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The Battle of Britain and Its Opponents

The Battle of Britain was the biggest and the most important air battle during the Second World War (10 July 1940 – 31 October 1940) in which the pilots of Royal Air Force and the Luftwaffe fought against each other. It can be divided into four major sections where serious technological advances took place, influencing its outcome.

Keywords: *Battle of Britain, World War II, RAF, Luftwaffe*

1. Stages of the battle

The first phase lasted from the capitulation of France from 22 June to 7 August 1940. During this time, Luftwaffe built its bases in France for the 2nd and 3rd Air Fleets and for the 5th Air Fleet in Norway and Denmark. The latter was smaller than the two former, but played a pivotal role, as the RAF was forced to disperse fighter units to cover Northern Britain. The British had built their radar systems primarily in the south and southeast. From then on, the Battle of Britain became a material war.

The second part (13–30 August 1940) was largely about the Luftwaffe's attempts to persuade Britain to surrender.

Operation Seelöwe (Sea Lion) was set for 15 August 1940 and was one of Germany's great plans, a detailed plan for the invasion and occupation of Britain.

Its main points were as follows:

- the destruction of the RAF and the British aircraft industry
- preventing the supply of food to the British Isles
- damaging the Royal Navy and Merchant Marine [1]

"The first serious attack took place as early as 8 August. At that time, the Germans deployed 2,669 planes. Their primary targets were airfields, radar stations and air traffic control points.

Although the Luftwaffe was more advanced, the range, payload and fuel reserves of the aircraft allowed only for a relatively short stay in enemy airspace.

Between 24 August and 6 September, RAF lost 233 pilots and 466 planes got destroyed. This accounted for nearly half of the Royal Air Force, as it had just over 1,000 aircraft. At the same time, the response of the British did not wait long: the numerical superiority of the Germans was sought to be offset by the development and unification of the military leadership. In practice, it was then that air defence was first introduced, which served as an example for the future. It was also a significant step forward that the data from the radar

stations were transmitted to the air defence from a single centre relatively quickly and with high accuracy. The first phase of the battle ended on 7 September, when Hermann Göring, the commander of the Luftwaffe, turned his Air Force against the big cities in Britain" [8].

The third phase (31 August – 17 September) continued with the Germans trying to force Britain to surrender, with the Luftwaffe planning to bomb Britain until it surrendered the war [1].

In addition to military targets, German pilots also hit civilian areas during the bombings, and a chain reaction began. The English began bombing military targets in Berlin, to which the Germans responded by bombing London. The Battle of London is the bloodiest battle in air military history. On the first day, Luftwaffe pilots dropped a total of 337 tonnes of explosives on London [9].

Air operations became increasingly more intense, with the Germans attacking not only during the day but also at night but were unable to break the Royal Air Force. Seeing the losses, Hitler postponed his plan to land in Britain.

By the end of October 1940, the daylight air strikes had completely ceased, and this phase of the war was over. Historians consider the period from 18 September 1940, to 22 June 1941, to be the fourth stage [3].

2. Opposing forces and their aircraft

2.1. Royal Air Force

The RAF was treated primarily as an independent force, as it was the only major armed force in Britain in addition to the Royal Navy.

The following commands were established in 1936: Bomber Command, the core of the Air Force; Fighter Command, tasked with air defence, both these commands worked with the ground forces; Coastal Command – which supported the Navy, and finally Training Command to provide training duties.

In 1937, the RAF handed over a portion of its naval aircraft to the Admiralty, which would become the Fleet Air Arm under the Navy. A Maintenance Command was set up to carry out procurement and supply tasks. Civilian aviation and volunteers were under Reserve Command, as was Balloon Command.

The basic unit of the RAF was the squadron. Before the war, it consisted of 12 single-engine aircraft or 10 twin-engine aircraft. 2–3 squadrons formed a wing, and several wings were organised into a group.

All that remained was the issue of air defence. In 1935 Robert Watson-Watt submitted an application to the Ministry of Aviation, which contained the principle of radio positioning of aircraft and the importance of its military applicability.

In that same year, the installation of the first five radar stations on either side of the Thames began. By the early stages of the war, that number had risen to 20. The operators detected German aircraft during the war when they took off in France. At first, the Germans did not understand how it was possible for the British to always be in the right place, knowing when they were coming.

The air defence relied on four groups: The Fighter Command; Anti-Aircraft Command (under the army), which consisted of seven air defence artillery divisions and searchlight units;

a monitoring and signalling corps; and finally, a Balloon Command. The head of the Fighter Command was Air Chief Marshal Sir Hugh Dowding, whose headquarters was at Stanmore.

