

Missions for America
Semper vigilans!
Semper volans!



The Coastwatcher

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

<http://capct075.web.officelive.com/default.aspx>

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SCHEDULE OF COMING EVENTS

14 APR-LifeStar Field Trip-Backus Hospital
21 APR-CTWG SAREX
21 APR-CSRRA High Power Rifle Clinic
21-22 APR-Corporate Leader's Course
27 APR-TRCS Officer's Banquet
28/29 APR-Glider Orientation Flight Trip
04 MAY-Ledyard A/S Festival-Juliet Long
02 JUN-Basic Communications Course
16 JUN-CTWG SAREX
16-17 JUN-Quonset Air Show
23-30 JUN-PAWG RCLS Course
12-14 JUL-Casa Wojtcuk Bivouac
21 JUL-04 AUG-Nat'l. ES Academy
04 AUG-Basic Communications Course
04-05 AUG-Westover Air Show
11 AUG-CTWG SAREX/Cadet Ball
15 SEP-Advanced Communications Course
19-22 SEP-CTWG Guided Training Evaluation
03 NOV-Basic Communications Course
10 NOV-CTWG Conference-Cromwell

ERRATA

Former *New London Day* newspaper executive and TRCS member sent word from his Florida winter retreat that LtCol Bergey is a faculty member at the Naval War College, not a “faulty” member. My sister, Leslie, formerly of the *Norwich Bulletin* also commented on this mistake.

Maj Noniewicz noted that Meteor 1-1's yeoman service as the first Soviet weather satellite was not a decade long but rather a year long.

CADET MEETING MINUTES

03 April, 2012

The meeting opened with drill. Following a basic review with all cadets, one group of cadets received drill testing, another group was taught basic drill, and a third group practiced marching maneuvers.

Upon return to the squadron, a uniform inspection was administered to cadets.

C/A1C Trotochaud led a DDR class on prescription drugs. He talked about different types of prescription drugs commonly abused, why they are abused, their symptoms and dangers, and how they work in the human body.

C/SSgt VanDevander held a safety class on storm safety focused on lightning. He discussed how lightning works and how to avoid lightning strikes.

In an emergency services lesson, C/Capt Flynn talked about fatigue and administered a quiz.

Cadet flight sergeants and the first sergeant led cadets during a flight time session. They taught cadets about customs and courtesies and how to enter SQTR information to eServices.

FREE EVENT
CSRRA HIGH POWER RIFLE CLINIC

The Connecticut Rifle and Revolver Association will sponsor a high power rifle clinic on 21 April at the Bell City Rifle Club. Attendees will witness demonstration with the AR-15 rifle, receive instruction, and be given a chance to fire the rifle on the 200 yard range.



Cadet Ray fires from the sitting position.

The Connecticut Junior High Power Rifle Team summer program will be explained and details will be presented on joining.

CAP cadets are invited. A parent should attend. The program is offered at no cost. Details may be obtained from Maj Rocketto. Advance registration must be made by contacting Coach Brad Palmer at palmerpatch@aol.com. This is not an official CAP event.

SENIOR MEETING MINUTES

03 April, 2012

The senior meeting consisted of a safety briefing by Maj Noniewicz. Noniewicz described his recent flight from Chester to Myrtle Beach in a Piper Dakota. The narrative discussed the decisions required to plan a safe journey considering the weather, routing, and fuel supply. The aircraft was IFR capable and the pilot was IFR current. Equipment included sufficient charts and aero data, an electronic flight bag, and a VFR capable GPS. Problems encountered included IFR

flight conditions, light turbulence, convective activity, and restricted airspace.

The solution required careful planning, understanding aircraft and crew limits, prudence, and patience. The result: good golfing and a safe return home.

OR

A Lesson in Reverse Polish Notation

MAN PLAN PLANE + ENTER FORE!

OR

Poetically

A man, a plan, a plane equals golf gain!

DO I HAVE TO DRAW YOU A PICTURE?

OK!-Pictographs.



ANNUAL TRCS OFFICER'S BANQUET

The annual Thames River Composite Squadron Senior Officer's Banquet will be held on 27 April, 2012 at the Thames Club, 290 State St., New London. Officers are encouraged to bring guests. Dress is casual.

Ticket are \$30 each. Make you reservations with Capt Wojtcuk no later than 10 April.

