



Missions for  
America  
*Semper vigilans!*  
*Semper volans!*

## The Coastwatcher

Publication of the Thames River Composite  
Squadron  
Connecticut Wing  
Civil Air Patrol  
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Issue 12.14

10 April, 2018

17 APR-TRCS Meeting  
16 APR-Lt Col Bright-Adventures in Learning  
18 APR-State Capitol Tour  
21 APR-Rocket Building (0900-1400)  
24 APR-TRCS Meeting  
28-29 APR-Corporate Leadership Course  
07 MAY-Special Wing Exercise (USAF)  
12 MAY-Connecticut Aviation Day  
19 MAY-Commander's Cup Rocket Contest  
27 MAY-Memorial Day Parade  
19 AUG-Groton Airport Day  
22 SEP-Preston Scarecrow Festival  
29 SEP-Glider Flights-Springfield, Vt.  
06 OCT-Groton Fall Festival

### CADET MEETING

10 April, 2018

The customary drill, pledge, oath, inspection, and GES testing opened the meeting.

Capt Guilliams and Lt Drost led a character development seminar which considered good manners and civil behavior.

A promotion ceremony followed

### SENIOR MEETING

10 April, 2018

Maj Noniewicz spoke about computer hacking, scams, phishing and account protection.

Maj Farley reviewed pilot meeting topics such as preheating and scheduling practices.

He and Noniewicz then reviewed last week's TRANEX from the point of view of AirOps.

The usual calendar and goal review was conducted.

### ACHIEVEMENTS

2d Lt Joanne Richards has completed both water survival and scanner training and is qualified to serve as an aircrew member.

Cadets Spencer Haynes, Benjamin Kelly, Roan Shaffer, and Luis Trinidad received their Airman Basic insignia.



Cadet Elizabeth Burton and Jillian Irvine were promoted to cadet airman first class.



Cadet Rhys Thornell was promoted to cadet technical sergeant and SM Jennifer Thornell was promoted to second lieutenant.



C/MSgt Christopher Munzner received a ribbon for recruiting success.

C/2d Lt Ryan Schantz and C/TSgt Cameron Wischman were awarded two year service ribbons.



C/CMSgt Hannah Ramsey and Daniel Ramsey received service ribbons with bronze clasps symbolic of five years of service.

## OPERATION SAPPHIRE TIGER II

The Connecticut Wing operated a training exercise on Saturday last. The mission base was in Danbury and the exercise was titled Operation Sapphire II.

Squadron members functioned in supervisory and training positions in Air Operations. Majs Neilson and Noniewicz served on the Air Operations Branch staff, Maj Farley was a trainee, and Lt Pineau was Mission Staff Assistant.

Six Wing aircraft were dispatched on 11 different sorties which included taskings for aerial photography, emergency locator beacon searches, and interactions with ground team units.

The Squadron operated a secondary mission base out of Groton. One sortie was dispatched to the Rogers Lake area in East Lyme to locate an emergency locator beacon. The signal was picked up on Grassy Hill Road and located following three direction finder readings. The entire mission took two hours.

Maj Borque led the ground team assisted by C/CMSgt Daniel Ramsey. Participating members were C/Col Hollingsworth, C/CMSgt Hannah Ramsey, SM Jennifer Thornell, and Cadets Rhys Thornell, Haynes, and Trinidad.

During the ground team sortie, Deputy Commander of Cadets, Lt Schmidt, directed a Mission Radio Operator training session from the Squadron radio room. The syllabus items practiced were radio operating procedures, WIMRS use, message handling, status board updates, and location tracking. SM Kopycienski and Cadets Burton, Diaz, Wischman, and Martin participated. Mr. Haynes, parent of Cadet Haynes observed.

Approximately 15 aircrew members from across the Wing participated. Over all, there were about 60-70 Wing members supporting the overall TRANEX.

## 12 MAY 2018 CTWG CADET ACTIVITY

### *Aviation Day*

Connecticut Wing's Royal Charter Composite Squadron will be holding a full day of aviation related activities, classes and speakers while concurrently performing O-Flights!

Learn about drones, helicopters, history of flight, military and aviation, WASP (Women Air Force Service Pilots); meet members of aviation-related civilian working force, meet members of the Air Force and Army; build model airplanes, see if you can beat ROTC Air Force Cadets in knock-out drill.

