Missions for
America
Semper vigilans!
Semper volans!

The Coastwatcher

Official Publication of the Thames River
Composite Squadron
Connecticut Wing
Civil Air Patrol
300 Tower Rd., Groton, CT
http://ct075.org.

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Issue 11.18 16 May, 2017

CALENDAR

See the Squadron Calendar for Meeting Details

20 MAY-CTWG Conference
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

CADET MEETING

16 May, 2017

The meeting was devoted to drone racing practice.

CADET FIELD TRIP

The Squadron will sponsor an all-day field trip on Saturday,June 3rd. The New England Air Museum and the Springfield Arsenal will be visited. Expect to depart at 0830 and return around 1800. The Air Museum charges an entry fee and we are negotiating with them on the group price. It is anticipated that the cost will be no more than five dollars.

Experts will be on hand to discuss the exhibits. Transportation will be provided. Interested cadets should speak to their parents. A commitment to attend should be made by the meeting of May 23rd. Notify Lt. Col. Rocketto if you wish to go.

Pilots who flew the Super Sabre and the Skyhawk in combat will be present to discuss their experiences flying these aircraft.

SENIOR MEETING

16 May, 2017

The art of "chasing" an emergency locator transmitter under instrument meteorological conditions was outline by Capt Edward Miller.

Miller and Maj Farley updated the operational plans of the Long Island Sound Patrol.

LtCol Doucette and Lt Richards informed the squadron about the current status of the recruitment and retention program.

CURRENT EVENTS

The USAF will run a demonstration at Holloman AFB in June. The demonstration is a preliminary step towards determining what aircraft meets the operational requirements for a low-cost attack aircraft which can operate in low threat environments.

Aircraft selected to participate in the event must be able to perform light attack and armed reconnaissance. A minimum endurance of 2.5 hours, a 90% mission capable rate, and an operational tempo of 900 hours per year are critical requirements. In addition, the aircraft should be able to operate in austere conditions and from 6,000 foot runway.

The Embraer 314 Super Tucano is a leading contender. As the A-29, it has been operating successfully with the Afghan Air Force. The Air Force also intends to use the aircraft to back up its training fleet. A modified Beech AT-6 Texan II is also in contention. Lastly, the Textron Scorpion, a pure jet, is a dark horse. The company withdrew it from the competition as a trainer and it has seen no sales., foreign or domestic.

Super Tucano

Texan II

Scorpion

The demonstration is not a "fly-off." It is being staged so the Air Force can make an enlightened decision on the possibilities inherent in the light attack concept. In all likelihood, if the Air Force decides to go ahead, then a demonstration under combat conditions might follow. Estimates are that a buy of 300 aircraft is possible.

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 One

by

Stephen M. Rocketto

Prologue

Everyone is familiar with Igor Sikorksy's pioneering efforts in the development of helicopters but few know that Sikorsky trail-blazed the construction of large aircraft and played an influential role in the maturation of the long-range commercial flying boat. The three parts of this essay will examine each of these phases in the remarkable career of this aeronautical pacesetter.

A Russian, Sikorsky was born in 1889 in Kiev, the Ukraine. He had a comfortable life. His father was a psychiatrist and professor and his mother, a physician. A devoted member of the Russian Orthodox Church, his life was marked by a strong spiritual disposition. In later life, Sikorsky argued

in print that the great need of the day was spiritual rather than material power.

The Russian Years

The cultural environment in which the young Sikorsky matured and was with a host of opportunities for intellectual development. An early interest in aviation was sparked by reading Jules Verne's science fiction. Verne's *Clipper of the Clouds* described an aircraft capable of vertical flight. As a young boy, he played with a spring driven toy "helicopter" similar to the Penaud "helicopter" which fascinated the young Orville and Wilbur Wright.

