

*Missions for America  
Semper vigilans!  
Semper volans!*



Publication of the Thames River Composite Squadron  
Connecticut Wing, Civil Air Patrol  
300 Tower Rd., Groton, CT.

Issue 19.03

22 January, 2025

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### CURRENT EVENT

#### ***Five Planets Visible With Naked Eye This Month***

Five planets will be visible on the 21<sup>st</sup> of January and will be aligned, a rare astronomical phenomenon. Neptune and Uranus are also part of this planetary parade but you will need a telescope to see them.

Mercury, the planet closest to the sun is visible in the early morning sky. At around 6:30 AM it can be found about 5° above the horizon in the southeastern sky. It will be 10° east of Antares a

bright red star. Magnitude will be about -0.4.

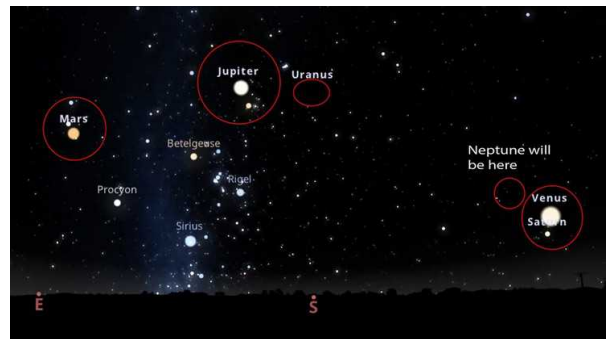
Venus is a very bright object, magnitude -4.4. Search for it at twilight in the southwest. It is unmistakable.

Mars will be bright, magnitude -1.4 which is almost as bright as Sirius. It can be found in the east just below the constellation Gemini.

Jupiter will be found in the constellation Taurus and near a bright red star Aldebaran. Magnitude is around -2.7 and it will be found around 40° in the east. If you have a pair of 7X binoculars, you will see three or four of Jupiter's moons as Galileo did when he trained his telescope on the night sky.

Saturn is about magnitude -1 and visible in the west.

There are websites that will provide more detail and include charts to help you identify the celestial objects.



### *Expand Chart for Details of Planetary Positions.*

### FEATURE ARTICLE

“FIREBOMBING”, - AN AMBIGUOUS VERB

Prologue

Ironically, the verb “firebombing” has two meanings which are antonyms. Firebombing can refer to an aerial raid intended to burn enemy structures. It might also refer to the practice of dropping water and fire retardants to control and put fires out.

In a typical fire bomb attack by the military,

incendiaries are combined with high explosives. The explosives splinter structures and make them more vulnerable to the incendiaries which set them alight. Some of the earliest examples are the Nazi attack on Guernica during the Spanish Civil War and their World War II campaigns against London, the "Blitz."

The Royal Air Force responded accordingly, operation Gomorrah. In July of 1943, Hamburg was attacked. A lack of firefighting resources and the intensity of the raid led to a firestorm. In about a hour, four and a half million pounds of bombs rained down on the city. The enormous fire created a low pressure area and winds up to hurricane force not only spread the flames but fanned the also. Temperatures in the center of the storm reached 1,500 degrees Fahrenheit. Estimated deaths totaled 43,000.



*Hamburg Burning*

The most well-known firebombing raids conducted by the United States Army Air Force were directed against Japanese cities. The B-29s, a strategic bomber designed for high altitude "pinpoint" bombing was found lacking. From 25,000 feet, the east flowing jet stream not only disrupted the path of the falling bombs but under certain circumstances, reduced the speed of the bombers to unacceptable levels.

General Curtis LeMay, in command of the XXI Bomber Command new tactics using incendiaries to set alight the wooden structures prevalent in Japan's cities. He eliminated much of the defensive armament of the planes which were not needed for the night raids. This allowed the aircraft to carry a heavier payload. LeMay then sent them in at low altitudes, under 10,000 feet.