Time: 0830-1730

Location: Royal Charter Composite Squadron  
Homeland Defense Building  
269 Maxim Rd., Hartford, Conn.  
Forms for cadets: CAPF 32 & CAPF 161  
Cost: (lunch&supplies): \$10.00

For applications and information contact Lt Rachel Silverberg at: rachel.silverberg.clnc@gmail.com  
(631) 413-9908

### AVIATION HISTORY

#### *Boeing B-52 Stratofortress Geriatric Combat Veteran*

The 15th of April marks the 66th anniversary of the first flight of the B-52, fondly known as the BUFF. If one counts the first experimental model and the service prototype, the current version, the B-52H is the 10th variant. The aircraft was originally designed to supplant the Consolidated B-36 as a nuclear bomber in the intercontinental strategic mission but has been employed in a number of other roles. The BUFF became operational with the Air Force in 1955 and is still performing combat missions today.

Originally planned to be a straight wing aircraft powered by turboprops, the final configuration was worked out almost overnight in a hotel room. The Air Force rejected the penultimate design

which has been presented to them in Dayton, Ohio so six Boeing engineers worked over a weekend to come up with a swept wing aircraft with eight engines mounted in pairs under the wings. Production facilities were in Seattle and Wichita and 744 aircraft were built.

The first two were the experimental XB-52s, one of which was converted to the service prototype YB-52. According to legend, General Curtis LeMay was displeased with the tandem arrangement of the pilots under a greenhouse-style canopy and told Boeing that if they wished to sell the aircraft then change it to side-by-side seating.



*The XB-52 (above) sits in front of a B-36, the aircraft which it replaced. Note the two men standing on the wing root of the B-36. The YB-52 in flight. (Photo Credits: USAF)*



Boeing did so but only three B-52As were produced. The Air Force returned them to Boeing to be used for in-house test programs.



*One of the only three A model Stratofortresses (Photo Credits: USAF)*

The B-52B became operational in 1955 and displayed the usual problems inherent in every

new aircraft. About half the production run of 50 aircraft were designated RB-52B and were modified to carry a reconnaissance pod containing two extra crew members and a selection of cameras.



*The B model (above), City of Riverside, resides in the March Air Field Museum. The RB-52B (below) is prominently displayed at the entrance to the Wings Over the Rockies Museum in Denver.*



The B-52C sported larger fuel capacity and upgraded engines which allowed an increase in range and a boost in gross weight of 15 tons. Assigned to the nuclear mission, these were the first BUFFs to be painted with the bright white anti-flash paint created to reflect some of the thermal radiation from a nuclear detonation.



*A 52C displaying the white anti-flash protection on the Westover AFB ramp. (Photo Credits: USAF)*

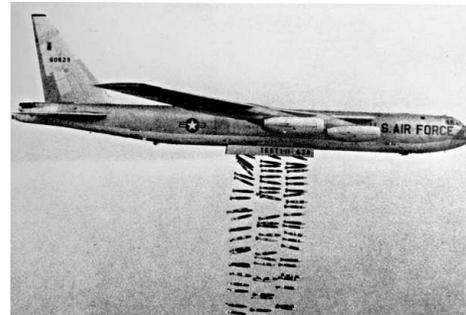
Next in line was the 52D. It received the “Big Belly” modification which increased the internal bomb load from 27 to 84 500 pound bombs. Wing pylons carried an additional 24 for a total of 108. The aircraft also had improved electronic counter-

measures equipment and was heavily used for carpet bombing Viet Cong positions in Vietnam.



*(Above) A 52D at Maxwell AFB has the Vietnam era dual paint scheme. Jungle camouflage on the dorsal side and a black belly to prevent reflections from anti-aircraft search lights.*

*(Below) A Big Belly Buff disgorges its ordnance. (Credit: USAF)*



The E model received upgraded navigation and bombing electronics. The improvements in air defense systems, especially radar and surface to air missiles, posed a serious threat to high altitude bombardment. The new equipment added a low-altitude attack capability.



