



## *The Daedalean*

**Semper Discens**

*Monthly Aerospace Education Newsletter of the Connecticut  
Wing of the Civil Air Patrol*

*Stephen M. Rocketto, Capt., CAP  
Director of Aerospace Education  
CTWG  
[srocketto@aquilasys.com](mailto:srocketto@aquilasys.com)*

*Volume III, Number 1*

*January, 2010*

### **CALENDAR**

#### **January**

15 JAN-Squadron AE Reports for 2009 due

#### **For Future Planning**

27-28 FEB-CLC Course-Middletown  
27-28 MAR-UCC Course-Middletown

### **SQUADRON ANNUAL REPORTS DUE 15 JANUARY**

Aerospace Education Officers are required to submit a Squadron Annual Report each year and they are due by 15 January. A convenient template for report submission has been attached to the email. Please fill out your report in a thorough and timely manner.

The Director of Aerospace Education needs these documents to submit the Wing Annual Report to Region and National. Your cooperation will be most appreciated.

Kudos to Maj Flynn of Danielson, Capt Rustek of the 186th and Thames River who have filed their reports.

### **RIFLE SAFETY AND MARKSMANSHIP TRAINING PROGRAM**

Any Squadron interested in starting or continuing in the Wing Rifle Program should contact Maj Rocketto at [srocketto@aquilasys.com](mailto:srocketto@aquilasys.com). So far Stratford, Danbury, and Thames River have expressed interest.

### **2010 COMMANDER'S CUP WING ROCKETRY CONTEST**

The contest is on for 2010. Rules of Engagement are being written by a committee and will be published when the committee makes the available. The Wing expects full participation from the Squadrons.

### **AMERICAN INSTITUTE OF AERONAUTICS AND ASTRONAUTICS EDUCATOR ASSOCIATE PROGRAM**

***IT'S FREE AND EASY!***



Join the American Institute of Aeronautics and Astronautics as an Educator Associate Member and you will be eligible for support in aerospace education activities which include participation in a lecture series, affiliation with the New England Air Museum, eligibility for Educator Awards and a Cadet or Squadron Book Program. There is no charge for membership. For further information please refer to the AIAA web site located at:

<http://www.aiaa.org/content.cfm?pageid=208>

At the present time, the records indicate that six members of the wing have joined and will be eligible for the spring book award. The book selected may be used as a Cadet prize, as an addition to a Squadron library, or as a personal acquisition to improve ones knowledge of the aerospace field.

## **AEROSPACE EDUCATION NOTICES**

1. The Connecticut Wing website has been revamped. Aerospace Education is featured at the following address:

<http://www.ctwg.cap.gov/aerospace.html>

It contains information about the current program, an archive of Daedalean back issues, and some handy links. We especially recommend link to the the Wyoming Wing Aerospace practice quizzes which cover both the aerospace modules and the leadership tests. They are excellent practice for Cadet preparation.

2. The new Aerospace Education Officer's Handbook, CAPP15, is now available on eServices. All Squadron AEOs should download a copy of this pamphlet and review it.

3. The Fly-A-Teacher Program has been renamed Teacher Orientation Program Flights (TOPS). The supporting material may be found at the following website:

[http://members.gocivilairpatrol.com/aerospace\\_education/internal\\_specific/top\\_flights.cfm](http://members.gocivilairpatrol.com/aerospace_education/internal_specific/top_flights.cfm).

## **PLANS FOR 2010**

Squadron AEOs should be working on putting together a Plan of Action for their program in the coming year.

The Wing Plan of Action will be outlined in a future edition of The *Daedalean*.

## **FRUIT SALE FUNDRAISER**

Four squadrons participated in the annual fundraiser: The Stratford Eagles, The New Haven

Minutemen, The 103rd, and Thames River. Preliminary results indicate that approximately \$5,000 was raised.

