

The “Eggbeater with Good Sense”:
Helicopter Medical Evacuations in World War II Burma
By Ken McElroy

Thanks to the popularity of the TV series “MASH”, if you asked the average person, “When were helicopters first used for military medical evacuations?” the overwhelming answer would be, “The Korean War.” Most civilians and a good number of military historians would be surprised to hear that the helicopter, invented by Igor Sikorsky in 1939, was being used in 1944 for medical evacuation missions in Burma during WWII.

As early as 1909, Sikorsky, then only 20 years old, attempted to build a helicopter. His initial efforts were unsuccessful, because the reality was, no one at the time, knew enough about rotor wing engineering to build a helicopter. Sikorsky, put his helicopter ideas on the back burner and became a pilot for the Imperial Russian Government. In addition to being a pilot, Sikorsky also designed fixed wing craft for the government. He left Russia for the United States after the Communist revolution and in 1923, partially funded by another Russian immigrant, composer, Sergei Rochmaninoff, Sikorsky founded the Sikorsky Aviation Company. The company built flying boats for Pan American Airways and in 1938 was bought out by the United Aircraft Company.



Igor Sikorsky and Orville Wright with a XR-4, May 1942

It was then that Sikorsky returned to the dream he had had as a 20 year old. And so in 1939, 30 years after his initial failures and with years of aircraft design experience under his belt, Sikorsky designed, built and successfully piloted the VS-300 the world’s first single rotor helicopter. This aircraft, had a welded steel frame, no outer skin, 3 wheels, a 28 foot 3 blade main rotor and was powered by a 4 cylinder, 75 horsepower, air cooled Lycoming engine. It was obvious that Sikorsky developed the helicopter as a simple way of transporting persons and materials to hard to reach locations where a fixed wing craft could not operate.

The Army quickly saw the possibilities for military applications for the helicopter and funded early versions. After initial test flights in 1940 by pilots such as, Captain Franklin Gregory, the helicopter was modified to the point that these first units looked similar to small helicopters produced today. The Army, Navy and the British Air Force all purchased early version of the YR-4 and of the first 27 units produced, six were sent to the 1st Air Commando Group in Burma.



Sikorsky YR-4B during World War II

Although purchased for military purposes, the helicopter was quickly assigned to humanitarian efforts. It had already been used by the Navy to rush blood plasma to the USS Turner, off the coast of Connecticut following an explosion on the ship and a helicopter on a training mission had been diverted to rescue a boy marooned on sandbar in Jamaica Bay, New York.

Medical evacuation procedures in the European Theater of Operations, were already well established. Most locations were accessible by motorized transport and fixed wing evacuations were usually easily managed. It isn't really surprising then that the first medical evacuation opportunities for the helicopter took place in Burma. Much of the fighting took place in primitive jungles with few roads and even fewer landing strips and as fate would have it, it was in Burma in 1944 that the helicopter first proved itself not only as a military craft but as a medical evacuation craft as well.

The Japanese had hoped, with the invasion of Burma, to take India out of the war, stir up anti-British sentiments among the natives and tie up as many British troops as possible and seemed very successful in their efforts. The British were trying to hang on in any way possible. In 1943, the British sent Brigadier General Charles Wingate to Burma to launch his pet project, Operation Longcloth. Wingate proposed sending small units of British and Gurka soldiers, far behind enemy lines. There, they would launch guerilla missions aimed at breaking the Japanese stronghold. The success of Operation Longcloth was questionable and Wingate's orders that wounded were to be left behind was very unpopular with the troops. Realistically, though, the military had no way of penetrating that far into the jungles and rescuing wounded soldiers.

Although only partially successful, Wingate was a good salesman and the concept was expanded. The new plan called for troops to operate 3 months at a time, several hundred miles behind the Japanese lines until relieved by another unit. To support these rotations, the new plan called for the creation of a series of strong points, complete with airfields. C-47 cargo planes would ferry supplies and replacement troops in and evacuate the wounded out.