The planes carried combinations of incendiaries, napalm, white phosphorous, and thermite bombs.

In March of 1945, he launch "Operation Meetinghouse," probably the most destructive air raid in World War II. This one attack, three million pounds of bomb, resulted in 100,000 deaths and the destruction of 250,000 structures. The immediate deaths at Hiroshima and Nagasaki were estimated to be in the same range! But the firebombing was a continuous campaign. One estimate is that 230,000 more deaths can be attributed to firebombing.

But the focus of this article is on the history of the aerial fire trucks, the air tankers, whose mission is diametrically opposite to the Lancasters and B-29s which set German and Japanese cities ablaze in World War Two.

In the United States alone, the USFS spends almost 300 million dollars a year to finance the service. Around 50,000 dollars/day is need as a retainer fee for the private companies. Aircraft on call may run over \$10,000/day. When one counts ground crews and equipment the bill for suppressing wildfires works out to about 1.2 billion dollars. But the economic losses can be counted in the many billions and include property damage, insurance payments, labor market and transportation disruption and losses in the tourist trade.

The article will look at three eras. First, the early days during which some Canadians experimented and developed the first of the air tankers. Next, a perusal of the post World War Two era during which surplus piston engine aircraft entered the air tanker fleet. Finally, the modern era marked by the use of turbine powered aircraft.

The aircraft in use today are categorized by maximum retardant capacity in gallons and mission. Some are listed below.

Very Large air tanker have a tank capacity greater than 8000 gallon. Large Air Tankers max out at 4000 gallons Single Engine Air Tanker 800 gallons .Some aircraft, water scoopers can land on

a lake and fill their tanks at a very fast taxi. Helicopters are classified as Type 1 and Type 2 dependent on capacity. Finally, Lead Planes are not tankers. Their job is to coordinate the attack and lead in the tankers.

An honorable mention: The smokejumper aircraft which deliver ground teams by parachute and drop supplies in Inaccessible locations. The ground teams actually work to put out the fire.

The missions are single pilot except for the largest aircraft into very challenging terrain. They are flown at very low altitude a few knots above stall speed in heavy turbulence, reduced visibility while operating three radios. It is challenging flying and fatalities are not unusual. Over 200 crewmen have ben killed in the last 30 years.

gallon water bags were also used and a conveyor system was installed in a Norduyn Norseman.



*Fairchild KR-34*



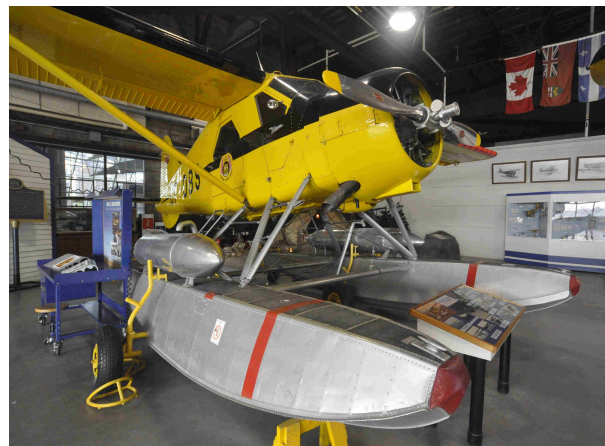
*Sierra Hotel Flying (Credit: Brent Connor)*

### *The Early Days*

In Canada in 1921, a ranger and his fire fighting equipment was delivered to the site of a fire and managed to extinguish it, the first known incident of an aircraft used to fight a fire. But the aircraft was just a transport, not a water bomber. The earliest water bombing ting can be traced back to the State of Washington, attempt, in 1930, to put out fires by dropping water filled wooded kegs. The aircraft employed could not carry enough payload to make a difference.

