

Transcript of First World War Reconnaissance Podcast

Narrator – Before the First World War the potential of aircraft for military purposes was not appreciated by the majority, but a few borrowed aeroplanes were used in the Army manoeuvres of 1910. These manoeuvres saw what is widely accepted as the first British military aeroplane reconnaissance flight. Despite criticism, the aeroplane was used for reconnaissance in the Army manoeuvres of 1912 and during the First World War, where it was to have every opportunity of proving its worth.

The first wartime aerial reconnaissance mission occurred shortly after the outbreak of the First World War, when two pilots of the Royal Flying Corps, Gilbert William Mapplebeck of 4 Squadron and Phillipe Joubert de la Ferte of 3 Squadron set out for a region of Belgium just south of Brussels on the 19th August. Both pilots made a record of this historic event in their diaries. Mapplebeck is clearly very enthusiastic about his task and records it in detail.

Mapplebeck – “The night before last after dinner the Major told me I was to make a reconnaissance the next morning at about 9 o’clock. He told me that I was to reconnoitre Gembloux and to look out for large bodies of cavalry. Another machine was also going out probably a Bleriot of Number 3 Squadron to reconnoitre Braine l’Alleud and look out for the signs of the Belgian cavalry. I was tremendously pleased at this as it meant that I was making the first reconnaissance of the war, and am most grateful to the Major for selecting me. At 8 o’clock on the morning of the 19th August, I and my machine were both ready. At 8.15 Joubert (who was going in the Bleriot) and I were sent for by General Henderson, who told us each our particular jobs. Joubert was to go straight to Braine l’Alleud via Nivelles; I was to go to Gembloux near Namur. He was to be over friendly territory and look out for Belgians and I was to look out for advanced German cavalry. My special orders were to keep up with the Bleriot as far as Nivelles then both were to go off to our own districts.”

Narrator- Joubert’s diary entry is shorter and notes one of the major problems with aerial reconnaissance at the beginning of the First World War.

Joubert – First reconnaissance, with Mapplebeck. Lost myself most thoroughly. Landed at Tournai, where I had lunch with the governor and again at Courtrai, where I was taken for a German, until rescued by the Irish inhabitants. Finally achieved my task and returned after six and a quarter hours flying.”

Narrator – Mapplebeck also records his report of this reconnaissance in his diary.

Mapplebeck – “Left Maubeuge 9.30am. Using large scale map, followed Bleriot. I did not pick up my position on the map, so depended on Bleriot’s pilot for correct route, intending to branch off on arriving at Nivelles. Missed Nivelles, arrived at a large town (I was at 3000 feet and in clouds) but could not place it on map. (On my return I discovered this to have been Brussels.) I flew to the other side of the town, turned round and steered South-South-East. I then took out the small scale map and picked up my position at Ottignies and soon found Gembloux after being in cloud. I made a wide circle round it, being in cloud part of the time, but only saw a small body of cavalry about a mile in length, moving faster than a walk in a south easterly direction. At this time I was at 3400 feet and was just turning a little further south when I was enveloped in clouds. I flew on for about 300 feet out of the clouds and saw Namur. I then turned west and passed Charleroi and altered my course a little south. I missed Maubeuge, flew on for about 15 miles after realizing that I had missed it and landed at Wassigny at 11.30 am, and flew back, landing at Maubeuge at 12.00.”

Narrator - This report of the first reconnaissance mission demonstrates that pilots had difficulty with navigation and only looked for specific pieces of information. The mission lacked something which would enable aircrew to record everything visible below them. There was no camera.

The aircrew made sketches and annotated maps of the area with what they saw on the ground below. A difficult feat when flying at approximately seventy miles per hour in an open cockpit. Some pilots including Capt. Paul Copeland Maltby, tried to make their work easier by attaching their maps to plywood using dope, a chemical mixture used to stiffen the fabric skins of aircraft.

Maltby – “I spent quite a lot of time cutting up my maps and doping them on to sheets of three ply wood. They are much easier to handle in a machine in this form.”

Narrator - Certainly anyone who has ever tried to unfold a map outside on a windy day will see the advantage of this.

Sometimes the weather made flying impossible as the aircraft were not able to take off or the ground below was obscured by cloud. Even today, weather is the biggest challenge faced by reconnaissance aircraft. Joubert records several incidents like this in his diary.

Joubert – “...made three attempts to go out on reconnaissance, but the clouds were at 1400 feet and Evans lost himself very speedily, so nothing was done.”

Narrator - Both of the opposing forces during the First World War developed defences against aerial reconnaissance, employing camouflage techniques to hide their positions and movements. Camouflage certainly made a difficult job harder for the Royal Flying Corps but it was the use of anti-aircraft guns, called Archie, along with defensive aircraft, which caused more immediate problems. Maltby records a difficult reconnaissance mission in January 1916.