As part of this military reorganization, the US 1st Air Commando was assigned to provide air support to these long range missions. The Air Commandos were led by Col. Philip Cochran, a charismatic, daredevil fighter pilot in North Africa and the model for the Major Flip Corkin character in the Terry and the Pirates comic strip. The 1st Air Commando group consisted of a squadron of 12 B-25H bombers, 30 P-51 Mustangs, 13 C-47 cargo planes, 225 Waco CG-4A gliders (one pilot was child acting star Jackie Coogan), and for liaison and observation some 100 small fixed wing airplanes.

It was to this unit that six Sikorsky YR-4B helicopters were assigned to assist in the liaison and observation missions. The helicopters arrived in Burma inside C-46 cargo planes in March 1944. When the YR-4B was deployed on its first reconnaissance mission, Col. Cochran wrote "Today the 'egg-beater' went into action and the damn thing acted like it had good sense." Although initially assigned to reconnaissance and observation missions, within a month, the helicopters were asked to perform an even more important task.



US Air Force Museum photo probably taken in January 1945, shows Lt. Carter Harman (*standing left*), with ground crew, including his crew-chief/mechanic, Sgt. Jim Phelan (*front row right*). Lt. Frank Peterson, a veteran R-4 test pilot who performed a later epic Burma rescue mission with a YR-4B, stands beside Lt. Harman.

On April 21, 1944, Sergeant Ed “Murphy” Hladovcak, flying a small fixed wing aircraft was evacuating three wounded British Chindits, when he took Japanese fire and was forced to land in the jungle 100 miles behind Japanese lines. The terrain made it impossible for fixed wing aircraft to land and evacuate the wounded soldiers. Sergeant Hladovcak and his passengers managed to hide in the jungle where they suffered from heat, mosquitoes, and lack of food. The wounds on the three passengers began to fester, they were unable to travel and if not rescued would soon be in enemy hands.

Perhaps the soldiers of the 1st Air Commandos had heard about the helicopter rescuing that young boy in New York. But more than likely it was a good bit of that “Yankee Ingenuity” that led the officers of the Air Commando, to look at the “eggbeater” and determine that it might be the solution to the dilemma. The helicopter had only a range of 100 miles, and at the time, they were located in India on the Burma border. It had its limitations, but if it could get there, the helicopter could land where the fixed wings could not.

Lieutenant Carter Harman flew his YR-4B helicopter on a circuitous 500 mile trip from his base in India to the crash site. The Lieutenant had to set the helicopter down every 100 miles at landing sites secured by Chindits so he could refuel. It took Lieutenant Harman four days to pilot his helicopter to the rescue site. In the meantime, a fixed wing aircraft had located Sergeant Hladovcak and had dropped a message to him to move his wounded companions to a nearby clearing where Lieutenant Harman and his YR-4B would meet them.

Due to the altitude, heat, and humidity, the YR-4B could only extract one passenger at a time. Harman picked up the first wounded soldier and ferried him 10 miles to a sandbar where a waiting L-1 fixed wing aircraft awaited. The wounded man was quickly loaded on the L-1 and flown to a hospital within British lines. On the second trip to the sandbar with a wounded soldier, the engine overheated and Lieutenant Harman had to spend the night on the sandbar waiting for the engine to cool. The next day he flew out, made a third trip to pick up the last wounded man and finally on his fourth trip he evacuated Sergeant Hladovcak.

Although the YR-4B helicopter had limitation in range and payload, these extractions were considered a successful demonstration of the medical evaluation capabilities of the helicopter. Lieutenant Harman and the other pilots managed 15 more extractions before their aircraft were unfortunately grounded due to the lack of replacement parts in the summer of 1944. For the rest of the year there were no helicopters flying in Burma.

In January 1945 an aircraft crashed on the air route between India and China known as the “Hump”. Because of the isolated location it was determined that the only way to rescue the pilot was by using a helicopter. With all helicopters in Burma grounded due to lack of parts, the military must have been so confident of the helicopters abilities that it was decided to bring a helicopter all the way from Dayton Ohio to assist in the rescue.

A YR-4 located at Wright Field in Dayton was broken down and loaded onto a Douglas C-54 for transport to Burma. Helicopter pilots were available in Burma, but Lieutenant Irwin Steiner, a veteran pilot, and Captain Frank Peterson, a test pilot with two years helicopter experience were assigned, possibly volunteered, as pilots for this mission. After a 74 hour flight the C-54 landed at Myitkyina, Burma with the crew and the YR-4. The exhausted crew set to work assembling the helicopter but in the middle of their assembly efforts, they learned that ground troops had made their way to the mountains and rescued the downed crew.

