



*Missions for America  
Semper vigilans!  
Semper volans!*

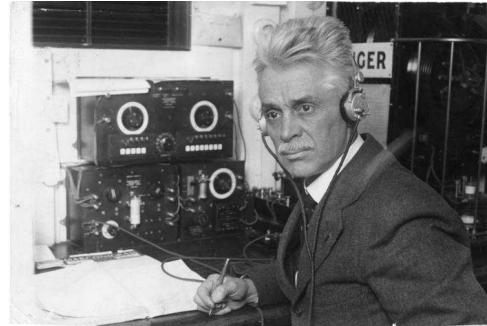
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*Hiram Percy Maxim (Credit: ARRL)*

*Doubt is often better than overconfidence, for it  
leads to inquiry, and inquiry leads to invention.*

*Hiram Percy Maxim, W1AW  
Co-Founder, American Radio Relay League  
Hartford, Connecticut*

### **SENIOR MEETINGS**

*07 March, 2023*

Officers reported on the current status of their departments. No outstanding problems or changes were reported.

### **CADET MEETING**

*07 March, 2023*

C/CMSgt Nicholas Buchko delivered the weekly aerospace current events briefing. Buchko provided details about the KF-21 Boramae (Fighting Hawk), a new aircraft with stealth capabilities and produced as a joint project by Korean Aircraft Industries and Indonesian Aerospace.

*KF-21 Prototype  
Note the nose  
mounted sensors  
needed to analyze  
flight  
characteristics.*



Mr. Mark Noe, KE1IU, a ham radio operator delivered an comprehensive presentation about the amateur radio community, its equipment and its activities. Noe's lecture, copiously illustrated, was professionally delivered and riveted the attention of the audience.



*Mr. Noe discusses the hundreds of contacts made with amateur radio enthusiasts internationally.*

## MISSIONS

### *Ice Patrol*

The weekend ice patrol was cancelled due to prevailing instrument flight conditions.

## TRAINING

### *Proficiency Flight*

Lt Spreccace and Lt Col Rocketto flew a proficiency flight on Sunday, March 7<sup>th</sup>. Practice included search patterns, air work and take-offs and landing.

Near the end of the flight an emergency locator beacon was detected on the Becker direction finder. The signal was variable in strength and most unusually, a commercial radio station was also heard on the same frequency, 121.5 MHz. A number of attempts were made to determine a vector to the signal. Our best guess put it someplace east on a line determined by Westerly State Airport and Watchung Pond. The strength of the signal indicated that it was further east. The FAA was notified.

## ACHIEVEMENTS

*Bosse Earns sUAS Mission Pilot Rating  
submitted by  
Capt Jason Otrin*



On Sunday, March 5, Cadet/Lt Col Bosse of the Thames River Composite Squadron earned his Mission Pilot qualification for Small Unmanned Aircraft Systems (sUAS). The exam was administered by Capt Robert Talley, CT Wing sUAS Director of Operations with assistance from Capt Jason Otrin. The evaluation consisted of an oral exam on CAP UAS regulations, mission planning, emergency procedures, risk management and flight operations among others. The practical test required Bosse to plan and execute searches based on a real-world scenario while managing a UAS team and coordinating with an incident commander.

Bosse began training with Civil Air Patrol UAS when he attended an unmanned systems course at the National Emergency Services Academy (NESA) last summer. While there, he learned about regulations, operations and trained on both fixed-wing and rotary-wing drones. He earned his FAA Remote Pilot Certificate shortly afterwards then began training for UAS Mission Pilot.

Bosse, now serving as cadet commander of the Thames River Composite Squadron, is also pursuing his ratings in the manned-aircraft world. He is working for his private pilot certificate at Coastal Air in Groton under the tutelage of SM Micah Person, CFI, also a member of the Thames River Composite Squadron.

C/Lt Col Bosse and Capt Otrin are the only two members of CTWG qualified as sUAS mission pilots.

## FEATURE ARTICLE

### ***Boom-Boom***

#### *Twin Boom Aircraft*

#### *Part 5*

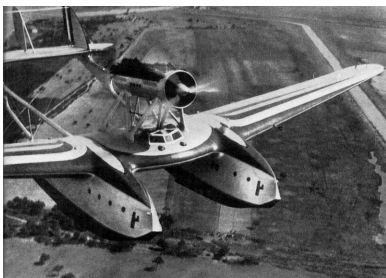
#### *Flying Boats*

Unlucky with women, the romantic side of the Editor turned to flying boats. *C'est la vie*. The class includes amphibians as long as their primary design features a boat-like hull as opposed to other seaplanes which might use single or paired floats.