The British developed the "Hurricane" and "Spitfire" fighter aircraft, which were deployed with great efficiency during the war [3].

The Hawker Hurricane was designed by Sir Sydney Camm. In February 1936, the Department of Aviation ordered 600 of them seven months after the first flight, while they ordered 500 Spitfires [6]. Later, seven more variants of the Hurricane were developed [6].

Reginald J. Mitchell designed a single-seat fighter called the Spitfire, which had similar motor capabilities to the Hurricane, for the Ministry of Aviation's tender. (Both models were powered by a Rolls-Royce Merlin engine [7].) 19 variants of the Spitfire were made, the largest number produced was the Spitfire Mark V (6,479 aircraft were produced). The letters A-F after the mark designation indicated the type of wing, they differed only in terms of equipment [7].

2.2. Luftwaffe

The German Air Force Regulations (Luftwaffendienstvorschrift [LDV] 16) defined the Luftwaffe's remit as follows: "The role of the Luftwaffe is to serve the objectives of the war by carrying out air operations throughout the war" and "the fight against resources has a decisive influence on the war. It destroys the enemy's combat momentum and resilience at its roots [...] the fight against resources and the suppression of the flow of forces to the battlefield are usually used only to prepare for land and naval operations, to help end combat operations, or to decide solely on expected destruction of resources" [3].

In 1939, the Luftwaffe had four air fleets (air armies) under its command. Its tactical base unit was the Geschwader, equivalent to the RAF wing. The Geschwader consisted of three Gruppen, or groups, which were the same as a Squadron of Aircraft. These groups consisted of nine deployed and three reserve aircraft. A Geschwader consisted of 44 aircraft – the three groups and a command flight, while 120 aircraft – 3 Geschwaders and a reserve group – formed an air regiment. The flight division was the largest tactical organisational unit, comprising several flight regiments.

The German air fleets differed from the others in that in addition to bombing, combat, fighter and reconnaissance aircraft, they also deployed air defence, parachute and artillery units. Their aircraft were: Messerschmitt Bf-109, -110; Junkers-87 dive-bomber and the Dornier Do-17 light bomber [3].

All in all, nine versions of the Messerschmitt Bf-109, designed and named after Wilhelm Emil "Willy" Messerschmitt, were manufactured. Supermarine Spitfire and Hawker Hurricane were two of its greatest enemies. The weakness of the Bf-109 was that it turned much slower than its British counterpart [10].

One of Luftwaffe's most hopeful developments was the Junkers-87 Stuka dive bomber. Recognisable by its distinctive seagull wing shape, the aircraft was able to deliver a bomb weighing 450 kilograms to its target during a dive of 80 degrees. It got its name from the characteristic screaming sound emitted by the aircraft during its dive, to which also a siren was attached to further intimidate the enemy [11].

3. Poles in the battle

On 22 June 1940, France signed a capitulation agreement with Germany. Shortly afterwards, on 16 July 1940, Hitler issued the "Landing Operation Against England" Directive [5]. On 19 July 1940, he offered a peace treaty to Britain, but it was rejected, so Germany launched an attack. In the first phase, there were no significant operations on the part of the Germans, but from 13 August (code named Adler Tag, or Eagle Day [2]) the pace of events increased. British radars detected German bombers over France. No. 74 and No. 609 Squadrons of the RAF were deployed against them. Polish Flying Officer Henryk Szcześniey shot down a Dornier 17 bomber (Officer Szcześniey joined the 609th Squadron on 5 August 1940 – P. K.). Flying Officer Tadeusz Nowierski and Piotr Ostraszewski-Ostoja were also involved in the operation in their Spitfire fighters. In doing so, Squadron Leader H. S. Darley, the leader of the 609th Air Squadron, ran into trouble communicating with Polish pilots; he even recorded this in his diary: "...although none of them spoke English at this time, they all quickly gained experience on Spitfire" [2].

On 15 August, radar operators spotted enemy planes again, this time over Dover.