## **AN EDITORIAL OPINION**

### **THOUGHTS ABOUT THE NATURE OF EDUCATION**

by

Stephen M. Rocketto

One of the most important traits which an Aerospace Educator can instill in a Cadet the need to understand a process, the implications of a set of facts or a situation, or the acquisition of a useful skill. Teachers know that one of the best ways to train a student is to present them with models of excellence and require that their students copy or imitate the model. A trivial example is placing a set of well-formed letters in front of a non-writer and asking them to reproduce them repeatedly. Drill is often regarded with disdain by modern educators but that is a serious mistake. There is no substitute for repeatedly going over the multiplication tables until the ability to multiply is ingrained, a fact that athletic coaches and military drill instructors know to be true.

Observing successful practitioners of a technique or an art and then imitating their styles is simply a higher level of drill. Once the fundamental skills are mastered, a neophyte can then go on to develop a personal style structured to meet their own needs, limitations, and goals. In *The Nicomachean Ethics*, Aristotle argues that to raise a good man one must raise him in a good society. The child must be exposed to the appropriate behaviors or good citizens, to hortatory literature, and to the customs and traditions of the well formed community. Appropriate behavior must be required and reinforced until it becomes habitual.

A good man need not think about how one must act but will act appropriately as the situation demands. Similarly, a skilled artificer, athlete, or writer does not think about the details of much of their specialized activities but act according to habit developed by practice. Knowledge, whether of theory or technique(,) becomes appropriated by ones character and will not be forgotten just as one learns how to ride a bicycle, and does not forget how.

Too often, what passes for knowledge is a semi-coherent body of facts which one stuffs into a student in order to pass a multiple guess test for some short term purpose. The ability to select one of four statements as the closest approximation of Newton's First Law of Dynamics is a trick which may only indicates a mere familiarity with the principle. On the other hand, the ability to use Newton's First Law to explain why a moving bicycle is stable or why a satellite maintains a circular orbit is a wholly different matter.

Modern education puts a lot of emphasis on the development of what they call "higher order thinking skills' but neglects emphasis of the fundamental skills which are the foundations of a "higher order" thought process. It is tough to "think outside of the box" when you do neither what is in the box nor the dimensions of the box.

One of the many problems in education is that students can be cocky individuals, consider themselves to be "street smart." —They are not inclined to follow the directions of "some old dude of a teacher" who has prescribed a course of learning which may be tedious, physically uncomfortable, and psychologically distressful. After all, a school is a place where mistakes can be made and forgiveness is a common quality. Rarely in the modern classroom environment do students face immediate serious consequences of their actions. However, at some point in life, the harsh realities of the civic, business, or physical world replace the forgiving world of the classroom.

Capt John Kelling of the 169th is a former USAF pilot. He did his Undergraduate Pilot Training at Webb A.F.B. in Texas, and flew Phantoms with the 4th Tactical Fighter Wing. He relates this story from his training:

Want to know something about yourself? You're in training, and someone tells you to do something a specific way. What do you do? If you're like most people, you ask: "Why does it need to be done that way? Why can't I do it another way - probably better?"

Well, maybe it can be done better, but when the laws of physics are involved, you're better off doing it the way you're told.

So I found out in pilot training. The T-38 is a sweet, forgiving airplane, but it has its limits. The instructors tell you what the limits are, and how to avoid exceeding them. But we're bright students, right? The cream of the crop, so to speak. But, we have a stupid streak as wide as the cockpit just waiting to cause us to dig a hole with our airplane. We think the instructors are telling us this stuff just to lord over us underlings.

"Why," I say to myself during a solo flight, "do we need to pull 4-4.5 Gs for a loop? Why not 3.5 Gs? It's much more comfortable." So, I drop the nose, accelerate to entry speed and pull a beautiful 3.5 G start to a loop. The airspeed is bleeding off, more aft stick is needed, and now, when perfectly vertical, the airspeed is zero, and stick has no effect, and with full power, I start sliding straight down with the nose pointing straight up. It's called a hammer head, not a maneuver recommended for T-38s.

Luckily, twenty five thousand feet of air is below, so there is a little time to fully grasp the futility of 3.5 G loops, and to think about what are appropriate control inputs for an

aircraft going backwards. As the aircraft accelerates backwards, I began pulling the stick back, slowly causing the tail to begin to rise, lowering the nose. Somewhere in the process, the aircraft began to move forward again, eventually recovering. Later, after landing safely, I started to shake a bit - maybe just a little scared.

