



Missions for America

*Semper vigilans!*

*Semper volans!*

Publication of the Thames River Composite Squadron  
Connecticut Wing  
Civil Air Patrol

<http://ct075.org>

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15 April, 2020

### CADET MEETING

*9 April, 2020*

An Aerospace Education meeting held using Zoom and moderated by Lt Ceniglio.

Cadets had previously viewed *Power of Ten*, a film which explores the relative size of objects in the universe by comparing their orders of magnitude. Lt Col Rocketto discussed the concept of scientific notation and used it to calculate the time it took sunlight to travel from the sun to the earth.

Lt Thornell led a learning exercise which used the technique of a trivia contest to review the material

in Module 1 of *Aerospace Dimensions*. A second part of the contest called upon cadets to demonstrate their general knowledge about CAP.

Maj Lenny Kimball, Commander of the Charter Oak Squadron attended as an observer.

The meeting was an experimental attempt at distance learning. Participating seniors meet in a Zoom conference on the next day to consider lessons learned.



*Zoom screen from last week's senior meeting.*

### SENIORS MEETING

*14 April, 2020*

The meeting was held via Zoom with Lt David Pineau moderating.

Capt Charles Johnson is the CTWG liaison with with the U.S. Navy and briefed the Squadron on possible future missions with the submarine force.

Members reported on their responsibilities and achievements.

### THAMES RIVER COMPOSITE SQUADRON ACTIVITIES

#### *Emergency Services*

Maj Bourque and SM Docker continued ground team training which included the monthly inspection of the station vehicle.

SM Jason Otrin has completed his instrument rating course

A number of members are participating in the FAA Wings Program, a selection of very good courses on a very bad website.

Maj Bourque, Squadron Testing Officer, is working with cadets and proctors which allow tests to be taken on-line.

Maj Farley, Lt Kopycienski, and several other members worked to mitigate damages and check the condition of our facilities before and after the Monday storm.

### *Aerospace*



SM Matthew Madore has completed the Aerospace Education Program for Senior Members and earned the Gen Charles E. Yeager Ribbon. Eighty-six percent of the senior members now hold the award.

### **TWO TRCS GUYS AND THE IMMORTAL B-52**

Sixty-eight years ago this week, the Boeing YB-52 Stratofortress took flight for the first time. Since that time 744 have been manufactured and about 60 H models are part of the USAF heavy bomber triad. Twenty Northrop B-2A Spirits and sixty-two North American-Rockwell B-1B Lancers make up the balance.

Two B-52 pilots from the Thames River Composite Squadron share a unique history with the Stratofortress.

Former Cadet Commander Erik Nelson learned to fly with CAP under the tutelage of Maj Keith Neilson and credits his success as an Air Force pilot with the training he received from Neilson. Maj Nelson is now an instructor pilot on the B-52H stationed with the 23rd Bomb Squadron, 5th Bomb Wing based at Minot Air Force Base in North Dakota.



*Erik in the cockpit of a B-52*

Former Squadron Commander Lt Col John deAndrade has been a CAP member for 20 years and is now a captain with Delta Airlines based in New York. He is a former B-52H and B-1B pilot and recalls that:

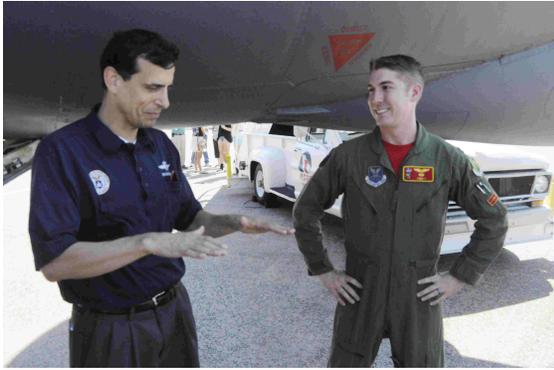
*The first time I flew the buff I could not believe something so gangly could fly. It doesn't fly off it more likes lifts off vertically like it wants to hover. The B-1 was like a sports car compared to the B52. But I never canceled in the Buff due to computer boot failure. Reliable and steadfast the B52 will out live us all.*



*John in the cockpit of a Delta Airbus A220*

Nelson and deAndrade are 19 years apart in age. The first B-52 flew 16 years before deAndrade was born and 36 years before Nelson's birth. The B-52H which the Air Force is now flying was last made in 1962. Six years before deAndrade was born and 16 years before Nelson's birth.