Flight Sergeant Wojciech Kloziński's plane was hit at around 11:20 a.m., the wounded pilot was hospitalised. One of the most successful pilots that day, also known as Black Thursday, was Flight Sergeant Antoni Głowacki. No. 501 Squadron was alerted four times, during which Flight Sergeant Głowacki shot down a Dornier 215 light bomber while flying over Chatham. Another pilot, Stefan Witorzeńć, although his Hurricane was hit, shot two Junkers 87. Meanwhile, in the west, Bolesław Własnowolski shot down the first enemy plane of his life. Własnowolski was a pilot of No. 32 Squadron, flying on Hurricane. In this battle, No. 151 Squadron also fought. The above-mentioned Poles did not fight alone. Other Polish pilots, such as Pilot Officer Mieczysław Rozwadowski, Tadeusz Wilhelm Kawalecki, Franciszek Surma, Jerzy Solak, Gustaw Radawanski and Francis Czajkowski, Flight Sergeant Wilhelm Szafranec and Feliks Gmur also served in these units [2].

On 14–15 September 1940, No. 234 Squadron moved from St. Eval's airbase to Middle Wallop. During this time, four Spitfires were shot down in battle and three were damaged. Flight Sergeant Zygmunt Klein was wounded but survived. In his diary of this day, Pilot Officer Janusz Żurakowski, who served with No. 234 Squadron, wrote in this diary: "I attacked the last Me 110 aircraft of a team from above, the enemy plane crashed to the ground. The rear gunner returned the fire. Down the road, another Spitfire from No. 609 Squadron attacked, but after it broke off, I attacked five more times and the enemy plane exploded on the Isle of Wight" [2].

Pilot Officer Żurakowski was assisted by Pilot Officer Piotr Ostaszewski, who also recorded the battle in his diary: "...The Germans launched another attack with the Messerschmitt 109 on 16 August 1940 in the Portsmouth area. No. 234 Squadron was alerted. Sergeant Zygmunt Klein shot one of the Messers" [2].

The 18th of August was the day of a major battle. No. 501 Squadron was directed to Canterbury in the morning. It was not a lucky day for the squadron as some Polish pilots were shot down, including Pilot Officer Franciszek Kozłowski. The pilot survived the attack and was hospitalised. The second wave of the bombers' attack arrived in the afternoon. No. 32 Squadron was deployed, during which Pilot Officer Własnowolski, together with a British pilot, shot

down a Junkers Ju-88 enemy aircraft. Własnowolski even shot a Messerschmitt Bf-109 with Flying Officer Peter Malam Brothers that day [2].

While the British–Polish pilots won the battle, Flying Officer Franciszek Gruszka and Pilot Officer Władysław Szulkowski went into battle against the Messerschmitts. Flying Officer Gruszka then disappeared. He was recorded as missing in action until 1971, when some archaeologists found the wreckage of the Spitfire and his body.

For Pilot Officer Tadeusz Kawalecki and Franciszek Czakowski, this was not the first battle they took part in; they had gained their previous experience in Poland in 1939.

The next significant day for No. 501 Squadron was 24 August 1940, when Polish and British pilots achieved much success. Flight Sergeant Antoni Głowacki shot down an enemy plane (Messerschmitt Bf-109), but Pilot Officer Pawel Zenker was shot down [2].

Around one o'clock in the afternoon, No. 510 Squadron was alerted at Manston Airfield, as the Squadron was attacked by German aircraft. Flight Sergeant Głowacki shot down a Messerschmitt 109 and a Junkers Ju-88. He destroyed a total of five enemy planes that day.

Pilots of No. 510 Squadron shot two aircraft. One of the pilots, Pilot Officer Karol Pniak was flying a Hurricane from No. 32 Squadron. He shot a Messerschmitt Bf-109 over Folkestone but had to bail out. The enemy plane landed on the other side of the Channel.

Pilot Officer Janusz Żurkowski was not as successful as the other Poles, but he shot down some German pilots. He bailed out, landing on Wight Island with his parachute. No. 609 Squadron pilot Tadeusz Nowierski was also wounded but survived.

It was around this time that No. 307 Night Fighter Squadron was established. It was based in Blackpool as the first and only such Polish group in the Royal Air Force.

On 27 August 1940, one of the biggest aces of the September campaign, Pilot Officer Stanisław Skalski, joined No. 501 Squadron. On 28 August, the Germans attacked Britain again. No. 79 Squadron needed help. While doing so, Flight Sergeant Głowacki of No. 501 Squadron shot down a Messerschmitt Bf-109 [2]. A Canadian pilot of the squadron (with Polish ancestry), Pilot Officer Alexander Zatoński was wounded but survived. He returned to his unit on 4 December 1940. He was later transferred to No. 238 Squadron.

No. 306 Polish Fighter Squadron was formed at the end of August.

