



Missions for America

*Semper vigilans!*  
*Semper volans!*

## The Coastwatcher

Newsletter of the Thames River Composite  
Squadron  
GON  
Connecticut Wing  
Civil Air Patrol

<http://cap-ct075.com/default.aspx>

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### SCHEDULE OF COMING EVENTS

#### NOVEMBER

29 NOV-Senior Flight Training  
28 NOV-TRCS Rifle Training

#### FOR FUTURE PLANNING

**01 DEC-Fruit Deliver-0700-Grasso Tech**

01 DEC-BDUs

02 DEC-CTWG Holiday Party

05-06 DEC-TLC Course

08 DEC-Blues-Character Developm'nt/Leadership

15 DEC-TRCS SUI Inspection/IG Visit

22 DEC-Squadron Holiday Party

29 DEC-NO MEETING

08 JAN-LEDYARD A/S FESTIVAL

27-28 FEB-CLC Course

27-28 MAR-UCC Course

Spring-SLS Course

**NOTE FRUIT DELIVERY DATE ABOVE**

### CADET MEETING MINUTES

24 NOVEMBER, 2009

Cadets split into two groups for the evening activities. Any Cadets who had completed Basic Communications Training assisted in cleaning the trailer. The rest of the Cadets attended BCUT training.

At the conclusion of BCUT, the Cadet Cadre conducted instruction in aerospace.

### BCUT TRAINING

24 NOVEMBER, 2009



*Maj Gorski Leads BCUT Training Session*

Maj Azriel Gorski conducted Basic Communications Training for those TRCS members who lacked certification. Fifteen members of the Squadron completed the evening program.

### CURRENT EVENTS

The Atlantis has ended its mission to the International Space Station, delivering 30,000 lbs of supplies for future use. Much of the cargo consists of pieces of equipment which are too large for the Russian Progress supply vessels which will service the ISS when the Shuttle System is retired, five missions hence.

The Atlantis is scheduled to return to Florida on Wednesday, the 25th and will carry one extra crew member. Nicole Stott will be carried home after a three month sojourn in space.

## HISTORY

November 24th marks the 49th anniversary of the first flight of the F-27 Friendship. Designed by the Dutch aviation manufacturer, Fokker, the F-27 was also built under license in the United States by Fairchild Aircraft.

Pilgrim Airlines, based at Groton, used the F-27 for its flights to Canada. The US Army uses two of them, designated as the C-31A, to serve as a jump platform and transport for their exhibition parachute team, the Golden Knights.



*Note the Open Jump Door on the C-31A.*

The F-27 was designed as a DC-3 replacement and is, if one includes its variants, the best selling turboprop airliner ever produced.



*An Air New England F-27 Taxis in on a Snowy Hyannis Airport.*

## RIWG USAF EVALUATION

Thames River Composite Squadron, Civil Air Patrol, Groton, participated in the U.S. Air Force biennial evaluation of the Rhode Island Wing this weekend. The Rhode Island Wing demonstrated its operational flexibility and the cross-training of

CAP volunteers by bringing in a Connecticut crew to assist them manage an imposing work load assigned by the Air Force evaluators. The Groton based crew consisted of Capt. Paul Noniewicz, mission pilot, Lt. Scott Farley, Observer, and Maj. Stephen Rocketto, Scanner.

On their first sortie, a search and rescue mission, they flew a route search from Gallup Farms to Newport. The "missing" aircraft was a white Cessna with blue stripes. On the second pass, the crew homed in on a strong ELT signal and located a white object with blue stripes near Locustville Pond just north of Hope Valley. The object appeared to be a catamaran on a trailer protected by a white tarp with blue stripes. The aircraft guided a ground team to the vicinity but they headed off to the east into some woods following their L-PER indications. The orbiting aircraft redirected them west towards the "catamaran" which they soon discovered was not the search object. The ground team then reentered the woods to the west and found the actually emergency beacon and a white tarp with blue stripes on the shores of the pond. The target object was inadvertently located approximately 200 meters away from an almost identical object. and this caused the initial misidentification.



