Missions for America
Semper vigilans!
Semper volans!

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FUND RAISER

Support the Thames River Composite Squadron by sponsoring a veteran's wreath through the Wreaths Across America project. Our goal is to place a wreath at every veteran's grave in Stonington Cemetery on December 14th. We are 115 wreaths short of that goal and ask you to help. Wreath sponsorships can be purchased through Thames River Composite Squadron at:

https*://www.wreathsacrossamerica.org/CT0163P.*

CURRENT EVENTS

November 4, 2024

A SpaceX Falcon 9 rocket lifted off heading for the International Space Station. It was the 31st Cargo Resupply Service and carried over three tons of supplies and experimental equipment. Among the scientific equipment is a solar coronagraph to collect data on solar winds. The technology of cold welding will be studied in order to determine its usefulness in repairing spacecraft hulls damaged bu micrometeorites. An antarctic moss will be exposed to the harsh conditions of space to determine how well plants might endure the conditions of microgravity and cosmic radiation. Around 20 other experiments are also aboard.

The cargo manifest includes space-walk equipment to replace some defective items which prevented the previously schedule space-walk on November 1st which was cancelled due to a water leak in the cooling system. And of course, a ton of crew supplies including special treats for the Thanksgiving holiday.

November 5, 2024

MOSCOW (AP) — A Russian rocket on Tuesday, Novemer 5 blasted off successfully and carried a pair of Iranian satellites into orbit

The Soyuz rocket lifted off as scheduled from Vostochny launchpad in eastern Russia and put its payload into a designated orbit nine minutes after the launch. It was carrying two Russian Ionosphere-M Earth observation satellites and several dozen smaller satellites as well as the two Iranian ones.

The two Iranian satellites are named Kowaar and Hodhod. Kowar has a resolution of about 12 feet/pixel and is intended for environmental monitoring,. Hodhod is a communications satellite which will support the “internet of things,” designed to transfer data from one device to another with no human intervention

Ties between Moscow and Tehran are strengthening. They are exchanging military technology. For example, Iranian drones to Russian and Russian air defense systems to Iran. Both nations are developing economic relationships in trade, shipping, investment and banking.

International Space Station Raised to Higher Orbit

Due to increasing maintenance costs and an aging technology NASA has decided to decommission the ISS and deorbit it. The SpaceX cargo vehicle attached to the ISS will fire a 12.5 minute burn to raise the ISS to a higher and faster stabilized orbit. This maneuver has been done before to raise the ISS orbit.

Drag in orbit tends to slow the ISS and forces it into a lower orbit. The drag is caused by collisions with gas molecules present in the low-earth orbit regime. To a lesser extent, solar winds also contribute. And it is a positive feedback mechanism. The satellite falls into a lower orbit in which it experiences more frequent collisions with gas molecules. This causes more drag and a slower orbital speed and a descent to a lower altitude and so on until it renters the more dense portions of the earth's atmosphere and burns up or if of sufficient mass, crashes to earth.

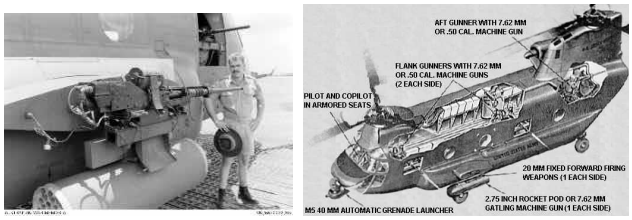
But for the first time, the SpaceX Dragon has been used in the deorbit maneuver.NASA has contracted with SpaceX for a deorbit vehicle which will result in the ISS returning to earth and a controlled crash into the Pacific Ocean as early as 2030.

FEATURE ARTICLE

Good Aircraft Designs Never Die!

