



*Missions for America
Semper vigilans!
Semper volans!*

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25APR-TRCS Meeting
02 MAY-TRCS Meeting Staff Meeting
09 MAY-TRCS Meeting Commander's Call
16 MAY-TRCS Meeting
23 MAY-TRCS Meeting
27 MAY-CTWG Rifle Training #3
30 MAY-TRCS Meeting
29 JUL-06 Aug-CTWG Encampment
19 AUG-Connecticut Aviation Day-GON
15-17 SEP-CTWG Conference
27 SEP-Scarecrow Festival-Preston

*United States Occupation of Vera Cruz
and
first combat flight by U.S. naval aircraft.
April 25, 1914*



*Pobre México! Tan lejos de
Dios y tan cerca de los
Estados Unidos
Porfirio Diaz, President of
Mexico*

CADET MEETING

*Submitted by
C/Amn Lucas Dellacono, Cadet PAO
04 April, 2023*

The meeting started with the monthly physical tests: mile run, push-ups, sit-ups, and ball throw. Cadets supported each others efforts and a number of personal “bests” were set.

Cadets returned to the squadron and participated in a teamwork exercise. This exercise involved two teams of cadets working together to stack cups without using their hands

Chief Master Sergeant Buchko presented a short brief on the importance of aviation to our national security.

11 April, 2023

Cadets cleaned up the squadron for the upcoming SAREX meeting.

After cleaning, cadets participated in a personal development session led by Capt. Steven Deignan-Schmidt. The topic was perseverance and was illustrated by the incredible survival epic led by Ernest Shackleton. After their ship was crushed in the ice, he led the entire crew to safety without losing a man.

SENIOR MEETINGS

*Submitted by
2d Lt Joanne Richards, PAO*

04 April, 2023

Department heads reported on the status of their departmental responsibilities.

Capt Spreccace reported Ice Patrol has been completed with 12 sorties flown. The number of flights were down primarily due to weather.

The operation plans for LISP 2023 has been written with and expected start date in late May.

Lt Richards reported on dates for future recruitment opportunities. Aviation Day at the airport and Scarecrow Festival in Preston are listed on the Coastwatcher calendar.

Capt Spreccace reported that three potential members were in attendance and a sponsor member has enrolled as a senior member.

Cadet Commander Thornell reported the Cadets received the Thames River Quality Cadet Award for the 7th year in a row.

Capt Kopycienski gave a brief safety overview of hazards to be aware of when using lawn equipment as the mowing season is soon to start.

11 April, 2023

Eighteen members gathered to complete quarters preparation for the upcoming SAREX. Lt Pineau supplied pizza, chips and soda for the workers.

*Joint Meeting
18 April, 2023*

Chet Moore, Tower Chief at Groton-New London Airport briefed a joint meeting of the cadet and senior members of TRCS and focused on the serious shortage of good training opportunities for

the new pilots and controllers who are now in demand.



Moore has been at the Groton Tower for 29 years and in 2017, under his stewardship, Groton was named as the New England facility of the year. Chet is most proud of the large number of successful controllers which he has trained and now serve at air traffic control centers throughout the nation. He has a positive attitude towards safety and regards mistakes as opportunities to advance the safety mission.

PROMOTIONS

Four cadets were promoting or earned achievement awards.



Cadet Cameron Watkins received the Curry Award and was promoted to Cadet Airman.



Cadet Brock Isenburg and Cadet Lucas Dellacono received the Wright Award and were promoted to Cadet Staff Sergeant. (Photo Credits: C/SSgt Lucas Dellacono)

Cadet Chief Master Sergeant Nicholas Buchko received the Armstrong Award. This is the second stage for a C/CMSgt and prepared his for promotion of Cadet Second Lieutenant.



Ten cadets, five senior members, one sponsor and five family members attended.

*CTWG SAREX
submitted by
Capt Jennifer Thornell*

On April 15, Groton hosted a wing wide SAREX.

Three ground teams deployed. GT1 and one of the two aircraft participating located an emergency locator transmitter. GT2 conducted a ramp search at Groton for a missing plane from Willimantic.

FIELD TRIPS AND TRAINING

*Bradley Tower Tour
submitted by
Maj Roy Bourque*

On Saturday April 8th the Squadron joined Danielson squadron for a tour of the Bradley airport tower set up by Capt Kris Golden.

We were met by Wes Miles, TRACON Operations Supervisor who gave us a tour of the TRACON facility and by Zachary Boivin, Tower Operations Supervisor, who gave us a tour of the Tower Facility.

Thames River attendees were SM Knets, Major Bourque, and cadets R. Kreyssig, M. Fago, A. Stefanelli, M. Trotochaud, and A. Knets.

*Planetarium Visit
submitted by
Capt Jennifer Thornell*

On April 14th, Cadets from both Danielson and Thames River squadrons and their families visited Eastern Connecticut State University's Robert K. Rickware Planetarium.

Dr. Zoran Pazameta, Professor of Physics and Astronomy explained the ecliptic, the plane defined by the earth's orbit around the sun, recognition of important constellations, the possibility of life in the sub-surface water beneath the icy crust on Europa, Jupiter's 4th largest satellite and the reasoning for the demotion of Pluto to a dwarf planet.