During the late '30s and early '40s, a Fairchild KR-34 was used experimentally by Carl Crossley to drop water bags and use a 45 gallon drum placed in the front seat of the Fairchild. Three to five

In 1945, Crossley extinguished a small fire at Elk Lake, Canada. A deHavilland of Canada Beaver was employed in 1950 and had some success. However, slow response time, poor accuracy, and limited coverage ended these early attempts.



*Beaver with Float Mounted Roll-Over Tank*

Five years later, Tom Cooke of the Ontario Provincial Fire Service developed tanks which could be fitted on the top of floats and filled while the seaplane was in motion. Water delivery was much improved and within five more years the OPAS fitted the tanks to all of its 25 Beavers and eight DHC Otters.



### *Era of Piston Power*

Canada, rich in lakes, specialized in float aircraft. In the United States, with fewer lakes, land-based aircraft predominated. The vast number of cheap surplus aircraft left over from World War II now entered service. The aircraft ranged from the single engine Grumman TBM Avengers large four engine bombers such as the Boeing B-17 and the Consolidated PB4Y Privateer.



*Hawkins & Powers Privateer at its Greybull Base*

Stearman PT-17



The gap in between was filled by a host of twin engined aircraft such as the North American B-25 Mitchell, and the Douglas A-26 Invader. Aircraft which did not see active service due to their late development were also added to the fire-fighting fleet, one example being the Grumman F7F TigerCat. Transport aircraft which were modified included the giant Martin JRM Mars the Douglas DC-7, and the jet augmented Fairchild C-119 Packet.



*Grumman TBM Avenger  
(Credit: David Stack)*



*Grumman F7F-3 Tiger Cat (Credit: William T. Larkins)*



*Boeing B-17s*



*Mars at Its Sproat Lake Base*



*Consolidated PBY-5 Catalina  
(Credit: JD Davis)*



*Northrop F-15, a converted P-61 Black Widow.*



*Last of the Line of Piston Powered Douglas  
Transports-A DC-7B Sporting an External Tank*



*P2V Neptune Depositing its Suppressant Payload  
(Credit: Jeremy Ulloa)*



*A Fairchild C-119 Packet equipped with an  
dorsal mounted auxiliary turbojet.  
(Credit: Steve Whitby)*

By the 1970s, newer aircraft were converted to fire-bombers. Seven Grumman S2F Tracker was adopted by the Canadians and modified with in-fuselage tanks. DHC developed a new aircraft specifically for the fire fighting missions, the Canadair CL-215.

#### *The Modern Era-Turbine Power*

Tactics were improving. In general, drops are not made directly on a fire but along the edges or ahead of it to stop its spread. The material dropped in a retardant, not an extinguishing agent.



Water is used but it is not as effective as dedicated chemical mixtures. The drops are inaccurate, too diffuse, and the water evaporates quickly. The new chemicals contain thickeners which improve the characteristics of the water and enhancers which increase the ability of the water to “stick” to surfaces. Past practice used borate salts but they rendered the soil sterile and were toxic to wildlife. Now, ammonium sulfate and ammonium polyphosphate are commonly used and actually fertilize the soil. The red color marks the drop site to provide guidance to subsequent drops. The chemicals must be loaded on the ground. Aircraft which pick up water directly while “on the fly” sometimes carry tanks of guar gum to “thicken” the water which improves accuracy.

The most modern aircraft include modified Lockheed Electras, the Douglas DC-10, and even a Boeing 747.



*The McDonnell Douglas MD-87*

The Lockheed C-130 Hercules is sometimes called up from Air National Guard and Air Force Reserve units. When this is done, the “Herec” is equipped with a Modular Airborne Fire Fighting System or MAFFS. The palletized MAFFS unit contains tanks of retardant and pressurized air tanks which propel the retardant through two nozzles mounted on the rear cargo ramp. The newest systems discharge the retardants through the paratroop door, a change which improves the aerodynamics of the aircraft.



