

*Missions for America
Semper vigilans!
Semper volans!*



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CURRENT EVENTS

The Museum of the United States Air Force held a ceremony on September 11th recognizing the Civil Air Patrol for its contributions in the aftermath of the terrorist attack on the World Trade Center in 2001. Civil air traffic was grounded but a lone CAP Cessna 172 Skyhawk, N9344L, flew over the devastation on September 12th and its crew, Lt. Col. Jacques Heinrich and Capts Andrew Feldman and Warren Ratis took over 40 damage assessment photographs.



Ground Zero (Credit: Crew of 44L)

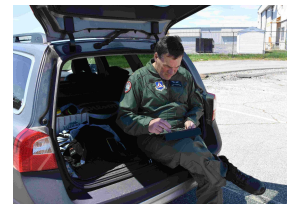


*Lt. Col. Andrew Feldman,
Lt. Col. Jacques Heinrich,
and Lt. Col. Warren Ratis*

*44L at Brainard
when assigned to
CTWG. Many
members were
privileged to fly
it.*



Crews from different wings were alerted that night and by daybreak of the next day sortied carrying urgently needed medical supplies to New York. One of these crews, Maj Keith Neilson and then Lt Paul Noniewicz, picked up CAP 604 at Brainard, loaded supplies at Hanscom Airport in Massachusetts, and flew them to Kennedy International Airport, Queens, New York.



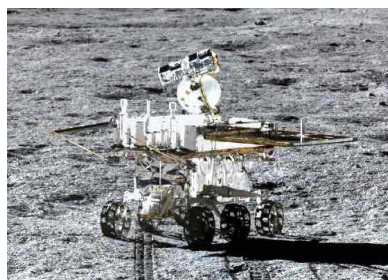
The museum exhibit features 9344L and to the joy of aerospace education officers, is sited next to a museum classroom in which the "Introduction to Becoming a Pilot Program," is held.



The Editor of *The Coastwatcher* does have one gripe. As a student of aviation history, he notes that 44L has been repainted in the current CAP red, white and blue livery. The original white and buff paint scheme with the red cheat line which the aircraft bore over Ground Zero is no more. Branding trumps historical accuracy. *O tempora, o mores.*

Chinese Lunar Rover Sets Record

The Chinese Lunar Rover, Yutu-2 (Jade Rabbit-2) soft-landed on the far side of the moon on January 3rd, 2019 with a planned three month mission. She is still active today exceeding the 321 day record set by the Soviet Union's Lunokhod I in 1970-71!



Yutu-2 (Credit: Kenneth Gill, CNAC)

Two quirky comments by *The Coastwatcher*. The name in English can be said as U-2, the Lockheed reconnaissance aircraft employed by the USAF and the CIA. An interesting historical note is the the rover landed in the von Kármán crater, named after Theodore von Kármán, a physicist and engineer who made very important contributions to aerospace affiliated with the Guggenheim Aeronautical Laboratories at California Institute of Technology and a founder of NASA's Jet Propulsion Laboratory.

One of his students was Tsien Hsue-Chen who was persecuted by the U.S Government during Senator Joseph McCarthy's 1950,s "Red Scare" and was forced to return to Communist China

where he became a central figure in the development of the Chinese rocket program and is known as "the Father of Chinese Rocketry." Lesson learned: Be careful whom you deport."



Three aerospace giants-Ludwig Prandtl, Tsien Hsue-Chen, Col, USA (temporary) and Theodore von Kármán in post war Germany teasing out the technological data about advanced German aeronautics and rocket science. (Credit: US Army)

Yutu-2 carries an impressive assemblage of investigative tools. Among them are a panoramic camera capable of acquiring 3D images, a Visible and Near-Infrared Imaging Spectrometer to analyze the chemical composition of minerals and gases and a ground penetrating radar capable of probing to a depth of 100 meters.

