Missions for America

Semper vigilans!
Semper volans!

The Coastwatcher

Publication of the Thames River Composite Squadron
Connecticut Wing
Civil Air Patrol

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Issue 10.7 16 February, 2016

CADET MEETING

16 February, *2016*
Submitted by
C/2nd Lt Daniel Hollingsworth

After opening ceremonies, some cadets launched junk rockets and fizzy flyer rockets.

At 7:30 the cadets went to the senior trailer to watch Maj Noniewicz deliver the first part of the Operation Risk Management program. This was followed by a briefing on fire safety led by SM Pineau

Then we attended a stellar lesson on "Fire Power" presented by Senior member Pineau. That concluded the meeting.

SENIOR MEETING

16 February, *2016*
Submitted by
Eugene Vidal

The annual 'safety down day' featured briefings by three squadron members. SM David Pineau, a professional fireman, discussed fire safety. Maj roy Bourque spoke on outdoor safety. Maj Paul Noniewicz discussed operational risk management. The program was a joint meeting of senior members and cadets.

SQUADRON TRAINING EXERCISE

20 February, 2016

Ten officers and cadets took part in a Squadron training exercise on Saturday.

Maj Roy Bourque worked with Cadets Jack Pineau, Hannah Ramsey, Benjamin Ramsey, and Daniel Ramsey on Ground Team 3 qualification tasks.

Capt Edward Miller re-qualified as an observer.

SM John Pineau and SM Steven Schmidt engaged in observer training air supervised by Lt Col Larry Kinch Majs Paul Noniewicz. Scott Farley, and Keith Neilson flew the two aircraft used for the training.

CSRRA HIGH POWER RIFLE CLINIC

The Junior Division of the Connecticut Rifle and Revolver Association will host its annual shooting clinic on 16 April at the Bell City Gun Club range in Southington. The training starts at 0900 and costs $10. See Lt Col Rocketto for further information

Participants will be taught the basics of firearms safety and the special features of the AR-15 rifle. At the completion of the basic instruction, they will go to the range and, under the guidance of coaches, fire the AR-15 rifle at 200 yards.

This in not a CAP sponsored event.

February 2016

SUN	MON	TUE	WED	THU	FRI	SAT
	1	2	3	4	5	6
7	8	9 CC CALL	10	11	12	13
14	15 Holiday	16 No Mtg(Cadet)	17	18	19 CP	20 OFlight SQ SAREX CyperPatriot
21	22	23 Ground Team **Safety DD**	24	25	26	27 STEM
28	29	PT Logs this month/ 4 days (Cadet)(Encouraged for Seniors) 20 FEB P&W Tour, MIT Brief				

March 2016

SUN	MON	TUE	WED	THU	FRI	SAT
		1	2	3	4	5
6	7	8 CC CALL	9	10	11	12
13	14 Canada	15 Canada	16 Canada	17 Canada	18 Canada	19 OFlight CTWG TRAEX
20	21	22	23	24	25	26 Rifle
27 Easter	28	29	30	31		

April 2016

SUN	MON	TUE	WED	THU	FRI	SAT
			Encampment Staff deadline April 1st		1	2 STEM
3	4	5	6	7 NER AEO	8 NER AEO	9 NER AEO
10	11	12 CC CALL	13 Airport Emer Plan 0930	14	15	16 OFlight Rifle
17 Week of Spring Break	18	19 No Mtg	20 SB	21 SB	22 SB	23 SQ SAREX
24	25	26	27	28	29	30 STEM

May 2016

SUN	MON	TUE	WED	THU	FRI	SAT
1	2	3	4	5	6	7
8	9	10 CC CALL	11	12	13	14 Rifle CTWG TRAEX
15	16	17	18	19	20	21 OFlight Rocket Contest
22	23	24	25	26	27	28
29	30	31 FUN	Rocket Contest 21 May Groton Aviation Aug 19th		SUI SEP 16th	