CURRENT AEROSPACE EVENTS

737 MAX vs. A30 NEO

The marketing war between Boeing and Airbus over the relative merits of the proposed 737 MAX and the A320 NEO designs is heating up. Both corporations are presenting arguments which support their design as being more economical to operate. A Boeing executive has been quoted as sardonically stating “Its remarkable how different the physics are in Europe versus the U.S.” The different performance figures proffered by each of the competing corporations illustrate that the choice of computer models and the data selected for entrance into the calculations can result in comparisons which are less than objective.

A rumored development which bodes well for Connecticut is that Boeing is expressing an interest in adopting the Pratt & Whitney geared turbofan for its entry. Some analysts believe that this engine might add three to five percent to the 737 MAX fuel efficiency.

The geared turbofan increases engine efficiency by slowing the speed of the fan down relative to the turbines in the inner core of the engine.

NRO PAYLOAD LIFFS OFF FROM VANDENBERG

The National Reconnaissance Office has used a specially adapted United Launch Alliance Delta IV rocket to launch a classified payload. Vandenberg AFB in California is favored for military polar orbiters. The rocket carried a larger than usual shroud to protect the payload and utilized two strap-on boosters. The payload is suspected to be a radar imaging satellite.

The rocket departed from Space Launch Complex-6 (“Slick Six”) originally designed for the cancelled USAF Manned Orbiting Laboratory and rebuilt for the Space Shuttle at a cost of four billion dollars but never used.



ULA Photo of Delta IV Lift-Off

The NRO is the agency charged with designing, building, launching and maintaining the nation's fleet of intelligence satellites. Organized in 1961, its existence was kept secret for thirty years.

The United Launch Alliance is a joint venture between Lockheed-Martin and Boeing.

AEROSPACE HISTORY

Operation Black Buck Long Range Bomber Strike on Port Stanley 30 April-1 May, 1982

A 250 Year Dispute

April 2nd, 2012 marks the 30th anniversary of the Argentine invasion of the Falkland Islands. The Royal Air Force (RAF) mounted one of the most remarkable air strikes ever flown during the campaign to regain the seized territory. This article will discuss the events leading up to the execution of Buck One, the RAF mission to disable the main airfield at Port Stanley, the capital of the Falklands.

The Falklands archipelago, known to the Argentinians as *Las Islas Malvinas* have been a source of dispute between Argentina and Great Britain for two and a half centuries. The islands were first sighted by the Dutch or English in the 17th century with the English making the first landing in 1690. In 1764, the French established the first settlement followed

by the British in 1766. In 1767, Spain acquired the French settlement and three years later drove out the British who continued to assert a claim. By 1811, the Spanish settlers had departed but Spain continued to assert a claim. In the early 1800's The Spanish colonies in South America won independence and what was to become Argentina, claimed the Falklands. A group of Argentineans, settled there.

Enter the United States! In 1831, US sealers used the Falklands as a base and complained that a “band of pirates” were plundering US vessels. The sloop of war USS Enterprise, under Master Commandant Silas Duncan, sailed to the islands, took most of the colonists captive, returned them to the mainland, destroyed their settlement, and declared the islands “free of all government.” The US and Argentine governments entered into a dispute over Duncan's action which was largely unresolved.

A year later, the Argentines attempted to set up a penal colony on the Falklands. Within a few months, the prisoners mutinied and murdered the governor. An Argentine warship was dispatched but was met by two British ships intent upon reestablishing Great Britain's claim. The Argentines were outgunned and left the islands to the British who established a naval station and then incorporated the them into the United Kingdom as a colony.

During the mid 1960s, the Argentine government pressed it claims for sovereignty at the United Nations. However, the inhabitants, all British citizens preferred the *status quo*. The principal of self determination trumped prior claims and the continued British presence galled the Argentineans. Rebuffed by the UN, the Argentinean government decided to invade.

The Geopolitical Situation

The Falklands is an archipelago consisting of almost 800 islands, the largest of which are East and West Falkland. Port Stanley, the capital is on East Falkland. The land area is about equal to that

of Connecticut. The islands lie about 350 miles east of the southern Argentine coast. The population of some 2,000, who have voted overwhelmingly to remain British, subsist by of sheep husbandry and fishing.



CIA Factbook Map of the Falklands

In 1962, the British defense force consisted of some 70 lightly armed Royal Marines and the armed ice patrol vessel, *HMS Endurance*. The Falkland Islands Government Air Service operated a Britten-Norman BN-2 Islander and several deHavilland of Canada DHC-2 Beavers.