Lesson learned: Instructors generally know more than you - regardless of how good you think you are. Argue all you want about opinions and personal preferences, but when it comes to flying and the laws of physics, listen and heed. Whether it's weight and balance, maneuvering speed, minimum oil level for flight, or approach airspeed, do it the way it's supposed to be done. Don't be a "Hammerhead," like one person I know very well.

Capt Kelling's point is well taken. Even Chuck Yeager cannot fool "Mother Nature" and gravity is (not only a good idea but it is the law and) a hard taskmaster. One need(s to) start by imitating the experts and taking their advice seriously. Cadets need to understand that instruction has a purpose and learning is a cooperative endeavor which requires the Cadet to honestly participate.

I doubt that many teachers will ever be one hundred percent successful in overcoming the obstacles which they face when confronting the raw personality of a neophyte. Nonetheless, it is instructive to understand the obstacles facing) a teacher. It is also worthwhile to adopt the metaphor of "Johnny Appleseed." According to legend, John Chapman was an itinerant and somewhat eccentric vagabond who wandered the countryside, planting apple seeds at random. He never saw his seeds sprout, grow, and eventually blossom to produce a bountiful crop of apples. The gift of the fruit was granted to generations yet unborn. So it is with teaching. A teacher may

never enjoy the final fruits of his labor but surely, a kind of immortality is earned as that which is taught is passed down the generations.

### *An Instructive Afterword*

The story of "Johnny Appleseed" is just that, a legend. In the film, *The Man Who Shot Liberty Valance*, a newspaper editor learns the facts about a long ago incident which has grown to legendary proportion choosing not to publish them with the comment, "When the legend becomes fact, print the legend." Chapman was a nurseryman who promoted the growth of apple trees in the Western Reserve during the first half of the 19th century. But, contrary to legend, he did not scatter the seeds randomly but rather planted orchards and left them in the care of others. He was as eccentric as the legend states but he understood, as a teacher must, that the young sprouts must be guarded and nourished until they mature and pass on their qualities to the next generation.

## **HISTORY FEATURE ARTICLE OF THE MONTH**

### **CAP VERSUS THE U-BOATS**

#### *An American Hero*

Colonel Edmond I. Edwards, age 95, Delaware Wing, Civil Air Patrol, went West on the 5th of December. Col Edwards, one of the last surviving members of the Civil Air Patrol Sub Chasers, was a principal player in two of the more notable events in CAP history.

On July 21st, 1942, two Fairchild 24s from (the) CAP's Coastal Patrol Base #2, Rehoboth, Delaware were on a routine anti-submarine patrol. Twenty miles north of Winter Quarter Light, the

aircraft crewed by Lts. Harry Cross and Charles Shelfus had to ditch. Their "buddy aircraft," crewed by Lts. Carl Verdin and Shelly Edmondson radioed a position report.



*The Fairchild 24s were workhorses of the Coastal Patrol. They were unusual in that they were available with two types of engines, the Warner radial above and the Ranger inline below. They were adopted by the USAAF as the UC-61.*



Back at Rehoboth Beach, the base commander, Hugh Sharp, pilot, and Eddie Edwards, observer launched their Sikorsky S-39 amphibian into the darkening skies to rescue the downed airmen—Once they arrived at the ditching site and Sharp managed to land the Sikorsky in the eight to ten foot swell, their troubles really began. The port pontoon was damaged and the sea conditions made the pickup extremely difficult. With difficulty, Edwards hoisted Cross, who had a broken back, aboard but the nineteen year old Shelfus could not be found and became one of the earliest of the 42 CAP members lost in the line of duty during World War II.

