# ALIFESAVING

Stewart Graham helped pioneer many aspects of rotary-wing flight during his 24 years of service in the USCG, becoming the first living USCG aviator to be inducted into the Coast Guard Aviation Hall of Fame.

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# THERE AREN'T MANY HELICOPTER LIVERIES AS DISTINCTIVE AND

instantly-recognizable as those of the USCG, which has been using vertical-lift technology in the life-saving role Igor Sikorsky predicted it would fulfill for almost 80 years.

Within the service, Commander Stewart Ross Graham played a crucial role in establishing and developing rotary-wing capabilities. He joined the USCG in 1936, and by the time he retired 24 years later, had received the Distinguished Flying Cross, two Air Medals, and from the Belgian government, he received the Knight of the Order of Leopold Medal. He also received the European–African–Middle Eastern Campaign, American Campaign, and Victory medals, as well as a commendation from the Secretary of the Navy and a US Coast Guard letter of commendation. In 1995, he became the first living USCG aviator to be inducted into the Coast Guard Aviation Hall of Fame.



Graham was born on Sept. 25, 1917, in Brooklyn, New York. After graduating high school, he enlisted in the USCG as a Surfman, where he served at various lifeboat stations on Long Island from 1937 to 1940. Even though he enjoyed the work, he dreamed of learning to fly for the Coast Guard.

He got his chance in December 1940, when he began flight training at Coast Guard Station Charleston in South Carolina. He was then one of 10 selected for additional training in Pensacola, Florida, and he received his wings in September 1941, becoming Coast Guard aviator No. 40.

After graduation, Graham was transferred to the Coast Guard Air Station in Floyd Bennett Field in New York. N.Y. There, he flew Grumman Amphibians and Hall Aluminum seaplanes on SAR missions, as well as on anti-submarine patrols.

On Nov. 12, 1942, Graham watched a flight demonstration of Igor Sikorsky's experimental VS-300 helicopter in Bridgeport, Connecticut. He was so impressed by the versatile aircraft that he requested to take helicopter flight training as soon as it became available.



Lt. Commander William J. Kossler (the aviation engineering officer at Coast Guard headquarters in Washington, D.C.) and Commander Frank A. Erickson had also seen demonstrations of Sikorsky's helicopters, and immediately recognized the helicopter's potential for search-and-rescue (SAR) duties.

Erickson was soon pushing for an air-sea rescue program for the Coast Guard using the newly developed technology. He considered it his personal program, and despite facing an uphill battle with headquarters, he succeeded in making it a reality thanks to Kossler's full support.

Erickson was checked out in a Sikorsky YR-4 helicopter and became the first USCG helicopter pilot. He then gave Graham just 3.5 hours instruction on the YR-4 before the latter soloed in October 1943, becoming USCG helicopter pilot No. 2.

On Nov. 1, 1943, Erickson and Graham ferried the first Coast Guard helicopter — a YR-4B (designated the HNS-1 in the U.S. Navy and USCG) — from the Bridgeport factory to Floyd Bennett Field. Stewart was assigned the task of training other pilots in the art of rotary-wing flight, becoming the lead pilot instructor at the Coast Guard Helicopter Flight and Engineering School.

The very first R-4/HNS-1 was piloted to Floyd Bennett Field by Erickson and Graham on Oct. 30, 1943. USCG/Stewart Graham Collection Photo





Graham (left, in right seat) and Lt. Duval hover the HNS-1/R-4 on Oct. 18, 1944, at the Mustin Naval Air Facility in Pennsylvania. Below them is Carl Yanwood. **US Navy/Stewart Graham Collection Photo** 

## ESTABLISHING A CAPABILITY

With only 65 flight hours in helicopters, Graham was transferred to the British Freighter *Daghestan*, which had two YR-4s stowed on an improvised flight deck on the stern of the ship. The vessel set sail from New York on Jan. 6, 1944, destined for Liverpool, England. Graham was on board to evaluate the feasibility of using helicopters for anti-submarine warfare while aboard merchant ships on convoy.

Wind and sea conditions prevented any attempt at getting airborne for over a week. Then, on Jan. 16, 1944, Graham completed the very first successful takeoff from a merchant vessel on the North Atlantic. The flight lasted 30 minutes, and he was able to land the YR-4 back on the ship with little difficulty, despite the windy conditions. Graham was later awarded the Air Medal for this daring flight. Subsequent helicopter flights proved that helicopters could fulfill a crucial role in anti-submarine warfare (ASW) in future years.



Other notable wartime flights included the rescue of a USCG pilot who had crashed in Jamaica Bay, New York; flying an HNS-1 as a target for naval vessels to calibrate radar installations; ice surveys in New York; testing and accepting the two-place Sikorsky R-6/HOS-1; flying prototype sonar equipment; and performing a flight demonstration in Washington, D.C., for representatives and senators.

