



Missions for
America

Semper vigilans!

Semper volans!

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13 March, 2019

SQUADRON CALENDAR

16 MAR-CTWG SAREX
19 MAR-TRCS Meeting
26 MAR-TRCS Meeting
29-31 MAR-Cadet Competition-Camp Niantic
30 MAR-Aircrew meeting in Hartford
30 MAR-CTWG Rifle Safety and Marksmanship
02 APR-TRCS Staff Meeting
06 APR-CTWG SAREX
09 APR-TRCS Commanders's Call-Blues
16 APR-TRCS Meeting
23 APR-TRCS Meeting
27 APR-CTWG Rifle Safety and Marksmanship
30 APR-TRCS Meeting
17-19 MAY-USAF Evaluation of CTWG
26 MAY-Ledyard Memorial Day Parade
15 JUN-Commander's Cup Rocket Contest
22 JUN-CTWG Annual Conference
04 JUL-Groton 4th of July Parade
10-17 AUG-CTWG Encampment

CADET MEETING

13 March, 2019

Lt Drost offered a Character Development Lesson on the concept of “grit.”



Former C/Col Daniel Hollingsworth, now a cadet at the U.S Military Academy contributed the lessons he has learned doing difficult tasks and achieving high goals. Hollingsworth emphasized the when undertaking a task, one exert a full effort and always remind themselves that one does not give up, never quit. Success will follow.

SENIOR MEETING

13 March, 2019

Commander's Call

Maj Noniewicz led a safety session pointing out a downward trend in airline accidents. The group also discussed the importance of a stabilized approach, the go-around decision, and the necessity of controlling airspeed and bank angle during the go-around.

Maj Farley pointed out that the various rules and procedures issued by wings are volatile and unknown to new members. To correct this deficiency, the Squadron has created an accessible operations book in which new wing edicts will be entered. The first two pages reference the “hidden”CAP radio switches in the Cessna 182 and the method of disengagement of the 182's -700 autopilot.

The Squadron reviewed the Goals statement and the upcoming calendar. Members commented on their area of responsibility.

PROMOTIONS AND COMMENDATIONS

Promotions

Six cadets and four senior were promoted.



Cadets L. Meier, R. Meier, and Alexander earned the Curry Achievement and were promoted to C/Airman.

Cadet Rathbone earned the Arnold Achievement and was promoted to C/Airman First Class.



Cadet Higganson earned the Feik Achievement and was promoted to C/Senior Airman



Cadet Diaz earned the Lindbergh Achievement and was promoted to C/Master Sergeant



C/CMSgt Rhys Thornell received the Air Force Association Medal for a year of outstanding leadership and academic achievement

Thomas Ciniglio was promoted to first lieutenant as was Guy Bradstreet. Thomas Seidel was promoted to second lieutenant.



Operations

Lt Michael Kopycienski is commended for steadfastly maintaining the weekly CTWG radio net with his team of cadet operators and for his participation in special government communication exercises.



Kopycienski acolytes Trinidad and Burton working the net.

Cadet Daniel Martin is commended for his excellent organization of the orientation flight program on Saturday.

ORIENTATION FLIGHTS

09 March, 2019

Four cadets, Rachel Alexander, Wesley Boudreau, Lillian Meier and Rowan Meier received their first orientations flight. Flights were flown by Majs Noniewicz and Farley between Groton and Windham.

All but one TRCS cadet has now received their first orientation flight.

GROUND TEAM TRAINING

Maj Bourque conducted a Ground Team 3 training session on Saturday, the 9th. Ten students attended and received training in route marking, litter carry, hasty search, attraction techniques, and action taken if the objective is found.

Cadets Burton, Trinidad and seniors Thornell, Bradstreet, W. Meier, and M. Kopycienski worked on the above named techniques.

Cadets L. Meier, R. Meier, and Jeznak studied familiarization and preparation section of the syllabus.



