



Missions for America

Semper vigilans!
Semper volans!

The Coastwatcher

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Connecticut Wing
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09 February, 2016

CADET MEETING

09 February, 2016

Submitted by

C/2nd Lt Daniel Hollingsworth

C/2nd Lt. Michael Hollingsworth spoke about the qualities of a leadership and asked everybody who there favorite leader was and why. The list included General Robert E. Lee, President U.S. Grant, Leonidas, and Vice Admiral Sandra Stosz.

A character development followed on the theme "giving credit where credit is due.

Promotions followed. Cadet Basic Joseph Pineau to cadet airman, cadet Ian Poe to cadet chief master sergeant, and cadet Ryan Poe to cadet senior master sergeant.

SENIOR MEETING

09 February, 2016

Submitted by

Brigadier General Frank Savage

Commander's Call

Maj Paul Noniewicz presented the monthly safety briefing. His experience teaching his daughter to drive and the recent auto accident suffered by a fellow squadron member prompted him to comment on the problem of distractions. Internal distractions might include the use of a phone, GPS, or eating a burger while driving. External distractions might be the sight of deer by the road or an accident in a different lane. Maj Keith Neilson added that the CAP culture of safety requires focused attention when operating a vehicle, using tools, or engaged in any other activity that may result in an accident.

Squadron Commander Lt Col John deAndrade called upon the digital communications committee, SM David Pineau and John Meers to report on their progress creating electronic squadron communications system, both private and public. The committee is evaluating various modes of communication: website, face book, and twitter and should make a final decision on the system withing two months.

Maj Scott Farley noted that two members have received all preparatory training and are ready for qualification flights. A third member must re-qualify and plans are being made to conduct the practical training during the next squadron SAREX.

The squadron calendar was reviewed. Overlapping activities were reconciled and new activities assigned tentative dates.

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	20 OFlight SQ SAREX CyberPatriot?
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 (tentative) 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.

PROMOTIONS



C/Amn Pineau receives his new stripes from his father, SM David Pineau and Lt Col deAndrade.



C/SMSgt Ryan Poe and C/CMSgt Ian Poe advance in the non-commissioned officer grade



PROFICIENCY FLIGHTS

SM Steven Schmidt flew a 1.6 hour proficiency flight with Maj Keith Neilson. Normal, short, and soft field landings and take-offs were practiced at Groton and Chester.

CURRENT EVENTS

The Arsenal Plane

Aviation Week and Space Technology recently carried an article authored by aerospace pundit Bill Sweetman. Sweetman commented on an announcement by Defense Secretary Ash Carter which postulated the development of an "arsenal plane bearing a very large payload of precision-guided munitions and operate in conjunction with Lockheed-Martin's F-22 and F-35. No specific platform was mentioned but some suggest that modified versions of the B-52, B-1B or C-130 might well fill that role. Large cargo aircraft such as the Boeing 747 are also candidates. The use of current aircraft is driven by financial constraints. The development of a dedicated arsenal plane is not possible given the USAF budget limitations.

The concept has been proposed since the F-22 and F-35 are limited in their capacity to carry ordnance and delivery of ordnance involves maneuvering in a high threat area. In order to minimize these limitations and deliver large quantities of precision guided weapons, the arsenal plane is proposed as a solution.

A typical mission profile would use unmanned aircraft or satellites to gather the intelligence needed to conduct an effective strike. All information gathered will be shared using the Link-16 digital datalink system common to the air, sea, and ground forces. The arsenal plane would stand-off in safe airspace and launch its precision-guided missiles at the targets. After the first strike is concluded, the stealthy F-35s could approach

the target and assess the damage. If the primary target is destroyed, the arsenal plane could then target anti-aircraft defenses and make the airspace safer for smaller attack aircraft. If the target is not destroyed, more missiles can be launched from the large inventory which an arsenal plane can carry.

The U.S.M.C. is examining a method to modify their C-130J tankers for tactical weapons delivery. This is not as ambitious as the arsenal plane but will provide data for a proof of concept, although on a limited scale.

The Marine Corps' KC-130J tankers are being modified to the "Harvest Hawk" configuration. The aircraft are fitted with a sensor suite and air to ground missiles and can be used as gunships. Testing is now underway to mount 30mm cannons to supplement the rockets.

Two variations of the missile launching system have been tried. The first is a box launcher mounted on the cargo ramp of a C-130 and contains 10 Raytheon AGM-176 Griffin missiles. The weapon is equipped with pop-out wings which extend its range to nine miles and carries a 13 pound warhead. It has been tested as a precision guided low-collateral damage in Afghanistan. The cargo ramp mounting means that the aircraft must be depressurized to launch the ordnance.



Griffin Launcher Unit on a C-130 cargo ramp

The second method is mounting the launcher in the left paratrooper door. Ten missiles are stored in a "wine rack". The paratrooper door installation allows the aircraft to maintain pressurization. The launch mechanisms can be mounted on the USAF AC-130W Stinger II as well as the Marine KC-130.