Maltby – “Henderson had a valve-rocker knocked off by Archie over Courtrai, fired his green light and we all had to make for home. Cpl Lott had his eye shot out by the same shell and fainted. ... Cpl Lott came round to find the Hun firing at him. Of course Henderson was helpless. Lott pulled himself together and opened fire with his gun, on which the Hun made off like fury.”

Narrator - Aeroplanes had to operate from greater heights to protect themselves from the ever increasing range of ground based weapons. 2Lt Francis Percy Adams records a debate regarding suitable operational heights in his diary.

Adams – “No shells fired at us, which seems rather strange after all the tales we have heard. Perhaps we were too high, 8000-8500 feet, to be seen properly. The Colonel has suggested ... that the height at which reconnaissances are being carried out is excessive. He suggests that for satisfactory observation height should not exceed 7000 feet. Personally I think that height should be granted by conditions.”

Narrator - Increasing height made it even harder for the observer to pick out all the pertinent details from amongst what they were seeing as their targets were further away from them. Joubert reports an instance of misidentification in his diary.

Joubert – “A great yarn about Burke. At Compiègne one of his reconnaissances reported something, at first supposed to be cavalry and then a conference of German generals in red cloaks. It turned out to be a pile of petrol tins!!!”

Narrator- It was the aircrew over the Western Front that chose to use cameras to record the information they were seeing, their commanders preferring the traditional reports. Aerial photography in the Royal Flying Corps was very dependent on this individual approach. William Sholto Douglas of 2 Squadron, was appointed the squadron specialist in photography when those in command discovered that he had been interested in it as a child. He cut a hole in the floor of his aircraft, and when the target area nearly filled this hole he would push the camera through and expose a photographic plate.

Sholto Douglas – “This procedure was not too easy in the cramped space available especially as the weather was cold and bulky flying kit a necessity. Each plate had to be changed by hand and I spoilt many plates by clumsy handling with frozen fingers”

Narrator- The persistence of these pioneering photographers led to aerial photography being recognised as a valuable weapon in the armoury of reconnaissance. February 1915 saw the photographers’ first major success. Photographs were taken of the enemy’s position revealing previously unknown trenches and identifying false trenches. This information led to a successful attack on the position without any British losses.

The French, meanwhile, were producing high quality aerial photographs which could be used to produce maps of the enemy trenches. The commanders of the Royal Flying Corps wanted their squadrons to do the same. The commanding officer of 3 Squadron, Major W.G.H. Salmond was tasked to find out how to bring British aerial photography up to the standard of the French.

The French had highly specialized, well resourced, centralized units working on aerial photography whereas the British had enthusiastic, determined individuals often funding their own efforts and interpreting their own photographs. Salmond recommended that the British should adopt a model similar to the French and to that end an experimental section was set up to develop a standardized set of photographic equipment. This section was handed over to Lt J.T.C. Moore-Brabazon, Lt D.C.M. Campbell, Sgt Maj Frederick Laws and Air Mechanic 2nd Class W.D. Corse.

The Experimental Photography Section was avidly supported by Lt Col Hugh Trenchard, later known as the father of the Royal Air Force, who was reputed to travel with his pockets full of aerial photographs and hand them out like free samples.

Moore-Brabazon and Campbell set off for England in February 1915 to design a new camera. This camera first saw service a few weeks later, but was not without its problems. The heavy camera was held by the observer who had to lean out of the cockpit to take his photographs whilst wearing the thick, heavy flying gauntlets needed to prevent his fingers from freezing. Assuming the observer did not fall overboard, he then had to operate the complicated, manual mechanism before he could expose each of the photographic plates.

The quality of the images produced by these new cameras was not, however up to the standard required for map making. A letter received by Moore-Brabazon on 1 June 1915 states that the author was

Quote - “afraid that my investigation of the limitations of aeroplane photographs for map making might have tended to annoy those who were doing this splendid work in improving apparatus and in taking the photographs. In point of fact, in spite of limitations, aeroplane photographs, are at the present state of proceedings, by far the most valuable evidence we get of the alterations in the enemy’s line and indications of his future moves.”

Narrator – Later in June Moore-Brabazon studied the advantages and disadvantages of a fixed camera against a hand held one. Moore-Brabazon reported the advantages of a camera held by an observer.

Moore-Brabazon – “A certain latitude as to the direction in which the camera be pointed, if a picture at a slight angle be not condemned.”

Narrator – and the disadvantages.

Moore-Brabazon – “The employment of two men, and consequently a double seater machine, an unreliability, due to movement of camera due to observer.”

Narrator – Moore-Brabazon also reported the advantages of a camera attached rigidly to an aircraft.