*The tail gunner position is clearly visible in this U.S. government photo of a B-52E.*



*One E Model was modified to an NB-52E. The 'N' prefix means that it cannot be restored to its original condition. The aircraft was assigned to the AF Flight Dynamics Laboratory as a Control Configured Vehicle for stability, control, and flutter testing. Note the canard just under and behind the cockpit windows. (Credit: US Government)*

Bigger engines and a high capacity water injection system provided more thrust for the B-52F. The newer Pratt and Whitney J-57 engines increased thrust by 10%.



*B-52F at Joe Davies Heritage Park, Palmdale  
(Credit: Aeroprints)*

In 1983, the last B-52D was retired and delivered to the Aerospace Maintenance and Regeneration Center (AMARC) in Tucson. All previous models had already been retired leaving the B-52G and H in the bomber force. These two models are sometimes known as the second generation. Boeing had been working on major improvements to the design and in 1958, the first G model took flight

*A G model BUFF and Hound Dog missile at Eglin's Air Force Armament Museum.*



Changes included the “wet wing,” which eliminated the fuel bladders and allowed for carriage of 10,000 pounds more fuel. Wing spoilers replaced ailerons. The vertical tail was shortened. The tail gunner was relocated to the main cockpit. And the ability to carry air launched missiles was added.

The missiles came in two “flavors.” The Hound Dog was a cruise missile. The Quail was a decoy designed to confuse air defense radars. Today, a wide variety of weaponry is available: air to ground and anti-ship missiles and “smart” bombs. The addition of advanced navigation, high resolution forward looking infrared systems, and laser designators provide precision delivery capabilities.

More Gs were produced than any other model but in 1992, the Strategic Arms Reduction Treaty (START) and NewStart made them redundant. Gradually, they were sent to AMRAC where they were destroyed in full view of Soviet reconnaissance satellites.



*Before and After*

*(Credit: Penark-Alamy and AMARC Experience)*



The only mark of the B-52 still flying is the H. About 70 of the 102 produced are still active and are based at Minot AFB, North Dakota, and Barksdale AFB, Louisiana. The big difference between the H and previous models was the use of the more efficient and powerful P&W TF-33 turbo-fan engines. The turbofans supplied 70% more thrust than the original engines. The four 50 caliber tail guns were replaced with a 20 mm cannon but that was removed in the early 1990s.



*This H model is on short final to Bradley International Airport and is flown by Capt Erik Nelson, former Cadet Commander, Thames River Composite Squadron (Credit: Hartford Courant)*

There are a number of side stories about the BUFF. Two of them were transferred to NASA as motherships for the North American X-15 and a series of “lifting bodies such as the HL-10.” The first was a B-52A, NASA tail number 003. Modifications included a launch pylon and a cutout on the trailing edge of the starboard wing to accommodate the X-15 tail and liquid oxygen and hydrogen peroxide tanks to refuel the X-15 before launch. Re-designated as an NB-52A, she was named “The High and the Mighty.”



*The “High and the Mighty” at Pima A&S Museum. Mission marks and the pylon which carried the X-15 are clearly visible.*

The other, an RB-58B, was assigned 008 as a tail number and known as “Balls Eight.” She was also used to test Space Shuttle Orbiter components such as brakes and drag chutes. The first six Orbital Science Corporation's Pegasus rockets, a three stage missile designed to boost payloads to orbit after launch from an airborne platform were carried by 008.

NASA received a third Buff, a B-52H, detailed for its Heavy Lift Project. The project was cancelled and little use was made of the aircraft so it was returned to the Air Force



*The two NASA aircraft are the Heavy Lift B-52H in NASA White and Ball Eight. The cutout to accommodate the X-15 tail is visible on Balls Eight right wing (Credit: NASA)*

In 1964, a B-52H was flying with a civilian crew on a Boeing test mission over the Sangre de Cristo Mountains in New Mexico. The object of the exercise was to determine how low altitude high speed flight would affect the airframe. The results exceeded their expectations. Most of the vertical stabilizer and all of the rudder departed the airframe!



*(Credit: USAF)*

The crew headed back to Wichita and in consultation with Boeing engineers lowered the rear landing gear. The gear, located behind the

center of gravity of the aircraft helped compensate for the lost tail area. The also elected to keep the externally mounted Hound Dog missile for the same reason. Their troubles had not ended. High winds made Wichita a bad choice so they diverted to Eaker AF Blythsdale, Arkansas and landed after five hours of tail-less flight. Boeing and the Air Force recovered the data from the flight sensors, took the hint, and active B-52s had their tails strengthened The aircraft involved in the incident was repaired and served for 44 more years.