One cannot ignore the remarkable series of flying boats created by Igor Sikorsky or Reuben Fleet. They opened up the Caribbean and South America to air travel. The British establishes world-wide communications over their imperial domain using flying boats. Italian, French and German companies produced aircraft which were instrumental in passenger and mail service over the Mediterranean Sea and South Atlantic Ocean. And the military did not ignore the design concept, ideal for maritime patrols and search and rescue.

#### *Made Famous by Balbo*

An early and highly successful twin boom flying boat was the Savoia-Marchetti S.55. Its design featured twin hulls, two contra-rotating propellers mounted in tandem on a pylon over the cockpit and above the center section of the wing and a triple fin empennage mounted on the twin booms.



*Note the Fascist insignia on the nose.*

The S.55 was a pioneer on the South Atlantic crossings in the 1920s but most famous for the massed formation flights led by Italo Balbo. After demonstrations in the Mediterranean, Balbo led 24

S.55s to North America for the 1933 Chicago Century of Progress International Exhibition. The formation used by the Italians gave rise to the term “Balbo” for any mass formation of aircraft.

#### *The Sikorsky Stable*

Igor Sikorsky pioneered innovative design, large land bases aircraft, flying boats and that for which he is most famous, the helicopter. Between 1928 and 1931, Sikorsky turned out four different related designs. The first was the most successful, the S-38.

The S-38 was a twin engine amphibian which were taken into service by airlines and the Navy. In August of 1929, New York, Rio and Buenos Aires Airlines initiated service between Buenos Aires and Montevideo, Uruguay using the S-38 which were then extended north with stops in Brazil and termination in Miami.

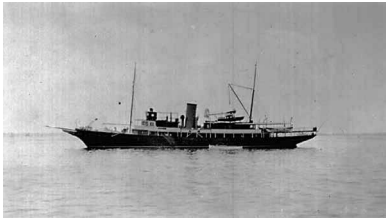
Of the 101 produced, Pan American Airways acquired 24 for use on their Caribbean and South American routes. The Army purchased 11 designated as the C-6 and the Navy and Marines operated a half dozen or so. The most famous of them was Osa's Ark, a zebra striped S-38 owned by Martin and Osa Johnson which they used in Africa to make a popular series of wildlife safari movies.



*The Johnson's S-38, Osa's Ark and S-39, Spirit of Africa and a White Stork.*

Sikorsky went on to manufacture 21 copies of the S-39, a single engine version of the S-38. Three individual ships deserve mention. The Johnson's owned one with a giraffe livery named *Spirit of*

*Africa*. Edward Deeds, National Cash Register and Delco, had one based on his yacht *Lotosland*, the first time this had been done.



*Lotosland with the S-39 and its crane amidship.*

During World War II, the Civil Air Patrol flew S-38s on the Coastal Patrols. One of them, an S-39B, NC803W, was the aircraft which performed a remarkable rescue off Rehoboth, Delaware for which the crew, Hugh Sharp and Ed Edwards received the first Air Medals presented to civilians from the hand of the President of the United States himself.



*NC803W at the New England Air Museum is perched in front of Sikorsky's last flying boat, the VS-44.*

Recognizing the need for larger passenger aircraft, Sikorsky built three S-40s for Pan American, the first of the Clippers. The four Pratt and Whitney Hornets could lift 38 passengers, cruise at 112 mph and fly 900 miles.



*The Flying Forest*

Lindbergh, a PanAM consultant, disapproved of the complex drag inducing maze of flying wires and struts and told Sikorsky "it would be like flying a forest through the air." On the inaugural flight of the S-40 to South American, Sikorsky and Lindbergh worked out the details for a clean-sheet design, the S-42, an aircraft without the iconic twin booms and the wires and struts needed to support the wings.

The last of Sikorsky's twin boom family was the S-41. She was a scaled up version of the S-38 but had the two engines mounted on struts between the wings. Only seven were built for PanAM and for the Navy. Pan Am operated some of them on a Boston-Halifax route under a contract with Boston-Maine Airways.



