



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

### CADET MEETING

*23 May, 2017*

First Sergeant Ramsey briefed the Cadets on the SQTR form used to attain a CAP specialty rating.

Cadets continued building rockets during the balance of the meeting.

## **The Coastwatcher**

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Connecticut Wing  
Civil Air Patrol  
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23 May, 2017

### CALENDAR

*See the Squadron Calendar for Meeting Details*

03 JUN-NEAM/springfield Arsenal Field Trip  
17 JUN-Commander's Cup Rocket Contest  
19 JUN-01 JUL NER ES Training  
25 JUN-WAA Pancake Breakfast  
23 JUL-ACES  
24 JUN-TRCS SAREX  
14-20 AUG-CTWG Encampment  
19 AUG-National Aviation Day  
09 SEP-CTWG Smallbore Rifle Clinic  
23 SEP-WAA Young Eagles  
06-07 OCT-AOPA GON Flying  
21 OCT-CTWG Smallbore Rifle Clinic

### SENIOR MEETING

*23 May, 2017*

The Long Island Sound Patrol new scheduling was explained and officers volunteered for assignments.

Coast Guard radio contact issues and the use of the Becker and CAP radio to track marine frequency transmissions were discussed.

Lt Col Rocketto informed the membership about the high points of the CTWG Conference.

Maj Neilson offered comments on the water survival course and lessons learned. A problem not covered in previous lessons was the evacuation of injured crew members.

### CTWG CONFERENCE

Ten Squadron members attended the 2017 CTWG Conference: Cadets Munzer, Wischman, Hollingsworth, B. Ramsey, H. Ramsey, and D. Ramsey and Senior Members Farley, Neilson, Bourque, and Rocketto.

The conference opened with registration at the Connecticut Fire Academy. There was a choice of activities. Seminars were held at the 103rd Airlift Wing. Lt Col Rocketto his program on pilot superstitions.

Many cadets had signed up for orientation flights. Cadet Wischman was one of these and flew out to

Block Island, enjoyed the offerings of the airport restaurant, and returned.

Cadet Munzer and Maj Bourque used the time to visit the New England Air Museum.

Maj Neilson completed his water survival qualification which included an academic course followed by aircraft egress techniques, immersion in a pool and a test of swimming, treading water, and boarding a life raft.

Maj Farley flew the GON aircraft to BDL where it was used in the O Flight program. He then attended the academic portion of the water survival course and a Red Cross presentation on shelter management.

The drone races were held after lunch. An obstacle was erected. Col Donald Leclair, Northeast Region Commander gave a demonstration of drone flying and then assisted Cadets in preparing and flying their drones. Major Roy Bourque took charge of setting up the course and then photographed the event. SM James Skiff and Lt Col Carl Stidsen registered the racers and served as timers. Lt Col Rocketto was in charge of the race and acted as starter.

Thames River excelled. Our team, Cadets C/SMSGT Benjamin Ramsey and C/Maj Daniel Hollingsworth took first place and Cadet Ramsey placed second in the individual event.

#### *CTWG Champion Drone Racing Team*

The last event of the day was a change of command and awards ceremony held at the New England Air Museum. Lt Col James Ridley received the Colors from Col Kenneth Chapman, assumed command of the Wing, and was promoted to colonel.

In addition to our drone race triumph, three squadron members received awards. See the *Achievements Section* for details.

### **ACHIEVEMENTS**

Cadet SMSgt Benjamin Ramsey and C/Maj Daniel Hollingsworth were the victorious team in the first ever CTWG Drone Race.



*Cadet Hollingsworth lines up his drone with the race entry point.*



*Cadet B. Ramsey's drone descends to go under the "limbo bar."*

(photo credits: Maj Roy Bourque)

Cadet Ramsey took the second place award in the individual race, 2.4 seconds behind C/A1C Anthony Dellasandro of the 103rd Composite Squadron.

At the CTWG Conference, Cadet Hollingsworth received the Air Force Association Medal as Cadet Officer of the Year.



*C/Maj Hollingsworth accepts his AFA "Cadet Officer of the Year" certificate. from Wing Commander Chapman.*

The Air Force Sergeant's Association presented C/CMSgt Hanna Ramsey with a medal emblematic of Non-commissioned Officer of the Year.



*C/CMSgt Ramsey reports to Col Chapman for the presentation of the AFSA "Non-Commissioned Officer of the Year? Medal.*

Lt Col Rocketto was honored as the Region Public Affairs Officer of the Year and also awarded a Meritorious Service Medal for "achievements and services which are clearly outstanding and unmistakably exceptional," and two Commander's Commendation awards for two instance of "outstanding duty performance where achievements and services are clearly and unmistakably exceptional when compared to similar achievements and service of members of like rank and responsibility."