*Aero Union Lockheed P-3 Orion  
(Credit: Alan Redecki)*



*Nevada Air National Guard C-130 on Duty  
(Credit: SMSSgt Paula McComber)*



*A DC-10 Passes its King Air Bird Dog.  
(Credit: 10 Tanker Corporation)*



*Loading a MAAF system*

Helicopters such as Sikorsky's S-61 Sea King and the Boeing CH-46 Chinook are also part of the battery of airborne fire fighters.



*One of Coulson's S-61s Uses a a Snorkel to Fills it Belly Tank at Sproat Lake, British Columbia.*



*A Sikorsky S-70 Firehawk Visiting Groton. These Florida based aircrews joust with death and survive. Are they here to try their luck at the casinos?*

The twin engine jet Beriev Be-200 is a Russian contribution and the Japanese Shin Maywa US-2, a four engine turbo prop amphibian has seen limited service.



*Sikorsky Sky Crane  
(Credit: Steve Whitby)*



*Shin Mawya US-2 (Credit: Michael Austin, USMC)*



*Boeing Vertol Chinook*



*Beriev Be-200-NATO Code Name Mermaid  
(Dmitriy Pichugin)*

In the United States, the U.S. Forest Service and the Bureau of Land Management contract private corporations to fight the fires such as Aero Union and Erickson Aero. Canadian corporations, some



of which fly in the United States include Coulson and Conair.

*In France, the Direction de la Défense de la Sécurité Civile flies the Bombardier 415, the Grumman Turbo Cat, and the Bombardier Dash-8.*



*This Italian based Bombardier CL-415, on the step, in the act of scooping up water.  
(Credit: Horticultural marxist)*



*DHC Twin Otter  
(Credit: Jarrod Wilkinig)*

The State of California has its own “air force.” The California Department of Forestry and Fire Protection, CAL FIRE, owns a fleet of over 50 aircraft: The pilots and maintenance personnel are contracted employees and a number of aircraft are “on-call” and available through private companies.



CAL FIRE uses the OV-10 Bronco as a lead plane. A lead plane, the air attack plane, often called a “bird dog” is used to carry the supervisor to determine critical aspects of the fire and sometimes, lead the Grumman S-2T air tanker to the correct site.



Even single engine aircraft may be found on the fire line.



*Two Ayres Thrushes Await the Call at Custer State Park. South Dakota.*





*A Hezbollah tactic was to start fires in northern Israel, a region prone to natural fires. The Israeli Air Force has established Unit 249 and equipped them with the Air Tractors AT-802F*



*French Q400, the Bombardier Dash Eight*

## AEROSPACE ANNIVERSARIES

January 21, 1920 – British Somaliland Protectorate  
The Royal Air Force activates “Z Force” to fight Sunni sheik Mohammed bin Abdulla Hassan, saddled with the name, “The Mad Mullah”

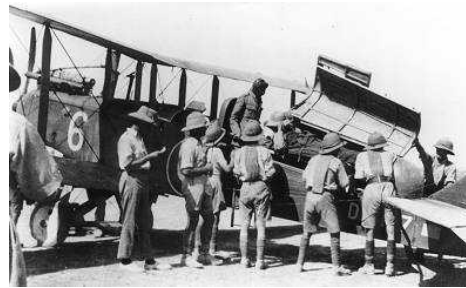
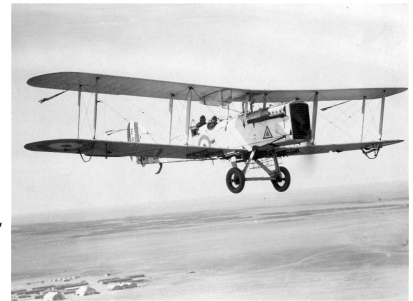
Hassan led a Dervish uprising seeking independence. Racked by austerity measures, the British Treasury were reluctant to grant two million pounds to field the two divisions which the Army claimed they needed to restore order.