The sea state made takeoff impossible so Sharp decided to try to taxi the 20 miles back to shore. The Sikorsky was shipping water and the damaged pontoon caused the plane to list left so Edwards

crawled out on to the right float in order to counterbalance the aircraft. As the ship wildly pitched, rolled, and yawed, Edwards gripped the struts with all of the strength which he could muster. Eventually, a Coast Guard patrol boat arrived and took the Sikorsky in tow but it was an agonizingly slow trip back to Chincoteague, Virginia. For the next eleven hours, Edwards, exposed and battered by the cold rough seas, maintained his grip and when the plane was finally beached, his hands had to be pried from the struts.



*The New England Air Museum's S-39 is the actual aircraft used in the rescue of Lt Cross. Note the plethora of drag inducing struts, the twin boom tail, and the awkward shoe-shaped fuselage.*

In 1943, Sharp and Edwards were summoned to The White House where President Franklin D. Roosevelt presented them with the first two Air Medals ever awarded to civilians.

Edwards, a North Carolina native, later entered the U.S. Navy and flew the Douglas SBD Dauntless. He remained in the active and reserve military for thirty years. As a civilian, he operated the Fixed Base Operation and instructed at Weimer Airport in Newark, Delaware. His life long contributions to civil aviation earned him membership in the Delaware Aviation Hall of Fame.

### *How It All Started*

The Civil Air Patrol was organized so that civil aviation could contribute to national security. It is doubtful that any of the founders imagined that part of the mission would evolve into a combat

role in which civilian aircrews engaged enemy submarines. Although clear signs of aggressive military activity against the United States had been present for years, the nation was slow to initiate preparations for war.

In 1937, Japanese aircraft sank the *USS Panay*, a gunboat stationed in China. After Germany invaded Poland and President Roosevelt's Lend-Lease Program started, U.S. naval vessels were placed on "Neutrality Patrol," escorting Britain bound convoys as far as Iceland. On April 10th, 1940, eight months before Pearl Harbor, the *USS Niblack* depth charged a German submarine during an attempt to rescue survivors of a torpedoed ship. Later, the *USS Kearny* was damaged by a torpedo and lost 11 men while on convoy duty. Finally, on October 31, 1940, 119 men died when the *USS Reuben James* was sunk by U-552. Some six weeks later, the Japanese struck Pearl Harbor and on December 11th, 1941, Germany declared war against the United States. One week later, Vice Admiral Karl Dönitz activated Operation *Paukenschlag* (Drumbeat) and dispatched five Type XI U-boats to the East Coast of the United States.

The country was woefully unprepared for this submarine onslaught. The US Navy only had a few obsolete patrol craft and a handful of inadequate aircraft with which to defend the Eastern Sea Frontier. The US Army Air Force was no better equipped and had no training in anti-submarine warfare. The British suggested a convoy system to better protect the ships and a blackout so that the coastwise traffic would not be silhouetted against the well lit shoreline but their advice was ignored. In the next few months, the small U-boat force sank 23 ships carrying about 150,000 tons of materials and petroleum products.

Seizing the opportunity, the *Kriegsmarine* pressed the attack. In the first six months of 1942, over 100 ships were sunk off the East Coast and the Germans opened up a further campaign along the

Gulf Coast. Petroleum stained flotsam from the wrecks littered the beaches and the reek of bunker oil pervaded the coastal air. German submarines penetrated the mouth of the Mississippi River, torpedoed ships off Cape Cod and Block Island, even landed saboteurs on the beaches at Amagansett, Long Island, and Jacksonville, Florida.

*Necessity is the Mother of Invention and  
Improvisation is an Adopted Daughter*

The carnage caused by the U-boats and the (War Department's) lack of resources to adequately combat the menace resulted in a request that light aircraft of the Civil Air Patrol be employed to scout offshore and report submarine sightings. World War Two submarines were limited in their ability to sail and attack submerged because their underwater speed was very slow and they had to surface frequently to recharge their batteries. Submarine tactics of the time were predicated on surface attacks and many of them were armed with large caliber deck guns in order to conserve the precious torpedoes. Consequently, the CAP scouting force might be a real asset for the anti-submarine mission. On February 28, 1942, the first Coastal Patrol Bases were activated at Atlantic City, New Jersey and Rehoboth Beach, Delaware. CPB#3, Morrison Field, Palm Beach, Florida, soon relocated to the nearby field at Lantana. Quite often cruising CAP aircraft forced submarines to submerge and lose their chance to score a victory while also directing vessels to rescue survivors or take damaged ships in tow.

