

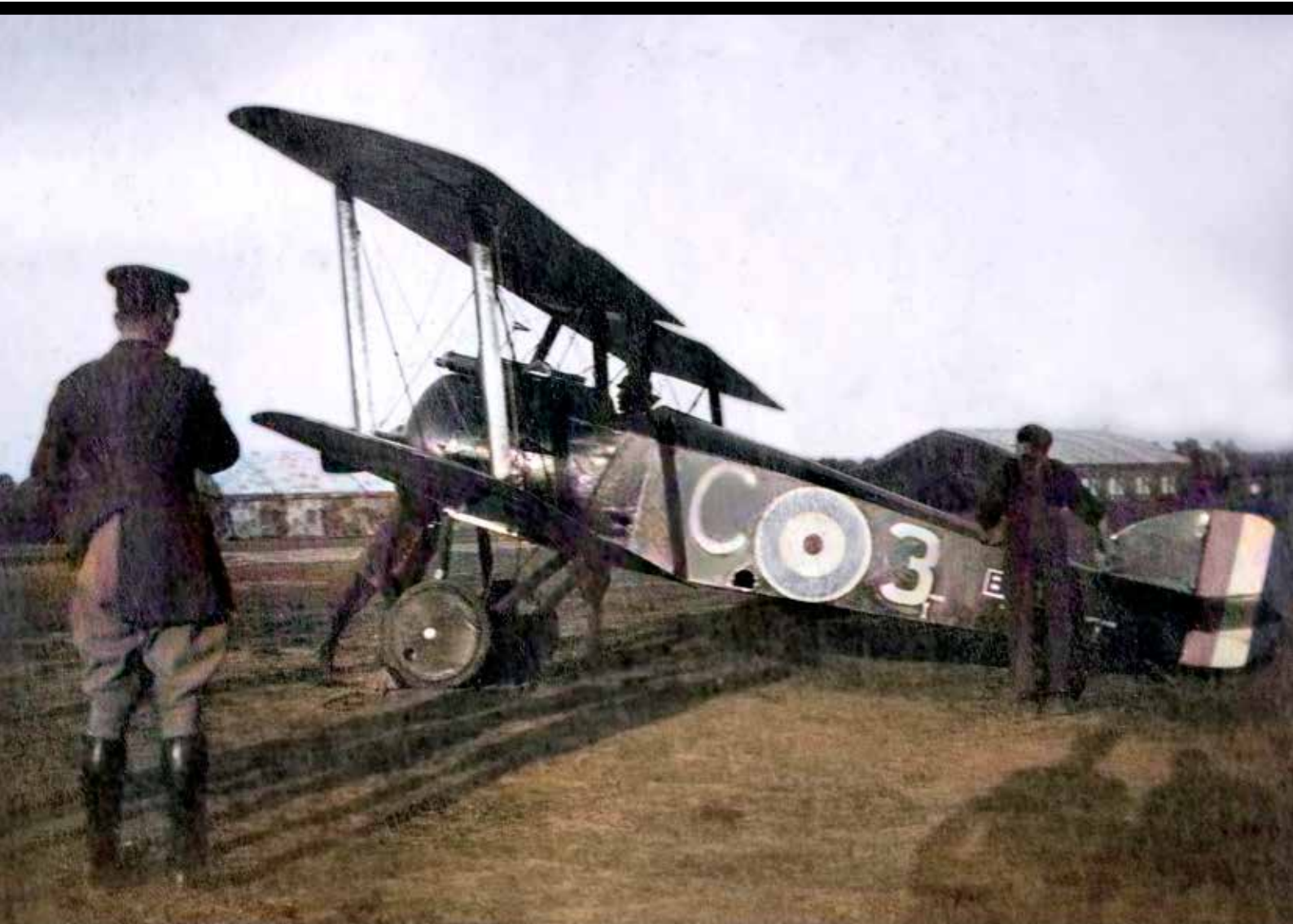


# Cross & Cockade International

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The Journal of the Great War Aviation Society

Autumn 2022 Vol 53/3



*Sopwith F1 Camel B3838 of 70 Squadron during the early summer of 1917. Marked as C Flight machine C-3. B3838 had been delivered to the unit on 19 July and lasted less than three weeks before it was wrecked in a landing crash by Captain F.H. Laurence, who had used it in two successful combats. After reconstruction at 1 AD, B3838 was issued to 45 Squadron and lost in action on 5 September 1917, with 2Lt W. Shields KIA, probably by Ltn E. Lowenhardt, Jasta 10. :CCI Archive*

The Spike & Jim Show: Lt. John Alfred Sully and 2Lt James Gordon Crang, A Flight 1½ Strutter Team, 70 Squadron, RFC 1917

Productivity and the Air War: The British Aircraft Industry in WWI, Part 2

Friendly Fire!: Dieudonné Costes and Walter Bell, 8 July 1917

Tom Owen: A Teacher Who Went to War – Part 2

Gazetteer of British Flying Sites in France, Belgium and Germany 1914-1920 - Part 11

Inserts - Annotated Maps: Germany



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## Contents Autumn 2022 Volume 53/3

**THE SPIKE & JIM SHOW: Lt. John Alfred Sully and 2Lt James Gordon Crang, A Flight 1½ Strutter Team, 70 Squadron, RFC 1917,**  
*Stewart K. Taylor* ..... 147

**PRODUCTIVITY AND THE AIR WAR: The British Aircraft Industry in WWI, Part 2, Hal Wilson** ..... 167

**FRIENDLY FIRE: Dieudonné Costes and Walter Bell, 8 July 1917,**  
*Mike Kelsey* ..... 181

**TOM OWEN: A TEACHER WHO WENT TO WAR – PART 2,**  
*Richard Chancellor* ..... 194

**GAZETTEER OF BRITISH FLYING SITES IN FRANCE, BELGIUM AND GERMANY 1914-1920 - Part 11,**  
*Peter Dye, Roger Austin, Mick Davis* ..... GFS-081

**INSERTS: Annotated Maps - Germany**

## Departments

**LOG BOOK:** *Compiled by Mick Davis* ..... 211

**MODELLING:** *New Releases and Kit Reviews, compiled by Joe Moran* ..... 213

**BOOKSHELF:** *Reviews of Books Received, edited by Paul R. Hare* ..... 215



A starboard view of B3838 of 70 Squadron, showing that its fin and wheel covers were painted in the C Flight colour, blue. :E.F. Cheesman

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# Editorial

Mick Davis

Welcome to the journal of the Great War Aviation Society. When the name change was proposed, there was some concern among the membership that the journal would

be, in some way, affected. As can be seen, there's very little change – only tweaks to the wording of the front cover and the contents page.

## Wind in the Wires

Wind in the Wires continues to flourish in the 10 years since the first issue was sent out in June 2012. Issue number 41 went out on 12 May 2022 to over 1,500 people. We currently have 1,518 subscribers in total on the list. The Society's membership currently stands at 836 and there are 372 members who, at the last count, do not receive Wind in the Wires. We would love as many members as possible to enjoy this free e-newsletter. All you need is an email address! Head to the website or contact [wires@crossandcockade.com](mailto:wires@crossandcockade.com).

Wind in the Wires focuses on carefully curated short articles relating to First World War aviation with the odd diversion into pre- and post-war content or digressing into the world of film, television and podcasts. You are free to make your own further enquiries by clicking the accompanying links. Whilst Wind in the Wires therefore takes a very different approach to the Journal, the two bedfellows seem to get along splendidly. The next issue should have been released by the time you receive your journal.

The 1,000 + subscribers to Wind in the Wires who are not members of the Society is a clear indicator to the Committee that there is an untapped market out there for the subject we love. The Committee is focussed on turning subscribers into members and, if possible, deriving other revenues from this source. It is read worldwide and based on the last two issues there were more opens in the USA than the UK.

## DH2 Monograph

The Society's monographs, just like the journal, fall under the *Cross and Cockade* banner. In essence, *Cross and Cockade* is the publishing arm of the Great War Aviation Society. So far, monographs 1, 2 and 4 have been published. The missing No.3 has been reserved for the long-awaited volume on the DH2 and, I'm sure, members will be delighted to learn that it will be released this autumn. Running to 257 pages, it is the weightiest of our monographs and covers all aspects of the type's development and operational service. Barry Gray's manuscript has been edited by Trevor Henshaw and prepared for publication by Andrew Willox. Mike Kelsey and others have made relevant contributions. The book is profusely illustrated with hundreds of photographs, contemporary diagrams, scale drawings and 10 pages of Ronny Barr's superb colour profiles and plan views. The release and price details will appear on the Society's website, so keep your eyes open.

## This Issue

There hasn't been a lot published about the operational use of the Sopwith 1½ Strutter and so the Stewart Taylor

contribution to this issue should help to plug the gap. Stewart covers the activities of a 70 Squadron 'team', 2Lt J.G. Crang and Lt J.A. Sully. Sully, an observer, was posted to Home Establishment when Camels replaced the 1½ Strutters but Stewart completes the story by covering the subsequent careers of both officers. As ever, we receive insight into the personalities of those involved and are treated to more of the rare photographs that Stewart collected over the years.

The second and concluding part of Hal Wilson's MA dissertation about aircraft production examines the British aircraft industry's approach to tackling cultural obstacles, the effectiveness of government agencies and the post-war legacy. Hal had included a very extensive bibliography, which would run to more than three journal pages. I haven't included it but any reader wishing a copy can e-mail me and I'll forward it.

Loss to 'friendly fire' isn't a recent side-effect of aerial warfare. Mike Kelsey covers an example from WWI where a British pilot in Macedonia brought down a French ally. Mike, thorough as ever, provides a lot of information on the careers of the two men. The artwork on the rear cover, kindly provided by David Méchin, relates to this incident.

The continuing diary of Tom Owen follows on to his posting to the BEF as a RE8 pilot, initially to 6 Squadron but then to 4 Squadron. The diary provides an excellent insight to the everyday activities of a Corps pilot.

## Next Issue

The concluding part of the Owen diary will cover the remainder of his time on operations with 4 Squadron and then his posting to Home Establishment that comprised time at Yatesbury and then at Worthy Down with the Artillery & Infantry Co-operation School.

There will be another feature that includes 'friendly fire'; the biography of A.L. Fleming who achieved combat successes against the enemy with 111 Sqn in Palestine after bringing down a 1 Sqn Nieuport while flying with 46 Sqn in France.

## Postscript

The feature on J.V. Sorssoleuil in 53/1 had gone to print when I realised that there was a photograph, that I'd seen somewhere, which illustrated his short stature. I eventually remembered a JMB/GSL shot, which is reproduced here. He is pictured centre in this group photograph, taken at Turnberry in 1918. To his right were H.W.L. Saunders (ex 84 Sqn) then R.W. Chappel (ex 41 Sqn). To his left were P.J. Clayston (ex 1 Sqn) then A.B. Yuille (151 Sqn).



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# THE SPIKE & JIM SHOW

Lt. John Alfred Sully and 2Lt James Gordon Crang

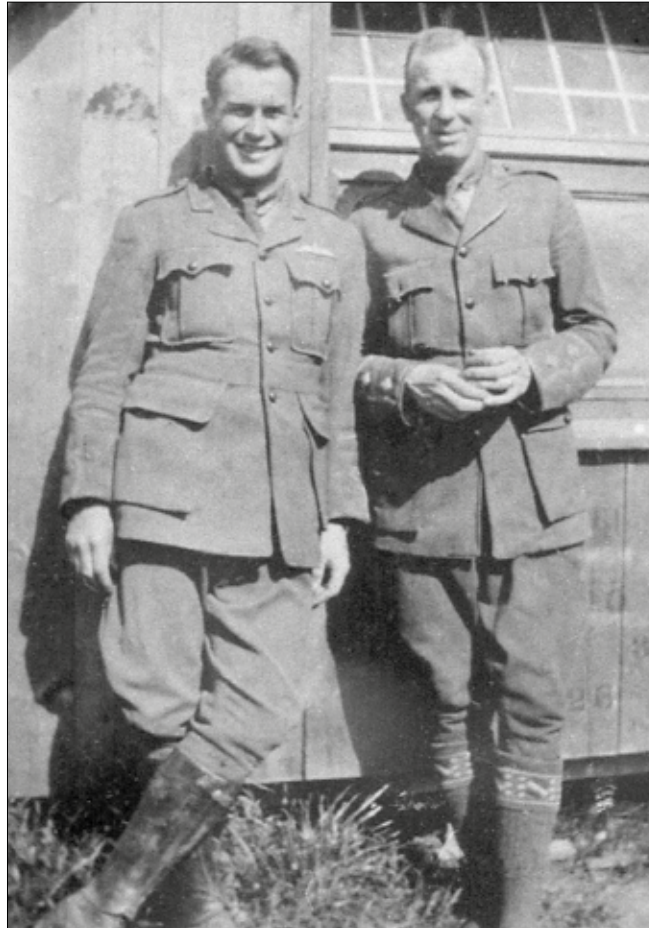
A Flight 1½ Strutter Team, 70 Squadron, RFC 1917

By Stewart K. Taylor

No. 70 Squadron crews learned some hard lessons during early 1917. The first signs of their near naked vulnerability were exposed as the month of March 1917 with its ever-increasing daylight, was added to by the unwanted appearance of faster and better armed scouts, now flown by Jasta pilots further accustomed to their Albatros D.III Scouts. 70 Squadron's problems were compounded by the 9th (HQ) Wing's demand for long-distance reconnaissance missions, placing the load squarely on the 1½ Strutter aircrews. Among the crews was observer 'Spike' Sully, christened John Alfred by his rural farming parents in Metcalfe, Ontario, where he was born 19 November 1892. Sully grew up to have a hard-nosed demeanour, aptly recognized by his peers; at school in Metcalfe his classmates soon referred to him as 'Spike the Big Guy'. He simply revelled in the label. No one was ever going to put something over or above him.

Urged by an 'inner voice' to try his hand at achieving some sort of satisfaction much further west in Alberta, he first looked for a wife. He found the willing mate, Blodie Marguerite Mills in Saskatoon, Saskatchewan, and married her on 28 September 1912. Their relationship blossomed. When not rolling up his sleeves for manual farm work, Spike spent his leisure time as OC of the local cadets, a post he held only for one year. Answering the call, he left his Youngestown, Alberta Militia Unit, the 21st Hussars, on 6 March 1916 and pledged to carry on, if and when, into battle with the 175 Battalion. As a lieutenant, he went overseas on 3 October 1916, sailing on *Saxonia* which embarked from Halifax. The battalion, raised in Medicine Hat, Alberta, would not go to the front, but would be stationed in England to act as a source of replacements for other battalions of the Canadian Corp fighting in France. The posting offered little for Sully. When his wife, now residing with her parents in Ottawa, heard that Spike was going to seek a secondment to the RFC, all Blodie could do, as she would for the next 52 years, was to pacify herself into accepting what her life partner decided to do.

The RFC needed observers in order to fulfil its offensive policy. There were questions regarding the transfer of



*Titled 'Smiles, not for the Hun'. Boisdillingham April 1917. On the left 2Lt James Gordon 'Jim' Crang, pilot, and Lt John Alfred 'Spike' Sully his observer. They were 'teamed' almost at once and flew together until 70 Squadron discarded their 1½ Strutters mid July 1917. All the photos credited to 'Spike' Sully were taken by him or 'Jim' Crang and surreptitiously printed and developed by the wing photographer. He had taken another roll of Sully's to have them printed in England, promising to return the films and a copy but was killed in an aircraft crash.*

*:J.A. Sully via S.K.T.*

commissioned officers such as Sully from the CEF – would they continue to be paid by the Canadian Government and what would their RFC rank be? Not that 'Spike' mired himself in the military politics or the impact on his finances.

The moment he was officially seconded from the 21st Reserve Battalion along with Capt George Barrett Davies, the two had thought earnestly about a future in the RFC not long after he was returned to Canada in 1916 with the task of recruiting another battalion in Medicine Hat. Capt Davies, a trench veteran with the 3rd Canadian Mounted Rifles had seen first-hand the work of the primitive RFC in France, was impressed and it would be he who helped incubate the idea the two of them attempt a change in forces while together with the 21st Alberta Hussars at Seaford.

Lasting within the allotted time of six weeks plus, the observers' course in early 1917 could only be described, when compared to the equivalent, a year and a half later, as barely functional. The basics were taught but the limited use of a weapon in the air at Hythe would never really prepare pupils for the real grim reality of what aerial combat had developed into.

For those at Hythe in March/April 1917 the word on most lips was survival – *Just how long am I going to last?* Word of mouth, from those who knew the situation in France gave the answer *not long!* There were no guarantees of survival, absolutely none.

With this knowledge, he was posted to 70 Squadron. To further unsettle the nerves, Jasta 5 had hammered a 70 Squadron reconnaissance between Douai and Cambrai at about 08.00 on 24 March and repeated the aerial slaughter the next morning, depleting 70 Squadron even further – another five 1½ Strutters were lost. The total for both days was 10 aircraft and their crews. White as a sheet, almost numbed into silence, a little bit of a chap in stature and the only Canadian survivor in the squadron from the 23 March near massacre, Capt George Crawford Easton introduced himself to Sully, and provided him with what had happened – then there was silence. This moroseness lingered for days. Understandably, in the face of it all, 9th HQ Wing strongly urged these deep

reconnaissances to the Hindenburg Line be continued without interruption and as Trevor Henshaw explained in *The Sky their Battlefield*, "This work was seen as being essential to the understanding of the enemy withdrawal and was undertaken fully in the expectation of meeting intense attacks."

With 70 Sqn nearly impotent against the German Jastas, a point well driven home by the events of 23 and 24 March, it was now up to the Pups of 66 Squadron to lend a hand. They were not thrilled with the idea. No longer capable of continuing the task they were previously employed in carrying out, the RFC's 'first true fighter' needed protection for any important long distant operation.

Another Canadian to join the squadron as a probationary observer, Lt Leslie Hay 'Moko' Kennedy, had 'Billy' Bishop as a first cousin and could dominate a conversation. He was outgoing, a little overwhelming with a personality that if not checked by his officer contemporaries had a tendency to inflate. He wore an ear-to-ear smile, regardless of the situation. Kennedy had not flown a single practice flight with 70 Sqn but was right there to hear the dreadful news from the surviving crews – the ones able or willing to talk – on that 'black' back-to-back Friday and Saturday in late March 1917. What he did was talk himself into crewing with Capt W.G.B Williams MC, 70 Squadron's A Flight commander. In his own perverted way, the captain, soon known as 'Gloomy Gus' for unmistakable reasons, took a liking to Canadians, or any pilot or observer with connection to that dominion, and crowded them all into his flight.

Capt Williams, when he talked, which wasn't that often, spoke only of revenge. He wanted nothing more, nothing less, than to exact a toll from the opposition. Fanciful at first, now mind imbedded, this wasn't the first attempt to disrupt the impunity of the Luftstreitkräfte airmen to roam freely at random over the allied lines – the months of March and April 1917 were the only times they consistently tempted such fate in numbers more than just once.

Sopwith 1½ Strutter A1069, a 23 March survivor, would be the captain's regular machine after his 25 March arrival from 1 AD; this on the same Sunday as these six observers arrived: Lt L.A. Kilburz (1st Canadian Reserve Battalion), Lt D.J. Allan (14th Canadian Reserve Battalion), Lt S.L. Shannon (15th Canadian Reserve Battalion), Lt L.H. Kennedy (19th Canadian Reserve Battalion), Lt J.A. Sully (21st Canadian Reserve Battalion) and Lt B.L. Franklin (Middlesex Regiment). Four pilots, all part of the emergency replacement package, were also taken on strength along with the new A Flight leader; all 'Englishmen', they were: 2Lt R.M. Neill, 2Lt J.C. Smith (Warwickshire Regiment), 2Lt N.C. Saward (RFA), and 47491 Sgt G. Skinner. Two aerial gunners were also attached to squadron and more pilots continued to be brought in to make up for the casualties. These fellows were 2Lt G. Budden (from 1 AD, 26 March 1918), 2Lt J.C. Crosby, Lt E.C. Gribben (5th Royal Irish Rifles from 46 Squadron on 27 March 1917). Two more pilots came in on 30 March: 2Lt J.H. Bring-Gould (1st North Devon Hussars) and Lt J.A. Westerman. Then, to complete the replacement parade, an observer, 2Lt G. Heasman (King Edward Horses), rejoined the squadron's A Flight from hospital.

All the squadron's 1½ Strutters, including complete aircrews, were flown to Fienvillers on 2 April 1917. Practice flights, involving formation, reconnaissance and photography consumed all flying time until 8 April. This extract from the squadron diary for 6 April 1917, gives a good summary of what happened that day, the fourth since moving to Fienvillers: *Reconnaissance at 15,000 ft. One machine Lille Tournai, Vinciennes and Le Cateau. Lts Peters and Balfour returned – unable to get above 13,200 ft. Lts Neill and Heasman (emergency machine) returned with petrol tank blown out. Lt Dean returned with Lt Mason.*

Capt Williams, with Lt Kennedy, flew an engine test.



*"Just call me Moko!" Everybody's friendly 'A' Flight observer and possibly too highly strung for his own good, Lt Leslie Hay Kennedy seen here giving his pilot Capt W.G.B. Williams MC a hand wave and patented broad smile while seated in the observer's cockpit of Sopwith 1½ Strutter A1069, April 1917. At the time of his squadron departure on 7 July 1917, the Montrealer's nerves were so frayed even a leave to Canada in November/December 1917 could not recuperate his deteriorating physical and mental health. A Medical Board hearing in Vancouver on 18 January 1918 decided that he required a further three months in a convalescent hospital. The war was already over by the time a posting to RAF HQ Canada came into effect, a move from Montreal to Toronto was required, one he never made. A bit of a 'joyboy', his family were upper middle class and 'Moko' could afford to live a carefree, irresponsible life. As a long serving member of Montreal's Board of Trade, he could sit around, smoke stogies and imbibe the most expensive of alcoholic imports until his death in the mid-1960s. :L.H. Kennedy via S.K.T.*

There was more of the same on the 7th, with gun test flying added. Another observer on probation, 2Lt N. Butterworth (Manchester Regiment) was also taken on strength.

Easter Sunday, 8 April, a cloudy but otherwise 'fine day' in RFC vernacular, presented Capt Williams with a good chance to 'get even'. He had 'Moko' Kennedy ready for a 07.00 'Height Test', just an excuse to go 'Hun hunting'. This reproduction of their original Combat Report, the contents therein, really ginned up buzz among the 85% replacements, the old 1½ Strutter was not dead yet as a fighting entity. A reconnaissance and escort of three from 12.45 to 15.25 saw a large formation they believed hostile over Cambrai. No combats ensued, the pilots gun-shy and, luckily for them, the opposition made no threatening gesture.

Arriving that evening from HE, 2Lt K.A. Seth Smith, a tall, gentlemanly probationary observer from Sussex joined A Flight. Impressive in the fact he, at least to the flight's Canadian observers, reminded them of a 'poster boy' for the best example of English manhood; he was unflappable, slightly reserved,

Combats in the Air.

Squadron: 70-70      Sopwith 2-seaters      Date: 23/3/17.  
 Type and No. of Aircraft: 2008, 1925, 1927, 1907,      Time: 8. a.m.  
 Armament: 1 Vickers and 1 Lewis each.      Duty: Reconnaissance.  
 Pilot: Capt. Saxty, Captain Lowry,      Height: 12,000 feet.  
 Observer: Capt. Costello, Lieut. Peter, Lieut. Butler,      Lieut. Bacon.  
 Location: Lieut. Duncan, Lt. Swann, Lt. Whitehead,      Lt. At. Officer: S/AM Hillman, Capt. Easton.

Remarks on hostile machine:—Type, armament, speed, etc.

12 very fast single seater Scouts, 2 guns, vertical engine, very well stream-lined fuselage with boss on propeller, no dihedral, outside wing struts visible to the support, round tail. Greenish camouflage on top. All machines gave the impression of being clean, bright and new. The leader had very long crimson streamers on the side struts.

Narrative.

When on reconnaissance between DOUAI and CALHAI a machine crossed the lines. One machine was hit in the petrol tank by anti-aircraft and was forced to leave the formation. Between DOUAI and CALHAI a hostile formation of about 12 machines was sighted coming from the direction of CALHAI. The hostile formation turned in towards our formation. Our formation continued on an easterly course until the hostile machines attacked in force. An extremely close and prolonged combat ensued. The hostile machine appeared to be flown by extremely skilful pilots and in the course of the combat frequently looped to avoid the Sopwith front gun. The close combat lasted about 15 minutes our formation being very closely bunched throughout. Early in the combat Lieut. Duncan, Observer, was badly wounded in the leg. He continued flying until again hit in the leg. Nevertheless, he continued firing until the gun was put out of action by a shot. In the course of the combat Lieut. Peter dived on one hostile machine, raking it at close range. The machine turned upside down and went down completely out of control. One hostile machine which was attacking Lieut. Saxty was shot down at very close range by S/AM Hillman and seemed to go down spinning. This machine was still spinning near the ground. Captain Lowry was seen to turn out at one period apparently to correct a jam, and then returned to the combat. Captain Costello was seen to turn out of the combat and then glide in a South Westward direction, also being stopped. One hostile machine was seen to follow him. At the conclusion of the close combat 4 hostile machines were seen who made no attempt to continue fighting. Captain Saxty, Lieut. Peter, and Lieut. Butler recrossed the lines Westward, all three machines being very badly shot about. Captain Lowry was seen to turn back towards the lines with the rest of the formation after the combat. He was not seen afterwards.

*Christie*  
 No 70 Squad  
 RFC

only six hours solo when sent to France. Lt Crang was just one of the usual procession of aircrew movements in and out of 70 Squadron with the squadron's reputation 'shattered', such a word used by Spike Sully, and its crews requiring continuous practice flights, combined with a multitude of test flights. The new pilots were 'jumpy' about having to fly over the lines in an aircraft that had trouble reaching 13,500ft, an altitude much favoured by the Jastas.

Cloudy mid-April weather cancelled operations almost daily; more practice formations were the substitute. Two, both involving A and B Flights went off well on 20 April. The success was followed up by another formation of seven machines. This was an achievement. The squadron diarist in his compliment wrote: *Eighteen machines in the air at once, all serviceable after landing.*

Major General 'Boom' Trenchard visited the squadron on 21 April, under a very grey and misty sky; giving a short-winded speech meant to lift the spirits of the squadron's few veterans as well as those recently joined.

Using the recently introduced 'P' type cameras, A Flight



*Happiness is a smiling 2Lt James Gordon Crang standing in front of an A Flight Nissan hut, Fienvillers during April 1917. Lt Sully took this photo of his pilot. They both crossed the lines as a 'team' shortly after 17.10 on 23 April 1917 as part of a six-machine line patrol. J.A. Sully via S.K.T.*

intelligent but not overbearing, motivated and always willing to accept responsibility.

Opposite in nature, the tough talking, ever cursing Spike Sully almost from the start had tremendous respect. Seth Smith remained periodically in touch with him for years after WWI. Then there were more unfamiliar faces belonging to pilots; the arrival of two more on 9 April was, however, offset by an admittance to hospital of a pilot who had made it home on 23 March, his nerves having finally done him in. Not all the 25 March replacements were up to scratch. One pilot required more training. B Flight's deputy on the 23rd was now promoted to flight commander.

12 April would introduce Spike Sully's future pilot to A Flight's Canadian pack. Lt James Gordon Crang was the first Canadian since Lt Phillip Clark Garratt on 5 July 1916 to pilot a 1½ Strutter in 70 Squadron. He ('Jim' Crang) almost 55 years afterwards, gave this author a real peek into those long-gone years. Printing as fast as one could, here are his answers to a flood of questions:

*... I was born in Toronto 1891, the eldest of five, only one a sister. Grandfather was a builder. Came from England. My father, Jethro, also went on camping and prospecting with him in 1909 in Northern Ontario staking out several gold mining claims.*

Question: Reason for enlisting in RFC: *I was Sergeant major ambulance driver with the CEF at Camp Borden in 1916. During a revolt of the troops drove the wife and child of the station CO to safety at night through the picket lines. The grateful CO asked me what favour he could provide. "Enlistment in the RFC" was my anxious reply. A fortnight later I was sailing overseas.*

Historically, J.G. Crang was considered a direct entrant from Canada. He sailed, on 13 October 1916, from Halifax on the *Olympic*, attended 2 School of Military Aeronautics at Oxford from 20 October 1916, then trained with 7 Reserve Squadron at Netheravon and at the CFS, Upavon. He claimed to have had



A poor, but rare view of 70 Squadron 1 1/2 Strutters at Fienvillers, with Martinsydes of 27 Squadron behind.

: M. Davis

Almost 30 years of age the moment of his 23 March 1917 posting to A Flight 70 Squadron as a replacement observer, Lt David Jeffrey Allan was not averse to 'blowing his own trumpet'.

Allan came to 70 Squadron along with five other new observers. His first pilot pairing was with 2Lt C.H. Halse, a 9 April new man and a 'jittery John' who would not help preserve Lt Allan's sanctity. It was not until Lt M.H. Griffith, a pilot relic with 70 Squadron with service reverting back to January 1917 using 1 1/2 Strutter A997 as the aerial platform and with Lt Griffith using his experience that would allow Lt Allan to put to use some of the lessons he had learned at Hythe may have given the University of Manitoba Registrar his one big opportunity to prove he could shoot straight. Nearly all the Canadian rear seat firepower was in action about 14.00 on 9 May 1917 over Caudry and the result after half a double drum was one Albatros scout 'out of control in side-slips'.

Photographed with Lt 'Spike' Sully on the left and on the right wearing his 79th Cameroon Highlanders hat, Lt David Jeffrey Allan, taken by 2Lt Crang using Spike's camera and film. This pairing was shot in April 1917 at Fienvillers.  
:J.A. Sully via S.K.T.



produced some rewarding oblique photos. The flight's commander, Lt Mason, was on leave (he and 'Gloomy Gus' shared leadership responsibilities) and so the formation was led by the crew of Capt L.H. Peter (RE)/Lt Balfour – these two were a 'team' even in late February 1917 and knew and still respected the 1 1/2 Strutter inside and out. They were aided in their leadership by Capt Williams, 'Moko' with him, with the rest of A and C Flights following in a not too close vee formation; the crews being: Capt Lucy/Lt Pinson, Lt Allen/Lt Terriere, Lt Neil/Lt Seth Smith, Lt Dean/Lt Shannon, Lt Gotch/Lt Henry, Lt Gribben/Lt Mellor and Lt Adams/Lt MacKenzie. From 05.55 to 09.00 they covered an expanse of territory – Orchies St Amand, Mons, Bavai, Le Quesnay, Solesnes, Le Catelet. A more modest undertaking, a weather restricted Line Patrol was flown from 17.00 to 19.30, the leading crew were Lt Musgrave/Lt Heasman with the rest of the Strutters flown by Sgt Skinner/AM2 Giles, Lt Crang/Lt Sully, Sgt Thomson/AM2 Impey, Lt Halse/Lt Allan and Lt Littell/Lt McGurk. EA were active but none were engaged. One pilot returned with engine problems.

Fine spring weather dominated this Tuesday 24 April and true to form the Jastas would be waiting. A 1 1/2 Strutter reconnaissance, Le Quesnoy to Vervins, was flown from 05.55 to 07.50. What escort they had – six 66 Squadron Pups – would pay a price in what was to be a minor return to those bad old days in March. The leading crew of 'Gloomy Gus' Williams MC and Lt Kennedy were followed by a 'field' of eight: Lt Seward/Lt Franklin, Lt Smith/Lt MacKenzie, Lt Gotch/Lt Kiburz, Lt Gribben/Lt Mellor, Sgt Skinner/AM2 Giles, Lt Musgrave/Lt Heasman, Sgt Thompson/AM2 Impey and 2Lt C.H. Halse/AM2 W.J. Bond trailing behind. Heavy German AA fire and low cloud interrupted the Strutters' long reconnaissance. Over Solesnes, Jasta 2 attacked once the flak fire had pointed out the 70 Squadron formation. First the Strutter at the left rear, A8213, had to deal with an Albatros attack and AM2 Impey responded accordingly. Bullet strikes were observed around the attacker's engine. The Albatros stalled and fell clear. Having hurriedly changed the drum, Impey had a second chance to fire at the EA's fuselage. The EA promptly appeared to go down OOC. Hits were also seen against another Jasta 2 single seater. This EA dived clear.

South of Vaucelles Sopwith 1 1/2 Strutter A1002 went down in flames. Early in the assault the tail end two-seater started to glide clear. A second attack finished off the B Flight machine. The victorious Jasta 2 pilot, Lt n d R Fritz Otto Bernert, would continue to down RFC aircraft, 10 minutes later he brought down three of 9 Squadron's BE2cs and then a 55 Squadron DH4. For the Upper Silesian, his five downed aircraft in one single mission would stand as a German record. No RFC, RNAS or RAF pilot could challenge such a total single sortie achievement.

Unsuitable weather for the next three days allowed time



**A quiet chap and a 1 November 1915 enlistment in the 100th Winnipeg Grenadiers, prior to a commissioning of his rank as a recording officer with an overseas bound unit of the CEF, Lt Samuel Leonard Shannon never left England once he arrived there on 2 September 1916 and he transferred, on 15 February 1917, to the RFC as a prospective observer. As a University of Toronto 'Arts' student from 1912-1913, the 20 November 1896, Prince Albert, Saskatchewan born 'Sam' Shannon just 'blotted up' his studies, albeit short ones, at Reading, the more practical rudiments the course at Hythe offered and once in France serving the needs required of him as back up to his one and only pilot 2Lt H.P. Dean, a little English 'power house' and a member of 70 Squadron's A Flight since 11 March 1917. Dean is seen here with the taller Lt Shannon in June 1917 standing in front of 1½ Strutter, A8172, A4. The location was Boisdinghem aerodrome. J.A. Sully via S.K.T.**

needed for the pilots and observers to engage in anything it would take to divert their minds from combat losses. In attempting their escort for the Strutters, 66 Squadron had been distracted by Jasta 33. One Pup pilot, 2Lt R.S. Capon, a wounded POW, had the 'distinction' of becoming the first combat loss for the squadron. Two more from 66 also had their machines shot up, one of them the 66 Squadron patrol leader, Capt R. Oxspring.

A reconnaissance flown 16.45 on 28 April turned out to be a lesson in futility, bad weather, clouds and mist saw to that. Another attempted trench line reconnaissance was thwarted by cloud.

Major A.W. Tedder harped on continuously about the need for the lasting pairing of pilots and observers. Sully for one thought he was trying to promote a marriage made only in heaven! He was speaking on behalf of his own Strutter partner, Jim Crang, they both were united as a team later in April and performed as such until the 1½ Strutters and their rear cockpit occupants were removed from 70 Squadron's roster.

A group of 10 Sopwiths were in the air from 09.05 to 11.45 on May Day, detailed to photograph hostile aerodromes. They were pounced upon by an equal number of EA and, in full sunshine, the attackers pressed home their intentions with such determination that Capt Williams with Lt Moko Kennedy and Lt Crang/Lt Sully were only able to escape from further mistreatment by forced landing near 34 Squadron's Estrees aerodrome. Each of their machines had a diagonal strut shot through. A third Strutter, flown by a sergeant pilot, sought sanctuary from the attack by landing at Macqueglise.

This was the kind of survival act, one also recommended by Major Tedder with enough potential to save many a crew but, strangely, not a popular idea with the macho minded pilots

COMBATS IN THE AIR.

Squadron:- No.70  
 Type and No. of Aeroplanes:-  
 Sopwith 2-seaters A/240A,  
 A/99A, A/99B, A/8172,  
 A/3431, A/8811, A/1001  
 A/997, A/8174.  
 Date:- 4/5/17  
 Time:- 10.25 a.m.  
 Duty:- Reconnaissance.  
 Height:-10,000 feet.

Pilots:- Captain Peter, Lieut  
 Gribben, Gutch, Dean, Allen,  
 Sgt Skinner, Lieut Adams,  
 Griffiths, Captain Lucy.  
 Observers:- Lieut Henry, Heller,  
 Alford, Shannon, Franklin,  
 Seth-Smith, Pinson, Allan,  
 Butterworth.  
 Locality:-

Remarks on Hostile Machines - Type, Armament etc.  
 8 or more Albatross Scouts, and at least one Halberstadt Scout.  
 The Albatross Scouts had red wing-tips with green fuselage, using tracer bullets.

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 NARRATIVE.

The hostile machines collected round the formation as it proceeded to TOURNAI, and commenced attacking while photographs were being taken near TOURNAI.

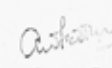
A running fight ensued until our formation recrossed the line. The H.A. hung on the back of our formation, attempting to cut off the rear machines.

One machine attacked Sgt Skinner and Lieut. Seth-Smith from underneath but Sgt Skinner, by his side-slipping into the formation, enabled his observer to fire at close range. This Albatross was seen by other members of the formation to turn over and go down spinning, a burst of smoke coming from the fuselage as the machine turned over.

At least two other hostile machines, after having been fired on at close range were seen to dive steeply and did not return to the attack.

Lieut. Adams's machine was apparently hit in the petrol tank at the commencement of the combat and he was seen going down apparently under control after firing a green light.

Lieut. Franklin, observer to Lieut. Allen, was mortally wounded in the combat and has since died.

  
 Major,  
 Commanding No.70 Squadron,  
 Royal Flying Corps.

- 70 Squadron had its share - who preferred to 'fight it out' - not the greatest solution in an aircraft about to be retired in the coming month and a half. Those 'he men' were offered their opportunity to stand and make a fight out of it near Lille at high noon on 4 May when a Capt Peter led reconnaissance of nine Strutters, without the aid of a Pup escort. They were accosted near Lille while in the process of exposing plates around Tournai. The eight Albatross Scouts from Jasta 8 picked out 1½ Strutter A1001, piloted by 2Lt V.H. Adams with 2Lt I.L. Pinson as his observer, as the 'sacrificial lamb'. Vzfw Walter Göttsch, Jasta 8, claimed this C Flight Strutter, one that burst into flames upon impact with the ground, both crew members dying of their wounds/injuries while POW. His observer killed in the initial exchange of fire; Lt D.G. Allen force landed close to 53 Squadron's Bailleul aerodrome. A third Strutter, A996 piloted by Lt Gribben, having had enough of the fighting, made for 45 Squadron's aerodrome where it was landed heavily and required dismantling.

Lt Sully missed this altercation. With the new flight commander, Capt Kemsley, he was attempting a height test. The best the pilot could attain with their fully loaded Strutter would be 12,700ft. All Strutter crews, this included 43 and 45 Squadrons, were compelled to incorporate a defensive strategy that would allow them to escape from a Jasta attack. This was to circle in line astern formation in order to allow gunners the chance to cover each other's machines. The defensive circle could then edge towards the lines and safety. It was a tactic first put into practice by 20 Squadron a few months previously.

Capt Williams MC and Lt Kennedy, with seven other Sopwiths, had the comforting escort of some 56 Squadron SE5s when they crossed the lines at about 12.40 on 7 May to take photos in the neighbourhood of Neuville and Caudry. Greeted by steady AA fire, the crews were very relieved when the close escort of Capt Albert Ball with Lts Maxwell and Knaggs intervened. They were on the way home with the 1½ Strutters - an abortive photo attempt as both German aerodromes

were deserted – and were over Beauvois when a strange type of Albatros two-seater, possibly a decoy, drew the attention of both SE5s and those in the Strutters. Soon a mixture of Jasta scouts and two-seaters appeared, gaining height as they came in from the south of the 70 Squadron formation. Just one German pilot ventured within range. The legendary Albert Ball extinguished the would-be attacker's hopes, driving it off but all the way back to the lines. The ever-hopeful enemy formation ventured no closer than 1,000 yards to the Sopwith's rear, were forced to give up on plans to press home any attack and had to break away each time they threatened to do so by the vigilance of their SE5 escorts.

Brought down in a much-disputed claim that afternoon, Capt Ball VC would no longer be on call to support further 70 Squadron photo reconnaissance incursions. As if he hadn't had enough, Capt Easton was required to withstand a rough crash landing at Fienvillers when the Strutters were back over the lines. Absent was the 1½ Strutter flown by A Flight's Lts Boyd, a curly redhead well on the way to premature baldness and his pipe smoking observer Lt McGurk. They force landed near Amiens.

In the 45 years that separate the actual moments relative to my discussions about 70 Squadron with Spike Sully, the then 70-year-old RFC veteran went to great pains assuring me that he *had never talked about our service flying with Jim Crang, about whom he correctly advised me: Jim would remember more about these things than I would because actually he had the hard time. He had to sit still and fly our machine in tight formation and couldn't do a thing about it while I was busy as a beaver enjoying all the excitement of a scrap, swearing profusely at the Germans and cursing them roundly because they didn't have sense enough to go down when I could see my tracer bullets hitting vulnerable targets and indeed where the pilot was supposed to be and occasionally giving them credit for a sound attack.*

Continuing his description, the next memory referred directly to the events of 9 May 1917:

*They came in, in formations of three. We were on top of our formation, and I think we got the brunt of the attacks. One pilot would come right in on the blind spot of our tail. He was awfully*

*One of Spike Sully's more surreptitious photos, the aircraft in question was SE5 A8902 flown by Lt Gerald Joseph Constable Maxwell. The 56 Squadron pilot had made only one patrol; an escort to 70 Squadron in the morning of 3 May 1917 when ordered to have the A Flight machine, only delivered to 56 Squadron on 1 May 1917 by 2Lt A.P.F. Rhys Davids was flown to Candas to be officially photographed. Such a coincidence as Lt E.B. Mason, the 70 Squadron A Flight deputy leader had taken Lt Sully with him to pick up a new 1½ Strutter at Candas. When they saw the SE5 sitting on the airfield, all alone, Lt Mason ran over to the SE5 had a peek at the controls and, as he did so, Lt Sully lens shuttered the occasion. A very rare moment to be caught on camera! Flown by Maxwell until 13 May 1917, that pilot claimed 3 EA in A8902 and Capt C.M. Crowe used it to send an EA two-seater down OOC. It was LIA on 26 May, with 2Lt J. Toogood surviving as a POW.*



*Just how relaxed can a pilot be? Capt Bransby Williams MC tries his darndest to make such an impression. Standing beside him, his observer Lt J.A. Sully seems to enjoy the pilot's antics. As a perfect setting the Sopwith 1½ Strutter the captain was fond of leaning upon was A1069, about the only Strutter he used on photographic reconnaissance operations.*  
:J.A. Sully via S.K.T.



hard to hit because of the danger of shooting off my own tail. After a few bursts he would peel off and another one of the three would get in the same position. I always felt I got three of these chaps for sure, though I never had time to follow them down. I was too busy looking after additional attackers and once or twice shooting one off the tail of one of our other machines. These were the times when I was so mad at them because they wouldn't go down as I could see my tracer bullets going right where the pilot should be and he still kept coming at my pal.

The team of Lts Crang and Sully received credit for one EA shot down in flames, Lts Griffith and Allan for one downed upside down, and the crew of LtMason/Capt Eastonone was credited with one driven down under control. 'Moko' Kennedy and his pilot were spared the attacking EA, having returned with plug trouble before the shooting started.

The formation's second leader, Capt Lucy, landed at Chipilly, his observer, 2Lt Norman Butterworth, 25 years old from Holmfirth, Yorks, dead in the rear cockpit. Notwithstanding this reduction in observer strength, the elimination by Jasta 5 of 1½ Strutter A994, with both pilot and observer, AM2 George Dwight Breakfield from Oshawa, Ontario, while not unexpected, was obviously not a 'nerve healer'.

Another Canadian, Lt Arthur Stanley Bourinot, arrived on 11 May 1917. Debonair, equally matched by well adjusted conceit, the youngest son of the late Sir John Bourinot KCMG, Clerk of the Canadian House of Commons for many years, a historian of repute, Arthur was a gifted poet. He had a small volume of verse published in December 1915. Bourinot had graduated from Trinity and University College with a BA. He had enlisted as a provisional officer in the Governor General's Foot Guards on 3 September 1915 as platoon commander with the 77th Battalion. Promotion to the rank of lieutenant on 1 December 1915, allowed this 24-year-old Arts graduate enough leeway to exert leadership, his vision as a ranking officer in the CEF well on track until the 'well financed' battalion was broken up in England during June 1916. A July 1916 transfer to the 87th Battalion would keep the lieutenant longer in England than he was prepared to accept.

Horrified at the thought of her only child wishing to join the RFC caused a temporary estrangement with his mother, Lady Isabelle Bourinot, one that would last until after the war. She resided at 87 Belgrave Road, London SW1 and refused to see Arthur, once his pilot training began. That training would include: 1 School of Aeronautics (4 September 1916), 6 SMA (17 November 1916), Vendôme (2 December 1916), 40 RS Portmeadow (5 March 1917), 55 RS Yatesbury and CFS Upavon (28 March 1917) before he was posted to 70 Squadron C Flight.

He was certainly different, stuck very much to himself, Sully remembered. He liked it that way. Jim Crang offered a likeminded reply when asked the same question. One who ventured close enough to have a first name relationship with 'Moko' Kennedy, in October 1961, specifically asked this author *do you know where I could contact Bourinot? I remember him well.*

2Lt A.S. Bourinot was accompanied by another Canadian pilot replacement Lt Sumner W Graham, the son of a Toronto Alderman, a 1914 Osgoode Hall Law graduate in 1914 and assistant to the City Solicitor. From 1912 he had been a lieutenant in the 10th Militia Regiment, and the 24-year-old Sumner, as an accepted Innes-Kerr candidate in Canada, left Halifax aboard the *Olympic* on 12 November 1916 with 14 others, including Jim Crang, and followed him throughout his pilot training in England. A much more accomplished pilot, Crang completed his training a month or so in advance of Sumner and when at last sent to France, the scholastically advanced Lt S.W. Graham, almost from the moment he reported to 70 Squadron from 2 AD, wanted to take up a 1½ Strutter. Granted his desire he took off and in, less than a minute, crashed. The injuries were so severe that 2Lt Graham



*Every squadron experienced its share of malcontents. When ordered to join an A Flight Photographic Reconnaissance in June 1917, Lt C.A.S. Bean (Canadian Scottish) could provide some of the most unique, very creative excuses. It wasn't for lack of experience. He served for almost four months (26 January to 3 May 1917) with 6 Squadron RFC, prior to that nearly as a BE12 pilot in 19 Squadron. The 70 Squadron CO was finally able to unload him, Lt Bean going to a 9th Wing Special Duty Flight. Able to tell one gripping story after another – few in 70 Squadron believed him – the contrary Scot had one documented incident in 19 Squadron. On his second Line Patrol, flying BE12 6632 on 4 December 1916, he lost his way in bad weather, the take-off delayed by trouble starting his engine, and landed on the French aerodrome occupied by Escadrille C202. A mechanic, unfamiliar with the four bladed prop or the RAF4a engine, required hospital attention. He was unable to jump clear once the RAF4s began to fire. Upon breaking the axle of another BE12 on 22 December 1916, he had a further early exit from a 27 December 1916 Line Patrol (carburetor the troubling factor). He lost touch with the same patrol in a different BE12 and experienced more engine malfunctions almost every time he took up one of these troublesome machines. His report of 15 January 1917 related to the inability of the RAF4a in BE12 6622 to pick up after being throttled down and misses and two more early returns, the last to repair a broken oil pipe on 25 January 1917, ended one miserable association with 19 Squadron. A demotion in rank from pilot to observer, unsettling as it may have been, then a return to pilot status, in the Special Duty Flight equipped with the BE12 would bring to a halt Lt Bean's chequered career in the RFC. Taken POW on 9 August 1917, while on a supposed Night Bombing mission, there is some speculation by veteran pilots who knew him that Bean was involved with clandestine flying operations behind German lines before another BE12 engine problem forced him down. This stocky little badger lived to be within a few years of his 100th birthday, years after most of his RFC 'buddies' had passed away. :J.A. Sully via S.K.T.*

was rushed to hospital. He took months to recover and when he was able to fly again joined 32 Squadron on 30 March 1918, made 29 operational flights with them, was engaged in one tough scrap (6<sup>th</sup> June 1918) then wounded in a 9 June 1918



*A Flight pilot and observer officers, 70 Squadron Boisdingham May 1917.*

*Back row, l-r: 2Lt J.G. Crang, Lt W.E. Grosset (POW 17 July 1917, shot down by Vzfw R. Francke Jasta 8), Lt J.A. Sully, Lt Boyd, Lt F.W. Harley ('Scotty', 5th Black Watch).*

*Middle row, l-r: Lt T.L. Heasman, Lt C.A.S. Bean, probably Lt E.B. Mason, Lt S.L. Shannon, 2Lt R.M. Neill ('Stockings').*

*Front row, l-r: Lt D. McGurk, 2Lt H.P. Dean and 2Lt R.J.E.P. Goode (An observer in 1916 with 7 Squadron, Goode returned with his 'wings' in May 1917 to begin a second tour. He stayed with A Flight, made it past September's heavy squadron losses, shared in an OCC Albatros D.V with the rest of the flight on 27 October 1917, only to be downed along with a second Camel over Houthulst Forest, his Camel B2361, a/c C, credited to Lt Josef Jacobs, Jasta 7. 2Lt Goode saw out the war as a POW.*

*:L.H. Kennedy via S.K.T.*

fight He landed at 43 Squadron, was admitted to an American hospital and never flew again. After WWI, he graduated in law, and eventually became a solicitor in the legal department of Toronto's City Hall until a aneurism took his life, on 15 March 1957, at Toronto's Sunnybrook Hospital.