Yet an examination of their log books show that both of them have flown BUFFs with the same serial numbers.



*The Old Man shows The Kid how it was in the old days.*



*The Front Office  
Then and Now  
(Credit: SrA Justin Armstrong)*

The last production aircraft, B-52H AF Serial No. 61-0040, left the factory on 26 October 1962 so the youngest H model is now 58 years old. The B-52, affectionately known as the “BUFF” has had its electronics, weapons systems and engines continuously upgraded. The selection process for new engines is now under study. Air Force plans are to operate the BUFF fleet until 2050 which will make the youngest of them, perhaps designated B-52J, 88 years old.



John's son, Trey, is an Air Force Academy graduate and heading for flight school. What is the possibility that he may one day sit in the right front seat of a BUFF?

### **THE WEEK'S AEROSPACE ANNIVERSARIES**

April 15, 1952 – First flight of the Boeing B-52 Stratofortress. Sixty-eight years later, around 60 remain in the active inventory.



*The YB-52, First Stratofort to Fly.*

April 16, 1935 – A Sikorsky S-42, the *Pan Am Clipper*, departs Alameda, California under the command of Capt. Edward Musick. It lands at Pearl Harbor the next day. Pan American was using the stripped down aircraft to survey the route and develop techniques for future commercial flights. This was their first Pacific survey flight. On return, the aircraft carried the first airmail from Hawaii to the mainland.



*Capt. Musick Boarding!  
(Credit: PanAM Historical Foundation)*

In 1938 Musick was killed in the explosion of the S-42, *Samoan Clipper* near Pago Pago. He was engaged in surveying the routes to Auckland, New Zealand.

April 17, 1899– Birth of Nevil Shute, novelist and aeronautical engineer. Best know for his 1957 post-apocalyptic novel, *On the Beach*. The story-line describes the lives of a group of Australians and the crew of a U.S. Navy submarine awaiting death as the radiation from a nuclear war is carried south and has been twice made into films. Of special interest to *Coastwatcher* readers might be the novel, *No Highway in the Sky* which was also made into a film and his autobiography, *Slide Rule*.



*Airspeed Oxford Mk.1 at Duxford*



*Stewart, a real WWII bomber pilot plays Dr. Theodore Honey, a boffin from the Royal Aircraft Establishment.*

April 18, 1952 – First flight of the only Convair YB-60. This swept wing eight engine jet could carry a bomb load 60% heavier than that of its rival, the B-52 which made its first flight three days earlier. It was cheaper than the B-52 because three-quarters of the parts were common to Convair's B-36.



*R-100 at Cardington*

But in testing, the YB-60 not only had severe handling problems but was 100 mph slower than the B-52 using the same engines.



*Slide Rule* centers on his first career as a aeronautical engineer and his work as a stress analyst on the record setting Vickers dirigible R-100 after which he became and founder and principal of Airspeed, Ltd. Airspeed developed a line of excellent aircraft such as the twin-engine trainer Oxford of which almost 9,000 were produced in World War Two. His innovative work earned him Fellowship in the Royal Aeronautical Society.

April 19, 2012 – Slovenian pilot Matevž Lenarčič becomes the first aviator to circumnavigate the world solo in an ultralight, a spercharged Pipistrel Virus SW914. He departed his native Slovenia the 8th of January and flew over 60,000 miles, touching down on all seven continents.



*Armstrong's  
F5D at the  
Armstrong  
Museum,  
Wapakoneta,  
Ohio.*

April 20, 1949 – A Short Sunderland lands on the Yangtze River bringing medical assistance to *HMS Amethyst*, a Royal Navy sloop besieged by the People's Liberation Army. It took just over three months for the *Amythest*, with some assistance from other Royal Navy ships, to run the Communist gauntlet and make the open sea.



April 21, 1956 – First flight of the Douglas F5D Skylancer. Only four were built. Two reasons were given for the cancellation of the order. The Skylancer was considered to be comparable to the Vought F8U Crusader and some believe that Douglas already had too much Navy business and acceptance of another design would weaken other airframe producers such as Grumman.