*The adversaries: Hassan perched on a camel and Trenchard plonked down in an easy chair.*

Air Chief Marshal Sir Hugh “Boom” Trenchard argued that the use of aircraft would be a relatively cheap and effective solution to suppressing the revolt. Trenchard promised that he would not ask for troops and would use 12 Airco DH-9A aircraft, about 20 ground vehicles, the locally based Somali Camel Corps and one battalion of the King's African Rifles. The cost would be around 100,000 pounds sterling, one twentieth of the cost of using regular British troops.

*DH-9A-The aircraft was equipped with two or three machine guns and could carry up to 660 pounds of 20, 50, or 112 pound bombs.*

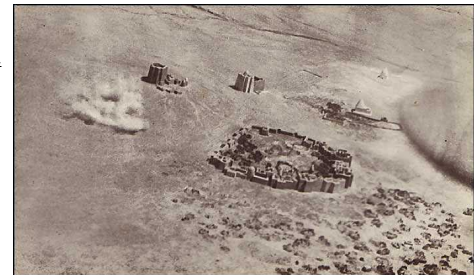


*One of them was converted into an aerial ambulance.*

Air raids on native forts and villages combined with the indigenous Somali and African ground forces led to a swift British victory.

*Dervish fort at Taleh under air attack.*

*(Credits:Imperial War Museum)*



The RAF was granted independent status, one of Trenchard's goals, and used for similar missions in Iraq and the Northwest Frontier region of India and Afghanistan. Somaliland remained under British rule

Hassan died of influenza in 1920 but he is regarded as the father of the pan-Somali movement and the “Father of his nation.” But for the last three decades, Somalia has faced internal turmoil by clan warlords and the terrorist group Al Shabab, an ally of Al-Qaeda.

JAN 22, 1914 – Death of New Britain, Connecticut native, Charles Keeney Hamilton, known as the “Crazy Man of the Air.” He started as a parachutist and lighter-than-air pilot but in 1909 learned to fly under Glenn Curtiss and then joined his exhibition team. His career was marked by repeated dare-devil stunting and numerous crashes.



*Connecticut's Crazy Man of the Air*

Hamilton's soon left Curtiss and started a mid-western and western tour of the United States during which he set a number of records. He returned to the east coast and won \$10,000 for the first round trip between New York and Philadelphia and then made the first night flight in America. In August of 1910, he received pilot certificate #12.

Curtiss repossessed the Reims Racer which Hamilton had purchased because he had fallen behind on payments. Hamilton then had J. Walter Christie build a new aircraft for him with a 110 HP engine which he christened the *Hamiltonian*. Incidentally, Christie was a talented inventor and industrialist and invented the “Christie suspension” which was used by the highly successful Soviet T-34 and a series of British tanks. Alas, within two months the *Hamiltonian* was destroyed in a stall induced crash but the cut, bruised, and burned Hamilton was flying again within a week.

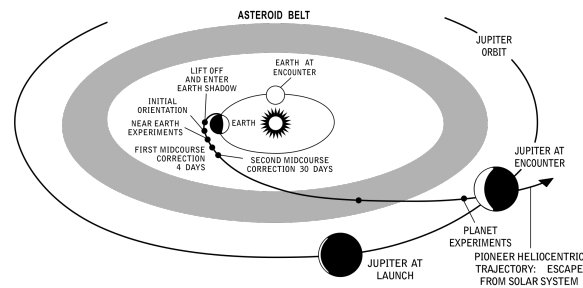
A drinker, smoker, and spendthrift, Hamilton died of tuberculosis and is buried in Hartford, Connecticut

JAN 23, 2003 – The final communication is made between Earth and Pioneer 10, a spacecraft intended to fly past Jupiter. It was launched in 1972 and performed well for over three decades.