70 Squadron moved by flights in formation to Boisdingham aerodrome on 14 May 1917. The weather was described as 'thick' by 2Lt Rabagliati, the recently attached recording officer. He was a real martinet in his own right and a stickler for evidence, should a pilot or observer request confirmation for a downed EA. This stubbornness would alienate many of the squadron's more formidable Camel pilots in the months to come. Rabagliati summed up the period 18 to 24 May 1917

*These days were spent in practice flights and formations, the main object of which was to acquaint pilots and observers with the country between Dixmude and Armentieres. The squadron is placed temporarily at the disposal of the 11th Brigade for photographic work only. These days no photographs were taken, and the line was not crossed except once or twice and then only for short distances. On 19th Lt Mason reported heavy bursts of white AA fire which followed him from across the line near Nieuport to a point about three miles on the British side.*

It was back to the real war work on 25 May 1917. The RO would have ample to record and for the remainder of the month as these daily entries imply 70 Squadron would not lack for accomplished tasks and better yet, no casualties of war to report: Rabagliati's accounts continued:

*25th May 1917. 8.30 am till 11 am. Photographic reconnaissance. Nine machines in three groups (1) Lt Mason, three cameras, (2) Lt Musgrave, (3) TOP. 2/Lt Neil. Object to photograph irregular area in the triangle Dixmude, Thourout, Roulers. This was successfully accomplished. Practically*

*the whole area required was covered by the photos taken. Reconnaissance was almost without incident. AA fire close to the lines slight and bursts much too high. Further on about twelve HA were seen coming from north and some from immediately underneath, believed to be Albatros Scouts, Nieuport pattern. No definite attack was made but shots were exchanged at long range.*

*[2Lt Neil, an A Flight pilot, was known as 'Stockings', a nickname that had something to do with a French brothel]*

*26th May 1917. 10.45 am to 1.5 pm. PR. Nine machines in three formations: (1) Capt Peter 3 cameras, (2) Capt Lucy,*

*A clerk with the Department of Indian Affairs in Ottawa during the day and a member of GGFG (Governor General's Foot Guards) for three years until he enlisted on 3 September 1915 in the 77th Overseas Battalion, Lt A.S. Bourinot wasted very little time, once in England, to shed his CEF affiliation. Here he is, third from the left, with a group of Canadians, who also shared the same motivation, at Reading, September 1916.*

*:Bourinot Family via S.K.T.*





*This portrait photo of Lt Bourinot appended in the Trinity College War Memorial Volume 16.116, 1922. In the short text accompanying the photo, mention was made that the 1½ Strutter came down at Rollegem at 4pm, his observer dead in the cockpit. Post WWI Arthur's life was lavender and roses; the sweet aroma of success abounded. Associated with the Metropolitan Life Insurance Company, Claims Division from the 1920s on, appointed solicitor in 1930, then manager, upwards as Assistant General Counsel and Claims Division Manager. For years he was a figure of skiing importance on the Gatineau ski trails (well prior to T-Bars and ski tows) until an accident on the Quebec slopes compelled Arthur to go on disability in 1950. He retired on 1 April 1959 and continued to write. He was the author of many volumes of poems, short essays – none about the RFC – a Canadian 'Governor General's medal winner for his poetry and the editor of a quasi-legal treatise 'How Canada is Governed' reinforced his prominence among Canada's law counseling elite. Arthur continued to write right up until his passing on Friday 17 January 1969 at his 290 Acacia Avenue home, Ottawa. His widow, Nora, passed on to her greater reward on 14 October 1986.*

*:Trinity War Memorial*

*three machines, (3) 2/Lt Gotch three machines. The object was to photograph an arc between Werwicq and Menin. 70 plates were exposed of which 23 were independent photographs. AA slight and inaccurate. About 6 HA were seen at long range but no fighting took place. One machine failed to cross the line and returned with engine trouble.*

*27th May 1917. 9 am to 11 am. Two PRS. Nine machines each. Morning – same formation as on 25th, Capt Mason leading. Area to be photographed Quesnoy – Tourcoing. About 70 plates were exposed of which 26 were independent photos. Two machines returned with engine trouble without crossing the line .... 3 EA seen.... AA fire very slight. Reconnaissance revealed little movement but a number of strong redoubts were observed in the neighbourhood of Comines – Werwicq – Roncq – Linselles. A single line of trenches was observed running approximately from NW side of Tourcoing, through Linselles and thence almost to Comines with small redoubts cut out from them at intervals.*

*70 Squadron's second photo reconnaissance of 27 May 1917 almost duplicated the routine, with a slight change in the*

COMBAT IN THE AIR.  
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Squadron: No. 70	Date: 3rd June 1917.
Type and No. of Aeroplanes: 9 Sopwith 2-seaters	Time: 3.30 p.m.
Armament: 1 Vickers and 1 Lewis Gun each.	Duty: Photographic reconnaissance.
Pilot: Capt. Mason, Lieuts Bourinot, Savard, Ufford, Dean, Neill, Thomson.	Height: 10,000 feet.
Observers: Capt. Shannon, Cpl. Giles, Lieut. McNeil, Terris, S/M Rich, Lieut. Shannon, Sgt. Smith and Harley.	

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Remarks on Hostile machines: Type, armament, speed &c.  
Single-seater scouts, very similar to SPADs.

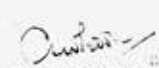
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NARRATIVE.

While on photographic reconnaissance our formation was attacked by three hostile scouts in the neighbourhood of MENIN. One machine attacked Lieut. Dean from below and behind, coming to very close quarters. Lieut. Shannon (Observer) fired at him heavily until he tumbled sideways and dived vertically. He was not seen to fall.

The other H.A. attacked Lieut. Crosbie's machine and was driven off, diving vertically, but he was seen to flatten out at a distance.

A third H.A. attacked the formation near LILLE, but went off on a course.

  
 Major,  
 Commanding No. 70 Squadron,  
 Royal Flying Corps.

formation pattern. Capt Peter was again the leader and there was some AA damage to the aircraft. One EA that tried to attack the formation was driven off. Although reconnaissance reports indicated great activity on the Courtrai-Comines Canal, there was no particular activity around Roncq. About fifty exposed plates, all taken from 10,000ft, showed nothing terribly different from those flown days earlier and, with conditions listed again as 'thick' for 29 and 30 May and not much improvement for the 31st, the coming June would be the month of increased testiness: Nivelles' offensive on the Aisne had failed, forcing the Allies to switch their offensive strategy to Flanders.

For the first week of June fine weather prevailed and 70 Squadron's good fortunes took a tumble. Grouped in the standard 70 Squadron formation, nine machines consisting of A and C Flights in three-machine triple 'vees' with Capt Mason out in front, their departure time at 14.30, photography was well underway and the exposure of plates over the designated Roulers-Menin-Tourcoing composite was almost complete when three Albatros scouts bore down on 1½ Strutter A981, C5. The pilot, Lt A.S. Bourinot was having engine trouble and had fallen behind, just ripe for the picking. First Bourinot's Strutter and then the A Flight crew of 2Lt Rolf Mayne 'Stockings' Neill, 19-year-old native of Kensington and his Scots observer, Capt Frederick William Harley aged 28 from Kirkaldy, went down to their deaths. Vzfw Rudolf Francke, Jasta 8 and Vzfw Matthias Meinberg were credited with the 70 Squadron losses.

The Combat Report produced by Capt Mason details the fact that Strutter A8172, A4, flown by Lts Dean and Shannon was also marked for disposal. This was the closest Prince Albert, Saskatchewan born Samuel Leonard Shannon would come to downing an EA. 2Lt J.C. Crosbie, the pilot of the 1½ Strutter also under attack, with AM2 Rich as his observer, survived long enough to fly Camels in the same flight.

Capt Peter, the other leader of these missions, had to confront another attempt by the German 4 Armee Jastas to exert their self importance. The involvement of eight Strutters and their equal in number nemesis V-Strutters, some painted black and white, others variegated, rose to attack, achieving their height near Comines. During the afternoon of 4 June 1917 from 17.00 to 17.40 the crews of both A and B Flights would require some stout defensive fire in order to keep the attackers at bay. Flying with his regular team-mate, Spike Sully referenced this



Hardly a proud moment for Lt A S Bourinot, these views show A981 after it was brought down. Not what Bourinot expected on his first operational mission. He provided this statement on 15 December 1918, after his return to England:

*Machine two-seater Sopwith. Employed on reconnaissance and photographic work. Owing to engine trouble I got behind the formation and was attacked by three Albatros Scouts as they dove on my tail. Observer's gun jammed and he was mortally wounded. I tried to use pilot's gun but was unsuccessful owing to the engine giving out. I got away from the enemy machines at approximately 4,000 ft but could not get engine (started) again. A strong wind carried me a considerable distance over the enemy territory. I was forced to land crashing my machine.*

*Keeping track of Lt Bourinot's movements was of priority importance for those detailed to serve such an Office of Enquiry. Information received by the Article Department of the OMFC Overseas Military Forces of Canada identified Lt Bourinot at Karlsruhe, Frieberg and Holzminden. He arrived at Hull on 14 December 1918, detached from the RAF – while a POW his rank was now recognized, as of 7 October 1918, to be that of a captain with an according boost in pay. Returned to CEF battalion consignment, Capt Bourinot's official day of relinquishing his RAF commission was not an officially done deal until 27 January 1920.*

:S.K.T and CCI Archive

encounter: *I was very busy clearing a jam in my machine gun and on that occasion Jim came through in grand style because I shouted down the telephone to him to 'split ass'. This he did in wonderful style and slid back into tight formation as quickly as I got my gun cleared.*

Encouraged by the absence of any casualties, a few Strutters received bullet blemishes: other than that, nothing of importance. AA fire was becoming more of a nuisance, although damage was not severe enough to injure the crew of Lt G. Budden/2Lt K. Wallace on 11 June when their Strutter, A8284, took a hit on the return from a photography sortie over Wervicq-Menin-Moorslede.

Flying with other pilots when Lt Crang was unavailable, 'Spike' Sully never seemed uncomfortable but an AA strike on 12 June forced Lt W.E. Gossett to make a nerve-wracking wobbly landing at Poperinghe, a reason why he tried to make sure Jim Crang was always at the controls.

The remaining weeks of June were more-or-less palpable with the planning stages for the Allied Flanders offensive in

COMBATS IN THE AIR.

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Squadron: No. 70 Date: 4th June 1917.

Type and No. of Aeroplanes: 8 Sopwith 2-seaters Time: 8 to 5.40 p.m.

Armament: 1 Vickers and 1 Lewis Gun each. Duty: Reconnaissance.

Pilots: Capt. Peter, Lieuts Allen, Budden, ~~Worner~~, ~~Worner~~, Boyd, Smith, Crang. Height: 10,000 feet.

Observers: Lieut Henry, Whitfield, Allan, ~~W. J. Grover~~, Lieut ~~Worner~~, Godard, McKenzie, Sully and Hensman. Locality: Near MENIN.

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Remarks on Hostile machines:- type, armament, speed etc.

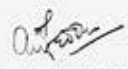
Albatross Scouts with V struts, some painted black and white and others variegated.

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NARRATIVE.

While on reconnaissance 8 hostile Scouts were observed getting their height near COSSINES. They came up behind our formation and attacked it near MENIN, making repeated attacks on individual machines of the formation throughout the reconnaissance, until our formation re-crossed the line.

Some close-range fighting took place and at least 3 hostile machines are believed to have been seriously damaged, only 4 H.A. were observed when our formation re-crossed the line.

  
 Major,  
 Commanding No. 70 Squadron,  
 Royal Flying Corps.

the final stages and more RFC and RNAS squadrons at the call the chances of 70 Squadron's 'Butterflies of War' escaping the Jasta's undivided attention appeared to increase until elements of the Richthofen circus made a direct contribution that would deflate this idea. Lt Hans Klein, Jasta 4, took out the crew of 2Lt H.J. Watlington and AM2 E. Gilchrist over Langeharck, their Strutter B714 falling to earth during mid-afternoon of this Friday. The 21-year-old pilot was a native of Bermuda and member of the Bermuda Volunteer Rifle Corps, 1/Lincs Regiment; the observer 87458 AM2 Edward Gilchrist, a 26-year-old Scot from Glasgow. Neither of their bodies were recovered.

These photo reconnaissance missions, the squadron's only 'bread and butter' itinerary, once over the lines had one more AA hit. The Strutter in question was A1026 and its damage limited, allowing the pilot, Lt C.S. Workman, to bring his observer, AM2 S.A. Groves and himself home to Estrée Blanche, an aerodrome 70 Squadron occupied from 27 June. Pilots were under no illusion that their days flying Strutters were limited – two Sopwith Camels, already hangered, represented 70 Squadron's future equipment, with A Flight the first to try them out.

Asked on 12 July 1917 whether he wished to return to England and learn to fly – the same offer was put to Lt D.J. Allan (10 July 1917), Lt S.L. Shannon (27 July 1917), Capt G.C. Easton (16 June 1917), Lt L.H. Kennedy (7 July 1917) – 'Spike' Sully, his feelings mixed: he really had no ambition to pilot an aircraft; yes, he would give it a try just to save face as Jim Crang told him *why not, you have nothing to lose*. He would learn the truth later, much later, long after WWI. Jim Crang was only kidding!

The memories of those 'ginger moments' with Lt Crang, the episodic ones, periodically served as a flashback for 'Spike'. One he gladly related to the author had an interesting twist to it: *On one occasion our machine was badly hit and the engine about conked out. Jim made a wonderful landing in a field behind the lines, and we found that one of the main supporting braces was about to split in half by a bullet and that it was dangerous to attempt to fly the machine back to our unit. I can't remember where this was but the thing that sticks out in my memory was not a fight with the 'Circus', but the experience of*



His observer role with 70 Squadron a thing of the past, as of 25 July 1917, Lt Shannon went back to school, attended 1 School Military Aeronautics for a three-week course, began to experience the travails of a student pilot at 52 TS, Stirling then 64 TS Narborough, AW FK3s the school's graduation aircraft. That was achieved on 12 September 1917. Any possibility of him continuing as a pilot was dashed the moment a crash at Narborough affected his balance, originally influenced by a near concussion that kept him hospitalized in France for one week but as it was the result of 'horseplay'. The medics overlooked this when he underwent the usual medical preparatory to pilot training. Judged unfit for three months, his only option of service left was as a school instructor. He then qualified as such at 5 SMA, Denham, Bucks on 30 October 1917 and was sent to Hythe, his duty as an aerial gunnery instructor. He lasted from 4 December 1917 to 24 January 1918 at 2 TS, Northolt. His next location was 26 TS Narborough and finally 35 TDS Duxford. The Canadians expressed a desire for his instructional services. 123 Squadron remained his final aviation commitment until concluding that was enough. "I left the CAF and returned to Canada 15 February 1919," he wrote for his old university. For years after WWI, the University of Toronto tried to keep track of their former students who survived service in WWI. The last they heard from him was via his mother in Prince Albert, Saskatchewan. The date was 1921. Her son had found a job with the Duff Development Company which had an office in Singapore and Leonard was working at Kelantar, Malay States as an inspector. :RAF Museum

being driven in the squadron's tender at night through the old battlefields and the millions of rats that were on the road. It was literally alive with them. I suppose they had lived on the corpses on the battleground and were up on the road looking for the debris from the troops and cavalry that had been moving along this road.

The near confrontations those missions had with JG1 from June 1917 until he left 70 Squadron were also a subject Spike recaptured: *I don't remember how many times we ran into Richthofen's circus but the fighters who were supposed to meet us when we got back close to our lines never seemed to click though one time we were very happy when we were met by a formation of FE2bs. These were the big pushers with the observer out in front. Our job of course was not to fight the circus but to get home with our information from these long reconnaissances.*



*"I was saved by inches". This was Sully's comment after he took this photo of 2Lt Dean, the pilot, and Lt Shannon having a good look at just how close they came to a ditch which bordered the Boisdinghem aerodrome. All A Flight 1½ Strutters such as A8172 coded A4 had white painted fins and wheel discs. This Strutter was flown by Sgt Skinner in April 1917 – traditionally each flight had one non-commissioned pilot and twice that number of AM2s acting as observers on the roster at one given time. Lt Dean and Lt Shannon became the aircraft's sole occupants until the Strutters were an endangered species by mid-July 1917. In this aircraft, at about 15.50 on 3 June 1917, an attack by one of three Albatros Scouts almost sealed the fate of the Dean/Shannon combo, the assault only thwarted by the mobility of the pilot, allowing Shannon to fire at the single seater from very close range. The result appeared to make the hostile pilot react defensively. He stalled laterally and dived vertically. The Combat Report bluntly states: "He was not seen to flatten out." :J.A. Sully via S.K..T*

*We had to keep going while those FE2bs took on the circus and cut us loose. It was an inspiring sight to see those things doing steep vertical banks and turning right into the Albatros. I don't know what luck they had but they sure scared them off us. We were told that some of our fighters got into the 'do' and were successful with the circus. [He was referring to 20 Squadron's FE2ds].*

All the Canadian observers sent back to England for pilot training attended Reading (No 1 School of Aeronautics) and the School of Special Flying, Gosport. Both Lts Allan and Sully were taught on Avros by the same instructor, 2Lt Roy Stanley Grandy, a Newfoundlander born at Bay L'Argentil in 1894. His first pupil, Lt Allan, was not a 'quick study' requiring fifteen hours dual in 29 flights until 2Lt Grandy felt confident he could handle the Avro. All this covered the extended period 3 September 1917 to 10 October 1917. Lt Sully began his ordeal on 11 September 1917. Grandy would have his work cut out. From the date mentioned until 8 October 1917, Spike was up with 2Lt Grandy 43 times. About then, his instructor turned to Lt Sully and told him *you are wasting my time, forget about learning to fly!* For Sully, that brought to a halt whatever little desire he had for flying.

Lt Allen went on to fly Dolphins with 87 Squadron while Lt K.A. Seth Smith, also undertaking pilot training as Gosport, although not a pupil of Grandy's became a friend of his. On one weekend in September 1917, he flew Seth Smith home to the family's estate. *Had tea and did some shooting – very nice time*, he wrote in his logbook. Lt Seth Smith completed pilot training in record time, rejoined 70 Squadron in November 1917 and, until wounded on 23 March 1918, could claim another six EA. As an observer, this gentleman had one OOC to his credit.

Allowed leave to Canada after 'flunking out' as a pilot – how he wangled that I could never get an explanation out of him – Lt Sully ran into a Lieutenant Colonel, a regular British officer with the 21st Lancers, who had learned to fly and had been at Gosport. He was headed for Washington on an aviation mission. It was he who put tremendous pressure on the Air Ministry to have Sully assigned, partly because of his 'experience' at the Gosport school. The next several paragraphs represent the contents of a letter Spike Sully compiled for this author in 1962. The contents do explain how Sully was privy to,

although not directly involved in, the School of Special Flying techniques and could make good use of what he casually picked up. One of his many enemies in the RCAF referred to 'Spike' as a 'Scammer'! That considered I will continue with the letter's explanation:

*My job there [in Washington] was to put the Gosport system of flying instruction into use. I believe now that on this activity I made a real contribution to the war effort though at the time it didn't seem to me and I was terribly disturbed. Lee, who was then a general, would not let me go back to France as then (March 1918) our Air Force was having such a bad time.*

*My first job in the States was flying at Washington which was mostly a propaganda job taking congressmen and senators up in the air and giving them a real stunt flip. This of course got them interested and developed a lot of support for the Signal Corp's programme. [Another RAF officer flew the aircraft, a DH4, while Lt Sully remained on the ground explaining beforehand the various stages of the Gosport method]*

*I remember having a chap from the Signal Corps taken up on two occasions with a gadget that he thought he could talk to the ground. Of course, I was skeptical. He got a few bursts through and came down with great excitement. I was then sent to Brookfield, San Antonio, Texas, and worked under the commanding officer there. He was a remarkable man, Col Conger Pratt. A great officer and a very enthusiastic airman. He is still alive [1962] and retired as a major general in Washington. I still get Christmas cards from him. He is 82 or 83 now.*

*At Brookfield my job was to train a group of instructors who could in turn take this plan out to the American stations. Some of the old timers in the United States Air Force were my pupils on this operation. The BOs called it the 'gas pipe system' – not at Gosport! The reason was that means of communication between the instructor and the pupil was a speaking tube which you shouted down and a little cap was fastened tightly over the ear of the receiver. It wasn't a very good method of communication, but it was the best then available. The American boys were very quick learners, and I had many wonderful experiences on this job and of course I was very proud that I was able to make a lasting contribution.*

*By the way, credit for this Gosport system is given to Col Smith Barry who was a character and quite a hero in those days. Actually, it is my opinion the bulk of the work was done by a man by the name of Parker who was Smith Barry's chief instructor. This Gosport system was the first intelligent approach to the art of flying and indeed the very principles that were brought out by those experiences are still used and much of the pattern that Parker developed is still used in instructing people to fly. I have heard from Parker since the war. He is an Englishman who lived in Vancouver. I got him into the RCAF on some job and I have heard from him since I came here but have now lost track of him. It is always my opinion that Parker was one of the unsung heroes of the Air Force and that he should have received more credit for the development of the Gosport system of flying instructions.*

*An item in Vol 32 No.2, Summer 2002 issue of OTF in an article titled 'Progressive Pilot Training Pt II', the author, James 'Skip' Federton, included this reference to Capt John A. Sully of the Royal Air Force:*

*The overall safety record of American pilot training was admirable, but risks of flying proved to be a major source of conflict and confusion within the army. The single cause of most airplane accidents was loss of lift – in other words stalls and spins. In stencil 618 author Capt John A. Sully of the Royal Air Force categorically states the reasons for all aviation training accidents. All accidents are the result of carelessness or poor instruction. The commonest manner in which accidents occur is the tailspin and that very seldom when the pilot goes into a spin intentionally. They usually occur when a pilot does some turn improperly and carelessly and close to the ground and falls into a spin. Capt Sully's conclusions about the flight conditions that*



*2Lt Roy Stanley Grandy, a Newfoundlander – had his Ships Masters papers, went to sea when only 16 years of age, had both legs and feet frozen, didn't have proper winter clothing, topcoat etc at Gallipoli while serving as a second lieutenant in the First Newfoundland Regiment and later joined the RFC on 25 September 1916. He learned to fly at 40 RS Northolt, 66 Squadron, Netheravon and 62 Squadron, Filton. The BE12 was added as a training upgrade. At Filton he began to instruct on BE2cs then the Avro. Some of Grandy's pupils were the ex-70 Squadron 1½ Strutter observers: Lt D.J. Allan, Lt J.A. Sully and Lt K.A. Seth Smith. Teaching pupils came to an end on 6 December 1917. Already 'Camel familiar', he had had his own to practice on, commencing 28 November 1917. Lt Grandy, once he joined 43 Squadron's A Flight led by Capt H.H. Balfour, soon developed a notable kinship with the future lord until Grandy, on temporary duty with the Camel squadron in France, was required to return to the School of Special Flying at Gosport. This photo represents that final chapter, March 1918 to August 1919. He went to sea again in 1919 and 1920, sailing between Newfoundland and European ports and joined the CAF in November 1920. From the early post-WWI years at Camp Borden, throughout a permanent commissioned rank in the RCAF, he was a pioneer in establishing air mail routes – in recognition of this he received an OBE. Only his refusal to play the political game as an RCAF insider and stay clear of the 'Brown nosing' which so infested RCAF hierarchy in the 1920s and 30s, carrying on into WWII, Group Captain Roy 'Bill' Grandy would look back on all these years with an air of sadness. He concluded to this author, in the early winter of 1961, that the happiest time of his aviation was that short period in 1918 while serving under his "good old flight commander" Harold Balfour.*

*:Joan Watson (daughter) via S.K.T.*

*led to accidents were supported by numerous sources.*

*He was mentioned in dispatches on 14 December 1918 and awarded the AFC on 1 January 1919, in recognition of distinguished service. His relationship with 2Lt Roy Grandy at the Gosport School, the pilot who taught him everything in a practical sense he required to know about the system, his attachment to the aviation mission, USA from 1 January to 14 December 1918 and his rank of major at the time of the Armistice meant nothing more than a 'hill of dirt' to him once the war was over. His award of the Aviation Medal of Merit, presented by the Aeronautical Society of America for installing the Gosport system there, he truly treasured and kept it framed in the living room of his Goderich, Ontario home until his death.*



70 Squadron received its first Camel, N6332, on 13 June 1917. It was returned to 2 AD three days later, then re-issued to the squadron on 28 June. It lasted until 17 June 1917, when Lt W.E. Grossett was brought down and made POW, probably by Vzfw Franke, Jasta 8. :CCI Archive

Post WWI life back out west on the farm left Spike Sully at 'sixes and sevens'. Blodie wanted him out of her kitchen, the children now numbering three were a real handful and back to fighting the weather the soil for a decent crop eroded the mind and in December 1921 the First Alberta Mounted Rifles required a C Squadron captain. He was it. Then came the 'dust bowl' of the 1930s. The entire Sully brood returned to Ontario and settled in Ottawa. Their home was like a transient's hotel. People came, people went. His wife, a prolific cook, kept the down on their visitors' stomachs filled and should they 'get out of hand' Spike could lay down the law with the best of them. Once the clouds of WWII gathered on the British Commonwealth Air Training Plan was set up, Sully was nominated as an Air Member for Personnel but had to wait until AVM H. Edwards was moved from that post in November 1941 before, now an AVM, he took over. The possessor of a 'hair trigger temper', he had created an ocean of distracters; they used a variety of reasons to keep him from out of the High Command exclusive club often calling attention to Blodie's housekeeping. It was not on a par with the Jones' and left much to be desired. This 'hitch' was eventually overlooked, and AVM Sully remained as the RCAF's most able disciplinarian until April 1945.

Post WWII Sully was drawn into the road construction business, investing every cent he had into the purchase of heavy equipment at a time when the auto traffic required an increase in highway construction. His location in Goderich, Ontario, gave his company The Dominion Road Machinery Co Ltd, located in that town, an excellent location and provincial governments were steady coffer fillers. Reputed to have one of the best records for maintenance and performance, the company enjoyed many banner years. When I met 'Spike' in 1962, he was about to hand over the business to his two sons. After his 23 June 1968 death in Toronto, they sold the business and obtained a Volvo automobile franchise.

### Goodbye to the Strutters

Taking part in the 1½ Strutters 'goodbye' photo reconnaissance only A and C Flights had yet to exchange all their two-seaters for the nimble Camel – their 'amen' far from an inspiring one at the hands of the gods, forced to yield to two of Jasta 6 and Jasta 34 Albatros Scouts which had dealt efficiently with the miserably inefficient escort of four 29 Squadron Nieuport scouts; half of them accounted for in a swift encounter close to the 1½ Strutters. Then, as the official Combat Report described, an equal number of Strutters were accounted for by Oblt Eduard von Dostler, the Jasta 6 Staffelführer (his 17th) and Ltn Hunrich Georg Geigl, Jasta 34, his 2nd victory.

Occupying the observer's seat in 1½ Strutter A8786, A2, Lt Ernest Daniel Sliter had only been taken on strength of A Flight

on 3 July 1917 and was the last observer with a commission to join 70 Squadron. He was a Kingston, Ontario native son, born there on 30 December 1891 and educated in that city at the public and high School – his father a principal at the latter. He enlisted, while in third year of a Civil Engineering course at Queen's University, with the Queen's Engineers Second Overseas Expeditionary Force on 30 December 1914. He was later given a commission with the First Pioneer Battalion. He was known around Kingston as one of the best athletes Queen's ever had, played 'team rugby' and hockey, was also secretary/treasurer and manager of both the clubs and was nearly two years as a sapper in France which made him consider the RFC as a more rewarding way to continue his war service.

Remembered for a 'Sunny Jim' smile his high road to another aspect of the war took him to both Reading (3 June 1917) and Hythe (11 June 1917), then on to 70 Squadron. Teamed with the same pilot, Lt Cecil G. Mathew, they were veterans of only three photo reconnaissance missions before the six Strutters left Estrée Blanche at 09.00 on that Friday the 13th. For a tall, almost six feet, massively built man, Ernie was superstitious, his pilot also. The last time he had some uncomfortable feelings about what the day had in store for him occurred on 8 March 1917 when he received a bullet wound to his left hand, was admitted to a Highland Field Hospital and it was there he made up his mind to transfer.

Major M.H.B. Nethersole wrote Lt Sliter's parents the instant he failed to return. A similar letter addressed to the Mathew's estate in southern England, also in the CO's handwriting, left Estrée Blanche the contents of both were very much a duplication: ... *the machine in which he was the observer and in which Lt Mathews was the pilot was seen to be in trouble shortly after its departure and it dived through the air perpendicularly for quite a distance. It then straightened and flew down until it seemed to land in German lines.*

The major intimated that the rear gun in charge of Lt Sliter was not being fired which seemed to suggest that the observer was wounded, and the pilot was steering the plane.

What actually took place had to wait until a German airman dropped a weighted message bag in the British Lines. While the one concerning the crew of A8786 stating the pilot to be a POW, Lt Sliter a wounded POW, the news could not be more horrific for the parents of the other 1½ Strutter's (A8335, C6) occupants. They were both so badly burned when they fell in flames that the pilot's body could not be immediately identified.

Questioned by his then bride, Dorothy, after they were first married, Ernie mentioned there were thirteen German planes that attacked. His gun jammed and he was machine gunned from underneath in the leg and groin. Taken first to an aid station then to a hospital, he was moved several times, once in a spring-less wagon over cobblestones with the horse at full gallop, he developed gas gangrene and was in great agony. The treatment for this was every four hours. 'Ern' received treatment every two days and, with nothing but paper bandages, iodine was poured into the great gash cut into his leg from thigh to knee. This saved his life but for three months he lay in a daze, in bed for seven months and a POW eleven months, ill fed on watery soup with a sort of turnip added, now and then a share of meat. Without parcels from home and the Red Cross, Ern told his wife he could not have survived.

The Germans were short of medicine, no nurses were allowed to dispense them. Fortunately, a captured Russian surgeon looked after the Canadian patient but to his disgust this humane and excellent doctor, accused of assisting other Russians to escape, was removed and shot, leaving Ern at the mercy of an incompetent, arrogant little German.

Lt Ernie Sliter's ordeal continued. Towards the latter part of his seven-month bed-ridden period, the weather had enough warmth to allow his fellow POWs who were not as

**Combats in the Air.**

Form: No. 70 Date: 13th July, 1917.

Type and No. of Aeroplanes: 8 Sopwith 2-seaters  
Nos. 1080, 9801, 8303, 8335, 998, & 8786. Time: 10.15 to 10.30 a.m.

Armament: 1 Vickers & 1 Lewis each. Duty: Photographic Reconnaissance.

Photos: Capt. John L. Michael, Tapp, Baumann, Height: 10/11,000 feet.  
Capt. J. H. Slater.

Observers: Lt. Shingleton, Jones, Richardson,  
Sdr. Fletcher, Lt. Smith, & Slater.

Locality: BECHLAERE.

Remarks on Hostile machine:—Type, armament, speed, etc.

7 Hispano-Albatross Scouts. Two guns fixed. Speed about 95 M.P.H.

1 Large two-seater painted black.

— Narrative. —

Our formation crossed the lines E. of YPRES and went S. from the N.E. of BECHLAERE to the cross roads at GHELUWY. Between BECHLAERE and GHELUWY two enemy formations of 3 and 7 machines respectively came up from the E. and engaged the escort and top row of our formation.

The formation turned N. at GHELUWY and proceeded N.W. followed and closely attacked by the E.A. all the way.

About the neighbourhood of BECHLAERE a large enemy 2-seater appeared right alongside of Lt. Baumann's machine (2.6) who was right rear of the formation. The Observer (Sdr. Fletcher) fired one burst and then appeared to cease firing. The E.A. then opened fire at close range and E.A. dived steeply going down in flames. The E. continued to follow and engage.

About the region of the cross roads about 1 mile N.E. of ST. JULIEN one of the escorting machines was driven down.

The remainder of our formation (5 machines) and two of the escort regained the lines W. of ST. JULIEN. Just before crossing Lt. Mathew's machine (A.2) fell out and crossed the lines below the formation. This machine appeared to be well under control and was seen gliding down towards the neighbourhood of BAILLEUL.

J. H. G. Slater, Major,  
Commanding No. 70 Squadron,  
Great Trunk Railway

**This Combat Report explains 70 Squadron's final losses on the 1½ Strutter. Lt E.D. Sliter is inadvertently named as Lt Slater.**

incapacitated as he to carry his metal bed outside, to heal in the combination of freshness and warmth. Finally, strong enough to use crutches and selected for the POW exchange programme along with other incapacitated men, he returned via Holland to England. He remained as an out-patient for three more months and then set sail from Liverpool on the *Carpathian*. When some 280 miles from the point of embarkation and 180 nautical miles from Ireland (Fastnet) the German submarine U55 put a torpedo or two into the 1903, launched, 18,555-ton Cunard passenger ship. The U boat commander brought the sub to the surface and began moving about, putting two more torpedoes into the sinking ship. Already in the water and clinging to a lifeboat, Ern and another officer saw smoke on the horizon. A British sloop was coming at full speed and began to fire several miles beyond her accurate range. One shell came so close to the surfaced sub that it was thought to have made a hit. Ern told his wife: *it was the most wonderful sight to see the sloop circling the lifeboats, every man motionless at his station*. He could not, and this bothered him for many years after WWI, forget the screams of the *poor chaps trapped in the boiler room!* [he was referring to five stokers, who were drowned]

The sloop returned all the survivors to Liverpool and, with only the clothes on his back, Lt Ernie Sliter boarded the *Missanabie*. This ship finally brought him back to Canada. The local Kingston, Ontario, newspaper periodically included reports about the 70 Squadron observer. Its 7 August 1918 issue printed a small account of his homecoming: *Although limping with the aid of two canes F/L Sliter lighted from the fast train from the east [Halifax] at the outer GTR [Great Trunk Railway] on Wednesday afternoon with the same old smile that used to beam when Queen's scored a touchdown in the football days before the war.*

Voted unanimously to be reinstated as Queen's representative on their Athletic Board for two years, he would see his term



**A POW Repatriation Report was submitted on 20 December 1918 by Lt E.D. Sliter's 1½ Strutter pilot, Lt Cecil George Mathew, a resident of Crawford Church, Crookham, Hants. He explained in a brief testimony. "Photo op, 7 EA attacked and hit engine, petrol tank and badly wounded Obs – FTL not wounded. Lt E.D. Sliter badly wounded, A/C badly crashed". After WWI Cecil Mathew remained in touch with his former observer. "They were great friends" Dorothy Sliter told the author and Cecil wrote Ern, seen in this Kingston, Ontario, newspaper photo "several times over the years trying to keep in touch. I am sorry to say Ern never answered .... He was no writer ... But he always loved Cecil and spent one leave from France at his father's estate in southern England."**  
:Dorothy Sliter (widow) via S.K.T.

repeated many more times until the effects of a brain tumour cut short any further association with the university. For the remainder of a relatively long life and almost invalided the final three years, he survived to spend his 84th birthday with his wife Dorothy and lasted until 27 April 1976 when a priest was called to perform the last rites.

One of the pilots flying in the same second vee of three 1½ Strutters on that 13 July 1917 happened to be 2Lt Harry Draper Layfield, one of the more undisciplined pilots ever to fly a 1½ Strutter, or later a Camel in 70 Squadron. This 5ft 8in Canadian, born on 30 September 1896 in Vancouver BC, marched very much to his own tune right from his time at King Edward High School in that city. He had been employed as a clerk/stenographer prior to his 28 October 1915 enlistment in the Canadian Railway Troops, with the rank of sapper No.502090. Once the unit arrived in England, months of drudgery set in; the only break from the daily norm was eighteen days in a Newcastle Hospital with tonsillitis. Almost to the day, two months later, Layfield wore the white banded hat indicative of a RFC cadet at Denham, Bucks. Layfield broke no 'sound barriers' learning to fly at Netheravon and then Upavon; the CFS instructors appeared to ignore his air of conceit, allowing the dark haired and complexioned Vancouverite to spread a little of his insolence with the other members of 70 Squadron's B Flight. Even prior to the 1½ Strutters' removal, 2Lt Layfield had designs on leadership of the flight.

No one could attach the same kind of attitude towards 2Lt J.G. Crang. Like every other B Flight pilot, he had no time to suffer Layfield's oppressive superiority manifestations. With

the 9th Headquarters Wing applying steady pressure to get the squadron up to speed, their demands almost intolerably stifling, pilots like 2Lt Crang were alarmingly aware they were being rushed into action without sufficient training on an unforgiving aircraft, a pernicky one, that allowed no quarter should a pilot neglect its limitation restrictions, the delicate balance of fuel and air mixture and careful monitoring of the engine's right-hand torque. Already Jim Crang concluded the 1½ Strutter was much nicer to fly than the rapacious Camel which wanted handling strictly on its own terms.

In the Camels' first combat test on 17 July, a 21-year-old Glaswegian, Lt Charles Service Workman MC, was brought down to become a wounded POW. Another pilot, with more time on the 1½ Strutter, was Lt W.E. Grosset who they, the other crew members of A Flight, called the 'Chumerican', to his face, for his continuous praise for anything connected to the US. Lt Sully seemed to think he was a Brit living in Vancouver but very low on the likeable list. Grosset also fell in combat on 17 July 1917. When brought down at 21.20 near Waterdamhoek by Vzfw Rudolf Francke, Jasta 8, Lt Grosset was seated in 130-hp Clerget, Camel N6332. This ex-naval machine had been tested with a Sopwith/Kauper Mk III interrupter gear two days in advance of being taken onto 70 Sqn charge on 28 June 1917.

Up against the formidable JG1 and other 4 Armees Jastas, the 70 Squadron Camel novices were not going to make much of an impression on the combat seasoned Germans. Obltn Ernst von Altheus, Jasta 10, took out C Flight's Lt Harold Donisthorpe Tapp. The Redland, Bristol, 21-year-old's Camel, B3825, C6, was under attack by four or five EA and a final glimpse by other pilots of the 24 July 1917 18.40 OP sent out to cover the Dodizeele-Gheluvelt-east of Polygon Wood beat were no match for the JG1 Jasta. Tapp's death was confirmed once a message to that effect was dropped in the Allied lines.

Jasta 11 and Jasta 4, or Jasta 26, were the next in line to waste a couple more 70 Squadron Camel pilots and as one of those who left at 19.00 to patrol the Roulers-Menin route on Saturday 28 July 1917, 2Lt Crang would come very close to having his Camel connection cut very short. Over Roulers, the JG1 units had already removed another two pilots from the squadron's pilot contingent: Lt Joseph Cecil Smith (R Warwick's Regiment, nineteen-years-old, a native son of Solihull with no known grave and remembered on the Arras Memorial) and 2Lt R.C. Hume (thought to be downed in flames by Ltn Eberhardt Mohnicke, he survived unwounded as a POW).

Flying B3863 the squadron's latest Camel, 2Lt Crang had this to tell the author:

*First time shot down. I had just left a scrap and was turning in the cockpit to look over my left shoulder when my instrument panel was shattered by a burst of gunfire. Five bullets penetrated the lower left side of my seat and had I been sitting upright would have suffered a severe wound.... Managed to glide the aircraft to safety and crash landed in French held support trenches. While flying west attempted to use the rudder, however, only the fuselage moved the wings stayed straight. I'd cradled the 'joy stick' between my legs and as I hit the ground the sudden impact slammed my face against the joy stick taking out most of my front teeth!*

Undaunted, 2Lt Crang 'enjoyed' two days with French officers, well dined and over wine, then sent via tender back to his squadron and then the dentist. Further extractions removed his usefulness. He missed the ground attack operations on a rainy 31 July, the general Allied offensive heralding that the third battle of Ypres now underway.

Casualties were one thing and what the CO was looking for was inspired leadership. Two pilots stood out, Capt Noel William Ward Webb, an 1897 Kensington born Brit, and an ancient Capt Clive Franklyn Collett, a 'Kiwi' from Blenheim whose RAeC 1057 certificate was attained in the dawn of aviation warfare, 29 January 1915. Having overcome a crash



**B3779 was lost on 17 July 1917, with Lt C.S. Workman MC becoming a POW. It seems likely that B3779 is the subject of these three images.**

:CCI Archive & M. Davis

when delivering an aircraft to France, he had been employed as a test pilot and was the survivor of an experimental parachute decent, but no operational flying to his credit. This made 70 Squadron pilots, like 2Lt Crang, take notice the moment they heard 'the old man' was handed the command of B Flight on a platter. Noel Webb brought to the squadron a different type of individual. He was withdrawn, morose and when Lt C.S. Workman (once his FE2b observer in 25 Squadron a year earlier when both were awarded the MC) failed to make it home on 17 July, the first 70 Squadron pilot downed in combat, Capt Webb acted as if there was no tomorrow. Ignoring nearly all the risks, he quickly piled up 'victories' – five in July 1917 after Lt Workman was posted missing. This scoring binge ended in dramatic fashion on 13 August 1917, with three in one day; three DFW's – two OOC, one destroyed. These two leaders were making up for the alarming number of 70 Squadron pilot casualties. They were supported by a third achiever, a County Down Irishman Lt Edward C. Gribben, his pair of July out of control claims and three more in August 1917 levelled the loss/claims accounting.

Not one to promote his own fighting dexterity, James Crang



**Captain Noel William Ward Webb, C Flight.**

**:M.Davis**

at the very least hoped he could assist in bringing down the opposition. He now had a Camel, B3890, B2, the first one he seemed comfortable with. It had only been delivered to 70 Squadron on 10 August 1917. This was to be the aircraft the Torontonian was flying in the evening of 13 August 1917. All eyes were on Capt Webb; as the leader they would respond to his every move. When he signalled, by firing a red Very's light, that an attack was about to proceed against a trio of two seaters, as he was proceeding east to join the B Flight segment of a two flight OP and when at 16,000ft over Roulers at 18.30 pm 2/Lt Crang made out what he perceived to be a 'standby coloured' two seater, 1,000ft above him and heading in the opposite direction, straight for the Allied lines. Crang followed until



**Captain Clive Collett, B Flight commander.**

**:CCI Archive**

the EA banked and, just south of Ypres, nosed back towards his own line of trenches:

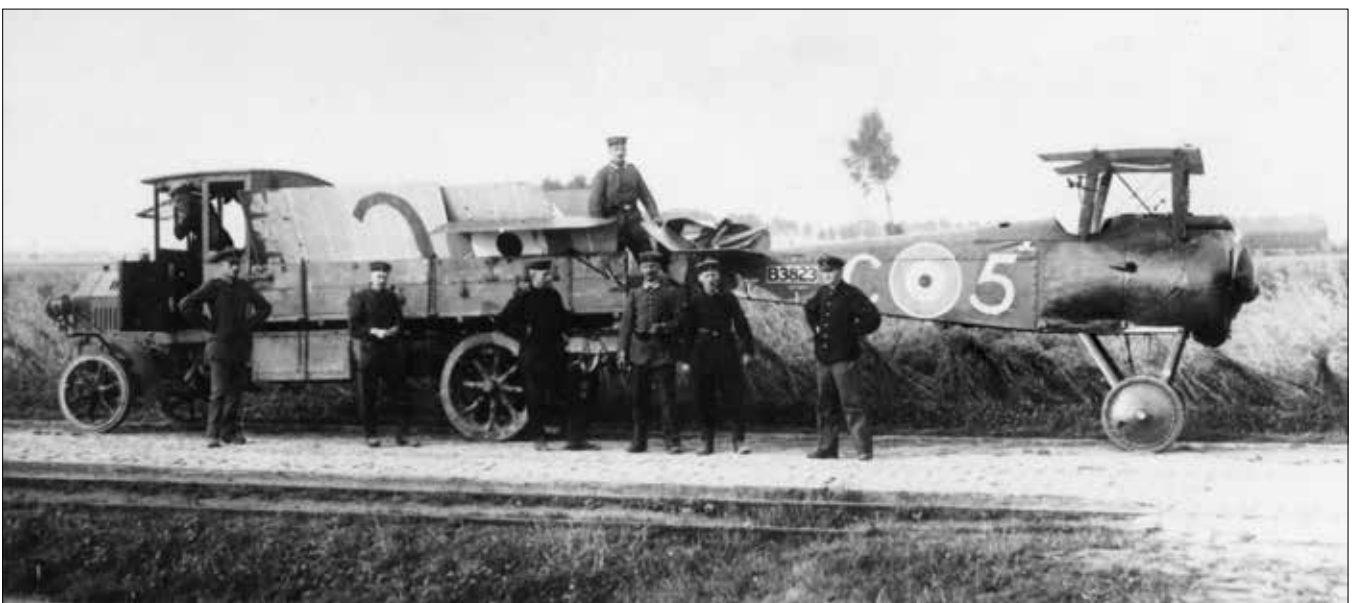
*I got underneath him and stalled my machine, firing both guns at him. I then lost sight of him and saw three Sopwith Scouts coming towards me. A few minutes later I saw this EA again and opened fire on him. He suddenly turned over and dived vertically for earth leaving a large streak of smoke behind him which appeared as if his petrol tank had been hit. He dived vertically down through the clouds and I lost sight of him.*

This paragraph, the last one in his Combat Report claim, signed by the Recording Officer 2Lt H.V. Rabagliati, would not make it to Wing as there was no other 70 Squadron pilot to provide confirmation. 'Rag' was not going to make a possible judgement on Crang's claim; he would just have to try again. Such a wait looked like it may never see the light of day. Only then, when sitting in the mess with their faces a little downcast, and pondering, that night, what to do to share the exploits of



**B3823, C-5, (above right and below) was lost on 28 July, with 2Lt R.C. Hume made POW.**

**:CCI Archive**





Lt James Gordon Crang and his Clerget 9b engine Camel B3890 B-2, Estree Blanche (Liettres) aerodrome August 1917. Delivered to 70 Squadron on 10 August 1917, he only made thirty operational flights in this machine, damaging an EA two seater south of Houthulst Forest at 19.00 on 13 August 1917 and the memorable 16 August 1917 Bisseghem solo aerodrome raid. Damage from machine gun fire required a refurbishment at the ARS of 1 AD and upon B-2s' Squadron return Lt N.C. Seward sent it back to the same repair shop. The deadly month of September 1917 was almost in its final week when B3890 returned again to 70 Squadron, carrying the letter H, indicative of 'B' Flight machines. This Camel lasted until 29 January 1918 when, in combat with ten Albatros Scouts, the pilot, Lt K.M. Rodger, was brought down and taken POW. His victorious assailant was Ltn Karl Bolle, Jasta 28. This photo was used by expert Canadian model maker Fred Huffman to build a very exacting replica of this Camel. The flight identification letter and number on the fuselage had received a white outline.  
:James (Jim) Crang Jr via S.K.T.

the squadron more evenly, the bandwagon obviously more prone to trumpet the two captains' continuous successes, they made it known to the CO they were willing to attack an enemy aerodrome, having heard via the 'jungle telegraph'

2Lt Crang, his fitter on the left, his rigger to the right and Camel B3890 with deputy leader ribbons, one on each rear outer strut enhancing his and the aircraft's dignatorial aspect. The number '2' is clearly noticeable on the lower left wing's undersurface. His flight commander Capt Clive Franklyn Collett, almost a legend in his own time, often scared Crang almost to death. The 'Kiwi' feared neither man nor beast, was intrepid once an EA appeared to be vulnerable and astounded his deputy Lt Crang who saw him destroy an Albatros D.V outright on 10 August 1917 NE of Polygon Wood. A little crash shy since a high wind 9 August 1917 caused him to collide in flight with another B Flight pilot while flying Camel B3863, the second of its type he flew in 70 Squadron, Lt Crang after the solo aerodrome raid of the 16 August really added another ten years onto his life with the breaking up of Camel B3931's engine right before his astounded eyes. The forced landing which soon followed very mercifully told him to leave this fighter pilot business and find a safer kind of work. Maybe as a test pilot.  
:James (Jim) Crang Jr via S.K.T.



that 66 Squadron were also in the same market. HQ was in step with a 'Bishop like' scheme. Three German aerodromes were selected: Abeelhoek and Marcke allotted to 66 Squadron, Bisseghem was 70 Squadron's objective.

I must have been nuts! Jim Crang told this author, but that 'Bishop thing' really stirred our imaginations. Capt A.R. Hudson the overshadowed C Flight commander would be flying Camel B3873 C5, Crang B3890, B2. These raids were also included in the aerial operations for the battle of Langemarck.

Shortly after leaving their own aerodrome at 04.55 on 16 August 1917, 2Lt Crang lost sight of the captain's Camel in the Lt E.C. 'Pat' Gribben, at left, who flew 1½ Strutters then Camels in 70 Squadron.  
:M.Davis



enveloping mist. Even the instrument panel was almost in direct the route to Bisseghem a 'by guess and by God' affair. What were four bombs going to do? That didn't seem to matter. *They just went along for the ride!* or some sort of remark was Crang's answer to another one of my questions. He told me he wrote out a raid report after his return. As this was 1961 and I only had the RFC communiqué report No.101 to go by, it would be almost another twenty years before it was published on page 424 of 'Canadian Airmen and the first World War' by S.F. Wise: *I crossed the lines over Armentieres [sic] and proceeded south of Comines and arrived over Bisseghem aerodrome. I found it exactly in accordance with the photograph. All the hangars were closed, there were no machines on the ground and no people about.*

[The most recent aerial photos of Bisseghem aerodrome were taken on 7 July 1917. They showed an increase in size by fourteen hangars, 22 in all. Jasta 'Boelcke' had last occupied this location from 7 to 11 August 1917, before moving to Ghisteltes. Jasta 6 was there 10 June 1917 to 1 July 1917. The present tenants were Schutzstaffel 4 (9 June 1917 to 24 August 1917). They acted as escort for FA256(A) who, presumably, were located on the same aerodrome. Schutzstaffel 12 (18 July 1917 to 18 September 1917) along with FA 224(A) W were also here and Royal Bavarian Schutzstaffel 30B escort for FA221(A)]

*I came up from the SE over two Bessoneaux hangars and I dropped a bomb from about 500 ft over these hangars but it fell on the road behind and a little to the right. I went straight across the aerodrome, diving all the time on two groups of RE hangars on either side of some trees. I dropped all my bombs and observed one fall in the trees between the two groups of hangars.*

*I then circled around at about 100 ft and fired into the two Bessoneaux hangars with both guns but could see no effect. The aerodrome still presented a deserted appearance, the hangars all remaining closed and nobody appearing on the scene.*

*I then turned south and (about two and a half miles SW of Courtrai)... I observed another aerodrome. There were at least five hangars... I fired both guns into one RE hangar from about 20 ft above and I crossed the aerodrome. I saw a two-seater machine on the ground with nobody about. [this was probably Marcke aerodrome]*

*I immediately turned back and fired both guns into it and as I did so I turned and observed the RE hangar into which I had previously fired, in flames. The canvas had already burned off and I could see a two-seater machine burning inside. (TNA: AIR1/917/204/5/875)*

Capt A.R. Hudson came down behind the German lines to spend the remainder of the war as an unwounded prisoner. *To be perfectly honest*, James Crang suggested, *he was not particularly missed*. An unusual statement coming from him, the reasons why never explained.

A closer examination of Crang's Camel B3890, B2, showed that there was combat damage which required attention at the Aeroplane Repair Section, 1 AD. It was not mentioned in his Raid Report. After attacking a train at Rumbeke, his Camel was shot up and he was forced to land at about 06.00, adding to the damage. The landing was far from Crang's most proficient.

In place of B2, 2Lt Crang chose, as his temporary replacement, Camel B3931, fresh from the ARS, its Clerget 9B hardly run in and that may have been the problem for, on his first flight since the aerodrome episode, he took off in this near pristine machine and opened up the engine. Once he did so, the engine rebelled and began to break up in the air tearing off the cowl. He landed one mile from the aerodrome. This was another example of *I'm OK but the aircraft isn't*. But Crang wasn't. Sent to hospital in England it would take six months convalescence before he was ready and able to join Boulton & Paul Ltd, Norwich, as a test pilot. They built over 1,500 Camels during WWI and nearly every machine he personally tested had some kind of fault. *I didn't particularly care for their*

*products*, a direct quote.

Awarded to AFC on 2 November 1918, *in recognition of valuable flying services*, Crang was employed until July 1919, when the firm's final Camel contract for a hundred H-serial machines was completed and with flying now a part of his psyche, post WWI he was back in Canada where he devoted much of his time to his own aviation cargo company, one he operated using war surplus JN-4s flying out of the old wartime hangars at Leaside until 1927. This operation never truly got off the ground. Using nine aircraft until 1923, hassles with his financial partners were an ongoing headache and once these and more modern aircraft were destroyed by fire in 1930 a few years after moving to a less convenient location to the west of Toronto, Jim Crang for several years, taught 'The Theory of Flight' at Central Technical School, a night course, the first of its kind in Canada. This lasted from early 1924 to 1939. In between the two wars, Jim Crang acted as the personal pilot, flying a Dragon Rapide, for a top 'Globe and Mail' employee with the name of McCullough, considered to be 'Canada's first aerial reporter'. Flying in those inter-war years presented these ex-WWI pilots with many showy options. Crowds often gathered to watch events conducted by the Toronto Flying Club and competition among some of the old wartime pilots was particularly keen. He crashed a small Buhl Pup monoplane in competition with Earl Hand, ex 45 Squadron 1918 in Italy, who flew a larger version of the Martsville Michigan, manufactured in 1929 at Leaside.