First made by Vertol, the CH-47 Chinook is now produced by Boeing Defense & Space Security. The first flight was in September of 1961 and production started the next year. To this date, production has exceeded 1,200 aircraft and over two dozen nations have used or are using the Chinook. The original CH-47A had a maximum gross weight of 33,000 pounds and a payload of 10,000 pounds. It was a medium-lift transport and 354 left the production line

In 1962, the exigencies of the Vietnam War led to the development of the ACH-47A, (**A**rmed **C**argo **H**elicopter) carrying a variety of weaponry in different combinations: five 7.62 machine guns or .50 caliber Brownings, two 20mm cannons, two 19-tube 2.75-inch folding fin rockets or a 40mm grenade launcher. Boeing-Vertol built four but they were more valuable as straight transports so the program terminated



ACH-47A forward armament and schematic

The latest version of the Chinook is the MH-47G for special operations. Its gross weight and payload is 1.5 times greater than the CH-47A. It can fly further and faster and more importantly, higher due to vastly more powerful engines. It is also equipped for mid-air refueling. Many improvements have been made in rotor blade materials and structural strength. A digital cockpit, array of communications equipment, and visual and forward looking infrared cameras are part of the electronic enhancements.

MH-47G (Credit: Sgt. 1st Class Michale Noogle,USA)

Permanently installed armament consists of four gun stations equipped with 7.62mm Gatling guns facing forward and two 7.62mm belt fed machine guns aft. The MH-47G will be employed by the Army 160th Special Operations Aviation Regiment.

There are a number of naval, civilian and experimental Chinook variations. The Navy and Marines operate the CH-46 Sea Knight, Sea Knights are navalized and may be used for cross-decking, heavy-lift transits between ship and shore and troop movements. The Marines favored them as assault transports. It also is amphibious but restricted by sea state and time on the water.

CH-46 Sea Knight-Note the tricycle landing gear.

Commercial interests find useful employment for Chinooks in servicing off-shore oil platforms, fighting fires and logging. The commercial aircraft's designation is the Vertol 107 or Boeing 234. They have been used for passenger service. New York Airways (NYA) provided service from New York airports to downtown locations, one of which was on top of the PanAm building. Some near-by cities, including Stamford. Connecticut, could also be found on the NYA timetable. British Airways ran an intercity schedule in Great Britain.

British Airways 234 *(Credit: Gary Watt)*

New York Airways Vertol 107

N245CH is a Boeing 234. CFHFW is a Boeing-Vertol 107. Columbia's main jobs are in logging, stream restoration and firefighting out of Aurora, Oregon *(Credit: User:Trashbag)*

Canada Rescue designates the Boeing-Vertol 107 as the CH-113 Labrador *(Credit: John Davies)*

One Chinook CH-47A was modified in an unusual way at the request of the Army. The Boeing-Vertol 347 had a longer fuselage, taller rear pylon four bladed rotors and variable incidence wings! Some of the features included in the 347 were incorporated in later versions of the Chinook.The wings improved lift and enabled the craft to make 60^{o} banked turns but the idea was not followed up.

Boeing 347 "Winged" Chinook

Chinooks make a distinctive sound as they fly overhead and Connecticut residents can often enjoy it. Groton-New London Airport and Bradley International Airport host Army National Guard outfits, the 1109th Theater Aviation Support Maintenance Group (TASMG, formerly the 1109th Aviation Classification Repair Activity Depot or AVCRAD)) at Groton and Bradley's Army Aviation Support Facility. Both installations employ a wide range of extremely talented technicians and have been visited by Connecticut Wing squadrons.

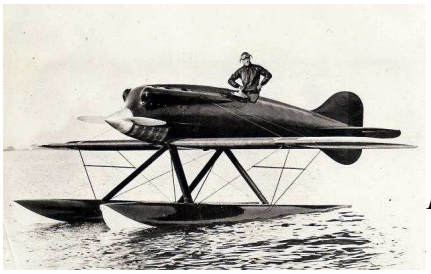
When it was still the AVCRAD and acquired a fine shop, work was done alfresco.