Other	Ground	Tranex	O-Flight	Meeting	Wing	National

Excellence

Date	Senior	Cadets
2	Planning / Staff	Planning, Rockets, Safety, Aerospace (BDU)
9	Commanders Call	Drill, Insp, DDR, CDI, Promo (Blue)
16	Emergency Service - Radio NPX38 LK	No Meeting
20	SQ SAREX	SQ SAREX, Oflights, Field Trip
23	Safety Down Day- Winter,etc (60min)	Drill, Safety (30m), Ground Team, Rocket (BDU)
27		STEM: Build Robot Arm; OFlight - Backup

Integrity

Date	Senior	Cadets
1	Planning - Sq staff mtg	Testing, admin, Planning (civies)
8	Commanders Call	Drill, Safety, CD, Leadership, Promo (Blue)
15	ES	Canada Troop - Special Activity (BDU)
14	Visit of Canadan Cadets- POC?	
22	PD - Personnel/ES - KLN89 GPS	Fitness, Ground Team (PT)
24	OFlight	OFlight
29	AE Brief	Drill, Rocket (BDU)

Volunteer Service

Date	Senior	Cadets
2		STEM: Helicopter
5	Planning: Staff Mtg	Leadership, testing, rocketry (civies)
12	Commander's Call / Promotions	Drill, CD, AE, Promotions (Blues)
16		Oflights
19	No meeting	No meeting
23		SQ SAREX
26	CAP History, PAO Brief	Fitness, Safety, Rocketry, ES (BDU)
30		STEM: Flight Simulator
13	Airport Emergency Plan 0930	

Respect

Date	Senior	Cadets
3	Planning / Staff	Leadership, Testing, Admin (civies)
10	Commanders Call	Drill, Insp, Sfty, CD, Lead, Promo (Blues)
17	ES - LISP Plan, Ditching	Drill, Insp, AE, ES, DDR, Guest Speaker (BDU)
21		Commanders Cup Rocketry
24		Fitness, Safety, flight time (BDU)
31		Fun night
14	CTWG Rifle Program to qualify for marksmanship ribbon (11 June)	

This schedule is not a replacement for good communications.

OOPS!

#1

Newly promoted Cadet Airman John Joseph Pineau was inadvertently identified as Joseph Pineau in the last issue.

#2

Coastwatcher reader Bob Neild sent the following information and photo to us"

I met a retired Air Force pilot back in the '80s in Melbourne, FL, and took some aerobatic training with him in his Pitts. His name was Bill Plunk.

He was in WWII, flew F-86s in Korea, and ended up flying Sandys in Vietnam. He swore this was a picture someone just happened to snap of him taking off loaded for a mission... **Look closely under the starboard wing....** Anyway, he was a real character, and just died last year. He also flew P-51s in South America for somebody.

#3

From Donkey Drivers to supersonic bombers, weight and balance counts!

"The universal aptitude for ineptitude makes any human accomplishment an incredible miracle."
Col. John Paul Stapp, Ph.D, M.D.

CADET LECTURE AT PRATT & WHITNEY

20 February, 2016

Cadets John Meers, William Burns, and Seamus Couch traveled with Capt David Meers and Lt Col Stephen Rocketto traveled to Pratt & Whitney's Customer Training Center (CTC) in East Hartford to attend a lecture given by Massachusetts Institute of Technology physicist, Prof. Edward Bertschinger. The MIT Club of Hartford sponsored the event.

Arriving early, the Thames River contingent passed time by studying a P&W exhibit showcasing the new geared turbines developed by the Pratt. The exhibition was interactive and included by working models and a video display.

Prof. Bertschinger's lecture discussed the recently detected gravity waves. Gravity waves were postulated by Einstein's Theory of General Relativity in 1916 but were not observed until September of 14th, 2012.

A pair of antennae located in Hanford, Washington and Livingstone, Louisiana are operated by the Laser Interferometer Gravitational Wave Observatory (LIGO) and funded by the National Science Foundation. Ground was broken for the installation of the Hanford antenna in 1994. Each installation consisted of an "L" shaped vacuum system measuring 2.5 miles long. Interferometers are placed in the evacuated tubes and the spacing of the units at the two locations result in a time delay of the signal allowing for triangulation of the source.