He was turned down by the RCAF in WWII – his heart not up to the task – but as a civilian instructor he logged 4,000hr on Avro Ansons at London, Ontario's airport until 1943, when he was 'declared unfit' for any further flight instruction of his pupils whom he had previously taught at night school and had initially 'washed out' as RCAF pilot material. Jim Crang retained his pilot's licence until the age of 62 but rarely did he fly in those last years. Not too long before his Parkinson's crippled his life completely, he operated a Toronto landmark, the Oakwood Stadium Public Swimming Pool – the author

Army Form W. 3548

### Combats in the Air.

Squadron: No.70	Date: 18th August 1917.
Type and No. of Aeroplane: Sopwith Camel B/3931.	Time: 7.40 p.m.
Armament: 2 Vickers Guns.	Locality: S.E. of GHISLIVELT.
Pilot: S/Lt. J.G. Crang	Duty: Offensive Patrol.
Observer: ...	Height: 11000/10000 feet.
	Result: Destroyed..... Driven down out of control..... Driven down.....

Remarks on Hostile Aircraft:—Type, armament, speed, etc.

4 strut Albatros.

Narrative.

When in formation led by Capt. Collett, I observed 4 E.A. coming East and South of GHISLIVELT. Capt. Collett fired on one which ~~had~~ dived, but subsequently flattened out. The other three fled East. I observed Capt. Collett again dive on the same E.A. which spun down, being fired at from very close range. The E.A. then continued spinning and finally went into a vertical nose-dive. I lost sight of it in a ground mist.

*James Crang*  
S/Lieut.  
No.70 Squadron, R. F. C.



Two images of Jim Crang (above and below, right) when he served as a test pilot for Boulton Paul built Camels at 3 (Norwich) AAP.

:James (Jim) Crang Jr via S.K.T.

used the facility once – which Crang’s father, a builder, erected shortly after WWI.

The son of Jim Crang, and a partner, became one of Toronto’s featured architects, their fame in the mid 1980s after designing any of Toronto’s more recent landmarks was such that they also offered to design and build a retractable roof domed stadium for the Toronto waterfront. These two architects, both cousins, cracked the English market and when chosen restored historic Beaver House, original home of the Governor and Company of Gentlemen Adventurers Trading into Hudson Bay – the Hudson Bay Co – in the heart of London.

Jim Crang Jr a world champion six metre sailor and WWII bomber navigator, who in 1984 also operated his own flying charter business, had a keen interest in his own father’s WWI 70 Squadron service and commissioned one of Canada’s most proficient model builders, Fred Huffman, to build a scale model of his father’s Camel B3890, B2, asking this author for information concerning the colours etc. When finished, the model, a near perfect one, was displayed in the company’s office.

Unexpectedly, his father died suddenly on 25 September 1966, while visiting relatives in Briarcliffe NY. His body was returned for burial to Toronto. All of this was a surprise to his old 70 Squadron observer, ‘Spike’ Sully.

#### ACKNOWLEDGEMENTS

Retired AVM John Alfred ‘Spike’ Sully and James Crang, first and foremost. They were followed in a more minor way by ‘Moko’ Kennedy ex 70 Squadron observer, David Allan’s son Stewart, ‘Ern’ Sliter’s widow Dorothy, Arthur Bourinot’s widow Nora Sherwood, Roy Gridley his daughter Joan (Mrs Jack Watson), John C. Huggard (70 Squadron), Mrs J.W. Gillespie and Jim Crang Jr. Also worthy of mention is Dr Dieter Gröschel MD who assisted back in 1994 with photos of J.W. Gillespie as a POW.





70 Squadron Camel B2307, B-4, after capture on 19 August 1917. Its pilot, 2Lt J.W. Gillespie, was brought down and made POW by Vzfw Fritz Jacobson, Jasta 31, as the German's second combat victory. Jacobson is seen posing in front of B2307 in the upper photograph.

:Dr D. Gröschel and CCI Archive.

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It is easy to tell the approximate date of this photo by the semi flapper outfit his young wife Miriam wears beside her husband who is wearing his old RAF uniform on the celebratory occasion of a visit by American military aircraft to the Leaside aerodrome in the mid 1920s. The mother of James (Jim) Crang Jr and a daughter, Marilyn, she outlived her husband by nearly 14 years. Her obituary appearing in the Toronto Star of 27 June 1985, a day after she passed away in the city of her birth.

:James (Jim) Crang via S.K.T.

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# Productivity and the Air War



## The British Aircraft Industry in WWI - Pt 2

by Hal Wilson

*Newly completed Camels in Hooper's Chelsea works, late 1918.*

Did the British Aircraft Industry successfully overcome cultural obstacles – such as the inclusion of women workers, or even longstanding pre-war cultures of craftsmanship – towards meeting wartime aircraft production demands?

Compared to its modest pre-war roots, the British aircraft industry experienced explosive wartime growth. As part of this rapidly expanding 'ecosystem' of suppliers it was natural that new cultures of workmanship grew in tandem, with the inclusion of female labour as perhaps the most outwardly visible cultural shift. It can be said that the cultural obstacle to including female labour was overcome comparatively straightforwardly, as industries essential to the production of munitions or aircraft welcomed the influx of women during the war.<sup>1</sup> This should come as little surprise given the increasingly severe shortage of skilled male labour noted previously; indeed the post-war history of the AID is explicit in recognising this impetus, noting that it *necessitated the utmost possible use of woman workers*, and even that to *encourage the application of a superior type of girl, the higher grade of woman examiners was introduced*.<sup>2</sup> Company histories also repeatedly emphasise the scale of this influx, for instance at Ruston subsidiary Hornsby's of Grantham, *females in the foundry were unheard of until the Great War, but the practice continued thereafter*.<sup>3</sup> At Ransomes of Ipswich *2,200 women were employed by 1918, many in the production of aeroplanes where the work was of a very high standard, a remarkable increase given Ransomes' entire workforce numbered only 2,500 personnel in 1911*,<sup>4</sup> and that pre-war *the only women employed at Ransomes were 'the housekeeper and sundry charwomen'*.<sup>5</sup> Likewise at Glasgow's Weir Company, *since the outbreak of the war, women had replaced men... in the automatic department*, and 80% of the aero-engine department were female,<sup>6</sup> while even cursory review of team photographs in December 1917's print of *The Aircraft Rag*, Airco's in-house, employee-run magazine, reveals that several departments – including the Fabric Machinists' Department, Fabric Covering Department, Fitter's Shop, Erecting Shop and

Bolt Inspection Department – were entirely female,<sup>7</sup> with the latter team's 'History of the BID' in particular noting it had a female forewoman as early as 1915 and suggests a remarkably strong team spirit.<sup>8</sup> Similarly at the AID, female labour was introduced by 1915 and *from this time onwards throughout the war, not less than 50 per cent of the whole AID staff were women*.<sup>9</sup> Clearly recognising their increasingly depleted pool of skilled males, government entities and industry employers were demonstrably eager to overcome the cultural obstacles to, and successfully implemented the, widespread employment of female labour. A distinction must nevertheless be made with skilled, shop-floor males. The cultural obstacle to female workforces in the British aircraft industry was essentially confined to this level, with varying degrees of resistance, reflecting that *dilution struck at the everyday life of the worker, his job, his security*,<sup>10</sup> and more concretely that wartime dilution was driving a *narrowing of pay differentials between skilled and unskilled workers*.<sup>11</sup> Manifestations of such concern included light-hearted jabs in Airco's *The Aircraft Rag*, which as late as April 1918 quipped that *we have 'diluted' our labour both male and female until we have workers of the combined sexes and neither sex*.<sup>12</sup> It could also be seen more explicitly in the three-day strike of 911 male aircraft workers in London in February 1918 objecting to a *lady Welfare Superintendent*, with the Superintendent consequently resigning,<sup>13</sup> or the two-day strike of 700 male aircraft joiners in Cowes, shortly before the German Spring Offensive in March 1918, due to a *joiner discharged for refusing to sharpen tools for women workers*, resulting in the man's reinstatement.<sup>14</sup> Mac Kay nevertheless concludes that such resistance to *the introduction of women in skilled work has obscured the fact that, in most cases, women were introduced without opposition*.<sup>15</sup> Indeed, nationwide *1,659,000 women entered the labour force between July 1914 and 1918*,<sup>16</sup> with the proportion of females in the British workforce rising from 26.5% in 1915-16 to... 46.7% in 1917-18.<sup>17</sup> Clearly, the alignment of both for government's and suppliers' necessity comprehensively overcame the cultural obstacle to including women in the British aircraft industry, despite



King George V visiting the Sopwith factory in Kingston-on-Thames, with Sopwith Pups in the background.

shop-floor dissatisfaction. The consequent quantitative and qualitative boost to productivity resulting from that success can be neatly gauged from the AID's conclusion that *without the extraordinary keenness, energy and ability shown by the women staff in their work, the efficiency of the Department's inspection would have diminished to a serious degree.*<sup>18</sup>

The British aircraft industry faced further cultural obstacles to productivity from within its workforce, however. Specifically, the industry sometimes struggled to sustain positive relationships with, and sometimes quite literally the interest of, its labour. The industry's deeply interconnected nature with subsidiary industries also left it vulnerable to wider British labour disruption: the British cotton industry, for example, featured significant labour hoarding dynamics, resulting in *the abandonment of the government's plans to open aircraft factories staffed by women in Preston, Blackburn, and Burnley in 1917.*<sup>19</sup> Likewise the challenge of sustaining aircraft workers' day-to-day interest is captured in a 1918 report, with manufacturers emphasising *the importance of maintaining the interest of workers... [in] the production by a repetition process of some small parts of an aeroplane, these men and women find it difficult to realise that they are contributing effectively to one of our most valuable instruments of warfare.*<sup>20</sup> This extended also to government agencies supporting the industry, with the AID's own history noting that *only by constantly reminding the junior staff of their direct connection with... the Fighting Service, that efficiency was sustained despite monotonous work.*<sup>21</sup> These challenges aside, Sir William Weir, later Secretary of State for Air, had found as early as 1915 that *the central difficulty of organising the engineering industry for war [was] the relationship between the skilled tradesmen and their employers.*<sup>22</sup> In 1916, for instance, specific trades such as aircraft woodworkers had been agitating *for a common hourly rate, which was to be that of the highest paid craft,*<sup>23</sup> a demand recognised in November 1917 with the announcement that *to meet the urgent need for greater output of aircraft, the Minister of Munitions is increasing the wages and improving the conditions of aircraft woodworkers.*<sup>24</sup> Stevenson notes that *the number of strikes (many in the aircraft industry) rose from 730 in 1917 to 1,165 in 1918,*<sup>25</sup> but unfortunately fails to elaborate on possible causes for the industry's apparent susceptibility to strike action. The impact to quantitative and qualitative

productivity can nevertheless be seen in the complaint of one exasperated SBAC member in November 1918 that *the Society is not sufficiently aggressive... workpeople have only to formulate a demand for it to be conceded*<sup>26</sup> For example, a claim went to arbitration on December 5th, 1917, *for an advance of wages to bring the rate at Wolverhampton up to the rate at Birmingham, with a verdict by December 12th that the grades of workpeople... in respect of Wolverhampton shall be increased by 1s. per week.*<sup>27</sup> Considering Wolverhampton's prominence in the aircraft industry, especially Sunbeam's local position, the verdict's alacrity is perhaps unsurprising. But the demand's parochial nature – to align pay with nearby Birmingham – also gives vital insight to Stevenson's observation above: that labour's grievances were *economic rather than political.*<sup>28</sup> Similarly when Brancker visited Coventry in 1917, preventing a strike among local aircraft workers, his summary to then-Prime Minister David Lloyd George noted *the men have no really definite grievance, but are suffering from a discontent which is the cumulative result of a series of pinpricks... while half-trained amateurs take their place.*<sup>29</sup> It is also important to reflect on the patriotic mindset of the British working class, for whom *one profound... element of British working class consciousness is a love of Britain and a willingness to defend her.*<sup>30</sup> Nor were the workers of the British aircraft industry an exception: when Brancker visited Farnborough after Royal Aircraft Factory workers struck against piece-work introduction on December 3rd 1914, he personally gave *Lord Kitchener's message and... the point of view of the nation and the Army,* with piece-work consequently adopted the next day and Brancker noting *we never had any more trouble at Farnborough.*<sup>31</sup> Similarly Aircor's 'Aircraft Rag' abandoned its normally jocular tone after March 1918's critical German Spring Offensives, instead exhorting *let us meet this hour of Destiny with an unflinching face.*<sup>32</sup> That same month the editor of 'The Aeroplane', another industry publication, said of Aircor's staff that *I do not suppose your people need to have propagandist work done... so badly as some shops.*<sup>33</sup> The observation highlights that just as the British Home Front was not a monolithic entity, per Karen Hunt's argument that place framed the experience of all on the Home Front to the point where... [we can instead] *speak of local 'Home Fronts',*<sup>34</sup> the cultural obstacles of poor labour relationships were not uniform across Britain's regions. At

least on first glance, the Scottish ‘home front’ of Clydeside provides a contrast to labour relations at Airco. Marwick described Glasgow’s *labour movement... at its most colourful and cohesive*,<sup>35</sup> and extreme Marxism predominated in local labour leadership. Weir viewed these leaders as *inept, naïve, quarrelsome and excessively parochial*,<sup>36</sup> and the Glaswegian *skilled worker’s attitude to war work as lazy and self-centred*,<sup>37</sup> but in truth *the bulk of the Clyde workers were closer to the government than their shop stewards... whose political agenda was unappealing*,<sup>38</sup> underlining that this cultural obstacle to productivity was often more transactional than confrontational in nature. Even so, the cultural obstacles of labour relationships and engagement were not effectively overcome and instead only mitigated, with undeniable harm to **quantitative** and **qualitative** productivity. During August 1917, for instance, *all munition workers were given ten days’ holiday... and we lost fifty percent of our output in new engines and aeroplanes*,<sup>39</sup> while in the months of November and October 1917 alone, the aircraft industry saw 281,600 man-days lost to strikes.<sup>40</sup> It nevertheless remains important to place these in nationwide context, whereby even *during the worst period of 1917 [British] workers were perhaps annoyed and exhausted, but there was not deep-seated discontent*.<sup>41</sup>

One further cultural obstacle to the productivity of the British aircraft industry lay in resentment of the new and exacting quality demands associated with delivering aircraft components, as well as the comparatively lower prestige of supplying aircraft demand. To illustrate, on June 7th 1916, Claud Johnson of Rolls-Royce briefed the Air Board of *the difficulty which he had with sub-contractors... [which, despite contracting with Rolls-Royce] sometimes received orders for other work from the War Office or Admiralty to which they gave preference*.<sup>42</sup> Nor was Johnson’s observation an isolated case, as similar complaints were made in 1917 of ball bearing suppliers that *cases were still occurring of tools and labour supplied by the Department of Aeronautical Supply being put on to Admiralty work which had a higher priority*.<sup>43</sup> Although a pre-war example, it is notable that Wolseley Motors’ July 1910 engine catalogue prominently boasts the firm’s position as *Contractors to the Admiralty*.<sup>44</sup> In effect, as Weir noted in late 1917, *Aeronautical supply... [was] the last large service to impose its claims on industry during the War*,<sup>45</sup> with the consequent cultural obstacle of lesser prestige for suppliers to pursue aircraft work over Admiralty requirements in particular. The unfamiliar and more strenuous nature of aircraft quality requirements also presented a cultural obstacle to productivity through disagreement with, and apparent resentment against, the requirements generally and the AID particularly. One remarkable case was a conference held June 29th 1917, between the AID Director of Inspection and John A. Hannay, the Austin Works Manager, who contended *that there was a stagnation of output due to AID procedure*, but it was subsequently found that of the AID’s requirements, *no expression of opinion could be drawn from them [Austin] that such requirements were unreasonable*, and regarding possible future delays resulting from them, *they [Austin] agreed this might be expected*.<sup>46</sup> The cultural obstacle of frustration with quality requirements is visible at the lowest levels of the aircraft industry also, albeit in less severe terms. One Airco employee went so far as to write ‘An Ode to the AID’ in the ‘Aircraft Rag’, declaring: *It seems to me the AID / Have red chalk on the brain / For everything you send them / Will surely come back again*.<sup>47</sup> However, good relations between local AID representation and their Airco colleagues apparently prevailed, mitigating the cultural obstacle to stringent quality requirements: an ‘Aircraft Rag’ caricature of on-site staff did not negatively portray the AID team.<sup>48</sup> This team in turn showed remarkable self-awareness by producing a self-deprecatory article describing the AID as a *conglomeration of brains drawn from*

*the four corners of the earth to cause trouble and dissension, also stressing that we are here to help you all, and especially the boys who go up in the air. But do not forget that Any Imbecile Does!*<sup>49</sup> As noted above, however, cultural obstacles were not uniform across all suppliers, and the AID’s own post-war history scathingly remarks that *certain firms right up to the period of the Armistice were incapable of performing ‘selective inspection’ of their parts, whereby quality checking was partially delegated to suppliers*.<sup>50</sup> The introduction of selective inspection nevertheless saw that *the very firms which had been most antagonistic to... detailed inspection by the AID provided of themselves the strictest detailed examination by their own staff*,<sup>51</sup> as firms grew to understand the value in avoiding wasted time, labour and parts which might otherwise have been detected at earlier machining operations. That the cultural obstacle of resentment against high quality requirements was ultimately overcome is visible in the fact that, *out of the last 28,000 aircraft accepted by the [Aeronautical Inspection] Department there were only nine cases of accident possibly traceable to defective workmanship*.<sup>52</sup> Nor were government agencies and supplier leadership teams alone in driving this qualitative improvement, as an explicit shop-floor ethos can be observed by April 1918, captured in the assertion that *the self-respecting craftsman is the backbone of Britain. On him depends the quality and quantity of the munitions supplied... [and] law, order and decency in this country*.<sup>53</sup> In short, despite initial frustration among British aircraft industry suppliers, this cultural obstacle was overcome effectively by the end of the war, much to the benefit of industry’s qualitative productivity.

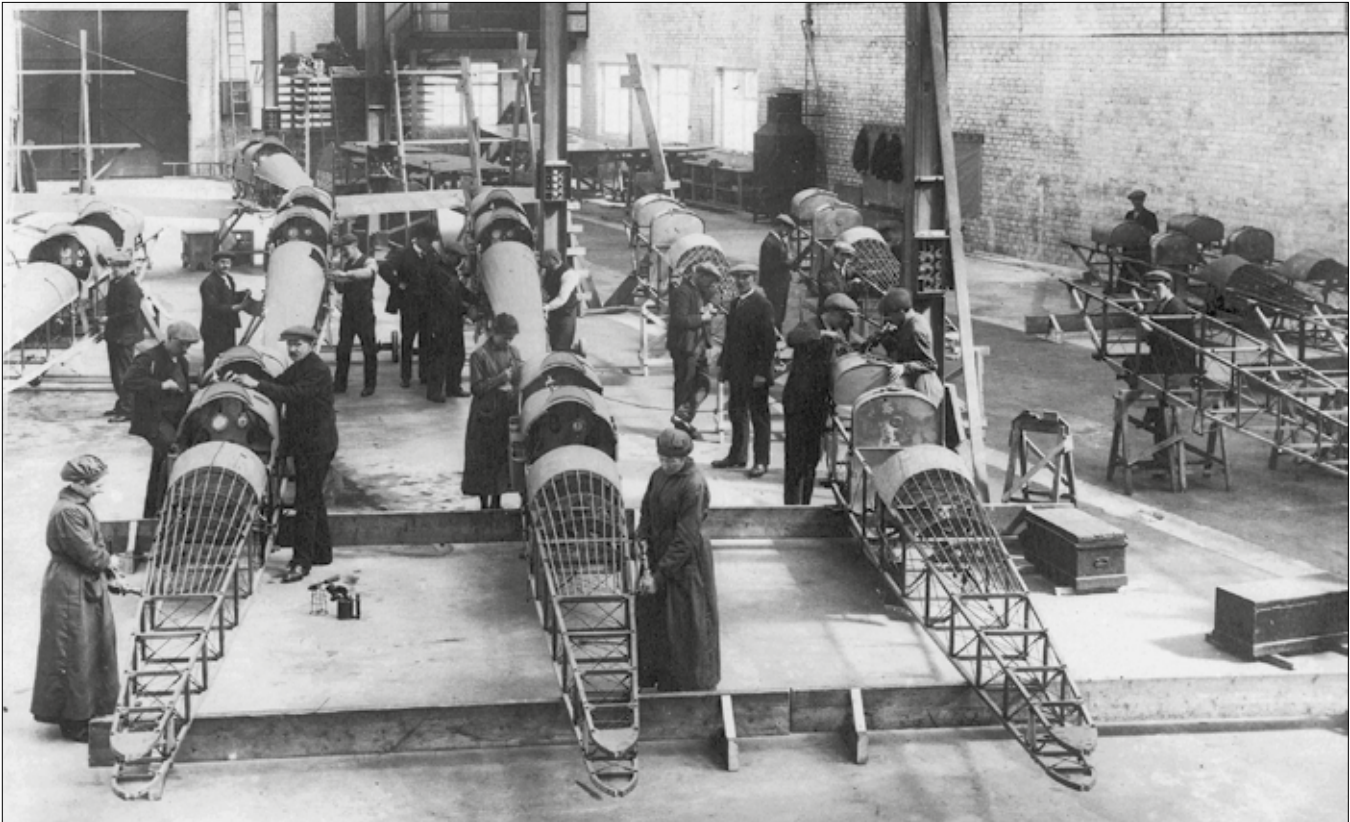
A further cultural obstacle to productivity in the British aircraft industry was posed by entrenched cultures of craftsmanship which clashed with mass-production requirements. Writing in 1967, Saul argued that in order to understand *the lags and successes of British engineering there is need for more detailed study of its training and institutional patterns*, noting that it was the steam engine builders, bastions of a culture of bespoke craftsmanship, which *were typically the places young men served apprenticeships*.<sup>54</sup> In an exhaustive 1986 study of attitudes in British industry prior to the First World War, Coleman and Macleod similarly claimed the *unenthusiastic attitudes displayed by many, though not all, British businessmen towards new productive techniques [which] clearly had long and tenacious historical roots*,<sup>55</sup> meshing with wider arguments that pre-war British elites were disinterested in *mere trade* compared to finance.<sup>56</sup> Nor did Coleman and Macleod see this cultural obstacle as limited to elites or employers, arguing *that mutual suspicions on the part of employers and employees have long influenced the attitudes of British businessmen towards the introduction of new techniques*.<sup>57</sup> Aldcroft likewise aligned with the Coleman and Macleod thesis of a blinkered British industrial culture, noting that by 1914 *no [British] manufacturer had managed to produce more than one car per man per annum*,<sup>58</sup> while Fearon described pre-war British aviation as *relatively backward*.<sup>59</sup> Certainly, pre-war *aeronautical engineering [was]... beyond the compass of existing engineering institutions*, with the Aeronautical Society of Great Britain including only 349 members in 1914, compared to the Institution of Electrical Engineers’ 7,045.<sup>60</sup> The Rolls-Royce ‘Eagle’ engine offers a prime example of how such legacy cultures of craftsmanship posed a quantitative productivity obstacle, as *its success owed largely to the skill of the mechanics employed... [and] being hand finished did not lend itself readily to mass production*, although Eagle engines were reportedly *the most reliable engines built*, affirming that craftsmanship at least offered a qualitative productivity benefit.<sup>61</sup> Closer assessment of the British aircraft industry nevertheless reveals that the cultural obstacle of craftsmanship was not insuperable – and, in turn, shows stark limits to the Coleman and Macleod

thesis of a blinkered industrial mindset. This is not to deny the significance of the obstacle of craftsmanship, as Weir, then-Director General of Aircraft Production, in 1917 viewed the British aircraft industry *sympathetically but without illusions... the manufacturers needed educating*.<sup>62</sup> His solution in aircraft production at the Weir Company in 1915 had been a sub-assembly scheme which was *the first of its kind in the world and depended heavily on the 'Just in Time' principle*, whereby components were delivered at exact times for immediate inspection and assembly, in turn requiring *standardisation and interchangeability of aircraft parts*.<sup>63</sup> Nor was such standardisation unheard-of among firms which entered the British aircraft industry: pre-war Wolseley Motors enjoyed a *standardised production system*, and by 1914 was described alongside Sunbeam as one of *only two British motor companies which... had made 'substantial progress... towards new methods of production'*.<sup>64</sup> Morris Motors, founded by William Morris, had also achieved major progress in pre-war quantitative productivity, with over 1,000 Morris Oxford cars produced annually by 1913.<sup>65</sup> Likewise at Sunbeam, Coatalen emphasised *standardising practice in the shops*,<sup>66</sup> and the firm, which supplied the greatest quantity of British-made aero-engines in 1915,<sup>67</sup> repeatedly claimed to possess deep pre-war *experience in standardising motors on a large scale*,<sup>68</sup> or that *by August 1914... [Sunbeam] had standardised aero engines... on a large scale*.<sup>69</sup> Such progress is all the more remarkable in that, as one motor agent noted in 1911, *the sale of cheap cars can never be as large in England as it is in the United States*.<sup>70</sup> With domestic *British demand... the dominant factor*<sup>71</sup> in pre-war manufacturing trends, this in turn limited the need for British automobile mass-production. Aldcroft's dismissive assessment of British car output failed to consider this, and indeed that pre-war British motor manufacturers prioritised smaller vehicles, being *much less costly than full scale motoring*,<sup>72</sup> as well as large-scale cycle manufacture, which was the first British product-line to achieve *interchangeable batch production and production for stock*.<sup>73</sup> In other words, contrary to the Coleman and Macleod thesis, new entrants to the British aircraft industry could call on a small but growing pool of mass-production experience from the pre-war British motor industry to offset the cultural obstacle of craftsmanship. Nor is the motor industry unique in this regard, as Dewey notes that among the agricultural machinery suppliers which entered the wartime aircraft industry, there is *little evidence to support the view... [of] entrepreneurial failure before the 'First World War'*.<sup>74</sup> The Coleman and Macleod thesis similarly fails to consider that, under the mounting pressure of wartime demand, suppliers pursued unprecedented collaboration, with one contemporary source noting *the works manager of a leading British aeronautic engine factory told us that whereas before the war inter-change of visits between works managers of plants like his was practically unknown, this had become common and was of great benefit professionally and also from a production standpoint*.<sup>75</sup> In short, rather than Coleman and Macleod's notion of a blinkered industrial mindset holding uniformly to old cultures of craftsmanship, the wartime aircraft industry recognised the quantitative productivity benefit offered by standardisation, and where possible collaborated to overcome the cultural obstacle of craftsmanship.

Leadership within the British aircraft industry also sometimes represented a significant cultural obstacle to individual firms' productivity. Although for contemporaries *managing directors were still regarded as mere servants of a company... [and] carried little weight with the investing public*,<sup>76</sup> even cursory assessment finds that leadership cultures held disproportionate significance, with a prime example being that of Sunbeam's Chief Designer, Louis Coatalen. Sunbeam boasted that it *produced a greater variety of types of aero engines... than any other firm*<sup>77</sup> – not least because of Coatalen's

*mercurial personality... [who] seems to have preferred to continually to move on to the next project*.<sup>78</sup> His leadership culture drove constant innovation at Sunbeam, both in his pre-war racing designs which included a *far-sighted feature*, whereby weight was minimised *so that the engines were capable of running at high speed*,<sup>79</sup> or in his January 1915 patenting of a *novel engine layout which illustrated the imaginative way his mind often worked*.<sup>80</sup> Coatalen perhaps unwittingly captured the essence of this leadership culture in August 1917, stating that *in the Sunbeam factor [sic] experimental work is held to be of vital importance*.<sup>81</sup> But Coatalen did not dedicate *at all times his undoubted abilities... to the main job in hand*.<sup>82</sup> In 1916, Coatalen unbelievably *found time and resources to build six-cylinder racing cars to take to America*,<sup>83</sup> even recruiting an American racing-driver *to compete on the AAA tour under his management in 1917... [because] Coatalen had a score to settle*,<sup>84</sup> with a former Sunbeam driver who quit to join Peugeot.<sup>84</sup> Coatalen's less-focused leadership culture had an adverse impact on Sunbeam's qualitative productivity. In January 1918, Weir reached the scathing conclusion that Sunbeam had *suffered severely through lack of a definite technical development policy... insufficient experience or time has been devoted to the thorough development and perfection of any one [engine] type*, and Weir even considered turning Sunbeam facilities over to Rolls-Royce, hesitating only over the *advisability of killing the individuality of a well known progressive firm*.<sup>85</sup> Weir's instinctive turn to Rolls-Royce is unsurprising, given that even Sunbeam's best engine models *never seem to have developed into engines as reliable as Rolls-Royce's*.<sup>86</sup> Rolls-Royce also offers a stark contrast to how Coatalen's leadership impacted wartime productivity at Sunbeam, as Rolls-Royce was a firm where *the company's internal culture was set very much by [co-founder] Henry Royce*.<sup>87</sup> An engineering perfectionist, Royce drove a more methodical leadership culture under which *a development programme was instituted to refine the [Eagle] engine... while retaining its proven reliability*,<sup>88</sup> with obvious benefits to the *qualitative productivity of the firm*. Another contrast can be found in the leadership of Airco under its founder and Chief Designer, respectively George Holt Thomas and Geoffrey de Havilland. The former displayed a robust tolerance for risk-taking, declaring that aircraft manufacturing *is normally a chancy business... it is only legitimate to do reasonably well out of it*,<sup>89</sup> while the latter built Airco's culture around his design philosophy of [and].<sup>90</sup> The qualitative and quantitative productivity benefits of this are easily gauged, with De Havilland's early DH1 design, for instance, described as *a feather in the cap of Airco, as it can be reproduced without the delays arising from the necessity of purchasing almost unobtainable fittings. Everything about the machine is the very simplest*.<sup>91</sup> For additional simplicity, De Havilland's later DH9 also *incorporated many DH4 components*,<sup>92</sup> and remarkably, on June 18th 1917, after a *conference between Sir William Weir... and Captain de Havilland, it was decided to adopt the DH9 design... owing to the simplicity of the design*.<sup>93</sup> Of the then-experimental DH7, the Air Board's Technical Department in May 1917 noted an 'anticipated result' of *very good performance*,<sup>94</sup> underlining the degree of trust won by De Havilland's culture at Airco, and the qualitative productivity that resulted from it. Perhaps not unnaturally, Thomas was by 1920 boasting that *our designs... are certainly at the moment the best in the world*.<sup>95</sup> In short, where company cultures were fostered by strong leadership, the quantitative and qualitative productivity of a firm was actively enhanced – but at Sunbeam, the obstacle of a poor leadership culture was not effectively overcome, to the firm's detriment.

In summary, the cultural obstacles to productivity were, on balance, successfully overcome. This was not always the case, not least regarding the increasingly transactional



**BE2es under construction in Scotland as part of the batch group-built under the supervision of G. & J. Weir, Cathcart and employing both men and women.**

culture displayed by the industry's workforce over economic grievances. At individual suppliers such as Sunbeam, this was compounded by a less-than-effective leadership culture which dissipated scarce resource. Leadership cultures at other suppliers such as Airco were nevertheless remarkably effective at enhancing quantitative and qualitative productivity, combining with a growing movement to adopt standardisation over older, pre-war cultures of craftsmanship, as well as new cultures of quality control which enhanced the output of mass-production by minimising waste. Similarly, the cultural obstacles to including women in the workforce were overcome highly effectively by aligned action in government and industry, enhancing productivity by unlocking a considerable new labour pool.

How significant were British government agencies – such as the Aeronautical Inspection Department – in either aiding or hindering the British aircraft industry in meeting wartime aircraft production demands?

This investigation has already explored the role played by government agencies in overcoming technical and cultural obstacles to productivity – whether funding capital goods purchases or decisive support for introducing female labour – and such findings require no repeating. But as Fearon observes, *any study of the growth of aviation in Britain must stress the close links... between, on the one hand the government, and on the other the manufacturers of aeroplanes,*<sup>96</sup> not least because, as Higham noted, the British government, was for many companies not only their largest customer but also the only one.<sup>97</sup> The symbiotic nature of this relationship was historically unparalleled, as British pre-war industrial employers had been surprisingly marginal to government decision-making... remote both geographically and culturally.<sup>98</sup> Given this lack of pre-war rapport, the effective government support to overcoming obstacles as varied as raw material shortages, or resistance to new quality-control cultures, is perhaps all the more surprising. This investigation has nevertheless only briefly touched on government failures to effectively support

the resolution of such obstacles, and neither has it assessed government inefficiencies early in the war, nor indeed where government failed to coordinate properly among its own agencies. A prime example of this last issue can be noted in the planned rollout of the Sunbeam 'Arab' discussed previously. Specifically, after initial notification on December 19th 1917, General Hugh Trenchard, commanding the then-RFC in France, protested to Weir that *this is the first notification received out here that the Sunbeam engine is going to be used... we have never yet had a Sunbeam Arab engine out here, we have no mechanics trained in it,*<sup>99</sup> with General Brooke-Popham adding pointedly that *people at home do not appear to realise that we cannot... [adopt] an untried engine in the middle of a battle.*<sup>100</sup> Such scathing comments reveal a notable lack of coordination between home government and frontline commands on the Arab, compounded by repeated oversights during the preceding months, not least that the Arab *on which our programme and policy was built up very largely... had not passed a bench test,*<sup>101</sup> let alone flight testing. This was despite a January 1917 assessment by the Advisory Committee for Aeronautics indicating prototypes had been *thoroughly tested on a small scale, and so far no difficulties have been experienced,* concluding that the design *will be satisfactory in service.*<sup>102</sup> Three months later, when the AID warned the Internal Combustion Engine Sub-Committee of the Arab's still-experimental nature, *the Sub-Committee decided that there was no reason to modify their previous [positive] opinion.*<sup>103</sup> And yet on May 2nd, two weeks before a modified Arab completed its first hundred hours' test-running, *General Henderson observed that the points... which the Engine Committee had recommended the Sunbeam had proved to be precisely its points of weakness.*<sup>104</sup> By September 18th, Weir revealingly stated *no blame could be attached to anybody for the number of modifications to the Arab, the latest version of which having only begun flight testing the week before.*<sup>105</sup> Contrary to Weir, however, and despite efforts by government agencies to support industry with drawing concessions and technical queries on the Arab,<sup>106</sup> the Arab's detriment to

quantitative and qualitative productivity is ultimately the responsibility of the British government. Sunbeam undeniably contributed to this as a result of Coatalen's leadership style and technical risk-taking. But government agencies demonstrably failed to heed warnings and establish sufficient testing when selecting the Arab for mass-production. Nor was government behaviour on selecting the Arab unique: the RAF3 (designed by the Royal Aircraft Factory), for example, was prioritised over Rolls-Royce alternatives, a decision defended in 1916 at the Bailhache Committee on support for the RFC, when *General Henderson... explained that in wartime, one must sometimes gamble an engine and trust to luck.*<sup>107</sup> This remarkably cavalier attitude ultimately hampered the quantitative productivity of more efficient Rolls-Royce alternatives, to the extent that *the decision to concentrate on the RAF design... was one of the most vital in the air war.*<sup>108</sup>

Alongside these significant government failures in engine selection, the aircraft industry's productivity sometimes suffered due to the British government's wider approach to aircraft design and procurement. Regarding the latter, *at the end of 1916, the utmost confusion prevailed on account of the... variety of departments which were making demands*<sup>109</sup> of the aircraft industry, not least because the RFC and RNAS pursued procurement independent of each other. Regarding the former, specifically the government-owned RAF, Sir Frederick Sykes, later Chief of the Air Staff, criticised this as early as 1913, attacking *the Factory's processes as inefficient due to lack of staff,*<sup>110</sup> while de Havilland, who began his design career there, likewise complained the pre-war RAF suffered from *a good deal of inter-departmental jealousy... the atmosphere was not at this time a very congenial one,*<sup>111</sup> and American sources in 1916 routinely criticised its cost<sup>112</sup> and design philosophies.<sup>113</sup> To focus on these early inefficiencies would nevertheless overlook how government agencies successfully enhanced productivity in the British aircraft industry by cumulatively improving their approaches to both aircraft design and procurement. Regarding procurement, for instance, in 1920 George Holt Thomas praised Weir's achievement of *what was considered impossible in the development of aircraft... until the advent of the Air Ministry, culminating in the vigorous policy of Lord Weir.*<sup>114</sup> In fact, Weir built on prior improvements achieved by the creation of a new Air Board under Lord Cowdray in 1917, which Brancker described as a *patchwork organisation [that] worked amazingly well... the enormous advantage accruing from common research and supply departments made itself felt at once.*<sup>115</sup> Claud Johnson of Rolls-Royce also notably defended the early model of competing RFC & RNAS procurements, stating at an Air Board meeting on June 7th 1916, that *the fact that there were two distinct departments responsible for aero-engines... created such healthy competition,*<sup>116</sup> as was needed for improving productivity. Regarding aircraft design improvements, Brancker makes an explicit case that the RAF was instrumental in overcoming both cultural and technical obstacles to productivity, stating *I always held that the high standards insisted on by O'Gorman [then-RAF Superintendent] and his followers in 1913 and 1914 were largely responsible for the super-excellence of British design in later years.*<sup>117</sup> Nor was O'Gorman alone in normalising intensive quality control cultures in the aircraft industry: in January 1917 his replacement, Sir Henry Fowler, launched repeat investigations following the lethal crash of an SE5 prototype.<sup>118</sup> While perhaps unsurprising that the AID's own history would declare that its *system of sub-contract inspection... indubitably fulfilled its purpose,*<sup>119</sup> by improving the qualitative productivity of inexperienced sub-contractors, Weir also attested to the qualitative productivity benefit achieved by the government's AID, alongside the RAF, stating that *the Aeronautical Inspection Department had 'played a definite part in raising the level of British engineering quality.'*<sup>120</sup> Indeed, the AID's history

goes so far as to stress that through its stringent testing, *very valuable educational work, and data of permanent utility, was provided.*<sup>121</sup> On balance, British government agencies, acting in a supporting role, successfully enhanced the productivity of the wartime aircraft industry.

This discussion has shown the significance of government agencies' roles, highlighting that despite initially inefficient aircraft procurement and design approaches, and striking engine-selection failures, cumulative improvements across government design and procurement processes yielded consistent productivity benefits to the British aircraft industry. Indeed, as suggested by the AID's history, these not unsurprisingly had positive implications for post-war productivity. Where government input was most effective, however, is in supporting roles. Attempts by the government to perform a more direct role were less successful, as reflected by Fearon's scathing remark on the 1917 scheme by the Ministry of Munitions to build three National Aircraft Factories: namely, that it was *slow and costly to get started, and the war had ended by the time they were in full production,*<sup>122</sup> an assessment shared by the official historian, who observed that *the effort so far as it concerns the manufacture of aeroplanes, be written down as a failure.*<sup>123</sup> In the final assessment, however, the government's contribution was a net positive to the British aircraft industry's productivity.

Did the wartime experiences of the British Aircraft Industry produce enduring and meaningful productivity improvements post-war?

Trebilcock contends that wartime aircraft demand brought in *more advanced systems of repeat production and cost analysis. A legacy of qualitative effects was made available upon which... the inter-war economy drew deeply.*<sup>124</sup> If so, did individual wartime aircraft suppliers enjoy meaningful post-war productivity improvements? It must be stressed, however, that without wartime demand for military aircraft, the British aircraft industry faced abrupt and near-total contraction of growth, with the result that *the vast majority of the firms which had temporarily joined the [aircraft] industry returned to their peacetime activities.*<sup>125</sup> This was no surprise to contemporary observers: a March 1919 report by the Branch Committee on Aircraft to the Engineering (New Industries) Committee, including several SBAC members, anticipated that *firms now engaged in the Industry will doubtless revert to their pre-war manufactures, though it is likely that they will not be able thus to utilise all their expanded productive capacity... the post-war output capacity of the [aircraft] Industry will be in excess of the demands for all purposes for at least several years to come.*<sup>126</sup> Airco's Holt Thomas had proposed as early as October 2nd 1918, that *the time had now come... to cut out the firms which had just come into the Industry,*<sup>127</sup> and thereby limit excess capacity, a sentiment shared by Brancker himself on November 8th 1918, that *after 4.5 years' unlimited expenditure of money... [Britain had] a vast and efficient aircraft industry... we must preserve our aircraft industry at all costs.*<sup>128</sup> But even Thomas' ruthless proposal would have come too late, and in Wolverhampton, for example, *the end of the war and the cancellation of both aircraft and engine contracts had a savage effect on the many companies... in the aviation business,*<sup>129</sup> and local firms such as Sunbeam, *which found themselves with a greatly extended plant, looked to the motor and motor-cycle trades... for their new productive capacity.*<sup>130</sup> Even at Airco, which initially sought to remain in the industry and took steps to improve their post-war productivity by sending a team to the United States to study mass production methods,<sup>131</sup> suffered a 1919 takeover by the Birmingham Small Arms Company, *who quickly made it clear that they did not wish to touch aeroplanes, and only wanted the buildings and plant.*<sup>132</sup> Despite the turn away from aircraft production, it is still possible to assess the

benefit of wartime experience by considering quantitative and qualitative productivity improvements implemented by suppliers in their post-war specialisations.

Sunbeam provides an ideal illustration: after a poor sales drive at the 1920 Paris Air Show, *only Coatalen himself... remained interested in aero-engines*,<sup>133</sup> although the Arab proved *the last nail in the coffin*<sup>134</sup> of his reputation. Nevertheless, Sunbeam's post-war promotional material explicitly links wartime experience to claims of post-war qualitative productivity benefits. One May 1919 catalogue, for example, asserts that *our aircraft engines have continuously demonstrated their supreme excellence... such wide and varied experience cannot fail of definite result... [that] will be reflected in all our after-war productions*,<sup>135</sup> a second promised Sunbeam would *apply the lessons of its... war-time experiences to its standard cars*,<sup>136</sup> as with pre-war racing experience, while yet another points to wartime success as *a happy augury for the future... [which] will still further enhance the enviable reputation gained*.<sup>137</sup> Indeed, the extent of Sunbeam's qualitative improvements can be gauged by contemporary praise in 1926, stating that *where luxury is concerned we lead the world... [Sunbeam] are without competitors, but they are for the few and not the masses*.<sup>138</sup> This praise also gives some clue as to why Sunbeam, although pre-war *outstandingly successful commercially, increasing their output by nearly five times between 1910-1913*,<sup>139</sup> would not survive through the 1930s. Despite Coatalen's wartime focus on standardisation and quantitative productivity, Sunbeam demonstrably prioritised post-war qualitative perfection and ignored contemporary warnings that *British cars must be developed upon American lines and sold at competitive American prices*,<sup>140</sup> partly because, as Sir William Rootes, Chairman of the Society of Motor Manufacturers and Traders, observed, *we had our Empire markets almost entirely in our hands [pre-war], but we lost those markets to the Americans almost completely*.<sup>141</sup> Simultaneously, in the pivotal British market, *motoring was rapidly changing from being the hobby of a wealthy few to the means of transport for the middle classes*,<sup>142</sup> demanding less luxurious designs. Although the Sunbeam example nominally validates the Coleman and Macleod thesis of British industrial hostility to change, in truth it was Sunbeam's failure to recognise market trends that drove the subsequent failure to implement quantitative productivity improvements based on wartime experience. In short, it can be surmised that an individual firm's idiosyncrasies were not only the drivers of – but perhaps as important as – the actual application of productivity improvements drawn from wartime aircraft experience.

A similar example can be found at Ruston & Hornsby, where furniture-making initially *maintained employment for a considerable number of men over the first difficult period of labour re-deployment*,<sup>143</sup> but in the longer term, *to utilise the very fine works at Boultham following the cessation of aircraft production, the Company commenced to manufacture motor cars*.<sup>144</sup> Although bolstered by the fact that *the manager of the Aircraft Department and many of his colleagues had previous first-class experience*<sup>145</sup> in automotive engineering, at post-war Ruston's *the wartime lessons of standardisation and quantity production had not been adequately assimilated*.<sup>146</sup> Indeed, the prioritisation of qualitative perfection over quantitative productivity in Ruston's automotive programme is visible not only in that a five-year production run saw only 1,000 cars produced,<sup>147</sup> but also the explicit phrasing of one 1923 brochure, *boasting every detail in the construction of [Ruston's] motor cars... is literally a piece of craftsmanship*.<sup>148</sup> The productivity obstacle posed by cultures of craftsmanship clearly proved tenacious at post-war Ruston's: *the small firm approach of making anything the customer had a whim to demand... still stuck to a considerable extent... efficiency in production must have suffered as a result*.<sup>149</sup> Given Ruston's failure to apply

quantitative productivity improvements gained through wartime aircraft experience, it comes as little surprise that automotive *production stopped in 1925, when competition from... mass-producers became too fierce*.<sup>150</sup> Significantly, it was Ruston's adroit business strategy – not productivity improvements – which allowed it to survive the wartime loss of *practically all overseas customers*.<sup>151</sup> Specifically, the 1919 acquisition of a controlling stake in Ransomes, another former aircraft supplier with an agricultural engineering background, was critical. Despite the fact that in the pre-war period a *too-broad range of production... [was] a major weakness of the British agricultural engineering company*,<sup>152</sup> at least initially after the acquisition *there does not appear to have been a very marked attempt to rationalise the [merged Ruston-Ransomes] range of products*.<sup>153</sup> But by directing Ransomes to focus on agricultural equipment, for example tripling post-war revenues from lawn-mowers, *a considerable achievement in view of the comparatively low market-entry cost and the high amount of competition*,<sup>154</sup> Ruston's successfully restructured by the end of the 1920s and moved *entirely into industrial machinery*.<sup>155</sup> As with Sunbeam, Ruston's clearly failed to implement meaningful productivity improvements based on wartime experiences in aircraft production, but Dewey rightly highlights that *the final determinant of success or failure must therefore be that elusive entity, entrepreneurial flair... In Ransomes, [and] Ruston... it seems to have flourished*.<sup>156</sup> Again, it can be seen that an individual firm's idiosyncrasies were of paramount importance to productivity in the post-war context.

A contrasting case study is found in car-manufacturer Morris Motors and its founder, William Morris. Although *few business records and papers had survived*,<sup>157</sup> it is evident the firm had no wartime experience in the British aircraft industry. Only in 1927 did Morris take first steps on *engines for light aircraft, to exploit an apparent business opportunity*<sup>158</sup>, and only in 1929 did Morris establish a department dedicated *to explore the possibility of developing and manufacturing aero-engines*.<sup>159</sup> Faced with low wartime civilian automotive demand, Morris in 1916 pursued a *contract to produce mine sinkers*,<sup>160</sup> through which vital experience was gained both for *him and his suppliers in the use of new methods and factory organisation*.<sup>161</sup> Returning to civilian automotive production post-war, Morris was not only *deeply conscious of the importance of the [post-war] export market*, for automotive production, but also continued to drive considerable productivity improvements, and specifically in 1919 *made use of his war-time experience of large-scale production. Workers were now to stay at one station in the line, and the vehicles were to be pushed from station to station for the individual assembly operations*.<sup>162</sup> By 1927, Morris had installed *a large number of American specialized machines*<sup>163</sup> to further enhance quantitative productivity, but had also pursued qualitative productivity improvements by including *both lighting and starting equipment as standard items on his motor cars*.<sup>164</sup> Thus, even without wartime exposure to the British aircraft industry, Morris Motors enacted considerably greater post-war productivity improvements than either Sunbeam or Ruston & Hornsby. Yet again, the root cause lies in the firm's idiosyncrasies and, specifically, its leadership culture. Morris' oversaw the *introduction in 1923 of a policy of management decentralization*,<sup>165</sup> while chief engineer Frank Woollard took initiatives to *disband the original workshops that had been devoted to one kind of machining operation each and to disperse the machines so that a flow of operations could be maintained*.<sup>166</sup> Woollard replaced them with a revolutionary 'automatic transfer machine,' which doubled engine output and which Woollard himself described as *eminently successful. The capital cost was considerably less than a group of normal machine tools... [and] a section of it was still in work... 25 years*

after it was first commissioned.<sup>167</sup> A 1925 speech by Woollard to the Institution of Automobile Engineers gives valuable insight on his thinking, in particular his comment that *the world's finest car has evolved towards technical perfection: the world's greatest-quantity car has evolved towards perfection in the administrative and manufacturing economics. Standardisation is essential to both...*<sup>168</sup> Clearly, wartime experience in the British aircraft industry was no guarantee of post-war productivity: innovative, entrepreneurial leadership was instead a vital driver of such improvements.

To summarise, post-war productivity improvements rooted in valuable wartime aircraft experience were not as uniformly implemented as Trebilcock's argument might have first suggested. Although a marked contraction in aircraft demand had clearly been anticipated, it is equally clear that certain suppliers failed to build on wartime experience in high-quantity production. At both Sunbeam and Ruston & Hornsby, an explicit prioritisation of *qualitative* perfection over quantitative productivity was pursued, reflecting that cultural obstacles of craftsmanship – or even poor leadership cultures – made the pursuit of quantitative improvements appear of secondary importance. It is worth noting that, for those suppliers that remained in the British aircraft industry, such improvements were indeed less important than qualitative advances, with de Havilland noting that production was consistently slowed by shifting requirements *constantly coming in... an example of the deadly effect of too much official interference.*<sup>169</sup> Others were similarly hampered in using mass-production methods... [because] *new types of airframe were often put into production before the experimental machines were fully turned out.*<sup>170</sup> Given such a context it is perhaps less surprising that only Morris Motors pursued quantitative productivity so intently, owing to an aggressive leadership culture spearheaded by *one of the first British entrepreneurs to grasp fully*<sup>171</sup> the importance of organisational planning and mass production.

## CONCLUSION

By delivering a focused interrogation of the four research questions outlined above, this investigation has been able to assess the productivity of the British aircraft industry in the First World War. In doing so, it has addressed Fearon's still-pertinent complaint from 1969 that *the early growth of the British aircraft industry has been largely ignored,*<sup>172</sup> while substantiating Stevenson's argument that British manufacturing performed in many ways... *better in the First World War than in the Second.*<sup>173</sup> By 1918 the British aircraft industry had completely outgrown its modest pre-war roots and could consistently deliver previously inconceivable output. Coleman and Macleod – although they exaggerate the problem of cultural mindset – are nevertheless correct that *the aircraft industry had grown up during the first conflict as a hothouse growth with the result that "engines were manufactured quite irrespective of cost. Machines were manufactured irrespective of their having to earn money.*<sup>174</sup> Airco's Geoffrey de Havilland attests to this, observing that *the war with all its wild extravagances seems to leave an immediate legacy of slight madness... above all in the aircraft industry.*<sup>175</sup> These observations underline an important counterpoint: *whereas in peace cost is everything and time nothing; in war it is the reverse,*<sup>176</sup> and though the British aircraft industry delivered considerable productivity growth both quantitatively and qualitatively, it remained an often-imperfect tool, and one bought at onerous financial cost.

This is particularly clear when investigating the effectiveness of the British aircraft industry in overcoming technical obstacles to productivity. Although it is evident that technical obstacles such as drawing availability or fixed assets acquisition were broadly and effectively overcome, these routinely required direct government input. The Lilliputian

nature of the pre-war aircraft industry, which had failed to achieve mass production of even *spars and struts [which] were made by hand,*<sup>177</sup> was partly offset by the heterogeneous nature of new market entrants, such as agricultural machinery suppliers, who brought with them newly-purchased capital goods gained through robust pre-war growth. Writing in 1965, Higham described an operational period of 'mobilisational change' whereby, until the length of a conflict can be gauged, *orders grow rapidly and a scramble for men, materials and facilities takes place... [until] routine atmosphere can be obtained... In World War I this came about in 1917.*<sup>178</sup> Indeed, by that point earlier technical obstacles, such as the bottleneck posed by the small pre-war supply capacity of British machine-tool manufacturers, had been overcome. But even in 1917 the ingrained technical obstacle of raw material shortages, especially resulting from the U-Boat campaign, demanded close coordination between industry and key government figures such as Sir William Weir. Conversely, this investigation has confirmed that skilled manpower requirements, particularly in engine production (despite innovative dilution schemes such as the use of skilled Belgian refugees), remained an increasingly significant obstacle to productivity.