The Army Aviation Support Facility at Bradley International Airport

The Chinook is now celebrating its 63rd year of service. The Boeing B-52 and Lockheed C-130 are in their 70th year. And the Douglas DC-3, upgraded with turboprops made its first flight in 1935. Good aircraft designs never die!

AEROSPACE HISTORY AND CHRONOLOGY

Nov. 13, 1926 – The Schneider Trophy Seaplane Race was run at Hampton Roads, Virginia and the Italian, Major Mario de Bernardi flying a Macchi M.39 won, spoiling the U.S. chances to gain permanent possession of the trophy.



Mario de Bernardi and the M.39 at Hampton Roads, Virginia

The victorious M.39 can be found at the Italian Air Force Museum, Vigna di Valle, Italy.

Permanent possession required that a team win three races and the U.S. team were victors in the 1923 and 1925 races. Navy Lt. David Rittenhouse flew a Curtiss CR-3 at a record average speed of 177.27 mph in 1923 and Army Air Service pilot Jimmy Doolittle and a Curtiss R3C-2 posted a new record of 232.57 mph in 1925.

Rittenhouse and the CR-3at Cowes England
(Credit: NASM)

Doolittle and the R3C-2 on Chesapeake Bay

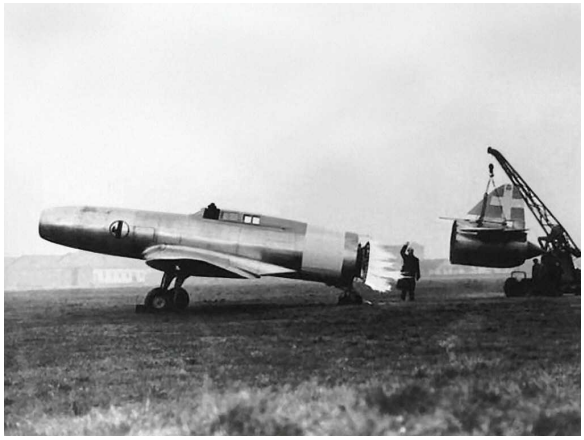
De Bernardi's 246.49 pushed the record even higher. And four days later, flying the same aircraft, the officials recorded a speed of 258.88 mph!

His win was a spoiler for the American racers because the 1927 and 1929 races were then won by the British pilots flying the Supermarine S.5 and S.6 designed by Reginald Mitchell who used what he learned to fashion the legendary Spitfire.

The winning S-6B and the trophy (lower left) are now on display in the British Science Museum.

De Bernardi flew for the *Regia Aeronautica* and was a WWI combat pilot, the first Italian credited with shooting down a enemy aircraft. He continued to set world speed records becoming the first person to exceed 300 mph. In 1931, De Bernardi, won the world aerobatics championship held in Cleveland.

A Caproni test pilot, he piloted the N.1 experimental jet aircraft in 1940, designed by Secondo Campini who had designed his seaplane racers. The N.1, also known as the C.C.2 was a curious hybrid, using a piston engine to drive a three stage compressor which forced the air/fuel mixture into what was essentially an afterburner.



The N.1 tail has been removed to study the combustion.

On April 8th, 1959, De Bernadi went West. He had flown to Rome to participate in a light plane show and was engaged in demonstrating aerobatics when he had a heart attack. He managed to land the aircraft safely before he died.

November 14th – A Bad Day for Royal Navy Aircraft Carriers

1941

The aircraft carrier *HMS Ark Royal* sinks after being struck by a torpedo from U-81. *Ark Royal* was an innovative design. The flight desk was an integral part of the hull rather than mounted on pylons as with previous designs. Two hangar decks, steam catapults, and arrestor gear allowed space to carry up to 72 aircraft although later modifications reduced the number to around 50 or 60.

