CAVALRY OF THE CLOUDS

Aspects of the Air War in the Eastern Theatre, 1914-1918

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PREFACE

In 1914 and 1915 British authorities in Egypt looked to a motley collection of land and seaplanes, spared from service in Europe, to provide early warning of any potential threat to the Suez Canal. Historians owe a debt to Captain L. Weldon, whose memoirs give an all to rare glimpse of this early phase of military aviation.\(^1\) The *Aenne Rickmers* and *Rabenfels* seaplane carriers were of German extraction, run by the Ports and Lights Administration of the Egyptian Government, overseen by the British Navy, the French Navy, and the British Army, and crewed by a mix of British naval ratings and seaplane observers, Syrian boatmen, and French pilots and mechanics! The contribution of the Nieuport VI seaplanes - types hardly out of the experimental stage - was limited to an occasional useful reconnaissance off the Syrian/Palestine coast.

In spite of this inauspicious beginning, seaplanes were entrusted with a key role in perhaps the most insightful strategic initiative of the four-year conflict - the Dardanelles naval venture. The naval phase inspired a tremendous historiography, and focus from an air perspective centred on the inability of British seaplanes to spot for ships' guns on to Turkish shore batteries. The predominant view, that the failure was due to the unreliability of the seaplanes, was challenged in a 1974 paper written by naval historian Arthur J. Marder.\(^2\) He argued that the failure was less a matter of their unreliability, than their inefficient use by naval authorities. Richard Layman, writing in 1994, largely rejected Marder's interpretation and re-emphasised the seaplanes' mechanical limitations.\(^3\) My research, based in part on a detailed Admiralty report dated August


1915, supports Layman’s analysis. I found that a staggering 48% of seaplane flights undertaken in the crucial month of March 1915 failed because of engine troubles.

I endeavour to show that the landplanes of No.3 Squadron, RNAS, were scarcely any more successful in helping the Allied troops to gain a foothold on Gallipoli Peninsula. The landplanes were warmly received - no surprise given the limitations of the seaplanes - and quickly demonstrated their worth for reconnaissance and in map-making duties. Contemporary accounts, however, lament the aircrafts' lack of success in fire-control duties especially. Charles Samson, Commanding Officer of 3 Squadron, found his decrepit machines were lacking in both performance and number in order to seriously disrupt the enemy's communications in an interdiction capacity.

In May 1916, Samson assumed command of the East Indies and Egypt Seaplane Squadron (EI and ESS), comprising the Ben-my-Chree, Anne and Raven II seaplane carriers, and up to ten Short and Sopwith seaplanes. Samson, ever-aggressive in outlook, pushed for a wider offensive role, and specifically offensive operations along the enemy's lines of communications. He was supported in this call by Captain J. Wedgwood-Benn, an observer, who criticised the authorities' lack of foresight and investment in the squadron. Wedgwood-Benn argued that a stranglehold may have been applied to the Turkish communications had the EI and ESS been given a definite place in the activities of the Egyptian Expeditionary Force (EEF). In response, I have suggested that Allied commanders throughout 1915 and 1916 had as their primary objective not the attainment of territory by a northwards advance, but the defence of the Suez Canal. The strategy necessitated that resources remain in the hands of the EEF, as

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4 'Reports from HMS Ark Royal', Dardanelles Operations, February-May 1915; August 1915 (Microfilm, Australian Joint Copying Project; Air Ministry/Air Historical Branch: National Library of Australia, Canberra, PRO 6882, Piece 2099, File 207/20/7).


6 J. Wedgwood-Benn, In the Side Shows (Hodder and Stoughton, London, 1919).
opposed to a heterogeneous collection of experimental seaplanes for their bold offensive designs.

Historians concur that the Mesopotamian campaign suffered throughout 1914 and 1915 from an alarming misunderstanding of military objectives, and associated administrative chaos. The War Office agreed that strategic considerations of the Indian Expeditionary Force's (IEF) involvement in the Persian Gulf should be controlled by the India Office, with management at a local level to be overseen by Viscount Hardinge, the Indian Viceroy. But Army Headquarters in Delhi, acting in an independent capacity, effectively increased the scope of the campaign when it issued a new set of orders to General Sir John Nixon, Commanding Officer of the IEF. Unfortunately, there was to be no proportionate increase in the area of logistics.

This divergence in military aims would greatly affect the performance of the Australian Half-flight, which arrived in Mesopotamia in May 1915 to bolster the Indian Army fliers. The British Royal Commission on Mesopotamia, conducted in 1917, concluded that the lack of efficient aircraft seriously hindered the troops in the task they had to perform.\textsuperscript{7} I attempt to show that the machines made available to the air unit, albeit inadequate in number and performance, in fact stood up to the initial tasks asked of them - reconnaissance and map-making. But when Nixon found his instructions had increased dramatically in scope, he looked to his air service to proportionately extend its air support. As well as reconnaissance, the airmen were called on to spot for batteries, carry out bombing raids, and fly contact patrol. The air establishment could not cope. Mechanical failures increased significantly, and the lack of W/T and of bombs and bomb-racks became increasingly felt by the air crews.

\textsuperscript{7} 'Mesopotamia Commission Report' in \textit{British Sessional Papers, House of Commons} (Vol.XVI, p.773).
The twelve-volume series *Official History of Australia in the War of 1914-1918* was commissioned by the Australian Government in 1919. The series gained an international reputation as an accurate and perceptive account of Australia’s experience in World War One. F.M. Cutlack’s Volume 8, *The Australian Flying Corps in the Western and Eastern Theatres of War* (1923), proved no exception. Until very recently, No.1 Squadron, Australian Flying Corps, historiography has been limited to variations on Cutlack’s work. In 1995 Mark Lax, in his P.h.D dissertation, went a long way towards altering the historians’ focus. He studied the technological, command, and control aspects during 1 Squadron’s service in the Middle East. I gained from Mark an understanding of air power imperatives, and one element especially interested me, attainment of control of the air. I have attempted to analyse the attainment of air superiority, as it pertained to 1 Squadron from the first months of 1918. Factors that warrant consideration include the impact of superior arms (the Bristol Fighter in particular), the determination of the air crews, and declining German effectiveness. It was the achievement of air superiority that enabled General Sir Edmund Allenby’s preparations for the Armageddon Battle to be concealed, and for the ground forces to carry out their tasks relatively unmolested.

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8 Mark Lax, *History of Number 1 Squadron, Australian Flying Corps* (currently being edited for publication, Air Power Studies Centre, RAAF Base, Fairbairn, Canberra).
CHAPTER I
Early British Seaplane Operations:
Anne and Raven II

Beginning in January 1915 two German merchant vessels that had been seized as prizes at Port Said in August of the previous year - SS Aenne Rickmers and SS Rabenfels - were detailed for a very special assignment. Following conversion, the vessels were to cruise the Eastern Mediterranean and disembark their Nieuport VI seaplanes in order to report on the development of Turkish communications, and the movement of enemy forces south, down the Syrian/Palestine coast, towards the Suez Canal.