This last point is especially notable in relation to cultural obstacles to productivity, and in particular the inclusion of female labour in the British aircraft industry. Even a cursory assessment reveals that both government and industry were aligned on the need for female labour. Despite the fact that female labour did not offset the requirement for skilled manpower, as well as instances of shop-floor resistance, female labour at firms such as Airco was clearly indispensable for quantitative productivity. Cultural obstacles to new quality-control requirements, as well as old cultures of craftsmanship, were also overcome broadly by the British aircraft industry. So too was an often-transactional labour culture, which was itself often shaped by the parochial nature of Britain's 'home fronts.' Higham argued that in the aircraft industry there is *a constant battle between quantity and quality in which consumer demand is often... in conflict with the ideas, traditions and operational limitations of the designing and manufacturing organisation.*<sup>179</sup> Indeed, this investigation has observed that the idiosyncratic nature of individual firm's pre-war backgrounds and leadership cultures formed a defining element of its productivity, with Weir's pioneering introduction of modern 'Just-In-Time' principles in 1915 being one striking example. That leadership culture was not always beneficial can be seen with Sunbeam's Louis Coatalen, whose highly personal leadership style is inseparable from the Arab engine's infamous failure.

Although Higham characterises government negotiations with industry as the suspicion on *each side... that the other is cheating,*<sup>180</sup> this investigation has demonstrated that both sides achieved a close wartime relationship, whereby British government support was often indispensable in overcoming technical obstacles to productivity. This investigation has also been explicit in its assessment that government agencies were not uniformly successful, whether, for example, coordinating internally on the selection, testing and deployment of the Sunbeam Arab, or in the planned establishment of National Aircraft Factories. Nevertheless, to dismiss the significance of the Aeronautical Inspection Department, or the Royal Aircraft Factory, in normalising new cultures of quality control would be wrong. Likewise, the pioneering deployment of female labour into increasingly responsible roles at the AID demonstrates that the cultural obstacle to female employment in the aircraft industry was never insoluble. The British government was demonstrably a catalyst for increased change and productivity improvements but owing to the collapse of its demand *during the years from 1919 to 1924, manufacturers had to live off the camel's hump of profits left from the war,*<sup>181</sup>

diminishing much of the need for post-war productivity improvements.

The fourth research question of this investigation is unambiguous in its outcome: meaningful productivity improvements were won (at great cost) by the British aircraft industry. But as participants returned to historic practice without the intensity of high-volume aircraft demand, these improvements were not implemented on a long-term basis, or forgotten amidst renewed obstacles resulting from cultures of craftsmanship. The remarkable example of Morris Motors, with no apparent wartime experience in high-volume aircraft supply, nevertheless continues to emphasise that the entrepreneurial culture of leadership figures, and a willingness to innovate at the level of individual suppliers, was a key determinant in the post-war productivity of a supplier.

Based on these findings, it is now possible to provide an answer to the hypothesis posed in the Introduction. Government assistance – in a supporting role – was pivotal to the British aircraft industry. The heterogeneous technical and cultural backgrounds of wartime market entrants did deliver uneven productivity growth, although leadership was an important cultural obstacle in this outcome. Post-war ‘lessons learned’ were of largely short-term benefit to the British aircraft industry, due both to dramatic post-war market contraction and individual suppliers’ renewed cultural obstacles to productivity. Although *no study of the British aircraft industry can be definitive*,<sup>182</sup> given that the number of firms involved rose from 771 to 1529 in the year before October 1918 alone,<sup>183</sup> this investigation’s conclusion is nevertheless positive. As Peter Dye observed, *the manufacture of large quantities of advanced combat aircraft stretched British... industrial capacity, particularly in the development of reliable, high-powered aero-engines*,<sup>184</sup> and yet, ‘stretched’ or not, this investigation has demonstrated that the British aircraft industry successfully overcame varied technical and cultural obstacles to productivity, thanks to extensive government support. Only in the post-war period, as temporary participants returned to pre-war specialisations, did suppliers fail to properly exploit their hard-won experiences.

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# FRIENDLY FIRE!

## Dieudonné Costes and Walter Bell, 8 July 1917

by Mike Kelsey

The use of the term 'friendly fire', to define the firing of weapons upon forces on the same side as those doing the firing, probably originated during the First World War, although instances of soldiers engaging their own side by mistake can be found practically as far back as the earliest recorded history of warfare. Thucydides describes such an event in 424 BC, during the Battle of Delion in the Peloponnesian War.

To give but one further example; at the Battle of Barnet in 1471, during the Wars of the Roses, a friendly fire incident developed in foggy conditions when the Lancastrian Earl of Oxford's 'star with rays' emblem was mistaken for the Yorkist King Edward IV's 'sun in splendour' motif. This resulted in a volley of arrows which spread confusion and, most probably, cost the Lancastrians the battle.

The use of aircraft in war brought about a completely new range of friendly fire problems. Despite the use of national recognition markings, aircraft were frequently fired upon by their own troops, while in the air pilots also made mistakes in distinguishing friend from foe.

Within the RFC one of the more notorious incidents took place on 3 July 1917 when 2Lt Tom Littler of 1 Squadron, flying a Nieuport 23, was shot down and killed by Lt Lloyd Fleming of 46 Squadron, flying a Sopwith Pup. Just five days after this event there was another 'friendly fire' episode, although this one took place far away from the Western Front in the skies of Greece. On this occasion, fortunately, there were no casualties, and the incident has lapsed into obscurity. It is, however, worthy of note because, by good fortune, two of the participants (one on each side) have left accounts of it which form a striking comparison.

That such a comparison has not hitherto been made is not surprising. One of the accounts has been published in a French aviation magazine and subsequently in a US aviation journal, while the other is buried in a book which principally concerns elephant hunting in Africa!



Dieudonné Costes



Walter Bell.

:RAeCT 1594

their ceilings at around 15000 - 16000 feet. In a memo of 15 June, Lt Col Dawes wrote that *the record height we have attained with the De Havilland [DH2] in this Country being 16,300 feet....* He therefore had to pin his hopes on four Vickers Bullets due to *arrive within the next few days* as this type was able to *climb higher*.<sup>1</sup>

The Vickers Bullets were to be allocated to 47 Squadron, which at that time was a Corps Squadron working with XII Corps of the British Salonika Force. Nonetheless, the Squadron's A Flight was specifically equipped as a scout flight. At the end of June, the flight was based at Hadzi-Junus, about 25 miles North of Salonika, and Captain W.D.M. Bell had just taken over from Captain E.E. Clarke as the Flight Commander.

Meanwhile, back in May the French Escadrille N391, which had been operating from Negocani in the Monastir sector, returned to its usual base at Topcin, not far from Salonika. This Escadrille was henceforth deployed to provide aerial defence for the city, albeit that it also conducted patrols up to the front line in the area of the River Vardar. At this time that river formed the boundary between the French and British ground forces in Macedonia. These arrangements meant that Escadrille N391 and 47 Squadron would potentially be operating in the same airspace.

### Dramatis Personae

The first few SPAD VIIs to arrive at Salonika were issued, in ones and twos, to Escadrilles N387, N390 and N391, where they were entrusted to the best pilots. The first pilot in Escadrille N391 to receive one of the new SPADs was Adj-Chef Dieudonné Costes. The aircraft in question was S.1083, which Costes flew from 9 May onwards. At this time Costes had one confirmed and one unconfirmed victory to his name. Such victories were hard to come by in the East and the most successful airman of the Escadrille in this respect was actually an observer/gunner, MdL Henri Astor, who had obtained four victories whilst flying with three different pilots.

In 1968 Costes recorded an interview with Jac Remise,

### Background

In March 1917, in response to raids by the German bombing squadron KG1, representatives from the RFC and the French Aviation Service drew up plans for the aerial defence of the city of Salonika. The French were also prompted to send a few new SPAD VII fighters to Salonika, and these arrived in April. Attempts by the RFC to obtain more modern aircraft were, however, unsuccessful. KG1 left the Balkan front in May 1917, but in June the Germans made a number of reconnaissance flights over Salonika that the RFC was unable to prevent.



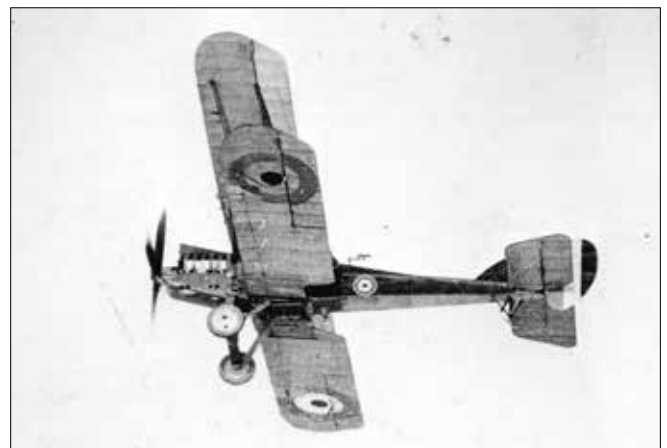
a French historian, about his experiences as a pilot in the First World War. The transcript of the interview remained unpublished until 1991, when it appeared in the November issue of the French magazine *Le Fana de l'Aviation*. An English translation of this piece was published in the Fall 1995 issue of the US journal *Over the Front*. In the interview Costes described an incident in which he had attacked a British aeroplane by mistake.

By the time Costes recorded his interview another account of this friendly fire incident had already been published, but



Costes' first SPAD VII, SFA S.1083. At this stage the aircraft was still in standard configuration, but had a tricolour band, plus the numeral '1', painted on the rear fuselage. : David Méchin

in very different circumstances. Walter Bell, who in July 1917 was the commander of 47 Squadron's A Flight, had died in 1954. However, shortly beforehand he had sent a manuscript of his memoirs to an American friend of his, Townsend Whelan, with a view to publication. Whelan later wrote that *This manuscript consisted of a number of chapters and essays, not consecutively arranged.... It was evident that a*



An in-flight view of one of 47 Squadron's BE12s. The squadron had three such aircraft in July 1917; two of which were in 'A' Flight at Hadzi-Junus. :CCI Archive

large amount of editing would be necessary to prepare all this material for publication. The resulting book – essentially Bell's autobiography – was published with the title *Bell of Africa* in 1960.<sup>2</sup>

As implied by the title, the majority of the book is concerned with periods which Bell spent in Africa, where he became one of the most successful professional elephant hunters of the time. There is, however, one chapter covering his experiences during the First World War. In this Bell describes his flying training and his service in East Africa, where he flew with 26 Squadron RFC. Bell also wrote about the Salonika front, although not as a continuous narrative, but rather as a series of short anecdotes about events which he experienced there. The very last of these anecdotes is his description of the 'friendly fire' incident.

There was more than one such incident on the Salonika Front – for example, Major Justin Herring, the CO of 17 Squadron RFC, was slightly wounded in the arm when fired on in error by a French aircraft on 10 February 1917. However, the accounts of both Costes and Bell can leave no doubt that they were describing the same event, as will shortly become apparent. Neither of them supplies a date, but the French aviation historian David Méchin has established that it took place on 8 July 1917.

By that date three of the four Vickers Bullets mentioned by Lt Colonel Dawes had reached 47 Squadron and two of these had



**SPAD S.VII, SFA S.1083, after Costes had installed two Lewis guns on the lower wings. In addition, the exhaust pipes had been cut away and shortened. The early 'winter' cowling cannot have helped the engine cooling in the heat of a Macedonian summer. : David Méchin**

been sent on to A Flight at Hadzi-Junus. The third one remained for the time being at Janes, where B Flight and the Squadron HQ were located. A Flight was above establishment strength at this time in both machines and pilots, possibly as a result of the arrangement by Lt Col Dawes to field three additional scout machines (It may alternatively be a consequence of a decision back in March 1917 that 47 Squadron should have a complement of 10 reconnaissance machines and 8 scouts). The 47 Squadron Daily Record of Work for this period does not differentiate between the different flights so it is difficult to be precise about this. However, it seems most likely that the flight had five DH2s (A4764, A4765, A4766, A4772 and A4784), two BE12s (6676 and A4022) and the two Vickers Bullets just mentioned (A5226 and A5227). Including Captain Bell there were eight pilots available: the others being Lt E.R. Wilkinson, Lt R.M. Wynne-Eyton, 2Lt H.C. Brufton, 2Lt H.J. Gibson, 2Lt R.E. Buckingham, 2Lt H.O.S. Pilkington and an attached Russian officer, Capt M.S. Smolianinov.

Dieudonné Costes used his SPAD (S.1083) for several patrols in May 1917. After some problems with the Vickers gun, he

**One of the DH2s of 47 Squadron. The DH2 was the most numerous aircraft type in the Squadron's A Flight during early July 1917.**

**:CCI Archive**



increased the firepower of the aircraft by installing two Lewis guns fixed to the lower wings and arranged to fire outside of the propeller arc. However, engine trouble and then a radiator fault together rendered the SPAD unserviceable for much of June. In the meantime, Escadrille N391 was re-designated Escadrille 507. Costes' three-gun SPAD was repaired and available for his use again on 30 June.

### **8 July 1917**

Early in the morning of 8 July, between 06.35 and 06.40, five pilots from A Flight of 47 Squadron took off on patrol. These included Captain Bell, who was flying the BE12 6676. Also flying on that day was Costes in his SPAD. Now it is time to look at the accounts in which they described the events of that day, starting with Costes:

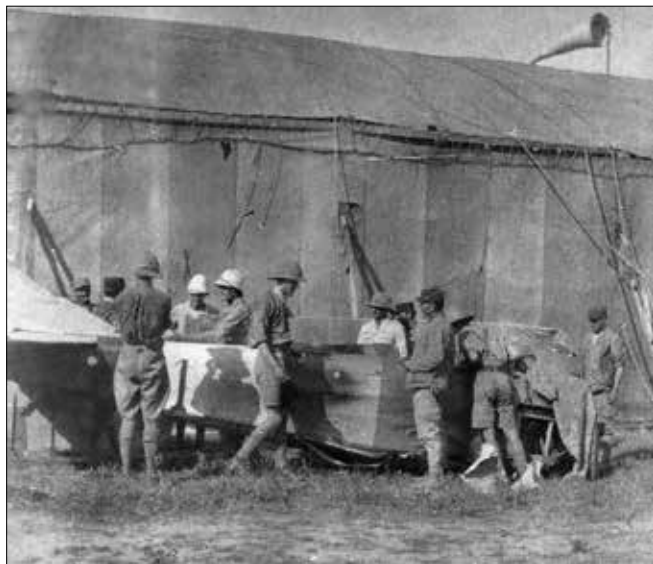
*An aircraft was being fired on by our anti-aircraft batteries about 15 or 20 kilometres inside our lines. Since the gunners were firing and they had the means to see if they were shooting at a German or an Englishman, I did not try to identify him.... I said to myself; if he is 15 or 20 kilometres over on our side, it is certainly a German!*

*I put myself in position to attack him. I approached very close, ¼ front (at that time I had my SPAD with four machine guns) and I gave him a burst for a fraction of a second when, immediately, I saw the English cockades. So, surprised, I didn't even ask myself whether he was a German disguised with English cockades. I disengaged so violently that the whole leading edge of the upper wing of my SPAD distorted and the entire fabric on the top side of that wing was torn off. The leading edge folded up to the spar, to a depth of 30 centimetres, and the fabric tore from one end of the wing to the other, as if the SPAD had been plucked!*

*I couldn't hold it! In the midst of the debris that flew off – all those bits of wood and canvas – even the gravity tank came adrift from its place in the upper wing and flailed around at the end of a wire (it later broke off, spraying me with petrol). When I tried to put the machine into a proper line of flight, it went into*

a spin. I straightened it up and raised the nose a little, but as soon as I slowed down it went into a spin again and I was getting closer to the ground.

Despite everything, I had time to think, to comprehend the situation. I was near the edge of Lake Catsigol. I told myself that I had to go towards that area because there were reeds there and the ground was soft. If I could do that I would come to less harm. I had time to think (it all started at around 4500 – 5000 metres) and to study the reactions of my machine. I realised that I had to fly fast for the control surfaces to be effective. To change direction, I used the ailerons to make a small rotation whilst diving vertically. But, glancing right and left, I saw



Views of the wreckage of Costes' first SPAD, S.1083, after recovery from the site of his crash landing on 8 July 1917. In addition to the fabric stripping off the top wing, note that the leading edge of the wing is missing as far back as the front spar. : David Méchin



my Englishman was descending in the same manner – I had brought him down!

Myself, I tried to control my descent as best as I could whilst he came whirling down about a kilometre away. And that is how I reached the ground. I composed myself as best I could; the machine was upside-down. At this moment the English landed perhaps 500 metres from me. I had been injured shortly beforehand in a fall from a motorcycle and I found it difficult to extricate myself from the machine. I had to scrape at the ground, which took quite a while. During this time the Englishmen came towards me and I finally emerged from the crashed SPAD, with the cabane completely flattened and the back of the fuselage almost touching the ground. However, my foot caught in the Bowden cable which controlled the machine-guns on the lower wing. Since the machine was on its back, the lower wing was one and a half metres from the ground – the Englishmen were

in front of me when the tracer bullets left! They thought I was shooting at them! Finally, I was out. I waved to them, raised my hands and explained to them what had just happened.<sup>3</sup>

And here is Bell's account:

Every day the enemy put over a very high-flying reconnaissance machine to photograph the shipping in Salonica harbour. It was known as the "Iron Cross" flight, and it was said that anyone making three successful flights was awarded that distinction. Everyone tried to intercept this machine. The French had got out from France one very smart little scout – a Spad – quite the latest thing, and the apple of their eye. On it they mounted two additional Lewis guns, secured to the outer struts and fired by Bowden wire from the cockpit, this giving, together with the normal gun firing through the prop, in those days at any rate, an unheard-of rate of fire. They chose their best pilot and one fine clear day they launched their attempt on the "Iron Cross" machine.

As it happened, Wynne and I were also up and bent on the same lay. We, however, were somewhat handicapped by the ceiling of their (sic) machine standing at fifteen thousand feet or so, whereas the Hun used to come over at twenty thousand feet. As we were floundering around in that floppy way of machines at their ceiling, suddenly there was a burst of fire behind me and a small machine flashed by in a dive. Without a thought I put my nose down and started my Vickers pop-popping. As luck would have it, the thing which nearly always gave up after a few rounds, continued to fire at its best rate. Wynne, too seeing me engaging a machine, joined in. His gun, too, operated. Presently we saw a piece of the enemy machine detach itself, and still we followed it down, down.

We thought, "We've got him at last!" We also knew what would happen to him if he came down within our lines. We had seen Hun machines stripped bare by hungry souvenir hunters in incredibly short time. So, taking no chance, we followed our victim straight down until he crash-landed, the plane collapsing flat. We landed close by and rushed over to the plane. Suddenly there was a burst of fire from the crashed machine, coming from one of the wing guns. Behind it was a fierce looking little man, evidently in a state of great excitement. He was invited to come forth and explain himself. He did so – in French, "It's a ruddy Frenchman. Hell! Let's clear out quick", we said. We did so, pretending we knew nothing about it. It was the marvellous, the formidable Spad! And my only souvenir was a neat group of bullet holes in my machine.<sup>4</sup>

Before commenting on these accounts, it is worth looking also at the relevant part of the Daily Summary for 8 July produced by the RFC's 16th Wing and signed off at 19.00 on that day by Lt Col Dawes:

One of our B.E.12s on the XII Corps front was attacked in error by a French scout Spad machine: seeing that this attack might have fatal consequences one of our Vickers Bullets on patrol fired at the French machine and forced it to land. The French accept full responsibility for the mistake which fortunately led to no injury to any pilot although the French machine was completely wrecked on landing. The matter has been thoroughly investigated and amicably arranged between the French Aviation and ourselves, and our claim that the French pilot fired his gun when on the ground is explained by the pilots statement that his machine gun mechanism jammed owing to the shock of the machine capsizing and that he was unable to stop the gun firing until he had extricated himself from the debris of his aeroplane.<sup>5</sup>

### Commentary

Before Costes and Bell engaged each other friendly fire was already occurring in the form of the allied AA fire directed at Bell. This is not actually mentioned in Bell's account but was a common occurrence (notwithstanding Costes' statement that the gunners had the means to see who they were shooting

at). The chances of anti-aircraft personnel correctly identifying an aircraft flying at 15000 feet or more were probably slim indeed. Just a few days later, on 15 July, Bell was flying a Vickers Bullet and had a combat with a German two-seater aircraft at around 17000 feet. His combat report mentions that *French A.A. fire, which continued throughout, appeared to be bursting about 5000 feet below us.*<sup>6</sup>

Both Costes and Bell were experienced pilots, but that did not prevent the friendly fire incident. Some such incidents can be explained as cases of mistaken identity, owing to similarities between certain types of friendly and hostile aircraft. For example, both Nieuport and Albatros fighters had interplane struts of a V-shaped configuration. However, beyond Bell's observation that the aircraft which fired on him was a *small machine*, neither Costes nor Bell actually describes the other aircraft involved. Indeed, Costes says he did not even try to identify the aircraft that he attacked.

The initial cause of the incident was the assumption by Costes that the aircraft he engaged must be hostile, because the allied AA batteries were firing on it. Bell said that he fired back *without a thought*, but it is implicit that he also made an assumption – in his case that Costes' aircraft must be an enemy because it had fired on him. As events unfolded Costes thought he had brought down Bell whilst Bell thought he had shot down Costes! The fact that he was fired upon appears to have gone unnoticed by Costes, who showed great coolness in nursing the crippled SPAD down. Possibly owing to the angle at which he was following Costes, Bell was evidently unaware of the fabric stripping off the SPAD. The piece which he saw become detached was probably the gravity tank.

The contention by the RFC that the French accepted full responsibility rather ignores the fact that the British fired back, although it is understandable that the RFC might well be touchy on the subject, following as it did the incident involving Major Herring. The description of how the gun fired on the ground as it appears in the 16th Wing's daily summary is implausible, and Costes' own explanation for this is much more likely to be correct.

There are a few more detailed points worthy of mention. The part of Bell's account referring to the "Iron Cross" flight should be taken with a pinch of salt. Nonetheless, if he was seeking to intercept a German reconnaissance flight over Salonika, that would explain his presence far behind the front line. Costes' memory was evidently at fault with regard to his SPAD having four machine guns. It is true that a solitary SPAD (S.1073) gifted by the French to the RFC in Macedonia was fitted with a second Vickers gun, and a SPAD VII of Escadrille 506 was



*SPAD VII S.1073 gifted by the French to the RFC in June 1917. This view shows the second Vickers gun fitted. In addition to this, and various other modifications, the exhaust pipes have been cut away in the same manner as on S.1083, the first SPAD used by Costes. S.1073 was delivered to the RFC on 5 June 1917 as a reciprocal gesture after the RFC had given the French a BE12 back in January 1917. This SPAD went to 17 Squadron on 25 June but was not used operationally until 12 July. :CCI Archive*

also fitted with twin Vickers guns in 1918. However, the photograph of Costes' SPAD fitted with two Lewis guns shows the usual single Vickers gun.

Bell's account refers just to his Vickers gun, although his BE12 was also fitted with a Lewis gun. In fact, just two days later, on 10 July, Captain Smolianinov had a combat when flying this same BE12 (6676) and his combat report states that it was fitted with two Vickers guns, in addition to the Lewis. That is the only reference found to this particular aeroplane having that armament, although a BE12 and a BE12a of 17 Squadron are known to have been armed in the same way. If correct, it would mean that, like the SPAD, it was also a three-gun fighter.

The only location mentioned in any of the accounts is Costes' reference to Lake Catsigol. Unfortunately, there is no lake with a name resembling Catsigol anywhere in Greece and Costes is evidently not referring to any of the better-known lakes in the area, such as Lake Doiran or Lake Ardzan. However, about 15 miles NW of Salonika is a small lake nowadays called Lake Pikrolimni, which happens to be the only salt-water lake in Greece. During the First World

War many places in Greece were still known by the Turkish names which they had when under Ottoman rule. The Turkish name for Lake Pikrolimni was *Acı Gol*, which literally means 'bitter lake'. On the pre-war Austrian military map of the area the name is given as 'Adzi Gol', which is most likely the Catsigol in Costes' account.

Indeed, Costes was already familiar with this lake and its surrounding reeds as, on 19 February 1916, a Maurice Farman XI bis that he was flying ended up overturning in the water there owing to a misfiring engine. Costes was flying at low altitude as had taken up a friend, Sergeant Jacquolliot, for an unauthorised duck hunt!

### **The Third Man**

Costes refers to only one 'English' aircraft but says that the 'Englishmen' approached him on the ground. Bell says that a certain *Wynne* was involved in the incident. This is the first mention of anyone called Wynne in 'Bell of Africa'. However, he is properly introduced later in the book as *my friend Wynne Eyton* when Bell describes an African expedition which they undertook together after the war. The disjointed mentions of Wynne and Wynne Eyton are probably a function of the nature of Bell's manuscript and how it had to be edited for publication, as mentioned earlier.

The accounts of both Costes and Bell could be read as implying that Wynne-Eyton was Bell's observer. Bell's account has been interpreted this way in his Wikipedia entry



Costes's original SPAD was not the only one to be fitted with two Lewis guns mounted on the lower wings. This example, also on the Macedonian front, belonged to Escadrille N.387.

: The Nicolas family via Mathieu Gras

which erroneously states *With his observer Lieutenant Robert Mainwaring Wynne Eyton, Captain Bell shot down a French SPAD by mistake.* However, Robert Wynne-Eyton was a pilot, not an observer, and Bell's BE12 was, of course, a single-seater. As it happens, Wynne-Eyton was also flying a patrol on 8 July. He took off at exactly the same time as Bell (6.40 am) and landed back at base at 08.30, just 10 minutes before Bell returned.

There is, however, a problem with the identification of Wynne Eyton as the third pilot involved in the friendly fire incident. The 47 Squadron Daily Record of Work shows that he was flying a DH2 (A4765) on 8 July, whereas the 16th Wing Daily Summary states that the second British aircraft was a Vickers Bullet. This is quite possible as there were two Vickers Bullets airborne at the time in question. The Squadron Commander, Major Frederick Minchin, flew a patrol from Janes in A5228, taking off at 06.30 and landing at 08.15. From Hadzi-Junus, Lt Eric Wilkinson carried out a patrol in A5227; his flight time being 06.40 to 08.20.

As shown in the accompanying table, the 47 Squadron daily record of work should really show two flights for any pilot on patrol, landing somewhere away from his base, and then returning to base. Unfortunately, for all the pilots concerned only a patrol flight is shown. It would probably have taken Captain Bell over an hour to climb to the BE12's ceiling of around 15-16000 feet.<sup>7</sup> That does not leave a great deal of time for the friendly fire incident, landing, walking to and from the wrecked SPAD, taking off again and returning to base, although it does seem at least possible for that to have occurred within the flight times of all the pilots mentioned. It also lends some credence to Bell's remark that he and the other

pilot cleared out quickly on learning that their opponent was a Frenchman. On the other hand, the suggestion that they did so, *pretending we knew nothing about it*, is at odds with the fact that the incident was investigated by the RFC's 16th Wing in conjunction with the French Aviation Service. It also does not sit easily with Bell's duties as a Flight Commander (and even less so with Minchin's as a Squadron Commander).

If Minchin had been directly involved in the incident, it seems probable that Bell would have remembered it. This perhaps makes Wilkinson the most likely candidate for the third pilot involved. However, the available information is unfortunately insufficient to draw a firm conclusion.

There are some parallels in the careers of Wilkinson and Wynne-Eyton. Both were British nationals who had been living in Canada on the outbreak of war and who returned to the UK with the Canadian Expeditionary Force. As mentioned earlier, at the time of the friendly fire incident, both were in A Flight of 47 Squadron, and they had both been flying with the Squadron since late 1916. They also were both awarded the MC for their service in 47 Squadron. However, whereas Wynne-Eyton survived the war, Eric Wilkinson was less fortunate. On 6 October 1917, he was flying a bombing mission when a shell went through the sump of his engine, necessitating a forced landing, after which he was hit by shrapnel. He died in hospital from his injuries on the following day.

### Fabric-shedding SPADs

When Costes' first SPAD, S.1083, was under repair in June 1917 he flew various other aircraft, including another SPAD, S.1096. He was, however, flying a Nieuport 24 when he claimed an unconfirmed victory on 26 July. For much of August, Costes was engaged in a mission to Athens, where he had been sent by Commandant Denain, the commander of the French Aviation Service in the East, to look into the practicalities of setting up a fighter patrol to defend the Greek capital.

Costes returned to Escadrille 507 on 23 August and then resumed flying the SPAD S.1096. Unlike Costes' first SPAD, this aircraft retained the standard armament of a single Vickers gun. With this aircraft, Costes had no better luck than he had with his first SPAD. Firstly, the engine ran badly, resulting in two forced landings. Then, on 29 August, Costes attacked an enemy aircraft only to have the fabric strip off the top wing again! Costes was able to walk away from the resulting crash landing although, not surprisingly, he reverted once more to flying Nieuports.

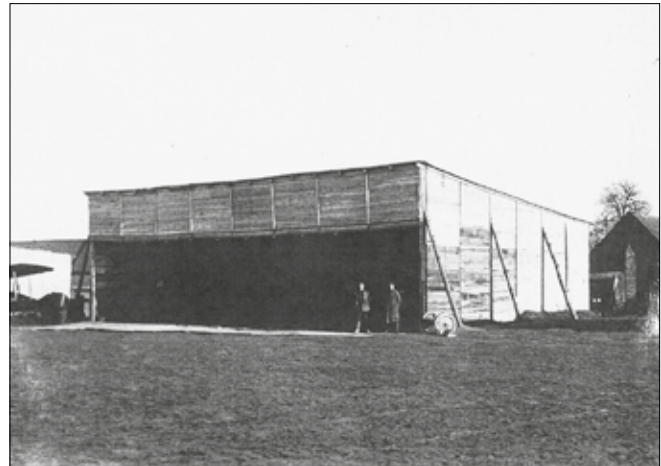
Costes later recalled how the SPAD's were constructed from *pieces of wood and canvas with glue. Under the sun of the Orient the glue worked and cracked...*

The SPAD VII was basically a very strong aeroplane, but early examples had a potentially fatal flaw. Rather than being strung to the ribs, the fabric was merely glued and tacked in place.

47 SQUADRON: SELECTED MISSIONS SHOWN IN THE DAILY RECORD OF WORK FOR 8 JULY 1917						
Type/Serial	Pilot	Duty	Take-off	Landing	Flying Time	Remarks
BE12 6675	Capt WDM Bell	Patrol	06.40	08.40	2hr	
VB A5228	Major FF Minchin	Patrol	06.30	08.15	1hr 45min	
VB A5227	Lt ER Wilkinson	Patrol	06.40	08.20	1hr 40min	
DH A4765	Lt RM Wynne-Eyton	Patrol	06.40	08.30	1hr 50min	
Note: Strictly speaking, for any pilot landing away from base and then flying home, two flights should be recorded, as in this example from 15 July 1917.						
VB A5226	Capt WDM Bell	Patrol	07.40	08.50	1hr 10min	Forced landing
		Amatovo- Hadzi Junas	17.00	17.20	20min	

<b>GAPENNES (18a)</b>
Abbeville L.4
50°10'33.97"N, 1°57'4.14"E
Surveyed by the RAF in early 1918 and judged suitable for a 2-seater squadron. In May, the ground was reserved but, by July, it had been given up. It was never used.

<b>GENECH (600)</b>						
Tourmai C.6, BEF Sheet 44 A.9.c						
50°31'50.13"N, 3°12'39.74"E						
Nine kms SE of the current Lille airport, Hostile Aerodrome 166 was used by Jasta 63 from 20 Sep – 20 Oct 1918. Shortly after it became aerodrome 600 and 2 Sqn moved in. It was said to be in very good condition but was declared to be surplus to requirements once 19 Sqn had departed.						
2 Sqn	26.10.1918	from	Mazongarbe	14.2.1919	to	Bicester (as cadre)
19 Sqn	9.2.1919		Abscon	18.2.1919		Ternhill (as cadre)



Located to the NW of Genech village, the aerodrome was shown as having seven wooden aeroplane sheds, arranged in two groups in the SE corner of the site. The photograph shows that the sheds were Type B structures with drop-down doors, each capable of holding four or five scout machines.

<b>GENNE IVERGNY (26b)</b>
Lens A.3
50°15'53.68"N, 2°02'43.57"E
Six kms NW of Auxi-le-Chateau, Gennes-Ibvergny was surveyed prior to the German 1918 spring offensive and was said to be being prepared for the French. There is no record of the preparations being completed or of it being taken up by the French or the RFC.

<b>GERPINNES (517)</b>						
Namur F.2						
50°20'01.35"N, 4°29'41.52"E						
Nine kms SSE of Charleroi, Gerpennes was taken up on 24 November 1918. It was said to be suitable for two scout squadrons and, by January had seven Bessonneau hangars. At the end of March when 6 Sqn had departed, Gerpennes was given up and returned to agriculture.						
12 Sqn	29.11.1918	from	Estourmel	6.12.1918	to	Clavier
59 Sqn	29.11.1918		Caudry	14.3.1919		Bickendorf
6 Sqn	6.12.1918		Pecq	19.3.1919		Sart

<b>GERPINNES EAST (922)</b>
Namur G.2
50°20'18.75"N, 4°32'01.59"E
Nine kms SSE of Charleroi, Gerpennes East was taken up on 24 November 1918 but was not heard of subsequently.

<b>GHLIN (415)</b>
Valenciennes K.1, BEF Sheet 45 J.32.a
50°28'13.84"N, 3°52'44.15"E
A pre-existing German aerodrome, home to Jastas 1 and 59, Ghlin was taken up by the RAF but was never used.

<b>GLISY</b>						
Amiens E.2						
49°52'14.76"N, 2°23'37.03"E approx						
Four miles east of Amiens, Glisy was an ALG prepared by 3rd Sqn AFC and used from 15 August 1918 to extend their time-over-target when engaged on artillery reconnaissance working with the Australian Corps over the Somme. It was used until the 3rd Sqn AFC moved east from Villers Bogaie to Proyart on 6 September. There is still an active aerodrome at Glisy.						
3rd Sqn AFC (det)	15.8.1919	from	Villers Bogaiescon	c.5.9.1918	to	Proyart

**GOLANCOURT (FERME DE BONNEUIL)**

St-Quentin A.4, BEF Sheet 66D P.17.d.23.b

49°42'44.30"N, 3°02'45.82"E

Originally a German aerodrome until their withdrawal to the 'Hindenburg' Line, Golancourt was then taken up by the French who called it Ferme de Bonneuil (Esmerly-Hallon). The RFC then used it for two months until the area fell to the German spring offensive when Jasta squadrons arrived and it became Hostile Aerodrome 299.

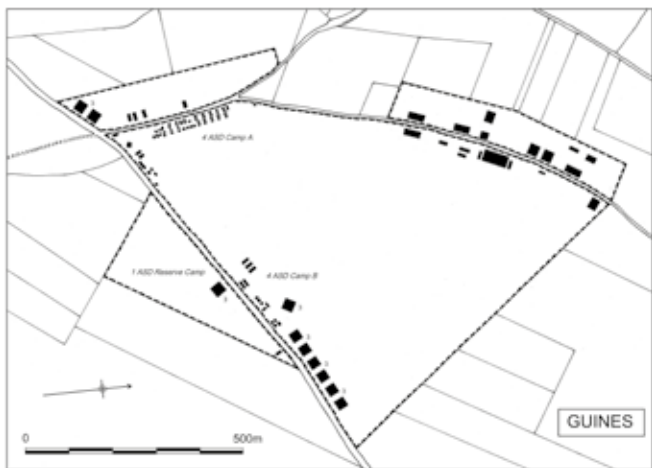
82 Sqn	22.1.1918	from	Savy	22.3.1918	to	Catigny
52 Sqn	23.1.1918		Matigny	22.3.1918		Catigny



The large aerodrome at Golancourt was shown in a reconnaissance photograph to have had two groups of aeroplane sheds when in German hands; one group near Ferme de Bonneuil and the other on the southern boundary near Chateau de Bonneuil. These were regarded as two separate aerodromes by the British – Golancourt to the north and Chateau Bonneuil to the south – although they shared the landing ground.



Based on a reconnaissance photograph, the plan shows the German aeroplane sheds on the northern boundary of Gondecourt aerodrome. Those sheds comprised three 42 x 42ft structures with the others measuring 60 x 42ft.



4 ASD's aerodrome was of triangular shape with a large number of sheds and Bessonneau hangars. 1 ASD's reserve camp was located on the southern boundary.

**GONDECOURT (607)**

Hazebrouck L.6, BEF Sheet 36C.D.8.a.b.c

50°32'17.10"N, 2°58'47.31"E

Listed as Hostile Aerodrome 286 in August 1918, Gondecourt was taken up by the RAF in October 1918 when it became 607. Recently evacuated by the Germans, the approaches were described as good, but narrow. Eleven sheds were available, 5 of which would hold 4/5 scouts: the remainder would each hold one large two-seater.

88 Sqn	26.10.1918	from	Ascq	28.10.1918	to	Bersee
6 Sqn	9.11.1918		Maretz	16.11.1918		Pecq
108 Sqn	16.11.1918		Bisseghem	16.2.1919		Lympne (as cadre)

**GONNEHEM – See CHOCQUES (31)**

**GORENFLOS (14a)**

Lens A.5

50°05'53.88"N, 2°04'17.20"E

Surveyed in early 1918 prior to the 1918 German spring offensive, by May Gorenflos was listed as 'given up'. It was never used.

**GRAND FAYT (506)**

Valenciennes J.5, BEF Sheet 57A.I.32

50°06'28.05"N, 3°48'22.46"E

Twenty-four kms SSW of Maubeuge, Grand Fayt had been used by the retreating Germans before 35 Sqn arrived on Armistice Day. 80 Sqn departed 3 weeks later and Grand Fayt did not feature in any subsequent list.

35 Sqn	11.11.1918	from	Flaumont	13.11.1918	to	Elincourt
80 Sqn	12.11.1918		Flaumont	3.12.1918		Strée A



*Guizancourt was adjacent to Flez aerodrome and it is impossible to work out the boundary between the two. Guizancourt was definitely more spartan than its neighbour and the photograph shows limited number of buildings on the site.*

### GUINES (17)

Calais D/E.2  
 50°51'38.78"N, 1°49'40.46"E  
 Originally a RNAS Depot, established following the evacuation of St-Pol, Dunkerque. Taken over by the RAF as 4 ASD by 24.3.1918. A Pilot's Pool and Reception Park were established at Audembert. 4 ASD vacated Guines by 28.12.1918.

### GUIZANCOURT (69)

St-Quentin A.2, BEF Sheet 62c V.27.d.28.b  
 49°49'47.91N, 3°01'08.13"E  
 Located on the other side of a road from Flez (68), Guizancourt was established when the Germans pulled back to the 'Hindenburg Line' and the RFC needed to advance. When 9(N) Sqn departed, Guizancourt was handed over to the French on 11.7.1917 and two escadrilles were there until the end of the year when it was handed back to the RFC. 84 Sqn had to evacuate quickly when the 1918 spring offensive artillery moved too close. Guizancourt was subsequently used by German squadrons and the Flez/ Guizancourt complex was known as Hostile Aerodrome 207 Guizancourts. There were three Bessonneau hangars in July 1917.

9(N) Sqn	15.6.1917	from	Furnes	5.7.1917	to	Le Hameau
84 Sqn	22.12.1917		Le Hameau	22.3.1918		Champien

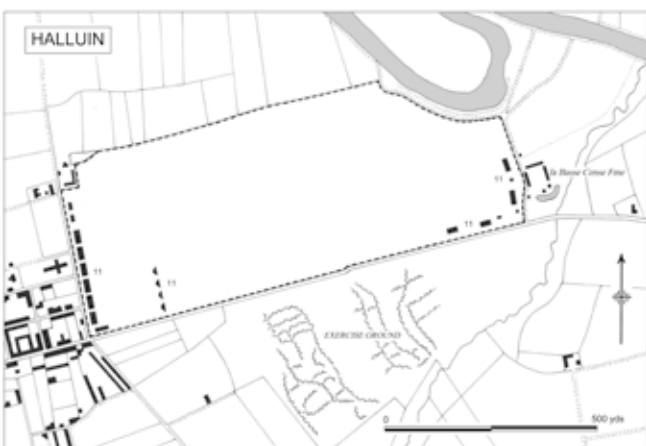
### HAGNEVILLE

Neufchateau XXIII-15  
 48°15'11.04"N, 5°47'56.24"E  
 Hagneville was under construction for the Independent Force by September 1918 but was abandoned after the Armistice. It was designed to hold five squadrons.

### HALLUIN (207)

Tournai B.3, BEF Sheet 28.R.21.b  
 50°47'26.89"N, 3°08'38.13"E  
 Halluin was Hostile Aerodrome 238. Halluin NE, home to four Jastas in spring 1918 but it fell to the final Allied advance when it was taken up by the RAF as aerodrome 207. At the Armistice there were 16 German hangars. (Halluin E is listed as Reckem)

41 Sqn	23.10.1918	from	Droglandt	10.2.1919	to	Tangmere (as cadre)
74 Sqn	30.11.1918		Froidmont	10.2.1919		Lopcombe Corner (as cadre).



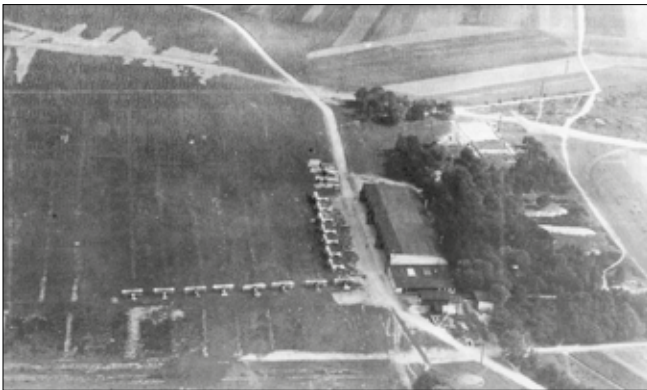
*The former German aerodrome known as Halluin North East had German aeroplane sheds on both the eastern and western boundaries. In addition, a reconnaissance photograph showed that there were also a number of Type A canvas hangars.*



*Lying just to the north of Hancourt village, the aerodrome has German Type A hangars set out along its eastern boundary.*

<b>HANCOURT (112a)</b>						
<i>St-Quentin A.2, BEF Sheet 62C Q.2.c.d</i>						
49°54'32.11"N, 3°04'14.81E						
Ten kms SE of Peronne, Hancourt was Hostile Aerodrome 233 in the Summer of 1918, but the Allied advance enabled the RAF to take up the aerodrome as 112a in September. Soon after the Armistice it was given up.						
23 Sqn	11.10.1918	from	Cappy	25.10.1918	to	Bertry East
101 Sqn	25.10.1918		Proyart East	12.11.1918		Catillon

<b>HANGELAR (242)</b>						
<i>Germany 2.L.F.6.19</i>						
50°46'20"N, 7°10'00"E						
A long-established German landing ground on the east bank of the <i>Rhine</i> , north-east of <i>Bonn</i> . The landing ground comprised old grass and measured 1,000 by 700 yds. Occupied by 5 Sqn (R.E.8) on 21 December 1918. 207 Sqn (Handley Page O/400) arrived from <i>Merheim</i> in May 1919 but returned to the UK three months later. 5 Sqn remained at <i>Hangelar</i> as part of the British Army of the Rhine until September 1919, when it also returned to the UK. Cpl William Lewis, a wireless operator with 5 Sqn, wrote to his mother on 21 December 1918, " <i>we passed through Bonn and crossed the Rhine to this village which is about two miles from Bonn. We are just outside Hangelar in one of Fritz's aerodromes. Fritz left about 30 planes here – all apparently in first class condition. All of us have good billets so we shall be quite comfortable for Christmas.</i> " In January 1919, the site offered five German sheds (one large brick and four wooden) together with billets. The site is now Bonn-Hangelar airport.						
5 Sqn	21.12.1918	from	Elsenborn	19.9.1919	to	Bicester
M Flt	27.12.1918		Bickendorf			
207 Sqn	10.5.1919		Merheim	22.8.1919		Tangmere (as cadre).



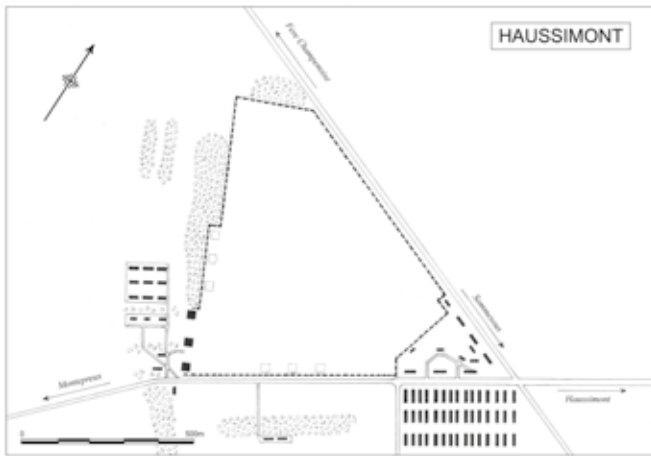
The available plan of this aerodrome does not indicate the location of its aeroplane sheds, one of which is shown in the photograph.



<b>HARAVESNES (8a)</b>						
Lens B.3						
50°17'16.25"N, 2°03'43.38"E						
Eleven kms SE of Hesdin, Haravesnes was surveyed and prepared prior to the 1918 German Spring offensive. It was soon completed with RE7 aeroplane tents and a camp for one scout squadron, but it was never used.						

<b>HARLEBEKE (221) - See ABEELHOEK (216)</b>						
<i>Tournai D.2, BEF Sheet 29.5.a.c</i>						
50°51'53.04"N, 3°19'19.51"E						
There is room for confusion here because the RAF itself was confused! Hostile Aerodrome 70 was called Abeelhoek until it was taken over by the RAF in October 1918. They changed the name to Harlebeke and gave it the number 216. Unfortunately, some later lists referred to 216 Abeelkoek. Two kms east was Hostile aerodrome 11 known as Harlebeke when in German hands. It was taken over by the RAF who called it Beveren, aerodrome 221. Some later lists still referred to 221 Harlebeke!.						
38 Sqn	26.10.1918	from	St-Pol	16.12.1918	to	Serny

<b>HAUSSIMONT</b>						
<i>Arcis-sur-Aube XX-14</i>						
48°44'12.12"N, 4°09'13.16"E						
An artillery observation school operated by Escadrille BR 210 from 2 February- 28 March 1918. Located at the southwest corner of the N4 and D 318 crossroads, south of <i>Haussimont</i> village. Construction began in December 1917.						
99th Aero Sqn USAS	11.3.1918	from	Tours	31.5.1918	to	Amanty
13th Aero Sqn USAS (det)	11.5.1918		Issoudon	24.06.1918		Colombey-les-Belles
82 Sqn RAF	15.7.1918		Quevauvillers	02.08.1918		Quelmes



This plan of Haussimont aerodrome is based on a contemporary sketch plan which showed three hangars erected (presumably Bessonneau hangars) and a further six planned. The French school buildings were adjacent to the hangars in the SW corner.



The available plan of Hautclocque shows only the boundaries and the area of possible enlargement to the north-west. It does not give any indication of the location of its Bessonneau hangars but does illustrate the proximity of Croisette aerodrome.

<b>HAUTCLOCQUE (36a)</b>
Lens D.2, 51DF.11.a
50°20'38.22"N, 2°16'36.90"E
Hautclocque was selected as a reserve aerodrome prior to the 1918 German spring offensive and, by July, five Bessonneau hangars had been erected but it was never used.

<b>HAUTEVILLE (55a)</b>
Calais C.2/D.2
50°52'26.23"N, 1°44'51.72"E
Hauteville was established as a reserve aerodrome in anticipation of the 1918 German spring offensive. By July, three Bessonneau hangars had been erected, but the landing ground was probably never used. At about the same time, St-Inglevert aerodrome was established on the other (northern) side of the six-way cross-roads and at least a part of Hauteville was taken by St Inglevert, which also had the number 55a. In fact, it may be that St-Inglevert's first squadron (21 Sqn) used the original Hauteville site. Hauteville seems to have been used an annex to St-Inglevert, which was quite busy with two or three HP O/400 squadrons and two night bomber squadrons from the US Navy

<b>HAUTEVISÉE (25a/11b/25a)</b>						
Lens E.4						
50°10'49.37"N, 2°21'47.82"E						
Just north of Doullens, Haute Visée was established prior to the 1918 German spring offensive and was given the number 25a, the 'a' suffix indicating use by the RFC/RNAS. 101 Sqn was there from 25 March to 7 April. The number then changed to 11b (the 'b' indicating use by the French) and Escadrille BR35 operated from what they called Haute-Visée-le-Beau from 18-27 May. It then reverted to No 25a but was never again used.						
101 Sqn	25.3.1918	from	Fienvillers	7.4.1918	to	Famechon

<b>HERIN (907)</b>
Valenciennes F.2, BEF Sheet 51A.D.16.22
50°20'45.40"N, 3°27'24.50"E
In the western outskirts of Valenciennes, Herin was probably a German aerodrome until Valenciennes fell to the Allies in October 1918. There were no hangars or accommodation and it was never used.

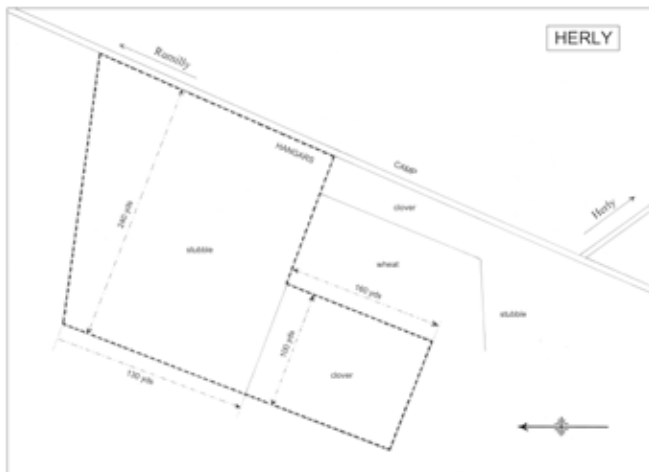
<b>HERLIN-LE-SEC (18b)</b>
Lens E.2,
50°21'17.13"N, 2°19'52.40"E
Two kms south of St-Pol-sur-Ternoise, Herlin-le-Sec was a French aerodrome used by five escadrilles between October 1914 and May 1915. It was then dormant until selected as a reserve aerodrome by the RFC prior to the 1918 German spring offensive. It was never used by the RAF.

<b>HERLY (56a)</b>
Calais F.6
50°33'52.71"N, 1°59'45.69"E
Herly was selected as a reserve aerodrome in anticipation of the 1918 German spring offensive and was deemed to be fit for a scout squadron, however, by July 1918, it was listed as "given up". The site was returned to the owners for agricultural purposes in September 1918.

<b>HERISSART</b>
Lens E.6, BEF Sheet 57D.T.2
50° 1'54.91"N, 2°24'20.51"E
Identified by HQ RFC as a potential aerodrome in August 1916, Herissart was never used operationally.