Lancaster releasing Grand Slam on the Arnsberg Viaduct.

(Credits: Imperial War Museum)

AEROSPACE HISTORY AND CHRONOLOGY

March 13-14, 1945 – Squadron Leader C.C. Calder, 617 Squadron, the RAF's Dam Busters, drops the first “Grand Slam Bomb.” The bomb is a 22,000 lb behemoth and the largest non-atomic aerial bomb used in combat until the United States dropped a GBU-43/B in 2017 in Afghanistan.

The target was the Schildesche viaduct near Viefelfeld, Germany. The viaduct is a railroad link over the Werre River connecting Berlin with the industrial Ruhr basin. Some 3,000 tons of bombs had been dropped with little damage done. Two Lancaster's carrying the “Grand Slam” and 28 others carrying the “Tall Boy Bomb”, the 12,000 pound little brother of the “Grand Slam” were assigned the mission. The bombs had been designed by Barnes Wallis, an eminent engineer, to destroy massive hardened targets which had proved impervious to lesser ordnance.

The “Grand Slam” could only be carried by a modified Avro Lancaster which had to have its bomb bay door removed. The bomb, when dropped from 12,000 feet, reaches a near supersonic speed, deeply penetrating the ground, detonating, and created a massive shock wave akin to an earthquake. Calder's bomb struck 80 feet from the viaduct, forming a 100 foot crater, collapsing part of the structure. A rain of “Tallboys” followed and the viaduct was put out of action for the rest of the war.

The MOAB (Massive Ordnance Air Blast better know as the “Mother of All Bombs”) differs from the “Grand Slam” in that it is not a penetrator but designed to destroy surface targets. It weighs 400 pounds less than the “Grand Slam” but contains roughly twice the explosive material and delivers twice the blast effect. The difference is that the “Grand Slam” required a very heavy cast iron casing to allow it to penetrate without breaking up but the MOAB needs a much lighter casing so it carries more explosive.



RAF technicians moving a “Grand Slam.”



The MOAB is guided to its target by GPS



A C-130 delivers the MOAB. It is pallet mounted and extracted from the rear by a parachute. The shroud lines are visible and the pallet is separating.
(Credit: USAF)

After World War II, the USAF developed the T-12 Cloudmaker, a 44,600 pound penetrator bomb but it was never used in combat.



Former TRCS Cadets and seniors stand by the T-15 at Army Ordnance Museum, Aberdeen, Maryland in 2005. From left to right: Shawn East, Jonathan Scanell, Michael Molinari, Kevin Roe, accompanied by Capt Rocketto and Maj Bourque.

March 14, 1885 – Gervais Raoul Victor Lufbery, American World War I pilot, is born in France to an American father and a French mother. His mother died when he was only one year old and his father traveled to family in Connecticut. Raoul was raised by his maternal grandmother. When he was 21, he decided to meet with his father and set sail to the United States but his father, at the same time, returned to Europe. Raoul stayed with relatives in Wallingford for a time, joined the Army and served as a rifleman in the Philippines. In 1912, he journeyed to French Indochina where he met Marc Pourpe, a French aviator and served as his mechanic, touring Asia, Africa, and Europe. In 1914 when World War I started, Pourpe joined

the French Air Force and Lufbery, the Foreign Legion. Pourpe was killed and Lufbery was accepted for pilot training.



After completion of training, he was assigned to the *Escadrille Lafayette*, a unit made of wealthy American volunteers. Lufbery assumed responsibility for the squadron mascots, Whiskey and Soda, a pair of lions!



The Escadrille, Whiskey and Soda at Chaudron, France.

During 1916, he scored 16 confirmed air kills and in 1917 was accepted by the U.S. Army Air Service as a major and was charged with organizing the 94th (Hat in the Ring) Aero Squadron flying the Nieuport 28. As the only combat veteran, he trained his men in for aerial warfare including future aces, Eddie Rickenbacker, Reed Chambers, and Douglas Campbell.