FEATURE ARTICLE

Malta Misfits! Part 2

The first part of this feature article traced the career of Adrian Warburton, a reconnaissance pilot flying the Martin Maryland from Malta

George Beurling

The Falcon of Malta and Canada's Ace of Aces

Malta might have been a repository for misfits. Adrian Warburton served on Malta from September, 1940 until March, 1942. On June 9, 1942, *HMS Eagle* launched 32 Mark Vc Spitfires to augment the fighter defense of Malta, at that time the most bombed place on earth. One of the pilots was Sgt. Pilot George Beurling, a Canadian serving in the RAF. Given his unrelenting efforts to fly, he epitomized the RAF motto, *Per ardua ad astra*, "Through struggle to the stars." Given his disregard for the customs and traditions of the

service and his ill-disciplined behavior, Beurling was a constant vexation for military officialdom.

Beurling's interest in flying can be traced back to age six when his father bought him a model airplane. He pursued aviation obsessively. He built models and became an airport bum, even playing hooky to spend time at the flying field. All of his earnings were poured into flight lessons. In 1939, he qualified for a commercial certificate but had very little time logged. Beurling hatched a plan to get to China to fly against the Japanese but only got as far as Seattle where he was picked up by U.S. immigration for illegal entry and shipped back to Canada. He then tried the Royal Canadian Air Force but was turned down because of a lack of formal education. What about Finland, fighting a war against the Russians? Due to his age, the Finns wanted a permission note from his father who said "Nothing doing."

Beurling found an angel in his old instructor and friend, bush pilot Ted Hogan. Hogan got Beurling's nose into the text books and over the year, he finished off his high school courses and picked up more flying time. But what now? He was grounded in May of 1940 for "low-stunting" giving him "plenty of time for brooding." He met an acquaintance who worked for a shipping firm who suggested that he sign on to a ship headed for England and his friend had just a ship in mind, the Swedish flagged *Valparaiso*, loaded with munitions and short-handed. Beurling signed on board as a deck hand and 18 days later, after losing 10% of the convoy to U-boats, arrived in Glasgow.



Motor Merchant Valparaiso

Attempting to enlist in the Royal Air Force, he was told to produce his birth certificate which he had forgotten to take with him. Back to the *Valparaiso* where he signed on once again for the

return trip back to Canada. Upon departure, the convoy was bombed by the Luftwaffe but Beurling made it back, picked up his birth certificate and set sail for the United Kingdom, once again on the *Valparaiso*. The convoy lost 7 of its 30 ships to the U-boats but George made it to the recruiting office in September of 1940 and became an Aircraftsman 2nd Class in the RAF Volunteer Reserve. However, the *Valparaiso* was doomed.

At 21.12 hours on 31 Dec 1940 the *Valparaiso*, a straggler from convoy HX-97 since 29 December, was hit by one torpedo from U-38 and sank. The master, 32 crew members and two passengers were lost.

Beurling entered flight training and displayed excellent stick and rudder skills but he had a proclivity to chart a course that was not the one established by the rule-bound RAF. While still in Elementary Training School, he buzzed the control tower and demonstrated a penchant for low flying. Objecting to a sergeant's insistence on marching between classes, he punched him out and was called on the carpet somehow escaping punishment. A teetotaler and non-smoker, he did not go pub-crawling with his fellow pilots. He tended to be a loner, not a member of the "hail fellow, well met" band of squadron mates.

He was posted to a new squadron and scored his first kill but did so by breaking formation, a cardinal sin, so instead of praise, his squadron mates not only censured him but reported his lack of discipline to the commanding officer. When one of his fellow pilots was assigned an overseas billet, he volunteered to take his place, destination unknown, which turned out to be Malta. The squadron was not unhappy to see Beurling depart.