<b>HERVILLY (109a)</b>
St-Quentin B.1, BEF Sheet 62C.K.30.a.b
49°55'56.89"N, 3°07'29.20"E

Hervilly was a Hostile Aerodrome, thirteen kms east of Peronne, which was used by Jasta 34 in August 1918. The area fell to the Allies and Hervilly became aerodrome 109a						
8 Sqn	8.10.1918	from	Estrées-en-Chaussée	18.10.1918	to	Malincourt
73 Sqn	8.10.1918		Estrées-en-Chaussée	17.10.1918		Malincourt



*Herly was another site whose boundaries alone were shown in a contemporary plan. A contemporary sketch, reproduced here, gave dimensions and an indication of the surface nature.*



*The plan of Hervilly aerodrome, to the SE of Hervilly village is based on an Intelligence map which showed tent hangars along the SW and NW boundaries.*

<b>HESDIGNEUL (32)</b>						
Hazebrouck H.6, BEF Sheet 36B E.25.c						
50°30'04.23"N, 2°35'21.02"E						
It was most unusual for a squadron to stay at the same aerodrome for three years, but 2 Sqn did. The village of Hesdigneul-lès Béthune was just SW of Béthune and the aerodrome was at the west end. It was rather small, the cause of some accidents, and Captain Allport, a Flight Commander, stated that when night bombing with the FK8 they often operated from Auchel. At the Armistice there were four 'A' sheds, one 'B' shed and one RAF hangar. It was used as a Demobilisation Aerodrome until it was given up in February 1919.						
2 Sqn	30.6.1915	from	Merville	9.6.1918	to	Floringhem
21 Sqn	19.10.1918		Floringhem	25.10.1918		Seclin



*Hesdigneul aerodrome had an L-shape plan with sheds at the eastern end. It is shown as it appeared in 1917 with a pair of RE hangars supplementing the sheds. The oblique photograph, taken from the SW shows the confined nature of the site.*

<b>HEULE (201)</b>						
Tournai C.2/D.2, BEF Sheet 29.H.19.a.b.c. ( but the landing ground was also in 29.a)						
50°50'24.41"N, 3°14'49.75"E						
Hostile Aerodrome 51, Heule was large and busy. It was in German hands for most of the war; at one point, there were 4 or 5 large hangars and 19 individual aircraft shelters. It was occupied by the RAF on 24.10.1918 and it was referred to in one RAF document as Courtrai (Heule). At the Armistice there were five German hangars.						
204 Sqn	24.10.1918	from	Teteghem	11.2.19	to	Waddington (as cadre).

<b>HEUMAR (247)</b>						
Germany 2.L.D.2.51						
50°55'21.05"N, 7°04'49.13"E						
In the western outskirts of Cologne, Heumar was taken up for the Army of Occupation and, on 20 May 1919 works were in hand to lay on a water supply. The exact position is not known but the grid reference suggests a spot one km west of Heumar town centre.						

12 Sqn	5.5.19	from	Duren	17.11.20	to	Bickendorf
208 Sqn	23.5.19		Stree B	7.8.19		Eil
7 Sqn	7.8.19		Buchheim	21.9.19		Old Sarum



*This plan of Heule is based on a reconnaissance photograph, which showed aeroplane sheds at both the eastern and western ends of the aerodrome, with an enclave for tent hangars to the south of the main site.*

<b>HINGES</b>						
<i>Hazebrouck H.6, BEF Sheet 36A.W.14.d</i>						
50°33'34.52"N, 2°36'29.25"E						
The use of Hinges aerodrome was limited but important and was probably associated with the Battle of Neuve-Chapelle. 3 Sqn conducted pioneering photographic work to brief the ground commanders on the enemy positions. They then carried out some of the early artillery co-operation work using wireless which proved to be a success. Hinges was their forward landing ground. In September 1915, for the Battle of Loos, 1st Wing located their Advanced HQ at Hinges.						
3 Sqn (det)	12.10.1914	from	St Omer	24.11.1914	to	Gonneham

<b>HONDSCHOOTE (8)</b>						
<i>Hazebrouck G.1</i>						
50°59'32.34"N, 2°34'22.40"E						
ESE of Dunkerque and close to the Belgian border, Hondshoote was a busy aerodrome which was French then British, French, Belgian and French again. A total of 22 French escadrilles were based there between the Summer of 1915 and the Armistice. British occupancy was fairly short, covering the period when 41 Sqn and 11(N) Sqn were at Hondshoote. At that time there were twelve Bessonneau hangars.						
11 (N) Sqn	20.4.1917	from	Petite Synthe	6.7.1917	to	Bray Dunes (Frontier)
41 Sqn	24.5.1917		Abeele	15.6.1917		Abeele

<b>HON HERGIES (915)</b>						
<i>Valenciennes J.3, BEF Sheet 51.I.8.b.9.a</i>						
50°19'26.60"N, 3°48'37.62"E						



*The oblique view of Hondshoote, taken when French Caudrons and 1½ Strutters were in residence, shows that the site was provided with a mixture of standard and 'super' Bessonneau hangars.*

<b>HOOG HUYS/HUIS/HOOGHE HUYS (77a)</b>						
<i>Hazebrouck E.3</i>						
50°49'03.86"N, 2°20'34.99"E						
Ten kms NE of St-Omer, Hoog Huys was one of the aerodromes established prior to the German 1918 spring offensive. 5 Bessonneau hangars were erected and a camp for a 2-seat squadron but the first to use it were three French escadrilles in May/June 1918. 29 Sqn came 2 months later. Hoog Huys was made available for disposal in January 1919.						

<b>HORNAING (405)</b>
<i>Valenciennes E.2, BEF Sheet 51A C.1.c</i>
50°21'54.51"N, 3°20'22.84"E
Midway between Douai and Valenciennes were two Hostile Aerodromes: 169 Hornaing at 44 T.30.b and 70 Hornaing South at 51A C.1.c. When the Allies advanced eastward through the area in October 1918, the latter was taken up and became 405 Hornaing but it was never used operationally.

<b>HUCLIER (73a)</b>
<i>Lens E.1</i>
50°26'05.54"N, 2°20'15.10"E
Huclier was 5 kms north of St-Pol-sur-Ternoise and was established as a reserve aerodrome prior to the German 1918 spring offensive. 36 RE7 hangars were soon erected pending replacement by Bessonneau hangars, and an aerodrome plan indicated that 16 Sqn and 52 Sqn were destined to arrive. In the event they did not come, and Huclier was never used operationally. By the Armistice, it was not included in the RAF List of Aerodromes.



The T-shaped Hoog Huys aerodrome was provided with eight Bessonneau hangars that were dispersed around its boundaries.



This plan of Huclier is based on one dated 8 August 1918. It showed that, at that time, three Bessonneau hangars had been erected on the western boundary for 52 Squadron, with a fourth yet to be provided. Six Bessonneau hangars were to be erected on the southern boundary, for use by 16 Squadron.

<b>HURTBISE FARM (21b)</b>						
<i>Lens F.5, BEF Sheet 57D C.19.d (Farm not aerodrome)</i>						
50°08'48.36"N, 2°27'27.93"E (Farm)						
Hurtbise, also known as Hurtbise Farm, was established prior to the German 1918 spring offensive. It was originally earmarked for the French, but they did not use it and, by July 1918, it was taken over by the RFC who deemed it suitable for a 2-seater squadron. The exact position is not known but it is likely that the camp was centred on the farm. At the Armistice there were five Bessonneau hangars.						
102 Sqn	19.10.1918	from	Famechon	23.10.1918	to	La Targette

<b>INCHY (313)</b>						
<i>Valenciennes F.5, BEF Sheet 57B.J.16.a.b</i>						
50°7'53.18"N, 3°28'0.88"E						
An ex-German landing ground (Hostile Aerodrome 177) located just north of the village. By January 1919, the site offered five Bessonneau.						
3 Sqn	4.11.1918	from	Lechelle	15.2.1919	to	Wye (as cadre)
60 Sqn	23.11.1918		Quievy	17.2.1919		Narborough (as cadre)

<b>IRIS FARM (131a)</b>						
<i>Valenciennes E.6, BEF Sheet 57B.O.34.b</i>						
50°3'26.99"N, 3°23'20.19"E						
Located just north of Elincourt village, Iris Farm was occupied late in the war. At the Armistice, it offered 22 Nissen huts.						
211 Sqn	24.10.1918	from	Petite Synthe	3.12.1918	to	Thuilles
20 Sqn	25.10.1918		Moislans	3.12.1918		Ossogne

<b>IWUY (909)</b>						
<i>Valenciennes D.4, BEF Sheet 51A.N.36.b.O.31</i>						
50°13'57.89"N, 3°20'6.85"E						
Allocated to the RAF during the Hundred Days campaign, but never used operationally.						

<b>IZEL-LE-HAMEAU - See LE HAMEAU (40)</b>						
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AW FK3 6221. On 11 February 1917, Wynne-Eyton, flying with Cpl C. De Pomeroy, flew an attempted escort mission in this aircraft. However, they were delayed by engine trouble and left too late to catch up with the aircraft they were supposed to be escorting. On 24 February Wynne-Eyton, this time with 2Lt A.P. Adams, flew a successful, although uneventful, escort mission in the same aircraft. 6221 was subsequently converted into an AW12 and, in that guise, it was flown by Eric Wilkinson, with 2Lt P.W. Taylor as his observer, on a bombing mission on 5 October 1917. During that flight they had a brief combat with an enemy fighter. 6221 was finally crashed by 2Lt James Boyd on 12 November. :FAAM JMB/GSL 00094

Incidents where the fabric stripped off the top wings were not confined to the SPADs sent to Salonika although, as noted by Costes, the heat of a Macedonian summer exacerbated the problem.

Lt Eric Russell Wilkinson in a BE12 of 47 Squadron. Wilkinson was born in Cheshunt, Hertfordshire, in 1894. He served in a Canadian Militia unit before transferring to Lord Strathcona's Horse in September 1914. Subsequent transfers took him to the Middlesex Regiment in 1915 and then the RFC in 1916. He was appointed a Flying Officer with effect from 26 July and flew with 47 Squadron from October 1916 until late July 1917, when he was admitted to hospital. Having contracted dysentery, he did not return to 47 Squadron until 20 September. This photograph was taken in late September or early October 1917, not long before Wilkinson was mortally wounded on 6 October, although he was flying an Armstrong Whitworth FK3, rather than a BE12, on that day.

: IWM HU89732



The method of attaching the fabric to the wings was recognised as a danger by the RFC in France when it began receiving French-built SPADs. In May 1917, 2 Aircraft Depot advised RFC HQ that the French were making certain modifications to prevent fabric stripping, including covering the leading edge as far back as the front spar with 2mm ply. This prompted Brigadier General Brooke Popham, the RFC's Deputy Adjutant and Quartermaster General, to write to the British Aviation Commission in Paris advising that we



Déjà vu for Costes - these views show his second SPAD, SFA S.1096, after his crash landing on 29 August 1917. Just as had happened on 8 July, the cause was fabric stripping off from the upper wing. Once again, the entire leading edge of the wing was missing. On this occasion the gravity tank was not lost completely, as had happened on 8 July, but it has become partly displaced from its housing in the upper wing. This SPAD remained in the standard configuration with a single Vickers gun and the exhaust pipes were unchanged.

: David Méchin





A third view of crashed SPAD S.VII SFA 1096.

: David Méchin

make a habit of sewing the fabric to the frames with string and enquiring Are the Spad Company aware of the method adopted by us for fastening the fabric to the ribs? In my opinion it is far sounder than fastening the fabric to the ribs with small tacks.

On 24 May the Commission replied, saying that the Spad Co. and Messrs Bleriot, who make our machines, have just started sewing the fabric to the frames with string within the last ten days. They agree that it is a far sounder method than fastening the fabric to the ribs with small tacks. Bleriot are not yet fitting 3 ply to the leading edge.

On 6 June the commission further advised that Bleriot built single-seaters with high compression Hispano-Suiza engines, are now coming through with the following improved features:

The fabric of the planes, in addition to being tacked to the compression ribs, is sewn with cord and the whole covered with a strip of seaming fabric doped on, thus practically following the English practice. There are six strips on each bottom plane, and ten on each side of the top plane.

(Number 2. concerned incidence wires being of increased gauge.)

On 23 July Brooke-Popham wrote to 1 and 2 Aircraft Depots stating: All spare Spad planes now in your stores that have not already got the fabric sewn to the ribs are to be sent to your A.R.S. to have the fabric sewn on. Planes that are now being received from Paris are sewn, but not to every rib, only to the compression ribs in the lower planes and to about 3 ribs out of 4 in the top planes. It is not necessary to modify these but only planes that are not sewn at all. In altering these spare planes it is not necessary to remove the fabric.

The SPAD VII was built by several different firms and there were variations in the wing construction and in the number of ribs which had the fabric sewn to them. For example, as of 19 July SPAD's received by the RFC from the Kellner company did not have the leading edges covered with 3-ply. On 22 July the British Aviation Commission in Paris advised HQ RFC that Messrs. Kellner are fitting three ply to the leading edges of the last twenty machines to be delivered off their contract.

It seems that the plywood leading edge covering was initially applied only to the lower surfaces of the wings, and only later to the upper surfaces as well. On some SPADs the plywood covering was perforated with lightening holes. This was the case, for example, on B9916, a surviving SPAD VII built by the British Mann Egerton company.

Ironically, when the British Bleriot and Spad Company began producing SPADs the use of a French aircraft as a pattern machine resulted in the fabric also being attached with glue and tacks! Consequently, Brooke-Popham had to write to 1 and 2 Aircraft Depots as follows - Please note that all English SPAD machines coming from England will have the planes removed, and the fabric sewn to the compression ribs, in the same way as the fabric on planes of other machines is sewn on to the ribs before issue to Squadrons. It is thought that it will be necessary for the planes to be recovered.<sup>8</sup>

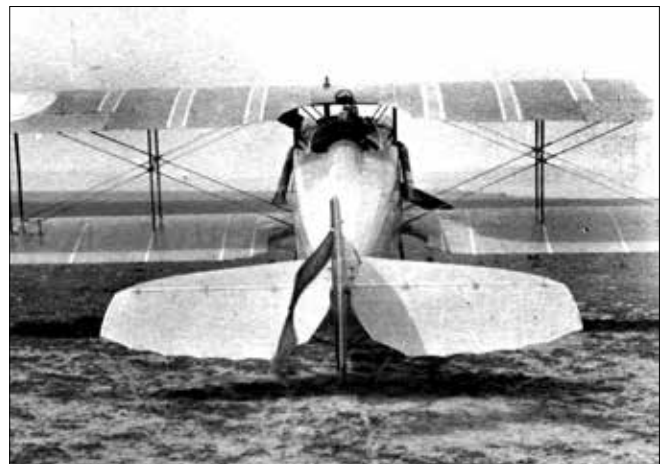


Above: Another SPAD which came to grief owing to fabric stripping off the top wing.

:FAAM JMB/GSL 09680

Below: A French built SPAD VII of 23 Squadron RFC with clearly visible rib tapes. These indicate that on this particular machine the fabric was sewn to some (but not all) of the ribs.

: Arthur W. Keen



### Dieudonné Costes

The friendly fire episode was but a single brief incident in the careers of Dieudonné Costes and Walter Bell, who led extraordinary lives and who were both remarkable characters, if perhaps not necessarily the most admirable of human beings. Whether he was involved in the friendly fire incident or not, Robert Wynne-Eyton also led an eventful life, as a resume of the respective careers of these pilots will demonstrate.

Dieudonné Costes is best known for his long-distance flights between the wars, including the first westward crossing of the North Atlantic in a heavier-than-air craft. His life has been chronicled in some detail in the works of David Méchin, so only a brief summary, concentrating on the First World War period, will be presented here.

Costes was born on 4 November 1892 in the village of Septfonds in south-west France. His family were quite well off and his father, Urbain, owned a small straw hat factory in the Department of Tarn et Garonne. After attending High School in Toulouse, Costes studied at the School of Arts and Crafts of Aix-en-Provence. However, he left at the age of 17 without achieving his diploma and, instead, obtained a job as a mechanic in an agricultural machinery repair workshop.

In March 1911 Costes witnessed flights by the French aviators Roger Morin and Jules Védrines and became fascinated by aviation. Having convinced his parents to offer him flying lessons, Costes trained at the Blériot School at Etampes and obtained his civil flying licence (number 1046) in September 1912. Next, he bought a share in a second-hand Blériot XI and took part in some flying exhibitions, venturing as far afield as Italy. This enterprise ended when the Blériot became unfit to fly and Costes returned to France. He then decided to try for a flying career by way of enlisting in the Army, which he did in October 1913. However, because the Army did not recognise his civil flying licence he was initially appointed as



*Diudonné Costes is the figure in the centre here, flanked by Paul Andrillon and Maurice Lashermes. The date is November 1917, and the Nieuport 24 of Escadrille 507 is one of the aircraft fitted by Costes with a vertical Lewis gun - the gun and its sight can just be discerned in the photograph. Costes scored two unconfirmed victories, on 3 May and 26 July 1917, using such a weapon.* : David Méchin

a Corporal Mechanic. When he was selected for pilot training, his instruction was interrupted by the outbreak of war, and he was sent to the front as an aerial machine-gunner with Escadrille V24.

Costes carried out several missions as an observer/gunner in Voisin LAS aircraft, but on 22 December 1914 he was wounded in the hand by shrapnel from AA fire. The wound became infected and Costes was hospitalised. His convalescence only ended in April 1915, when he was transferred to Escadrille MF44. On 17 May, however, he was sent to the flight school at Chartres where he obtained his military pilot's licence (number 1185) in July. To his great disappointment he was not then sent to the front but was retained as an instructor at Chartres.

A keen hunter, Costes shot game in the surrounding countryside to supplement the camp rations. However, he also went hunting partridges by flying a Maurice Farman at low altitude over nearby ponds. As a result, Costes' commanding officer took disciplinary measures against him, and eventually decided to have him transferred to a front-line unit, Escadrille MF55. However, during his time at Chartres Costes gave flying training to Capitaine Victor Denain, the future commander of the French Aviation Service in the Orient, and Denain would play a crucial part in Costes' subsequent career.

On 8 October 1915 Costes arrived by air at the airfield of MF55 and chose to give a demonstration of his flying skills before landing, immediately alienating his new Escadrille commander. A mere 20 days later, Costes "volunteered" for the new Escadrilles which were then being created to support the Armée d'Orient – a move probably facilitated by the Escadrille commander.

Costes was assigned to Escadrille MF85 and arrived at Salonika in early 1916. He made his first flight there on 4 February. Costes quickly resumed his bird hunting activities, resulting in the crash into Lake Aci Gol mentioned earlier. This flight was passed off as an "engine test" and although it had lasted barely half an hour the crash was blamed on a fuel shortage. Commandant Denain was not impressed, and Costes was removed from the aviation service and transferred to a regiment of Zouaves as a disciplinary measure. Having made his point, Denain allowed Costes to be restored to his Escadrille two months later. Subsequently, the two men forged a good working relationship, as Denain recognised that Costes was one of his best pilots and selected suitable assignments for him. He also used Costes as his personal pilot on a number of occasions.

For the remainder of 1916 Costes flew various missions with



*This bird of prey may be one of those 'shot down' by Costes using his aircraft. Costes himself is second from the left in this 1918 photo. In addition to the Nieuport on the left, a Breguet XIV is just visible in the background on the right.* : David Méchin

Escadrille MF85, which was re-equipped with Farman F.40 aircraft and, in August, re-designated Escadrille MF385. Costes was promoted to Sergent in July 1916 and to Adjutant-Chef in January 1917. In the latter month he was transferred to Escadrille F386.

In March 1917, in response to bombing raids by KG1, the French Aviation Service in the Orient underwent some reorganization. Escadrille N391 was charged with tackling the German bombers in the Vardar-Salonika sector and Costes was transferred to this unit, where he initially flew a Sopwith 1A2 two-seater with MdL Astor as his gunner. Costes and Astor had three combats whilst flying together, but in the last of these, on 1 April, their Sopwith was badly shot about by two Halberstadt fighters. Costes then moved on to single-seater Nieuports and on 29 April, during Escadrille N391's stay at Negocani, he scored his first confirmed victory. This was over a twin-engined bomber which crossed the lines at low altitude, and which was seen falling by several ground observers.

Costes then fitted his Nieuport with a Lewis gun arranged to fire vertically upwards, and with this machine he claimed an unconfirmed victory on 3 May. After his second unconfirmed victory on 26 July, mentioned above, Costes underwent a long fallow period. On 30 July Escadrille 507 moved to Lembet, just North of Salonika. It remained responsible for the aerial defence of the city for the rest of the war and, although sometimes used for front line patrols, combats were few and far between. In late 1917 Costes began using an old Farman F.41 for night flights, including four bombing missions targeted at the German aerodrome at Hudova.

Despite his salutary experience when duck hunting in 1916, Costes continued to use his aircraft for hunting birds, although when flying fighters this could be justified as target practice. In his 1968 interview Costes recounted how:

*For example, when returning from patrol, I often had fun, by way of entertainment, shooting scavengers (hawks, eagles, vultures.....by the dozens). I made the creatures take off, I forced them to climb and when they reached an altitude where I could stay up without losing speed, because these birds fly slowly at 65-70 km/h; when, therefore, I could float along without the risk of losing speed and crashing into the ground, I took a bird... a bullet or two, and it was down! This happened frequently... With geese too, but it was a question of not getting too close because you risked catching the bird with the propeller! We were shooting them just like they were on the other side of the street!*

In December 1917, Costes was transferred to the newly-created Escadrille 532, which was the first Escadrille formed for the Greek Army that was now fighting alongside the Allies. Owing to a shortage of Greek pilots, Costes was one of a number of French pilots assigned to the Escadrille, which was



Notable pilots of Escadrille 531 in 1918. Left to right: Adj Basile Sauné (KIA 20 June 1918), S/Lt Maurice Ripoché, MdL Maurice Lashermes, S/Lt Alexandros Zannas (CO), A/C Dieudonné Costes and Sgt Paul Andrillon. : David Méchin



Costes, Lashermes and Andrillon with a SPAD VII in September 1918. Costes shared in one confirmed victory with Lashermes and in two confirmed and two unconfirmed victories with both Lashermes and Andrillon. : David Méchin

equipped primarily with AR1 observation aircraft. However, it also had a few Nieuport fighters for escort purposes. On 26 January 1918 Costes and Brigadier Maurice Lashermes, both flying Nieuports, shared in a claim for an enemy Roland fighter. This was subsequently allowed for Costes' second confirmed victory.

In April 1918 Costes was transferred again, this time to Escadrille 531, which was a dedicated fighter unit. Also attached to the Greek Army, the Escadrille had a Greek commanding officer, but all the other pilots were French. Between 30 April and 10 September 1918, Costes scored a further four confirmed and three unconfirmed victories, all bar one of which were shared with other pilots. In his 1968 interview Costes explained the group tactics employed and also said:

*When an aircraft was shot down by a patrol it was presumed that the pilots of that patrol, flying together, had all participated*

*in that victory...thus we gave a citation to each one. But, in truth, it was always the same pilot, very rarely a second or third, who shot down the enemy plane.*

Escadrille 531 was initially equipped with Nieuports, and only in May 1918 was Costes belatedly re-introduced to the SPAD VII. He eventually had two confirmed victories and one unconfirmed one whilst flying SPADs; all his other victories being achieved on Nieuports. Costes final tally was six confirmed and five unconfirmed victories, making him the highest-scoring French pilot in the Orient.

At the end of the war Costes contracted Spanish Influenza whilst en route to France from Salonika. Although demobilised in 1919, he sought to remain in aviation and obtained a job as a pilot with the Latécoère airline. This did not last for long, as in 1920 he was arrested for trafficking cocaine from Spain to France! He was convicted in May 1921 and given a suspended sentence (only his war record saved him from a prison term).

*The Breguet 19 TF 'Super Bidon' named 'Point d'Interrogation' of Dieudonné Costes and Maurice Bellonte. The photograph was taken as the pair were about to set off from Le Bourget on their historic transatlantic flight, 1 September 1930.*



A second brief airline job ended when the company concerned went bankrupt.

Costes had to rely on financial support from his family until finally, in September 1923, he was hired by the Air Union company which operated Paris-Brussels and Paris-London flights. With this airline Costes flew Breguet 14Tbis, Bleriot-Spad 33 and Farman F.60 Goliath aircraft. His usual navigator was Maurice Bellonte and together they had accumulated nearly 1000 hours flying time by the summer of 1925. That same year Costes left Air Union and joined the Breguet company, becoming one of a team of pilots tasked with various long-distance flights to publicise the Breguet 19 aircraft.

These flights included a world distance record on 28 October 1926 when Costes, flying with Georges Rignot as his navigator in a Breguet 19 GR, flew 5396 kilometres in 32 hours from Paris to Jask in Persia. In October 1927 Costes, this time with Joseph Le Brix as his navigator, set off on a round-the world flight in the same aircraft. Only the Pacific crossing (from San Francisco to Tokyo) was done by ship, and the two airmen arrived back in Paris in April 1928. Their journey had included the first non-stop aerial crossing of the South Atlantic, between St Louis in Senegal and Natal in Brazil.

The most famous of Costes' flights was the westward crossing of the North Atlantic. For this flight Costes was reunited with Maurice Bellonte, his navigator from the Air Union days. Their aircraft was a Breguet 19 TF named "Point d'Interrogation" and the flight from Paris to New York, lasting 37 hours, took place on 1 - 2 September 1930.

In 1938 Costes married Mary Vachnadze, an actress of Georgian descent, but they separated in 1947 and divorced in 1951. During World War Two Costes worked with the Hispano-Suiza engine company. After the fall of France, he was approached by the Abwehr, the German military intelligence organization, which wanted to use him to spy on the American aircraft industry. Costes, agreed, but once permitted to leave France he contacted the US consular authorities in Madrid, and thereafter worked as a double agent, passing false information to the Abwehr.

Costes returned to France in October 1945, only to be arrested in 1947 and charged with espionage. Despite the support of the US Embassy, he was put on trial and only acquitted in 1949. After that Costes turned away from aviation and built up a ski resort business at Mont Dore. However, tragedy ensued on Christmas day 1965 when seven people were killed in a cable car accident there. Costes was in poor health in his later years, and he died, aged 80, on 18 March 1973.

### Walter Dalrymple Maitland Bell

Walter Bell was born on 8 September 1880 near Edinburgh. He was one of eight children born to Robert and Agnes Bell. Robert Bell was the son of a Scottish farmer and had started out as a timber merchant, but he later leased a coalfield and became a pioneer in distilling oil from shale. He also discovered sulphate



*Dieudonné Costes and Joseph Le Brix photographed in Panama during their epic flight around the world in 1927-28. The aircraft is the Breguet 19 GR 'Bidon' No. 1685. It was named 'Nungesser-Coli' in honour of the two French fliers lost on a transatlantic attempt in 1927. Unfortunately, Costes and Le Brix later fell out and engaged in a dangerous rivalry over long-range flight attempts.*

of ammonia as a by-product of shale, and these industries made him a fortune. Agnes Bell (nee Dalrymple) hailed from the Isle of Man.

Walter's mother died when he was two and he had a distant relationship with his father. So much so that in 'Bell of Africa' he wrote that his father passed away when he was six, whereas Robert Bell actually died in May 1894 when Walter was thirteen.

Deprived of parental influence, Walter Bell became a keen reader of adventure stories and books on hunting big game. He seems to have been inspired in particular by Roualeyn Gordon-Cumming's book 'Five Years of a Hunter's Life in the Far Interior of South Africa'. Bell then conceived an ambition to go to Africa and become an elephant hunter – an ambition which many boys would have set aside as they grew older, but which Bell pursued with an extraordinary tenacity.

After Bell had run away from boarding school his family resorted to sending him to sea. He was apprenticed to a firm of sailing-ship owners and in, 1892, he embarked on a ship bound for Tasmania. On arrival he left the ship, 'breaking his articles' and forfeiting the money his family had paid to the company. Bell then worked his passage to New Zealand, where he obtained work in a starch factory. On failing to find a ship bound for Africa, he instead took a job on a refrigerator steamer carrying frozen meat to London. From there Bell returned home to Scotland. On arrival he was aged just fourteen. His eldest siblings became his guardians after his father died and, in 1896, they sent him to a boarding school in Germany. His school master there arranged for the purchase of a gun and Bell went hunting small game.

*Two of the illustrations from Gordon-Cumming's book 'Five Years of a Hunter's Life in the Far Interior of South Africa'.*





**The Armoury at Mbuyuni. Bell mentions that the bombs used in East Africa did not explode at first - only the primer went off; not the main charge. On examination it was discovered that the T.N.T had liquified and soaked into the primers. Thereafter the primers were stowed apart and only inserted just before the bombs were loaded on to the aircraft.**  
:both Ray Vann/Mike O'Connor Collection



**The Officers' Quarters at Mbuyuni, 26 Squadron's first aerodrome in East Africa. Mbuyuni was retained as a base and the site of the Aircraft Depot when the Squadron moved on to more forward aerodromes. Walter Bell was flying from Mbuyuni when he experienced fabric 'ballooning' on a Henri Farman and was fortunate to land safely.**

Despite the hunting, Bell tired of his schooling and built a kayak in order to escape from Germany. The kayak was wrecked while he was negotiating a mill weir, but he traded his gun for enough money to buy food and a rail ticket to Bremerhaven, where he found a ship sailing to a British port and returned home.

Bell's family then relented on his education and indulged his desire to go hunting in Africa. His eldest brother bought him a rifle and a passage on a steam ship bound for Mombasa. Bell found work with the Uganda Railway as armed protection for survey parties. Having gained some useful experience, he left the job in order to join an expedition led by a German explorer, but the German let him down and Bell was left stranded at Lake Victoria, where he ran out of quinine and contracted malaria. Failing to find another job, he took steerage passage

for England.

When his guardians refused to advance the funds for another trip to Africa, Bell set off to seek gold in the Yukon. Employed to work a claim, he found it involved hard labour, so instead he started a business hunting game and selling the meat for food. This venture ended when Bell's business partner failed to return from a trip to sell the meat, leaving Bell with only his rifle and three dogs from their dog team. By now it was 1899 and Bell heard about the outbreak of the Boer War, so he sold his rifle and went to Calgary to enlist.

Bell was accepted into the Canadian Mounted Rifles and arrived at Cape Town in February 1900. During the Boer War he was captured by the Boers after his pony was shot from under him, although he subsequently managed to escape. At the end of the war, he was discharged and returned to Scotland. He was then able to arrange what he called *my first well-organized expedition to Africa*.

Having embarked upon a career as an elephant hunter, Bell spent the years 1902 to 1914 almost entirely in Africa. Up till late 1907 he hunted in the Karamoja and Dabossa regions of Uganda; subsequently moving on to Abyssinia, the Belgian-administered Lado Enclave, Liberia, and the Belgian and French Congos. During this period Bell said that he achieved his set aim of killing a thousand elephants.

There is no indication in Bell's writings that he ever had the slightest moral qualm about his hunting activities. Of course, the prevailing views at the time on such matters were very different to those of today. In Africa, Bell was often welcomed by locals because elephants had destroyed their crops. However, for Bell that was a bonus, rather than an incentive. His primary motivation seems to have been the thrill of the hunt. In addition, hunting was his business, and a very profitable one too. Once, in one day's hunting, Bell shot nine elephants netting ivory worth about £877 (over £100 000 in today's money). He also mentions taking some tusks home

with him that he presented to his sisters, *who promptly sold them and invested in diamonds*. Even in his own day Bell was aware that nearly all big game in South Africa had been wiped out by Dutch and British hunters. In writing about Gordon-Cumming's book that had so inspired Bell, David Livingstone referred to *nauseating details of indiscriminate slaughter of wild animals*.<sup>9</sup> Bell's hunting was systematic, rather than indiscriminate, but otherwise the same comment can be justly applied to 'Bell of Africa'.

When hunting in the French Congo, Bell learned of the outbreak of war in Europe, and then travelled to London via Bordeaux. He wrote that he *wished to join the (Royal) Flying Corps*, although he does not say why. Having spent so much time in Africa he must have known very little about the development of the aeroplane. Nonetheless, he was accepted by the RFC, commissioned as a temporary Second Lieutenant and learned to fly at Brooklands in August 1915. He was considerably older than most fledgling pilots, turning 35 in September. That same month he went to the newly-formed 19 Squadron at Castle Bromwich. He became a Flying Officer with effect from 11 November, and on 11 December he was transferred to 26 (South African) Squadron for service in East Africa.

26 Squadron sailed from Southampton on 26 December and travelled via Durban to Mombasa, arriving on 31 January 1916. Flying began in early February, and Bell thereafter chiefly flew reconnaissance missions in BE2c aircraft. In May 1916 some Henri Farman F.27 aircraft arrived, but shortly after these had been assembled one was lost in a fatal accident. A few days later Bell carried out a test flight in another Farman and experienced the alarming phenomenon of fabric 'ballooning'

**Major Frederick Minchin, the C.O. of 47 Squadron. In November 1917 Minchin had to write to the Deputy Director Medical Services, XII Corps, to explain that Captain Bell's nerves had gone and that he was no longer fit for operational flying.** :Ray Vann/Mike O'Connor Collection



**Captain William McBain with the Vickers Bullet A5225 of 47 Squadron in August 1917. This particular aircraft was flown by Walter Bell on 5 and 8 August but was crashed by Robert Wynne-Eyton on 20 August. Captain McBain took over from Bell as the CO of A Flight, also in August, when Bell was deputising from Major Minchin as the Squadron CO.**  
:RAF Parkhouse Collection

on one wing. Bell later recalled that he was able to land before the fabric actually burst, although the 26 Squadron War Diary states that the fabric did split. It was subsequently found to be badly mildewed and the Farmans were then deemed unsafe and had to be recovered. Bell had been fortunate as, whilst this work was being carried out, further faults came to light including warped and broken ribs and badly rusted spars and internal cross-bracing wires!<sup>10</sup>

In June 1916 Bell was awarded the MC. The 26 Squadron War Diary states that this was for gallantry in the field between 19 February and 25 March and adds:

*He has consistently carried out reconnaissances and bomb*

*Walter Bell in later life.*



dropping with unfailing success. Under the most adverse circumstances in all weathers and at great personal risk on several occasions, when necessity required he has flown at a height of a few hundred feet only over the enemy positions under heavy fire.

In July Bell carried out a number of bombing missions flying the Henri Farman aircraft. In East Africa there was no aerial opposition, which prompted Bell to apply for a transfer to a more active front. Consequently, he sailed from East Africa on 23 August 1916 to join 5th Wing in Egypt and, on 4 September, he was posted to 14 Squadron. His stay there was brief, as he was firstly attached to 23 (Reserve) Squadron, and then moved on to 17 Squadron at Salonika. He disembarked there on 1 October 1916.

With 17 Squadron, Bell flew BE2c's and also the Squadron's sole surviving DH1a (4612). On 27 October he was transferred again, this time to 47 Squadron as a Flight Commander with the rank of temporary Captain. However, he was still with 17 Squadron on 28 October, when he had an encounter with an enemy single-seater whilst flying a BE2c with Captain S.R. Penrose-Welsted as his observer. Their opponent seemed disinclined to engage and Bell only got off about 20 shots at it from his Lewis gun at a range of around 1000 yards.

Having moved on to 47 Squadron, Bell was flying a newly issued BE12 (6602) on 23 December 1916 when he shot down a German two-seater from FFA 66 which crashed in no-man's land. This was the first decisive victory obtained by the Squadron and, in March 1917, Bell received a Bar to his MC. In the spring of 1917 he was granted leave, only for the ship he was travelling on to be torpedoed and sunk. Bell made it to a nearby island with other survivors in a lifeboat. He mentions that he lost his semi-automatic rifle, which went down with the ship, and there is at least one prior recorded instance of Bell taking his rifle aloft with him to supplement the armament of his aircraft.<sup>11</sup>

Back with 47 Squadron, Bell was flying the BE12 6676 on 5 June 1917 when he had an inconclusive battle with a Halberstadt fighter: his Vickers gun jamming after firing only one shot. A report subsequently came in stating that the Halberstadt had gone down to a forced landing and had been shelled by French artillery. In Bell's own account of this incident, he says he explained what had happened to his CO (Major Minchin) and then:

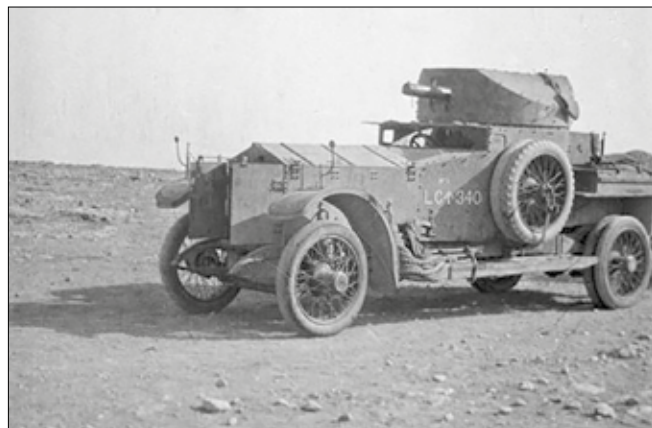
*The C.O., an otherwise quite sane person, was furious and said he was not going to lose a claim, and that I would be credited with the machine whether I liked it or not. "What, with one shot, sir?" I asked. "Yes, and be damned to you!" and off he went.*

In the latter part of June Bell was based at Kirec, the home of C Flight. However, On 30 June he flew the BE12 6676, his usual machine at the time, to Hadzi-Junas. That is probably the effective date on which he took over A Flight.

The incident with Costes on 8 July may well have made Bell more cautious about returning fire from another aircraft in case it was an allied machine. On 15 July he had a combat with a small single-seater whilst flying a Vickers Bullet (A5226) and wrote in his combat report:

*I met this H.A. at 13000 feet and at first thought he was a Nieuport. He opened fire but I still thought he was a Nieuport. It was not until he was quite close that I saw his crosses.*

This aircraft then dived away, and Bell chased it until he saw a larger aircraft flying south along the Vardar River. Abandoning his pursuit of the single-seater, Bell climbed towards this machine and engaged it at 17000 feet (this is the combat mentioned earlier where the French AA continued to fire). Given the high altitude, it is probable that the German machine had been sent out for a reconnaissance over Salonika. Bell identified it as an Albatros, although it may well have been a DFW C.V. In the combat that ensued Bell forced it to turn for home, although he was unable to obtain a more decisive result



**A Rolls-Royce armoured car at Sollum in Egypt, April 1916. This belonged to the Light Armoured Car Brigade, consisting of Nos.1, 2 and 3 Armoured Motor Batteries. The Brigade was the old No.2 Squadron of the Royal Naval Armoured Car Division, re-named on transfer to the Army. At this time it was still commanded by the Duke of Westminster, who had originally funded and raised the Squadron. Wynne-Eyton embarked at Marseilles for Egypt with No.3 Armoured Motor Battery on 8 January 1916.**

as he ran out of petrol and had to force land at Amatovo (near the lake of the same name).

For much of August and September Bell was deputising for Major Minchin as the Squadron CO, which limited his operational flying. On 25 September, the day before Minchin resumed command, Bell flew two bomber escort missions in a BE12 (A4046). However, although released from command responsibilities, Bell made no further operational flights. His last recorded flight with the Squadron was a transit flight in a Vickers Bullet (A5228) on 24 October and, on 12 November, he was admitted to hospital in Salonika. The cause was mental rather than physical, as revealed in a letter written by Minchin to the Deputy Director Medical Services, XII Corps, on the following day:

*This officer was one of the most gallant Pilots I have seen in the R.F.C. Lately however he has had a bad attack of nerves, and frequent fits of depression. He is apparently in good physical health, but says he goes to pieces in the air. I have seen a good many similar cases during my service in the R.F.C., and I do not consider that Capt. Bell is safe.*

*His wide experience of flying in many theatres of war ought to be of great value if suitably employed.*

*I am satisfied that this is a genuine case.<sup>12</sup>*

As a result of a Medical Board Bell was evacuated to Malta in December and admitted to St. Andrews Hospital there. A further Medical Board on 19 December found Bell unfit for service for four months and recommended his transfer to England by hospital ship. In April 1918 Bell was at the 4th London General Hospital and declared permanently unfit for any service. He relinquished his commission, on account of ill health, on 12 April.

Not long after the war Bell and Robert Wynne-Eyton went on a hunting expedition together in West Africa. Subsequently Bell moved to Ross-shire in Scotland with his wife, Kate Rose Mary (nee Soares), whom he had married in London on 15 January 1919. He began to write about his hunting expeditions, starting with articles which were published in 'Country Life' magazine. In 1923-24 Bell undertook one last expedition to Africa, this time with two American friends, Gerrit and Malcolm Forbes. This was unlike Bell's previous expeditions in that motor vehicles were used for a journey from Nigeria to Sudan. Otherwise, Bell spent his time sailing, shooting and fishing on his Highland estate. In the Second World War he served in the Home Guard. There were no children from Bell's marriage. He died of a heart attack on 30 June 1954 at the age of 73.



**Armstrong Whitworth FK3 6199, seen here flanked by two DH2s. Wynne-Eyton flew this aircraft on at least two occasions - on 20 December 1916 and on 12 March 1917. He was accompanied by 2Lt A.P. Adams on both these flights. On 12 March Wynne-Eyton and Adams in 6199 were involved in a battle against the German twin-engined bombers of KG1. In his combat report Wynne-Eyton wrote that he and Adams flew beneath them to JANES, firing upwards whenever possible. In all, seven drums of Lewis ammunition were expended, and one enemy bomber was seen to turn for home without dropping its bombs.**  
:FAAM JMB/GSL

### Robert Mainwaring Wynne-Eyton

Robert Wynne-Eyton was born on 12 January 1886 in Whitchurch, Shropshire and baptised on 19 February at St. Michael's Parish Church, Marbury, Cheshire.

He was the third of five children born to Charles Edward Wynne-Eyton and his wife Aline Mary (nee Wills). Robert's mother was on a Londoner, but on his father's side the family were descended from an old Flintshire family of gentry. Robert's grandfather, Thomas, had been a Treasurer of the County. In 1891 the family were living at 'Oakenholt', Northop, Flintshire (one of Robert's great uncles had been the Vicar of Northop). Charles Edward Wynne-Eyton was a Major in the Denbighshire Hussars and he served in the Imperial Yeomanry during the Boer War.<sup>13</sup> Robert was educated at a public school with a decidedly military connotation – Wellington College in Berkshire.<sup>14</sup>

It is easy to see why Robert Wynne-Eyton and Walter Bell became friends. Aside from having served in the same Squadron they shared a restless spirit of adventure. When writing about their expedition to West Africa, Bell mentioned that:

*Eyton had spent five years as the adopted son of one of the native chiefs in Tahiti. He had lived there in the nude, and of course had taken part in all the native ploys. What he knew about swimming, diving, fish spearing and so on could have been learned in no other way. Among other accomplishments he had learned to kill sharks with a knife...*

Wynne-Eyton left Tahiti in May 1914 and travelled via San Francisco to Victoria, the capital of British Columbia in Canada. During his time on Tahiti Wynne-Eyton must have met the poet Rupert Brooke, for on the 19 May he wrote to Brooke from the Empress Hotel in Victoria saying *Tatamata of Papete gave me a letter to post & address to you, just as I was leaving on the boat. I failed to send it from Frisco so am posting it from here.*<sup>15</sup>

Tatamata (or Taatamata) was a woman with whom Brooke had a liaison during his time on Tahiti. The somewhat enigmatic contents of her letter to him have given rise to speculation that he fathered a child by her.

By November 1914 Wynne-Eyton was living as an unmarried 'rancher' at Cowichan Station in the Cowichan Valley, Vancouver Island, and he was active in the Cowichan Polo Club. In his letter to Brooke he had said that he had *just arrived in Victoria & am going straight on to Duncan*; the latter being a town in the Cowichan Valley. Wynne-Eyton evidently also joined the Royal North-West Mounted Police not long after his

arrival in Canada, as he had spent three months in that force by this time.

On 16 November 1914 Wynne-Eyton enlisted in the Second Regiment of the Canadian Mounted Rifles, Canadian Expeditionary Force. This Regiment was mobilized in March 1915 at Victoria and embarked for Great Britain in June. In the same year Wynne-Eyton transferred to the Royal Naval Volunteer Reserve and he served as a Sub-Lt in No.2 Armoured Car Squadron of the Royal Naval Air Service. When most of the Navy's armoured car fleet was handed over to the Army, he correspondingly transferred to the Motor Machine Gun Service on 1 September 1915 as a temporary Lieutenant. He then served in No.3 Armoured Motor Battery (No.2 Armoured Car Squadron of the RNAS became Nos. 1, 2 and 3 Armoured Motor Batteries). In October 1915 these batteries went to France, but they were later transferred to Egypt. Wynne-Eyton is recorded as having sailed from Marseilles to Egypt with No. 3 Armoured Motor Battery on 8 January 1916.

On 23 October 1916 Wynne-Eyton transferred to the Royal Flying Corps. At this time 1, 2 and 3 Armoured Motor Batteries, having been involved in the campaign against the Senussi, were still in Egypt and Wynne-Eyton did his flying training there. In joining the RFC, he may have been influenced by his younger brother, Charles, who had gained his flying certificate at Hendon in 1915 and served with 2 Squadron in 1916.

In 1918 Robert Wynne-Eyton was noted as having previously served with 14 Squadron but, if so, his stay there must have been brief as on 10 November 1916 he disembarked at Salonika and was posted to 47 Squadron.<sup>16</sup> Like Walter Bell he was a comparatively old pilot, turning 31 in January 1917.

In 47 Squadron, Wynne-Eyton began by flying the Armstrong Whitworth FK3 two-seater. He was involved in an earlier friendly fire incident, on 10 February 1917, when flying with Lt Henry Faull as his observer. They were attacked by a Nieuport scout, with some of the bullets passing between the wings of the AW. Later that month, whilst flying artillery observation missions, Wynne-Eyton had combats on three successive days – one with Faull as his observer and two with 2Lt A.P. Adams. On 12 March, also with Adams as his observer, Wynne-Eyton had a battle with the twin-engined German bombers of KG1. In March and April he had three further combats with KG1, by which time he was flying single-seaters (the BE12 and DH2).

For much of May 1917 Wynne-Eyton was in hospital with a fever. On his return to 47 Squadron, he had several more combats, but was never able to claim a decisive victory.

Nonetheless, when flying a DH2 (A2584) on 5 July he attacked and drove down an Albatros two-seater even though it was escorted by three Halberstadt fighters. In response to an enquiry from GHQ the Wing Commander, Lt Colonel Dawes, described this combat and referred to Wynne-Eyton as *an experienced and successful pilot*.<sup>17</sup>

On 17 October 1917, Wynne-Eyton was appointed to command B Flight and, as was customary, he held the rank of Temporary Captain whilst so employed. By this time B Flight was partly equipped with AW12s (FK3's fitted with the 140-hp RAF4a engine). Wynne-Eyton was flying one of these on 30 November when he was wounded in aerial combat, being shot in the back. His observer on that day, 2Lt W.D. Robertson was also wounded, although less seriously. Wynne-Eyton flew for 20 minutes after being wounded and successfully landed back at his own aerodrome. After treatment at the 28th General Hospital in Salonika, he was invalided home to the UK – embarking on 24 December and arriving at Southampton in January 1918. Meanwhile, he had been awarded the MC – announced in the New Year's Honours list on 1 January 1918.

On 5 March 1918 Wynne-Eyton attended a Medical Board which reported –

*The wound is in the mid-dorsal region upon the right side of his spine. No injury to spine...Two pieces of broken bullet were removed by operation the rest was left in. Wound is quite healed now. No disability now..... States he feels quite fit...wants to fly.*<sup>18</sup>

In April Wynne-Eyton went to 6 Training Depot Station, Boscombe Down. After a further Medical Board in May he was subsequently appointed as a Flight Commander in 211 Squadron RAF, flying DH9s and serving in that Squadron from 6 July to 16 August 1918. However, on the latter date he was shot down by AA fire in DH9 C6348 and ditched in the sea off the Dutch coast. His observer, 2Lt Thomas Dodwell, was badly wounded. The skipper of the Dutch lifeboat 'Cadzand', Cees van den Heuvel, swam into a minefield to rescue Dodwell whilst Wynne-Eyton was picked up by the Dutch guard ship 'De Seine', which arrived next. Dodwell was taken to hospital in Oostburg, where he had to have an arm amputated. The London Times (on 7 January 1919) reported that the King had awarded the Silver Medal for Gallantry in Saving Life at Sea to eight Dutchmen for his rescue – these were Cees van den Heuvel, his two crew and five soldiers who had manned the lifeboat.

After internment in Holland, Wynne-Eyton was repatriated on 15 November 1918. He was transferred to the unemployed list on 23 January 1919. As mentioned earlier, Wynne-Eyton joined Bell for an expedition to West Africa shortly after the war. Bell described Wynne-Eyton as *naturally the most stoical of men* and says that they journeyed by canoe *two or three thousand miles up the Niger River and its tributaries*.

During their expedition together, Bell and Wynne-Eyton travelled to some very remote areas of French Equatorial Africa, including the autonomous kingdom of Bouba Gida, ruled from Rei Bouba in northern Cameroon. They hunted lions and elephants – Bell indicates that Wynne-Eyton had not previously hunted big game, but said that he was very keen on lions, and that *At first he skinned and preserved every one he shot. Then after a time he got tired of them. Their skins were bulky and a nuisance in the canoes. So one day I was amused to see him throwing overboard what had been his most cherished trophies*.

After this expedition Bell and Wynne-Eyton sailed for home, arriving at Liverpool in May 1920. Nonetheless, Wynne-Eyton evidently felt drawn to return to Africa, as by October 1925 he had set up a retail store in the Bwanje Valley, Nyasaland (now Malawi), in partnership with Arthur Cyril Dent, another former 47 Squadron colleague. Dent had flown with the Squadron as an observer from December 1916 until badly wounded in the leg by AA fire on 24 June 1917.



*When Captain Wynne-Eyton and 2Lt Dodwell failed to return on 16 August 1918, 211 Squadron also lost this DH9, B7623, which force landed in Holland with 1Lt D.R. Harris USAS and 2Lt J. Munro both interned. Wynne-Eyton had flown 10 bombing raids with Munro as his observer. He had also flown one raid in B 7623 – on 12 August 1918 - with 2Lt Dodwell. On that occasion the left pressure pump seized up and the aircraft was also hit by AA fire; subsequently requiring two new struts.*

:CCI Archive

Dent later said that he first went to Nyasaland as an elephant hunter, and it is likely that he and Wynne-Eyton hunted big game there between 1925 and 1927. By April 1927, both were registered as acquiring a lease on a property called 'Mitongwe-Luwawadzi' and had together taken up residence there. By 1929, although this was still jointly owned, only Dent remained living there. The reasons for Wynne-Eyton and Dent parting company, and where Wynne-Eyton went next, are not known. Indeed, hardly anything is known of Wynne-Eyton's later life.

In November 1938 he was on a ship, the *Yorkwood*, sailing from Dover to Durban in South Africa. He was listed as a 'planter' and married. His wife was Leonora (nee Bradfield). She had been born in South Africa and was the granddaughter of an English settler in that country. There is no UK marriage record, so the marriage presumably took place elsewhere. As far as can be ascertained there were no children of the marriage.

Robert Wynne-Eyton's brother, Charles Sandford Wynne-Eyton, remained in the Air Force for some time after the war, and he re-joined at the outbreak of World War Two. He reached the rank of Wing Commander and was reputedly the RAF's oldest pilot. However, on 14 November 1944 he was killed when a Liberator he was flying from the Middle East to the UK crashed into a mountain near Autun in France during a snowstorm.