The Louisiana Antenna *(Credit: CalTech)*

The LEGO principle measures the distortion of the earth in the space-time continuum as a wave passes. A number of astronomical events can produce a detectable gravitational wave but the effects are minimal. The change in distance is equivalent to one part in 200 quintillion, a two followed by 20 zeros! In a linear measurement, this is less than the diameter of a hydrogen atom

A decade passes with no results. The system was modified to improve the sensitivity of a signal and reduce noise and and observations continued. On September 14th, a century after Einsteins's prediction, the first wave, generated by the merging of two black holes which occurred about 7.5 sextillion miles (7.5 followed by 24 zeros) away and a billion years ago!

At the conclusion of his lecture, Prof. Bertschinger entertained question from the students and teachers in the audience. The students then enjoyed a pizza lunch while the teachers were given a guided tour of the CTC led by CAP Lt Col Kenneth Benson, a retired P&W employee and Air Force pilot. Benson explained that the The Training Center employs a number of current Pratt engines which are used for hands-on training of technicians from all over the world.

Mr. Benson and the P&W X-3, a prototype of the famous Wasp engine.

AEROSPACE CURRENT EVENTS

GONE WEST
21 February, 2016

Captain Eric Melrose "Winkle" Brown, CBE, DSC, AFC, Hon FRAeS, RN., a legendary test pilot, has gone west, age 97.

Brown holds the record for the most aircraft flown, 487 types, and his over 2,000 aircraft carrier take-offs and landings doubles the second place holder's traps. His "carrier firsts" include the the first landing of a tricycle gear aircraft and the first jet landing of a jet.

Brown and his father were attending the 1936 Berlin Olympics with his father, a Royal Flying Corps veteran. Ironically, Ernst Udet, Germany's second highest scoring ace and later a General in command of Luftwaffe equipment development and supply, took Brown up for aerobatics and after allowing him to handle the controls, stated that Brown had the "temperament of a fighter pilot" and recommended a career in aviation.

While studying German at the University of Edinburg, Brown joined the University Air Squadron and learned to fly. In 1939, while he was in Germany as an exchange teacher, war was declared and he was arrested, and escorted to the Swiss border.

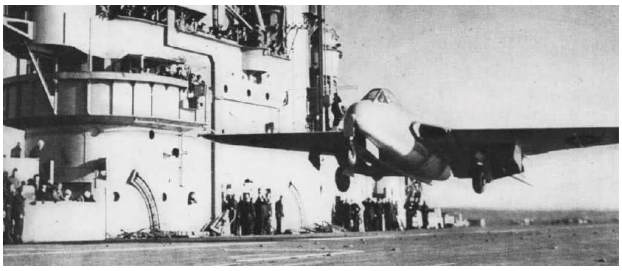
Returning to Britain, Brown attempted to join the Royal Air Force but was told "there was no rush for my services." However the Fleet Air Arm (FAA) could find a "use" for him and he was assigned to *HMS Audacity*, an escort carrier protecting convoys in the North Atlantic. He flew the Grumman F4F Wildcat, know to the British as the Martlet. He was aboard when the ship was torpedoed and sank and was one of the few survivors of the air detachment.

The FAA recognized his abilities and sent him to the Royal Aircraft Establishment, Farnborough as a test pilot. His primary task was determining the suitability of aircraft for naval operations.

The US Army Air Force called upon his knowledge of high speed flight to work out the control problems experienced in fighters when they encountered compressibility and found out the limiting Mach number was around 0.7.

At the conclusion of the war, he commanded the "Enemy Aircraft Flight" which evaluated the capabilities of captured Axis aircraft. He also interview Herman Goering Wernher von Braun, and Willi Messerschmidt among others.