*The Navy designation for this S-41 was RS-1 (Credit: US Navy)*

### *The Flying Clog*

The most produced of all of the boats mentioned in this article is the Blohm & Voss BV 138 *Seedrache* (Seadragon). It was the primary long range maritime patrol aircraft for the Luftwaffe.

The aircraft used three diesel powered engines, could fly almost 800 miles on patrol and had a remarkable 18 endurance time. Its stumpy fuselage shape led to its nickname, *Der Fliegende Holzschuh* (Flying Clog).



Two interesting points. The BV 138 was equipped for catapult from ships which could extend its patrol radius. And the diesel engines allowed it to be refueled from U-boats, another feature used, especially in the Norwegian theatre and arctic waters.



*The Israeli Air Force once operated a Seabee. It was used for maritime patrols and as a 101 Squadron hack.*

As is the case with many aircraft, other uses were found for the *Seedrache*. It was modified to carry bombs and for use as a mine sweeper and light troop transport. Almost 300 were produced but no complete example exists today.

*An Italian Seabee*

Fratelli Nardi designed a general aviation amphibian in the 1950s, the rights to which were eventually purchased by SIAI-Marchetti and marketed as the FN.333 Riviera. Most of them were sold in the United States.



*This Riviera is listed as “deregistered” on the FAA data base.*

The aircraft was equipped with a Continental 240 hp engine driving a constant speed three-bladed pusher propeller. Only 29 were ever built and they never enjoyed the 1,000 unit production run of the Republic Seabee.

There are some interesting comparisons between the Seabee and the Riviera. The Riviera's engine develops about 15% more power and the claim is that it cruises about 60 mph faster than the Seabee's 103 mph. But the Riviera seems to suffer in comparison to the Bee's landing and take-off performance, both on land and water which is puzzling.

Most attempts to sell amphibious flying boats to the general aviation community have been doomed to failure, witness the Dornier Sea Star, Piaggio P.136 and David Thurston's Colonial Skimmer and Lake Buccaneer. Why is an interesting question and any reader responses would be appreciated.

**READER CONTRIBUTIONS**

Col Larry Trick, former MDWG Commander and affiliated with NAS Patuxent River sent information about the Kawanishi Emily which had been tested at PAX River by the U.S. military.



*The Emily rests on beaching gear at Chambers Field, NAS Norfolk, Dec, 1948 in December 1948.*

*(Credit: Emil Tkachik Photograph Collection/ Smithsonian Institution/ National Air and Space Museum Archive)*

He also sent a copy of the flight test report which the Japanese conducted on the UF-XS modified Albatross.

Dr. Eric Thomson noted that the Luftwaffe had two distinct aircraft named Uhu, the FW 189 reported on in the last issue and the Heinkel He 219.



*The Luftwaffe's other Uhu, a night interceptor sporting Hirschgeweih (Deer Antlers) VHF radar antennas.*

Carl Champagne, a retired 747 pilot, sent a passel of imagery of aircraft with unusual liveries, one of which is offered below.



*A Swiss International Airlines Airbus painted with an Alpine scene extending for most of the fuselage.*

Invader and with Odom as pilot and Tex Salle in the right seat broke Howard Hughes' world-record circumnavigation by 12 hours completing the trip in 78hr 55.5min. The aircraft itself was later used by Bell Helicopter as a transport in Iran and it is now on display there.



*The B-26 Reynolds Bombshell*

### **AEROSPACE CHRONOLOGY FOR THE WEEK**

March 8, 1949 – William Odom flew a Beechcraft Model 35 Bonanza from Honolulu, Territory of Hawaii to Teterboro, New Jersey. The 56hr 2min, 4,957 mile flight established a new FAI world record for Class C-1-c aircraft. In addition to the normal 40 gallon fuel carried by the Bonanza, Odom has a 100 gallon fuel tank installed in the cabin and two wing tip tanks holding 60 gallons each.



*The record setting Bonanza at the Udvar-Hazy Annex, National Air and Space Museum.*

Their next adventure was more “spooky.” Reynolds believed that K2 (Mt Godwin-Austen) or perhaps Anme Machin, accounts vary, was higher than Mt. Everest and hoped to garner publicity for his business activities by proving it. But as early as 1948, the Communist Chinese were expressing interest in developing a nuclear weapon and had started practical work to attain this goal. According to Reynolds family beliefs, Milton had cut a deal with U.S. intelligence to search for evidence of a Chinese nuclear program.