By the end of the Second World War, the Floyd Bennett school was training pilots and mechanics from all over the world.

In February 1946, Graham was assigned as the project helicopter pilot with the Anti-Submarine Helicopter Dipping Sonar program at the Naval Research Laboratory in Washington, D.C. The Coast Guard's new Sikorsky R-5/HO2S-1 was used for the testing program, flown by Graham. Later, USCG Ensign William Coffee joined as a relief pilot. The results were encouraging, and the helicopter-assisted sonar program appeared to have a great future.

During July 1946, Erickson and Graham received orders to proceed to Elizabeth City, North Carolina, to establish a new Rotary Wing Development Unit to further fulfill the helicopter's SAR mission.

## SAVING LIVES

The full extent of the capability offered by helicopters for the SAR mission was demonstrated in September 1946. A commercial Belgian airliner had crashed while attempting a landing at Gander, Newfoundland, during a transatlantic flight, but it was not located until two days later due to poor weather in the area. A ground-based rescue party made it to the crash site the day it was found, discovering 18 survivors among the 44 passengers and crew who had been on the flight.

The rescue party's doctor requested a helicopter rescue due to the serious injuries sustained by some of the survivors, and the inaccessibility of the remote, wooded area. The only helicopters available were two USCG HNS-1 and HOS-1 aircraft in Brooklyn and Elizabeth City. They were dismantled and flown to Gander in two U.S. Army C-54 transport aircraft.

The helicopters needed to be reassembled and test flown upon their arrival in Gander, and began rescuing the most seriously injured survivors later that day. The last of the survivors and support personnel were flown out the following day. This successful rescue gained huge publicity, helping Erickson in his quest to promote the use of rotary-wing aircraft for lifesaving SAR operations.

Back in North Carolina, Graham flew the first "air mail" service to the remote Outer Banks islands off the coast of North Carolina, and completed what might have been the first night helicopter medevac from the same region. The mission was accomplished by flying along the shoreline and using the phosphorescence from waves washing up on the beach as a visual reference.

Graham later piloted the first transcontinental USCG helicopter flight, unescorted, from Elizabeth City to the Coast Guard Air Station in Port Angeles, Washington. It took 57 flight hours and was completed in 10 days from March 24 to April 3, 1949.

In January 1951, Graham was transferred to the Naval Air development Squadron (VX-1) in Key West, Florida. His duties involved teaching Navy pilots and crew members the technique of helicopter sonar dipping, and he also evaluated the Piasecki





HRP-1 tandem rotor. The following year, he evaluated anti-submarine sonar with the

Sikorsky S-55/ HO4S.

"I remember well how the helicopter dipping sonar program had stiff opposition during its early development," said Graham. "However, there has always been a premium and a penalty on pioneering, but both will always be accepted by men of vision."

He subsequently received orders for duty at the Naval Air Test Center (NATC) in Patuxent River, Maryland, as the head of the Technical Test Division; and was then transferred to the Coast Guard Air Station in St. Petersburg, Florida, as the assistant operations officer, flying both fixed-wing and helicopters on SAR operations.

In January 1955, Stewart flew the first night hoist rescue, saving three survivors from a vessel breaking up on a reef in the Gulf of Mexico. He received the Distinguished Flying Cross for this mission.

Later that year, he was transferred as the executive officer to the Coast Guard Air Attachment in Argentia, Newfoundland, where he flew B-17s to locate icebergs and plot their positions as they drifted into shipping lanes.

In August 1957, Graham was transferred to the Coast Guard Air Station in Salem, Massachusetts, as the Executive Officer. While there, he flew a Sikorsky HO4S/S-61 that provided air coverage for Queen Elizabeth II during the grand opening of the St. Lawrence Seaway in Canada. He later escorted the Queen's yacht *Britannia* to Chicago, Illinois.

Graham became the Assistant to the Chief of the Search and Rescue Section of the First Coast Guard District, in Boston, Massachusetts in 1960, but retired later that year after 24 years of service.



"I have always been fascinated by the wonders of flight — the flying machines as well as the daring aviators who flew them," he said. "The flying machine I came to know best was the helicopter. Throughout the many stages of my life and career in the Coast Guard, I have met wonderful, adventurous, imaginative, talented, visionary people."

Graham was a founding member of the Twirly Birds, and in 1990, received the Les Morris Award in recognition of his lifetime achievements in the helicopter industry. He passed away at his home in Naples, Maine, on Aug. 13, 2016, at the age of 98.



### ⊁ BOB PETITE

Bob is a member of the Twirly Birds, The Vertical Flight Society, the Canadian Aviation Historical Society, the American Aviation Historical Society and the Bell 47 Helicopter Association, Inc. He is the author of *The Bell 47 Helicopter Story*.