In matters of administration and personnel, the Aenne Rickmers and Rabenfels seaplane arrangement was a remarkably heterogeneous affair. The seaplane carriers were run by the Ports and Lights Administration of the Egyptian Government, under the orders of General Sir John Maxwell, Officer Commanding in Egypt. However, when, in February 1915, control of the coast of Syria and of Palestine as far south as Jaffa became a French responsibility, seaplane operations along the Syrian coast, in effect, came under the jurisdiction of the admiral commanding the Syrian Division of the French Navy. Thus, the British Navy, the British Army, and the French Navy, all had a vested interest in the arrangement.

At the end of December 1914, Captain L.B. Weldon, a Dublin Fusilier who had spent the last fourteen years in the Survey Department of the Egyptian Government, was informed that he was to take over the job of Intelligence Officer, Liaison Officer, and Officer Commanding the Aenne Rickmers. Part of Weldon’s job description entailed that he land and extract spies from behind the Turkish lines. He was also to oversee the work of two French seaplanes which Maxwell intended to operate from the German cargo ship.
In keeping with the improvisation apparent in the running of the Aenne Rickmers, her crew consisted of British naval ratings, marines, and seaplane observers, Syrian boatmen, Greek engine-room staff, and French pilots and mechanics - from L’Aviation Maritime Francaise, commanded by Captain de Lescaill. The French unit put one flight of 80-h.p. Nieuport VI seaplanes at the disposal of the Admiralty. Known as Escadrille Nieuport, Suez, the eight machines bore French markings and French serial numbers, ranging from N.11 to N.23. Under the command of Captain R. Todd, Rabenfels was crewed and equipped in similar fashion to Aenne Rickmers.

The two carriers had as their primary tasks the reconnaissance and bombing of enemy camps, troop movements, and communications, anti-submarine patrols on the coast of Asia Minor, and spotting for ships’ fire. This work was carried out with the intention of supporting Maxwell’s force in Egypt, then garrisoned along the Suez Canal. The one great advantage of seaplanes, as opposed to the landplanes of the RFC, was their ability to fly missions as far as the forward Turkish positions at El Arish and Beersheba. The Anne Rickmers and Rabenfels could, in fact, drop anchor at any point five to twenty-five miles off the Palestine/Syrian coast, and disembark their seaplanes for reconnaissance of enemy positions or communications up to 150 miles inland.

Problems of Administration and Equipment

“The Navy sent us a signalman and five bluejackets who were to man the steamboat, but otherwise we were simply told that we must raise a crew for ourselves. Well, we set about it. We got firemen all right. And at last we even got a crew of sorts. They were the sweepings of Port Said, and I don’t think any of them - with one exception - had ever been on a ship before, except perhaps to carry coal on board. ... I doubt if any ship ever sailed with such a crew since the days of the Ark.” Captain L. Weldon.

Dick Cronin, a recent historian who has written an extensive account of early British naval aviation in the “sideshows”, emphasised the failure on the part of the
Admiralty to realise the potential of the naval air arm in its support of land operations against the Central Powers. The fact that the Aenne Rickmers and Rabenfels were administered in a haphazard manner that was quickly to prove unworkable lends support to his view. In June the seaplane carriers were commissioned, meaning they were to be run by the navy and not by the Ports and Lights Administration under orders from Maxwell. However, it was not until late July that both ships' motley crews were paid off and replaced by naval ratings.

Weldon voiced particular concern over the unit's deficiencies in the areas of personnel, administration, and armament. On 17 July he wrote to Colonel Elgood, Base Commander at Port Said, setting forth the conditions under which he was expected to sail in the Aenne Rickmers:

namely with a crew consisting chiefly of fellahin, ... no one capable of taking the wheel with the exception of the ship's officers, and entirely unarmed except for a few revolvers. I pointed out that we should have 'pukka' [genuine] naval ratings for our crew, and that also we ought to have ... a maxim and a 12-pounder, as we knew that there were enemy submarines in the area in which we had to operate. The fact was that we were 'nobody's child': but, serving under the British Army, British Navy and French Navy, we could get nothing out of any of them except orders, and we got plenty of those.¹

Weldon might also have mentioned that anti-aircraft guns were urgently required for countering the growing instances of enemy air attacks.

Neither the army nor the Admiralty administered the carriers in a manner which was conducive to a high level of efficiency in the operation of the seaplanes. At the same time, it is important to bear in mind that the seaplane type, as it appeared in 1915, was a far from developed machine. Indeed, it had been only four years since the first British seaplane had flown. For every successful flight carried out by the Nieuport seaplanes, a

greater proportion failed, either through mechanical unreliability, the absence of W/T [Wireless Telegraphy] for the spotting of ships’ fire and of bomb-sights for the accurate dropping of bombs, or the effects of non-conducive weather and sea conditions for flying.

The Nieuport VI seaplanes embarked by the Aenne Rickmers and Rabenfels throughout 1915 were, like all seaplanes in the early years of flying, designed to operate under European climatic conditions. Hence, when flown in the higher temperatures of the Eastern Mediterranean their water-cooled engines often overheated and cut short attempts at reconnaissance. On the occasions when the under-powered engines did manage to unstick the machine from the sea’s surface, strict limitations were imposed on service ceilings. More often than not, the seaplanes failed to climb above 1,000 feet: at this meagre altitude not only were both crew and machine susceptible to rifle and anti-aircraft fire, but artillery spotting was rendered ineffective. Moreover, operations that required mountains to be traversed in order to reach enemy targets had necessarily to be curtailed. It was the high incidence of mechanical failure, however, that accounted for the vast majority of abandoned flights.

Perhaps the limitation of most consequence imposed upon the work of the Nieuport seaplanes was the requirement for near perfect sea and weather conditions in order to get a flight away. Richard Layman, writing in 1976, noted that the low power of the engines in relation to the weight of the airframe and workloads (crew and bombs) made take-off impossible in an unquiet sea. Weldon confirmed that: “we had several mishaps through trying to get a plane away in a choppy sea.”

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4 Weldon, pp.20-21.
take-off in the flat calm of a quiet sea was equally problematic because inefficient floats often prevented the machine from unsticking the water’s surface suction. Since the Nieuport’s maximum speed in ideal conditions was only 68 miles-per-hour, a strong wind meant the aircraft could make little headway.

The Gathering of Intelligence

Weldon’s inaugural cruise in the Aenne Rickmers, from 18-23 January 1915, coincided with the first important success of the seaplanes off the Sinai coast. On the 19th, off Gaza, Weldon sent out a Nieuport to Beersheba. On their return the crew reported a considerable movement of enemy troops along the Beersheba-Hebron road. This information, immediately coded and transmitted by wireless to General Headquarters, Egypt, was augmented on 7 February, when Lieutenant R. Paul and Petty Officer Grall flew a second reconnaissance to Beersheba and Hebron. 600 tents and approximately 20,000 troops were seen at Beersheba, and working parties were observed laying a road between Beersheba and Hebron.