Door mounted launcher and "wine rack storage magazine

Raytheon has self-funded the missile's development and based it on existing technology which should make its acquisition cost more reasonable.

In his 1987 novel *The Flight of the Old Dog*, Dale Brown came close to describing the arsenal plane. The "Old Dog" was a heavily modified B-52 "Megafortress" fitted out with a wide range of missiles, computers, and sensing gear. She possessed stealth characteristics and in later novels, replaced the eight turbojets with four turbofans. But this was before data-linking and the aircraft operated alone rather than in concert with other units.

The arsenal plane concept can be traced to 1996. Major Bryan J. Benson, while attending the School of Advanced Airpower Studies at Maxwell, AFB explored the topic and wrote a thesis entitled *Transport Bombers (A Conceptual Shift in Precision-Guided Munitions Delivery)*.

Bryan examined the feasibility of using transport aircraft to carry long range precision-guided ordnance. He suggested the modification of military cargo aircraft and the Boeing 747-400. Essentially, the cargo bay would be fitted with equipment to carry the missiles and move them from their storage racks to mechanisms for launching them. He concludes that the transport bomber is affordable, fits into the current air warfare doctrine of operations, and is technologically feasible.

Bryan retired as a Brigadier General after long service in the Air Mobility Command flying airlift and tanker aircraft. He logged 4,300 hours of flight time with 450 of them as combat and combat support operations.

AEROSPACE HISTORY

The Cat, Dog, and Duck Method of Instrument Flying
by
Stephen M. Rocketto, Lt Col, CAP

Rob McGuire and I recently engaged in a round of correspondence regarding our long term association with aviation. As a high schooler, Rob was an early proponent of model rocketry. In the mid '60s, he was the first champion of this new hobby in Caanan, started a rocketry club at his high school, and demonstrated rocket flight to the local grammar schools. One of his two-stage rockets reached 3,500 feet, he flew camera equipped rockets and took aerial photographs which he then developed in his home darkroom.

As a youth he earned a ham radio operator's license, looked to a career in electronic research and getting a driver's license. His advice to Cadets is "Get motivated, Get a hobby, have fun with it. It may get you the job of your dreams and a lifetime of satisfaction." It worked for him.

Maj Robert McGuire of Meriden's Silver City Squadron now owns a Mooney, is a CAP check pilot, holds the Airline Transport Rating and glider and seaplane instructor privileges, and works as a computer systems architect and avionics software specialist.

My early endeavors followed a similar path. Rocketry was not yet in vogue and radio controlled airplanes were beyond my skill and expense limitations so I settled for rubber band powered free flight models and U-control aircraft powered by the easily obtainable two cycle engines. I recall that my standard power-plant was the OK Cub glow point engine with a displacement of 0.049 cubic inches. The engines used a nitro based fuel and when running, emitted a loud insect-like buzz, not quite the rumble and roar of the real radials found on aircraft such as the T-6 Texan and the Beech 18. The fuel was death on the balsa wood firewalls and a good part of my time was spent reconstructing fuel soaked structural members. My other problem involved my F-82 Twin Mustang. Getting both engines running with sufficient fuel for flight took three of us, two propping and one refueling. The Twin Mustang also gave me early experience in engine-out operations and asymmetrical thrust, all of it bad.

Unlike Rob, I had no interest in a driver's license. I was happy to bum rides from my buddies or used my bicycle or shank's mare for my independent explorations. However my life-long interest in aviation led me past models to full scale man carrying aircraft. Waterford Airport was a scant five miles from home.

In those days, "airport security" was what the air enthusiasts put up to cover their loans so that they had the lucre to fly. I was a regular visitor to Waterford where I made myself useful washing airplanes and handing tools to the bootleg mechanics which were always performing their own maintenance. From time to time, I was rewarded with an local flight or cross-country trip.

By my senior year in high school, I had been working part-time and saving to pay college tuition. In my senior year, I received a substantial scholarship and some loans and realized that I could finance some limited flight instruction. But first I had to get by my mother, a depression era matron who knew the value of a buck and stood for no financial tomfoolery. She never got a driver's license, knew how Notre Dame Coach Knute Rockne had died, seen the wreckage of the *Hindenburg*, and followed the well publicized weekly losses of test pilots at what is now Edwards AFB. Nothing is as obsessive as the mother bear protecting her cub and a formidable obstacle stood in the way of my future in aviation.

I persistently argued that aviation was far safer than she believed. The metal wings of modern aircraft were not subject to wing failure which brought down the wooden winged Fokker F.10 carrying Knute Rockne. Hydrogen was no longer in use and even if it had been, I would not be flying blimps. Test pilots were flying experimental aircraft but I would dance aloft in well proven light planes. I also, given the scholarship, had some surplus money which could be used for flight instruction. My logical approach combined with wheedling, whining, some groveling, and an appeal to Mom's deep-seated desire to see the needs of a son satisfied led to permission to fly. To assure my comfort and safety, she made me a white silk scarf and counseled me, for safety's sake, to fly low and slow.