C/SrA Cameron Wischman completed an orientation flight experience performing standard aircraft maneuvers.

Cadets Ian Diaz and Caleb Shafer completed the first stage in the O flight program with Maj Farley. They flew from Groton to Windham and return learning about preparation of an aircraft for flight and the use of controls in three axes.

Cadet C/CMSgt Ryan Schantz studied the use of aircraft instruments on a pilotage flight along the Connecticut/Rhode Island coast.

Maj Paul Noniewicz completed a Form 5 flight review and earned the Federal Aviation Administration Basic Wings Award.

## CURRENT EVENTS

Boeing is suggesting that the FA-18 Super Hornet receive upgrades which will allow it to meet the demands of future combat missions. Rather than order a new design, Boeing suggests an enhanced engine, conformal fuel tanks, and an enclosed weapons pod which will reduce the aircraft's radar signature. Upgrading the Super Hornet will be faster and cheaper than designing, testing, and producing a clean-sheet aircraft.

The F/A-18 Hornet was derived from the Northrop F-17 which lost the fly-off for a light weight fighter. The Navy liked the safety of twin engines for overwater flight and Northrop collaborated with McDonnell Douglas to produce the Hornet. Boeing bought McDonnell Douglas and upgrades led to the current Super Hornet.



*The F/A-18 of the current aircraft of the Blue Angels.*

## AEROSPACE HISTORY

May 25th marks the 128th anniversary of the birth of Igor Sikorsky. The Coastwatcher will celebrate the event with a series about the three eras which define his career as a pioneer designer of aircraft.

### **The Multi-faceted Genius of Igor Ivanovich Sikorsky**

*Part Two*

*by*

*Stephen M. Rocketto*

In February of 1918, Sikorsky left St. Petersburg, one step ahead of the Bolshevik terror. He followed a circuitous route, Murmansk to London to Paris. The Armistice which ended to "War to

End All Wars” also ended Sikorsky's opportunities so he headed, as so many hopeful emigrants did, to New York. He arrived just in time for demobilization and faced a bleak future.

A visionary, Sikorsky intuited that there would be future prospects in commercial aviation so he gathered a group of Russian emigres around him and founded the Hannevig-Sikorsky Aircraft Company in Wantagh, Long Island. He hoped to construct a freighter capable of carrying a 12,000 payload but the design was never finished and the new firm dissolved.

September, 1919 found Sikorsky hard at work on an aircraft which he called the *Avion Atlas* based upon the bomber which he had designed but died stillborn when the French cancelled the contract. The plane was the S-27, Sikorsky Battleplane. The Air Service looked favorably upon the preliminary plans and Sikorsky moved to McCook Field, Dayton, Ohio, home of the Air Service Engineering Division.

The Air Service was pleased that they had engaged the services of the leading designer of very large aircraft and instructed him to produce drawings for an aircraft with three engines and a 130 foot wingspan, just 11 feet short of Boeing's B-29 Superfortress, an aircraft two decades in the future. But constraints on the Air Service budget resulted in a cancellation of the project but Sikorsky walked away with \$1,500 for his efforts. This is equivalent to about \$26,000 today but in 1919, the average family wage was around \$1,000 per year so Sikorsky had some working capital for his next attempt to develop a marketable aircraft.

The experience at McCook Field convinced him that his vision about the future of commercial aviation should be the guide to his next endeavor. In 1920, Sikorsky entered into a partnership with two Russian expatriates to produce his latest design, the S-28. As with the military, finances ended this second attempt. As his McCook nest egg diminished he sought work in New York City. The population of Russian emigres was relatively large and they supported each other to the limit of their means. For two years, Sikorsky

lived a Spartan existence, worked part time as a mathematics and astronomy teacher, found a wife, and in March of 1923, joined with a group of investors to form the Sikorsky Aero Engineering Corporation.