The significance of this intelligence must be gauged within the context of the first Turkish Suez offensive. The Suez Expeditionary Force, comprising two echelons of the 8th Corps (some 25,000 men) under the command of Djemal Pasha Kuchuk, assembled around Beersheba in mid-January for the long march to the Canal. The first echelon departed on the 14th, while the second followed a day behind. The remnants of these movements were reported by seaplane reconnaissance on 19 January. It was in all probability the 27th (Arab) Division, which had remained behind at Beersheba in reserve, that Paul and Grall observed on their flight of 7 February. According to David Bullock, enough intelligence was gathered from the air to conclude that the main Turkish offensive would fall against Military Sector Two, Central Canal Zone.5

Aenne Rickmers Torpedoed Off Smyrna

On 6 March, Aenne Rickmers rendezvoused off Smyrna Harbour with the Euryalus, Triumph, and Swiftsure. For the two previous days, the battleships had been bombardng the Turkish forts in the hope of preventing the use of the Gulf of Smyrna by the enemy as a submarine base to attack the Allied fleet then gathering at the Dardanelles. The seaplane crews were expected to report on the damage done to the forts, and to establish the position of two ships sunk across the harbour entrance and whether they blocked the opening. On the 9th, Lieutenants Paul and Destrem observed two clear channels between the two skuttled ships, and between one ship and the shore. The fliers further reported that three guns in one of the forts had been put out of action.

A truce was arranged until mid-morning on 11 March to allow the envoy of Smyrna time to acede to demands to block the port, and deny its potential use as a submarine base. Blissfully unaware of this agreement, during the night of 10-11 March the Turkish torpedo boat destroyer Demir Hissar ran into the fleet's anchorage at Chustan Island and fired her torpedo at the outermost ship, hitting Aenne Rickmers on the starboard side in number one hold. Fortuitously, number two hold - which contained a metallic ore - served to buttress the bulk-head between number one and two holds, and allowed the carrier to remain afloat. Weldon recalled:

We all stood about on deck with our ankles in water, wondering when the final plunge was coming, till I suggested it would be drier if we adjourned to the Saloon. Naturally we were rather excited and all complained of exceedingly dry mouths. Someone suggested that a drink would not be amiss.

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6 In fact, the first German submarine, U-21, commanded by Lieutenant Commander Otto Hershing, did not appear in the Eastern Mediterranean until the end of May 1915.
In the following months, while Aenne Rickmers was undergoing repair in dry dock, Rabenfels was busily occupied off the Southern Palestine and Syrian coast, where her seaplanes reconnoitred and spotted for fire on Turkish camps, and followed the development of enemy railway communications. Between 16 and 19 April, Rabenfels interspersed the spotting of fire for the French battleship St. Louis with detailed reconnaissances of Turkish roads, railways, and camps. On the 16th, Lieutenant Paul and Petty Officer Grall were sent away in Nieuport N.11 to direct the fire of St. Louis on to the tented camp and town of El Arish. Throughout the day, the French vessel fired some 200 rounds into the targets, and four batteries of field guns. Before Rabenfels returned to Port Said, an interesting flight took place off Gaza. In the absence of W/T, the Nieuport’s communication with the bombarding ships had to be by visual means. On this occasion, smoke-balls were dropped by Petty Officer Grall and Captain R.E. Todd to mark the fall of St. Louis’ shot.

Seaplane reports revealed exactly what steps were being taken regards the southwards advance of the Turkish railway. On 8 July, off Nebi Yunas, Rabenfels hoisted out N.17 and the French pilot Lieutenant de Saizieu, with Lieutenant H. Ledger as observer, flew over Ramleh and Gaza. The railhead was found to be extended two miles south of Gaza with about 5,000 troops engaged in extending the line. Two weeks later, Lieutenant Destrem and Major H.P. Fletcher reconnoitred the railway at Samaria running north-west and south-east, and at Tul Keram running parallel to the coast. On this flight, new buildings south of Samaria were bombed from 3,600 feet, as well as a camp at Tul Keram, causing panic among the troops.

Following Aenne Rickmers’ return to service on 7 July, an administrative overhaul saw her and the Rabenfels commissioned into the Royal Navy. The carriers were renamed HMS Anne and HMS Raven II, respectively. For Weldon, however, it remained:
a case of getting back to our old work. For the next twelve months we were cruising up and down the coast of Syria and Asia Minor, landing and embarking our agents, sending off our planes to reconnoitre, and generally doing the hundred and one odd jobs that the powers thought fit to give us.\footnote{Weldon, p.91.}

These jobs included detecting any changes of consequence in enemy communications and camps in Sinai and Southern Palestine, as well as targeting for attack the railway bridge at Chicaldere. Located approximately 30 miles inland from the Gulf of Alexandretta, the bridge comprised an important link in the Constantinople-Baghdad Railway. In fact, should the bridge be put out of action, the transport of troops and supplies south-east from Constantinople via Adana to the pivotal Aleppo Junction could effectively be held up. Unfortunately, the “powers that be” did not see fit to replace the ageing Nieuports, and as a result, operations between August and September were marred by the loss of two crews in separate incidents.

On 18 August, Anne, carrying pilots Lieutenant Destrem and Petty Officer Grall, and observers Captain J. Herbert and Major Fletcher, rendezvoused at the top of the Gulf of Alexandretta with Raven II, and their aircrews of pilots Lieutenant de Saizieu and Petty Officer Trouillet and observers Lieutenants Paul and Ledger. The following day, both ships hoisted out their seaplanes for a bombing attack on Tarsus and Adana. Owing to a thick mist inland, and the failure of Destrem and Herbert to get off the water, only Grall and Fletcher in N.11 managed to reach the target, where they dropped one bomb on or near each railway station. Weldon congratulated the crew for “a good piece of work.”

The same could not be said for a bombing attack on the railway bridge at Chicaldere by three seaplanes on the 20th. N.11 bombed the target without result and returned with two bullet holes in the fabric. N.20 failed to reach the bridge, while Raven II’s N.17 deposited just one bomb with unknown results. The only result of the attack
was to provide the Turkish defenders with a warning that Chicaldere Bridge was considered an excellent target, and that future raids of greater intensity were sure to follow.

Before Anne returned to Port Said on the 21st, Lieutenant Destrem and Major Fletcher made a useful reconnaissance along the Beirut-Damascus railway in Southern Palestine. They were heavily fired upon by three machine-guns at the camp of Aliya, and Fletcher had a lucky escape: "one bullet would have got the observer if it had not been diverted by striking a pipe just beside him." 8

An Interrupted Reconnaissance

It was Lieutenant Paul and Petty Officer Trouillet who were first to experience the hospitality of a Turkish prisoner of war camp. Their demise, which occurred during a reconnaissance of Beersheba on 10 October, should have come as no surprise. Weldon has written:

our planes were troubling us a good deal; whenever we tried to launch them they had all sorts of minor troubles, such as cylinders burning out. The machines were old, and we ought not have been asked to fly them. De L'Escaile was repeatedly cabling to France for new machines, but without result. 9

After Trouillet and Paul had been away for nearly four hours, Weldon sent out Lieutenants de Saizieu and Ledger in N.17 to search for the missing seaplane. The Nieuport made a useful reconnaissance of the railway from Tel el Sharia to the Gaza-Beersheba road, and observed numerous store dumps and an elaborate trench system between Gaza and Wadi Esh Sharia. Trouillet and Paul's seaplane, however, was not sighted.