The project pilot for the Skylancer was future astronaut, Alan Shepherd. One aircraft went to NASA where Neil Armstrong used it to carry out simulate abort procedures for the ill-fated Dyna-Soar space plane. Another provided on the ogival wing planform which was adopted by Aerospatiale/BAC for the Concorde.

## HOWARD HUGHES, AVIATOR

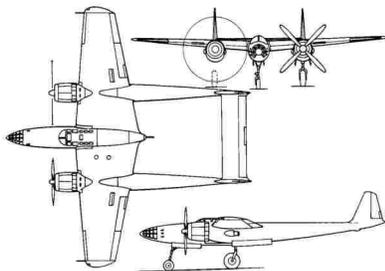
*A Photo Essay  
Part II-War and Peace  
1940-1976*



*The first part of this essay reviewed his interests in aviation from his first flight at New London, Connecticut until the start of World War II. His vast wealth allows Howard to make his mark as a record setting pilot, publicist, and innovator. But his aeronautical career reveals striking personality characteristics, both positive and negative which can be either depending upon the circumstances. His extraordinary attention to detail contributes to his successes but also results in delay and cost-overruns. The quest for perfection is the enemy of achievement. An obsession for "collecting" and flying various types of aircraft is matched by a habit of storing them and rarely using them again. A desire for secrecy and his reliance on loyal retainers insulate him from the checks and balances found in social intercourse. These characteristics become manifest in the last half of his life.*

1940

Hughes noted the war clouds, built a new plant and designed and constructed a new fighter resembling but much larger than the Lockheed P-38 Lightning. The designers chose Duramold, a plastic bonded plywood which could be formed into compound curves under heat and high pressure, for the fuselage. The flush riveting and its improvement of aerodynamics met with Howard's approval.



*XP-73  
An Unofficial  
Designation?*

*D-2 Under  
Construction.  
Hughes is in the  
foreground handing  
his jacket to his  
technical expert  
Glenn Odekirk.*



Over six million dollars went into the D-2. Hughes flew the first two test flights on June 20, 1943 but subsequent flights resulted in unresolved control problems. In the end, the procurement office at Wright Field rejected it as unsuitable for combat.

1941- Hughes directed and produced the RKO film, *The Outlaw*, starring Jane Russell. Howard's attention to details brings his engineering skill to the forefront of costume design when he creates and fabricates a brassiere which will visually enhance Miss Russell's fundamental assets. Howard's creativeness led to the film being banned by the Hollywood Production Code

Administration which was assiduously guarding the morality of the American cinema. How times have changed.

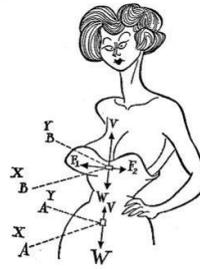


Figure 1.  
Forces Acting On Cloth Element.

*An illustration from  
Robert Baker's Stress  
Analysis of a Strapless  
Evening Gown  
illustrating the  
application of statics and  
cantilever beam theory.*

A master of public relations in advancing his interests, Hughes contrives a plan to get his banned film released. Hughes cut a 30 second sequence and resubmitted the film but RKO but the company reneged on its decision to release the film for distribution. Millions of dollars were at stake as was Howard's pride and ego. He brooked no opposition to his ambitions.

In what can only be regarded as a brilliant false-flag scheme, he had his agents contacting religious and civic organizations complaining about the lascivious nature of the the film. The immediate result was an outcry of public support for the banning. But the Law of Unintended Consequence came into play and the public outcry for banning the lewd film aroused another segment of the population which demanded that the film be released and for a one week period, it made it into the theaters. Maybe times have not changed?

A different country emerged from World War II as did a weakened production code. RKO released the film in 1946 and it became a money-maker. The young, at that time, *Coastwatcher* Editor, saw some billboard advertisements.



A devotee of Roy Rogers and a passion for westerns drew his attention to the hog-leg six shooter in Miss Russell's right hand and he demanded to see the movie. Mother Rocketto said no! "But Mom, its about Billy the Kid." Mother Rocketto replied "Stephenyu! No!" When she called me Stephenyu I knew she meant business so beating a hasty retreat became the order of the day.