Malta was in dire straits, under constant bombardment by the Axis air forces. But Malta was beyond the range of any fighter launched from the United Kingdom or Gibraltar. The solution was to use aircraft carriers to carry RAF planes and launch them within range of the island's airfields. The aircraft were shipped crated to Gibraltar, assembled, and loaded on board a carrier.



The graceful lines of the Spits are marred by the Volkes air filters needed to protect the engines on dusty Malta and the belly mounted 90 gallon slipper tanks to extend their range.



On the ninth of June, 1942, *HMS Eagle* launched 32 Spitfires. Beurling flew a Mark Vc. The aircraft were armed with two 20mm Hispano cannons and four .303 Browning machine guns but the Brownings were removed to save some weight and the pilots used the empty ammo bays to store personal gear. Not equipped with tail hooks for a return to the carrier, it was a one-way trip, all over water, and to the maximum ferry range of the aircraft.



Beurling's Spit

Beurling had acquired the nickname "Screwball,"

a descriptor he frequently used for ideas or situations which he considered odd. Later, after he achieved ace status, he became known as Buzz Beurling. But nicknames aside, he refined his flying and shooting skills to become a consummate dogfighter. Blessed with extraordinary eyesight, he kept notes on fighter tactics and practiced deflection shooting.



Three Royal Air Force tropicalized Spitfire Mark Vcs of No. 249 Squadron RAF at readiness in their dispersal at Ta Kali, Malta.

Deflection shooting is the art of leading a target flying at an angle to one's own heading and hitting it. On the ground, he used a revolver to hone his skills by shooting at lizards. Beurling took special interest in his ammunition loads, checking them for defects which might cause jams and disdaining tracers which he claimed were distracting. RAF policy was to harmonize the wing guns to converge at 300 yards. Beurling preferred 250 yards and aligned his guns for the shorter distance.

On July 6th, Beurling scored five victories in four days and by mid July had racked up a total of 14 kills. But he was not invulnerable, crashing three times. On October 14th, 1942, he shot down three German planes but was himself shot down, parachuting into the sea. Picked up by a rescue launch, he was hospitalized with multiple shrapnel wounds and a heavily damaged left heel.

On November 1, 1942, Beurling was evacuated but the Liberator carrying him crashed short of Gibraltar and he was one of only 3 survivors out of 24. A few days later, he boarded another Liberator

bound for Canada via Scotland and arrived safely.

When he left Malta, Beurling has scored 28 victories, 27 of which were while on Malta and all done in less than four months. He had also been awarded the Distinguished Service Medal, Distinguished Flying Medal and Bar (2nd Award and the Distinguished Flying Cross.



In Canada, Beurling was assigned to promote the sale of war bonds, a duty which he loathed. He also received some notoriety in the press when he mentioned that he enjoyed killing people and once killed a parachuting German.

In May of 1943, Beurling sailed back to England. Engaged as a gunnery instructor, he was the victim of "friendly fire" when he had to bail out after his engine caught fire when a student pilot accidentally fired his loaded guns during a mock dogfight. It was rumored that he also flew under the Nene River's Cross Keys Bridge, highly believable given his propensity for low flying.

Impatient with instructing, he longed to return to combat and in September transferred to the Royal Canadian Air Force and continued to annoy his new superiors, carping about conditions and what they construed as his arrogant attitude. His casual wear of the uniform and his non-regulation hair length did not win him any favor but as Canada's number one ace, he was tolerated. Flying a Spitfire IXb, his lack of formation discipline and displays of forbidden aerobatics lead to his arrest and possible court martial but intercession from a higher authority lead to a grounding and a transfer to a different station. While in England, he scored three more victories bringing his total to 31 which would make him Canada's Ace of Aces in World War II.

Finally, Beurling was sent back to Canada and exiled to Ferry Command assigned as a co-pilot

flying, most likely, a Beechcraft C-45 Expeditor on cargo runs. Unhappy, he submitted his resignation which was gratefully accepted by the RCAF. He traveled to New York and attempted to enlist in the U.S. Army Air Force but the Yanks showed no interest.