8 Ibid., p.100.

9 Ibid., p.9.
Weldon could certainly be excused for thinking that the two airmen were dead. Before all flights, he issued his crews with flares and instructed them that in the event of a forced landing they were to first destroy their machines, and then make for shore and burn their flare at night. Anne cruised one mile off-shore all night, but no signal was observed. Weldon also recalled that:

de Escaille had often told me that in his opinion a seaplane with floats could not possibly alight on land without crashing badly, and that the chances were that the occupants would be killed.¹⁰

Paul and Trouillet had, in fact, been forced down by engine trouble, and as it happened made an excellent landing. Immediately surrounded by hostile Arabs, who stole their personal possessions and some of their clothes, the fliers were thankfully rescued by Turkish officers who took them to Beersheba. In a remarkable footnote to these events, about two months later Weldon received a censored letter from Paul written from a prisoner of war camp. He wrote that on their capture the Turkish officers had mounted them on camels, whereupon entering Beersheba his camel had shied at some railway trucks and thrown him. Weldon, knowing Paul was an experienced rider, concluded that he was letting him know that the Turkish railway had reached Beersheba - the very information he had been sent on the flight to obtain. Paul also mentioned that the Turkish officers, including some aviators, had treated him kindly. Thus, he also cleverly conveyed to Weldon valuable information that the enemy now had aeroplanes on this front.

Anne was back off the Southern Palestine coast on 6 November, where Petty Officer Grall and Major Fletcher resumed the reconnaissance of enemy railway communications and of the camp at Beersheba. At 4,000 feet what was thought to be a hangar, measuring approximately 100 feet by 40 feet, was seen just outside the camp.

¹⁰ Ibid., p.107.
and about fifty men were observed working on a three mile stretch of railway laid on the Beersheba to El Auja road. Various activity along the railway was seen en route to Gaza, including a bridge under construction at Tel el Sharia. The following day, Lieutenant de Saizieu and Major Fletcher flew a reconnaissance northwards along the railway from Ramleh to Tul Keram, noting all the bridges on the line.

Grall and Fletcher’s reference to what they thought was a hangar is interesting. Taken with Paul’s letter, which reported that on his capture on 10 October he had dealings with aviators, there is evidence to suggest that there were flying officers and a sizeable aeroplane hangar at Beersheba by 6 November. However, Major Erich Serno, Commander of the Ottoman Air Force between 1915 and 1918, has noted that the aviation advance party of the first German air unit sent to the theatre only assembled at San Stefano military airfield, located 25 kilometres west of Constantinople, in mid-December 1915. Furthermore, this Vorkommando, which was allotted the task of making the arrangements for the deployment of German Fliegerabteilung 300, did not arrive at the flying field assigned to them at Beersheba until the beginning of March 1915. The nearest land-based squadron to Beersheba in November 1915 was Ottoman Fliegerabteilung 1 on the Gallipoli Peninsula.

On 22 December Anne lost the experienced crew of Lieutenants de Saizieu and Ledger, who had undertaken a flight in N.17 to Beersheba. Petty Officer Grall was sent out to search for the seaplane, but returned after one and a half hours without sighting it. Anne cruised all night close in-shore looking for a signal, but watch fires indicated that the coast was being closely patrolled. A final early morning reconnaissance revealed extensive changes in the camp layout at Beersheba, but no sign of the seaplane was found. Just after Christmas an enemy wireless signal was picked up by Anne stating that N.17 had forced landed with engine difficulties, and that de Saizieu was a prisoner:
“Poor Ledger had been shot, as he had foolishly fired at the Turks as they approached.”

The success of the Anne and Raven II seaplane experiment in the course of 1915 must be gauged within the context of the slender resources devoted to it. In the first place, following conversion in 1915 the seaplane carriers were by no means ideally suited to their new function. The Anne, for example, had great difficulties in handling the non-folding Nieuports which were stowed on the after-well deck. With a speed of only eleven knots, moreover, the Anne was easy prey to both enemy aircraft and submarines. It was, in the words of Weldon “perfectly ridiculous sending planes to sea in such a ship.”

Like the seaplane carriers, the Nieuport seaplanes were not equipped for the work they were required to carry out. Ill-suited to a tropical environment, they were mechanically unreliable and carried no wireless for communication with the bombarding ships. Added to this was a lash-up administrative arrangement, that on one occasion saw armed sentries placed over the seaplanes so that the Greek crew would not sabotage the machines whilst Anne was operating in dangerous waters. In the face of these limitations, the aircrews were nevertheless able to obtain important information on the movement and disposition of enemy troops, and the development of the Turkish railway system on the southern coast.

11 Ibid., p.112.

12 Ibid., p.112.
CHAPTER II
HMS Ark Royal:
An Ill-Conceived Venture

The decision made in January 1915 by the British Government to attempt a naval forcing of the Dardanelles had as one important basis an over-confident expectation in the capabilities of shipboard aviation. The British Navy’s first specially-designed and purpose-built aviation vessel, HMS Ark Royal, was detailed by the Admiralty to embark a heterogeneous collection of still experimental seaplanes in the misplaced belief that they could significantly help the battleships to overcome formidable Turkish defences in the form of fortresses and minefields.

An important contributing factor to the failure of the Dardanelles naval enterprise was the inability of Ark Royal’s seaplanes to carry out essential spotting duties. Until recent times, historical opinion concurred that this shortcoming was due primarily to the mechanical unreliability of the seaplane as a type.\(^1\) In 1972, however, the eminent naval historian Arthur Marder presented a paper which contended that the failure of the seaplanes was less a matter of their unreliability “than their inefficient and inappropriate employment by Carden [Admiral Carden, Commander of the Eastern Mediterranean Squadron] and his staff.”\(^2\) Richard Layman, a more recent historian, has in turn emphasised the mechanical limitations of these “far from fully developed craft”, and criticises Marder who, he says, failed to appreciate the severity of the seaplanes’ disadvantages.

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\(^1\) This is the conclusion brought out in the ‘Report of Committee Appointed to Investigated the Attacks Delivered on and the Enemy Defences of the Dardanelles Straits, 1919’ - generally referred to as the Mitchell Report.

Churchill's Bold Strategy

It was the War Council's concern over the defence of Egypt, and in particular the safeguarding of the Suez Canal, which precipitated a suggestion - initially from Winston Churchill, First Lord of the Admiralty - that a diversion should be made on some part of Turkey's Asiatic coast, and preferably the Gallipoli Peninsula. However, in the opinion of Lord Kitchener, Secretary of State for War, the time for action had not yet arrived, and as a result the matter was more or less left to stagnate. All this changed on 2 January 1915, with the arrival of a very important telegram from the British Ambassador at Petrograd, Sir George Buchanan. It stated that the Russians were being hard pressed in the Caucasus, and appealed on behalf of the Russian Government that to relieve this pressure a "demonstration" against the Turks be made in some other field. The British Government agreed to a demonstration, but, as Kitchener told Churchill, he doubted the merit of any such action:

I do not see that we can do anything that will seriously help the Russians in the Caucasus.... We have no troops to land anywhere.... The only place that a demonstration might have some effect in stopping reinforcements going East would be in the Dardanelles.... We shall not be ready for anything big for some months.  