Great Britain is some 8,000 miles distant with Ascension Island, a British self-governing dependency much like the Falklands located midway. The chief British military problem was logistical. They had maintain a amphibious military force 8,000 miles from home waters and defend the vulnerable troop and cargo transports from the enemy. Ascension's airfield, Wideawake named after the noisy sooty terns which disturbed those wishing to sleep, was maintained by the United States Air Force and used to support a National Aeronautics and Space Administration tracking facility and an alternate airport for the Space Shuttle.

At that time, the Argentine Air Force's closest airfield to the Falklands was at Rio Grande, 450 miles away, about the maximum combat range of their fighter and attack aircraft. They had

some buddy-tanking capability for the fleet of a dozen Douglas A-4 Skyhawks. The rest of their strike aircraft consisted of two dozen IAI Daggers, an Israeli version of the Dassault Mirage, and nine English Electric Canberra twin engine bombers. The Argentine Navy's attack force consisted of a dozen A-4s which had a limited operational capability from their sole aircraft carrier, *Veinticinco de Mayo* and five land based Dassault Super Étendards armed with Exocet anti-shiping missiles. To these might be added a collection of FMA IA-58 Pucarás, Beech T-34 Mentors, and Macchi MB-339 light attack aircraft. Because there was only one paved and two unpaved airports available, the most aircraft that the Argentina could base on the islands was around 130.

for air defense. The carriers also carried a complement of 27 Sikorsky Sea King helicopters to transport troops and supplies. The RAF offered 14 GR.3 Harriers, a ground attack version of the V/STOL fighter.



FRS.1 Sea Harriers (Flicker.com)

Argentina's Primary Attack Aircraft



Douglas A-4B Skyhawk
(FAA photo)



GR.3 Harriers

IAI Dagger
(Horacio Clario)



Dassault Super Étendard
(CANA Photo)



To meet the Argentine air threat and support the landings, the British were transporting some 28 Hawker-Siddeley FRS.1 Sea Harriers on board the aircraft carriers *HMS Hermes* and *HMS Invincible*

The British realized that if the Argentines could use the surfaced runway, 4100 feet long, located at Stanley, for the jet attack aircraft, attack aircraft could avoid the 450 mile flight from the mainland. Their search time and time over target would increase so that the British forces could be subject to devastatingly intense and repeated attacks. The risk was such that the British determined that an invasion would be untenable. To reduce the risk, the British decided to put the airfield out of action by using a long range bomber and runway-busting bombs which which would damage the concrete paving and its base so that, even if repaired, it could not support the attack jets. Operation Black Buck was mounted.

Preparing the Aircraft-the Vulcan Bombers

The overall British plan, *Operation Corporate*, was put together with incredible speed. Warships were prepared, transports were commandeered, and the special aircraft need to fight in the South Atlantic were modified. The Black Buck attack required a long range bomber and refueling aircraft. The only long range bomber in the RAF was the Avro Vulcan, a four engine delta wing aircraft designed as a cold war nuclear bomber. However, it had been declared obsolete and was marked for retirement that spring. With retirement planned, Vulcan equipment had not been upgraded, squadrons had been stood down, and training had been curtailed.



Vulcan B.2 at Imperial War Museum, Duxford

Three Vulcans of proven reliability and equipped with the more powerful Bristol Olympus 301 engines needed to lift the over-gross aircraft off Ascension's 10,000 foot runway were selected. Technicians, engineers, and flight crews scrambled to prepare for a different kind of war.

Crew training and aircraft upgrades commenced immediately. The crews needed to practice aerial refueling and dropping conventional ordnance. However, the refueling probes had been removed from the Vulcans years before when it was found that broken probes would be sucked into the engines causing catastrophic failures. A scavenger hunt ensued. The necessary probes and system parts were collected by visiting aviation museums in Great Britain and the United States and removing them from displayed Vulcans! The bomb racks which held conventional bombs had

also been removed and sent to a scrap yard. A technician remembered where they had been sent and by good fortune, the racks were still there. They also need to locate the intervalometers which controlled the bomb drop sequence. Someone remembered that they had been stored in an RAF depot and they were recovered and installed. They also managed to find 47 of the 1000 lb bombs needed. These bombs were capable of making craters thirty feet deep and sixty feet wide.



The bomb racks, capable of carrying twenty-one 1000 pound conventional bombs were rescued from a scrap yard.



A suite of 1000 pounders perched in front of a Vulcan's Nose wheel.