Anyway, Reynolds outfitted a former Navy Consolidated RY-1 Liberator Express which he named *The Explorer*. They had some form of legitimization from the Boston Museum of Science and flew as the Reynolds-Boston Museum China Expedition. The made it to China were events get murky.



*(Credit; Bill Larkin)*

During WWII, Odom flew transports over “the Hump” between India and China for China National Aviation Corporation. Afterwards, he engaged in long distance flying. He established a relationship with Milton Reynolds, first to introduce the ball points pen into the American market. Reynolds was an enthusiastic promoter of aviation. In 1947, he outfitted a Douglas B-26

One story states that they made it to K2, another and more likely claim is that they were detained by the Chinese government which sent them back to Japan under fighter escort. Another story says that they never had any authorization from China or Japan to make the flight and they were finally taken into custody in Japan.



*The jet-like pods on the wing are radiator and engine air coolers.*



*The Explorer at Peking after the right main landing gear failed. Note the flags on the tail, the American Flag and the flag of the Republic of China! What might the People's Republic make of this? (Photo by: Jack Birns / Life)*

No member of the expedition ever admitted that they were involved in espionage but another report notes that clandestine payments were passed from a U.S. intelligence agency to the Reynolds Construction Company as part of an operation code-named *KK Mountain*.

To make this even more murky, *KK Mountain* is reputed to be a code-name for a joint CIA-Israeli operation in Africa. To wander in the world of intelligence is to wander, as James Jesus Angleton remarked, "in a wilderness of mirrors." Put on your cloak, strap on your dagger and take your chances. They made it back to the United States and *The Explorer* passed through a number of hands before being written off in a crash at El Alto, La Paz, Bolivia.

Odom met his end at the National Air Races in Cleveland. He sweet-talked Jackie Cochran into purchasing a P-51C Mustang modified for racing and named *Beguine*.



*Is that part of the score for Begin the Beguine under the cockpit?*

On Sept 5, 1949, Odom was on the second lap of the race when according to an eye witness, Odom cut inside Pylon No. 3 and was correcting toward Pylon No. 4 when *Beguine* rolled inverted and crashed into a house killing not only Odom but a woman and child resident in their home.

*March 9, 1934*

*A Bad Day for Army Crews Flying the Air Mail Routes*

Burton, Ohio-Lt Otto Wienecke is killed in the crash of his Curtiss O-39 Falcon during a heavy snow storm.



*Curtiss Falcon*

Cheyenne, Wyoming-Lts F.L. Howard and A.R. Kerwin are killed when their Douglas O-38E crashes on takeoff.



*Douglas O-38E*

Daytona, Florida-Pilot Lt. Walter Reid, mechanic Pvt. Ernest Sells and Pvt. Floyd Marshal are making a night take-off in a Keystone B-6A. The engine fails and the plane crashed into heavy woods. Sells is killed and Reid and Marshal were injured.

*Keystone B-6A*



In February, President Roosevelt issued Executive Order 6591 which ordered the War Department to place at the disposal of the Postmaster General "such air airplanes, landing fields, pilots and other employees and equipment of the Army of the United States needed or required for the transportation of mail during the present emergency, by air over routes and schedules prescribed by the Postmaster General."

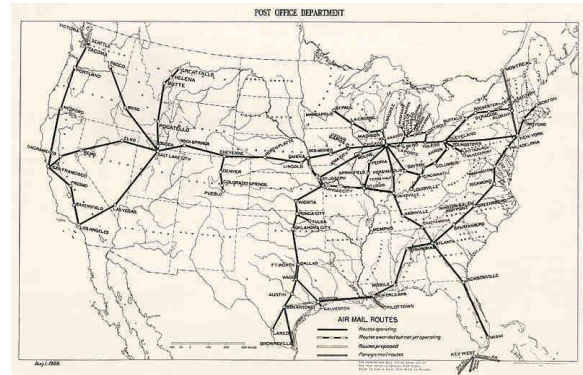
Previous to this time, commercial airlines carried the mails using highly experienced pilots, modern aircraft and established bases. However, a scandal about how the routes were allocated resulted in the government cancelling the commercial contracts and turning the service over to the Army. As is traditional, the Roosevelt administration blamed the previous Hoover administration.