While Kitchener was at pains to point out that the army could spare no troops at present for a joint demonstration, Churchill, by contrast, was boldly thinking of a naval attack alone on the Dardanelles with Constantinople as its objective. This was apparent from a telegram sent by Churchill on 3 January to Admiral Carden: "Do you consider the forcing of the Dardanelles by ships alone a practicable operation?" On the 5th Carden replied: "I do not consider Dardanelles can be rushed. They might be forced by extended

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operations with large number of ships."⁵ In Churchill's eyes, this response offered the extraordinary prospect of influencing the situation in the east in a decisive way without requiring any immediate military aid. Indeed, should an effective blow be delivered against the Turkish capital, it might knock Turkey out of the war, relieve the pressure on Russian forces, and deter Bulgaria from joining the Central Powers.

On 13 January 1913, the War Council recommended a purely naval enterprise: "The Admiralty should prepare for a naval expedition in February to bombard and take the Gallipoli Peninsula, with Constantinople as its objective."⁶ From the wording of this decision, it was clear that in the event of the fleet proving successful in its attempts to force the straits, the War Council was in any case committed to large-scale military action. Further to this point, although the recommendation of the 13th was endorsed by the Admiralty, it was far from unanimously accepted. Maurice Hankey, Secretary to the War Council, wrote on 10 February:

From Lord Fisher [First Sea Lord] downwards every naval officer in the Admiralty who is in the secret believes that the Navy cannot take the Dardanelles without troops. The First Lord [Churchill] still professes to believe that they can do it with ships.⁷

Sir Henry Jackson, First Sea Lord, recommended only that the fleet attack the outer forts. He did not consider that an attempt made by the fleet alone to destroy the defences of the Narrows and advance into the Sea of Marmara was a feasible operation. A technical demerit which weighed heavily on the minds of naval authorities and experts was the fact that guns mounted on board ships could not be given sufficient elevation to counter the high-angle plunging fire of land-based defences in the form of Turkish howitzers.

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For Churchill, however, the advent of aviation "seemed to offer a means of overcoming this disadvantage".\(^8\) Aircraft equipped with W/T could spot for indirect, high-angle fire from battleships out of sight of their shore targets and out of range of the Turkish defences. As Churchill wrote:

So precise are the naval guns and so exact is the naval gunnery, granted the proper observation, that it was not only possible to hit forts like those of the Dardanelles from ranges at which they could not reply, but to hit in succession every single gun in them.\(^9\)

Hankey told the Dardanelles Commission on 1 February 1916 that: "in a comparatively confined space like the Gallipoli Peninsula, the value of naval bombardment, particularly by indirect laying, would be enormously increased."\(^10\) This argument, in the words of the Dardanelles Commission, "weighed strongly both in the minds of ministers and experts."\(^11\) H.A. Jones, the official British air historian, concluded that of the reasons behind the decision: "One of the chief was the new air weapon."\(^12\) Finally, W. Douglas, in a 1972 paper has written:

It is clear ... that the enhanced capabilities which air observation was expected to give to naval guns played an important part in the decision to go ahead with the naval bombardment.\(^13\)

It is this evidence that leads Layman to conclude that in the absence of aviation the Dardanelles campaign would never have been undertaken. His assessment, while

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\(^8\) Layman, ‘Over the Wine-Dark Sea’, p.5.


\(^13\) Douglas, p.23.
basically correct, requires qualification. In *partnership* with the new air arm, it was the availability of the 15-inch gun dreadnought *Queen Elizabeth* - which alone had sufficient range to fire over Gallipoli Peninsula - that rendered the scheme viable. In a similar connection, military planners placed considerable importance on the existence of a large class of heavily armed and armoured ships which, in a few months, were to pass out of commission. In other words, the ships assigned to force the Dardanelles were expendable.

**The Ark Royal**

The task of providing the gunfire direction which it was hoped would nullify the advantages that land-based high-angle artillery possessed over low-trajectory ship-mounted guns was allotted to the seaplanes of *Ark Royal*: “the first vessel in history to be specifically acquired, designed and constructed for the sole purpose of operation of airplanes.”14 The story of *Ark Royal* effectively begins in 1913, with the experimental conversion of HMS *Hermes* to carry seaplanes for the Naval Air Service. Principal characteristics of the refit included the installation of a launching ramp on the cruiser’s upper-deck to allow seaplane launchings on wheeled trolleys. A large hatchway aft of the deck led to a hold providing accommodation for seaplanes. Also fitted were two derricks, one on each side of the deck, which were used to hoist the machines from the hold on to the water, and vice-versa. During naval manoeuvres scheduled for July 1913, *Hermes* was detailed to operate a 160-h.p. Short S.64 floatplane, equipped with a folding wing device and W/T, and a 100-h.p. Caudron GIII floatplane. These trials proved conclusively the value of the folding-wing type for shipboard storage, the requirement for sprung floats, and the necessity of fitting aircraft with wireless telegraphy.

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A total of 30 flights were conducted from the Hermes (water take-offs) between May and December 1913, establishing beyond doubt "the feasibility of shipboard operation of aircraft under service conditions."\(^{15}\) Suitably impressed by the Hermes experiment, Churchill subsequently authorised the construction of a "special vessel as a seaplane carrying ship."\(^{16}\)

A merchant steamer, in frame at the Shipbuilding and Dry Docks Company at Blyth in Northumberland, was purchased by the Admiralty in May 1914 and a radical re-design commenced. According to Layman, two reasons lay behind the decision to acquire a merchant hull: firstly, by 1913 standards an aviation vessel was an auxiliary, and the Admiralty was not prepared to lay down a vessel in one of the construction slips so busily engaged in the building race against Germany. Secondly, a merchant hull was perhaps perceived as more closely embodying the qualities required in an aviation vessel than did the structure of a warship.

The engines, superstructure, and single funnel were placed right aft, allowing two-thirds of her 366-foot length aft from the bow to be assigned - above and below decks - to aircraft stowage, handling, launching, and maintenance facilities. The most impressive of these features was the aeroplane hold, capable of housing between seven and ten seaplanes where they were safe from wind and sea damage, and salt-water corrosion. A sliding hatch gave access to the hangar deck, from where two three-ton steam-cranes swung the seaplanes off the vessel for take-off and back aboard after alighting.

\(^{15}\) Ibid., p.91.