*Capt Noniewicz and Lt Farley head for Mission Base, PVD, after the first sortie.*

Their second sortie was based on a homeland security scenario and the crew obtained aerial photographs of five different sites in northern and central Rhode Island and successfully transmitted them electronically to a photo-interpreter team. The crew logged six and a half hours of flight time in their twelve hour duty time.

## IMPORTANT WEBSITE ADDRESSES

The Squadron website is at:  
<http://cap-ct075.com/default.aspx>.

It contains portals to the **ES 116** test and a wealth of important information.

If you plan on taking an **aerospace test or a leadership test**, first go to:  
<http://www.capwyhq.org/drupal-5.0/?q=node/296>.

This site contains an excellent set of practice tests with answers supplied.

If you need **OpSec Training**, go to  
<https://tests.cap.af.mil/opsec>.

For uniforms and supplies:

The Hock Shop: <http://www.thehock.com/>  
Vanguard: <http://www.vanguardmil.com/>  
Old Lincoln County: <http://olcnet.com/index.htm>

## HOLIDAY CHEER FOR OUR TROOPS

The Wojtcuks are putting together holiday baskets to ship to some troops stationed in a combat zone. Several Cadets know of military personnel to whom we might send these gifts.

For the next two weeks, anyone who is interested may donate something for the gift packets. The following are some of the items which are recommended: socks, foot powder, insect repellent, baby wipes, razors and shaving cream, tooth brushes and tooth paste, beef jerky, power bars, hard candy, chewing gum, microwavable popcorn, powdered presweetened drink mix, cookies, dried fruit, nuts, DVDs, CDs, paperback books, and eye drops. Items should be non perishable.

Bring your donations to the Squadron next week and the articles will be packaged and shipped in time for receipt during the holiday season.

## CAP'S 68th ANNIVERSARY

The Civil Air Patrol was founded when a trio of aviation minded citizens convinced the U.S. government of the utility of a volunteer force of aviators who would stand ready to assist in times of national emergency.

Gill Rob Wilson, Thomas Beck, and Guy Gannett, all in involved in newspaper and magazine publication, put together a plan to organize civil aviation interests to support the military in the impending war. They submitted the plan to the Director of the Office of Civil Defense, New York Mayor, Fiorello LaGuardia, an aviator in the "War to End Wars." LaGuardia approved the plan and it was submitted to a board appointed by General "Hap" Arnold which then allocated army support.

On December 1, 1941, LaGuardia signed Administrative Order 9 and the Civil Air Patrol was born and placed under the command of Maj. Gen. John Curry. Wartime duties involved anti-submarine patrols, courier flights, anti-aircraft training missions, border patrols, and cadet training. Fifty-nine CAP members died in the line of duty.



*NEAM Stinson 10, Spirit of Latana Fitted with Bomb for Anti-sub Work*

After the war, CAP went through a number of changes and was made the official auxiliary of the USAF in 1948.

Today, CAP membership stands around 60,000 members organized in 52 Wings. The volunteer members stand ready with over 500 aircraft and 1000 vehicles to meet the obligations of their federally mandated three missions: Emergency

Services, Aerospace Education, and Cadet Programs. CAP flies over 90% of the USAF continental search and rescue missions, works with Homeland Security departments, local, state, and federal law enforcement agencies, public emergency service providers, schools, and a variety of external organizations to provide assistance when required.

### **History Feature Article For December**

#### **COLONEL JOHN PAUL STAPP, PhD, MD** **"The Fastest Man on Earth"**

Not all aviation heroes are pilots or even air crewman. John Paul Stapp achieved fame as the fastest man on land but that was only a means to an end; to make the fastest survivable stops! John Paul Stapp was born in Bahia, Brazil, the son of missionary parents and teachers. Home schooled until the age of 12, he was then sent back to the United States and received his secondary education in Brownwood, Texas. He received a B.A in English and was interested in a writing career but decided to train in medicine after nursing a fatally burned infant cousin. Financially strapped and unable to afford medical school, Stapp earned an M.A in zoology at Baylor and taught for two years. His financial condition was so critical that the school's lab animals supplemented his larder. He commented that "If it breathed it had protein and if it had protein I ate it. He then enrolled at the University of Texas in Austin and received a Ph.D. in biophysics and followed up by entering the medical program at the University of Minnesota. Upon completion of his degree requirements, in 1944, enlisted in the U.S. Army.

