffalo, the first of the DHC designs deliberately fitted with turboprops built by General Electric. The USAF operated them as the C-8.

NASA Buffalo fitted with experimental gear at Wallops Island, Virginia

The versatility of the designs has been demonstrated by the modification of the Beaver and the Otter to turbo-prop power plants, generally, a version of the P&W PT-6.

The Otter was further modified by adding a second engine creating the DHC-6 Twin Otter. This aircraft pioneered the modern era of regional air transport led by Joe Fugere and Pilgrim Airlines operated out of Groton for a number of years until bought out by Business Express. Although production of this design was halted two decades ago, it has since been resumed and over 60 have been ordered from Viking Air of British Columbia which purchased rights to all DHC designs from Bombardier.

The U.S. Army has ordered three of them to support their Golden Knights Parachute Team. Designated as UV-18A's They will replace leased Fokker C-31A Friendships will deploy out of Fort Bragg, North Carolina.

Surinam Airways Twin Otter

DHC moved into the four engine field when it designed and marketed the DHC-7 Dash 7 powered by P&W PT-6 turboprops. Designed as a regional airliner, it had remarkable STOL performance and was extremely quiet. Nonetheless, its four engines made for high operating expenses and it was not heavily utilized by the commercial airlines. The United States Army has operated several of these unique aircraft as RC-7's, not to be confused with the C-7 Caribou. The Army uses the RC-7 in a program called Airborne Reconnaissance-Low and is used to garner signal and imagery intelligence.

Dash 7 operated by PANAM

DHC capitalized on its experience with the Dash 7 to produce the Dash 8, a twin engine design with the same carrying capacity as the four engined aircraft. The variants of this model have been extremely successful competitors in the regional transport market and production of improved versions is now carried on by Bombardier.

U.S.Air Dash 8