\(^{16}\) Ibid., p.92.
Seaplane Difficulties

The assortment of seaplanes which the *Ark Royal* embarked, following the completion of her conversion in January 1915, "were with one exception, sadly inefficient for the work they would be called on to do."\(^{17}\) Six of them were two-seat, folding-wing, float biplanes: two Wight Type A.1 Improved Navyplanes with 200-h.p. Canton Unne' engines; three Sopwith Admiralty Type 807's with 100-h.p. Gnome Monosoupape engines; the exception was the Short Admiralty Type 135, which the *Ark Royal*’s commander, Robert Clark-Hall, labeled the "most valuable and only rough water seaplane aboard the ship."\(^{18}\) Inexplicably, four Sopwith S.S.2 Tabloids - single-seat landplanes with 100-h.p. Gnome Monosoupape engines - were also embarked on *Ark Royal*. Presumably, the Tabloids were intended to fly from land airfields once they had been established, or a less likely proposition, to operate from the ship’s flat forward deck. In the event, Clark-Hall could find: "No possible place for these machines - which ... require a particularly large and smooth aerodrome both for landing and getting off from".\(^{19}\) There is no evidence of the Tabloids' employment, even after an airfield at Tenedos was established, but this was not altogether surprising given that single-seaters were useless for reconnaissance and fire-control - duties that required an observer.

The *Ark Royal*’s British aircraft shared with the French Nieuports of the *Anne* and *Raven II* a record of severe mechanical unreliability. The magnitude of this problem is perhaps best demonstrated by tabling the performance figures of individual machines during the crucial month of March 1915:

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\(^{17}\) Jones, p.10.

\(^{18}\) Layman, *Ark Royal-Pegasus*, p.95.

\(^{19}\) ‘Reports From HMS *Ark Royal*, Dardanelles Operations, February-May 1915; August 1915 (Microfilm, Australian Joint Copying project; Air Ministry/Air Historical Branch: National Library of Australia, Canberra, PRO 6882, Piece 2099, File 207/20/7).
Summary of Flights For March, 1915

<table>
<thead>
<tr>
<th>Machine</th>
<th>Flights</th>
<th>Time In Air</th>
<th>Engine Failures</th>
<th>% Failed Flights</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short No. 136</td>
<td>6</td>
<td>2 Hrs. 8 Mins.</td>
<td>6</td>
<td>100%</td>
</tr>
<tr>
<td>Wight No. 172</td>
<td>14</td>
<td>12 Hrs. 51 Mins.</td>
<td>6</td>
<td>42.8%</td>
</tr>
<tr>
<td>Wight No. 173</td>
<td>10</td>
<td>8 Hrs.</td>
<td>5</td>
<td>50%</td>
</tr>
<tr>
<td>Sopwith No. 807</td>
<td>8</td>
<td>5 Hrs. 38 Mins.</td>
<td>3</td>
<td>37.5%</td>
</tr>
<tr>
<td>Sopwith No. 808</td>
<td>4</td>
<td>1 Hr. 52 Mins.</td>
<td>3</td>
<td>75%</td>
</tr>
<tr>
<td>Sopwith No. 922</td>
<td>14</td>
<td>13 Hrs. 31 Mins.</td>
<td>4</td>
<td>28.5%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>56</strong></td>
<td><strong>44 Hours</strong></td>
<td><strong>27</strong></td>
<td><strong>48%</strong></td>
</tr>
</tbody>
</table>

It is significant that the figures quoted in the table do not include variations other than engine failures which also contributed to the incidence of curtailed flights. Chief among these was the frequent inability of the aircraft to take off because of unsuitable sea conditions. In a report dated 9 March, Clark-Hall wrote: “The short, choppy sea which is prevalent here during the strong winds of winter makes it exceedingly difficult for either the Sopwith seaplanes or the Wights to get off the water.” Considerable difficulty was experienced in gaining an adequate number of revolutions out of the Monosoupape and Canton Unne' engines to develop sufficient power to permit take-off. Nor do the statistics take into account the preponderance of broken propellers, burst floats, and W/T malfunctions.

Taking Wight No. 173 as an example, we can see from the table that five of the ten flights attempted by the machine during March failed because of engine trouble. Information contained in an Admiralty source reveals that of the five sorties not affected by engine problems, a further three were cut short: on the 16th and on the 17th, the respective pilots of Wight No. 173 found that the machine was out of truth, and hence

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20 Source: 'Reports From HMS Ark Royal'.

21 Ibid.
uncontrollable in flight. On the 26th, the seaplane failed to get off the water, with its engine overheating.

Sopwith No. 807 suffered engine trouble on three of its eight flights during March. A glance at the monthly return of flights, however, shows that the machine failed to get off the water on the 4th, tore a float attempting this feat on the 16th, and experienced W/T malfunction on the 28th. No. 807, as a result, performed only two sorties of real consequence in the month.

Clark-Hall quickly established that the Canton Unné engined Short was the machine which gave best service in the unfavourable weather conditions. This type had been specifically requested as early as 24 February, and reports dated 9 and 15 March expressed the hope that a number would be arriving imminently. When reinforcements were eventually received on 5 and 9 April, they were in the form of a 200-h.p. Canton Unné Wight, and two Schneider Cup single-seater Sopwiths. The Ark Royal's commanding officer responded to their arrival in no uncertain terms: "Our present lack of rough weather seaplanes is beginning to be very badly felt.... I am of [the] opinion that four Short machines with Canton Unné engines should be despatched as soon as they are possibly available."22 Clark-Hall’s frustrations were understandable. Nearly two months’ experience had confirmed that the Wight could operate only when the sea was quiet, and the single-seat Schneiders were unsuitable for detailed reconnaissance and fire-control duties. In mid-May, two 225-h.p. Sunbeam Sopwiths were erected, but these machines did not prove satisfactory owing to defects in the oil pressure system.

During his time as commanding officer of the Ark Royal, Clark-Hall received only one rough weather seaplane as a reinforcement. Short No. 161, with a 200-h.p. Canton-Unné engine, was assembled on 23 April. The performance of the Short entirely

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22 Ibid.
vindicated Clark-Hall’s faith in this type: in the five weeks to 1 June, the machine flew “in a very satisfactory manner”, and notched up a flying time in excess of 32 hours.

Given the weather conditions and the requirement for machines which could accommodate observers, the Wight and Sopwith seaplanes allotted to Clark-Hall proved indifferent in value. The five types of machines (Sopwith 807’s, Shorts, Schneiders, Sopwith Sunbeams, and Wights) and three types of engines (Canton-Unné, Gnome-Monosoupape, and Sunbeam) adversely affected the squadron’s efficiency, causing delays in the supply of spare parts and in the servicing of engines.