1942

The engineering tycoon Henry J. Kaiser contacted Hughes with a plan to build a giant flying boat.the HK-1. German U-boats were taking a horrendous toll of shipping and Kaiser, impressed by Howard's aeronautical record saw a possible answer. Fly over them! (Ironically, Kaiser, an engineering genius himself found a better solution, the Liberty Ship, a prefabricated cargo ship that could be built in about six weeks and produced in numbers so large, over 2,700, that the Germans could not sink them fast enough.) But the desperate pace of war would trump Howard's micro-managing and obsession with perfection.

A year and half went by and the Reconstruction Finance Corporation cancelled the 18 million dollar contract and Kaiser dropped out. Hughes renegotiated the contract and continued to pursue the construction of what became one of his his best known and least successful aeronautical achievements, the H-4 Hercules. Concurrently, he had been working on what would be one of his most successful aeronautical triumphs. The Lockheed Constellation. He did not design it nor build it but he had his hand in the details and provided the necessary financial backing.

1943

On January 9th, the Connie, designated C-69 by the Army Air Force made its first flight. It was commanded by Boeing's Eddie Allen and Lockheed's Milo Burcham, both destined to die within a year, Allen while testing the B-29 and Burcham in the P-80.



C-69 (Credit: Naval Aviation News)

Howard also had a turn test flying the Connie. His past flight accomplishments were remarkable but his impulsive nature was not the mark of a good test pilot. Burcham sat in the right seat, Kelly Johnson flew as a flight engineer and Jack Frye was aboard as observer. Hughes had never flown an aircraft this large and complicated. At one point, his failure to follow a recommended procedure for a stall, forced Burcham take the aircraft away from him. His airspeed control on take-offs and landing was so poor that Johnson consulted with Frye and made Burcham take the Connie home. Hughes was not pleased.

The S-43 which Hughes has purchased for a potential round-the-world flight back in 1937 had been so modified that it was now registered in the experimental category. Hughes had been using it at Lake Tahoe to study hull design for the planned H-4 and to practice water operations.



The Army Corps of Engineers which was building airports to support the North Atlantic route needed it to transport staff between building sites. Under the threat of appropriation, Howard reluctantly decided to sell it to the Army but before the deal was closed, disaster!

On May 16th, he was flying a final test flight with four on board. The modifications which included more powerful engines shifted the center of gravity forward so ballast was added to the tail to restore longitudinal equilibrium. However, the Army had removed the ballast planning to replace it with radio equipment and a radio operator. Hughes was unaware of this had been done. On his

first landing he lost control of the Sikorsky and it broke apart and sank. His mechanic and a Civil Aeronautics Authority inspector were killed. Hughes received head injuries. The two other survivors received serious physical damage. It was Howard's fourth crash.

*Salvaging  
the  
S-43*



*Howards "hijacked" Connie touches down at Washington National.*

Hughes Aircraft contracts to build what will become known as the XF-11.

*1944*

Although Hughes had a reputation as a secretive recluse he was also a clever publicist and knew how to get "good ink" in the media.

Secretly crafting a grand publicity event, Howard Hughes cleverly negotiated rights to buy the first Constellation, destined for the military, which was to be used on shakedown flights. He then turned around and immediately sold the aircraft to the government at cost. The Connie, with military registration 43-10310, was handed over to TWA at Las Vegas, Nevada, (for favorable tax treatment) on April 16, 1944. It was then ferried back to Burbank.

Early the following morning, with Hughes himself and TWA president Jack Frye at the controls, the Constellation left California with 17 people aboard and flew non-stop to Washington, DC, in the record time of 6 hours, 57 minutes, 51 seconds, shattering Hughes' earlier record by 30 minutes.

When the Connie landed at Washington National Airport, the assembled military and government dignitaries, Gen. Hap Arnold among them, were more than offended when the Connie taxied in bearing the TWA livery rather than the olive drab of the Army Air Force. Among the passengers were Kelly Johnson and Howard's current lady friend, Ava Gardner.

For the next few days, Hughes milked the visit for all it was worth, taking VIPs on flights and hosting a huge party promoting TWA. The Connie was then flown to Wright-Patterson Field in Dayton and officially transferred to the government. While there, Orville Wright came aboard and took his last airplane ride and was allowed time at the controls.