In November of 1944, he married Diana Gardner and his deportment and dress improved but the marriage was short-lived due to his impatience inattentiveness and attraction to another woman, an American named Vivian Stokes.

The war in Europe ended and Beurling attempted to re-enlist in the RCAF for combat in the Pacific but was considered unsuitable for an appointment. Records are nebulous but Beurling seems to have taken a number of short term flying jobs. He also approached the Chinese legation in Ottawa and offered his services to the Chinese National Air Force but was turned down without explanation.

But in 1948, the British mandate in Palestine ended and on the 14th of May, Israel declared its independence. The next day, Egypt, Transjordan, Iraq, Syria, Lebanon, Saudi Arabia and the Arab Liberation Army declared war and invaded Israel.

Israel was desperate and an arms embargo and British blockade forced them to clandestinely acquire and smuggle arms. The first aircraft which they managed to smuggle to Israel were some Curtiss C-46 Commandos, four Boeing B-17s and a couple of dozen Avia S-199s, a Czech 2nd rate version of the Bf-109. They also acquired some Spitfires, assembled from hulks and parts left behind by the RAF. But they needed aircrews. They had a small coterie of Israelis who had flown in World War II but needed more so they started to recruit foreign pilots. Having no funds, they looked for pilots who had an ideological commitment to the new state.

Volunteers from overseas answered the call. They were called *Machal*, an acronym, for *Mitnadvei Hutz LaAretz* which translates from the Hebrew as "volunteers from abroad." Machalniks from 15 different countries made up 70% or the aircrews. Notable Americans included Chalmers "Slick" Goodlin, who made the first powered flight of the

Bell X-1, Sam Lewis, a TWA Captain, Air Transport Command in WWII and later the first Chief Pilot of El Al, Chris McGee, nine-kill ace with Boyington's Black Sheep Squadron and Rudy Augarten, a Harvard man and P-47 pilot who when captured by the Germans, escaped, evaded and returned to England to fly more combat. Later, Augarten shot down four Egyptian planes while flying for Israel. Given his two WWII kills, this made him an ace.



*Chalmers,
McGee and
Augarten*



For Beurling, the mid-east conflict was a gift from Mars, the god of war, a chance to get back into combat after suffering through mediocre flying jobs in Canada. He signed up to fly Mustangs and headed to Israel with a stop in Rome. Both the Canadian and British governments looked askance at his recruitment. The Canadians had a law against serving with a foreign military and the Brits were inclined to support the Arabs.

The U.S. government was regulating materials which they suspected were destined for the mid-east but Harry Fredkins, an ex RAF pilot, negotiated a contract for 20 Noorduyt UC-64A Norseman bush planes at \$11,000 each. The Israelis planned to use the aircraft to service besieged kibbutzim.

A Dutch millionaire, Willem van Leer, an engineer, pilot, journalist, playwright and film producer was the financial backer. Cover for the purchase was arranged by a broker "representing" a Belgium company named SOMACO. The aircraft, carrying U.S. N-numbers were flown from the USAAF base at Oberpfaffenhofen to a KLM facility for the installation of long range fuel tanks and then to Italy via Paris.

The Norsemen were staged at Rome's Urbe

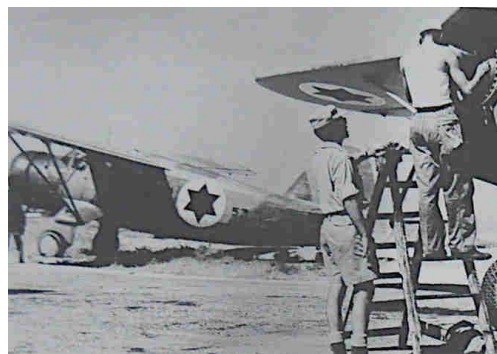
Airport. Beurling teamed up with another pilot, Leonard Cohen, ex-RAF, for a training flight before ferrying one of them to Israel. The aircraft assigned carried the U.S. registration NC 79822.