The official Air Force film report is available at: <https://www.youtube.com/watch?v=WJuEAQbxWRo>

The combat record of the B-52 starts in 1965 with the “Arc Light” raids bombed suspected enemy strongholds in South Vietnam. The Vietnam missions continued until December, 1972, Operation Linebacker II, the “12 Days of Christmas” with attacks on Hanoi and Haiphong.

Between 1990 and today, the BUFF has flown missions over Iraq, the Balkans, and Afghanistan, using non-nuclear weapons, sometimes at low altitudes, far different from the intercontinental strategic nuclear delivery missions contemplated by the Air Force.



*A B-52 demonstrates low level capabilities with a fly-by of the USS Ranger during 1990 exercises in the Persian Gulf. (Credit: US Navy)*

Not many other aircraft can boast of such long service. The English Electric Canberra (US Martin B-57) flew between 1951 and 2008, 57 years. Russian's Tu-95 Bear has been in service for 56 years and flies today as part of the Russian military intervention in Syria. Variations of the

Lockheed U-2 Dragon Lady and Boeings KC-135 still fly, just over 60 years after their introduction. The Lockheed P-3 Orion, a 60 year veteran is being replaced by the Boeing P-8 Poseidon. And Lockheed's C-130 Hercules almost matches the B-52 for longevity and will probably be around for a long time also.

Air Force intentions are to keep the BUFF flying until the 2040s, approaching a century of service. It is possible that a great-grandchild of one of the original BUFF pilots may be sitting in the left seat and it will be interesting to see if any other aircraft, especially a combat aircraft, can match the longevity of the B-52 Stratofortress.

### AEROSPACE CHRONOLOGY

11 APR, 1911 – Lieutenant T. Gordon Ellyson became the Navy’s first pilot.



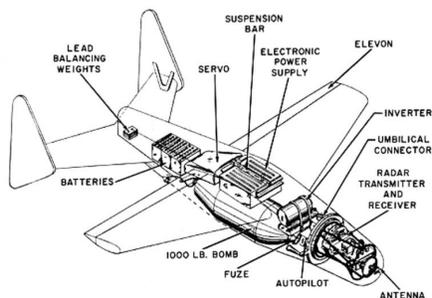
*Naval Aviator No. 1*

12 APR, 1918 – The Loughhead brothers fly their seaplane, the F-1, from Santa Barbara to San Diego. One of the principal designers was a young Jack Northrop. The 211 mile flight took 181 minutes. Allan and Malcolm flew the aircraft. A passenger was Carl E. Christoffersen, a journalist. Christoffersen prepared sandwiches in flight making him, arguably, the first flight attendant.



*Malcolm and Allen Loughhead at the controls of the F-1*

13 APR, 1945 – There is some dispute about this date but sometimes in April, the Navy used its first radar guided glide bomb in combat. Consolidated PB4Y-2 Privateers attacked Japanese shipping in Balikpapan Harbor, Borneo. The weapon was designated at the SWOD-9 (Special Weapons Ordnance Device)



*Privateer Carrying BAT*  
(Credit: US Navy)

14 APR, 1929 – Ed Link introduced the ground-based flight trainer which came to be known as the Link Trainer.



*The instructor's controls allowed him to vary flight conditions, direct maneuvers, and track the simulated course.*



15 APR, 1952 – First flight of the Boeing B-52 Stratofortress.



*First Take-Off* (Credit: USAF/Boeing)

16 APR, 1941 – Igor I. Sikorsky sets a record hovering the VS-300 over Stratford, Connecticut for an hour and five minutes.



(Credit: Sikorsky Archives)

17 April, 1935 – A Pan American Sikorsky S-42, piloted by Ed Musick makes the first flight from the continental United States to Hawaii to survey the route. This is the first commercial type aircraft to make the crossing.



*Docking crew in period swim suits welcome Capt. Musick as he disembarks.*

17 APR, 1973 – Federal Express delivers its first package by air.



*The FedEx Dassault Falcon 20 now on display in the National Air and Space Museum-Dulles.*