In his autobiography, Rickenbacker speaks of Lufbery's guidance after he flew with him on his first orientation flight. After landing, Rickenbacker mentioned the anti-aircraft fire but noted the absence of other aircraft. Rickenbacker relates that Lufbery chuckled and asked

“Sure there weren't any other airplanes around Rick?”

“Not a one.” Rickenbacker replied.

Lufbery shook his head. “Listen. One formation of five Spads crossed under us before we passed the lines. Another flight of five Spads went by about fifteen minutes later, about 500 yards away....And there were four German Albatrosses ahead of us when we turned back and other enemy two-seater closer to us than that. You must learn to look around.”

Rickenbacker took the lesson to heart.

Lufbery met his death on May 19th, 1918. There are two accounts of his demise. The popular legend states that after attacking a German aircraft, the rear gunner hit him and his aircraft caught fire. To avoid a fiery death, he jumped clear. The U.S. Air Service did not equip the pilots with parachutes and he died on impact with the ground. However, subsequent research indicates that he may have unfastened his safety belt to clear a gun jam and the plane flipped upside down and he fell out.

He is interred in Paris at a memorial dedicated to the Lafayette Escadrille. He is also claimed by this family's home town, Wallingford, Connecticut which maintains a park named in his honor and the Major Raoul Lufbery VFW Post 591.

March 15, 1947 – The Vought V-173 (Flying Pancake) is retired and two days later, the contract for the Vought XF5U is cancelled.

The “Flying Pancake” design was conceived by Langley Memorial Aeronautical Laboratory researcher Charles H. Zimmerman, who specialized in aircraft stability, novel airfoils, and short and vertical take-offs and landings. He worked on the design for over 10 years and the Navy expressed interest in the aircraft for use on battleships and cruisers without the necessity of using catapults.

The V-173 was the prototype developed under Navy contract and constructed using wood and canvas and equipped with two 80 HP Continental engines. Boone Guyton, Vought's Chief

Experimental Test Pilot, noted for his developmental work on the Corsair, flew the first flight. Charles Lindbergh also participated in the program.



V-173 on its maiden flight. (Credit: Vought Aircraft)

In his book *Whistling Death*, Guyton relates the near disaster of the first flight. His major concern was with the geared transmission system that transferred power from the engine to the propeller. Gear box failure on one engine would create a huge asymmetric thrust and make the aircraft uncontrollable.

Taking off and headed over Long Island Sound, Guyton found that he could not bank the aircraft, a problem afterwards attributed to unbalanced ailevators, the unique combined ailerons and elevator control surfaces. He relates that:

I was caught in a peculiar twilight zone of sluggishness, staggering flight, and a crash landing that looked certain. I had lost charge....Try something, Carefully I pushed on the rudder and held it. Momentarily it forced the nose left as he Wing skidded...But I had gained a few degrees...I did it again. Progress...With continual repetitions, I finally had the nose pointed for home...Descending over the road, the fence, and then the runway, suddenly, against all of my piloting instincts I found myself applying full power ...and pulling the nose up as hard as I could...The V-173 nearly stopped in the air and gently settled to a landing. It was mind-boggling, The landing roll was an incredible 30 feet...Mostly I was elated for the boyish-looking man (Zimmerman) with the beaming smile, rushing up with both hands clenched above his head, His ten years of tireless effort had come to fruition.

Almost 200 test flights were conducted and led to the all metal XF5U-1 equipped with a pair of Pratt & Whitney R-2000 radial engines developing 1,350 HP each. The aircraft was fast and maneuverable but its long development time brought it into the nascent jet age. The Navy lost interest and cancelled the contract.



The Big Brother-XF-5U-1

The V-173 (below) has been restored by Vought workers in Texas and now on display.



March 16, 1916 – The First Aero Squadron supports General Pershing's punitive expedition into Mexico chasing Pancho Villa after his raid on Columbus, New Mexico. This is the first Air Service mission over a foreign country.



