The Vintage Flyer *by John Cilio* WWII Airborne Anti-submarine Warfare – Big was Beautiful

Navy K-type airships are seldom talked about in WWII conversations, after all there were only 168 aircraft built. Their top safe speed was just 60 knots or 69 mph in a war where aircraft speeds approached 500 mph. Yet these giant, non-rigid bags of helium were arguably the most effective submarine deterrents of the war. German U-boats sunk over 2,700 ships and 14 million tons of cargo during the war. Almost half of those losses were incurred along the U.S. coast in 1942. It's staggering to think of what the losses could have been if Congress had not appropriated ten million dollars ($155 million in 2010 dollars) to create balloon and aircraft response stations along the coast. As the bases came online with convoy techniques deployed, shipping became much safer.

There were three different airship models used during WWII, K-ships representing the bulk of the fleet. They were huge, over 250 feet long, 60 feet wide and filled with helium. Powered by two 425hp engines, fired by 91 octane gasoline, the airship could stay aloft for 60 hours without refueling. These traits made the airships ideal for long missions although most were under 24 hours. Responsiveness – well, it was different than any other U.S. aircraft used in WWII. A pilot needed to anticipate the measureable time delay necessary in directional changes and recovering from a dive. New blimp pilots would inadvertently learn that being 250+ feet long meant that you could easily drag your tail into the water if you pulled up too late from a dive.

A K-ship with two free balloons in practice during WWII.

I've had the pleasure of knowing two airship pilots, both of whom are healthy and active today. A few months ago I sat down with A. L. Whitt Jr., to listen to more of his personal experiences. Whitt was recruited into the Navy and immediately upon graduation went to the Navy's Murray State Teachers College (now Murray State University) to train on light planes. In 1942, a Navy pilot candidate would learn to fly and solo in eight hours to determine if they had a flight career ahead of them. Whitt soloed and advanced to the preflight training facilities at the University of Iowa. It provided intense physical conditioning which he would appreciate later as he took the controls of the airship.

Whitt became a pilot after graduating class 2-43 at Lakehurst New Jersey. It took over 100 hours of flight training to solo in one of these lighter than air airships. One of the highlights of airship training was learning how to use ballast and to control flight in a small hydrogen-filled balloon. Known as free ballooning, a cadet would be sent aloft in a balloon that they had little control of, initially. A cadet would learn how to gain altitude with ballast and drag or change direction with the winds. A favorite tool was a roll of toilet paper to determine vertical direction and a 300 foot long drag rope to control speed. The cadet would let the rope out to lighten the load and reel it in to make the balloon heavier. It helped in landing, too. In today's world of tall buildings, power lines, transmission towers and population densities, free ballooning is no longer practical. It was crucial training in WWII because what you learned in free ballooning would pay dividends when your airship carbureted engines failed and you needed to keep altitude until you could restart the engines.

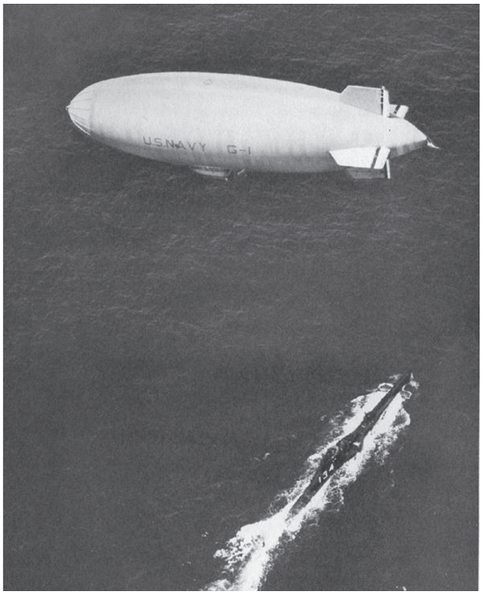
Ensign A.L. Whitt Jr. as a U.S. Navy airship pilot in 1943.

Whitt became an Ensign when he earned his pilot wings in the U.S. Navy. There were airship bases all along the East coast and down through most of South America and along the West coast. Whitt served at several bases. He attended advanced training at Squadron 21 below Miami, convoy duty at Lakehurst, NJ and at Squadron 15 located in Brunswick, GA and finally patrolled in Oregon from the Naval Air Station Tillamook. Regardless of where the crew was stationed, they had one mission: keep shipping safe from submarine (U-boat) attack. The airship was an ideal platform to perform the mission. The airship could attack a sub with its four depth charges which evolved to airborne mortars, the first being Hedgehog and later Tarpex which fired a pattern of small depth charges. They could damage a U-boat from 35 feet away. Later acoustic homing torpedoes became available and could find its target from 10 miles away. But the most important weapon was simply being in the air with the radar on. The airship kept the submarines underwater by their presence and by doing so the enemy could not report on ships in transport, their direction or speed nor could they make an attack.

Whitt shared a sad proof of how the cat and mouse relationship of U-boats and airships collided. The SS Esso Gettysburg was a speedy tanker ninety miles off the Georgia coast and bound for Philadelphia with crude oil. The day, June 10, 1943, started out sunny and an airship from Squadron 15 was patrolling overhead. The area was known as a sub infested zone. As the day progressed a large thunderstorm squall forced the airship to divert with a plan to intercept the tanker on the other side of the squall. Unfortunately, U-66, a German U-boat skippered by one of Germany's major aces, Kapitaen-Leutnant Friedrich Markworth, was waiting for its next victim in the storm. Firing two torpedoes, the tanker burst into flames and sank with only 15 of the 75 crew members surviving. Fortunately, U-66 would only sink one more allied vessel before it too was sunk.

As general duty, airship crews flew every third day although the ships flew every day. Missions could vary widely from simply patrolling regions of the ocean, escorting convoys or finding and rounding up ships into a 200 ship convoy. Whitt told me how both destroyers in a convoy or an airship could radio a special message to convoy ships ordering commanders to stop engines and turn off all noise making equipment because they were releasing homing torpedoes to find a sub within the vicinity. Next month we'll continue the story of keeping the seas safer with an enemy sub sinking in a New London, CT harbor and why blimps require two hangars at a base.

Under the helium balloon of a K-ship was the control center known as a Gondola. You can see one today at the New England Air Museum.



An airship crew found a target sub during a WWII practice mission.