Having assigned to the Ark Royal’s seaplanes the essential work of aerial spotting, it is perhaps fair to suggest that the Admiralty did not fully appreciate, nor actively seek to address, the difficulties which might arise from the employment of a system of air-to-surface radio communication which was at best rudimentary. The Ark Royal embarked two Sterling transmitting sets, largely of an experimental nature, but no technician expert in aircraft W/T. This, stated the official history, “prevented a proper examination of the wireless apparatus before each flight” - a necessity owing to the fact that the sets had to be transferred from one seaplane to another.\(^{23}\) The intended partnership of vessel and seaplane was further impaired by the lack of pre-war experimentation in the control of ships’ gunfire. Since naval aircraft wireless had been developed primarily to rapidly communicate reconnaissance communication, no standard system had been devised for artillery spotting. As a result, the seaplane observers and the ships’ gunnery officers:

had to work out their own systems of signaling and coding on the spot, complicated by the fact that initially the seaplanes could send but not receive.\(^{24}\)


\(^{24}\) Layman, ‘Ark Royal-Pegasus’, p.96.
Operations Commence

The Ark Royal reached Tenedos, a Greek island in the Aegean Sea situated eleven miles from the Gallipoli Peninsula, on 17 February - two days before the opening of the bombardment. She joined a force which comprised sixteen antiquated battleships, plus the modern British battle cruiser Inflexible and the dreadnought Queen Elizabeth. An Admiralty letter of 15 February requested aerial reconnaissances of the outer defences at the entrance to the Dardanelles Strait for any sign that they had been supplemented since the preliminary bombardment on 3 November 1914. In compliance with this order, Ark Royal sent her machines into the air immediately on arrival. It was a disappointing start, with three of the four flights attempted failing - two due to engine failure and one because the seaplane could not unstick the calm sea. A Wight, crewed by Flight Lieutenant G. Bromet and Flight Commander H. Williamson, managed a 75-minute flight, whereupon they returned with confirmation of reinforced defences.

Acting on this information, Carden quickly arranged for the bombardment of the outer defences - four forts mounting nineteen primary guns (Cape Helles, Sedd el Bahr, Orkanie, and Kum Kale) at each side of the entrance to the Straits - to begin on the 19th. Once the outer forts had been overcome by naval gunfire from long-range spotted by the seaplanes, the plan was to overwhelm the defences at short-range and minesweep a channel towards the mouth of the Straits.

On the morning of 19 February, Flight Lieutenant Bromet and Flight Commander Williamson were sent away in a Wight to spot the guns of battleship Cornwallis on to Orkanie Fort. For an hour the aircrew flew constantly between the ships and the fort frantically signaling to commence the bombardment - but to no avail. In an endeavour to improve accuracy of fire, the Admiralty had instructed ships to remain at anchor. A faulty capstan prevented Cornwallis from doing so, and she was subsequently relieved of duty. Bromet and Williamson, no doubt frustrated at the lack of response to their signals, were ordered by searchlight to examine the damage caused by the morning's...
bombardment. In spite of their report, which indicated that the guns in Sedd el Bahr, Orkanie, and Kum Kale were still intact, Carden gave the signal for the fleet to close.

Meanwhile, two seaplanes were sent away in succession with orders to spot for Inflexible on to Cape Helles Fort. One machine returned with the W/T aerial jammed on its reel, and in the second the Sterling transmitting set short circuited. The day ended unhappily when, in the early evening, the bombarding fleet withdrew.

Churchill later pointed out that one result of the inconclusive engagement of the outer forts on 19 February was the realisation that actual hits must be made on the guns or their mountings to put them out of action. The seaplanes, however, “had given little promise that they could do their part in directing the ships’ guns on to the vital part of their target.”25

The bombardment resumed, after five days of poor weather, on the 25th whereupon all four outer forts were silenced. The engagement, in fact, validated to a certain extent Churchill’s profound belief in “the great accuracy of naval fire, provided good observation could be attained.”26 On this occasion the sea proved too choppy for the operation of seaplanes, and the work of artillery spotting fell to the bombarding ships themselves. This form of spotting, it should be noted, was only effective on the few occasions when the vessel’s gunnery officers could observe at right angles to the line of fire.


26 Churchill, p.192.
The Narrows’ Forts

The bombardment in the first days of March of the intermediate defences, comprising 36 Turkish mobile howitzer batteries and 24 mortars on both sides of the Strait, was not a success. This was due to the effectiveness of the howitzers, whose function was to prevent the ships from anchoring, thereby ensuring accurate fire would be difficult. Carden’s response was to change both the target, and the method of countering that target. On 5 March, Queen Elizabeth began the indirect bombardment of the forts at the Narrows with their fixed batteries of heavy guns. She was anchored two and a half miles south-west of Gaba Tepe and fired at 14,000 yards range across the peninsula. Bearing in mind that only direct hits could destroy the guns of a fort, the possibility of achieving this (at 12,000 yards range) was estimated by the Mitchell Report to be only two or three percent. However, firing off Gaba Tepe and outside the range of the mobile howitzers, the Queen Elizabeth “could bombard the forts with accuracy given efficient aircraft spotting and sufficient ammunition”, since the Narrow’s guns presented almost a broadside target to indirect fire.27 Battleships manoeuvring inside the Straits could spot for range, but they were unable to spot for direction: “This depended upon the seaplanes, and for this all-important purpose our seaplane force was found inadequate.”28

On 5 March, at 9:14 am, Flight Lieutenant W. Garnett and Flight Commander Williamson in a Sopwith took-off to spot for Queen Elizabeth. Marder has quoted a letter written by Williamson which details his recollections of that day:

It was a perfect day, with just the right amount of wind for taking off from the water, and we were soon in the air. It was an exhilarating moment. There

27 Marder, p.5.

below was the Queen Elizabeth with her eight 15-inch guns ready to fire and trained on the coast. The conditions were ideal, stationary ships and stationary target, only eight miles apart, and perfect visibility. I believed that there was every prospect of destroying the forts, and that the Fleet would be able to go through the Straits and accomplish the object of the campaign by appearing off Constantinople. Few junior officers have ever been in a position so favourable and of such importance, and I was thrilled with confident expectation. We soon reached 3,000-ft. and were ready to cross the peninsula to the target.... Then it happened. In a moment the machine was out of control and we were hurtling towards the sea.\textsuperscript{29}

In fact, the propeller of Sopwith No. 808 had splintered, and the aircraft nose-dived into the ocean injuring both airmen. Williamson was the more seriously hurt, requiring lengthy hospitalization for a dislocated humorous, shock, cuts and bruises. Just one hour later, Flight Lieutenant N.S. Douglas became the seaplane unit’s third casualty. Sent up with Flight Sub-Lieutenant E. Dunning to replace Garnett and Williamson, Douglas was hit in the left leg by a rifle bullet and was forced to return to the Ark Royal. A third machine, piloted by Flight Lieutenant R. Kernshaw, made several corrections in the fall of shot, but the steep terrain made observation difficult and sufficient height could not be attained to enable the Sopwith to proceed further inland.

Queen Elizabeth recommenced her indirect bombardment on 6 March, but no seaplanes could get off the water and battleship spotting proved ineffective. Rough seas or low clouds prevented seaplane activity when direct attacks on the Narrow’s forts were resumed, unsuccessfully, on March 7 and 8.

