

Hugh Alexander

1909 - 1974

A brief biography, formerly displayed in the 'Hall of Fame' in Bletchley Park mansion.

Hugh Alexander was an outstanding chess-player, and he was also amongst the greatest of British cryptographers. When he arrived at Bletchley Park in early 1940 he had no previous experience at codebreaking, but in Hut 6, and then Hut 8, he soon became adept at using both traditional and machine-based methods for breaking Enigma. He led the Naval Enigma team in Hut 8 from 1942, and ended the war on Japanese codes. After the war he led the cryptanalysts at GCHQ until he retired in 1971, keeping up his chess in his retirement.

Colonel Hugh O'Donel Alexander was born in Cork, but after his father's early death the family moved to Birmingham. He read mathematics at King's College, Cambridge, graduating with a First. He went on to teach mathematics at Winchester College, always playing and writing about chess, being near the top of British chess for many years. Moving to London, he joined the John Lewis Partnership in 1938, the year in which he became British champion.

In February 1940, aged 30, he joined the Hut 6 team of cryptographers at Bletchley Park working on the German Air Force & Army ciphers. He soon became one of the Heads of Watch in Hut 6, proving to be both an excellent cryptanalyst and a fine manager. He was transferred to Hut 8 in March 1941, both to strengthen the attack on German Naval Enigma, and to improve their administration. Alexander soon became the acting Head of Hut 8, and took over when Alan Turing left to visit the US in November 1942. If the theoretical ideas for breaking Naval Enigma largely stemmed from Turing, it was Alexander who led the team to practical success, in particular in breaking the German Atlantic key, *Dolphin* in the summer of 1941, and by the breaking of the U-boat key, *Shark*, in December 1942. He strengthened Bletchley Park's relations with the US Navy cryptanalytic team in Washington. Alexander tackled the 4-wheel Enigma, driving on the introduction of the high-speed bombes, both in the UK and in the USA. When he left them in August 1944, his Hut 8 was breaking about a dozen German naval Enigma keys each day.

Hugh Alexander did not believe in having cryptanalysts standing idle, so he kept his team small. But with his endless enthusiasm and energy, he was an inspiring leader, very popular with his staff, and certainly ran one of the best organised and productive teams at Bletchley Park, despite his own untidy ways. He had phenomenal powers of concentration, and habitually worked very long hours. In February 1943 he invited the Naval sub-Section struggling to break the Japanese Naval attaché machine, Coral, to join his Hut 8 team. In the autumn he sent the US team a detailed report on how to break it, and was in Washington to oversee the final stages of the break in February 1944. In the autumn of 1943 it had become clear to Hut 6 that the Germans were planning to introduce a variable reflector, known in Bletchley Park as 'Uncle Dick'. It is a tribute to his reputation that Alexander was asked to oversee the attack on this development. He and his working party produced various suggestions on how to tackle the threat, some of which were implemented when the Germans introduced it into service on some Air and Army Enigma keys during 1944. In August 1944 Alexander moved from Hut 8 to lead the team working on the main Japanese naval key, JN 25.

After the war, following a short interval back at John Lewis, Alexander rejoined GCHQ, and led their cryptanalytic teams until he finally retired in 1971, having refused promotion to the top management. He continued to be actively involved in the chess world until his death in 1974.