Moore-Brabazon – “The possibility of operating the camera by the pilot alone in the machine and the consequent use of scout types of machines, the extra sharpness of definition obtained, the long exposure possible of the plate, due to lack of movement of the camera.”

Narrator – Moore Brabazon recorded two disadvantages to the fixed camera, which were

Moore-Brabazon – “Absence of latitude as to area included from one position in the air, increased wind resistance when camera attached outside fuselage.”

Narrator - Moore-Brabazon studied in detail the types of movement that occurred to both hand held and fixed cameras and how these movements affected the photograph produced, eventually concluding

Moore-Brabazon – “That whenever possible the camera should be attached firmly to an aeroplane for taking photographs.”

Narrator - The eventual result of the work done by the experimental photographic section was the L type camera which came into service in 1916. The L type was capable of being used inside or outside the fuselage and could be operated manually or automatically.

The automatic system was not ideal as the mechanism which changed the photographic plates had a tendency to jam resulting in a failed mission. 2Lt Charles D. Smart records a camera failure in his diary.

Smart – “Taking photographs of our own front line. Went over the area alright and then discovered that the camera was not working properly due to a broken wire. Most annoying to climb up to 8000 feet and hang about over the lines all for nothing. I told the photographic Sergeant that he had better learn to fly and then go up and do the job himself. Expect I shall go up and have another shot this afternoon, if the camera had only worked I should have been able to slack about for the rest of the day.”

Narrator - The reliability and ease of operation of the cameras was not the only problem for the Royal Flying Corps, they also had to deal with the lack of trained specialist photographic personnel. This problem was addressed by the formation of the School of Photography at Farnborough. The school set out to provide enough specialist photographers and support personnel to fulfil the increasing requirements for aerial photography.

Aircrew also had to be trained to operate the cameras effectively, this responsibility fell to Laws. He liaised with Moore-Brabazon and made frequent visits to France, to make sure that the training included all the new tactical and technical developments which were being made on the front lines.

Training notes made by 2Lt Thomas Clifford Broadhurst, a Royal Flying Corps pilot, include notes on photographic reconnaissance.

Broadhurst – “Photographs are most important to confirm observations”

Narrator – in a section entitled the use of photographs, Broadhurst wrote the following

Broadhurst – “A {sic} exact reproduction of the ground, to the start shows new work and its progress, such as wire, the route taken by patrols shown by tracks, trenches, gaps in wire, dug outs, machine gun emplacements, trench mortar emplacements, buried cables, light railways, French railways, rolling stock and dumps”

Narrator - Broadhurst also notes that aerial photographs can show the results of artillery shoots and provide the exact location of artillery targets. He even records several important tips for photography, including;

Broadhurst – “Select prominent objects in the area and use them as guides; when actually taking photos don’t dodge Archie; a hole throws a shadow inwards, mounds throw shadows outwards.”

Narrator – One of these tips is particularly significant as if the aircraft is engaged in evasive manoeuvres to avoid artillery fire, the photographs are likely to be blurred. This means that the mission will have to be repeated. Smart records his feelings about photographic missions in his diary.

Smart – “Photography is a good job when you don’t get hurt, it is so short, the job only lasts about one and a half hours and then you have finished for the day if you have got the photos that are requested, if you don’t get them, up you go again.”

Narrator - The returning crew will run more risks as the enemy are more likely to be expecting them. Not dodging anti-aircraft fire, poses significant risks as the aircraft is likely to be hit and may be damaged to an extent that it will crash. Even if the aircraft survives the aircrew may not, as they are in open cockpits with very little protection. Smart objects to the dangerous nature of the mission in his diary.

Smart – “Photography again. I am getting thoroughly fed up with this job, it is a most thankless game and about the most difficult and dangerous job a pilot can get.”

Narrator - Despite the danger and the limitations of the photographic equipment available, aerial photographs were increasingly in demand, as recorded by Laws in a letter sent to the Commander-in-Chief of advance operations on 18 November 1918.

Laws – “It is interesting to note that during the past ten and a half months photographic work has been in greater demand than ever before, in spite of the fact that for the greater portion of that period the war has developed into one of movement.”

Narrator – Laws recorded the number of photographic negatives produced on a monthly basis and calculated the average number of negatives taken per month between August 1916 and December 1917 as 7828 negatives per month but in the shorter time period of

January 1918 to 11 November 1918, Armistice Day, as 20,504 negatives per month. Aerial photography had proved its value and was here to stay.

Many of the developments made in aerial photography during the First World War would endure to form the basis of aerial photography in years to come. Experiments with moving film cameras carried out by the Germans during the First World War, developed the principle that all modern aerial reconnaissance cameras work on. Even satellite imagery, a world away from the handheld aerial camera, can trace its roots back to the technology of the First World War.