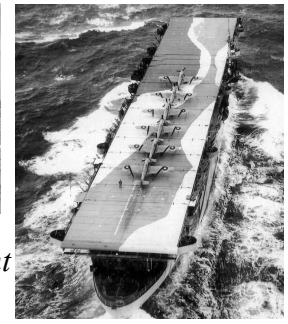
HMS Ark Royal and a covey of Fairey Swordfish
(Credit: IWM)

Her operational career included the hunt for the *Graf Spee*, the Norwegian Campaign, the attack on the Vichy French fleet at Mers-el Kébir, chasing the *Scharnhorst* and *Gneisenau* when they broke out into the Atlantic convoy routes and crippling the *Bismarck*. She was sunk while escorting a supply convoy to Malta. Miraculously, only one of the 1,600 crew members were killed.

1942

A year later to the day the German submarine U-155 torpedoes and sinks the British aircraft carrier *HMS Avenger* off Gibraltar.

The *Avenger* was an Long Island class escort carrier converted from a Rio class passenger-cargo vessel just after launching. A wooden flight deck was installed with a small hangar and a single elevator. The ship had no "island."The navigational bridge was installed under the forward edge of the flight deck. After conversion, the U.S. Navy transferred her to the Royal Navy.

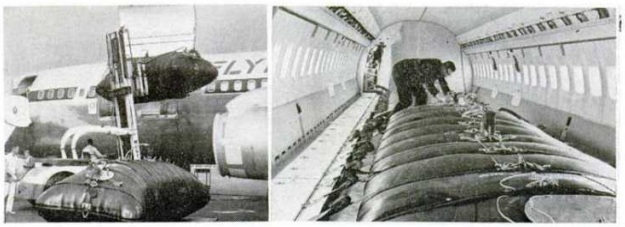


Avenger and her complement of Swordfish.

Avenger was on convoy escort duty when the torpedo struck and ignited the munitions stored in the bomb magazine. The explosion broke the ship in half and she went down in under five minutes. Only a dozen or so of the crew survive out of a complement of 500 officers and men.

Nov. 15, 1965– A Boeing 707-394C makes the first polar circumnavigation of the earth. The journey, envisioned by two TWA pilots, Fred Austin and Harrison Finch flew from Honolulu to Honolulu and would take 57 hours and 27 minutes to covere 26,230 miles. The flight made refueling stops at London-Heathrow, Lisbon, Buenos Aires, and Christchurch, New Zealand.

The Pole Cat.



The bladders installed in the cargo compartment contained 4,000 gallons of jet fuel.

The aircraft, named *"Pole Cat*," was leased from the Flying Tiger Line and carried five pilots, Captains Austin and Finch, Capt. Jack Martin, Chief Pilot of Flying Tigers Line, Capt. Robert N. Buck, TWA and an expert in aviation meteorology, and Capt. James R. Gannett, Boeing's Senior Engineering Test Pilot. John Larsen, TWA's Chief Navigator was in charge of flight planning assisted by two Flying Tiger navigators. The aircraft also carried three Flying Tiger flight engineer.

Two special passengers were also aboard. Bernt Balchen, a pioneer polar aviator and the first man to fly over the South Pole and Col Willard F. Rockwell, Sr., founder of Rockwell Corporation and principal financial sponsor of the flight. Other passengers included journalist Lowell Thomas, Jr. and a groups of scientific researchers.

Nov. 16, 1945 – Pan American World Airways resumes commercial seaplane service between California and Hawaii, using Boeing Clipper aircraft it leased to the U.S. Navy during World War II.

Alas, the age of the flying boat had passed. The war had produced hard runways and long range land aircraft like the Douglas DC-4.

PanAm's first DC-4 departs LaGuardia Airport as the Capetown Clipper, moored at the Marine Air Terminal, awaits retirement. *(Credits: PanAm Historical Foundation)*

On April 8, 1946, a Boeing 314, *American Clipper* departed Honolulu for Mills Field, San Francisco, the last flying boat service by Pan American Airways in the Pacific.