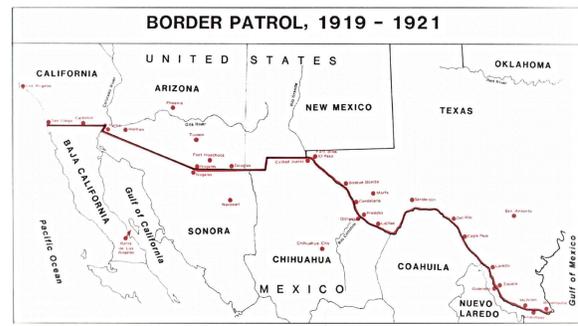
First Aero Squadron Curtiss JN-3 flight line, Columbus, New Mexico.

1919 and the Air Service is back on the Mexican border trying to stop the northward flow of illegal

aliens and narcotics and the southern flow of weapons. Around a dozen squadrons are deployed from the Pacific to the Gulf.



Left: Cavalry and a 12th Aero Squadron DH-4 on the border. Right: Mexican Border Service Medal.



Border Patrol bases during the 1919-21 campaign. (Credit: USAF Historical Research Center)

As the French say, *Plus les choses changent, plus ils restent les mêmes*, the more things change, the more they say the same.

Today the air patrols are back on the border, not flown with Curtiss Jennies and Dayton-Wright DH-4s but with Predators, single and multi-engine turbine aircraft, light prop planes, and helicopters manned by the US Customs and Border Patrol.



Predator B

DHC-8-200



Cessna 550



Cubcrafters Top Cub

Eurocopter AS350B-3

(Credits: US Customs and Border Patrol)



Agricultural Extension Agent at Louisiana State University and teamed up with Dr. B. R. Coad, a US Department of Agriculture entomologist to interest the Army in using their aircraft to spread the dry powder calcium arsenate from the air.



Army Air Service Duster

The Huff-Daland Aero Corporation took saw an opportunity and formed a crop dusting deivision, employing Woolman as an executive. Eventually, Huff-Daland expanded into air mail and passenger transport and Delta Air Service emerged with Woolman as General Manager.

March 17, 1923 – The Army Air Service takes on crop dusting from Scott Airport supporting the Agriculture Research Laboratory, Tallullah, Louisiana by spreading calcium arsenate on Louisiana cotton fields in an experiment designed to halt the depredations of the boll weevil.



An Huff-Daland and the Delta Air Corporation Logo

*Well, the Boll Weevil and the little black bug
Come from a Mexico they say
Came all the way to Texas
Just a lookin' for a place to stay*

*Just a lookin' for a home
Just a lookin' for a home*

-Traditional Blues Song-

The rest is history. Today, Delta Airlines is the oldest airline still operating in the United States and maintains a fleet of around 900 aircraft.

March 18, 1945 – First Flight of the Douglas AD Skyraider.

The boll weevil is thought to have immigrated from Mexico in the late 19th century. It feeds on cotton buds and flowers. By the 1920s, U.S. cotton growing areas were infested and the industry was in ruins. Today, the weevil has been eliminated from all cotton growing states except parts of southern Texas.

Scott Field is still active and was important in the formation of Delta Airlines. Collett Woolman, a founder of Delta Airlines. Woolman was a

The Skyraider, another great design from the drawing board of Ed Heinemann, is arguably one of the greatest attack aircraft ever produced. The Navy was looking for a carrier based long range aircraft to replace the highly successful Douglas Dauntless and Grumman Avenger and the less than sterling Curtiss Helldiver. The original designation was XBT2D-1 standing for experimental bomber/torpedo plane and ought not be confused with a Douglas contemporary, the XTB2D-1 Skypirate which was cancelled after only two prototypes had been built.