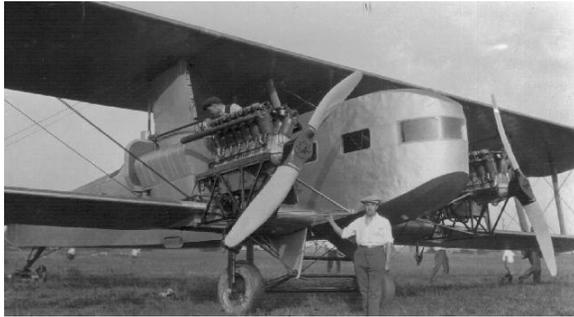
This coterie of investors, engineers, and pilots included future luminaries in the field of aeronautics. Michael Gluhareff became Chief of Design for Vought-Sikorsky. In 1941, he studied the concept of swept wings and their possibilities for high speed flight. His son invented the Gluhareff Pressure Jet, a ramjet engine which found some use in powering small helicopters. The irrepressible Boris Sergievsky, author of *Airplanes, Women, and Song*, was a World War I ace and chief test pilot for Sikorsky and Robert Labensky, was the project engineer for the Sikorsky R-4, the first helicopter to fly a combat mission. But they needed a nest to build their birds and they settled at a chicken farm, owned by Victor Utgoff. Living was commune style and the participants were mostly unemployed Czarist veterans who exhibited a resolute faith in the Sikorsky dream.

The team used a converted chicken coop as a machine shop and scrounged materials from junk yards. Paychecks were few and far between but they labored to produce the S-29-A. The famed composer Sergei Rachmaninoff donated \$5,000 and the money enabled Sikorsky to rent a hangar at nearby Roosevelt Field in which they assembled the airplane. First flight occurred on May 4th, 1924. However the underpowered aircraft could barely climb. Sikorsky did a touch-and-go at Mitchel Field and then an engine failed and he executed an emergency landing on a golf course.



*Roosevelt Field Plant*

Two 400 horsepower Liberty engines were acquired and on September 24th, a successful flight was made and Sikorsky flew a number of demonstration flights for the press, military, and public. The aircraft was well received by experts in the aviation community. The company's first revenue flight was to transport two baby grand pianos from New York to Washington.



*The S-29A*

The country was not ready for commercial aircraft and Sikorsky sold the S-29-A to the racing pilot and showman, Roscoe Turner. Turner, in turn, sold it to Howard Hughes for use in his movie *Hell's Angels*. The plane was modified to resemble a German Gotha bomber and destroyed in a crash scene!



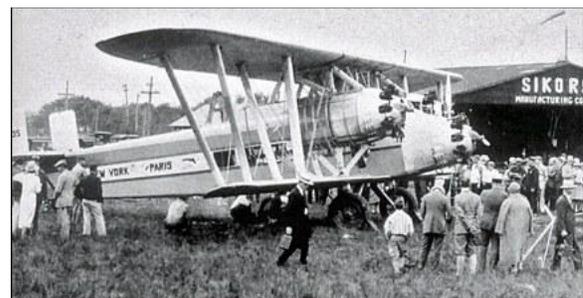
*The S-29 transmogrified into a replica of the Gotha bomber.*

But, *mirabile dictu*, a dramatic change came about in Congress. The government decided to encourage civil aviation. In 1925, the Kelly Act allowed the Post Office to tender contracts for the carriage of mail. The contracts were long term and offered bonuses for miles flown. Sikorsky responded with a corporate reorganization and a

new name, the Sikorsky Manufacturing Company. The company produced three more models, not of which were commercial successes. Sikorsky changed tacks and moved from the production of land aircraft to amphibians. Sikorsky reasoned that most population centers were situated on bodies of water of sufficient size to accommodate the landing and take-offs of seaplanes. And there were few land airports. Moreover, the market was flooded with land aircraft so Sikorsky saw the opportunity to fill a market niche and construct amphibians and flying boats.

The first effort was the S-34, a twin engine sesquiplane. An engine failure led to a crash in Long Island Sound but lessons learned would bear fruit.

The S-35 was designed as a trans-Atlantic contender for the Oertig Prize. René Fonck, a French World War I ace. The biplane had a wing span of just over 100 feet and was powered by three 425 horsepower engines. On September 20th, Fonck attempted to take-off from Roosevelt Field. The rough surface led to damage to the landing gear and a partial loss of control. The aircraft failed to reach take-off speed, ran over an embankment and burst into flames. Fonck and his co-pilot escaped but the mechanic and radio operator were killed.



*The only S-35 produced was a strong contender to be the first aircraft to fly from New York to Paris.*

The loss of the aircraft was a damaging but not fatal blow to the corporation. A year later, Sikorsky moved to a rented factory in College Point, New York just east of where LaGuardia Airport now sits. Fonck stuck with Sikorsky and

they collaborated to build the S-37, another large plane designed to cross the Atlantic. But the Oertig Prize was won by Charles Lindbergh and the S-37 was sold. A second S-37, fashioned as a bomber, failed to win a government contract.