The Army accepted the challenge but was woefully unprepared to start with such short notice. Half the assigned pilots were reservists with less than two years flying experience and the aircraft assigned were a grab-bag of different types, not designed for mail duties. At that time, Army aviation was a fair weather daylight operation. Only 31 of the selected pilots had logged a minimum of 50 hours at night and only two of them had 50 hours of instrument time.

The death toll was horrendous. There were 66 major accidents and thirteen airmen were killed in a few short months. Eddie Rickenbacker called the program "legalized murder." Lindbergh, a former

air mail pilot telegraphed the Secretary of War and said that using the Army to carry the mail was "unwarranted and contrary to American principles." The Roosevelt Administration was unhappy with both aviation icons and neither would never again gain any favor with the Roosevelt administration, an early example of political cancellation.

After punishing the airlines and executives deemed guilty of corruption, new legislation was enacted, routes were assigned and commercial operators resumed carrying the U.S. Mail.



March 10, 1966 – Maj. Bernard Fisher and five squadron mates were providing close air support to troops near A Shau Valley when the A-1E piloted by Maj “Jump” Myers is hit and crash lands on the abandoned 2,500 foot airstrip of a special forces camp. Myers took cover on the edge of the airstrip. The nearest rescue helicopter was 30 minutes out and the enemy was with 200 yards from Myers so Fisher decided to land and pick up him up.



*Myers' crashed Skyraider is circled. (Credit: USAF)*

The four other SPADS

provided air cover and Myers landed on the debris strewn and damaged Marston matted runway and under small arms fire from the nearby enemy effected the rescue.



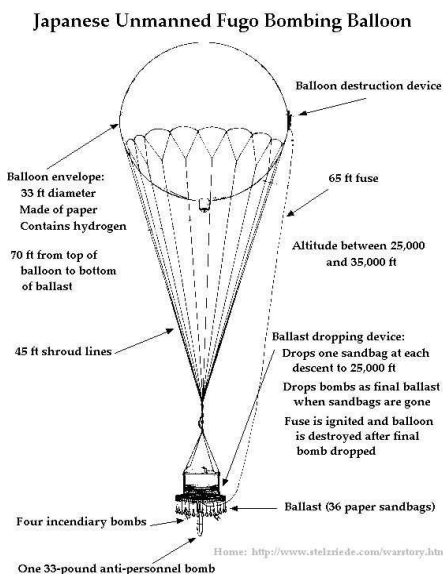
*Fisher's Skyraider survived the war and is on display at the Museum of the USAF in Dayton, Ohio.*



On January 19<sup>th</sup>, 1967, President Lyndon B. Johnson presented the Medal of Honor to Fisher, the first Air Force man to be so honored for heroism in Vietnam.



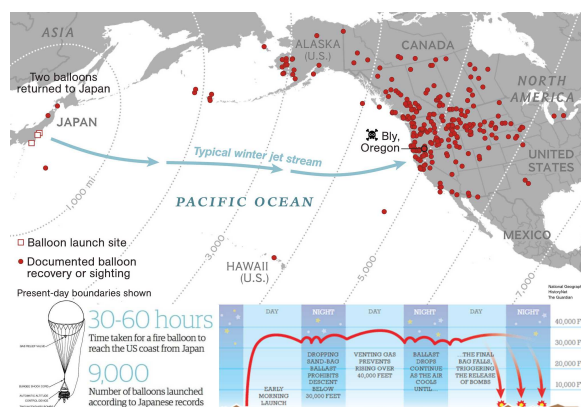
March 11, 1945 – A Japanese balloon bomb was recovered in Edson, Alberta, Canada, a weapon coded by the Japanese as Fu-Go. Initially, no one believed that these weapons flew from Japan and it was thought that they were launched by Axis agents or from submarines. Analysis of the sand used in the ballast bags revealed the precise location of the launch region on the Japanese home islands.



Between November 1944 and April 1945, Japan launched over 9000 paper and rubberized silk balloons carrying incendiary and anti-personnel

bombs. The balloons had a 33 foot diameter and were equipped with rudimentary instruments to allow them to maintain altitude and drop their ordnance after a pre-established period of time.

*The bombs and ballast bags are clearly displayed.*



Launched into the jet stream, the balloons traveled westward for a week or more. Fūjin, the Japanese god of the winds did not favor the sons of Nippon. The winter and spring launch windows provide the strongest jet streams but the high levels of precipitation dampened the forest fire danger in the Pacific northwest.