No. 303 Squadron was formed on 2 August 1940 and training began as early as 3 August, first on Miles "Master" and then Hawker "Hurricane" aircraft. Squadron Leader Zdzisław Krasnodębski was the commander of the squadron; the commander of A Flight was Flying Officer Witold Urbanowicz and the commander of B Flight was Flight Lieutenant Tadeusz Opulski and then Flying Officer Ludwig Paszkiewicz. No. 303 Squadron also had an English commander: Squadron Leader Ronald Kellett [1].

The Germans launched a major attack on Britain. They had hoped that British forces would join the fight. No. 501 Squadron was alerted around 10 a.m. Four enemy aircraft were shot down (two Heinkel He-111s and two Messerschmitt 110s), one of which by Flight Sergeant Antoni Głowacki [2].

Shortly after the Croydon attack, No. 253 Squadron was also deployed. Pilot Officer Tadeusz Nowak shot down a Dornier Do-215 enemy aircraft.

In B Flight, pilot Michał C. Samoliński flew as a Polish pilot. Some Polish pilots were sadly declared missing after the battle. Flying Sergeant Feliks Gmur disappeared around Jacks Hatch. Flight Sergeant Antoni Głowicki and Pilot Officer Stanisław Skalski damaged a Heinkel He-111 aircraft.

At this time the pilots of No. 303 Squadron were still learning formation flying. On a training flight on 30 August 1940, Flying Officer Ludwik Paszkiewicz spotted enemy planes [2]. He reported sighting the enemy and then launched an attack with the rest of the squadron. The Germans lost 10 and the Poles lost two aircraft, but both pilots bailed out in time and luckily landed.

The next day they took part in an operational deployment, where they took up the fight against the Luftwaffe with great efficiency and success. Already in the first week, 40 kills were claimed and another 12 listed as probables [2] of German aircraft that could be recorded in the battle log [4]. On 2 September 1940, No. 501 Squadron was alerted by the alarm of an impending air attack. Around 8 a.m., the Germans dropped the first bomb at the airfield. Two ground crew were killed. The Hurricanes found themselves facing 30 Dornier 17s and Dornier 215s, escorted by Messerschmitt 109s [2]. Two aircraft from No. 303 Squadron took off from Northolt at 5:30 p.m. The entire squadron defended Dover from German attacks. Józef František shot down an enemy Messerschmitt 109. Pilot Officer Mirosław Ferić and Flying Officer Zdzisław Karol Hennenberg chased a Messerschmitt all the way to France.

On 5 September 1940, pilots from No. 501 Squadron attacked a Messerschmitt 109 formation. That day, Stanisław Skalski's plane was hit, so he had to jump out of the plane.

Around 2:40 p.m., all pilots in No. 303 Squadron were in the air. The following results were reported in this clash: Squadron Leader Ronald Kellett shot down one Messerschmitt 109 and damaged another; Flight Lieutenant Forbes shot down a Junkers 88 aircraft; Sergeant Karubin shot down two Messerschmitt 109, Flying Officer Waclaw Łapkowski shot down a Junkers 88, Sergeant Kazimierz Wünsche shot down a Messerschmitt 109, Sergeant František shot down a Junkers 88 and almost shot down a Messerschmitt, but had to return to Northolt as his plane was damaged.

9 September 1940 began as an easy day until 5 p.m. At 5:35 p.m., however, No. 303 Squadron's pilots took off to check London airspace [2]. At Beachy Head the patrol spotted forty enemy bombers. The battle began, but only three Polish pilots managed to shoot down enemy aircraft.

One Messerschmitt Bf-109 attacked Pilot Officer Jan Zumbach, but he was fortunate to be able to fly back to Britain.

Sergeant František shot down two enemy aircraft, but his Hurricane was damaged and landed in a cabbage field not far from Woodingdrine.

The Germans were constantly attacking Britain, and the pilots kept the front line as best they could.

The first half of October was very intense in attacks, with the bloodiest battles fought on 15–16 October; from 19 October, the Germans reduced the attacks, and by the end of October 1940, offensive daylight operations ceased [2].

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Az angliai csata szemben álló felei

Az angliai csata (1940. július 10. – október 31.) a történelem legnagyobb és legfontosabb légi csatája volt a II. világháborúban, amelyben a brit Royal Air Force (RAF) és a német légierő (Luftwaffe) pilótái csaptak össze. Négy nagy szakaszra oszthatjuk a csatát, minden szakasz alatt komoly technológiai fejlesztés ment végbe, ami jelentősen befolyásolta a csata végkimenetelét.

Kulcsszavak: *angliai csata, II. világháború, RAF, Luftwaffe*

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