Robert Wynne-Eyton died, aged 73, on 8 September 1959 in Cape Town, South Africa.

#### Acknowledgements

I am indebted to David Méchin for allowing me to freely plunder his material on Dieudonné Costes, and for kindly providing many of the photographs used to illustrate this article. My thanks also go to Andrew Mann for research into the Bell and Wynne-Eyton families.

#### Sources and Further Reading

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AIR 1/2375/226/11/7 - 47 Squadron Daily Record of Work, June 1917 to January 1918

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AIR 1/1250/204/7/21 – 26 South Africa Squadron War Diary, 1 February to 30 April 1916

AIR 1/2376/226/121/1 – 17 Squadron Daily Summary of Work,



**Walter Bell and Robert Wynne-Eyton's expedition to French Equatorial Africa. This canoe, photographed on the Bahr Aouck River, is the smaller of two which they used for this journey (there were four paddlers for the larger canoe and two for the smaller one). Bell wrote that he steered the larger canoe whilst the smaller one was in Wynne-Eyton's charge. Therefore, Wynne-Eyton is probably the figure with the pith helmet in the bow of the canoe.**

1 September 1916 to 30 June 1917  
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 AIR 1/1929/204/242/6 – 211 Squadron, Technical Records and Casualty Reports, 1 March 1918 to 31 March 1919  
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#### Endnotes

- 1 TNA AIR 1/2353/226/4/109 The Aerial Defence of Salonika, 1 March 1917 to 31 July 1918.
- 2 The quote is from Townsend Whelen, in the Introduction to 'Bell of Africa'.
- 3 All Costes quotes in this article are translated from his 1968 interview with Jac Remise.
- 4 All Bell quotes in this article are from 'Bell of Africa'.
- 5 TNA AIR 1/2352/226/4/103 - 16 Wing Daily Summaries of Work, 10 June 1917 – 31 March 1918.
- 6 Quotes from Bell's combat report 15 July 1917 are from TNA AIR 1/2353/226/4/105 - Combat Reports 16 Wing RFC/RAF.
- 7 In the test of a BE12 in May 1916 the aircraft took 62 minutes to reach 14000 feet. On 10 September 1917 when Captain C.f. Denning of 47 Squadron attempted to engage a high-flying enemy aircraft he found that his BE12 reached its ceiling at 16000 feet. His flight lasted 1 hour and 25 minutes. A height of around 15000 feet (mentioned by Bell) to 16000 feet is consistent with Costes' statement that the incident took place at around 4500-5000 metres.
- 8 All the correspondence between Brooke-Popham, the British Aviation Commission in Paris and the Aircraft Depts is in TNA AIR 1/1069/204/5/1626 - "Spad" aeroplanes correspondence & reports March – October 1917. The memo to the Aircraft Depots regarding English SPADs is undated but sits in the file between other correspondence dated 5 July and 7 July 1917.
- 9 David and Charles Livingstone, "Narrative of an Expedition to the Zambesi and Its Tributaries: And of the Discovery of the Lakes Shirwa and Nyassa, 1858-1864" (J. Murray, 1865, p.197).
- 10 TNA AIR 1/1250/204/7/23 – 26 South Africa Squadron War Diary, 1 May to 31 July 1916. The date of Bell's flight when the fabric split is not given precisely, but reference is made to a telegram dated 1 June 1916 which stated that it had happened "recently".
- 11 In a Combat Report of 5 January 1917 - TNA AIR 1/2353/226/4/105.
- 12 TNA WO 339/133654 – W.D.M. Bell
- 13 TNA WO 339/15318 – Lt Colonel Charles Edward Wynne-Eyton. In 1916 he was a Lt Colonel in command of the 20th (Reserve) Battalion, Royal Welsh Fusiliers, but was allowed to vacate his command and relinquish his commission in April 1916 on grounds of ill health.
- 14 Wynne-Eyton is included in a list of Old Wellingtonians serving in the armed forces in the March 1917 edition of 'The Wellingtonian' and his M.C. award is included in the List of Honours contained in the Wellington College Year Book of 1918.
- 15 The Archive Centre, King's College Cambridge, GBR/0272/RCB/L/12 – Letters from R M Wynne-Eyton and Taatamata of Papete to Rupert Brooke. The letters survived the sinking of the RMS Empress of Ireland en route from Canada to Liverpool on 29 May 1914 and were subsequently salvaged and forwarded to Brooke from Ottawa.
- 16 The reference to 14 Squadron is in TNA AIR 1/1931/204/242/20 - Particulars of Officers joining 211 Squadron, July 1918 – February 1919.
- 17 Memo in TNA AIR 1/2353/226/4/105 - Combat Reports 16 Wing RFC/RAF.
- 18 TNA WO 339/50644 – R M Wynne-Eyton

# Tom Owen



## A teacher who went to war – Part 2

Compiled by Richard Chancellor

**20th June**, *Gweddol* (fair). OVERSEAS BEF. Depart Victoria 7.50, arrive Folkestone 9.50am. Spent the morning there. Embarked 3pm, arrive Boulogne 5pm, Raining heavily. To report to No.6 Squadron, Abeele. Remainder of pilots going to pool!!! Dinner at Officers Club with Lush and Ingram (Orsova) They depart 9.30pm. I stay until 3am and then entrain for Bailleul.

**21st June**, *Gweddol*. Depart Boulogne 4am, arrive at Bailleul 9.30am, waiting for tender. Report to 2nd Wing, then to No.6 Squadron (RE8) at Abeele, behind Ypres, arrive No.6 Squadron 12.30pm. Posted to A flight and digging with Clarke. Writing letters after dinner. 12 miles behind firing line – very peaceful.

**22nd June**, Weather, very wet, morning and afternoon. Round sheds with Capt Ambler during morning, getting gadget made for rudder bars. Writing letters during afternoon. Went up for a flip after tea and made quite a ood landing. Engine not too good. No work all done all day, two machines went up about 7pm but failed to do anything owing to the poor visibility *First flight in France. RE8 A4298, 1930hrs, 2000ft around aerodrome, 20 minutes flight time, initial flight with the BEF.*

**23rd June**, *Bore Braf* (nice morning). At the intelligence shed, half hour's buzzing afterwards (Morse code practice). Down at shed in afternoon getting rudder altered on 4298 to which I have been detailed. Went up for a trip on her after tea. Bed early.

*RE8 A4298, 2000hrs, 2500ft around aerodrome, 30 minutes flight time, trying new gadgets on rudder bar.*

**24th June**, *Braf*. Down at shed and intelligence hut during morning. Went to Field Cashier's at Abeele in afternoon to change money and secure an "Advance book". Out "Spark Crawling" with Anstey in evening – flying up and down over Ypres for an hour- unmolested. Cumulus towering badly. North Sea in sight. Flying over the Ypres Salient.

*RE8 A4298, 1955hrs, 5500ft, 1hr 30m flight time, Ob Lt Anstey, Spark, initial flight over the line, initial passenger flight, flight uneventful.*

**25th June**, *Gweddol*. Round sheds and intelligence hut in morning. Read Sunk Island in Afternoon. Longton and Clark chased by three Albatross [sic] scouts, their machine riddled, both uninjured. Detailed for Spark with Tribe. Game of Auction with Longton, Tribe – Came on to rain about 7.30 – Spark washed out. Short game of Auction after dinner.

**26th June**, Squally and overcast in morning, very fine evening. Jones and Carson sent out on Spark at 9.30, Duke of Connaught wished to inspect Whyschate – protect him from shells. Bad accident in No.4 Squadron – flat turn 100ft up. Doing machine gun in Afternoon. Up for a Shoot with Tribe 5.40, Tribe wasted no time calling up Battery, excellent visibility, up at 6500ft. Several Huns about and Archie quite heavy but we kept out of trouble. Fire in Ypres when we arrived, got back at 8.45 after

3hrs 5mins. Rather tired.

*RE8 A4298, 1740hrs, 6500ft, 3hr 30m flight time, Ob Lt Tribe, Shoot, fire at Ypres when we arrived died down, Archie and Huns plentiful, unmolested.*

**27th June**, Dull and overcast, clear evening. Doing nothing much all morning. Rigger putting fabric on centre section. Due up at 1.30 but weather dud, went up with Carson at 3pm, doing Shoot at extreme end of sector. Uneventful until end, we went over Hun Land and ran into ½ dozen HA, one chased us, Carson fired, then Hun turned tail. Red Belly. Visibility good. Caught rain coming home, made a very dud landing and bent axle. Back at 8.25. Bed early. Ypres shelled, house near Dickebush knocked into atoms. Hadrill [2Lt Eric Walter Hadrill] has force landed near Dickebush, is admitted to hospital. Chased by Hun. Balloon brought down by Hun at beginning of Shoot.

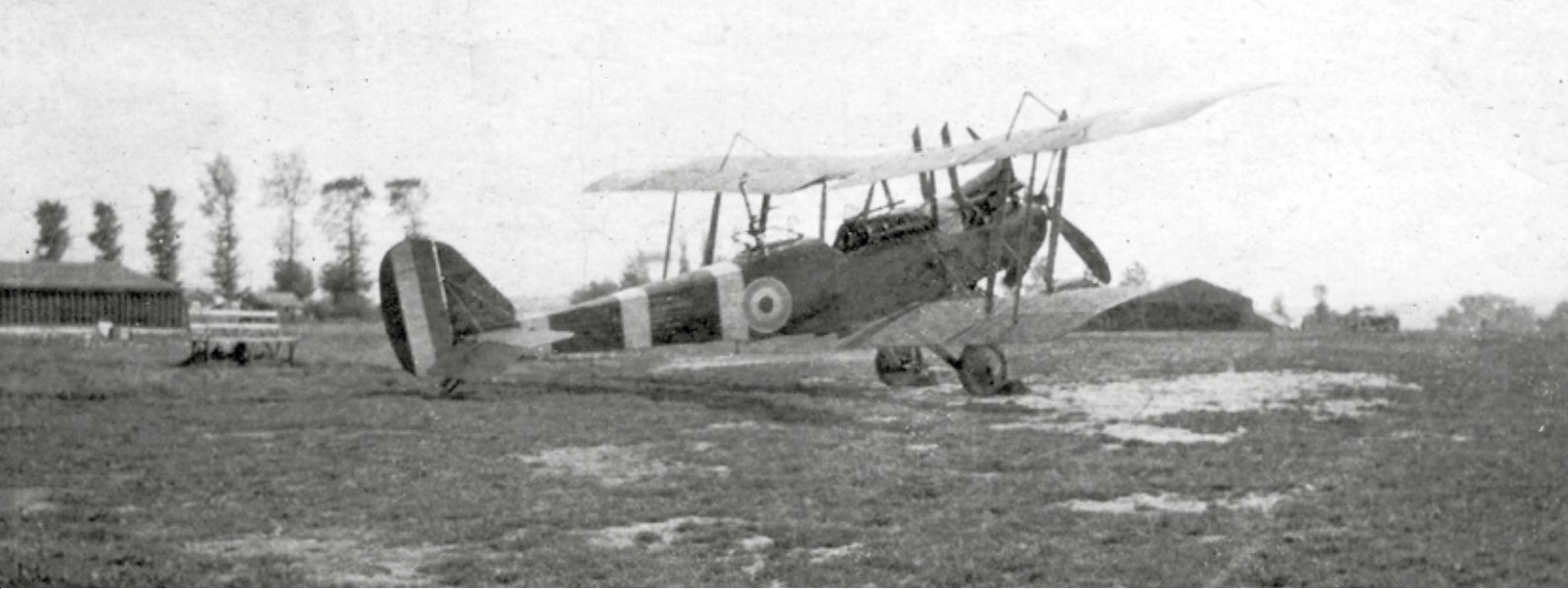
*RE8 A4298, 1740hrs, 6000ft, 3hrs 25m flight time, Ob Lt Carson, Ypres Shoot, uneventful until, went over lines ran into half a dozen red bellied Huns, one chased us, Carson tried, turned tail. Caught rain coming home, bent axle in landing.*

**28th June**, *Gweddol*. Very heavy thunder and showers in early morning. Orderly officer, censoring letters, 10am down at shed. New axle on 4298, engine being looked over. Doing intelligence in afternoon, mechanic still on engine. Thunderstorm came on in evening. In CO's office, slept there. No Flying.

**29th June**, Very Dud weather. Busy all morning at sheds seeing to my machine, airman still tinkering with engine. Test machine in afternoon, took Sgt Harper up, running much

*Abeele aerodrome 1917, home to 6 and 4 Squadrons RFC. The road running from left to right through to the south of the aerodrome formed the Franco-Belgian border.* :CCI Archive





A 6 Squadron RE8 at Abeele in 1917, showing the unit marking applied until March 1918. This particular machine, A3652, was taken onto 6 Squadron charge after Owen's time with the unit. :via Andy Thomas

better. Spad landed on aerodrome after tea. Lethbridge from 4 Squadron looking on. Went and had dinner with him taking about our old times at Turnberry.

RE8 A4298, 1405hrs, 2000ft, 15m flight time, Sgt Harper, around aerodrome, test flight engine running better.

**30th June**, Raining hard all day. No Flying. Down at Abeele with Lethbridge in afternoon, called with Alice and Marie (ordered Lace). Lethbridge back with me for tea. Went to Poperinghe after tea, had dinner there. Heard that A Flight No.6 Squadron to be transferred to No.4 Squadron tomorrow. Last night with No.6, some night!

#### JULY 1917

**July 1st**, all of A Flight (including aircraft) to report to No.4 Squadron. Dull and stormy. No Flying. A Flight reports to No.4 Squadron at 9am. Fed up. Packing, had lunch and tea at No.6. Under canvas with No.4. No.6 fellows come over after dinner and kick up an awful row. Tents upset me.

**2nd July**, Braf dawn. Called at 7 to do Shoot, postponed until 10. Took bombs with us!! Prevented from dropping them by Archie and Hun (well over Hun Land) Clarke couldn't get a response from Battery, came home. Went up again at 3pm but couldn't get ground strips out. Clarke very fed up.

RE8 A4298, 1015hrs, 5000ft, 1hrs 15m flight time, Ob Lt Clarke [2Lt Leslie Vincent Woodhouse Clark], Ypres Salient, engine running well, Clarke could get no ground strips out, no shoot. Took up bombs, tried to get to dump, prevented by Archie.

RE8 A4298, 1515hrs, 4000ft, 1hr flight time, Ob Lt Clarke, Ypres Salient, no ground strips again, cloud at 4000ft very bumpy.

**3rd July**, Rather dud. Did no flying all day, doing little of

King George V inspecting the crashed remains of 4 Squadron RE8 A4313, brought down on 6 July 1917 by Lt n Kurt Wolff, Jasta 11.



anything except writing letters. Huge mail from home, nine letters!!! One from??? Not feeling too happy with 4. Capt Orr and Lt Moore killed, spinning nosedive near aerodrome, result of flat turn [RE8 A3438 Lt Frederick Moore and Lt Robert Baird Rowley Orr took off to do Observation Patrol and stalled after take-off, both died of injuries]

**4th July**, Very Dull. King and Prince of Wales pass by at 8.30am. Clarke and I go up for 1½ hrs for Spark while King is at Messines and Wyttschaete, the only machine in Salient, no balloons. Clarke with wind up after his scrap yesterday. Sown at abele in afternoon, King and Prince of Wales pass back from Messines at 5pm. Letter writing after dinner

RE8 A4298, 1155hrs, 4000ft, 1hr 30m flight time, Ob Lt Clarke, Spark, visibility poor clouds just above. Pitot tube not working!

**5th July**, Very Dull. Clarke and I down for Shoot at 8am, postponed, engine and weather dud. Letter from Major Rees saying no trace of kit at Victoria!!!!!! What shall I do? Wrote to all kinds of places about it. Went up with Clarke at 7pm,

Lt Frederick Moore, killed on active service on 3 July 1917. :RAeCT 2992



clouds thick at 2500ft, so stayed for 1½ hrs to do Spark. Ran into shed on landing, couldn't keep machine from turn, one tyre nearly flat. Game of Auction after dinner.

RE8 A4298, 1905hrs, 2500ft, 1hr 30m flight time, Ob Lt Clarke, Salient, clouds at 2500ft too low for a shoot, so did a spark.

**6th July, Braf iawn** (very nice). Salient reported to be full of Huns!! FE2b landed here with machine badly shot, attacked by 6. Fitters seeing to ball races in Thrust Box, all rusty. Prop and maps taken off. Capt A.B. Wright in casualty list. Down at Abeele with Carson getting money from Field Cashier. Expecting King in afternoon. Longton on Photography, had aileron controls shot away and ½ the rudder controls, crashed badly on landing [RE8 A3581 Lt Longton, Sgt W. Studholme, combat with 5 EA, controls shot away, XI Corps front]. Money struck on nose with Archie while on Photography. Taylor and Mutch brought down, both killed [RE8 A4313 combat with 5 EA shot down in flames at map ref I.28b, 2Lt J.Y. Taylor Lt, G. Mutch DSO, XI Corps Front, RE combat claim Zillebeke 8.20pm Ltn Wolff, Jasta 11] King George and Prince of Wales pass by and inspect Longton's crash. Enemy



Major Leoline Jenkins DSO MC, OC 4 Squadron from 20 September 1916 until 21 November 1917. :CCI Archive

*Thomas Long Carson, a 4 Squadron observer first noted in Owen's diary on 26 June 1917 and shown before he received his commission, when serving with the Royal Engineers.*



bomb raid at midnight. Detailed for shoot at 5am.

RE8 A4298, 1840hrs, 1000ft, 20m flight time, around aerodrome, engine test.

**7th July, Braf iawn.** Up at 4.30, Took air at 5am, Engine dud, mist thick. Up again at 6am, Shoot impossible, prevented from dropping bombs by enemy aircraft, one of A Flight machines crashed on landing. Standing by all afternoon. Up with Clarke at 6.30, haze still thick, couldn't get ground strips out at CWS twice, they got our signals all right, came back after two hours. CO not pleased with day's work. Carson the only one who did a successful Shoot in Squadron.

RE8 A4298, 0505hrs, 2000ft, 25m flight time, Ob Lt Clarke, aerodrome, engine dud, thick mist.

RE8 A4298, 0605hrs, 4000ft, 25m flight time, Ob Lt Clarke, Salient, haze too thick for shoot. No bombs dropped on account of enemy aircraft.

RE8 A4298, 1830hrs, 4500ft, 1hrs 55m flight time, Ob Lt Clarke, Salient, couldn't get ground strip out, at CWS

twice.

**8th July, Gwlyb iawn** (very wet) my kit arrives intact, unpacking all morning. Letter writing afternoon and evening. DH5 leave the aerodrome for a better??

**9th July,** Dull and cloudy, very low. Not down for Shoot, pass Buzzing test with success. Down at Abeele with Carson, called with Alice and Marie, got a couple of charms, RFC a Miracle. Game of Auction in afternoon. For a stroll ½ way to Poperinghe after dinner with Carson.

**10th July,** Quite Dud. Didn't fly all day, letter writing. Went for a long stroll with Lush after dinner

**11th July,** Fair. Not detailed for Shoot, but in camp all day. Basking in the sun

**12th July,** Glorious day, but visibility bad, 6000ft of haze. Up three times, once in the morning and twice after tea. Shoot impossible, went over lines twice to drop bombs, didn't release first time! Saw DH4 fuselage drop from great height on edge of Zillebeke Lake. Wings followed about ten minutes later, all in tatters. Flopping about like a kite. Finished book at 9pm. Tired and sleepy.

RE8 A4298, 0945hrs, 4000ft, 25m flight time, Ob Lt Clarke, Salient too misty for shoot.

RE8 A4298, 1810hrs, 6500ft, 1hr 15m flight time, Ob Lt Clarke, Salient too hazy for shoot. Went over to drop bombs, not released.

RE8 A4298, 1935hrs, 6000ft, 1hr 20m flight time, Ob Lt Clarke, Salient, spark, dropped bombs on Shrewsbury Forest, saw DH4 fuselage drop, wings followed ten minutes later.

**13th July, Braf iawn.** Thought I was going to have a day off but detailed for photos with Clarke. Escort of DH5 picked us up at 8000ft at Droglad. Exposed eight plates. Archie Abnormal, simply surrounded us with bursts of black smoke. Streamers the cause of it, up for 2½hrs, gave us up for lost at aerodrome. Photos came out well. Down for a stroll to Abeele after tea.

RE8 A4298, 1045hrs, 8000ft, 2hr 30 flight time, Ob Lt Clarke, Photos (J21,22,26,27,28,32,33,34) Escorted by DH5, AA abnormal, exposed eight plates.

**14th July,** Fair. Thunder about all day, not detailed for job, but took Barr up at 3.15. It rained for the first 1/2hr and then Thunder, dropped bombs through thunder and shower. Stuck

it out and Barr did Success for Shoot. Almost uncontrollably gusty at 6000-7000ft, Barr nearly sick, lost control of machine more than once. Other bomb dropped on aerodrome after I landed.

*RE8 A4298, 1515hrs, 7000ft, 2hr 30 flight time, Lt Barr, Successful shoot on Gheluvelt. Raining for ¾ hour, almost uncontrollable. No Huns about and Archie inactive. Gusty between 6000ft and 7000ft.*

**15th July, Braf.** Up with Clark at 10.55, clouds low, target not visible. Up again at 5.35, stayed for 3hrs 25mins, dropped bombs when hidden from Polygon Wood by cloud. Had to go to CWS three times to find out about signals. Down at 9pm with very little petrol left.

*RE8 A4298, 1055hrs, 5000ft, 35m flight time, Lt Clarke, Salient, cloud between 2500 and 5000ft, target not visible.*

*RE8 A4298, 1735hrs, 6500ft, 3hrs 25m flight time, Lt Clarke, Salient, very gusty up to 4000ft, dropped bombs, saw formation of nine Huns.*

**16th July, Gweddol.** Detailed for 4.30am, Battery not ready. My engine packed up when I wanted to go up. Cylinders taken down to be cleaned. Detailed for Photos again!!! Hope it is dud!  
**17th July, Glorious day.** Took up A4605 at 11am with Sgt Studholme, sent up without escort!! Cloud 4000 to 8000ft. Impossible to take Photos, Huns about but couldn't see any of our Scouts. 4298 finished in afternoon. Sopwith Triplane landed here during afternoon, had lost its way and landed over German lines but got away again. General Longcroft takes up Prince of Wales in one of No.4 RE8 and takes him over the line. Too Dud for Photos all day. O'Shea arrives from Yatesbury.

*RE8 A4605, 1055hrs, 7500ft, 40m flight time, Sgt Studholme, PHOTOS, sent up without escort!!! Huns in the sky but no scouts to be seen, clouds from 4500 to 7000ft, photography impossible.*

**18th July, Wet all day.** Took Monro as far as Dickebush at 5.30am, but clouds at 1500ft, came back immediately. Out for a stroll towards Steenvoorde with Carson before lunch. With Carson to Poperinghe after lunch. Writing letters after tea, game of Auction after dinner.

*RE8 A4298, 0530hrs, 4000ft, 25m flight time, Lt Munro, got as far as Dickebush, clouds at 1500ft.*

**19th July, Very Stormy and damp.** Detailed for 7.30am but didn't get up, dud. Lecture by CO at 10am. Buzzing. Jenkins (DSO!!) [Major Leoline Jenkins, CO of 4 Squadron at the time] Tribe and Longton go up after tea, but not successful. Carson and I go as far as Abeele after dinner.

**20th July, Fine day but thick ground mist.** Clouds come over later. Called at 5.15 for 6am patrol, didn't go up, misty. Jacky (John Longton) Carson and I go for a run, bath and then breakfast. Bill Harvard calls at 10.30am, stayed to lunch, like a breeze from Blighty. Writing letters after Bill leaves. Up at 6.55 with Munro, don't think he found the target!! Or Battery!! Dropped bombs and then home, fed up with him.

*RE8 A4298, 1855hrs, 6000ft, 1hr35m flight time, Lt Munro, flying very well over line. Dropped bombs, don't think Munro found the target.*

**21st July, Fair.** Misty morning didn't fly all day. Letter writing. Out for walk with Carson after dinner.

**22nd July, Braf iawn (very nice)** Up with Clark at 8.10, stayed up 2hrs 50mins, only two shots observed! Up again at 3.40, no shots observed, so came home after 1hr 25mins. 4¼ hours flying. Very tired. Game of Auction after dinner. Interrupted by Huns bombing, 11.22pm, searchlights, Archie and machine guns going for hours.

*RE8 A4298, 0830hrs, 4500ft, 2hrs 50m flight time, Lt Clark, Shoot unsuccessful, two roads out of eighteen observed, enemy aircraft active.*

*RE8 A4298, 1540hrs, 5600ft, 1hr 25m flight time, Lt Clark, same Shoot, no roads observed, dropped bombs.*

**23rd July, Fine day but thick mist.** Up with Heys [2Lt George Arthur Duncan Heys] at 3.20, dropped bombs and then came



Above: Lt John 'Jackie' Longton, posted as missing on 31 July 1917.

Below: 2Lt Thomas Long Carson, Longton's observer, also missing on 31 July in RE8 A4724.



home owing to poor visibility. Up again at 5.15 Shooting on J36d!! 6500ft of mist, visibility atrocious. Flying ref: Zellebeke and Gheluvelt the whole time, Archie very busy but didn't touch us, very near though! Chased by two Huns towards end of Shoot. Four hours again today. Two pilots and one observer killed in No.6 today. Burt and O'Neil. [RE8 A4197 Lt Owen Lyndon Burt, pilot, Lt Mervyn Whitby Briscoe observer, both KIA shot down crashed in flames whilst carrying out an Artillery Patrol West of lines] [RE8 A3545 2Lt Percival Claude Felts, pilot, killed, 2Lt Thomas Michael O'Neil, observer, injured due to engine failure whilst taking off to carry out a Flash Patrol]

*RE8 A4298, 1530 hrs, 6000ft, 55m flight time, Lt Heys, Shoot on J36d, thick mist, dropped bombs, came back.*

*RE8 A4298, 1715hrs, 6500ft, 3hrs 5m flight time, Lt Heys, flying over Zillebeke and Gheluvelt!! AA very active, dropped bombs, successful.*

**24th July, Misty.** Up at 5.30a with Heys, thick mist, carried on for 2hrs until sun came above mist then observation impossible. Doing nothing more all day. For a stroll with Carson after dinner. Bomb raid by Huns at 11.30pm.

RE8 A4298, 0530hrs, 6000ft, 2hrs flight time, Lt Heys, Shoot J257, very thick mist, carried on until sun came out and then observation impossible and then two fires, AA very active.

**25th July**, Thunder and rain all morning. No flying all day, letter writing. Stroll with Carson. Weather delays Push.

**26th July**, Misty morning. No flying until the afternoon. FORCED LANDING. Up with Carson 3pm. Engine gave out when at 4000ft, this side of Steenvoorde. Landed in cornfield without damaging anything. Stayed there until 9.30pm dismantling machine. Vachell crashed twice [Capt Charles Theodore Vachell, Vachell's original uniform owned by the Whitgift Archive] O'Shea's engine cut out, crashed, [RE8 A4616 2Lt Francis Joseph O'Shea, pilot, 2Lt Gordon Kelf McArthur, Obs, force landed and overturned due to engine trouble on Artillery Observation] Gilroy's engine cut out, crashed [RE8 A3633 Capt Wilbert Harold Gilroy, pilot, Lt Hedley Ken Thompson, Obs, force landed near Poperhinghe due to engine fire on return from Artillery Observation] Unlucky day.

RE8 A4298, 1510hrs, 400ft, 5m flight time, Lt Carson, engine cut out, had to land in cornfield. Had to dismantle machine to bring it back.

**27th July**, *Brf.* Visibility poor until noon. One of A Flight crashed at 5.30am. [RE8 A4211 2Lt Francis Joseph O'Shea, pilot, 2Lt F. Woodcock crashed just outside aerodrome after pilot caught sleeve in vacuum control on take-off for Artillery Registration] Up with Clark at 1.30, did 3hrs 10mins, successful Shoot. For a stroll after dinner [not mentioned in diary RE8 A3194 Capt Charles Howe Stocks, pilot, Lt A Barr, observer, forced landing due to engine failure whilst carrying out an Artillery Observation patrol]

RE8 4605, 1325hrs, 5500ft, 3hrs 10m flight time, Lt Clark, JZ10, successful, unholy strafe going on.

RE8 A4298, 1905hrs, 2000ft, 15m flight time, Sandbags! Test flight, wires not properly streamlined, otherwise not too bad.

**28th July**, Very fine day but visibility poor. Up with Clark at 10.40 but too misty, sky full of Huns. Up again at 6pm did successful Shoot on extreme end of J36.

RE8 A4298, 1040hrs, 5500ft, 45m flight time, Lt Clark, Shoot too misty and cloudy, prevented from dropping bombs by enemy aircraft.

RE8 A4298, 1800hrs, 6000ft, 2hrs 30m flight time, Lt Clark, successful Shoot on extreme edge of J36d, bombs dropped.

**29th July**, Very wet, heavy thunderstorms. Doing nothing all day. Reading and writing letters. First Sunday on which I have done no work

**30th July**, Clouds at 500ft all day. No flying. Lecture by CO, 'Push' tomorrow. Operation orders, further details given by Stocks at 5pm.

**31st July**, The Great Push, 3rd Battle of Ypres [Passchendaele] Very dull, rain in evening. Due, according to timetable to do NF & GF calls on No.1 area 11am to 2.30pm with Clark, then Back Area (with Cameron) 5pm to 9pm A Flight came back from "Contact" with machines all riddled (flying at 300-500ft) Longton and Carson go up on Contact. Counterattack at 11.45, not returned by 5.30pm. Mist turns to rain after tea. Longton and Carson missing [RE8 A4724 Lt John Longton, pilot, 2Lt Thomas Long Carson, observer, both MIA whilst carrying out a Contact Patrol, RE claim by Ltn Meyer, Jasta11]. Smith of No.6 killed shot through neck [Lt Geoffrey Cholerton Smith MC died of wounds]

#### AUGUST 1917

**1st August**, Very wet. Rained steadily all day without ceasing once. Didn't get up till 10.30, at Wireless Hut 11am buzzing. No news of Carson and Longton. Buzzing again at 4pm. Writing letters after tea. Game of cards after dinner. Down for No1 Area at 4.30am, Back Area with Cameron at 11am.

**2nd August**, Very dull and damp. Rain ceased after 40hrs. Down for No1 Area at 4.30am and back Area with Cameron at

11am. Not up for 4.30, still raining. Probably too dull for Back areas too. Writing letters, no flying all day.

**3rd August**, Very wet. Same program. Raining all day, no flying. For a long walk with Tribe after tea. Over with No.6 after dinner with Stocks. No hope of our returning there and almost certain to be kicked out of No.4.

**4th August**, Weather clearing. Several A Flight machines unserviceable. Clark and I standing by for Back Areas. Thunderstorm during the afternoon and evening and heavy rain. All Pilots and Observer supernumary to No4 to be transferred to another squadron as soon as Push is over, with Stocks in command!!! Over with A Flight at No6 to dinner

**5th August**, Clearing. Writing letters in morning, reading Boython in afternoon. Took the air with Clark at 5.50. Dodging clouds over Ypres from 3 to 7000ft, dropped bombs and came home, visibility hopeless. First flight in eight days!

RE8 A4298, 1755hrs, 7000ft, 1hr 15m flight time, Lt Clarke, clouds 3000 to 7000ft, observation impossible, dropped bombs.

**6th August**, Very dull and damp. Down for 4.30, but mist to thick. Not up all day. For a walk before lunch with Carter and Clark. Standing by in the afternoon but didn't aviate.

**7th August**, Dull. Called at 5am and got up but hopelessly dud, so went back to bed again and missed breakfast! Took Clark up at 5.20 to do Shoot on Becelaere!!! Clouds 1000 to 4000ft, got up to 5000ft and dropped bombs on Polygon Wood, clouds looked gorgeous rolling underneath, came back out at 1000ft after one hour. Walsh and Fendall brought down by Hun over Zillebeke. Walsh reported killed and Fendall seriously wounded. [RE8 A4255 2Lt Albert Walsh, pilot, died of wounds, 2Lt Dennis John Fendall, observer, died of wounds. Shot down whilst on Artillery Observation patrol, II Corps front] Went to Abeee Hop Poles for dinner with Carter, Tribe and Clark.

RE8 A4298, 1720hrs, 5000ft, 1hr flight time. Lt Clark, clouds 1000 to 4000ft, observation impossible, dropped bombs on Polygon Wood.

Lt A. Barr, Black Watch and RFC, an observer with 4 Squadron.



**8th August**, Dud. Didn't fly all day. Spent most of the time reading Sorley's *On The Ethics of Naturalism!* Game of Auction after dinner. Fendall died of wounds [not mentioned in diaries RE8 A3623 Capt Wilbert Harold Gilroy, pilot, Lt Hedley Kent Thompson, Obs, force landed between Pypegaale and Zuydschoote after attack by enemy aircraft and rudder control shot away on Artillery Patrol].

**9th August**, Very dud, but pushed into air. Up at 5am with Clark, clouds came over and obliterated target and our area. Up again at 11, stayed up for 3½hrs, hopeless, clouds from 2500 to 8000ft. Did 5hrs 20mins.

RE8 A4298, 0500hrs, 5000ft, 1hr 45m flight time, Lt Clark, clouds low, observing target, bombs dropped. Engine running well climbing at 1350revs.

RE8 A4298, 1110hrs, 7000ft, 3hrs 35m flight time, Lt Clark, clouds from 2500 to 8000ft, very unpleasant beneath them, lost my way trying to get above



**4 Squadron RE8 A3848 after suffering battle damage on 16 August 1917; it was hit by an artillery shell. The observer, Lt B.C.R. Grimwood, was wounded but the pilot, 2Lt R.D. Stanley was unhurt and flew back to Abeele. The unit marking, abandoned in March 1918, was a single white band around the fuselage, forward of the national marking.**

*:via Andy Thomas*

*them. Bent V strut in landing, very bumpy.*

**10th August, Braf.** Advance on Glencorse Wood and Inverness Copse. Failed to go up at 7.45 owing to engine trouble. Took B757 up at 12.50, very bumpy and gusty, took photos of Gheluvelt at 3000ft!!! Up again at 6.15, photos of Glencorse Wood and Inverness Copse. Went over first time and Clark didn't open box. AA very active each time. 5hrs 35mins for the day. Very tired [not mentioned in diaries RE8 A3613 Capt Charles Theodore Vachell, pilot, Lt Frederick Charles Boughton Greene, Obs, force landed due to engine fire on Contact Patrol]

*1250hrs, RE8 B757, 3500ft, 3hrs 15m flight time, Lt Clark, NF and MQ Patrol, Photos of Menin Road in the vicinity of Gheluvelt at 3000ft, very bumpy!!!*

*1825hrs, RE8 A4298, 5000ft, 2hrs 20mins flight time, Lt Clark, MQ NF and Photos of Glencorse Wood and SE, exposed sixteen plates, AA very active.*

**11th August, Dud.** Clouds low and continuous showers. Up at 2.30 but the Salient black with rain, stayed 45mins but didn't clear. Still feeling very tired after yesterday and Thursday.

*1430hrs, RE8 B757, 2000ft, flight time 45mins, Lt Clark, Salient black with rain, observation impossible.*

**12th August, Braf.** Called at 3.45am, into the air at 4.45, quite dark, had to have lights on to see instruments. Stint didn't come off after all. Up again with Clark at 1030. Total six hours! Absolutely dead beat. Couldn't stand another day at this rate. New engine being fitted in my machine.

*0445hrs, RE8 B757, 4500ft, 3hrs 30mins flight time, Lt Clark, Shoot and NF Patrol, dropped bombs, visibility fair.*

*1030hrs, RE8 B757, 5000ft, 2hrs 30mins flying time, Lt Clark, Clouds from 2000 to 6000ft Did Shoot beneath cloud.*

**13th August, Gweddoll.** Up again in 757, good visibility. Battery shooting on wrong target. BC comes to see me after tea. Down Abeele during afternoon, Clark goes to see his Battalion. Mackenzie smashes 757 into Wakeman's machine in taking off. Clough 'does in' another, his last chance with No.4.

O'Shea collides with a lorry taking off!!! For a stroll with Ward and Tribe after dinner. Testing engine on 4298. Cut out at 3000ft, just managed to get into aerodrome [RE8 B757, Lt G.W. Mackenzie, pilot, Lt Thomas Fordam Flanagan, Obs, hit tent guy rope on take-off for Artillery Observation and crashed in RE8 A3645] [RE8 A4605 Lt Arthur Harold Clough, crashed on landing during practice landings] [RE8 A4320, 2Lt Francis Joseph O'Shea, pilot, 2Lt Gordon Kelf McArthur Hit lorry and crashed in cornfield on take-off for Artillery Registration] *0745hrs, RE8 B757, 4800ft, 3hrs 15mins flight time, Lt Clark, Successful Shoot, spotted two AA batteries and one howitzer battery.*

*1835hrs, RE8 A4298, 3000ft, 25mins flight time, AM2 Barnes, Engine test, engine cut out owing to back terminal of magneto coming loose. Got in aerodrome.*

**14th August, Showery.** Start off for Shoot 10.30, new right V strut, collided while taxiing out!!!! Up at 2.10 Stayed for three hours, flying between 6000 and 2500ft owing to clouds. Visibility not good but Clark did a fair shoot with 163 Siege Battery, one gun. Game of Auction after tea, writing letters after dinner.

*1410hrs, RE8 A4298, 6000ft, 3hrs flight time, Lt Clark, Successful Shoot, dropped bombs, flying between 2500 and 6000ft.*

**15th August, Very dull morning.** Went up as far as Salient, but clouds at 800ft. Up again in afternoon, dropped bombs over clouds, then came back down and exposed eighteen plates east of Polygon Wood at 3000ft! Photos useless owing to bad light!!! *0815hrs, RE8 A4298, 1000ft, 30mins flight time, Lt Clark, Clouds at 800ft, went to Salient and back.*

*1525hrs, RE8 A4298, 6000ft, 1hr 20 mins flight time, Lt Clark, Shoot on JZ42 and Photos, exposed eighteen plates east of Polygon Wood at 3000ft.*

**16th August, Braf.** Z Day, advance on Glencorse Wood and Polygon. Called at 3.30, engine start at 4.30, up at 5am on NF Patrol, visibility bad. Up again 10am, clouds from 1500 to 10000, flying over Polygon at 1500ft! Up for a third trip 3.30, visibility is excellent, very gusty to Shoot, then calmed down. Total nine hours in air. Grimwood wounded by direct hit by one of our shells. Centre section and longeron smashed, but Starley brought machine back [RE8 A3848, 2Lt Richard Douglas Starley, Pilot, Lt Bertie Constantine Ruffell Grimwood, Obs, wounded] Troops active after taking objective owing to resistance in Inverness Copse.

*0500hrs, RE8 A4298, 5500ft, 2hrs 45mins flight time, Lt Clark, Patrol, Z Day, visibility very poor owing to mist. Bombs.*

*1030hrs, RE8 A4298, 5000-1500ft, 3hrs flight time, Lt Clark, Patrol, flying very low over Polygon Wood and Inverness Copse, clouds from 2000ft to 10000ft. Bombs.*

*1340hrs, RE8 A4298, 3000ft, 2hrs 45mins flight time, Lt Clark, Patrol, very gusty to Shoot, visibility excellent. Bombs.*

**17th August, Braf iawn.** Not in the air until noon. Clark does Shoot, unsuccessful. Flying low owing to clouds, very gusty. Barlow killed by machine gun fire from ground [2Lt Charles Alfred Barlow died of wounds when taking part in a Contact Patrol]

*1330hrs, RE8 B742, 3500ft, 3hrs flight time, Lt Clark, Shoot with 163 Siege Battery, unsuccessful, bombs dropped.*

**18th August, Up at 8am, successful Shoot by Clark on JZ26 by 163 Siege Battery, drooped bombs. Perrott, aerial gunner wounded while on Photos with Marsden [AM2 E. Perrott wounded in leg, Lt Elwyn Harrison Marsden uninjured] Clark goes up in afternoon with Davis, new pilot.**

*0800, RE8 B742, 4000ft, 3hrs flight time, 4000ft, Lt Clark, Shoot on JZ26 with 163 Siege Battery, successful.*

**19th August, Braf.** Up at 1pm with Busher, [2Lt Walter Paul Busher] his first Shoot, 208 Siege Battery on JZ50, unsuccessful, very gusty and low cloud. Up again at 6.35 with Busher on same Shoot. Did it myself, successful. Landing in the dark. Auction after dinner with Jones, Tribe and BC 13 Siege Battery.

1300hrs, RE8 B742, 4500ft, 2hrs 55mins flight time, Lt Busher, Busher's first Shoot, unsuccessful, very gusty. Bombs.

1635hrs, RE8 B742, 5000ft, 1hr 55mins flight time, Lt Busher, My first Shoot with 208 Siege Battery on JZ50, successful. Bombs.

**20th August, Braf.** Didn't get up till 10.30, sent up to do Shoot at 12, so missed breakfast and lunch! Clark did successful Shoot with 163 Siege Battery on JZ87. Flying at 3000ft below cloud, very gusty, AA active. Went over to have a look at target but could see nothing. Night bombing raid by Hun.

1200hrs, RE8 B742, 2000ft, 3hrs 10mins flight time, Lt Clark, 163 Siege Battery on JZ87, successful, cloud at 3000ft, dropped bombs, very gusty.

1915hrs, RE8 A4298, 3000ft, 15mins flight time, Sgt Cook, Test, engine not running satisfactorily.

**21st August, Braf.** Up with Sgt Cook at 6.55am testing 4298, satisfactory. Up with Clark 1015, Shoot and Photos. Had just taken Photos and came back when engine cut out and had to land east of Poperinghe, ran into hop pole and crashed. Up again in evening with Weir taking Photos of Inverness Copse for tomorrow's stunt. Tired and fed up, night bombing raids by Hun.

0635hrs, RE8 A4298, 4000ft, 25mins flight time, Sgt Cook, Test, satisfactory.

1015hrs, RE8 A4298, 4500ft, 1hr 25mins flight time, Lt Clark, Shoot and Photos. Engine cut out over Zillebeke, forced landing and crash just east of Poperinghe. Machine gun from ground at 2800ft.

1800hrs, RE8 4250, 3500ft, 1hr 15mins flight time, Lt Weir, Shoot and Photos, AA active, machine gun from ground.

**22nd August, Braf.** Another Battle, fourth in three weeks. Attempt to take Inverness Copse. Up at 6.30 on M.Q.N.F. AA very active and accurate, got a four-inch chunk through top starboard plane (over course of canal) Up again at 2.45, successful Shoot with 126 Siege Battery, AA active again. Attack a failure!!! Night bombing raid by Huns.

0630hrs, RE8 742, 5000ft, 3hrs 10mins flight time, Lt Clark, M.Q.N.F. Patrol, attack on Inverness Copse, visibility bad. Spar in upper right plane smashed by AA.

**23rd August, Gweddol.** Not fit for flying until noon, up with Clark at 12.10. Successful Shoot with 23 Siege Battery AA spiteful again. Concert in church army hut. Total time for last fifteen days sixty-two hours.

1210, RE8 B742, 4800ft, 3hrs 10mins flight time, Lt Clark, Shoot with 23 Howitzer Battery successful, AA very active, gusty, two bombs.

**24th August,** very stormy and showery. Hemming, Green and McArthur go home to Home Establishment. Game of Auction in morning and letter writing. Capt Whelen in charge of Flight. No flying all day on account of weather. Went for stroll with Carter to Mt de Café.

**25th August, Gweddol.** Up at 5.50. Dropped bombs then came home, ground mist and strong head west wind. Up again 1.15, Battery put out T, owing to bad shooting. Very pleasant up.

0550hrs, RE8 B742, 4000ft, 50mins flight time, Lt Clark, Shoot not commenced owing to mist, dropped bombs.

1315hrs, RE8 B742, 4000ft, 1hr 45mins flight time, Lt Clark, Unsuccessful shoot with 23 Howitzer Battery, put out T. Very gusty.

**26th August, Gweddol.** Up at 11 for 3¼hrs S Shoot. Sent up again at 5.10, fortunately Battery got crumped and put T out. Rain came on about 7pm.

1100hrs, RE8 B742, 5000ft, 3hrs 15mins flight time, Lt Clark, (S) Shoot with 23 Howitzer Battery, bombs dropped.

1310hrs, RE8 B742, 4200ft, 1hr 15mins flight time, Lt Clark, (U) with 73HB. Battery shelled put out T. Rain came on.

**27th August,** very wet. Another new flight commander, Capt Huskinson [Capt Patrick Huskinson]. Went out to 17 Casualty Clearing Station to get a tooth filled, quite well done. Back by tea. No Flying.



L.V.W. Clark at Abeele, 1917.

**28th August,** Very stormy and showery. No flying, in camp all day writing letters and cleaning my old bus.

**29th August,** Stormy and showery. Still no flying, Clark and I cleaning 4298. Painting and doping, looks quite well now. Not test since crash. North, Tribe, Marsden and Clark at Hop Poles to dine.

**30th August,** gradually clearing. A Flight flying. No CB work done. Out with Clark and Tribe to dinner at Steenvoorde, went there by lorry and back in luxurious car. Writing letters.

**31st August,** Fair. Up at 8.30 testing machine, ran into clouds at 800ft so had to come down. Up again with Barnes at 6.30pm, engine and rigging fairly OK.

0840hrs, RE8 A4298, 1000ft, 20mins flight time, 2nd Airman Richardson, Test, clouds at 8000ft.

1830hrs, RE8 A4298, 4000ft, 30mins flight time, 2nd Airman Barnes, Engine and rigging OK.

#### SEPTEMBER 1917

**1st September, Braf.** Up at 6.30am with Clark. V. Shoot, bombs dropped, but cloud from 700ft to 2500ft came over. Carter in hospital Tribe and I go to 3 Casualty Clearing Station to see him A.B. Jones goes on leave.

0630hrs, RE8 A4298, 4500ft, 1hr 55mins flight time U Shoot, bombs dropped, cloud at 700 to 2500ft came over.

**2nd September,** Low clouds and rain. Up at 6.30am but ran into clouds at 1200ft. Bingo at Hop Poles in evening.

0620hrs, RE8 A4298, 800ft, 10mins flight time, Lt Clark, ran into rain clouds.

**3rd September, Braf.** Up for 2.45 S. Shoot on JZ88 with 17 Howitzer Battery, bombs dropped. Feeling rather seedy. No.4 goes into 2nd Wing, 2nd Brigade. No more bombs. Ward and Studholme wounded on Photography [RE8 A4651 in combat with three enemy aircraft, shot down and spun in near Stirling Castle. Lt George Frederick Ward shaken, Pilot. Sgt William Studholme Obs, died of wounds. RE combat claim Zillebeke 1700hrs by Vfw Kurt Wusthoff Jasta 4]

1100hrs, RE8 A4298, 6500-2500ft, 2hrs 45 mins flight time, (S)

Shoot on JZ88, bombs dropped, cloud at 3000ft.

**4th September**, Braf Niwlog (nice but hazy) Heavy ground mist. Up at 9.5 for ½ hr, up again at 10 on Spark. Engine went fub at 11.30 but I managed to get back. Move over into Carter's hut. Clark goes to Ward's. Heavy night bomb raid. 10.30pm Bombing raid on our aerodrome very near too.

0950hrs, RE8 A4298, 6000ft, 30mins flight time, Lt Clark, weather test, too misty for Shoot.

1000hrs, RE8 A4298, 4500ft, 1hr 45mins flight time, Lt Clark, Spark, engine cut out over Zillebeke, just got back.

1815hrs, RE8 A4298, 35mins flight time, 2nd Airman Barnes, engine test, going fairly well.

**5th September**, Very heavy mist. Now attached to 1st Anzac Corps. Sgt Studholme died of wounds. Up with Clark but unable to do Shoot behind Becelaere owing to mist. Engine not going well, one jet covered with oil. Letter writing and reading. General Officer Commanding 2nd Corps wishes us goodbye. Hun night bomb raid.

no take-off time given, RE8 A4298, 1hr 30mins flight time, 6000ft, Lt Clark, Shoot beyond Becelaere. (U) couldn't see target.

**6th September**, Very dull day. Up at 6am, Shoot not commenced, couldn't get Battery, cloud and mist at 7am. Tinkering with engine, re-doing air ports. Cleaning machine in afternoon. Up for a test with Cpl Allcroft, going well but had to come down after 15minutes owing to thunderstorm. Letter writing. Tremendous bombardment going on all day.

0600, RE8 A4298, 1hr 20mins flight time, 5000ft, Lt Clark, Registration, couldn't set Battery, cloud and mist at 7am.

1805hrs, RE8 A4298, 2000ft, 15mins flight time, Cpl Allcroft, Engine test, (S) came down early on account of thunderstorm.

**7th September**, Very dull and misty all day. Up again on same Registration but did not take the air. Tinkering about with "Guard" most of the morning. General Birdwood (1st Anzac Corps) pays us a visit in the afternoon, shakes hands all round. No flying all day. At Steenvoorde with Marsden for dinner.

**8th September**, Very thick mist all day. Up early, no flying. Football match, Officers v Mechanics 1-8 Feeling pretty done in after game, hot bath! Letter writing then to bed, immediately after dinner.

**9th September**, Not much better than yesterday. Up at 9am, could see nothing. Came home after 1¼hrs and sent up again. Total 3hrs 20mins. Oz Jenkins (gas officer 20th Div) dropped in accidentally with a Major Padre during the afternoon, won't stay. Game of Auction.

0920hrs, RE8 A4298, 5500ft, 1hr 15mins flight time, Lt Clark, Registration, impossible to see anything on account of low clouds and mist.

1110hrs, RE8 A4298, 2hrs 5mins flight time, 7000ft, Lt Clark, Spark, practically no activity, thick haze and cloud.

**10th September**, Very misty until midday. A few machines up in afternoon and evening. Not down for a job at all, what

Tom Owen with his regular observer of September 1917, Leslie Vincent Woodhouse Clark.



a change! Bill Hasard called in morning and stayed to lunch. Had a short ride on his pony. Writing letters in afternoon. Game of Auction after dinner. Huns on bombing raid again at night.

**11th September**, Misty again. Same program as yesterday, not detailed for a job. Down at Abeele in morning getting cash and haircut. Game of Auction after dinner.

**12th September**, Misty, Up at 11.30 with Clark, tried below and above cloud 2000ft to 6000ft, no use. Didn't believe us when we came home, sent Heys up. Went with Tribe to Steenvoorde to dinner for a change.

1130hrs, RE8 A4298, 1hr 25mins flight time, 2300ft, Lt Clark, Unable to do shoot, clouds 2000 to 6000ft.

**13th September**, Stormy and cloudy, much colder, detailed for noon. Up at 1.15, very unpleasant owing to number RE8, DH5 and SE5 all at the same height (2500ft) AA very spiteful, didn't leave us alone the whole time. (S) Shoot, Huskinson and Barr same time, but came down, it was dud! Game of Auction after tea, letter writing after dinner.

1315hrs, RE8 A4298, 3000ft, 2hrs 55mins flight time, Shoot on JX51, Unpleasant up, AA very active all the time.

**14th September**, Dud morning owing to clouds. Spent an hour with 4298 getting maps done. Up at 12 with Clark, Shoot (S) on Becelaere, stayed up 3 ½ hrs, visibility excellent but cold. Game of Auction after dinner. OC No.5 Company Royal Engineers (Forestry) in to dinner.