*1945*

As the war wound down, the successful Constellation project could be compared to his attempts to build a massive trans-oceanic cargo hauler and a state-of-the-art photo-reconnaissance aircraft. Twenty-two Connie had been produced for the military as the C-69 and 856 Connies had left the factory by the time production ceased in 1958.

But the HK-4 and the XF-11 were still-born as wartime assets. Neither had flown. As the German war machine discovered, "wonder weapons" are of little value if not produced in time and in sufficient quantities.

*1946*

Hughes engaged in an orgy of collection of war surplus aircraft. The government set up disposal sites at a number of different airports and over 100,000 aircraft were transferred to surplus and many could be bought by civilians for a pittance.



*Kingman Arizona Repository  
She inventory was near 5,000 aircraft.*

Paul Mantz purchased 475 fighters and bombers for \$55,000! He retained a dozen for his filming business, sold the fuel which he salvaged from the tanks for enough money to cover his initial investment and made even more money disposing of the 463 aircraft left over. A P-51 Mustang went for about \$1,500. Stearmans could be had for \$250 and you could get a jeep for 100 bucks.

Records seem to indicate that Hughes managed to purchase about a dozen each of Douglas B-23 Dragons and A-20G Havocs, possible for conversion to high speed transports for the business community.

At least one North American B-25C Mitchell was acquired. It became the personal hack of Noah Dietrich, Howard's right-hand man. It was last flown in 1957 and as of 1975 was still parked at Hughes Airport.



*Dietrich's Personal Plane*

Hughes also flew one of the converted Havocs, NL34920, which on its last flight, July 11, 1957, was moved to Hughes Airport, parked and like the Mitchell was still there in 1975.



*Howard's Favorite Havoc*

One of Hughes's eccentricities was that he never likes to dispose of an aircraft which he owned. He would fly them a few times, often just doing repeated touch-and-gos and then abandon them in place. The abandonment wasn't complete since he generally hired guards or rented hangars and provided extremely complex written instructions on caring for the aircraft.

To practice for flying the H-4, he purchased a Consolidated PB2Y-2R Coronado that had been Admiral Chester Nimitz's transport in the Pacific. Howard never flew it. It sat in Long Beach for 18 years and in 1977, went to the Naval Aviation Museum where it has been restored and put on display.



*The Coronado at Pensacola*

On July 7th, Howard took the XF-11 up for its maiden flight.



*Howard prepares for the ill-fated flight.*



The twin engine aircraft has counter-rotating propellers on each engine. A loss of oil pressure on the starboard engine caused the right rear prop to reverse pitch. Hughes then showed poor judgement and ignored standard emergency procedures which resulted in a crash in Beverly Hills. Howard incurred severe injuries which plagued him for the rest of his life.

1947

In April the second prototype of the XF-11 eliminated the counter-rotating props but was found wanting and with the jet age was imminent. A production order was cancelled and less costly alternatives were chosen.

In August, MR. Hughes GOES to Washington and confronted Senator Owen Brewster who was chairing a special committee investigating WWII defense procurement. The charges against him centered on the failure of Hughes to deliver any aircraft after being paid \$40 million. There has also been a whiff of corruption involving the possible bribing of Army procurement officers including Col. Elliot Roosevelt, son of the President.



On the other hand, Brewster was suspected of working surreptitiously for Juan Trippe, President of Pan American Airlines with a plan to force TWA to sell out to PanAM, giving PanAM the status of "the chosen instrument," a monopoly on U.S. commercial overseas operations.

Hughes performed brilliantly and Brewster provided a lack-luster performance. Hughes emerged as a public hero for facing up to government power. The hearings led nowhere. But

Hughes was unhappy and the next time Brewster ran for office, Hughes convinced Maine's governor to run against him and fattened the governor's campaign purse with a substantial donation. Brewster was defeated in the primary and resigned from office.

On November 2nd, Hughes took the H-4 out for taxi testing. George Haldeman, a Civil Aviation Agency inspector would not approve the aircraft for flight but was on board. During the third high speed taxi, at around 70 mph, Hughes commanded the flight engineer to apply 15° of flaps and the H-4 rose off the water and flew in ground effect for the 80 second one mile run.