"Hap" Arnold, Commanding General of the Army Air Corps believed in promoting research on advanced concepts germane to aviation. He established relationships with academic institutions and entered into a long term relationship with Theodore von Karman, arguably the foremost aerodynamicist in the country. As a result, the Scientific Advisory Group was formed.

Their recommendations led to the establishment of the RAND Corporation and the Air Engineering Development Center (now the Arnold Engineering Development Center) and research in a myriad of aviation related projects such as JATO, swept wings, and aviation physiology.

After transfer to the Army Air Corps, Stapp became interested in aeromedical research. Stapp observed the tests ejection seat tests at Wright Field in 1946. When ejected from a swiftly moving aircraft at altitude, a pilot faces a range of dangerous conditions: acceleration, wind blast, sub-zero temperatures, decompression sickness, and hypoxia. Stapp saw the challenge in developing methodologies to protect the aviator from these hazards and reenlisted. His first assignment was testing a liquid oxygen breathing under the auspices of the Aeromedical Laboratory of the Air Material Command.

Stapp soon learned of a new project involving studies of the effects of high rates of deceleration upon the human body. He visited Moscow to examine a rocket powered rail car which the Russians had captured from the Germans. Soon, he found himself at Muroc Air Base, Mojave, California working with Northrop Aircraft engineers who had built a 2,000 foot track and rocket sled. The sled was propelled down the track by rocket motors and brought to an extremely quick stop by means of a mechanical braking system. Stapp volunteered as human guinea pig on many of these runs. The now U.S. Air Force was able to test and modify restraint harnesses and seating positions which might best protect crew and passengers which are incurred during crashes. New standards were set for crew seat construction, improved harnesses entered the supply system, and the rearward facing seat found its place in military passenger aircraft.

Stapp also volunteered for the wind blast experiment. The Air Force was interested in determining the speed limit at which a pilot could still operate ejection seat controls if the canopy of

the aircraft was lost. Stapp strapped himself in the rear seat of a Northrop F-89 Scorpion which had its canopy cut away. From 20,000 feet, the pilot dived the aircraft and accelerated to 570 miles per hour and Stapp not only survived but developed a procedure to operate the ejection seat controls.

Stapp questioned the Air Force belief that a man could not survive a deceleration in excess of 18 Gs. The crucial point was that restraints and harnesses were constructed to meet the 18 G criterion. Stapp theorized that a man could survive much higher G loads and if so, aircraft restraint systems and seats were insufficient to protect the crews. The Air Force disagreed and Stapp was forced to resort to techniques which pushed the envelope of Air Force regulations guiding resource acquisition and allocation in order to advance his projects.

The conservative Air Force kept tight reins on financial and material resources needed to run Stapp's research and was ever wary of any efforts that were outside the traditional framework so Stapp was neither fully funded nor granted full approval by his superiors. For a man who once sustained himself on lab animals and was intellectually and spiritually driven to solve the problems of survival in the unfriendly skies, such a challenge was irresistible. Stapp resorted to a method known as "bootleg" research, applying his clever mind to ways to "beg, borrow, or steal" what he needed. If you succeed you are a hero. If you fail, you face court martial. Eventually, Stapp's data proved convincing to authorities in the aeromedical branch and, although cautioned against personal involvement as an experimental subject, he was offered a new assignment.



*Sonic Wind No. 1 on Display at the New Mexico Museum of Space History*

In 1951, Stapp arrived in New Mexico's Tularosa Basin where, at Holloman Air Force Base near Alamogordo, New Mexico awaited Sonic Wind No. 1, a Northrop built rocket sled. The sled could be powered by up to twelve solid fuel rocket motors delivering up to 40,000 pounds of thrust which could cause accelerations in the neighborhood of 20 times that of gravity but the real test awaited the rider at the end of the 3,500 foot track. Specially designed vanes would deploy into troughs of water paralleling the track and rapidly, very rapidly, bring the sled to a stop. On December 10th, 1954, after preliminary testing and ignoring the order to serve as an experimental subject, Stapp was strapped into place and the rockets were fired. A new an still existing world record for a manned rocket sled of 632 miles per hour was achieved and then, in about a second of time, the sled was braked to a halt. A G load of 46.2 times the force of gravity was imposed on Stapp's body.