*Norseman,
NC59776,
owned by
Medie
Traggis flew
cargo out of
Westerly
Airport in the
late 1940s.*

The training flight proved fatal. According to witnesses, on their fourth touch-and-go flames erupted from the cowling. From a height of around 150 feet, the Norseman plunged to the ground, caught a wing-tip, cart-wheeled and burst into flames. Beurling and Cohen were observed slumped over, perhaps unconscious, and the flames prevented any rescue attempt. A shoddy investigation of the accident drew no conclusion for the cause. Beurling had crashed 10 times, four of them after being shot down and except for his damaged heel had gone relatively unscathed. But on May 20th, 1948 he drew a bad hand and handed in his chips.

The smuggling operation became too public and the United States and some European nations diplomatically squeezed Italy and some of the acquired Norsemen were confiscated. But Israel already ferried about a dozen and used them effectively.



Norsemen in Israel

For three months no one claimed Beurling's body. Then his widow had the body buried in a Protestant cemetery between the graves of the

romantic English poets Percy Bysshe Shelly and John Keats. In 1950, he was disinterred and his casket was shipped to Haifa where draped with the Israeli flag, full military honors were rendered and Buzz Beurling was re-interred in the military cemetery at Mount Carmel.



AEROSPACE HISTORY AND CHRONOLOGY

25 SEP, 1955–The Royal Jordanian Air Force is founded.



DeHavilland FB.6 Vampires, their first jet fighters.
(copyright Mike Freer)

Sept. 26, 1986 – First flight of the Piaggio P.180 Avanti. The canard layout used two turboprops mounted as pushers and a canard wing feature

Avanti Visits Groton



The Piaggio's canard angle of incidence is slightly greater than that of the main wing. It will stall before the main wing. This causes a pitch down of the aircraft and warns of an imminent main wing stall.

27 SEP, 1913– Katherine Stinson becomes the first woman in the United States to make an official airmail flight.



Post card depicting Miss Stinson and her aircraft.

28 SEP, 1980– Jaromir Wagner is the first to fly the Atlantic standing on a wing! The trans-Atlantic voyage was made aboard a Britten-Norman Islander. The flight required five hops: West Germany to Scotland to Iceland to Greenland to Newfoundland to New Jersey.



Sub-Economy Class is akin to being a strap holder in a subway (Credit: detail-historie-59)



Sacré Bleu! Est-ce un Beechcraft?

One of the pilots who flew the Islander, Robert J. Moriarty, flew a Beechcraft Bonanza under the lower span of the Eiffel Tower on March 31, 1984. Go to *You Tube* to see the cockpit film.

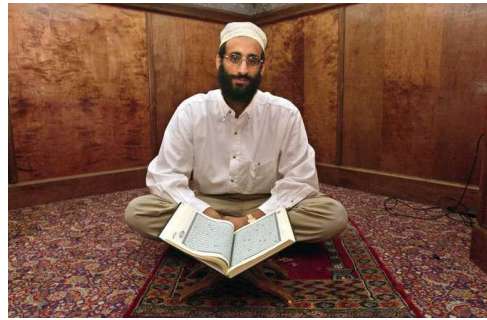
29 SEP, 1940 - An unusual mid-air collision occurred over Brocklesby, New South Wales, Australia. The accident was unusual in that the aircraft involved, two Avro Ansons of No. 2 Service Flying Training School RAAF, remained locked together after colliding, and then managed to land safely. Both navigators bailed out after the aircraft struck, followed shortly afterwards by the injured pilot of the lower Anson.



The pilot of the upper Anson, however, found that he was able to control the interlocked aircraft using his ailerons and flaps, coupled with the still-functioning engines on the machine underneath. He was then able to make a successful emergency landing in a paddock near Brocklesby. All four crewmen survived the incident, and the Ansons were repaired and remained in service with the Air Force.