American Clipper

Twelve 314s had been built and three lost to accidents. Three of the Boeings had been leased to British Overseas Air Corporation and the last was used on the Baltimore-Bermuda route. Most were scrapped. In 1951, the last of them, the *Anzac Clipper*, was destroyed by fire in Baltimore Harbor. A romantic era had ended.

Nov. 17, 1954 – Peter Twiss, a test pilot for Fairey Aviation was flying one of two FD.2 deltas built, WG774, a transonic design and the last British aircraft to hold a world speed record. He was at 30,000 feet and 30 miles from home, the Aeroplane and Armament Experimental Establishment at Boscombe Down.

WG774

The engine packs up and Twiss manages to stretch his glide and dead-sticks onto the field at 170 mph. But it wasn't his day. Only his nose gear deploys and he bellies in.

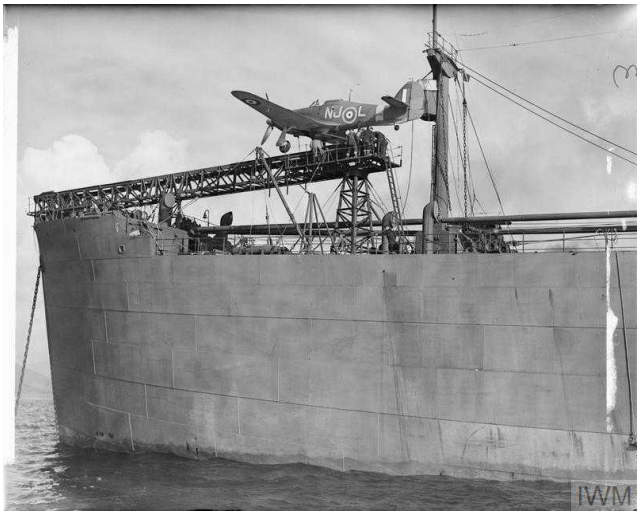
An Excellent Landing

They say a good landing is one from which the pilot can walk away from and an excellent landing is one in which the airplane can fly again.

The damage to WG744 is serious but repairable and eight months later, the aircraft is again flying. Twiss is awarded a Queen's Commendation.

WG774 is now on display at the Fleet Air Arm Museum, Yeovilton

Twiss had an impressive career. Before flight school, he was an apprentice tea taster for Brooke Bond & Company. He enlisted in the Royal Navy and trained as a fighter pilot and served time as the pilot of a Hawker Hurricane mounted on a merchant ship's catapult.



The Hurricane would be launched if German reconnaissance aircraft was shadowing a convoy. After completing a mission, the pilot would ditch and be picked up by a rescue ship. During the course of the war, he not only operated from aircraft carriers but also flew night intruder missions in RAF Mosquitos.

Carrier pilot and test pilot. Two stages in the life of Lionel Peter Twiss.

A graduate of the Empire Test Pilots' School, Lt. Cmdr. Twiss left the Royal Navy and joined Fairey becoming their chief test pilot in 1954. He set a number of speed records and retired in 1959 after logging 4,500 hours in about 150 aircraft types.

Twiss made appearances in two movies, the speed boat driver in “From Russia with Love” and a Swordfish pilot in “Sink the Bismarck. Despite his wartime service and test pilot career, he had time for five marriages. The 90 year old Lt. Comdr. Lionel Peter Twiss, O.B.E, D.F.C. and Bar went West on August 31, 2011 leaving behind a widow and four ex-wives.

November 18th-A Good Day for First Flights of Little Known Japanese Aircrafts.

1942

First flight of the Tachikawa Ki-77, a long range aircraft designed during WWII to connect Japan with its Axis partners in Europe.