C/Capt Kitchin zeroing in on an beacon fix while C/CMSgt N. Buchko takes a compass heading and two cadets record the readings. (Photo Credit Maj Foy Bourque)

GT3 was the CTWG small unmanned aircraft systems team (sUAS) which launched drones which photographed three different targets.

WHERE ARE THEY NOW

The Coastwatcher just received a note from Dave Meers, a former senior member now retired in Mahone Bay on the southeast shore of Nova Scotia.

His son, former cadet John Meers is deploying with the Canadian Army to Camp Adazi, Latvia, as part of NATO's support force. John is qualified to fly the RQ-11B Raven-B (Canadian designation-CU-179) drone. It is capable of providing real-time color or infra-red imagery for surveillance, target acquisition and reconnaissance operations.



Dave on his promotion to 2dLt and John in the intake of a P&W 4000 engine during a field trip.

FEATURE ARTICLE

*Boom-Boom
Twin Boom Aircraft
Part 9
Experimental Aircraft and Spacecraft

McDonnell XV-1*

There is no free lunch for the aeronautical engineer. The versatility of helicopters has been paid for cruise speed limited by the rotor system which the forward speed of the aircraft and the forward speed of the advancing rotor are added, airflow over the advancing rotor approaches the supersonic regime and drag increases dramatically. In 1951, the Air Force sought a solution and Bell, Sikorsky and McDonnell responded.



XV-1 (Credit:NASA)

The design, commonly called a convertiplane, featured stub wings, a three bladed main rotor powered by high pressure air tip jets and a 525 hp radial engine powering a pusher propeller and compressors for the tip jets. Each of the tip jets featured a combustion chamber where fuel was burned for additional thrust.

During forward flight, the engine was disconnected from the compressors and drove the pusher propeller. The stub wings provided 80% of the lift while the rotor autorotated at about 50% of its normal rpm rate. At the final stage of its development, the XV-1 became the first rotorcraft to exceed 200 mph, exceeding the helicopter speed record by almost 50 mph.

Alas, the increase in complexity of the design negated the speed advantage and the high noise level generated by the tip rotors led to the abandonment of the design.

*Scaled Composites White Knight One and
SpaceShip One*

Without doubt, Burt Rutan sits in the pantheon of aircraft designers along with notables such as Jack Northrop, Ed Heinemann, Fred Weick and Lloyd Stearman. His Scaled Composite Models 316 SpaceShipOne and 318 White Knight One paired together to become winners of the \$10 million dollar Ansari X Prize for achieving sub-orbital flight by a privately funded space craft. Both sport twin booms.



White Knight and SpaceShipOne. Note the similarities of the forward portion of each aircraft. White Knight also served as a flight trainer for the SpaceShipOne crew.

SpaceShipOne is air launched by its mother ship, White Knight. Once they reach an altitude of about 50,000 feet, SpaceShipOne is dropped and its rocket engine is ignited and a steep climb initiated. At the end of the rocket burn, SpaceShipOne is traveling at around Mach 3.5 and it cruises ballistically until it exceeds the 62 mile Kármán line, defined as altitude at which space flight commences. Its initial descent is controlled by the unique high drag configuration in which the twin

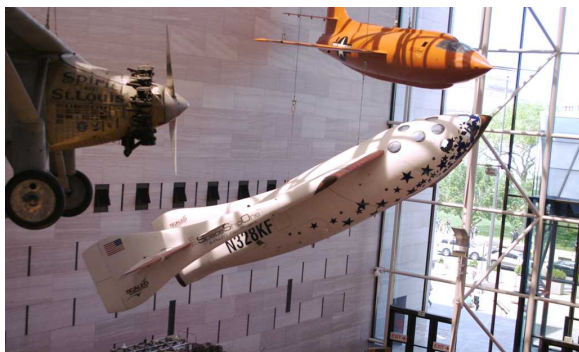
boom tail surfaces are lifted and used as air brakes. Walton and a pilot who owns several warbirds.



Burt Rutan poses with SpaceShipOne's tail in the high drag configuration needed to slow its re-entry into the atmosphere.

For landing, the tail returns to its normal position and a SpaceShipOne resumes flight as a normal glider and lands conventionally after about a 20 minute flight. White Knight One, powered by a pair of General Electric J-85 after-burning turbojets returns at a more sedate pace and lands a few minutes after SpaceShipOne.

SpaceShipOne now resides in the National Air and Space Museum next to the Spirit of St. Louis and the Bell X-1.



Lindbergh's Spirit of St. Louis and Yeager's Glamorous Glennis flank Michael Melville's SS1.
(Credit: ZnU)

White Knight One may be found in the Flying Heritage & Combat Armor Museum in Paine, Washington. The museum was founded by Microsoft's Paul Allen who ponied up the \$25 million dollar development cost needed to win the \$10 million dollar prize! However, the museum is now owned by Steuart Walton, grandson of Sam

AEROSPACE CHRONOLOGY FOR THE WEEK

April 19, 1984 – First flight of the IAI Astra. Israel Aircraft Industries developed the Astra from its Model 1124 Westwind which had originally been designed by Aero Commander as the Jet Commander.