His face contorted and the capillaries in his eyes ruptured. The force of the eyeballs hitting his eyelids inflicted two enormous black eyes.

But the injuries were not permanent and the data gathered proved that aircrew safety devices were deficient. Stapp's work led directly to new harnesses, reinforced seats, and ejections systems which met the higher standards and increased the air crewman's chance of survival.



*The Business End of Sonic Wind No. 1*

The standard unit which measures exposure to acceleration, the stapp or g's has been named in his honor. For example, a pilot in a 60° banked turn pulls two g's. If the turn is maintained for 10 seconds, he is subjected to 20 stapps.

Interestingly, Stapp's work also resulted in the formulation of the first of the famous "Murphy's Laws." Capt. Edward Murphy, Jr. was the engineer in charge of the electrical gauges used to measure the strain on the seat harnesses. When tested, the four gauges yielded no data and an examination revealed that there were two ways to wire them, one correct and one incorrect. All of them had been incorrectly wired and so the most common variation of Murphy's First Law was born: "If anything can go wrong, it will."

His remarkable ride (and fast stop) did attract some national publicity. In 1955 he was on the cover of *Time*, featured in *Colliers* and *Life* magazines, became the guest subject on the tv program, "*This is Your Life*."

Stapp's breadth of knowledge of technology attracted him to research on the frontiers of space. The concept of "space travel" was regarded by the Air Force as a shibboleth of "wild eyed visionaries" He was deeply involved with Project Manhigh. Manhigh's objective was to investigate the biological hazards faced at extreme altitudes. Stapp recruited three stalwart pilots, Maj David Simons, a doctor, Capt Joseph Kittinger, who flew chase in a Lockheed T-33 during the record sled run, and Lt Clifton McClure, an engineer and pilot. On three flights, the balloons reached altitudes on the order of 100,000 ft and stayed aloft for as long as 32 hours. Valuable data was gathered on the effects of cosmic rays on the human organism and the techniques for operating balloons at altitude.

Stapp also promoted the investigation of high altitude parachute jumps. Capt Joe Kittinger was

transferred to the Escape Section of The Laboratory and participated in what Stapp named Project Excelsior. Borne aloft by balloon, Kittinger's third jump, in 1961, set the world altitude record for a parachute jump when he departed the gondola at 108,200 feet and made a free fall of almost five minutes before deploying his parachute at 18,000 feet.

The aeromedical work did not end with the spectacular rocket sled rides and high altitude balloon flights. Stapp's ever observant scientific character noted that the USAF was losing more men each year in auto accidents than in aircraft accidents. He advocated the use of lap belts and working with industry and the Society of Automotive Engineers, promoted the use of anthropomorphic dummies in crash research and fostered research ideals which led, in aircraft or ground vehicles to three point restraint harnesses, padded dashboards, air bags, and rearward facing seats. For almost a half century, the SAE has sponsored the annual Stapp Car Crash Conference named in honor of Stapp and dedicated to improving the chances of survivability of passengers in automobile accidents.

At the age of 89, Col Stapp went West on November 13, 1999. His honors include the Legion of Merit, the Presidential Medal of Technology, and membership in the National Aviation Hall of Fame and the Space Hall of Fame. He also collected two broken wrists, a bunch of rib fractures, and repeated retinal hemorrhages.

Stapp's sterling character stands as a paradigm of leadership. He had vision, intellectual prowess, a keen sense of humor, determination, a crusading spirit and valor above and beyond that which his office demanded. The multitudes who have survived vehicle crashes due to the safety devices which his work developed or fostered are the true fruits of Colonel John Paul Stapp's courage.