*One of the two S-37s built soars over Sikorsky's College Point facility.*

Lindbergh's *Spirit of St. Louis* flight scotched the S-37 project but the adulation of the masses for "Lucky Lindy" sparked a heightened interest in aviation. Sikorsky saw an opening and he modified an earlier design to produce the S-38.

Rather than construct a large airship, Sikorsky sized the new plane to meet the market needs of commercial air travel. Only a half dozen were sold but they were purchased by corporate interests and the military. The Navy designated it aircraft as the XPS-1 and patrol duties and used it as a transport. The Andean National Corporation flew their ship in rugged areas of Columbia as a corporate transport.

But most importantly, an S-37 was purchased by Juan Trippe for his new aviation venture, Pan American Airways! PanAm used the plane to survey routes in the Caribbean and lay the groundwork for PanAm's dominance of international air travel in the western hemisphere. Trippe, a shrewd and ruthless businessman convinced the United States government that PanAm and PanAm only would be the "chosen instrument," the U.S. flag carrier overseas.

Sikorsky hired Lindbergh as a consultant and

route survey pilot, a public relations triumph. Trippe and Sikorsky teamed up. PanAm needed a long range transport for routes to the Caribbean islands, Central, and South America. The S-38 fit the bill. It could carry eight passengers and had a range of 600 miles. Lindbergh flew the first commercial flight, airmail to Panama. The reliable plane could maintain altitude on one engine and if necessary (if conditions permitted) execute a safe landing on the sea safety features demanded by potential passengers.

Pan American purchased 38 of the 111 manufactured and the Sikorsky company was off the ground. The Navy, the Army and a number of airlines and corporations. Martin and Osa Johnson, famed wildlife photographers purchased two Sikorsky and used them for the African safaris and South Pacific expeditions. The movies and articles were a public relations bonanza for Sikorsky Aircraft.

One, Osa's Ark was an S-38 painted with a zebra stripe motif. The other, an S-39, Spirit of Africa, carried a giraffe spot motif. The S-39 was a small single engine clone of the S-38. Twenty-one S-39s were produced and the five passenger aircraft was a popular vehicle for the wealthy sportsman. Some served with the Civil Air Patrol in World War II.



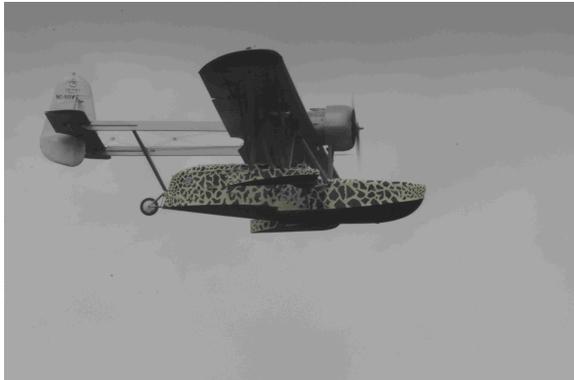
*The Johnson's S-39 and S-38.*



*The Johnson Wax Corp. used the S-39 to search the Amazon basin for sources of the palm from which caranuba wax can be extracted. The aircraft displayed is at the EAA Museum.*



*The S-39 on display at the New England Air Museum is the CAP aircraft which performed the at-sea rescue resulting in air medals awarded to the crew.*



*Kermit Week's flying his S-39 at his Fantasy of Flight Museum in Florida. The aircraft bears the giraffe spot livery of the Johnson's S-39.*

The firm had now outgrown the crowded workshops at College Point and what was known as the Sikorsky Aviation Company and relocated to Stratford, Connecticut.



*Sikorsky's Stratford Plant on Long Island Sound*

Facilities expanded. Hull testing and wind tunnel testing facilities became available. The company produced a series of record setting large flying boats and amphibians which were the backbone of the Pan American Airlines fleet as its route structure expanded along the east coast of South America.

The theme which Trippe devised for PanAm was nautical in nature. PanAm established the standard for flight crew uniforms. Leather togs were out and an austere black uniform similar to that worn by naval officers was adopted. Crews were cross-trained as mechanics, radio operators, navigators, and pilots. The highest level of attainment for a pilot was to become a "master of ocean flying boats." And the nautical name "clipper" was added to the lexicon of aviation.

First down the launching ramp was the S-40, a forty passenger aircraft outfitted with a refrigerator and stove. The production run was limited to three: the American Clipper, Caribbean Clipper, and Southern Clipper since Sikorsky was already working on a much improved design. Lindbergh commanded the initial revenue flight, Miami to the Panama Canal with intermediate stops in Cuba, Jamaica, and Columbia. Lindbergh called the aircraft a "flying forest" because of all of the inter-plane struts and wires.