As fate would have it, that night, the crew learned that Private Howard Ross accidentally shot himself in the hand at a remote weather station located in the mountains near Sinkaling and he needed medical evacuation if his hand was to be saved. The helicopter was assembled and fueled, so Captain Peterson and Lt. Steiner flew out of Myitkyina to the airfield at Sinkaling. The helicopter had no radio and since the pilots were not familiar with the terrain, two L-5 fixed wing aircraft were assigned to accompany them.

The underpowered helicopter had to fly just above the jungle canopy which made it hard for the L-5 pilots to follow. Also, the top speed of the helicopter, slower than the L-5s, required that the fixed wings aircraft constantly circle the helicopter to remain in contact. Several times during the journey the L-5s lost contact with the helicopter but Peterson and Steiner used a survival mirror to flash contact with the L-5s. At one point, the helicopter required three tries to get over a 5,000 foot mountain. The effort drained the helicopter of gas and the crew was forced to land on a sandbar. One of the escorting L-5s flew ahead to the mountain airstrip at Sinkaling obtained fuel which was dropped to the helicopter so it could continue its journey.

The weather station was located at an altitude of 4,700 feet and was in a circle of peaks on a razorback mountain with 2,500 foot drops on both sides. The arduous experience of the helicopter barely carrying the two pilots over the 5,000 foot mountain made it obvious that it would not be able to carry two pilots and a wounded soldier once they reached the weather station. When they landed at Sinkaling, Lt. Steiner left the helicopter and became an observer on one of the L-5s. Captain Peterson landed the YR-4 at the weather station that afternoon but there was so much turbulence that the helicopter was unable to fly out until the next day.

The next morning the circling L-5s wondered why Captain Peterson was not taking off. Unable to communicate via radio, Peterson ingenuously arranged white cloth, supplied by the local people, spelling out the word "Oil" on the ground. Quickly understanding Peterson's message, the L-5 then flew back to Sinkaling for oil which was dropped to Peterson. The flight back to Sinkaling was uneventful and Private Ross was transferred to an L-5 for a trip to the hospital at Myitkyina where he recovered.

Having gone to such amazing efforts to bring a helicopter all the way from the States to Burma for one rescue mission, demonstrated that the Army saw merit in the "eggbeater" as a medical evacuation craft. The value of the helicopter as a med evac unit was again demonstrated in March, 1945, when Lieutenant Raymond Murdock piloted another newly arrived YR-4 to pick up an injured pilot located on a jungle ridgeline.

A C-46 transport had crashed going over the "Hump". Captain James Green and a local tribal chieftain took off from Shingbwiayang Airfield in a Fairchild PT-19 in an attempt to locate the downed aircraft. They failed to find the C-46 and unfortunately they crashed as well, five miles from the airfield in 150 foot tall trees on a steep ridgeline. Green was badly injured and the chief was killed. Volunteers hauled hand tools, power saws, and dynamite to the site to construct a small platform for a helicopter to land on. Despite the high temperature and gusty winds, Murdock was able to land on the platform. Green was placed on a reclining board in the right seat. When he applied power, the helicopter barely responded but Murdock took advantage of the down-sloping terrain to gain speed and was able to take off. Green was transferred to a fixed wing at

Shingbuiyang while Murdock started flying back to Myitkyina. In route, he had an engine failure and landed on the Burma Road, forced to finish the trip by truck. (1)

The use of the helicopter for medical evacuation in World War II had its limitations. The mechanical frailties of these early aircraft and the unavailability of parts severely limited the number of opportunities for medical rescue. Even with these limitations, it was obvious that the military was convinced that helicopter had great potential in rescue operations. Over the next three years Sikorsky, Bell Helicopter, and Hiller Aviation made significant mechanical and aerodynamic improvements to the helicopter. By the time of the Korean War, the “eggbeater with good sense” was ready to play a significant role as a medical evacuation transport.

- 1) <http://www.youtube.com/watch?v=ARN2kjjL6So>, Visit this site for a video from MilitaryVideo.com that is based on this mission.