*Pioneer Ten Mounted on its “Kick Motor.”*  
(Credit: NASA Ames)



Pioneer 10 was the first spacecraft placed on a trajectory to escape the solar system and travel into interstellar space and first to fly beyond Mars, the main asteroid belt, Jupiter, and Neptune and first to use all-nuclear power.



*The Trajectory of Pioneer 10* (Credit: Smirnov 103)

The spacecraft is heading in the general direction of the red star Aldebaran in the constellation Taurus. It is expected to pass by Aldebaran in about two million years.

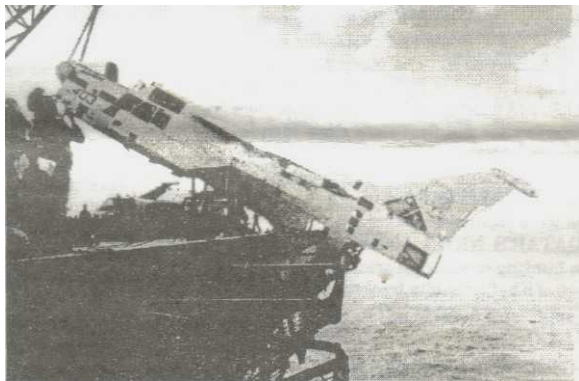
JAN. 24, 1991 – A Ling-Temco-Vought A-7E flown by Lt. Tom Drostie was retired with honor. She was the last Corsair II to need a barrier net landing aboard a U.S. carrier after damaging its nose-wheel upon launch.





*Drostie's A-7E on board the USS John F. Kennedy  
(Credit PH 2 Moore, USN)*

The A-7E type was about to retire so the Navy stripped it of all usable parts, over three million dollars worth. The crew then desecrated it with graffiti but the Captain declared it unseemly for an aircraft which had done noble service so he had it repainted and buried at sea with full military honors. It was dropped by a crane over the port side



Unfortunately or otherwise, the wing fuel tanks were declared not worth saving and left in the wings which provided enough buoyancy to keep the aircraft afloat. The *Kennedy's* Marines had to sink it with machine gun fire.



*(Photo Credits: PH2 Mickey Moore and  
PH# Paul Hawthorne)*

JAN 25, 1947– Birth of Hap Rocketto, aviation and marksmanship researcher and writer.



*Hap Rocketto at Pensacola Naval Air Station circa  
1970*

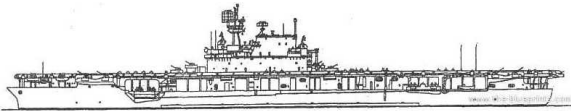
JAN 26, 1953 – The first meeting of the Experimental Aircraft Association takes place at Milwaukee, Wisconsin's Curtiss Wright Field.



*Paul Poberezny, First President EAA*

JAN 27, 1928 – 30 miles south of Rhode Island – The first rigid airship to aircraft carrier mooring is achieved when United States Navy dirigible *Los Angeles* moors to *USS Saratoga* at sea. The experiment was hampered by gusty winds and rough sea conditions and not repeated. However, during World War II, blimps did successfully moor to aircraft carrier to transfer personnel or stores.

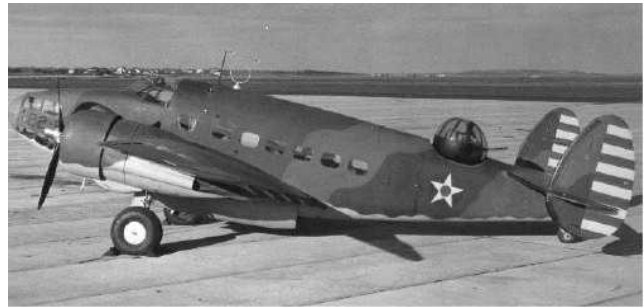
Photo # NH 63067 USS Los Angeles landing on USS Saratoga, Jan. 1928



*The two bottom images are to scale and show the relative lengths of each ship.*

World War II. Unfortunately there is clear evidence that the sub was not sunk. Civil Air Patrol claims two sinkings of Nazi U-boats but there is no solid evidence that these events occurred. In the heat and fog of battle, eye-witness testimony is untrustworthy and with good reason. For example, WWII claims of enemy aircraft shot down can be reduced by at least half and probably 2/3 to get an accurate account of losses.