Originally built at the behest of the Asahi Shimbun newspaper for a non-stop Tokyo to New York flight, the Ki-77 was an aerodynamically clean design featuring a drag reducing laminar flow high aspect ratio wing. The war cancelled the plans for the New York flight and the military claimed the two aircraft which had been built.

The lines of the Ki-77 recall the Republic XF-12 Rainbow, the faster four engine piston aircraft ever flown.

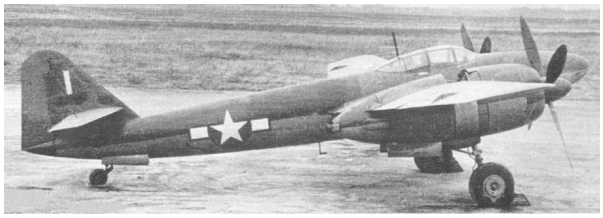
Although Japan was not at war with the Soviet Union, they did not desire to use Soviet airspace and provoke the Russian Bear so the great circle route in Soviet airspace, the shortest, was rejected.

Only one attempt was made to fly from Japan to Singapore via a German controlled airfield in the Crimea. The aircraft departed Singapore on the 7th of July, 1943 but disappeared en-route. It has been suggested that the aircraft had been intercepted by the British whom had decrypted messages about the route and timing of the journey.

Interestingly, Dr. Hidemasa Kimura, the aircraft designer, was on board a Boeing 747SP which made the first direct flight from New York to Tokyo in 1975.

1944

First flight of the Mitsubishi KI-83. The aircraft was an attempt to develop a long range interceptor but heavy bombing of Japanese industry stopped production.



U.S. insignia was applied to appropriated aircraft.

The USAAF seized the four that had been produced and one of them was shipped to the United States where it were evaluated and found to be a well designed high performance aircraft. Destined for the USAF Museum, the aircraft disappeared and was probably scrapped.

Nov. 19, 1940 – The Air Cadet League of Canada was established to train 12-18 year-olds for possible service in the Royal Canadian Air Force.

Post-war, the League re-evaluated its mission and modified it as conditions changed. Today their primary flight program consists of glider training and conducts over 50,000 flights per year. A six week summer program will take a cadet to his private pilot rating and about 300 cadets qualify annually.

A tow rope is being attached to a ACLC Schweizer SGS 2-33 prior to launch.

In general, CAP and the Canadian programs are similar although squadron leadership in Canada is provided by serving members of their armed forces.

COMMONPLACE BOOK

This edition presents wisdom from a mixed bag of philosophers, an admiral and a baseball player.

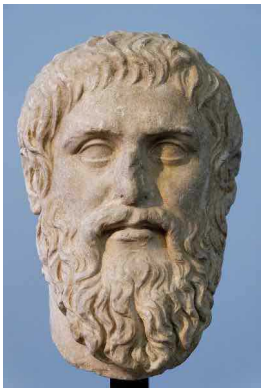
Socrates, Athenian Gadfly

The unexamined life is not worth living.

The Death of Socrates by Jacques-Louis David

Plato, the Father of Western Philosophy

Credit: Marie Lan Nguyen



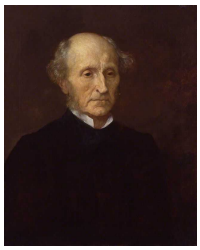
In politics we presume that everyone who knows how to get votes knows how to administer a city or a state. When we are ill...we do not ask for the handsomest physician or the most eloquent one.

Marcus Aurelius, Roman Emperor and Stoic Philosopher

If someone can prove me wrong and show me my mistake in any thought or action, I shall gladly change. I seek the truth, which never harmed anyone: the harm is to persist in one's own self-deception and ignorance.