In May of 1942, a submarine dived to escape a CAP aircraft and grounded on a mudbank. The aircraft could do nothing to the exposed boat except send a report. By the time armed aircraft reached the site, the submarine had made its escape. Consequently, the US War Department authorized the arming of CAP coastal patrol aircraft and within a short time, CAP and USAAF mechanics devised methods to fix bomb racks to

the light planes and improvised primitive bomb sights. The gaggle of Stinson, Fairchilds, and assorted other aircraft were a fair representation of the U.S. general aviation aircraft of the day. The lighter aircraft were tasked to carry 100 lb. demolition bombs while the heavier aircraft could carry as many as two 325 lb. depth charges. The civilian pilots of the Coastal Patrol assumed a combat role!

The pay was minimal. Pilots were given a *per diem* of eight dollars to cover food, lodging, uniforms, and incidentals. A sliding scale down to five dollars per day remunerated observers, mechanics, communicators, administrative personnel, and guards. The aircraft were either purchased or leased from their civilian owners and hourly rates were set to cover, maintenance, depreciation, and insurance. Some of the variety of aircraft used include the:



*The "Spirit of Lantana, a Stinson Model 105 Voyager, on display at the New England Air Museum, carries a 100 lb. bomb. The aircraft was generally referred to in the Coastal Patrol as the 10A. Adopted by the USAAF, the plane was designated the L-5 Sentinel.*



*Monocoupe 90  
Displayed at Old  
Rhinebeck  
Aerodrome*



*An Old Rhinebeck  
Rearwin Cloudster*



*Sometimes seen at Coastal Patrol Bases was the WACO YKC-2. This aircraft is now based at Bradley.*



*The Beech  
Staggerwing in  
profile reveals the  
origin of its name.*

Eventually, 21 Coast Patrol Bases were established stretching from Bar Harbor, Maine to Corpus Christi, Texas. Many of the bases were built from scratch by the CAP volunteers who hailed from 45 different states. Civilian Conservation Corps buildings were disassembled, transported, and reconstructed. Crude runways were cobbled out from seashells and gravel. Materials were begged, borrowed, donated, scrounged, and without doubt, acquired *via* "midnight requisition."



*The Stinson V-77 Reliant sometimes known as the Stinson Gullwing. It was Stinson's Model SR-10 and the USAAF UC-81.*



*The Piper J-3 Cub, now on display at the National Museum of the USAF, carried a 65 HP engine, too little power to lift a bomb but was used as a base hack.*

Wartime confusion and governmental inefficiency often meant that the *per diem* checks were months behind and, more often than not, the volunteers survived on personal funds, credit, and other support offered by local governments, businesses, social organizations, and patriotic citizens. At one point, the Atlantic City contingent were being evicted for non-payment of rent. The District Manager of the Sun Oil Company made the rounds of his service stations, cleaning out the cash boxes, and delivered the funds to the Coastal Patrol Base Commander so that he could pay off the CAP creditors.

### *Coastal Patrol Operations*

The Rehoboth base launched the first Coastal Patrol on March 5, 1942. Five days later, two Atlantic City crews, Pilots Lts. Ivan Culbertson and Benny Benedict and Observers Howard Carter and Edmund Edwards, one of the heroes of the rescue effort cited above, made the first submarine sighting when they spotted a surfaced U-boat, its decks awash, lying in wait to ambush an approaching tanker. When the sub spotted the approaching Fairchilds, the boat's captain abandoned his plans to torpedo the tanker and dived to escape. The mere presence of two CAP light aircraft had saved a ship and its valuable cargo.

The first patrol from Atlantic City went out on March 10th. Base Commander Maj. Wynant Farr and Capt. Al Muthig discovered a seriously damaged tanker with its crew in the water. The made a position report and CAP recorded its first save.