Now back to Waterford Airport were I engaged the services of Pete Cloutier and his Piper J-3. For instruction, I paid Mr. Cloutier the princely sum of three dollars per hour and aircraft hire, wet, could

be had for eight dollars per hour, a total of eleven dollars for each hour logged dual. Ground instruction was free! I was a ham-handed, club-footer student and the tail-dragging J-3, the short runways and Waterford's siting in a valley made for a long period of dual instruction. But the big event finally came and I soloed the day before I left for college.

Fortunately, Mom did not know the details of flying a J-3. With no electric starter, my first lesson was "propping" the aircraft. The ritual for starting the engine requires two operators and was performed in the following way. One man sat in the cockpit, let's call him the pilot, and the second man stood immediately in front of the aircraft, the "propper." The ritual called for a series of commands and replies. First, the "propper took position in front of the aircraft. He stood upright and close to the prop. In order to get further from the prop, there was a tendency to lean forward and risk falling into the propeller which was an invitation to disaster. The "propper" called for "brakes on, throttle cracked, and magneto switch off." The pilot replies "brakes on, throttle cracked, switch off." The "propper" tugged on the aircraft to assure that the brakes were set and pulled the propeller through about eight blades which delivered fuel to the induction system. Then the "propper" then commanded "brakes on, throttle cracked, magneto switch on." The pilot checked the brakes and throttle position and switched the magnetos to "both" and replied "brakes, throttle cracked, magneto switch on." The "propper" grasped the propeller about half way between the hub and the tip and flicked it down. With luck the engine started on the first pull. Cloutier could manage this feat by hanging out of the right side of the Cub, left hand on the door frame, and pulling the prop through with his right hand. I never tried this trick but I did learn how to prop an aircraft and never once did Mom ever learn about this unique aviation skill.

I also learned how to test the fabric of the Cub. I had told Mom that the wooden wings were no more but never apprised her of the fact that the skin of the aircraft was nitrate doped cotton which

deteriorated under the sun's ultraviolet rays. Testing was done with a small plunger which when placed against the skin, determined how much force was needed to puncture it. The hole was then patched with a piece of cotton, some glue, and some dope. I decided that Mom was better off not knowing that the material which comprised the wings and fuselage of the Cub was the same as her dress.

Finally, the instructors all learned their trade in the days when engines were far less reliable than those of today. Engine failures were more common and expected. Consequently, every landing was dead stick. When passing the end of the approach end of the runway on downwind, the engine was throttled all the way back. A normal approach was flown and you were allowed a very brief burst of power on final to "clear" the engine. I thought it best not to inform Mom of this prudent need to practice a power-off landing. There is no percentage in alarming your mother.

The realities of paying tuition, room, and board pretty much ended my nascent aviation career though I did manage to sneak in one flight out of East Boston's Revere Airport. The aircraft was an Aeronca 7AC Champ and I flew under the tutelage of Mr. Rodney Goreham, a WWII combat veteran of the Royal Canadian Air Force. Goreham has served a combat tour over Germany and been shot down so he had nerves of steel but a desire to live out a natural life span. Still ham-handed and club footed, I was on a final and too high so I attempted what I thought was a forward slip and drew an immediate physical response from Mr. Goreham. He seized the controls, entered coordinated flight, and got back to a safe airspeed. His verbal reprimand to the best of my recollection was "Don't ever do that again in one of my airplanes!" Cloutier and Goreham have both gone west and Waterford and Revere are now in the land of lost and forgotten fields but I have always cherished those early days.

We had no radios and the only instruments in the J-3 were an altimeter, airspeed indicator, tachometer, alcohol filled magnetic compass (fondly called a whiskey compass), and oil temperature and pressure gauges. The fuel gauge was mounted on the cowling, a metal rod attached to a float in the fuel tank. The length of rod visible indicated the fuel state

With neither a gyroscopic attitude indicators nor bank and turn indicator, instrument flight became problematic. With no radio, we were never distracted by air traffic controllers and could devote our full attention to aircraft control. The solution was simple. We always carried a cat, a dog, and a duck on each instrument flight. Cats always stand upright so when placed on the top of the instrument panel, the angle to which the feline leaned indicated the degree and direction of bank. If the cat was standing on the ceiling, a roll brought you back to straight and level flight. But cats have a propensity to sleep so the dog was needed to keep the cat awake. And that leaves the duck. In bad weather a duck will always be able to find a body of water and land safely. In extremis, we could toss the duck out the door and follow him down. This worked best if you are flying a seaplane.

In order to remedy this deficiency, I have applied to the FAA to allow me to test using a dove during instrument flight for landplanes. I got this idea reading *Genesis 8:6-12* and Noah's use of a dove to find dry land. I have considered using a turkey buzzard because its high wing loading forces it to take off from relatively flat level surfaces, ideal for a forced landing. Its rather large size will restrict its use to larger aircraft and its filthy hygienic practices will only appeal to the less fastidious pilot.

If neither method works, after the crash you can salvage the whiskey compass, break the glass face, and drink the contents which will steady your nerves and help you concoct a good story for the accident investigators.