Sept. 30, 2011 – al-Queda's Anwar al-Alwaki's meeting with co-conspirators in Yemen is cancelled when his vehicle is struck an AGM-114P Hellfire missile launched from an MQ-1B Predator.

Anwar al-Alwaki was an multi-purpose imam who combined his preaching with recruiting for al-Qaeda and planning terrorist attacks.



al-Alwaki Praying (Credit: Linda Spillers, NYT)



al-Alwaki Preying (Credit: Agence France-Press)

Al-Alwaki was a U.S. citizen, born in Las Cruces, New Mexico and educated at Colorado State and George Washington University. Promoting his beliefs via *Facebook*, *You Tube*, and print, the Saudi news station Al Arabiya described al-Awlaki as the “bin Laden of the Internet,” and repeated his calls for *jihad* against the United States.

After an *in absentia* trial, the Yemeni government convicted him for plotting to kill foreigners and ordered that he be captured dead or alive. The United States also had an arrangement with Yemen to operate military forces within the country. President Barack Obama placed al-Alwaki on a CIA kill list.

The strike also killed Samir Khan, an American citizen with a Pakistani background. Khan grew up in Queens and North Carolina. He edited *Inspire*, an English language online magazine reported to be published by al Qaeda in the Arabian Peninsula. and once stated in the magazine that he was “proud to be a traitor to America”. One of the articles which he edited was titled “Make a Bomb

in the Kitchen of Your Mom.”

After al-Alwaki was killed, a storm of protests broke out. Civil liberties advocates pointed out that as an American citizen, he was entitled to an arraignment, legal representation and a trial. Killing him without the niceties of due process was in their words “an extrajudicial execution.” But both the U.S. Department of Justice and Department of State produced documents justifying the killing of al-Alwaki.

The government argued in regard to al-Alwaki that his participation in bomb plots to blow up airliners and his membership in an organization which was in armed conflict with the United States and that since there was no feasible way to arrest him justified the missile strike.

The killing of al-Alwaki raised critical questions about the rules for asymmetric “war” between nation states and non-state actors and about the constitutional rights of U.S. citizens who advocate, plan, or carry out acts of terrorism while outside the reach of United States law enforcement.

One is reminded about a scene in the film, *Breaker Morant* set in Africa during the Boer War .

Peter Handcock. A British officer has admitted to killing a missionary and Lt. George Wittow says “Yeah, but killing a missionary, Peter?” Morant explains:

It's a new kind of war, George. A new war for a new century. I suppose this is the first time the enemy hasn't been in uniform. They're farmers. They come from small villages, and they shoot at from behind walls and from farmhouses. Some of them are women, some of them are children, and some of them... are missionaries, George.

Oct. 1, 1958 – NASA was created to replace NACA, the National Advisory Committee for Aeronautics. NACA was established in 1915 to undertake aeronautical research.



NACA Wind Tunnel, Langley, Virginia



Research aircraft in front of the NACA hangar at Muroc Dry Lake in 1952. Can you name them?

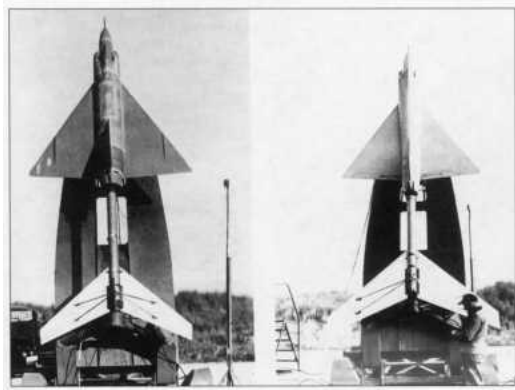
(Credit: NASA)

A host of innovative aviation designs and developments emerged from NACA research including the NACA cowling which reduced drag, the NACA airfoil series which reduced drag and maximize lift, and the Whitcomb area rule which minimizes wave drag in the transonic speed range. During World War II, NACA was deeply involved in improving the performances of U.S. aircraft.