*A line of sailors march in front of two S-40s used as navigation trainers by the Navy at Dinner Key, Florida.*

Only six or seven S-41s were built. Three went to commercial models which originally went to PanAm. One was transferred to a PanAm subsidiary in Columbia and two ended up with Boston-Maine Airways which had a PanAm contract.

The US Navy accepted the others. The service test model was designated RS-1. Reports indicate that two others, designated RS-5, were impressed into naval service. If this is true, they must be the Boston-Maine aircraft. There were likely used as navigation trainers during the first stages of World War II.



*A Navy RS-1 in flight.*

The S-42 benefited greatly from operational data accumulated from records of the S-40 and S-41 performance. It was aerodynamically refined. The outrigger tail and much of the inter-plane wiring and bracing were not used and struts were streamlined. Four 700 horsepower Pratt and Whitney Hornets engines equipped with Hamilton Standard's revolutionary controllable pitch propellers were adopted. On its test flights, the S-42 set 12 new records in its class, for speed, range, load, and altitude. The S-42 under the command of Captain Edwin Musick flew all four of the survey missions which established the Pacific route structure.



*Captain Musick boards the S-42 at the start of the first Trans-Pacific revenue flight.*

Juan Trippe was anything but a sentimental man and past business relationships meant nothing to him. He contracted with Glenn Martin for a ship with greater range than the Sikorskys and purchases three and only three of them. The Martin Company took a financial bath on their design and construction. The first of them, the China Clipper, flew the first scheduled mail flight across the Pacific and acquired such fame that the other two, the Philippine Clipper and the Hawaiian Clipper, were conflated by the public into the generic name "China Clipper."

A movie, *China Clipper*, hit the cinemas in 1936 and had an interesting cast. Humphrey Bogart as a pilot, Milburn Stone, who achieved fame as Doc Adams on *Gunsmoke*, and Wayne Morris as the

navigator. Morris was a navy carrier pilot in WWII and an ace with seven kills. The screen writer, Frank "Spig Wead was a naval aviator who set a number of speed records and who was crippled when he broke his neck in a fall and partially paralyzed. Amazingly, he managed to get recalled to duty in WWI and served in the Pacific studying air operations and writing reports detailing important aspects of carrier operations. In 1957, John Ford made a movie, *Wings of Eagles*, in which John Wayne played Wead.

A year later, the S-43 “Baby Clipper” was born. She carried half the passenger load of the S-42 but was suitable for some of PanAm's shorter routes along South America's east coast.



*JRS-1, Sikorsky Model 43*

By 1939, United Aircraft Corporation which has acquired Sikorsky and Chance Vought Aircraft as subsidiaries merged the two corporations into Vought-Sikorsky Aircraft. The 44th and final Sikorsky fixed wing aircraft became the VS-44A.

American Export Lines, a leader in the steamship business decided to enter the airline business. They ordered three VS-44s, each named after one of its crack passenger liners: *Excalibur*, *Excambian*, and *Exeter*. Luxurious accommodations and capable of non-stop crossings of the Atlantic with full payloads, the 44s had a longer range, could carry a heavier payload, and fly faster than the Boeing 314s but Trippe gave the contract to Boeing.

When the United States entered World War II, they flew as personnel and cargo on the trans-Atlantic run for the Naval Air Transport Service.



*Navy employed Excambian “on the step.”*

After the war, the VS-44s flew for a number of conventional airlines, charter, and tourist operations. One, the *Excambian* was purchased by extraordinary aviator Charlie Blair, and rendered faithful service working on his routes in the Virgin Islands.



*The Excambian in the service of Charlie Blairs's Antilles Air Boats.*

Extensively damaged while taxiing, it could not be repaired. Blair donated it to the Museum of Naval Aviation which transferred it to a restoration facility in Connecticut. Retired Sikorsky technicians and artificers, some of whom worked to build it, engaged in a ten year effort to restore it.



*The rebuilt Excambian, bearing the livery of the American Export Lines, reposes in the New England Air Museum.*

By the end of thirties, the flying boats were becoming obsolescent and Igor Sikorsky devoted his energies to his first love, helicopters. The third and final chapter in his life story commenced.

*Part Three will examine the years in which Sikorsky developed the first practical helicopter. More information can be found at the official Sikorsky Archives:*

*<http://www.sikorskyarchives.com/>*