The Prototype Skyraider

When the Skyraider was accepted for service, its new designation became the AD-1 Skyraider and when in 1962, the Department of Defense adopted a uniform naming system for all services, the Skyraider emerged as the A-1. By the time that the last Skyraider left the production line, over 3,000 had been built, the most common being the A-1H (AD-6). Pictures of some examples follow:



A-1E (AD-5) in South Vietnam Air Force livery.

A-1H (AD-6)



EA-1F at Pima before transfer to Navy museum at Pensacola.

French Air Force AD-4A at Le Bourget's Musée de l'air et de l'espace



A Royal Navy AD-4W known in the Fleet Air Arm as the AEW.1

Superb as a dive bomber and in the close air support role, the aircraft was extraordinarily versatile with conversions ranging from electronic warfare models to target tugs.

She carried a lot of nicknames, the most common being SPAD, a tribute to a World War I fighter. The operational history of the SPAD included the successful attack on Korea's Hwachon Dam, last U. S. Navy's last torpedo attack and the Congressional Medal flight of Maj. Bernie Fisher who landed his aircraft under fire on a contested airstrip and picked up a comrade who had crash landed.



A torpedo bearing Skyraider on its way to the Hwachon Dam. The snub-nose on the torpedo is a temporary cover designed to protect the warhead upon entry to the water. (Photo credit: U.S. Navy)

The SPAD carried a wide range of ordnance, nuclear weapons, bombs, rockets, and four 20 mm cannon but its most unusual "bomb" was delivered on "Operation Sani-Flush." A damaged toilet which was scheduled to be "deep-sixed" was fitted with a set of fins and a fused nose and dropped over Viet Cong forces in the Mekong Delta.



Commander Bill Stoddard, VA-25, prepares for launch carrying a toilet with a bomb's nose and tail fins.

One of the better books to come out of the war in Southeast Asia is Richard S. Drury's *My Secret War*, an account of his experiences flying the Skyraider in Laos. Drury is an interesting character loves flying and who managed to wangle a place for himself as a Skyraider pilot. He relates that

With the A-1, I began to enjoy a full flying world....The airplane embodied a special airman's philosophy to me, which was the one reason I had to fly it. Instead of myriad electronic systems and computers and instrumentation, the A-1 was a basic airplane. Its pilot had to rely on the old aviating skills for the most part. The airplane had a conventional landing gear configuration know as a taildragger. This feature, coupled with the immense engine, could made for some serious handling problems unless the pilot was sharp enough to keep well ahead of the machine. That had great appeal to me, as if the airplane simply said that if its pilot was fool enough to understand it, he could find great joy in the taming. And it had one engine and most models but one seat. That about tied up the package as far as I was concerned. Further, it didn't fly at high altitudes, didn't go super fast and survived only by the capabilities of its pilot, a man who had to know more about flying airplanes than computer programming. I was completely hooked.

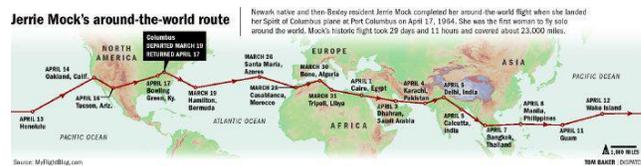
And so Drury encapsulated the essence spirit of an aviator and the essence of the the Skyraider.

March 19, 1964– Geraldine Mock departs

Columbus, Ohio in a Cessna 180 Skywagon named *Spirit of Columbus*. She returns on April 17th, the first woman to fly around the world. Her flight covered 22,860 miles with 21 stopovers.



Jerrrie Mock and the route of her circumnavigation. (Credit: Sheldon Ross. Columbus Dispatch)



A side light to the flight is that another aviatrix, Joan Merriam Smith flying a Piper Apache named *City of Long Beach* departed Oakland, California two days earlier in an attempt to duplicate Amelia Earhart's flight. Smith finished 17 days after after Mock but covered 27,270 mile with 34 stopovers. Although the women were not competing, the media sensationalized the flights as a race.



Joan Smith and the *City of Los Angeles*