In 1945, Brown was the first pilot to land a jet on an aircraft carrier, a Sea Vampire on *HMS Ocean.*

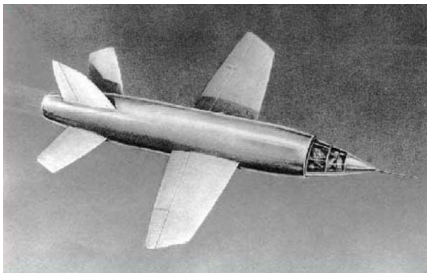


The first landing of a jet aircraft on an aircraft carrier. *(US Naval Aviation News)*

During the Korean War, Brown was seconded to the U.S. Naval Test Center at Patuxent River, Maryland where he explained and demonstrated the concept, now common, of an angled deck.

Brown's postwar career included developmental work on FAA and experimental aircraft Two unique designs were the Miles M.52 and the DeHavilland DH 108 (Swallow).

The turbojet powered Miles aircraft was cancelled for political reasons but was capable of supersonic flight, validated by a Mach 1.3 flight of a scale model. According to the story, the data was turned over to Bell Aircraft including details of the variable incidence tail which was incorporated into the Bell X-1, the first aircraft to break the sound barrier.



Artist impression of the Miles M.52 *(UK Gov't)*

Brown judged the DH 108 a "killer." She was Britain's first delta wing and tail-less design and he was one of the six test pilots who flew her, three of whom were killed in the crashes of all three prototypes.

DeHavilland DH 108 Swallow
(US Naval Aviation News)

In a radio interview, Brown described the characteristics which make for a good test pilot. They served him well. He crashed 11 times.

> *I have a nature that doesn't panic in these situations," he said.*
>
> *My brain goes very sort of cold, and very good at considering things."*
>
> *Nobody is without fear, he said, but there was often a casual attitude among the other pilots.*
>
> *"They'd say "kick your tyres, light your fires, and the last one off's a sissy".*
>
> *"I was not of that school at all. I always put two things down to my survival. I was always meticulous in my preparation.*
>
> *"Secondly, my height - I'm only 5ft 7in - saved me because there were occasions I would have lost my legs in crashes."*
>
> *It was his height that earned him his nickname "Winkle" - short for "periwinkle", a type of small mollusk - from his colleagues.*

Brown was more than a test pilot. He served a spell as naval attache in Bonn, was commander of a naval air station, promoter of the utility of helicopters and was elected President of the Royal Aeronautical Society.

Brown published a number of books worth reading: *Wings on My Sleeve* and *Wings of the Weird and Wonderful* are two recommendations worthwhile for any student of aviation.

Rarely does a man of such consummate skill, audacity, and service pass out way. We are diminished.

AEROSPACE HISTORY

What's In a Name?

Recently The Civil Air Patrol has emphasized "branding" and provided a resource guide to assist CAP public affairs officers in the "branding" initiative. Branding is a strategy which seeks to form a bond, a strong attachment between an organization, its clients, and the public. CAP's branding program hopes to let people know who we are and what we do. If the branding is successful, public awareness will lead to new members, financial support, and additional media coverage.

Major aircraft manufacturer have a history of successful branding. Douglas was known for its excellent line of transport aircraft. McDonnell produced veery successful fighters. Grumman was known as the "ironworks" for the rugged construction of its naval aircraft. Boeing found recognition as the producer of strategic bombers..

Boeing, like most aircraft companies assigned model numbers to its designs. These numbers are a classification scheme which separate designs into separate projects. The commercial success of a design adopted the model number as its official name. The moderately successful Model 247 airliner is one example. Sometimes the aircraft received a popular name for public consumption. The Model 307, the first pressurized airliner, was named Stratoliner beginning a tradition of using the "strato" prefix on later models such as the Model 367 Stratofreighter and the Model 377 Stratocruiser. Well known military aircraft such as the B-17 Flying Fortress is Boeing Model 299 and the seemingly immortal B-52 Stratofortress is Model 454.

In the post WWII period, Boeing sought to expand into the commercial market and missile development and production. To differentiate the different lines, the engineering department decided to set aside model numbers in blocks of 100 with 600 assigned to missiles and 700 assigned to jet transports.