Formal education began with a three year stint at the Imperial Russian Naval Academy in St. Petersburg. He left after three years, spent six months studying in Paris and the enrolled in the Polytechnic Institute of Kiev. A born tinkerer and practical engineer, he spent time in the labs working on various projects of his own making.

A Renewed Interest in Helicopters

A 1908 trip to Germany introduced him to the Zeppelin phenomenon but fortuitously he ran across a newspaper account about the Wright Brothers. Wilbur Wright demonstrated the Flyer II in France that year and European enthusiasm for heavier-than-air flight soared. France became the world center of the development of the airplane.

Within a year, Sikorsky returned to France and conferred with Ferdinand Ferber and Louis Bleriot, leading figures in aeronautics. Now passionate about aerial flight, he returned to Kiev to follow his dream of building a helicopter. The problem of control baffled him and after two attempts, he abandoned the helicopter project. He attributed his failure to the existing state of the art of engines and materials, lack of experience, and the absence of sufficient funding. Sikorsky now focused on a fixed wing design.

The well-dresses aviator of the first decade of the 20th century. Sikorsky was his own test pilot.

Fixed Wing Aircraft

His first attempt, the S-1, was a pusher biplane powered by a 15 HP engine. The S-1 did not fly but its wing was salvaged and used for the next plane, the S-2. The aircraft was configured as a tractor and used a 25 HP engine. The aircraft flew but a 200 yard flight at three feet of altitude was not world-shaking and soon after, Sikorsky stalled the S-2 at an altitude of 70 feet. The S-2 was destroyed. But the nascent aircraft designer and pilot was accumulating valuable experience.

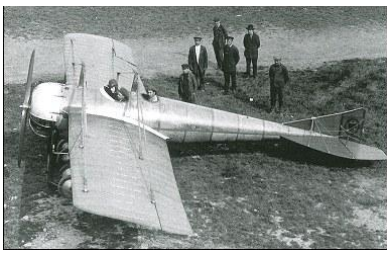
The Sikorsky S-2

After two years, Sikorsky hit pay-dirt with the S-5. A 50 HP water-cooled engine and improved aero design produced a controllable two seat aircraft. Sikorsky conducted a series of proving flights and then managed a four minute succeeded in circling a field in four minutes. The Fédération Aéronautique Internationale issued him license #64 and the aircraft went on tour winning a number of prizes. Ten flying hours were logged until an engine failure led to a destructive crash.

The S-6 series used streamlining to improve performance and could carry three passengers seating tandem. Another prize winner, the S-6 series attracted the attention of M.V. Shidlovskiy, Director of the Russian Baltic Railroad Car Works. Sikorsky was hired as Chief Engineer.

The company had just started an aircraft division and recognized Sikorsky's promise. The next four years yielded 11 important designs, many of which were milestones in the history of aviation.

The S-9 was the first monocoque monoplane and its features are recognizable in modern designs. A military seaplane, the S-10 followed and it served with the Baltic Fleet. But the big step forward was Sikorsky's creation of the first of the large multi-engine aircraft.



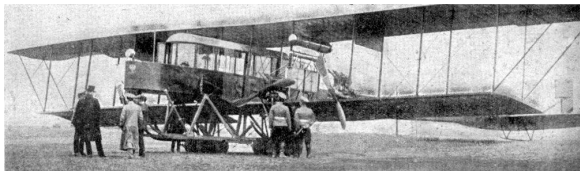
The Sikorsky S-9

The under powered S-16 was purchased by the imperial government in small numbers. It had a synchronization mechanism so that its 7.7 mm machine gun could fire through the propeller. The aircraft saw combat service in World War I and during the Russian Revolution.

An S-16 replica at the New England Air Museum.