Credit: Marie Lan Nguyen

John Stuart Mill, Philosopher of Liberalism

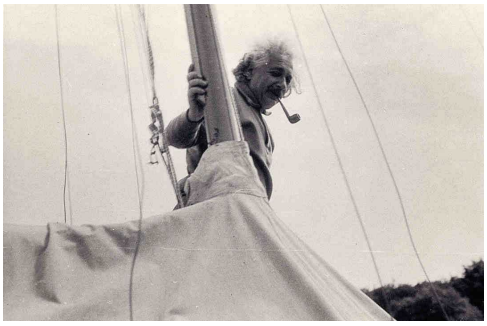


(Credit: George F. Watts)

To refuse a hearing to an opinion, because they are sure that it is false, is to assume that their certainty is the same thing as absolute certainty. All silencing of discussion is an assumption of infallibility.

Henry David Thoreau, American Gadfly

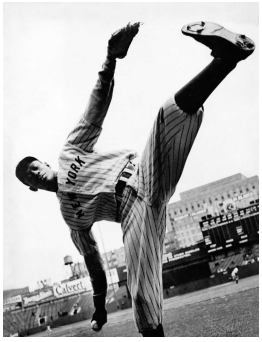
I heartily accept the motto, "That government is best which governs least"; and I should like to see it acted up to more rapidly and systematically. Carried out, it finally amounts to this, which also I believe—"That government is best which governs not at all"; and when men are prepared for it, that will be the kind of government which they will have.



Albert Einstein, Refugee from Nazism

The difference between stupidity and genius is that genius has its limits.

Satchel Paige, Fastball Pitcher, the Oldest Major League Baseball Player in History



(Credit: George Strock)

Don't look back. Something may be gaining on you.

Hyman G. Rickover, Refugee From the Pogroms of the Russian Empire and the Father of the Nuclear Navy

Trying to make things work in government is sometimes like trying to sew a button on a custard pie.

THAMES RIVER COMPOSITE SQUADRON

MINUTES

12 November, 2024

C/C\SSgt Garrett Scroggins offered a safety briefing on safety while cooking.

An aerospace education presentation by C/MSgt Adam Balfour discussed the Lockheed Martin X-59 Quesst (Quiet Supersonic Technology) which is a proof of concept aircraft to study the reduction of supersonic noise when flown over land.

Maj Roy Bourque reviewed the items which should be in an urban direction finder pack in preparation for the UDF training on December 17th.

The Thames River Composite Squadron's main fund raising activity, Wreaths Across America, is seeking to gain sponsorship for 354 wreaths which will allow the Squadron to place a wreath at every veteran's grave in the Stonington Cemetery at noon on December 12th.

On Saturday, November 9th, cadets and senior members manned a table at the Groton Stop and Shop to solicit donations. The public was very generous and we collected donations to support 49 wreaths. We currently has sponsorships for 239 wreaths and seek donations for 115 more.

The staff members which manned the table on Saturday were Maj Farley, Capts Schmidt, Kopycienski and Thornell and Parent Sponsor Robertson. The cadets were C/2dLt Isenburg, C/MSgt Regan, C/TSgt King, C/SSgt Robertson and C/SrA Currie.

MINI-CONTEST

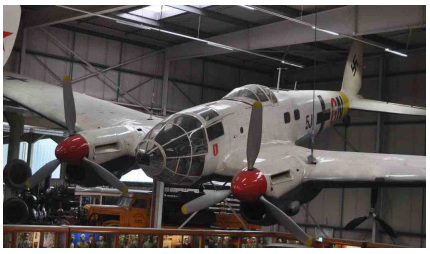
Identify the five Luftwaffe aircraft.

Approximately 24,000 produced

So good,it was adopted as the personal aircraft of Field Marshal Montgomery

Nicknamed Tante Ju ("Aunt Ju")

Originally claimed to be a civil airliner to circumvent restrictions on German warplane development



Answers and Museums

Focke-Wulf Fw 190 Wurger (Champlain), Fieseler Fi 156 Storch (Stork) (Collings, Junker Ju 52 (Fantasy of Flight ,He 111 (Sinsheim)