1205hrs, RE8 A4298, 6000ft, 3hrs 30 flight time, Shoot on Beselare, visibility very good.

**15th September**, Braf. Not detailed until 1pm, sent up at 5.15pm, hopelessly dud, very thick mist. Played around over Polygon and Gheluvelt. Bristol Fighter landed here at 7.30 with observer shot through right chest [Bristol F2b A7193 shot up in combat 2Lt Frank Ford Babbage, pilot OK, 2Lt John Edward



The remnants of 6 Squadron serving with 4 Squadron at Abeele, September 1917.

Above: Tribe, unknown, Barr, Clark, Jones

Below: Tribe, Barr, Owen, Clark, Jones.



Linning Skelton WIA, 20 Squadron]

1715hrs, RE8 A4298, 5500ft, 2hrs flight time, Lt Clark, too misty for Shoot, went over Polygon Wood and Ghulevelt to have a look at target.

**16th September, Braf.** Cloudy until afternoon, arranging maps all morning. Carter's kit packed and sent away. Up with Tribe at 3.15, aerial shot away! Weller, Steben wounded on Photography. Humphries, killed. Steben, wounded. Four casualties, Farmer reported dying in evening [2Lt William Henry Weller, Pilot wounded. AM1 F. Farmer, died of wounds]. [RE8 A4693 2Lt Leslie Henry Glendower Humphries, pilot, KIA. 2Lt Frederick Laurie Steben, Wounded. Shot down]

1515hrs, RE8 A4298, 4500ft, 2hrs 40mins flight time, Lt Clark, Aerial shoot away, unable to do Shoot.

**17th September,** Very gusty all day, dud until afternoon. Sent up at 2pm, almost a gale blowing, very unpleasant up, cloud at 2500ft. Shoot on Molenhoek (S), Up for 2.40hrs, returned on account of engine trouble, plugs oiled up. Wind turned me on to wingtip when landing. Broken aileron strut, top and bottom ailerons changed. Game of Auction after dinner.

1400hrs, RE8 A4298, 4000ft, 2hrs 40 mins flight time, Lt Clark, (S) ranging, returned on account of engine trouble, gusty landing, turned onto wingtips.

**18th September,** Gusty and dull. Not detailed for a job at all!! Getting a map of Battery positions done. Went to Cassel with Tribe and Clark to dinner, managed to get a ride all the way there and back. Back in camp at 9.30pm.

**19th September,** Very stormy again. Walthew and Hartnett missing (trench photos) Lecture by CO at 10.30, show tomorrow. Tested my machine A4298 after tea. Lecture by Staff Captain on tomorrow's operations at 7pm [RE8 B3427 Photography, 2nd Lt John Sayer Walthew, pilot. Lt Michael Charles Hartnett, Obs, both KIA. Re combat claim by Ltn H Adam Jasta 6]

1750hrs, RE8 A4298, 3000ft, 25mins flight time, Cpl Allcroft, Engine and rigging test.

**20th September,** Fair. Battle, 2nd Army attack. Inverness Copse, Glencorse Wood and Polygon (July 31st objective). 10th Corps Inverness Copse, 1st Anzac Corps Glencorse and Polygon. Everything appears to have gone well. Hunt and TB Jones send down 2 LL??? Up with Clark doing Counter attack. Told to watch for troops from Waterdamhoek. Five GF calls sent on motor transport, one lorry on fire, one turned over. Attacked by three Albatross at 4500ft, dove for home, one after the other. Three big two seaters doing contact over Polygon. AA and machine guns very active. Flying between Belewarde and Beselaere all the whole time.

1430hrs, RE8 A4298, 5000ft down to 1800ft, 2hrs 50mins flight time, Lt Clark, Counter counter attack, five GFs sent on motor transport, attacked by three Albatross over Polygon Wood at 4500ft. 4.15.4.30.50 drove three two seaters home. Flying between Bellewaerde and Becelaere whole time.

**21st September, Braf.** Up at 11.30 on M.Q.N.F. with Clark, five Huns dived on us over Inverness Copse but we did not open fire. Very little activity on front, came back on account of engine trouble. Game of Auction after dinner.

1130hrs, RE8 A4298, 4000ft, 1hr 55mins flight time, Lt Clark, M.Q.N.F. All quiet, dived on by five enemy aircraft, returned on account of engine.

1845hrs, RE8 A4298, 3500ft, 25mins flight time, 2nd Airman Hunting, Engine test, fair.

**22nd September,** Fair. AERIAL BATTLE, up on Shoot at 8.50, ground mist and cloud later. Reconnoitring roads East of Polygon Wood at 1500ft. Attacked by five enemy aircraft, two of which kept on firing until we were at 300ft over Inverness Copse. Troops fired at Enemy aircraft from ground. Machine riddled, four planes and tailplane, rudder and both top ailerons, three RAF Wires, elevator controls, five fuselage struts, engine bear and sump, right hand wheel, 4298 written



Captain Francis Herbert Hodgson.

:RAeCT 2325

off and goes to No.1 Air Depot. Tribe and Rolison go on leave. Northam has one of our own shells through fuselage, takes three longeron away, landed safely near Herenthage. Dawson brings me 6461 from Omer [Lt Reginald Laurence Tribe] [RE A4348 2Lt Norman Frederick Northam, pilot, 2Lt Stanley Chadwick, Obs, crashed in a force landed due to artillery shell going through fuselage]

0900hrs RE8 A4298, 5000ft down to 300ft, 1hr 20mins flight time, Lt Clark, thick ground mist and cloud, came over at 1500ft later. Attacked by five enemy aircraft over Polygon Wood, two of them kept on firing until I was at 300ft over Inverness Copse. Machine shot to pieces, our own troops firing at enemy aircraft from ground.

**23rd September, Gweddoll** (fair not bad) Working all morning on new machine 6461. Got it ready to take up for test at 12.15 when one of No.6 crashes into it taking off, Write off!!! Jones goes to Omer for another for me. It arrives about 7.30, a Daimler No.3436 [RE8 A4206 6 Sqn, Lt Wright, Lt Taylor, engine choked when taking off for an Artillery Observation Patrol, crashed into RE8 6461]

**24th September, Braf.** Dawn, Heavy ground mist but fine otherwise. Working all morning on 3436. Photographers go up twice for C.B. photos, driven back each time by Huns, but get some photos second time. Up testing machine at 3.30, got to 6000ft without any trouble. Writing letters after dinner.

1330hrs, RE8 B3436, 6000ft, 55mins flight time, Airman Barnes, Testing new machine, engine OK, rigging stiff.

**25th September, Braf.** Heavy mist during morning. Detailed for Photos with Hodgson and Prout to take area for which about ½ dozen attempts have already been made!!! Prout taken off during morning and Hodgson told to go. Five Camels meet us at 7000ft over Zillebeke and keep with us the whole time, no Archie. I take up Cpl Herman Nelle at last moment instead of Clark. Everything went off quite well and photos turned out excellently [Capt Francis Herbert Hodgson] [2Lt Geoffrey Newcombe Prout]

1315hrs, RE8 B3436, 7000ft, 1hr 25mins flight time, Cpl Nelle, Photos with Hodgson, Polygon Wood- Becelaere-Broodseinde-Zillebeke (S) escorted by five Camels, enemy aircraft hovering around but did not attack.

**26th September**, Low cloud. BATTLE AGAIN. No flying commenced until 8am. Up with Clark at 10 for 2hrs 20mins, very unpleasant owing to clouds at 300ft and too many of our own shells. Saw about ½ dozen pass in front. The whole of Polygon Wood taken and Zonnebeke. X Corps held up south of Menin Road. Had a lovely sleep in afternoon. Letter writing after dinner.

1000hrs, RE8 B4336, 5000ft, 2hrs 20mins flight time, Lt Clark, Another battle M.Q.N.F. no flashes seen, cloud low, East of Polygon Wood taken and Zonnebeke.

**27th September**, *Braf ond Niwlog* (nice but hazy). Up in the morning with heavier prop and a new carburettor. Vibration. Plugs cleaned and maps examined, up in evening. No better. Up later again with fresh plugs, still vibrating. Decided to put back light prop. Very fine all day but visibility bad.

1100hrs, RE8 B3436, 4000ft, 20mins flight time, 2nd Airman Barnes, Engine test, heavier prop and new carburettor. Slight vibration.

1730hrs, RE8 B3436, 3000ft, 15mins flight time, Pvt Kay, Engine test, still vibrating, plugs changed.

1840hrs, RE8 B3436, 2000ft, 10mins flight time, Sgt Cook, Engine test, vibrating, changing prop.

**28th September**, *Braf ond niwlog*. Very little flying done owing to bad visibility. Up on engine test with Clark before lunch. Game of Auction after lunch. Letter writing after dinner.

1135hrs, RE8 B3436, 2000ft, 20mins flight time, Lt Clark, Engine test, OK.

**29th September**, *Braf*. Not up all day, not even on engine test. Cleaning my machine in morning. Game of Football in afternoon, Officers v Airmen. Lecture on "Strategy of the War" by a Captain from the Royal Welsh Fusiliers. Letters after dinner. Great activity in the air at night.

**30th September**, *Braf iawn*. Marsden up on Patrol. Round machine all morning, up at 12 with Clark, stayed up for 2¾ hrs. Down to Abeele after tea, letter writing after dinner. More aerial activity at night, full moon. 12 midnight Hun overhead, dropped six bombs on aerodrome, Wireless officer of No.6 killed and Airmen wounded.

1200hrs, RE8 B3436, 5000ft, 2hrs 45mins flight time, Lt Clark, S Shoot, perfect visibility.

### OCTOBER 1917

**1st October**, *Braf ond niwlog*. Cleaning machine and buzzing during morning. Fire in Young's hut at lunch time. Put out just in time to save block. Active preparations in the way of dug outs in view of another raid. Up with Clark after tea but too misty to see anything. Got to bed early expecting a raid but it didn't come off.

1705hrs, RE8 B3436, 7000ft, 1hr flight time, Impossible to see anything owing to mist.

**2nd October**, *Braf eto ond niwlog* (Sunny but hazy again). Round sheds during morning. Up at 2pm, couldn't get ground strips out. Went to CWS twice. Put T out second time. Letter writing after dinner. No disturbances during the night.

1405hrs, RE8 B3436, 5000ft, 2hrs flight time, Lt Clark, (U) failed to get ground strips out, at CWS twice.

**3rd October**, Low clouds. Busy all morning cleaning 3436. Looked jolly well with all the brass polished. Rigger game arranged with No.6 but put off owing to weather cleaning up. One or two people take the air, but nothing done. Lecture by CO, Battle tomorrow!

**4th October**, Very Stormy, clouds at 700ft not fit to fly. BATTLE. Another advance, all the high ground captured east of Polygon and Zonnebeke. Vatchell and Woodcock go up. Huskinson and Barr take the air but too late, see nothing.



Caernarfon and Bangor, both visited by Owen during his October 1917 leave.



Heavy rain in evening and wind increasing. Hope this is the last push in this vicinity for winter [2Lt Frederick Woodcock]

**5th October**, Fair but very cold. MQNFs and CAP. Rain came on midday. Cleared up 2.30. Sent up at 3 with camera, Raikes comes as observer!!! Is Clark a fair weather observer? Eighteen plates exposed along Corps front. Very cold. Names go in for leave.

1500hrs, RE8 B3436, 4000ft, 2hrs 10mins flight time, Lt Raikes, M.Q.N.F. and Photos of Corps Front, eighteen plates exposed.

**6th October**, Very wet. Proceeding on leave. Huns bombing overhead 4.30am. Packing during morning. At Abeele for lunch. Left camp 1pm, Hazebrouck 1.30, train due out at 2pm, waiting about until night. Two train loads of Boche prisoners pass through during afternoon. Leave train departs about 9pm, travelled via Calais, arrive Boulogne 2.30am Stayed at Australian Artillery HQ at Hotel de Paris. A couple of bombs dropped on the town just as we went to bed.

**7th October**, Wet and cold. Boulogne to London. Reported Amlo 11am, sailed 12.15. Very rough and wet, tossed about badly, arrive Folkestone at 1.45. Arrive Victoria Station 4.55, staying at Jermyn Court. Called at Grosvenor Road and saw Carys Bryan before dinner, dinner at Jermyn Court. Charlie Clayton calls at Jermyn Court at 10pm, haven't seen him for 2½ years.

**8th October**, *Bore braf* (nice morning). Around shopping. Hawkes and H.C.S. in Bond Street. Clark and his brother call for me at 11am. Drew £20 from Cox & Co Bank. Gwene Bryan comes to lunch with me at Jermyn Court. Depart Paddington 2pm, arrive Welshpool 6.50, Meifod 7.45. Called at Liverpool House after supper. Very wet evening.

**9th October**, *Gwlyb* (Wet) Off to Heniarth with Dwynn in car, walked back from Newbridge. Called at Temperance and at Rowland. Went to WMS in evening. Dia's wife coming tomorrow, called at Liverpool House. Not feeling too well, bed early.

**10th October**, *Gweddol*. Didn't get up until 11am, still rather seedy. Strolling about in afternoon. Called at Durley House to see DJ's wife and child. Meeting at the Wesleyan Chapel. Up as

far as Glascoed Mill for a stroll with Job.

**11th October, Gwlyb (Wet).** To Welshpool in car. Aberystwyth 11.45, down in college, saw Mary Evens, Dr Lewis, Sargent and Prof Edwards. Called with Jenkin Jones and DJ Saer in afternoon. Tea with WJF at Owens. Staying at Bryn???

**12th October, Gwlyb iawn (very wet).** Depart Aberystwyth 7am, arrive Llanelly 10.30. Staying at 3 College Hill. Called in school and saw everybody there including Miss Frazer and Rosalie Jones, Miss Jones in to tea. Mr and Mrs Roberts from Swansea came in later. Called with Mrs March.

**13th October, Gweddol.** Depart Llanelly 9.16, saw Eunice Phillips on station, WJ had arrived at Kidwilly previous evening from hospital. Arrive Aberystwyth 12.40 just in time to miss Cambrian Railway connection. Called at H.A. Davies. Arrive Welshpool 6.17, Dia came to meet me. Down at Liverpool House after supper.

**14th October, Braf ond oer (nice but cold)**

**15th October, Braf iawn.** A chat with Arthur Evens (19th Manchester's 30th Div) in morning, out for a stroll. Even Thomas, vicarage calls after tea. Down at Liverpool House wire comes that Jones is enroute home. Down at Temperance after supper.

**16th October, Gweddol.** Called with F.J.R. about 10.30am and find that he's been in the Salient the whole time on Kimmel Hill was around Zillebeke. Out for a stroll with him in afternoon. Called with ??? after tea. Kate and I down at Liverpool House to supper, came away about 11pm. Packing.

**17th October, Gweddol.** Left Meifod for Caernarfon, Dia drives me to Oswestry, arrive ??? 12.15, Bill meets me. Had a snack at 4 Victoria Park and then Bill and I go out to Bont getting there about 2pm. Out for a stroll. RWT and Mrs Jones ??? in to tea. Bill goes off at 7pm, Katie Jones in to supper

**18th October, Overcast, rain.** Strolling about during morning Chas Davies (CO) called to visit church with us. Off to Bangor with Ed on 2.20 at Roberts Café to tea. Ed goes back with 7pm. I saw E.B. Jones on station, called with Edwin Jones (Llanfair) before supper. Long talk with Hawkinson and Bill after supper, bed 1.30am.

**19th October, Braf.** Off to London with 9am from Bangor. Saw JWG Griffith on the way to station and E.B. Jones on station, arrive Euston 3.40. Off to Jermyn Court find invite to tea at Charlwood Street, bounty for me there. Arrive Charlwood St 5pm and had tea with Gwyne and Carys Bryan, dinner with them at the Rendy Vous, Soho, and then at New Theatre Air Raid warning, Zepp dropped bomb in Piccadilly Circus, smashed Swann & Edgars [attack by Zeppelin L45, the 300kg bomb dropped killed seven and wound eighteen, this was the last Zeppelin raid on London]

20th October, Braf. Back to BEF. Victoria 7.30am Evens and Carys see me off, arrive Folkestone, embark Boulogne, Clark missed early boat. Letter writing at Officers Club. Strolling about Boulogne with Lt Reid, 14th Australian Machine Gun Corps (5th Div, 1st Anzac) During afternoon. Met afternoon boat at 5pm, Major Jenkins on board but did not offer us to come in his car!!! Dinner at Officers Club, sleeping in waiting room.

**21st October, Braf.** Entrain at 2am, depart 4am, arrive Hazebrouck 2pm. Met Bennent (Y.L. Rugely) there. Back at Squadron 4.30, new flight commander, Lt Cairns. Morgan and Atkinson missing, while I was on leave. Gilroy wounded. F.E.O. go over in shoals towards dusk for bombing [RE8 B5040, Infantry Protection Patrol so flight near Ypres east of line, Heavy ground mist at 1000ft, shot up and compass hit, 2Lt Wilfred Gilbert Morgan, pilot, POW died of wounds 23rd October. Lt James Morgan Atkinson, Obs, slightly wounded became prisoner of war, both men thrown from aircraft on landing, 1st Anzac Corps front]

**22nd October, Fair.** Not down for a job. Looking around machine, away morning and sandbagging hut. Down at Abeele



*H.A. Smith, 10th Middlesex Regiment & RFC. He was a pilot, later flight commander, in 27 Squadron, flying Martinsyde G.102s and DH4s. He is not mentioned in the diary and the reason for his photograph to be in Owen's album is unknown.*

with Tribe and Clark, Tribe and Marsden stay to dinner, Clark and I return.

**23rd October, Very Dud.** Out for a stroll in rain and mud with Tribe during morning. Football Committee after lunch. Game of football in afternoon. Down at Bailleul with Tribe, Clark, Vatchell and Dawson. Officers Club to dinner. Vatchell and Dawson got to No.19. They call us at lam. Turnbull, Muspratt MC, Rhys David DSO MC came over from 56 to stay to tea.

**24th October, Up three times, twice weather dud, last time battery out of action.** Buying new lamp and book at Bailleul. Lecture at 6pm by Area Commandant about Verdun. Letter writing after dinner.

*RE8 B3436, 5000ft, 4hrs flight time, Lt Clark.*

**25th October, Dry but very stormy.** No flying on account of gale until teatime. Didn't get up 10.30. At Bailleul by tender in afternoon with footballers buying tops for team. Back 6.30pm. Battle tomorrow, bombers at it.

**26th October, Very wet all day.** Standing by from 8.45 till 12 for M.Q.N.F. Game of Auction in afternoon, out with Tribe after tea to Godewaersvelde. Letter writing after dinner. All No.4 who were at Watou out to dinner with CO.

**27th October, Braf.** Up at 6.10 S. Shoot, job finished by breakfast, down at Abeele before lunch. Auction in afternoon, for a stroll with Tribe in evening.

*0610hrs, RE8 B3436, 6000ft, 3hrs 5mins flight time, Lt Clark, S Shoots one gun in action.*

**28th October, Fair.** Not on a job, didn't get up for breakfast. Game of Football in afternoon. Out for a stroll in evening.

**29th October, Cloudy and misty.** Up twice with Clark but failed to do anything owing to bas visibility. Watched a game of Football in afternoon. Letter writing in evening. Sir John Simon KC MP joins No.4 at Staff Capt with rank of Major, and messes with us. Huns in plenty, full moon.

*1025hrs, RE8 B3436, 5500ft, 1hr 25mins flight time, Lt Clark, U Observation impossible owing to clouds and mist (up twice).*

**30th October, Fair morning, very wet after lunch.** Battle

again. Wakeman killed, Heys wounded. Game of Rugger No.4 Squadron v No.6 Squadron in afternoon, won 19 to nil. Davis of CWS, Turnberry now 28 Squadron called and was in to lunch. Game of Auction after tea, letter writing after dinner. [RE8 B5070, Artillery Observation Patrol, hit by shell machine seen spinning out of control, crashed, Lt Frank Trevor Wakeman (body never recovered) missing in action, Lt George Arthur Duncan Heys wounded in action]

**31st October**, Cloudy and misty, 3am-5am Huns overhead dropping bombs, sixty dropped in Abeele district, three men killed and nine wounded at No.6. Standing by from 7.15am, too misty and cloudy eventually took the air at 2.30, up for an hour only. Huns bombing at night again, but only four bombs dropped in immediate vicinity.

*1435hrs, RE8 B3436, 4500ft, 1hr flight time, Lt Clark, U Couldn't get through to Battery.*

#### NOVEMBER 1917

**1st November**, Very misty all day. No flying, game of Rugger in afternoon. Letter writing after tea, very dull night. Game of Auction after dinner.

**2nd November**, Misty and dull all day. No flying, didn't get up until 11am. Rugger match, No.6 versus No.7 & No.9 Squadrons at 3pm, spectator for a change, 7 & 9 won by six points. Auction and letter writing after dinner.

**3rd November**, Very dull and misty, no flying all day. Down at Abeele having a haircut. At Chateau Louve playing Rugger against No.21 Squadron (fly half) won 11 to 3. Met Zimmer and Quine there. Back to 4 for tea, letters after tea. Crowd of guests in to dinner. Australian concert on, didn't attend.

**4th November**, Dull and misty. Trying to arrange a Soccer match. No.53 Squadron team came over in afternoon. Soccer match beaten 1 nil. Pictures, Battle of Arras at church army hut. Cairns and Barr go on leave. No Flying.

**5th November**, Still misty and dull, no flying. Didn't get up until 11am. Soccer game in afternoon amongst ourselves. Trying to pick out a team. Pictures after dinner, reading until 1.30am "The Hundredth Chance".

**6th November**, Cloudy with occasionally showers. Battle, up at 6.30am with Clark on N.F. and C.A.P. Forced landing. Engine cut out after 1½ hours, landed just north of Herenthage without breaking machine. Breakfast with some Royal Engineers. Wheeling machine across fields to get off, tried twice but engine couldn't take it. CO orders it to be dismantled. Back at 12.30, soccer match in afternoon against Army Service Corps, beaten 3 nil, our forwards want rearranging. Letter writing after tea.

*0630hrs, RE8 B3436, 5500ft, 1hr 30mins flight time, Lt Clark, Battle NF & C.A.P. Forced landing. Engine cut out over Zonnebeke, landed just north of Herenthage, no damage done, machine dismantled.*

**7th November**, Cloudy and showery, very little if any work done in the flying line. Rugger match, playing ½ again against 30th Australian Battalion, very fast game, won 4 to 3, Grose and Grimwood missing. CO down at Chocques reconnoitring aerodrome. Mechanics putting my machine together again after yesterdays forced landing [RE8 A3746, 2Lt Albert George Grose, pilot, MIA, 2Lt Bertie Constantine Ruffell Grimwood, Obs, MIA. Took off at 7am, shot down around the village of Moorslede 0810, shot down by Paul Baumer Jasta 2]

**8th November**, Fair, Not very much flying done. Engine test in afternoon, going fairly well. Game of Auction after dinner. *0145hrs, RE8 B3436, 4000ft, 30mins flight time, AM Barnes, Engine test.*

**9th November**, Fair. Photos with Jackson (B) at 9.40. Two unsuccessful attempts, ran into and was attacked by twelve enemy aircraft first time and by six enemy aircraft second time. Soccer match in afternoon against Army Service Corps as Cassel, lost 2-1, very good game. Back to dinner.



*Chocques aerodrome, to which 4 Squadron moved from Abeele during November 1917. :CCI Archive*

*0945hrs, RE8 B3436, 5500ft, 50mins flight time, Cpl Mann, Photos, two unsuccessful attempts, on first occasion met Huns attacked by two formations of six enemy aircraft, on the second attempt by six enemy aircraft.*

**10th November**, Very wet all day. Battle on, down for N.F. & C.A.P. went up 3.30, mine was the only machine in the Squadron to go up today. Failed to get further than Herenthage owing to clouds and light. Very wet night, very heavy strafe going on. Flanagan leaves Squadron for another posting. Thompson goes on leave and then to Gosport for flying. *1535hrs, RE8 B3436, 2000ft, 40mins flight time, Lt Clark, N.F. & C.A.P. Couldn't get any further than Herenthage owing to clouds and light.*

**11th November**, Misty, up early 6.55 but impossible to do Shoot owing to clouds and mist. No work done all day. Six machines back to No.1 Air Depot, [six machines were A4744, B742, A3721, A3447, A4220, A4260] Dawson and Gilroy posted to Home Establishment. Frightful binge at night. Last night for No.4 to be together as a squadron.

*0655hrs, RE8 B3436, 4500ft, 55mins flight time, Lt Clark, U owing to cloud and mist.*

**12th November**, fair. B Flight goes to Chocques, Dawson and Gilroy and several new pilots leave, squadron reduced to original strength. One flight of No.10 arrives here on AWs. My Shoot washed out, not flying all day.

**13th November**, Very misty, doing practically nothing. Up on a N.F. in afternoon and lost my way coming home, found bearings again, landed just before dusk. Bed early.

*0230hrs, RE8 B3436, 5500ft, 1hrs 40mins flight time, Lt Clark, N.F. Impossible to see anything owing to very thick mist.*

**14th November**, very cold, damp and misty, pukka November weather. No work done all day, letter writing most of the afternoon and evening. Sent to Lotus Shoes for a new pair of Boots.

**15th November**, Dull again, up on N.F. with Clark at 9.30, stayed 1½ hours saw nothing. Very heavy bombardment all evening and night, continuing till following morning. *0930hrs, RE8 B3436, 5000ft, 1hr 30mins flight time, Lt Clark,*

*N.F. Impossible to see anything owing to very thick mist.*

**16th November**, misty. No work done, very heavy bombardment all day again. Game of Soccer, Officers v Men in afternoon, lost 4 nil. Letter writing after tea. News comes through that Tribe, Wood, Clark and Hunt to Home Establishment tomorrow.

**17th November**, misty, practically no work done. Woodcock, Tribe and Hunt depart for Home Establishment. Packing during afternoon for move. Game of Auction after tea.

**18th November**, Very Dull, moving to Chocques. Breakfast 6am, kit packed by 7.15am, departing from Abeele and the Salient. Formation of A & C flights leave at 10.10 led by CO, arrive Chocques 11.45. At Bethune for lunch, saw Sam Jones (Aberystwyth) at club, stayed in to tea and dinner, went to Pierrot Concert with AB Jones at 5.30, very good, back at camp 10pm. Stayed in canvas billet.

*1010hrs, RE8 B3436, 2500ft, 35mins flight time, Lt Busher, Abeele to Chocques, formation of A & C Flights led by CO.*

**19th November**, Dull and misty. Flying with Capt Pell Ilderton, up for 1hr 10mins trying to pick up the line, found myself at Bailleul and over Kemmel. Our Corps front extends from La Bassee to Armentieres. Engine missing badly. Changing billets again, Cairns, Jones, Marsden and I together. Cairns arrives back from leave just in time for dinner.

*1010hrs, RE8 B3436, 2500ft, 1hr 10mins flight time, Capt Pell Ilderton, Patrolling La Bassee-Armentieres front.*

**20th November**, Wet. Rumours of sudden push without artillery preparation around Cambrai. Our machines standing by to go down to bomb and machine gun the Hun on Third Army Front!!! Up in the afternoon with Clark, clouds at 800ft and very gusty, AA very active. The CO has a farewell dinner at Bethune.

*0245hrs, RE8 B3436, 1000ft 1hr 15mins flight time, Lt Clark, Clouds at 800ft, very gusty, AA very active.*

**21st November**, Rizzling all day, no flying. Major Jenkins MC departs at 10.15am for Home Establishment. Marsden and Barry go on leave. Down at Bethune with A.B. Jones and Busher during the afternoon. Got a few things at Ordinance, back at 5.15, letter writing after tea. Lessons in French conversation with Berthe, Cairns and Madame after dinner!! [Lt Elwyn Harrison Marsden] [2Lt Gerald Reid Barry] [2Lt Albert Blundell Jones] [2Lt Walter Paul Busher]

**22nd November**, Still dud, no flying. Polishing the brass on 3436 after breakfast. Game of Auction after lunch and then a stroll with Busher before tea. Pictures at Squadron Theatre at 5.30. Maitland and Hinton with us to dinner. Letter writing after dinner.

**23rd November**, Damp and cloudy. Standing by for bombing Cambrai, too cloudy. Settling down in new mess. Down at shed. Brigadier and Jones Commander call.

**24th November**, Damp. Standing by for bombing Cambrai with 3rd Army, too cloudy. Clark and I playing Soccer for the men v 18 Sqn, won 6-1. Letter writing afterwards.

**25th November**, Cold and damp. Snowing slightly during afternoon. Off to 18 Sqn to play Rugby. Rigger match v 18 Sqn, won 5-3. Had tea there, back for dinner.

**26th November**, Damp and misty. Due up on Shoot at 7am, got stuck in mud taking off, didn't leave ground for ¾ of an hour. Too dud for Shoot, did 2hrs Patrol, dropped two bundles of Propaganda North of Bois de Briz at 1800ft. Propeller shot near Bois by machine gun. Game of Auction in afternoon, boots from Delta came in evening. Clark and Pocock warned for Home Establishment tomorrow. Threatened with night bombing!! At pictures after dinner.

*0745hrs, RE8 B3436, 2300ft, 2hrs flight time, Lt Clark, Patrol, dropped bombs and two bundles of propaganda leaflets, machine guns very active, propeller shot.*

**27th November**, very wet morning, Clark and Pocock depart for Home Establishment at 11am. Up at shed and engine room.



*2Lt Walter Paul Busher, a 4 Squadron observer who flew with Tom Owen.*

Letter writing during afternoon. Bits comes to dinner (Alfred Herbert Cabledu, nickname 'Bits').

**28th November**, Fair. Round shed all morning, in mess dining in afternoon. Letter writing after tea. Jackson had a forced landing near Bethune. Game of Auction after dinner.

**29th November**, *Braf*. Up three times with Busher, engine dud second time. Not feeling very fit. Pictures after dinner. Two new Observers come to C Flight.

*0920hrs, RE8 B3436, 6000ft, 1hr 20mins flight time, Lt Busher, Shoot, couldn't get ground strips out.*

*1155hrs, RE8 B3436, 4000ft, 1hr 5mins flight time, Lt Busher, Shoot, got started and then engine went dud.*

*1450hrs, RE8 B3436, 3000ft, 25mins flight time, Cpl Allcroft, engine test, fair.*

**30th November**, Cloudy. Standing by for Photos, up at Squadron all morning. Smith and Busher have a forced landing. Raikes transferred back to C Flight. AB Jones goes to hospital with facial paralysis.

## DECEMBER 1917

**1st December**, Dull. Standing by for Photos. Rigger match with 43 Squadron away, draw 3 each. Back here to dinner. Very cold all day.

**2nd December**, *Braf*. Very cold and 60mph gale blowing at 6000ft. Up on Photos in morning with Mosby but didn't cross line owing to engine, wind and cloud. Up on Patrol with Busher in afternoon. Raikes and I to dinner with B Flight.

*1030hrs, RE8 B3436, 6000ft, 45mins flight time, Lt Mosby, Photos, didn't cross lines owing to cloud and gale.*

*1435hrs, RE8 B3436, 4000ft, 1hr flight time, Lt Busher, Patrol, got four flashes.*

**3rd December**, *Braf*. On Photos with Gilliat, crossed over Bois De Biez at 7000ft then work south to La Bassee. Camera jammed after four plates!!! AA inactive, enemy aircraft too windy to attack. Jackson got decent photos. At Pictures after dinner [Lt Eric Vernon Gilliat]

*1015hrs, RE8 B3436, 7000ft, 1hr flight time, Lt Gilliat, Photos, from Bois de Biez to La Bassee, camera jammed after four plates.*

**4th December**, Very cold. Off to Pont de L'Arche (Engine Repair Shop) with Robson and Petch [Wing Equipment Officer] started 11.30, lunch at Fruges, tea at Neuf Chatel, arrive Rouen 7.30, arrive Pont de L'Arche 9pm. Robson, Petch and I billeted at Hotel Normandie. Get a very bad head, coming through the cold, about 170 miles [2Lt William Robson]

**5th December**, *Braf*. Pont de L'Arche, Didn't get up till 12 noon. Messing with B Flight. Off to Rouen after lunch. Robson and I go to the military prison to see Capt Money. Tea at the Normandy, strolling about, dinner at Normandy. Back at Pont de l'Arche 10pm.

**6th December**, cold again. Up at sheds all morning, the Fiat undergoing its tests. Capt Money comes up during the afternoon. Robson goes back to Rouen with him. Letter writing and chatting after dinner.

**7th December**, Milder. Depart Pont de L'Arche 8.30am, picked up Petch at Rouen, lunch at Abbeville. Come via Hesdin, Estee, Banche, Bruay. Bethune being shelled as we pass through!!! Picked up Marsden and Barry there. Back at 4.30pm.

**8th December**, Dull. Very little flying done, up at sheds during morning. Doing nothing much the rest of the day.

**9th December**, raining all day, no flying. Game of Soccer with men in the afternoon, very unpleasant on account of wet ground. Letter writing after tea.

**10th December**, *Gweddol braf*. Up at 7.30 with Mosby on Patrol, dropped bombs south-east of Bois de Mez, AA quite good. General Trenchard around. In the mess all afternoon. Pictures in the evening. Capt Hove of 258 Siege Battery to dinner and Pell Ilderton's brother.

*0730hrs, RE8 B3436, 5000ft, 2hrs 35mins flight time, Lt Mosby, Patrol, bombs dropped south-east of Bois de Mez.*

**11th December**, very misty. No flying around sheds all morning. Scratch game of Rugger in afternoon. Goal posts taken from us in the middle of game!!! Went for a run with Cairns, Jackson and Mosby afterwards. With Cairns, Marsden, Davis and Pell Ilderton at A Flight mess to dinner.

**12th December**, dull and misty. No flying, game of Soccer in afternoon, C Flight v A Flight, C won 3 nil. Only four of us to dinner.

**13th December**, Low clouds, no flying. A lecture by CO [Major Richard Saul] on night flying in the morning. Went by tender to 208 Siege Battery in the afternoon, back for tea. Pictures after dinner. Met Bailey (who used to be with 4) Meredith Roberts now in Ox and Bucks at Bethune.

**14th December**, low clouds, no flying. Up around sheds all morning. Rugger match, No.4 v Lancs Fusiliers in afternoon. We won 11-8.

**15th December**, *Gweddol braf*. Up at 7.30 on Shoot with 258 Siege Battery, Battery put out T. Smith, Raikes and Busher go on leave. Out for a ride on Fritz with Mosby and Gunner Jackson Smith [Lt Walter Henry Raikes]

*0800hrs, RE8 B3436, 5000ft, 55mins flight time, Lt Mosby, S. Shoot with 258 Siege Battery, T put out.*

**16th December**, *Gweddol*. Up at 8.25 on Shoot (S) with 258 Siege Battery on BW33, four explosions! Round Batteries, 208 North and 208 South in afternoon with Cairns and remainder of Flight. Vachells last night with Squadron, some night!!

*0825hrs, RE8 B3436, 6000ft, 2hrs 30mins flight time, Lt Mosby, S. Shoot with 258 Siege Battery on BW33, four explosions [Lt John Edward George Mosby]*

**17th December**, Snowing all morning. Round group with Cairns seeing about Registration for new Observers, back for lunch. Up in afternoon but failed to get Shoot done owing to bad visibility. With Billie Marsden at B Flight to dinner. Pictures in afternoon.

*1400hrs, RE8 B3436, 5000ft, 1hr 20mins flight time, Lt Mosby, Shoot with 208 Siege Battery (W) Dud weather.*

**18th December**, *Braf ond oer ofnadwy* (nice but terribly cold). Snow on ground. Up on Patrol 11am with Mosby, Bombs and Machine gun fired. Up again in afternoon to do Registration with Mosby but couldn't see target so dropped Bombs and came home. Daddy Davis goes on leave. Two pilots and three qualified observers on leave from C Flight now.

*1100hrs, RE8 B3436, 5500ft, 2hrs 10mins flight time, Lt Mosby, Patrol, dud, two bombs dropped, Vickers and Lewis guns fired.*



*Richard Ernest Saul, 4 Squadron's CO from 2 December 1917. He transferred to the RFC from the RASC and is shown when an observer with 16 Squadron. He went on to command 7 and 12 Squadrons with the Army of Occupation and remained in the RAF, rising to the rank of AVM and commanding Fighter Command's 13 and 12 Groups during the early part of WWII.*

*: CCI Archive*

*1450hrs, RE8 B3436, 4500ft, 45mins flight time, Lt Mosby, registration twelve roads for new observer, dud, bombs dropped.*

**19th December**, *Braf ond niwlog* (nice but foggy). On Photos with Robson and Northam over La Bassee, East of Armentieres, AA very active and accurate. Escorted by two Camels. Crowd down from A Flight to dinner.

*1220hrs, RE8 B3436, 7500ft, 1hr 40mins flight time, Lt Pilcher, Photos with Northam and Robson, two Camels escort.*

**20th December**, Thick mist all day and very cold, snow on ground, no flying. For a walk with Marsden in morning. Football-Soccer B Flight v C Flight, 4 each, very hard playing. Pictures after dinner.

**21st December**, Thick mist and very cold, snow on ground, no flying. Round sheds all morning. For a long

walk with Billy Marsden in afternoon. Northam in to dinner. Tommy Weir comes back from leave.

**22nd December**, *Braf iawn*. Snow on ground. Up at 8.40 with Gilliat, Shoot on IC85 with ADA (208 North) Battery got shelled and put T out. Up again in afternoon with 2nd Airman Nelle, got on quite well until light failed. Billy Marsden in bed with cold on chest. Bethune shelled during the day and bombs in the evening. Writing letters after dinner.

*0840hrs, RE8 B3436, 5500ft, 1hr 55mins, flight time, Lt Gilliat, Shoot on TC85 with 208N (Ada) Battery got shelled T put out, two bombs dropped.*

*1445hrs, RE8 B3436, 5000ft, 1hr 15mins flight time, 2nd Airman Nelle, Continued shoot, got on quite well until light failed, two bombs dropped.*

**23rd December**, Very cold, but pretty dud all day owing to mist, snow on ground. Billy Marsden still in bed. Standing by for photos and night landings!!! Wind up – vertical!!!! Up in the afternoon doing practice landings with tail weights. Too misty for flight training. Bethune bombed at 5pm again.

*1440hrs, RE8 B3436, 1500ft, 15mins flight time, tail weights, two practice landings with tail weights.*

**24th December**, Dud, snow on ground. Standing by for Photos and night landings. Off to 208 Siege Battery South with Cairns in morning. Bought coal out mine for mess. Had lunch at Bethune.

**25th December**, Fair, more snow. Fair amount of flying going on all morning. Started to snow after tea, snowed all night. Excellent Christmas dinner, and no one drunk at C Flight!! A concert after dinner, quite good. Snow fights around various messes after dinner. Bed 1.30am.

**26th December**, Snow on ground, snow showers all day. On Photos with Hodgson at 2.15, just managed to get over and take them, La Bassee - Le Transloy – Aubers and then it came over dud again. No escort AA inaccurate but plentiful. Standing by for night flying with Cairns!!!!!! Called out for night flying at 8.30 Cairns alone goes up to do one landing, then came over dud. Writing letters [Capt James Cairns].

*1415hrs, RE8 B3436, 8000ft, 1hr flight time, Lt Pilcher, Photos, La Bassee-Le Transloy-Aubers, no escort, no enemy aircraft, AA not very active.*



'Daddy' Davis at Chocques during the winter of 1917-18.

**27th December**, Dull all day, snow on ground. Practically no flying. Walked with Jackson to Bethune in afternoon H.C.S. and S Just starting dinner when warned for night landings. Jackson, Marsden and I from C flight. Up for five minutes, 8.35, perfect night, one landing OK.

*2035hrs, RE8 B3436, 1000ft, 5mins flight time, one practice night landing.*

**28th December**, *Brafond oer ofnadwy* (nice but terribly cold). More snow. 7.30 up with Pilcher doing Shoot with Advance on TA53, get off 136 rounds, three explosions, up for 3½ hours. Round Squadron most of afternoon. Heavy snow in evening, night flying washed out. Letter writing after dinner [2Lt Charles Rayner Pilcher]

*0740hrs, RE8 B3436, 7000ft, 3hrs 20mins flight time, Lt Pilcher, S. Shoot on TA53 with Advance, got off 136 rounds, two bombs dropped.*

**29th December**, Froze hard during night. Dud practically all day owing to low cloud and ground mist. Took Pilcher up for 25mins in morning to do practice shoot over aerodrome. Up with Gilliat on Patrol in afternoon, clouds at 1200ft, up for 50mins. Standing by for Night Bombing. Washed out later owing to dud weather. With Cairns at B Flight to dinner. Letter writing afterwards.

*1025hrs, RE8 B3436, 1000ft, 25mins flight time, Lt Pilcher, Pilcher attempts a practice shoot over aerodrome.*

*1410hrs, RE8 B3436, 2000ft, 50mins flight time, Lt Gilliat, Patrol, no good, cloud and mist.*

**30th December**, Dud all day. Off around Batteries with Marsden, Northam and Barry. Called with 49 Siege Battery South near Laventie and 49 Siege Battery North at Fleurbaix. Lunch at Bac St Maur then off to Estaires while Northam and Barry went to see 101 at Armentieres. Found Bill Havard at Estaires after much hunting. Billy Marsden and I had tea with him. Back at 5pm. Two new pilots arrive at C Flight. James and Nye, what for for??? [2Lt Menrig Lewis James] [2Lt Alfred Cecil Nye]

**31st December**, pretty Dud. Not much work done. Round sheds all morning. Auction in afternoon. Standing by for night flying. Robbins informs me that there is to be a rearrangement of flights and asks me to take over A Flight!!!!!!!!!!!!!! Quite a merry evening in mess. Padre and U.S. Doe from CCS as guest, bed lam.

## JANUARY 1918

**1st January**, Fair. OC A Flight!!! The old A Flight, a Portuguese detached flight. Up at Squadron during morning finding out some of my duties. Long conflag with Carter. The

reorganisation not in order yet, working in original flights for time being. Up at Squadron again in afternoon. U.S. Doe from C.C.S. to tea. At Squadron again after dinner. Standing by with Cairns for night flying

[The following entry is from the back of Tom's 1917 diary: '1st January, Up at squadron during morning trying to find out something about my duties as OC A Flight. Long conflag with Carter getting all the information I can. Not yet thoroughly arranged. Up at squadron office again in afternoon. US Doe from CCS to tea. Up at squadron again after dinner. New A Flight not functioning until tomorrow']

**2nd January**, Fair. Still carrying on in C Flight until tomorrow. Took up Capt Pillinger (USA) for a flip in afternoon during engine test after top overhaul. Clouds came over at 800ft so had to return fairly soon. Standing by again for night flying. Writing out orders for the new A flight.

*1450hrs, RE8 B3436, 2000ft, 25mins flight time, Capt Pillinger, Engine test after top overhaul [passenger American army doctor]*

[The following entry is from the back of Tom's 1917 diary: '2nd January, Fair. OC A Flight, but still coming on in C Flight until tomorrow. Up in afternoon with American doctor from CCS Capt. Cloud came over me at 800ft so I had to return fairly soon. Standing by with Cairns for night flying. Writing out orders for A Flight!']

**3rd January**, *Braf.* trying to get A Flight going. Bad start. Two (U) Registrations and Nye nearly kills himself on initial flight, got into two spins and crashed on landing. What shall I do with him? Two new machines B5071 and B5094 come for me from Cerny [sic]. Money and Whittaker up on Counter Battery Photos [2Lt Duncan Goff Money] [2Lt William Edwin Marchbank Whittaker]

*1145hrs, RE8 B3436, 4000ft, 2hrs flight time, Lt Mosby, attempt at registering 4.5 inch howitzers (W).*

[The following entry is from the back of Tom's 1917 diary: '3rd January, Trying to get A Flight going. Bad start Two U Registrations and Nye nearly kills himself on landings. Got into two spins and crashed lands. What shall I do about him? Two Machines from A Flight up on Counter Battery Photos']

**4th January**, Misty, otherwise fine. Up on Trench photos with Northam - V.S.- AA very active and accurate. Got several chunks through planes and centre section and one piece stuck in undercarriage! Mosby does a (S) Registration with Aust 4.5 Howitzer. Up again in afternoon reconnoitring Hayem and La Marlaque. Robbins not satisfied with reconnaissance report, doing it again with Baker tomorrow.

*1215hrs, RE8 B3436, 8000ft, 1hr 30mins flight time, Lt Gilliat, Photos, very successful, pretty badly shot about by AA.*

*1445hrs, RE8 B3436, 3500ft, 30mins flight time, Lt Gilliat, 3500ft, reconnaissance of Hayem and La Marlaque, for dumps.*

[The following entry is from the back of Tom's 1917 diary: '4th January, Misty. Up on trench photos with Northam. Mosby does S Registration with Aust 4.5 Howitzer. Up again in afternoon on Reconnaissance of Hayem and La Marlaque. Very badly Archied on photos, machine well riddled']

**5th January**, Fair, very little flying. Northam does three (S) Registrations. I tested 5074 the machine which gave Nye so much trouble. Sent Nye up, not too bad on the whole. Got a rotten cold, feeling quite seedy. Reading Public OP and Y Brython after dinner.

*1000hrs, RE8 B3436, 3200ft, 20mins flight time, Cpl Brand, testing rigging and engine, OK.*

[The following entry is from the back of Tom's 1917 diary: '5th January, Fair. Northam did three successful registrations. Money on Photos. Myself tested 5074 and then sent Nye up. Not too bad on the whole. Got a bad cold, feeling quite seedy. Reading Public Op Y Brython after dinner']

**6th January**, Fair. Took Baker up on practice Contact at 10am (S) up later with Baker doing Reconnaissance with camera

on Bas Pommereau, Hayem, La Marlaque and N21a. Nye and Gilliat taking photos of Armentiere, ran into ditch on landing. 25lb bomb exploded in C Flight hangar at 4.30pm Soloman and Wirth killed. Two others seriously wounded. One machine absolutely wiped out and three others of C Flight put out of action. I have to lend Cairns for tomorrow. Letter writing after dinner [2Lt John Wakerling Baker] [Air Mechanic 1st Class Harry Walter Paul and Air Mechanic 2nd Class Joseph Soloman killed in accidental bomb blast]

1020hrs, RE8 B3436, 1500ft, 30mins flight time, Lt Baker, practice contact patrol.

1210hrs, RE8 B3436, 4000ft, 1hr 15mins flight time, Lt Baker, Reconnaissance of Bas, Pomereau, Hayem, La Marlaque and N4A.

**7th January**, Misty. Up at 7.45 with Mosby doing Registration, started out quite successfully until mist and cloud came on at 600ft, had to send C.I. Robbins gives a lecture on reconnaissance at 11am. Northam and White doing a practice contact in afternoon. Went up with Mosby to try and finish Registration, but too dud. Flying wire cut by machine gun fire from ground at 3000ft, bullet entered fuselage, just by my foot!!! Cold getting worse.

0748hrs, RE8 B3436, 3500-1000ft, 1hr 35mins flight time, Lt Mosby, registering shoot until mist came over at 600ft, two bombs dropped.

1430hrs, RE8 B3436, 3500-2000ft, 50mins flight time, Lt Mosby, too dud for registration, two bombs dropped, flying wire cut by machine gun from ground.

**8th January**, Snowing hard all morning. Nothing doing in the flying line. Major Saul [CO of No.4 Squadron] returns midday from England. Arranging Contact scheme with South Wales Borders troops for tomorrow. Baker, Starley and Baxter in to dinner [2Lt Richard Douglas Starley] [2Lt Frank Baxter]

**9th January**, Very fine morning. Money up on Photos, Baker to go up on Reconnaissance with Cameron. WOUNDED on crossing lines, machine gun bullet from ground lodged just above my left ankle. Came back and landed alright, Straight to hospital. Bullet extracted in afternoon by Capt Pillinger (US) the officer I took up for a joy ride a few days ago. Higgs (USS) in same Casualty Clearing Station. Very stormy evening, rain and snow. Major Saul, Cairns, Money, Marsden, Baker, Pell, Mosby came to see me. Letter writing after dinner.

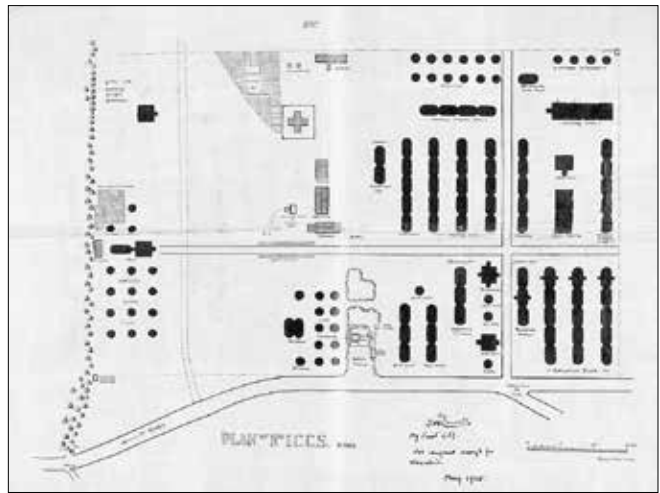
1045hrs, RE8 B3436, 5000ft, 1hr 45mins flight time, Lt Baker, S. Reconnaissance of Hayem and La Maismil with photos, wounded on crossing lines, machine gun bullet from ground lodged just above left ankle at 3500ft, got back to aerodrome and landed OK.

**10th January**, rather stormy, but dry. No.1 Casualty Clearing Station. Having a nice time quite time on bed, wound not dressed all day, but not troubles one all day. Tons of visitors arrive from the Squadron. Reading Red Wall and Masters of Men. Letter writing after dinner.

**11th January**, Dud all day. No.1 Casualty Clearing Station. Sister Caig does day duty with us, topping good sort. In bed all day again. Major Saul looks me up in the evening. Reading "Incomparable Bellairs" Letter writing after tea.

**12th January**, Fair. No.1 Casualty Clearing Station. Still in bed. Canada leaves us. Quite a number of the boys

Thomas Wier CEF at Chocques.



1 Casualty Clearing Station, where Owen was treated after being wounded on 9 January 1918.

come out to see me and bring the mail. Letter writing after tea and dinner.

**13th January**, Fine. No.1 Casualty Clearing Station. Sister Caig leaves us for D Hut, got lamentation amongst the officers!!! Got up after wound was dressed, after lunch. Several visitors come along from the Squadron. Outside the ward in afternoon watching a Sopwith Dolphin floating around, first I'd seen.

**14th January**, No.1 Casualty Clearing Station. Pretty squally and snow all morning. Got up at 7am. Reading most of the morning. Played Bridge in afternoon with a couple of Padres and a Manchester. Went over to C Flight in evening just to see them. Quite a good fire going in the ward after dinner. Reading.

**15th January**, very wet all day. No.1 Casualty Clearing Station. Still in C.C.S. not able to get out owing to the rain. Capt McClean (No.2 Squadron) and Lt Hood (Manchesters) leave us. Called in D Hut to see Airman Bainbridge and incidentally Sister Caig!! Trying to arrange to leave here tomorrow. Phoned up "Bits" at 10.30pm and then got tender across to see him. Given my leave warrant and then off to my billet through 18 inches of water to get to my kit. Back at C.C.S. 11.30pm. Got my leg dressed about midnight and then to bed.

**16th January**, frightfully stormy and wet. Boulogne - London. Up at 4am, left C.C.S. at 5.15 with Sister Cox, arrived Boulogne 9am after a very rough journey. Sailed at 11am, rough passage, London 4.30pm. Staying at Marble Arch Hotel. Called at 50 Charlwood St. Took Gwend Bryan out to dinner at the Rendezvous, Soho, Carys joined us later. Too late to go to a show, back to Charlwood St, chatting before fire. Both come with me to Victoria, met Ella Powell there. Marble Arch 11.30.