Refueling probes and ancillary refueling equipment were removed from museum aircraft such as this one at Barksdale AFB, Louisiana.

The radars were optimized for over water work. Electronic counter measure units were stripped from operational Blackburn Buccaneers to counter the more modern gun layers and radar

detection systems possessed by Argentina. Several Vulcans were modified to carry Shrike anti-radiation missiles. The aircraft undersides were also been repainted in dark sea gray to blend in with the South Atlantic environment.

A reliable more accurate electronic system was needed to back up the astronavigation. Carousel inertial navigation systems (INS) were used in the refueling planes but the Vulcans had none. Where to find them? Institutional memory served the RAF once again. An old hand recalled that British Overseas Airways Corporation (BOAC) had retired their entire fleet of Vickers VC-10 passenger aircraft and were in storage. It turns out that each of the VC-10s had two of the Carousel INS units and some of them were quickly installed in the Vulcans.



Retired BOAC VC-10s, the source of the INS units.

Preparing the Aircraft-the Victor Tankers

The Handley Page Mk.2 Victor refueling aircraft were formerly one part of a strategic aerial triad called the 'V Bombers,' Valiant, Victor, and Vulcan. The Vickers Valiant was retired early and the Victors were converted to reconnaissance and tanker roles due to airframe aging.



Victors used to reconnoiter French atomic bomb tests in the Pacific in the late 1960s.

The RAF faced problems bringing the Victor tankers to a fully operational status. Only 23 Victors were in inventory but periodic overhauls, modifications, and squadron maintenance meant that under the best conditions, twelve of them might be operational. Like the Vulcan, the Victor

was a four engine aircraft but was readily identifiable by its crescent wing form and T-tail. Their primary anti-missile defense was an improvised system which "chaff," metallic strips cut to an appropriate length to reflect anti-aircraft radar back to its source and clutter the screen.



Victor's distinctive features are evident in this aft view.

Herculean efforts were exerted by ground crews to prepare the aircraft and within three weeks, the first of them were heading for Ascension Island! Meanwhile, logistics teams were arranging for fuel, food, tentage, office equipment, and sundry items needed to maintain the mission. Wideawake would soon be one of the busiest airfields in the world.

Planning the Attack

British military planners needed to devise a plan which would assure that the Port Stanley airport would be unusable for jet attack aircraft. The best way to knock out a runway with a horizontal bomber was to approach at a 35 degree angle and time the bomb releases to maximize the probability of either getting one direct hit or straddling the runway so that two near misses would cause sufficient damage. The Vulcan's bomb release equipment allowed 90 different combinations of bomb spacing and could be programmed for the altitude and speed of release. A time interval of 0.24 seconds would space the bombs 54 yards apart. The runway was 40 yards wide. The planning group

estimated that they had a 90% chance of getting one bomb on the runway and a 60% chance of hitting it twice.

The second problem was how to minimize the danger to the crew from the Argentine air defense network. Time was a critical factor. Radar director anti-aircraft need time to lock onto a target, derive a firing solution, and either release the missiles or fire the guns. Therefore, surprise is of the essence in an attack of this nature. In order to gain surprise, leaving less time for the defenses to react, the attack aircraft would descend to a low altitude before coming within range of the search radars. At the optimal time, the aircraft would pop up to 10,000 feet, commence jamming the gun and missile radars, and drop its bombs. The 10,000 foot altitude was chosen because it would allow enough time for the bombs to obtain maximum velocity for runway penetration it would be keep the aircraft outside the effective range of the light flak.

The attack would also require a byzantine plan of aerial refueling for both the Vulcan bomber and the accompanying Victor tankers. Resources meant that only one Vulcan could make the round trip. There were not enough tankers to support more.

The map indicates the distances involved from Great Britain to Ascension, from Ascension to the Falklands, and from the Falklands to southern Argentina



This ends Part I. The details of the attack will be featured in the next issue of The Coastwatcher.

AIRCRAFT CREWED BY TRCS MEMBER

A Continuing Feature

The Black Buck operation naturally points The Editor in the direction of searching out a TRCS officer who flew long range bombers and this would be Maj John deAndrade.



“The Bone,” North American-Rockwell B-1B Lancer at Ellsworth AFB

Boeing B-52G Stratofortress at Eglin AFB Armaments Museum



Northrop T-38 Talon

and in the “civvie world for Delta

*“The Mad Dog 88”
McDonnell-Douglas MD-88*



Boeing 757

Boeing 767-332