*The airplane has no airworthy certificate. What is this man thinking?*

*Howard disses Senator Brewster*



Hughes once said regarding the H-4 that he had "...puts the sweat of my life into this project and if it's a failure I'll leave the country and never come back." With the H-4 rumbled along 70 feet over the Long Beach Channel, Hughes was heard to mutter "There you are, Senator Brewster, you son-of-a-bitch, It's flying."

1948

The year was not a happy one for Hughes aircraft, beset with both management and financial problems but a bright future lay ahead. The AIM-4 Falcon guided air-to-air missile was under development and the company was in the avant guard of missile and electronics development.



Ira Eaker became a vice president and outstanding engineers such as Simon Ramo and Dean Wooldridge conceived and developed a system in which signals for an interceptor's radar would be fed into a digital computer which the guided the aircraft into the firing envelope. As the cold war heated up, electronically guided defensive interceptors became a hot item and the company would prosper.

1949

Hughes sold his "Flying Penthouse," the luxuriously appointed Boeing 307B Stratoliner to Texas entrepreneur Glenn "King of the Wildcaters" McCarthy, who used it to fly in a load of Hollywood celebrities when he opened his Shamrock Hotel and held what had been billed as "Houston's biggest party."

After passing through many hands, the Stratoliner ends up as the houseboat, *Cosmic Muffin*.



*The Flying Penthouse and the Cosmic Muffin*



The Falcon missile was tested and the Hughes E-1 Fire Control System was developed and eventually installed in the first three U.S. jet interceptors, the Lockheed F-94 Starfire, Northrop's F-89 Scorpion and Convair's F102 Dart which set a pattern for the all-weather interceptor.



*Minnesota Air National Guard Starfire*



*Vermont Air National Guard Scorpion*



*Connecticut Air National Guard Dart*

Ramo and Wooldridge continued development of what became known as the MA-1. It was integrated into the 1959 Convair F-106 Delta Dart to control intercepts and fire the missiles, either Falcons or the AAIR-2A Genie nuclear missile.



*177th Fighter Interceptor Group  
Delta Dart*

Ramo and Wooldrige left Hughes in 1953. They have been frustrated with the management problems endemic in a Hughes run enterprise and Howard's failure to even discuss the issues concerning them. They formed the Ramo-Wooldrige Corporation, became a major competitor of Hughes and became the USAF's lead contractor in the development of intercontinental missile guidance systems.

*This second chapter in the aviation pursuits of Howard Hughes touches upon his destructive micro-management, disregard for deadlines, disdain of air traffic control and shaky decision making are revealing insights about the dark side of his personality.*

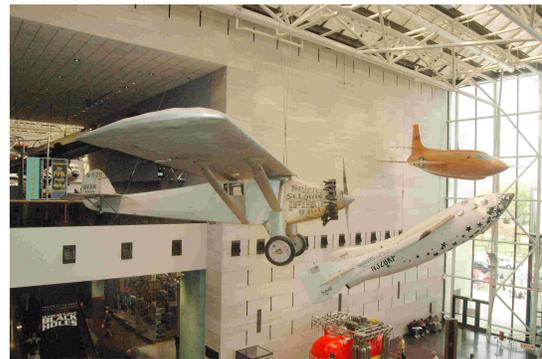
*On the other hand, he is willing to take financial and physical risks, shows extremely loyalty to his chosen employees, has a vision of the future of aviation, is willing to face-down legislators, and an incredibly hard worker.*

*His airplane crashes and auto incidents not mentioned resulted in grievous physical injuries and he suffered a number of concussions. The pain from the XF-11 crash leads to an abusive use of prescribed pain-killers.*

*The next edition will feature Part III of the photo-essay. His deep plunge into the airline industry, his interest in business jets and his withdrawal from aviation enterprises in favor of real estate and casinos.*

## FILLERS

A filler was a common newspaper practice. If formatting leaves blanks in the page, facts, pictures, and information not relevant to the day's news are used. *The Coastwatcher* will often adjust the size of pictures to meet this goal or even add a paragraph or two to a story but tonight, my friends, The Editor has, as they say in aviation, run our of altitude, airspeed and ideas so.....we dug up some interesting montages from the files.



*Three historic aircraft on display at the NASM-Mall*



*Anti-Sub Day on the Groton Ramp.  
But what is that Army Mohawk doing there?*



*Legacy Flight!*