A pregnant woman and five children from a church group were killed in Oregon after the found one of the balloons. Investigators speculated that one of the kids may have kicked the payload package.

Three hundred and sixty-one of the balloons have been found in 26 states, Canada and Mexico. Farmington, Michigan is the landing site of the balloon which traveled furthest east.

Balloon bombs are still being launched in the 21<sup>st</sup> century. In 2018, terrorists launched party balloons or helium fill condoms in clusters strung with flaming rags or other incendiary devices in

attempts to burn crops in Israel. Reports indicate that 678 fires were started burning 2,260 acres of woodland and 1,500 acres of agricultural crops. One of the weapons was found 40 miles from the Gaza Strip.

March 12, 1947 – First flight of the Douglas Cloudster II. The aircraft used two Continental 250 hp engines buried in the fuselage to drive a tail-mounted propeller.



*Note the tail skid to prevent prop strikes.*

Only one was produced. The primary engineering problem encountered was as to be expected, engine cooling. However, the post-war aircraft market was disappointing and the anticipated price made the aircraft commercially unviable.

March 13, 1940 – Finland is forced to sign an armistice with the Soviet Union ending the Winter War. However, their air force inflicted server punishment on the Soviets. In the final accounting, the Finns lost about 40% of the aircraft, 62, in combat and accidents.

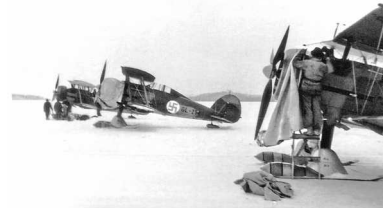
*Most Common Finnish Fighters*

*It has been joked that the Finnish inventory contained aircraft from every nation except Japan.*



*Fokker XXI*

*Brewster Buffalo*



*Gloster Gladiator*

*Morane-Saulnier MS.406*



*The Most Common Soviet Fighters and Bombers*

Soviet losses were about the same percentage but perhaps 1200 aircraft were lost and they did little to disrupt Finnish mobilization and communications.



*Polikarpov I-15*  
*(Credit: Kogo)*



*Polikarpov I-16*

*Ilyushin DB-3*





*Tupolev SB-2*

March 14, 1885 – Raoul Lufbery, American World War I pilot, was born. Wallingford, Connecticut claims Lufbery as a local hero but he was a French citizen, born in France of an American father and French mother. The father has family roots in Wallingford and Raoul lived there for two years between 1906 and 1908 while working in a silver-plating plant.



*Lufbery and below, squadron mate Douglas McGonagle, Lufbery, and Whiskey and Soda, the Lafayette Escadrille's leonine mascots.*



In World War One he entered service with the French Air Force and scored 16 of his 17 victories flying for France. In November of 1917, he received a commission in the US Army Air Service and spent time training pilots for combat. Eddie Rickenbacker, the American Ace of Aces said that “Everything I learned, I learned from Lufbery.”

In order to eliminate the chaos engendered when multiple aircraft approach a field from multiple directions, Lufbery is credited with setting up the first of the standard traffic patterns. Promoted to major, he scored his 17<sup>th</sup> victory flying with the American 94<sup>th</sup> “Hat-in-the Ring” Squadron.

But on May 19<sup>th</sup>, 1918, he was flying a Nieuport 28 and attempted to attack a Rumpler reconnaissance plane when the German rear gunner damaged his aircraft. Stories conflict about what happened next. One claim is that the aircraft caught fire and Lufbery jumped to avoid burning to death. A more likely story is that he might have unfastened his seat belt to clear a machine gun jam, the plane flipped inverted and he was thrown out.

Lufbery was buried at the Aviators Cemetery at Sevastopol, France but his remains were later removed to a place of honor at the *Lafayette Memorial du Parc de Garches* in Paris. This site honors the American volunteer pilots who flew with French squadrons during the Great War, and is the final resting place for some of America’s first combat aviators and their French Officers. Nine member of the Lafayette Escadrille rest there.

Two Connecticut pilots are also so honored. Sergeant Paul Pavelka of Madison died while on duty in the Balkans in November 1917. Corporal Schuyler Lee of New London, a member of the Lafayette Flying Corps who died in combat over France in April 1918, has his name inscribed in the memorial.



*Sergeant. Pavleka and Corporal Schuyler.*