Curtiss AT-5A Hawk with a NACA cowling which added 19mph to its speed.

Rockets were used to test models of the Convair F-102. The model on the left has the original constant diameter fuselage design and the model on right has the Area ruled "Coke bottle" pinched waist, an improvement which allowed the aircraft to go supersonic.



The YF-102, a subsonic aircraft had the area rule applied and it became the Mach 1.5 F-102A.



The constant cross-section design allows the Bone to reach Mach 1.25 at altitude.

SAME NAME, DIFFERENT MANUFACTURER

Aircraft naming is done by the manufacturer or the military. Sometimes they are used by different companies. Sometimes by the same company. Criteria for selection was a name in English and no II suffix.



Kingfishers: Vought OS2U on USS North Carolina and RCAF EADS CC-295



Lightnings: Lockheed P-38F and a Saudi Arabian BAC F.53



A Trio of Apaches: North American A-36A (Mustang Dive Bomber), Piper PA-23 and Hughes AH-64 on Washington Mall





*A Trio of Buccaneers,
Brewster SSB2A, Lake LA-
4-200 and an RAF
Blackburn S2B at Duxford.*



*Banshees: AAF Douglas A-24B
(SBD-3 without a tailhook) and
McDonnell F2H-2*



*Cheyennes: Lockheed
AH-56 and Piper PA-42
Cheyenne III*



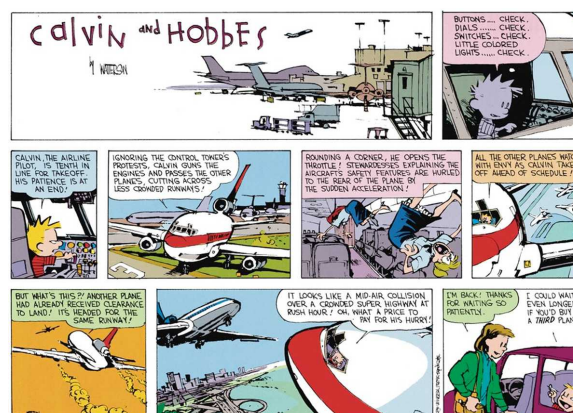
DO YOU KNOW WHAT THESE (MOST LY AVIATION) ACRONYMS REPRESENT?

An acronym is an abbreviation formed from the initial letters of other words and pronounced as a word. The answers are at the end of the page.

1. NASA
2. HELLfire (AGM-114 missile)
3. LASER
4. SONAR
5. HARM (AGM-88 missile)
6. ROYGBIV (read as a name Roy G. Biv)
7. STOL
8. ZIPcode
9. NOAA
10. CONUS
11. FLAK
12. CAG
13. NOTAM
14. RADAR
15. ANZAC

HUMOR

*Have you ever fantasized while waiting for mom
to finish her errand?*



ANSWERS TO ACRONYMS

1. National Aeronautics and Space Administration
2. Heliborne laser fire-and-forget missile
3. light amplification by stimulated emission of radiation
4. sound navigation and ranging
5. High-speed Anti-Radiation Missile)
6. color spectrum: red, orange, yellow, green blue, indigo, violet (You see it when you see a rainbow.)
7. short takeoff and landing
8. Zone Improvement Plan
9. National Oceanic and Atmospheric Administration
10. continental United States (Land of the Free and the Home of the Brave less Hawaii)
11. Flugabwehrkanone aircraft defense cannon
12. Commander of the Air Group (Aircraft carrier officer now called Commander of the Air Wing but still referred to as The CAG)
13. Notice to Airmen (Now called Notices to Air Missions)
14. Radio Detection and Ranging
15. Australia and New Zealand Army Corps