The Hudson bomber flown by Chief Mason was one of 20 former lend-lease RAF Hudson IIAs which the USN repossessed and supplied to Patrol Squadron 82 operating out of Argentia, Newfoundland.



*A Hudson bomber from Mason's VP-82 (Credit" US Naval Historical Center)*

JAN 28, 1942 – Piloting a PBO-1 Hudson patrol bomber over the North Atlantic, U. S. Navy Chief Aviation Machinist's Mate Donald Francis Mason attacks a German submarine, which submerges and escapes. Thinking he had sunk it, he signals "SIGHTED SUB, SANK SAME."

The US military faced a shortage of aircraft and pilots and during this time period, from 5 March 1942 to 31 August, 1943, the Civil Air Patrol flew almost 87,000 patrol missions logging almost 250,000 hours. 173 U-boats were sighted and 82 bombs or depth charges dropped but the true value was not in a sub sunk but in assisting in the rescue of 363 survivors of U-Boat attacks and forcing the U-boats to remain submerged where their speed and attack ability was limited



*Chief Mason*



It becomes one of the most famous signals of *CAP Stinson 10A at New England Air Museum.*



Note the bomb attached under the fuselage. The aircraft is marked as one assigned to CAP Coastal Patrol Base 3, Latana Florida. It also bears the WWII CAP white triangle applied directly over a factory paint job.

Administration-2<sup>nd</sup> Lt Regan-Filing nominal

Personnel-Capt Spreccace-Promotion of advancement in specialty tracks and ranks

Safety-SM Kaye-safety down day on 11 February

### THAMES RIVER COMPOSITE SQUADRON

Mountings  
21 January, 2005

All staff members reported status of their departments. Squadron Commander Schmidt moderated

Cadet Programs-Capt Thornell-five new cadet members

Aerospace-Maj Bourque-four cadets have signed up for the rocketry badge-Yeager program to be promoted

Transportation-Maj Bourque-monthly report filed with wing

Squadron Facilities-Capt Kopycienski-leaking window repairs in progress

Education and Training-Maj Peske-Cadet Protection qualifications in progress

Emergency Services-Maj Farley and Capt Otrin-UDF training in progress-TRCS will run training sessions on the last Tuesday of the month at request if members

Communications-Capt Kopycienski-TRCS has 78% membership ICUT qualified (90%-seniors and 68% cadets)-TRCS joins the Wing radio net every Tuesday night.

Operations-aaj Farley and Capt Spreccace-TRCS flying ice patrol missions as scheduled

Aircraft Maintenance-Maj Farley-C182 relocated to GON

Supply-2<sup>nd</sup> Lt Regan-inventory adequate-new Wing patch is in the works

Finance-fMaj Farley-fruit sale and wreath programs successfully

Public Affairs-Lt Col Rocketto- Lt Richards is in charge of media account - The Coastwatcher,published weekly ,is in its 19th year-Maj Farley and Lt Col Rocketto are assigned to publish the Wing annual report due at Nationals in June

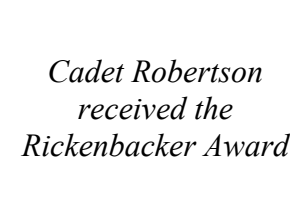
*Cadet Meeting  
21 January, 2025*

Flag etiquette and flag folding was practiced.

### *Promotions*



*Cadet Casanas received the Curry Award*



*Cadet Robertson received the Rickenbacker Award*



*Cadet Regan received the Doolittle Award*



*Cadet Grogan received the Willa Brown Award*