CAP received credit for sinking a U-Boat in July. Capt. Johnny Haggin and Maj. Farr were flying a Grumman Widgeon off the coast of New Jersey in order to investigate a reported submarine contact. They picked up a oil slick, followed it, and found its source, a submerged submarine. The crew trailed it for four and a half hours. Fuel was approaching the minimal level so they decided to attack. On the first pass, they dropped one of their 325 lb. depth charges and then circled and made a second run. Observation after the second attack indicated an increase in the oil and the presence of floating debris. CAP was credited with the first of its two submarine kills.



*Incongruous in a desert setting, this G-44 Widgeon in Navy colors suns itself at the Pima Air Museum in Tucson, Arizona.*

Over the next year and a half, the Coastal Patrol bases dispatched their single engine fleet into the teeth of the foul North Atlantic weather and shark infested Gulf, searching and sometimes attacking U-boats, locating survivors, and escorting merchantmen. The flight conditions would make the authors of *CAPR 60-1 CAP Flight Management*, tremble in horror. Operational necessity forced flight to cruise at altitudes of 200 and 300 feet 50 miles offshore. Visibility could

drop to one mile or less but CAP pressed on. Generally, two planes, each with two crew, were launched on each mission in order to provide mutual support in case of an aircraft going down. Ninety aircraft were lost, many at sea. The CAP survivors were inducted into the "Duck Club," entitled to wear a blue patch upon which was superimposed a red duck.

### *Disbandment of the Coastal Patrol*

By the late summer of 1943, the industrial might of the United States was providing the active military with sufficient aircraft and ships to adequately guard the coasts and the training organizations were supplying the (skills and) men. On the 31st of August, CAP's Coastal Patrol force stood down. During the course of their activities, they flew nearly 87,000 sorties for a total of 24 million miles and a quarter of a million logged flight hours, sighted 173 enemy submarines, attacked 57 of them, and were credited with sinking two. More importantly, the Coastal Patrol located 337 survivors from sinking ships, establishing a tradition for CAP's future role in Search and Rescue.

Volunteers turned to other tasks. CAP resources were used in the sometimes hazardous task of towing banners which anti-aircraft trainee gunners used for practice. They flew ice patrols on the Great Lakes, maintained aerial watches for forest fires, performed courier service for the military, and maintained vigilance over our southern border for infiltrators. Other members joined the military or worked in the defense industries, flew as Air Transport Command or Service Pilots or returned home to continue their previous civilian occupations.

Airmen who had flown at least 200 hours of overwater missions were eventually awarded the Air Medal. After the war, an effort was made to provide benefits under the G.I. Bill of Rights to the volunteers but this failed in Congress.

Nonetheless, many of the wartime members continued with CAP and as the organization changed and matured, continued to contribute their hard work and valuable experience to make the Civil Air Patrol the outstanding organization which it is today.

### *References*

It has been the policy of *The Coastwatcher* to not supply references for articles in order to conserve column space. However, we always stood ready to supply references upon request. Because this article is closely tied to our organization, the following reference are provided so that interested parties may pursue our history in depth.

Go to the CAP Museum Website and for a donation, you can order some of this material as well as historical CAP posters and patches.

1. Burnham, Frank A., *Hero Next Door*, Aero Publishers Inc., Fallbrook, Calif., 1974.
2. Keefer, Louis E., *From Maine to Mexico (With America's Private Pilots in the Fight Against Nazi U-Boats)*, COTU Publishing, Reston, Va., 1997.
3. *Introduction to Civil Air Patrol, CAPP 50-5*, NHQ, CAP, Maxwell AFB, Al., 2002.
4. Neprud, Robert E., *Flying Minutemen (The Story of the Civil Air Patrol)*, DVD, CAP Historical Foundation, 2009.
5. The National Museum of the Civil Air Patrol (website), <http://www.caphistory.org/>.

### *A Side Note*

Some of you may have noted that some of the aircraft displayed had CAP insignia but the red propeller was not evident in the white circle. The design was altered in 1941 to eliminate a possibility of mistaking it for the Japanese national markings, the *Hinomaru*.