The Air Force need jet tankers to efficiently serve the strategic bomber fleet. Work started on modifications of the propeller driven Model 367 design, its final version, a four engine jet, was assigned model number 367-80. This became known as the Dash 80 and since it was a jet, it would be the first of the 700 series. Marketing did not like the sound of 700 so they settled on the more jazzy number 707. The number 717 was assigned to the -80s USAF iteration, the KC-135 Stratotanker. Then marketing made another decision. All model numbers beginning and ending in seven would be assigned to commercial jet transports. The 717 designation had already been used so the marketers skipped the number.

And so, a long line of successful aircraft came to be: the 707, 727, 737, 747, 757, 767, and 777. There were two anomalies. The 717 was missing and short range, high performance version of the 707-20 was renamed the 720. This was a marketing ploy to help United Airlines who operated the largest fleet of Douglas DC-8s. The marketers wanted to avoid the notion that United was reverting to the 707.

During the years following the adoption of the 707 dessignation, Douglas aircraft had been Boeing's main competitor and was producing a twin engine airliner with rear mounted engines, the DC-9. The DC-9 first flew in 1965 and as might be expected, produced a number of variants, all denominated by a hyphenated suffix such as DC-9-50.

But two years after first flight, financial troubles at both Douglas and McDonnell led to a merger and the new corporation was named McDonnell-Douglas with McDonnell heavily invested in defense and Douglas soldiering on as a producer of the commercial aircraft which which bore the names of McDonnell-Douglas: DC-8, DC-9, and DC-10.

DC-9 production ended in 1982 but was superseded by a series of stretched and improved version of the DC-9 series. This series of aircraft were named the McDonnell-Douglas MD-81, 82, 83, 87, 88, 90 and 95. They all used variations of the Pratt & Whitney JT-8D series engines and varied somewhat in performance.

In 1996, Boeing forked over some 13 billion dollars to purchase McDonnell-Douglas, a deal which was approved in the following year by the Federal Trade Commission. One of the issues was the fact that the McDonnell-Douglas line was similar to Boeing's 737 raising issues regarding restraint of trade and monopoly practices. But Boeing managed to tailor the Boeing and McDonnell-Douglas line to avoid a charge of monopoly and not accidentally, to prevent competing against itself. Now Boeing's only competitor in the large commercial jet transport business was Airbus.

Boeing then resurrected the long unused 717 model number and filled in the missing slot in the 700 series. Now there are two Model 717s: the older Douglas KC-135 and newer Boeing 717, formerly the MD-95. It is a tribute to the manufacturers that both are still in service today.

The final plane in the DC-9, MD-80, and 717 series was delivered in 2006 ending 41 years of commercial construction and the production of 2,400 aircraft. The Long Beach, California plant continued to produce the Air Force's C-17 Globemaster III until 2015 but was shut down after 74 years of service

The DC-9 Line

The original Dash 80 was the prototype of the KC-135/707 so the number was not assigned to any commercial transport. An MD-80 Advanced was planned but abandoned because there was no commercial market for it at the time.

DC-9-32

C-9B Skytrain II, a modified version of the DC-9-10 departs Groton.

DC-9-88 and DC-9-80 designations in existence but were not used for manufactured aircraft.

The DC-9-81 is also known as the DC-9 Super 81 and the MD-81. (Credit; Adrian Pingstone)

MD-82-Note the extended slats. Some -82s were upgraded to MD-88 standards. The aircraft was licensed to be built in China.

The Chinese manufacturer, Comac was accused of pirating the design for their ARJ-21. In all likelihood they may have used some of the tooling supplied under license. The wing is definitely different, a super critical airfoil with winglets designed by the Ukrainian Antonov Design Bureau.

Comac ARJ-21

MD-83 also known as the DC-9-83

The Coastwatcher was unable to locate information on the MD-85, 85, and 86.

MD-87, a shortened version to fill a market niche. Note the beaver tail introduced in this model.

The MD-88, was first with the EFIS cockpit.

No information was found on the MD-89.

MD-90, a stretched and extended range version

The "717" number is restored in the Boeing line.

MD-95/Boeing 717