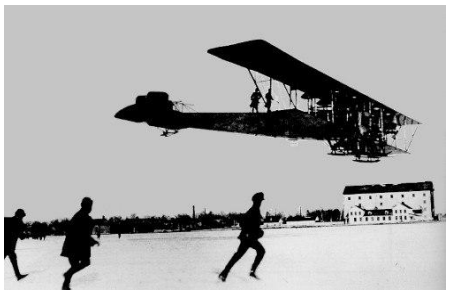
The Development of Multi-Engine Aircraft

First came the Great Baltic and its follow-up, the *Russian Knight* or *Grand*. These were the first four engine aircraft ever built. The *Russian Knight* was a biplane with two nacelles, each containing two engines which drove tractor and pusher propellers. This was later converted to four individual engines mounted on the leading edge of the wings. Two passenger cabins could accommodate as many as seven passengers. Only one was produced and it was destroyed when an engine on an aircraft preparing to land fell off and so severely damaged the *Russian Knight* that it was not worth repairing.



Sikorsky S-21 Le Grand

Sikorsky's large aircraft reached a pinnacle with the production of the *Ilya Mourmets*. Six variants were developed, S-22 to SS-27, and almost 100 were built. Starting as a commercial airliner, the *Ilya Mourmets* was modified to become the first heavy bomber. The commercial version had a range of amenities: insulation, heating, electrical lighting, and the first airborne potty. Initially employed on the St. Petersburg-Kiev run, 700 miles, in about 13-14 hours. The payload included 16 passengers. Later versions could carry 60 passengers and two tons of freight.



S-22

The military version of the Ilya Mourmets could carry around 1,700 pounds of bombs and had provisions for nine defensive machine guns including the first ever tail gun. They were flown as squadrons and flew over 400 sorties.

"Bombing Up" an Ilya Mourmets

In 1917, the Romanov dynasty was replaced by a provisional government under Alexander Kerensky and Russia withdrew from the war. The morale of the nation had been destroyed. By the end of they year, Lenin and the Bolshevik revolutionaries had gained power and a brutal civil war ensued. Sikorsky found the new order to be repugnant and was forced to flee to save his life. He reached Paris and the French accepted his offer to produce large bombers for them. However, the end of the war brought the end of his contract. Europe's economy was in shambles and Sikorsky decided to seek his fortune in the "New World."

Part Two will discuss the twenty years during which Sikorsky emigrated to the United States and developed fixed wing aircraft in New York and Connecticut.

More information can be found at the official Sikorsky Archives at http://www.sikorskyarchives.com/

May 16, 1919-Lt. Cmdr. A. C. Read, commands and navigates the Curtiss NC-4 on the first trans Atlantic flight: Newfoundland to Horta in the Azores and thence to Portugal and Plymouth, England. Pilots were Lt Walter Hinton, and Lt Elmer Stone. were the pilots. Lt. James Breese and Chief Eugene Rhoads were the flight engineers and Ens. Hevert Rodd operated the radio. The crew were USNR except for Read who was Regular Navy and Stone, USCG.

Curtiss NC-4 Berthed at the USN's Naval Aviation Museum, Pensacola, Florida

May 17, 1916-A Bristol Scout C piloted by M.C. Day is launched from a Baby flying boat piloted by J.C. Porte marking the first time one airplane is launched from another.

May 18. 1966-Actress Sheila Scott, piloting a Piper Comanche, becomes the first woman to make a successful round the world solo flight.

May 19, 1939-The USN contracts for the Curtiss SB2C Helldiver.

May 20, 1971-Boeing announces the cancellation of its supersonic transport

Mock-Up of Boeings SST.

May 21, 1977-A supersonic Air France Concorde celebrates the 50th anniversary of the May 20th 1927 solo Lindbergh flight by flying the same route, New York to Paris, in 3h 44m. Lindbergh's time was 33h 29m.

May 22, 1928-Samuel D. Heron, a Wright Field engineer, receives the first patent for sodium filled engine valves.

May 23, 1967-First flight of the Hawker-Siddeley Nimrod, a maritime patrol and anti-submarine version of the Comet IV.

Nimrod R.1 at RAF Cosford