Aero Commander had been acquired by North American Rockwell which produced the Sabreliner so it had to sell off the Jet Commander to avoid anti-trust action by the federal government. In a complex series of business deal And reorganizations involving Galaxy Aerospace, a General Dynamics company which held the type certificate, Grumman Aircraft and its spin-off, Gulfstream, the Astra became the Gulfstream G100.

April 20, 1964 – First flight of the Lockheed L-100 Hercules. The L-100 is the first of the models of the Hercules which Lockheed produced for the commercial market. A total of 114 left the Marietta, Georgia plant before delivery ended in 1992. An updated version, the LM-100J was released in 2019.

Delta Airlines owned three and operated five others on short term lease and operated them between 1966 and 1974.



Delta L0100-200 Cargo Plane (Credit: Bill Larkins)

April 21, 1972 – Apollo 16 lands in the Descartes Highlands on the moon. John Young and Charlie Duke spend 71 hours on the lunar surface while Ken Mattingly manned the orbiting command module.



John Young jumps 42 cm high and salutes the National Ensign. The Lunar Module Orion is to the left. (Credit: Charlie Duke)

Young and Duke collected 211 lb of lunar rocks including the largest, “Big Muley.” Mattingly made 64 orbits and operated cameras and data collection instruments.

April 22, 1985 – Pan Am sells its Pacific division to United Air Lines for \$750 million. The deal includes all Pan Am's East Asia and South Pacific routes as well as 11 Boeing 747SP's, 6 Lockheed “TriStars” and one McDonnell Douglas DC-10.



This United TriStar still bears an “N” number with a “PA” suffix.

2700 PanAm employees were transferred as well as landing rights in 13 cities in Asia and the South Pacific.

April 23, 1956 – First flight of the Douglas C-133 Cargomaster. The Cargomaster was a turboprop strategic airlifter which filled in the gap between the piston engine Douglas C-124 Globemaster II and the Lockheed C-5 Galaxy in 1970.



The C-133B at Bradley before the tornado.

The Bradley Air Museum, now the New England Air Museum had a C-133B which was destroyed by the 1980 tornado. The B model was a modification which could transport the Atlas ICBM.

April 24, 1943 – The first class of the Women Air Force Service Pilots (WASPS), Class 43-1, graduated from the four-month flight training program and earned their wings as U.S. Army pilots.

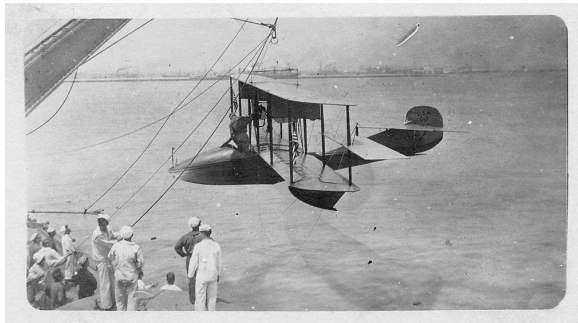


A WASP class passes in review (Credit: USAF)

The class entered with 38 trainees and 24 graduated. Each woman had a civil pilot’s license and at least 200 hours of flight time. Over 25,000 women applied and approximately 1,900 were accepted. By the end of the war, 1,074 had graduated.

April 25, 1914 – The first combat flight by a U. S. Navy aircraft takes place. It is a flight to observe Mexican positions during the Veracruz Incident.

On April 25, Lt. P.N.L. Bellinger, Naval Aviator Number 8, flew his Curtiss AB-3 flying boat to search for sea mines in the harbor. He was the first U.S. military aviator to fly a combat mission. The aviation squadron was commanded by John Henry Towers, Naval Aviator Number 3, based on the battleship *USS Mississippi* and cruiser *USS Birmingham*.



Lt Bellinger and his AB-3 are craned off the USS Mississippi.

FEATURETTE

SpaceShipOne is notable because it was developed with private funding. If we define a space plane as a vehicle which can attain an altitude above the Kármán line, return to earth flying like an aircraft, landing on a runway and is reusable, then there are at least four other examples.

The first is the North American X-15 which exceed the 62 mile altitude twice in 1963, both piloted by NASA's Joe Walker. Three were built and both space flights were flown in X-15 #3.



Joe Walker and X-15 #3.

Between 1981 and 2011, The Space Shuttle Orbiter fleet accomplished the feat 134 times.



*The last mission, STS-135. Atlantis is photographed from the International Space Station. The cylinder in the aft portion of the cargo bay is the Multi-Purpose Logistics Module.
(Photo Credit: NASA)*

There have also been two unmanned space planes. The Soviet *Buran* made its one flight in 1988 controlled from launch to landing by computers.



Buran, OK-GLI, an atmospheric test vehicle fulfilling missions similar to the Enterprise.

The fourth space plane is the Boeing X-37 Orbital Test Vehicle. Three have been built and six flights have been completed, one of which in 2020-22 logged a record 908 days, 21 hours and 8 minutes.