**17th January**, Wet London - Meifod. Up at 10.30. H.C.C.S.& S. at Piccadilly, called with Hawkes, Saville Row. Depart Paddington 2pm, arrive Welshpool 7pm. Dai there to meet me. Snowing all the way home, fully 6ft of snow on road. Had some difficulty in removing bandage at night.

**18th January**, Very wet. Indoors all day giving my leg a rest. Thawing hard and raining, expecting a flood, didn't come. Quite a lot of people called in to see me. Dr Lewis examined my foot and told me to keep it up. Reading Hocking's "Tommy and the Maid of Athens".

**19th January**, Fair. Indoors all day, no one called at all. Reading most of the time. Stephens "Science of Ethics" and "Tommy and the Maid of Athens".

**20th January**, Wet. Indoors again. Visitors all day long. Wynn in morning. Pearce Llanfair in evening. B and MR in later.

**21st January**, Very wet. Wound slowly getting better. Amusing myself with Emlyn all morning. Writing letters in afternoon. ABJ, Northam, Marsden, Cairns, Pillinger, JWB, LVWC (Leslie Vincent Woodhouse Clark, was Tom's Observer between June and November 1917). Read Michael O'Hallonan.



RE8 B786, marked as a/c 17, became Owen's regular machine from 15 February 1918 and is shown with his fitter, AM2 A. Wilke, and rigger, AM2 H. Richardson.

**22nd January**, Wet and Stormy. Rowlands, J.E.T. and the Vicar called in the morning. Writing in the afternoon. Everard called. Slight indigestion.

**23rd January**, very wet. Indoors again. Wound very painful while getting up. Will it be fit to return? Reading "Adventures of Terence O'Rourke". Robert W called in evening.

**24th January**, *Braf*. Out with Dai in afternoon in car, came back at 5pm. Bessie and Maggie in to supper.

**25th January**, Fair. Indoors all day. Letter writing and reading. Very few visitors. Arthur Angram called.

**26th January**, *Braf*. Dr called in afternoon. Hobbling about a bit more than usual. Wrote to Bill and Ed.

**27th January**, *Braf* (nice) Not in Chapel in morning, at Sunday School. Liverpool House to tea. Chapel in evening Pearce Llanfair preaching. Pearce and Job Watkin in to supper. Mrs W comes in later.

**28th January**, *Braf iawn*. Walked about rather too much, leg bleeding again. Didn't go to chapel. Huns bombing London.

**29th January**, *Braf*. Resting again, last night on leave. Called around one or two people during the day. Packing up after supper. Huns Bomb London again.

**30th January**, *Braf*. LONDON. Depart from Meifod 8.15am, arrive Paddington 2.45, called at Cox & Co and had a haircut. Off to Charlwood St at 6.30. Gwend, Carys and Miss Ella Powell come to Cha Chin Chow with me. Very good show. No air raid.

**31st January**, *Braf*. B.E.F. Depart Victoria 7.35. Gwend Bryan and Ella Powell see me off. Barker returning at same time. Arrive Boulogne 12.30, staying at Officers Club.

## FEBRUARY 1918

**1st February**, *Braf*. Depart Boulogne 7.30 with the civilian train! Arrive Bethune 2pm. Cairns on station about to leave for Home Establishment. I come back to find Douglas Officer Commanding A Flight! What's going to happen to me?

**2nd February**, *Braf ond niwlog* (nice but foggy). Report to CO in morning. He tells me to take over C Flight provisionally temporary. Went over to C.C.S. to get foot dresses, Pills and Sister Caig on leave. Letter writing after dinner.

**3rd February**, *Braf ond niwlog*. Not much work done all day. At C.C.S. getting foot dressed.

**4th February**, *Braf ond niwlog*. Up at Squadron all morning. Not much work done. B v C Flight up on Practice Formation in afternoon. Pictures in evening. Mosby goes on leave.

**5th February**, *Braf iawn*. Very busy all day. Daddy does first Shoot. Naylor crashed at 12.30, Griffiths on Photos. Marsden continues Daddy's Shoot. Robson, Mitchell, Barrington and Maitland in to dinner. Boston goes to infantry 9am [RE8 A4260 2Lt Wilson Naylor, pilot, Lt Cyril John Ivor Griffith, Obs, hit road and crashed on landing after returning from

Artillery Patrol]

**6th February**, Dud all morning, cleared later. Lecture by CO 9am. Up at Squadron all morning. Off to Batteries (Advance and Adjust) with Daddy Davis in afternoon. Got a good strafe from CO, Billy Marsden didn't do his Registrations! Strafe later: I didn't send for machine from Cerney [sic]!! I'm sent up to see him about after dinner

**7th February**, Wet and very cloudy. No flying all day. Round Squadron all morning. Daddy at Cerney [sic] but couldn't bring machine back. Griffith goes to Batteries for three days. Moll and Naylor visit Batteries. Rigger match 4 v 6th Manchesters, won 28 nil. Spectator for a change. At C.C.S. getting dressing changed. Four sisters from No.1 C.C.S. with Mitchell, Marsden, Smith and me at Cinema, we escorted them back in tender. Mitchell with us to dinner. Game of Auction after dinner.

**8th February**, Wet and low clouds, no flying all day. Getting through some framed book in the morning. Observers in Artillery room and C. Round sheds. Game of Auction with Daddy and Billy after lunch. Cleaning my room up in Billet after tea and writing letters.

**9th February**, Low clouds and a damp strong wind. No flying all morning. Off to Bruay in afternoon, final for Rigger Cup, 4 v 16, 4 won 10pts to nil. Capt Shephard MC and Lt Palmer both from the 38th Division playing for 4. Bed early.

**10th February**, Very gusty. At Squadron all day. Pilcher and Mitchell go on leave. At B Flight to tea. Pell Ilderton returns from leave but not fit to fly!!! No qualified observers now! Writing letters after dinner.

**11th February**, Very Gusty. CO goes out early and leaves me in charge of Squadron. My Captaincy comes through from 1st Wing. I washed out flying at 2pm owing to strong wind and low clouds. Rigger match in afternoon. Bits goes to C.C.S. and Pell takes one prv. tem. Fortunately, nothing comes in. Up to C.C.S. to see Bits. Pictures afterwards.

**12th February**, Wind less violent, but very low clouds. CO out again all day, in charge of Squadron. No work done, I sent up Patrols in afternoon but cloud at 700ft. They come down again. Went to see Bits again in evening, saw Pillinger too.

**13th February**, Wet, no flying at all. CO out again all day, in command of Squadron. Capt Glenly MC arrives, turned up with Fawcett. Off to see Bits after tea, brought Pillinger back, with us to dinner. Robson also in. Maitland and Baxter call after dinner.

**14th February**, Dud all day again. CO in for a change. Went into Bethune in afternoon. Round at C.C.S. in evening to see Bits.

To be concluded



Date and Hour.

Pilot.

Machine Type and No.

# LOG BOOK

Remarks.

Date and Hour.	Pilot.	Machine Type and No.	Class	Height.
14 5 18	Jelly	B2522	1-5	
15 5 18	"	B2522	2-20	
16 5 18	"	B2522	1-30	
17 5 18	"	B2522	1-15	
17 5 18	"	B2522	1-15	
18 5 18	"	B2522	1-15	

Two 2 seats seen  
 2 Holy Scouts shot down out of control.  
 No 2nd seen  
 2 1000 seats seen for over  
 forced landing, valves broken  
 2nd 500

## 54 Squadron Unit Markings

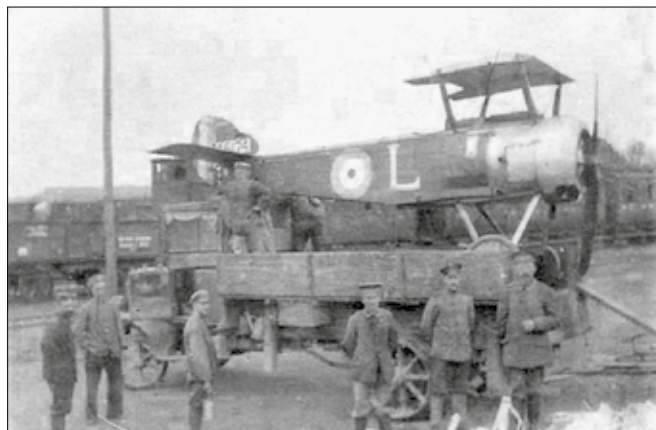
by Mick Davis

The idea for this feature came when a photograph turned up of Sopwith Camel F2169. The image shows the machine after it had been brought down during the 07.40 OP on 19 August 1918, with 2Lt A.C.R. Hawley made POW. The curious thing was the fact that the machine carried the letter N immediately aft of the national marking on the fuselage. 54 Squadron is not known to have used individual letters to identify its Camels, preferring instead to use numerals, initially 1-18 before unit establishment was increased to 24 machines. F2169 had not served with any other unit, being delivered to 54 Squadron from 5 AIS on 22 July 1918, and so the letter N was not a hangover from use by another squadron.

54 Squadron was the first RFC unit to use the Sopwith Pup operationally and by spring 1917 was using a combination of individual letters and numbers to identify its machines. Several also carried individual names marked on the centre section of the mainplanes.

Then, on 22 August 1917, a system of squadron markings was introduced for RFC squadrons with the BEF. 54 Squadron was allocated one of a white horizontal bar running 'along the top edge of sides of fuselage' - i.e. along the upper longeron. In practice, this was confined to the rear of the fuselage. White individual numbers, from 1 - 18 were marked ahead of the fuselage national markings; 1 - 6 for A Flight, 7 - 12 for B Flight and 13 - 18 for C Flight.

*Pups A648 and A6174 showing the early use of both letters and numbers for individual identification. A 6174 carried the name 'Canada' across its centre section.*  
 : CCI Archive



*Upper: Pup B7344 after capture on 13 October 1917 when 2Lt P.C. Norton was made POW. The 22 August unit marking is evident.*

*Centre: 13 October 1917 was a bad day for the unit with a further three Pups lost. One was B1800, shown here after being brought down near Zarren with its pilot, 2Lt F.W. Gibbes, KIA.*

*Lower: Camel B5423, lost on 19 January 1918 with 2Lt F.M. Ohrt POW, shows the continuation of the 22 August 1917 marking.*  
 : CCI Archive

The 22 August marking and use of individual numbers was continued from December 1917, when the squadron began re-equipment with the Sopwith Camel but on 23 December

a change of unit marking was authorised. This comprised a single white vertical bar, placed ahead of the fuselage national marking. Consequently, the individual numbers were moved to the rear fuselage behind the national marking.

It would appear that the new unit marking came into use during January 1918 and the range of unit numbers increased when the establishment was increased to 24 machines. Available photographs show the numerals ranging from 0 to at least 23. It may be that 0 was reserved for the CO's machine, or that the number 13 was avoided on grounds of superstition.

Squadron markings for BEF fighting squadrons were changed following an order dated 22 March 1918. 54 Squadron was allocated a white zig-zag, resembling an italicised letter N, to be placed behind the fuselage national marking. It shared this marking with an SE5a unit, 40 Squadron.

However, and for whatever reason, 54 Squadron continued to use the white vertical bar and available photographs show its use well into 1918.

Higher authority eventually caught up with them and a 9th Brigade order, dated 29 June 1918, instructed the unit to change its marking to that ordered on 22 March – 'N behind the national marking'. Typewriters don't do italics and it would

appear that 54 Squadron took the 9th Brigade order to face value. Photographs, albeit dating from the war's end, show the application of a letter N aft of the fuselage national marking – just as on F2169. The individual numbers were then moved forward of the national marking.

*This set of four photographs show what must have been a misinterpretation of the zig-zag marking. F2169 was lost on 19 August and suggests that the 9th Brigade order of 29 June was implemented shortly after it was received. The other three Camels, C3380, F6326 and H808, were all received as new machines by 54 Sqn. The white bars aft of the N on C3380 and F6326 were the boxes for fuselage serials on these Boulton Paul machines.* :CCI Archive

**Examples of the squadron marking authorised on 23 December 1917.**  
**Top:** Camel B5417, lost on Wireless Interruption on 9 February 1917 with 2Lt G.A.C. Manley POW. :CCI Archive  
**Centre:** C6720, lost on 18 March 1918 with Capt F.L. Luxmore POW.  
**Lower:** B4612, lost on 28 June 1918, the day before 9th Brigade ordered to unit to apply the marking authorised on 22 March. :CCI Archive



# MODELLING

## New Releases and Kit Reviews

compiled by Joe Moran

### New to the Market

**In 1:144 scale:** Valom has released a series of WW1 two-seater aircraft including the Airco DH 9; Albatros C.VII; Breguet 14A2 and the LVG C.VI. Each box contains two kits with a choice of four different decals. These value for money kits cost £20.80 per box.

**In 1:72 scale:** MAC has released the Spad VII with French and Italian decals, costing £15.80. Kits World has released five sets of 3D-printed seat belts. Sets include: Albatros D.II to D.Va; German two-seater aircraft; Fokker Dr.I Triplane; Fokker D.VII and finally a set for the RFC, RNAS and the RAF. Each set costs £5.90. FCM has released a set of German upper and lower Lozenge decals priced at £15.20

**In 1:48 Scale:** Fly has released a Macchi M5 Flying Boat costing £24.40. Eduard has released Profipack Editions of the Sopwith Camel 'Comic version' and the Albatros D.V priced at £21.20 and £23.40 respectively. Copper State has released the Sopwith 5F.I Dolphin costing £35.50. FCM has released a set of German upper and lower Lozenge decals priced at £15.20. Aviattic has released a large number of new decal sheets specifically for the Fokker Triplane in this scale also repeated in 1:24 scale. These are priced between £14.40 up to £29.70 per sheet.

**In 1:32 Scale:** Lukgraph has released their Royal Aircraft Factory Be2C and the Lloyd C.V priced at £149.25 each. They have also released 'Premium' versions of both kits priced at £189.30 each. Special hobby has released their kit of the Morane Saulnier costing £35.60. FCM has released a set of German upper and lower Lozenge decals priced at £19.90.

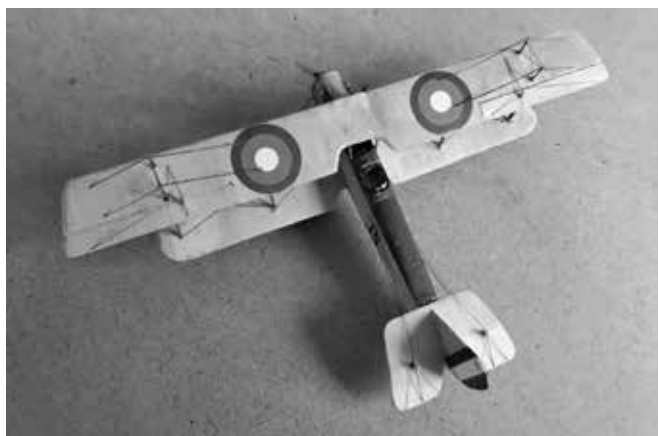
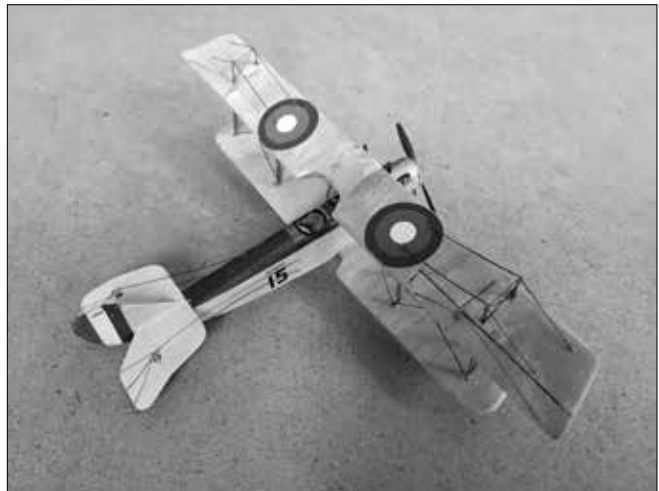
Again I would urge you to visit the Aviattic web site ([www.aviattic.co.uk](http://www.aviattic.co.uk)) as it's well worth a look.

### Build Reviews

In this issue Bob takes on the Pegasus release of the Curtiss 'Jenny'. This was a short-run injection moulded kit from the early 1980s and he did a great job on a very basic kit. My contribution to this issue is the Martinsyde Buzzard. If WW1 had continued into 1919, this would have been one of the main fighter aircraft of the RAF. Instead with the large numbers of Sopwith Snipes available very few served with the RAF. It was left to other countries air forces to show what might have been. The air forces of Finland; Russia; Spain; Portugal; Latvia and the Irish Free State all used the 'Buzzard' in various numbers. The Irish Free State purchased four of these aircraft directly from the Aircraft Disposal Company and were supplied in standard RAF colours.

### Pegasus Curtiss JN-4D 'Jenny' 1:72 scale Modelled by Bob Gladding

For such a significant US aircraft in terms of its WW1 training role and subsequent civil flying activity, it is strange how few model kits in 1/72nd scale have been issued. Perhaps this reflects on modellers' preference for combat aircraft. However, it is still possible to get the Pegasus version – Kingkits having a few kits at the time of writing – but the more recent model by Ukrainian maker Olimp is hard to find in Europe. Both feature the early version with its distinctive forward leaning vertical exhaust stacks – curiously missing from surviving aircraft in museums and private hands.



The kit needs the addition of a cockpit floor to accept the two seats. The neat diecast engine requires its four location holes for the two banks of cylinders to be drilled out further for a proper fit. Undercarriage legs were cut from 20 thou card and cut down cocktail sticks used for wing and inter-cabane spars. Otherwise, a straightforward build, although the four upper-wing king posts and their rigging need care to capture their essential character. Rigging was painted, heat-stretched sprue. Decals are provided for an Army JN-4D at Love Field, Fort Worth, Dallas, in 1918.

Designed for Curtis by a British engineer, Benjamin Douglas Thomas, who had worked for Avro and Sopwith, some nearly 7,000 Jennys were built in New York and Toronto. Their impact on North American aviation in the twenties was immense as



huge numbers of war surplus aircraft were sold off at bargain prices. So perhaps building a barnstorming version with a wing walker would be a light hearted option. One is reportedly just released in 1/48th scale by US producer Glencoe Models.

**AZ 1:72 scale Martinsyde Buzzard  
Modelled by Joe Moran**

The kit is a little soft on detail and looks more like a short-run injection kit with the sprue gates that are thick and a lot of refining required. The engine is rather basic and even though not a lot of it will be seen I decided to replace it with an Aeroclub metal engine. The radiator was both under scale and the detail was very soft, so I scratch built a new one and refined the filler cap from the old one and used it. The propeller was poor, and I replaced this with a metal one from the spares box.

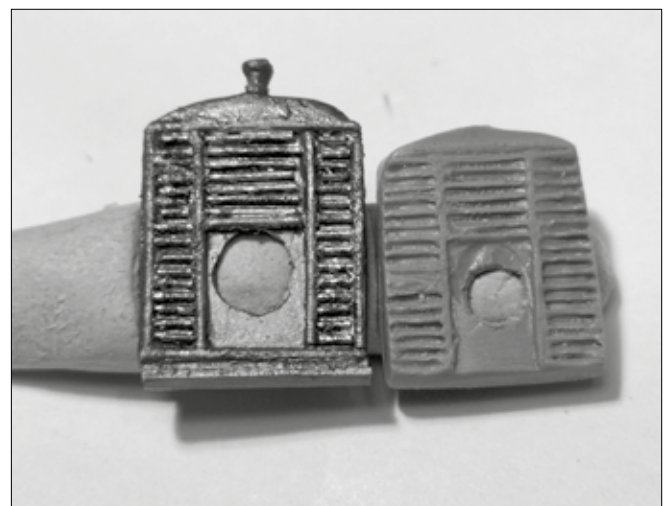
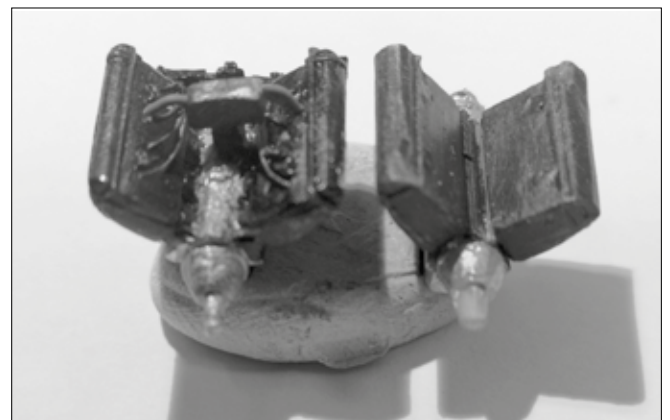
The cockpit is reasonably well fitted out with a floor, instrument panel, rudder pedals and a joystick. These were painted mainly in various shapes of wood. I drilled out the gun troughs and used the supplied Vickers guns. I cut them to size and used both ends of the guns with the barrels protruding from the front and the butt ends showing in the cockpit. The supplied pilot's seat was OK, so I just added seat belts from Tamiya tape. I had to refine the main struts and as the cabane and tail struts were over-scale, I replaced these. The undercarriage struts were a little bit short in width, so these were modified slightly until they fitted correctly.

The main wings were sprayed underneath with natural linen and the upper surfaces were sprayed with PC10. The Irish tricolour markings of green, white and orange were sprayed on the upper and lower sides of the wings and the tail. The engine was painted in various colours including black, silver, gunmetal and copper. Exhausts were painted a rusty brown and the surround of the radiator was painted in dark copper. All struts including the undercarriage were painted in a light brown and then given a coat of clear orange varnish. The propeller was painted with two different shades of brown and also given a coat of clear orange varnish. The aircraft had been given the name of 'The Humming Bird' and thanks to Joe Maxwell Decals I was able to add this to both sides of the fuselage.

For the next issue I know that Bob is working on

resin Albatros C.X11 and a Formaplane Halberstadt CL.11. I'm not sure exactly which one he will have ready. I have an Austro Hungarian PZK-2 WW1 helicopter almost finished, just some rigging to do and I'd like to make up a nice base for it. After that possibly a DH4 in Afghan markings.

For those of you with any questions my email address is josephmoran1@gmail.com. Please don't hesitate to contact me as I will be very happy to reply to all questions.



# BOOKSHELF

Book reviews edited by Paul R. Hare



## ZEPPELIN INFERNO – THE FORGOTTEN BLITZ 1916

Ian Castle

Pen & Sword Books Ltd, 47 Church Street, Barnsley, S70 2AS  
382 (150 x 235mm) pages, Hardback, Illustrated  
ISBN:1399093924

Cover price £25.00 (\$42.95)



There may already have been detailed accounts written about the airship raids upon England during 1916 but, if so, I am unfamiliar with them and so found this book of great interest, especially as the defending aeroplanes were mostly BE2cs, and my interest in that particular aeroplane is well known.

Every mission is described individually, with the identity of the raider, the course it flew, and details of any damage caused.

The book includes a bibliography, and extensive endnotes, plus maps of bases, air raid warning districts, and the locations where airships were eventually destroyed as well as a selection of Indices (General, Places, Airfield, and AA Gun Positions). Appendices give details of the airship numbering system; Airship and aeroplane raids, and individuals killed in the raids

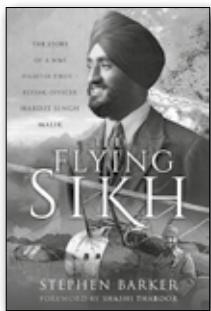
The photographs depict various airships, bomb damage caused, Zeppelin commanders, and the pilots of defending aeroplanes. However, the only picture of a BE2c, the principal aeroplane employed in defence against the raiders was that of the example preserved in the IWM and I should have thought that a view of a machine more closely involved in the action might have been more appropriate. That said, I found the book interesting, informative, and well written and although the information given about the raid here on Cleethorpes added nothing to the results of my own researches, it was reassuring to have those details confirmed.

## THE FLYING SIKH - THE STORY OF A WW1 FIGHTER PILOT

Stephen Barker (foreword by Shashi Tharoor)

Pen & Sword Books Ltd., 47 Church Street, Barnsley, S70 2AS  
226 (150 x 235mm) pages, Hardback, Illustrated  
ISBN:1399093924

Cover price £25.00 (\$49.95)



Little is written about Malik's childhood until, at the age of 14, he sailed, alone, to England to attend Eastbourne College where he was able to indulge in his love of Cricket, later playing for Sussex County. When war broke out Malik, who was then a student at Balliol College, Oxford attempted to join the RFC but was not accepted and instead became an Ambulance driver with the French Red Cross. However, a letter from his college tutor to Sir David Henderson led to another interview by the RFC, and his subsequent acceptance for pilot training.

The author appears to assume that the reader will know nothing about Great War aviation and so patiently explains that the control stick controlled the aeroplanes movement both fore & aft and laterally, and that the twin synchronised machine guns "could not be swivelled" making it necessary to fly the whole aeroplane towards the target in order to take aim.

The book describes his training at Aldershot, Reading and Yatesbury, and his eventual assignment to 28 squadron, flying Sopwith camels on the western front with Malik scoring two combat victories before being shot down, fortunately landing on the allied side of the lines.

His service career met with prejudice and a disinclination to place an Indian in a position where he might have command over a British Officer without which he might have been promoted further than he was.

Malik went on to have a distinguished career in the Indian Civil Service, but the book ends with his demobilisation in 1921.

Three lengthy appendices give verbatim accounts of Malik's interviews for employment with the Civil Service, for a permanent commission, and for entry to Sandhurst and are followed by a Glossary, a short bibliography, and an index. I found the author's narrative style just a little laboured in places, but Camel enthusiasts will no doubt find reading the book well worth the effort.

## FOKKER AIRCRAFT OF WW1 – VOLUME 6 – FOREIGN SERVICE

Jack Herris

Aeronaut Books ([www.aeronautbooks.com](http://www.aeronautbooks.com)) Charleston, South Carolina, USA

148 (215 x 280mm) pages; softback; Illustrated  
ISBN: 9781953201102

Available from the publisher (US customers) or from Amazon, price £33.20



As collectors of this series will realise, Volume 5 has yet to appear. It is still in preparation as it turned out to be a bigger task than expected is now due out in the autumn and so the publisher has jumped ahead to volume 6, which covers a whole host of different models in service with foreign forces.

This new book follows a similar format to the earlier volumes, with 219 photographs and 23 colour profiles by Bob Pearson,

together with modern CAD drawings of Fokker's factory at Schwerin and three view drawings of the BI and DII models. As previously, data tables are provided for each type covered and production is well up to Aeronaut's usual standards.

Each of the many individual sections begins with a fairly brief narrative, the bulk of the information being transmitted by means of extensively captioned photographs all of which are reproduced at a decent size and are every bit as crisp and clear as the originals would allow.

This volume is every bit as informative as the earlier ones and I look forward to the rest of the series.

## THE MAN WHO TOOK THE RAP; SIR ROBERT BROOKE-POPHAM AND THE FALL OF SINGAPORE

Peter Dye

Naval Institute Press, 291 Wood Road, Annapolis, MD21402, USA  
412 (150 x 235mm) pages; hardback, Illustrated.

ISBN:9781682473580

Available from The Society (price £37.50) or from Amazon



As the officer in command of Britain's forces in the far east, Brooke-Popham is often blamed for the surrender of Singapore, and the subsequent loss of the Empire, but as this book shows, that decision was forced upon him at the end of an otherwise distinguished career.

Brooke-Popham was a Sandhurst trained career soldier who served on India's North-West frontier before becoming interested in aviation. Learning to fly and becoming attached to the Air Battalion. He was the first commander of 3 Squadron RFC and wrote a number of influential papers predicting the use of aircraft in war. At the outbreak of the

Great war, his staff college training made him ideal for developing the RFC's logistics and he spent most of the war years as Deputy Assistant Adjutant and as Quartermaster General.

Post war he created the RAF Staff College, served as Colonial Governor in Kenya and, at the outbreak of WW2, organised flying training schemes in both Canada and South Africa before becoming CinC Far East.

Based, in part, on the subject's own papers and written with the assistance of the Broke-Popham family, this scholarly but very readable book is complete with almost 90 pages of source notes, a 25-page bibliography and a comprehensive index.

Although published in 2018 this book has not been previously reviewed in this journal, possible because only 47 of its 275 pages of narrative deal with the period up to and including the Great War. But do not let this put you off reading it, it is a fascinating account of a man who did much to make RAF what it quickly became and gives a clear picture of why Sir Robert Brooke-Popham should be better remembered more favourably.

I am sure that you will find it as informative as I did.

### FROMELLES 1916 – NO FINER COURAGE – THE LOSS OF AN ENGLISH VILLAGE

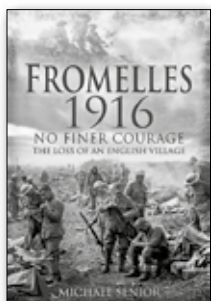
Michael Senior

Pen & Sword Books Ltd., 47 Church Street, Barnsley, S70 2AS

239 (150 x 235mm) pages, Hardback, Illustrated

ISBN: 9781848845374

Cover price £19.99



I make no apology for reviewing a book with no aviation content; I found it fascinating and, if you have any interest in the way in which the Great War affected the lives of the general population, so will you. The book, which was first published in 2004 with the title 'No Finer Courage' but has now been extended and revised, deals with the parish of Lee in Buckinghamshire, a community of some 700 or so people, the majority of the property being owned by Sir Arthur Liberty, owner of the famous London store, who moved there in 1890 and became lord of the Manor.

At the outbreak of war many of the men of the parish joined up, mostly in local regiments and thirty of them lost their lives, many in the attack on Fromelles in July 1916 which prevented the Germans bringing more troops south to the Battle on the Somme. The narrative not only describes the training and service of the volunteers from the parish and describes the attack on Fromelles in some detail, but places it in the bigger picture of the war as a whole.

The book is well written, illustrated throughout and, in a number of appendices, gives brief biographies of the thirty men whose names are listed on the Village's war memorial and details of a tour of the Fromelles battlefield. There are also extensive source notes, a select bibliography, a couple of maps, and an index.

### MEMOIRS OF GERMAN PILOTS IN THE FIRST WORLD WAR – VOLUME 2 – ROSENSTEIN – BOHME – SCHAEFER

Translated and introduced by Jason Crouthamel

Aeronaut Books ([www.aeronautbooks.com](http://www.aeronautbooks.com)) Charleston, South Carolina, USA

126 (215 x 280mm) pages; softback; Illustrated

ISBN: 9781935881508

Available from the publisher (US customers) or from Amazon, price £25.36



This book follows a similar format to the first volume in the series (reviewed in Journal 53/2) with the narrative based on the subject's own writings. Thus, the section covering Willy Rosenstein is based on his own autobiographical notes, that on Erwin Bohme being based on letters that he wrote to his girlfriend, and that on Karl-Emil Schaefer drawing on both letters home and his own diary entries.

Both Bohme and Schaefer were killed during the war but Rosenstein, who flew as Goering's wingman in 1917, survived only to suffer persecution for his faith in Nazi Germany before escaping to south Africa where he became a flying instructor.

The book, which is well up to Aeronaut's usual standard, has 51

photographs (in several of which Richthofen makes his almost inevitable appearance) and 8 colour profiles, and with copious endnotes listing the sources quoted at the conclusion of each section. The translation from the original German language is very well done and has resulted in a very readable account of the lives, thoughts, and feelings of these three fighter pilots.

### OVER THE FRONT – VOL. 37 NUMBER 1, SPRING 2022

#### THE QUARTERLY JOURNAL OF THE LEAGUE OF WORLD WAR ONE AVIATION HISTORIANS

96 (215 x 278mm) pages

See advert inside front cover



This issue of the journal of our sister (or should that be 'mother') organisation contains seven main articles.

Firstly, a very detailed description, by Colin Owers, of the design, development, and service career of the Norman Thompson N.T.2b flying boat including three view and sketch drawings. There follows an account, by David Mechin, of the effects of the Spanish Flu outbreak on the French Air

Service.

Next comes the story of the final hours of American Pilot Norman Prince followed by details of a 1982 interview with one of the last survivors of Richthofen's squadron, Hans-Georg Von Der Osten during which the lady interviewer was treated to coffee and cake. This made me slightly envious as although, during the 1970s and 80s I conducted many similar interviews, of English aircrew, myself I was never treated to anything more than a cup of tea!

The following pieces are a 1914 letter from Henry C. Mustin giving a personal view of French Aviation as it appeared at the time, a very well-illustrated description of a modern replica Fokker Drl including a double page spread photograph of it in flight, and the Story of two men's search for the burial site of the crew of an American DH-4 during which some very interesting artifacts were uncovered.

In addition, there is the usual news, and several pages of book reviews, although I do have one tiny nit-pick; the list of contents includes several page numbers far higher than actually contained in this volume. All in all, I greatly enjoyed reading it, finding it both very similar, and yet at the same time very different to our own journal; Different in the typeface used and the content included, which has an obvious bias towards American and German topics, similar in that it was carefully researched, well written, very nicely produced and a credit to the organisation behind it.

### MEDAL OF HONOR – VOLUME 1 – AVIATORS OF WW1

Alan Durkota

Aeronaut Books ([www.aeronautbooks.com](http://www.aeronautbooks.com)) Charleston, South Carolina, USA

148pp, 215x280mm, softback, illustrated

ISBN 9781953201195, Available from the publisher (for US customers) or from Amazon, at £24.74

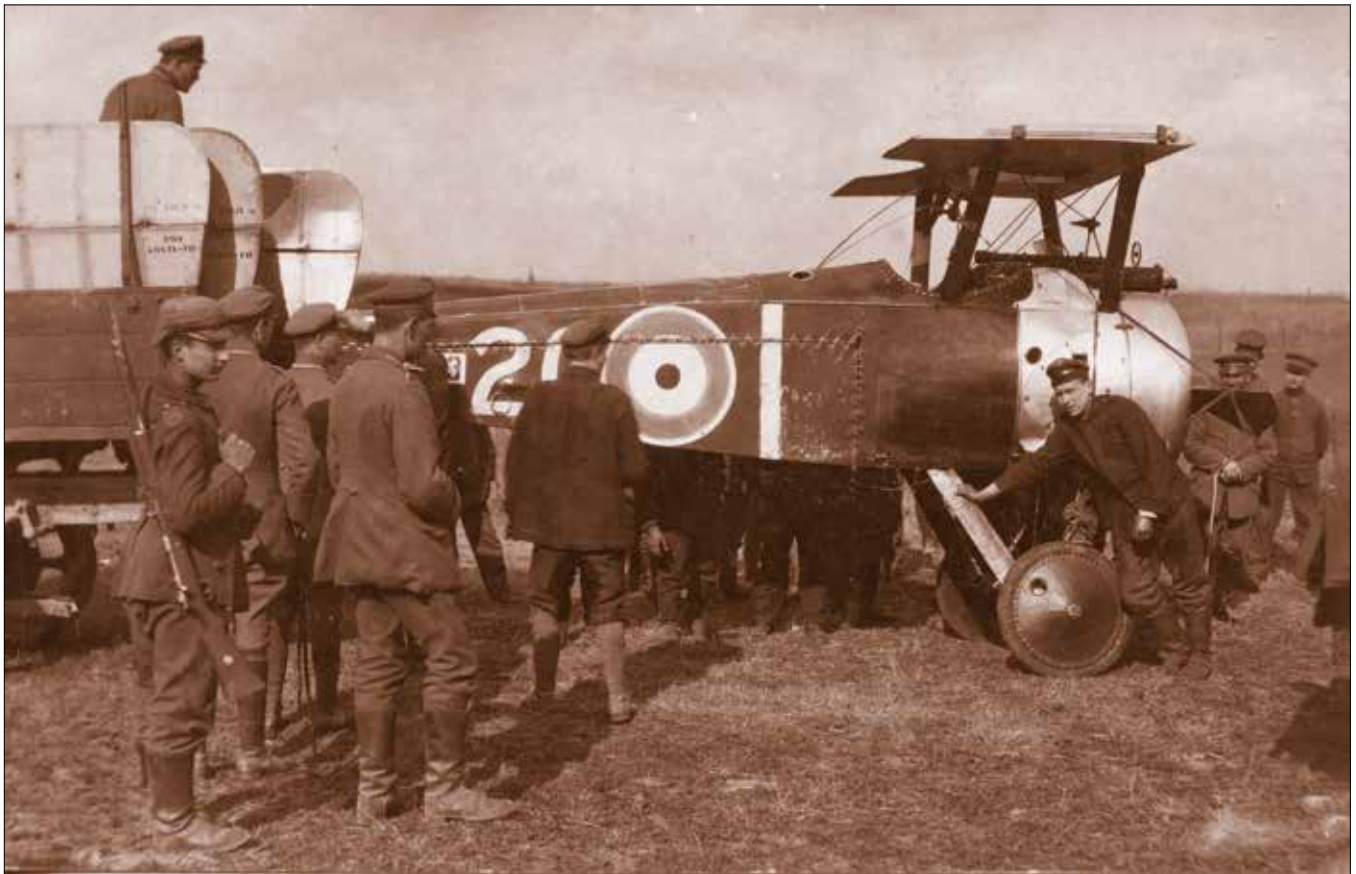


This volume covers the eight individuals awarded the Medal of Honor for acts of bravery during the period of the First World War and follows the typical Aeronaut format. The book begins with a brief history of the medal itself and explains how it came to be awarded not just for acts of courage under fire but also for lifetime achievements and for contributions to exploration, thus eight people covered in this volume two were given the award for saving the lives of

others at considerable risk to their own, four for bombing operations and two, Frank Luke and Eddie Rickenbacker, for aerial combat, the latter having to wait until 1930 to receive his medal.

The book is heavily illustrated with period photographs and is completed by full details of the colours and markings of the various aeroplanes flown by the medal's recipients, copious endnotes detailing sources, and a brief index.

Members in the USA may already be more familiar with the subject matter than I was, but the book certainly filled a few gaps in my own knowledge both of the history of the medal and of the men to whom it was awarded.



*This pair of images relate to the Logbook feature on 54 Squadron's markings and show two more of the unit's losses in the period that its Camels carried the unit marking authorised on 22 December 1917.*

*Above: B5243 was delivered 54 Sqn from 1 AIS on 1.2.1918 and given the unit number 20. It saw combat success two days later, in the hands of Capt H.H. Maddocks but was lost in action on 18.3.1918 when 2Lt W.G. Ivamy was made POW after being brought down by Ritt M. Fr v Richthofen.*

*Below: C1657 was delivered to the BEF in a packing case and issued to 54 Sqn from 2 ASD on 11.3.1918. Marked as a/c 23, it lasted only 11 days, being brought down with 2Lt E.A. Richardson WIA.*



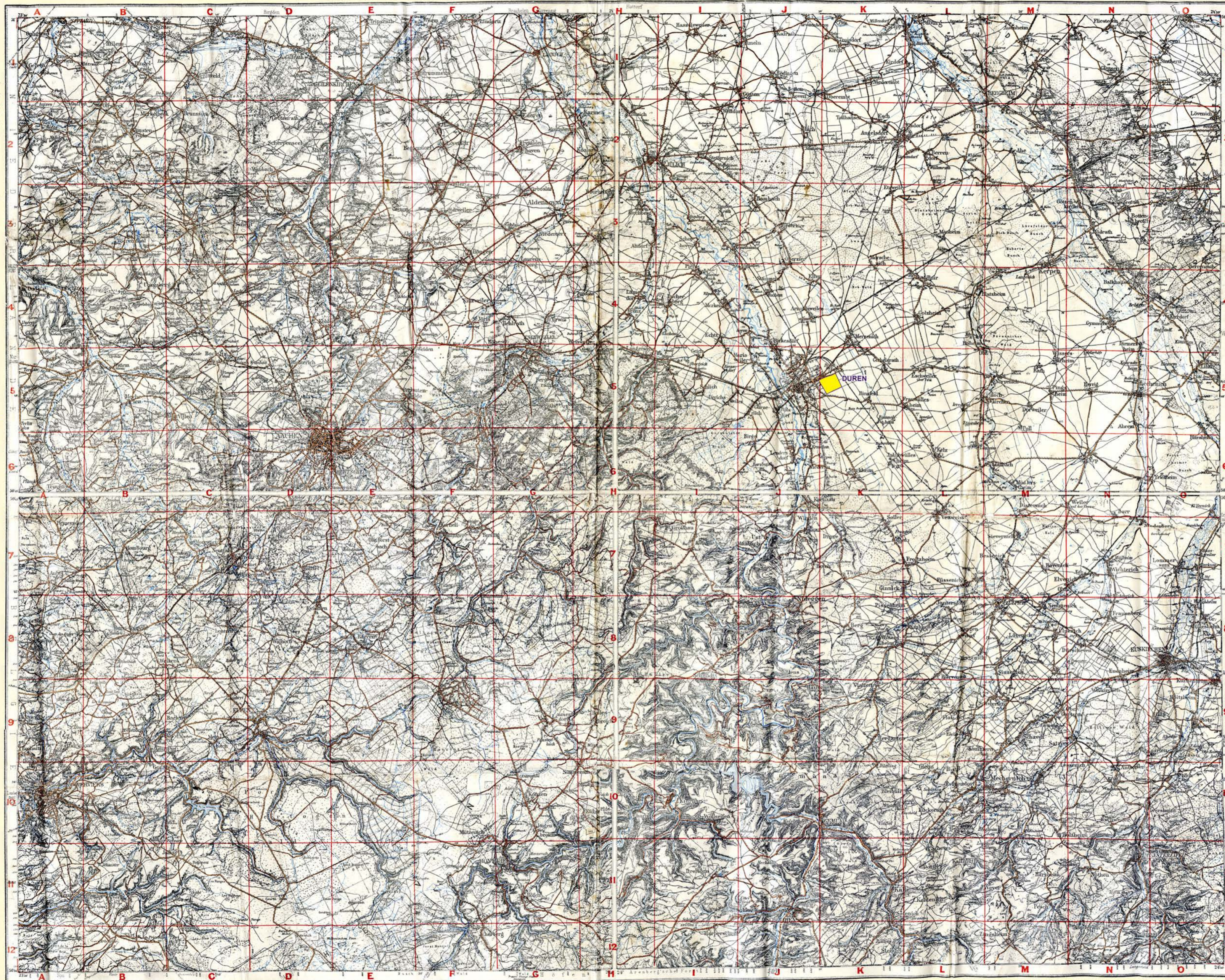
## SPAD S.VIIS USED BY DIEUDONNE COSTES IN MACEDONIA



*S1083 flown by him in Escadrille N391 and fitted with a Lewis gun on each lower mainplane, in addition to its existing fuselage-mounted Vickers gun.*



*S1096 flown by Costes in Escadrille 507 (formerly N391) from June 1917 and which he crashed on 29 August after the fabric had stripped from its upper mainplane.*



RAILWAYS AND ROADS

- Railway
- Tramway
- Main Road
- 2nd Class Road (metallic)
- 3rd Class Road (metallic)
- By-road (not metallic)
- Farm Road
- Foot-path
- Mountain Bridle-path
- Banks and Dikes

BOUNDARIES

- International Frontier
- Provincial Boundary
- District

ELEVATION

- Wood
- Copse
- Orchard
- Heath
- Dry meadow
- Water meadow
- Fen Moor, Moss
- Vineyard
- Hopfield

WATER

- Ford
- Ditch
- Canal
- Ferries
- Pontoon Bridge
- Stone or Iron Railway Bridge
- Water

ABBREVIATIONS

- Suspension Bridge
- Girder Bridge
- Swing Bridge
- Castle
- Factory
- Brick Kiln
- Powder Magazine

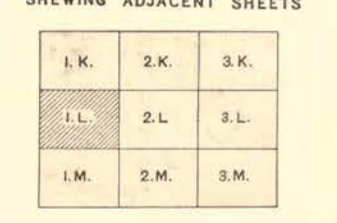
CONVENTIONAL SIGNS

- Church
- Chapel
- Windmill
- Watermill
- Foundry
- Watch-tower
- Ruin
- Old Redoubt
- Substantial Wall
- Enclosure with Hedge
- Mine
- Quarry
- Large excavation, Clay Pit or Sand Pit
- Lime Kiln

TYPE

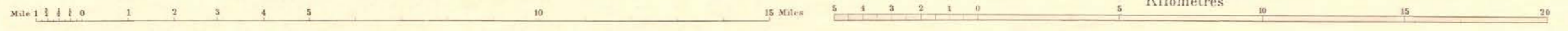
- Berlin Capital of State
- Königsberg Provincial Town
- Ellwangen District
- Laurenzberg County
- Taunus Mountains

DIAGRAM



G. S. G. S. N° 2739

Scale 1:100,000  
1 Inch = 1.58 Miles



Supplement to THE GAZETTEER OF FLYING SITES IN  
FRANCE, BELGIUM AND GERMANY, 1914-1920

by Peter Dye, Roger Austin, Mick Davis

Sheet 21 - Ordnance Survey, Germany Sheet 1L



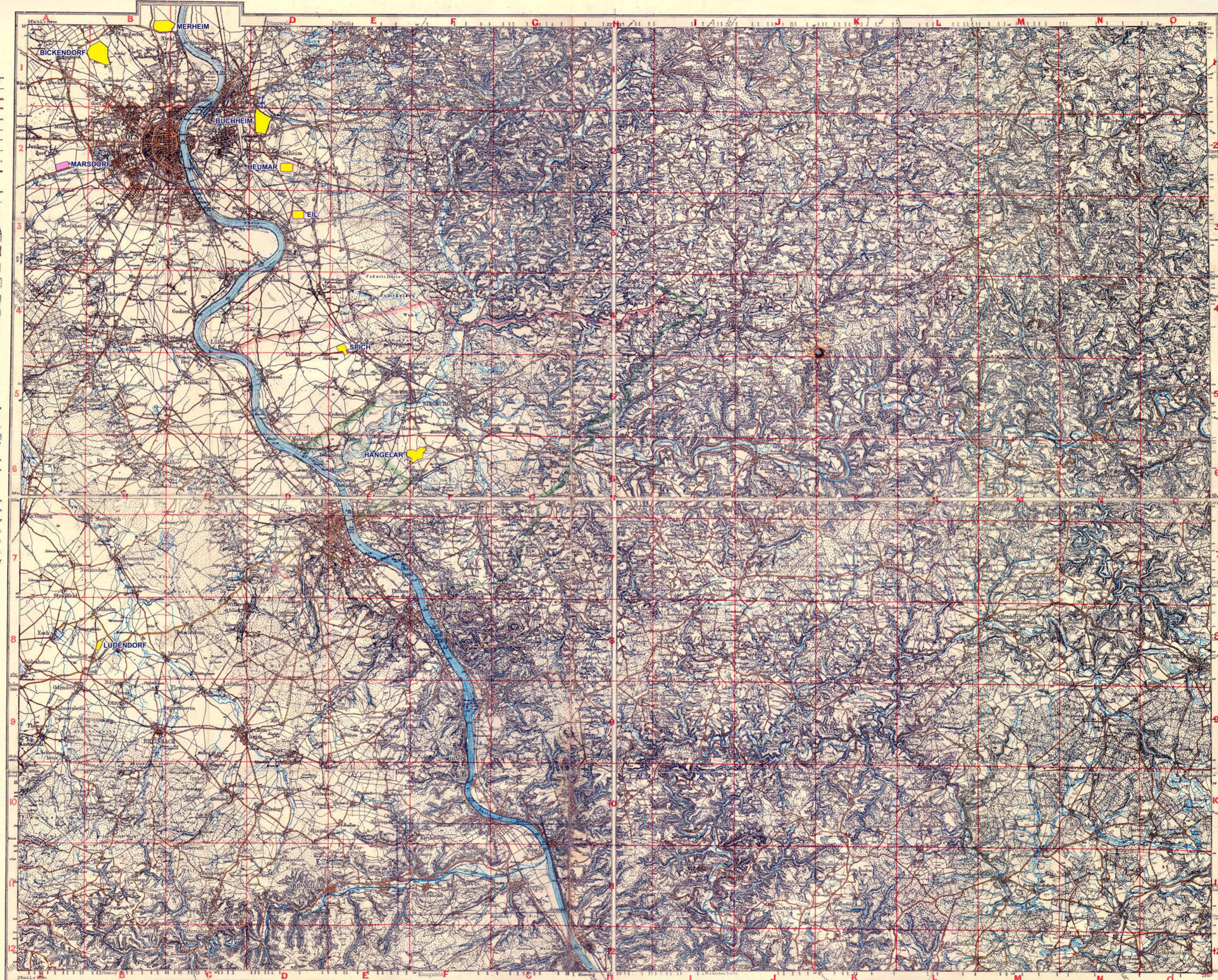
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- HQ Sites
- RNAS/RFC/RAF sites
- Aerodromes allocated but not used

Flying sites labelled in regular font  
Support sites (non-flying) labelled in italic font

Rounded rectangles indicate sites whose boundaries have yet to be established

The maps of the Rhineland under the Army of Occupation were produced by the Ordnance Survey but appear to be copies of pre-war German maps, which did not use contour lines. Instead, slopes were shown by hatching and this results in the maps having a black appearance.



**RAILWAYS AND ROADS**

Railway  
 Tramway  
 Main Road  
 2<sup>nd</sup> Class Road (metalled)  
 3<sup>rd</sup> Class Road (metalled)  
 4<sup>th</sup> Class Road (metalled)  
 By-road (not metalled)  
 Farm Road  
 Foot-path  
 Mountain Bridle path  
 Banks and Dikes

**BOUNDARIES**

International Frontier  
 Provincial Boundary  
 District

**CULTIVATION**

Wood  
 Copse  
 Orchard  
 Heath  
 Dry meadow  
 Water meadow  
 Fen, Moor, Mass  
 Vineyard  
 Hopfield

**WATER**

Ford  
 Ditch  
 Canal  
 Ferries  
 Pontoon Bridge  
 Stone or Iron Railway-gauge  
 Wharf

**ABBREVIATIONS**

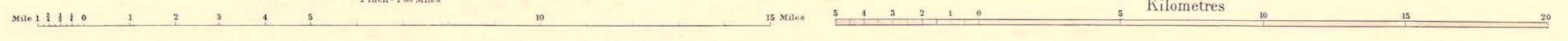
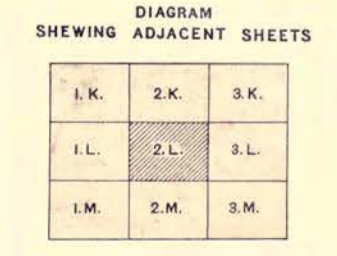
Suspension Bridge  
 Girder Bridge  
 Swing Bridge  
 Castle  
 Factory  
 Brick Kiln  
 Powder Magazine

**CONVENTIONAL SIGNS**

Church  
 Chapel  
 Windmill  
 Watermill  
 Foundry  
 Watch-tower  
 Ruin  
 Old Redoubt  
 Substantial Wall  
 Enclosure with Hedge  
 Mine  
 Quarry  
 Large excavation, Clay Pit or Sand Pit  
 Lime Kiln

**TYPE**

Capital of State: BERLIN  
 Provincial Town: KÖNIGSBERG  
 District: ELLWANGEN  
 County: LAUBUNGEN  
 Mountains: TAUNUS



**Supplement to THE GAZETTEER OF FLYING SITES IN FRANCE, BELGIUM AND GERMANY, 1914-1920**

by Peter Dye, Roger Austin, Mick Davis



Sheet 22 - Ordnance Survey, Germany Sheet 2 L

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