\textbf{Historians’ Interpretation}

The conclusions brought out in the Mitchell Report validated the widely-held opinion that the failure of the opening phase of the naval campaign was in large part due to the unreliability of Ark Royal’s aircraft. The seaplanes “entirely failed to meet the

\textsuperscript{29} Marder, p.7.
main requirements of the Fleet, which was accurate spotting." Marder regards this view as misleading in the sense that the poor performance of the seaplanes can be traced back and attributed to the mismanagement of the air resource by Carden. This interpretation, supported by Flight Commander Williamson, maintains that futile reconnaissance flights of no value to the success of the naval campaign were wrongly prioritised over the essential work of gunfire spotting. This, in turn, compromised the policy, which - given the many warnings of the limitations of the seaplanes - aimed to conserve flying hours. As a result, "machines were not getting off, or were unable to reach a satisfactory altitude, or were being forced to return with engine trouble."  

On 4 March, for example, landing parties which were sent to Sedd el Bahr and Orkanie to ensure that these guns were demolished met with strong resistance, and achieved disappointing results. Clark-Hall, on Carden's orders, had seaplanes flying for in excess of five hours over the forts in support of these landings, and in the event were heavily fired on. The Sopwith crewed by Flight Lieutenant Kershaw and Petty Officer A. Merchant was struck eight times by bullets, and the Wight flown by Flight Lieutenant Bromet and Lieutenant A. Brown suffered extensive damage from 28 hits. It was "an unnecessary and useless job" according to Williamson: "The whole affair was a waste of time and effort."  

The repercussions were evident when, that evening, Ark Royal was told that a seaplane was required to spot for the indirect fire of Queen Elizabeth the following morning. Had, in Marder’s opinion, a contingent of seaplanes been held ready "for the one job on which everything depended", the outcome of the bombardment on 5 March might well have proved more successful. Certainly, Williamson would have had

30 Ibid., p.8.
31 Ibid., p.6.
32 Ibid., p.6.
the choice of taking up his own good machine which had been damaged on the “useless job” on the 4th.\textsuperscript{33}

There is another, perhaps less apparent, dimension to Marder’s explanation for the failure of \textit{Ark Royal}’s aircraft. He seems to infer that a mental bias existed against the perceived capabilities of the seaplane as a type, and that the naval staffs’ preference for landplanes as a tool for spotting may have placed a limitation on the opportunities \textit{Ark Royal}’s seaplanes were given to demonstrate their worth. Williamson noted that the conviction among naval staff that they wanted aeroplanes and not seaplanes reached the point of obsession:

it was so strong that within a few hours of the \textit{Ark Royal} joining the Fleet a party from the Flagship, including the Flag Captain, come to us in a picket boat wanting an opinion on the suitability of a landing ground which they had chosen on Tenedos Island.\textsuperscript{34}

This bias, it is interesting to note, carried over as one of the main conclusions in the Mitchell Report: “The lack of aeroplane observation was throughout the [naval] operations found to be the heaviest handicap.”\textsuperscript{35} Certainly, one advantage of landplanes would have been their ability to fly from an aerodrome on days when the seaplanes could not take-off from the sea. On the other hand, we cannot assume that spotting would have improved, as the engines and W/T of landplanes would in all probability have been no more reliable than those of the seaplanes.

Marder seems to imply that this sense of pre-occupation at not having aeroplanes overshadowed to a certain extent the thought given to utilising the seaplanes efficiently. The failures of 19 February (when \textit{Cornwallis} was ordered to cease firing owing to a

\textsuperscript{33} \textit{Ibid.}, p.7.
\textsuperscript{34} \textit{Ibid.}, p.9.
\textsuperscript{35} \textit{Ibid.}, pp.8-9.
defective capstan), and of 4 March (the squandering of over five hours flying time) could have conceivably resulted in an unjustifiably poor perception of Ark Royal’s seaplanes and the premature discontinuance of their spotting role.

Marder concludes his assault on the naval hierarchy in the Dardanelles by criticising a lack of practice in aerial spotting for guns before the operation began. There were, in his opinion, seventeen days between the arrival of Ark Royal at Tenedos and the beginning of the indirect bombardment on 5 March for “an unoccupied Aegean Island” to be utilised for essential spotting tests.36

It is perhaps necessary at this point to add a degree of qualification to several of Marder’s arguments. There is no denying that there were occasions when Carden might have utilised the seaplanes more effectively. In a report to the Admiralty dated 22 May, Clark-Hall pointed out “the excessive amount of flying being asked from seaplanes, and the necessity of economising flying time and only using them for really important work”.37 Indiscursions aside, the work of aerial reconnaissance (reporting damage done to the forts, locating concealed batteries, and noting new camps and trench systems) was nevertheless an essential component of the naval operation.

We need to appreciate that limitations of time and weather militated against the possibility of spotting practices. The commencement of the bombardment just two days after Ark Royal’s arrival reflected Carden’s concern that haste was essential if the defences were to be neutralised before they could be reinforced. Contrary to Marder’s assertion that seventeen days were available for spotting tests, only four days in February - the 17th, the 19th, the 25th, and the 26th - produced weather conditions which were conducive to flying.

36 Ibid., p.5.
37 ‘Reports From HMS Ark Royal’.
Finally, and most importantly, while Marder accepts that seaplanes had disadvantages, he "fails to appreciate their frequency and severity." The high incidence of engine failure, and the frequent inability of Sopwith and Wight types to overcome unsuitable sea conditions, led to instances when a staggering 75% of attempted flights were unsuccessful.

The Minefield Menace

The original naval plan - which intended that battleship fire should silence the forts and minefield batteries before an attempt was made to sweep the minefields - was reversed when the ships' fire in conjunction with seaplane spotting proved a failure. Hence, following the bombardment of 25 February, the minesweepers were given the job of clearing the minefields by night sweeping, which would then allow the battleships to smash the forts at close range.

The minefields assumed the central role in protecting the Dardanelles. At the end of February 1915, it constituted five lines of mines across the Narrows and a further five across the Straits just below Kephez Point (lines 6-10, known as the Kephez minefield). On 8 March, the pivotal Number 11 line was laid in Eren Keui Bay.

As a consequence of two handicaps - the unsuitability of the minesweepers for the task, and the unjustified expectation that trawler crews should clear the minefields under intermittent gunfire - the minefield defences remained largely intact. Vice-Admiral de Robeck, who assumed command of the Eastern Mediterranean Squadron on 16 March following the sudden illness of Admiral Carden, had no option but to revert to the Admiralty's original strategy for the planned assault of 18 March. The object was to

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38 Layman, 'Over the Wine-Dark Sea', p.10.
silence simultaneously the Narrow's forts and the batteries protecting the Kephez minefield so as to enable the trawlers to sweep a passage through the minefields:

It is not expected to destroy the forts ... but it is expected that ships will dominate the forts to such an extent as to make it impossible for them to interfere with the sweeping operations.\(^\text{39}\)

Churchill later wrote that it was essential to the plan's success that the battleships should only fight and manoeuvre in areas which had been swept and declared free of mines. Line 11 of the minefields in Eren Keui Bay, however, had not been swept to any adequate degree "and this fact led directly to the losses in the attack of March 18, and indirectly to the abandonment of the whole naval enterprise."\(^\text{40}\) The architect responsible for Line 11 was the Turkish mining expert Lieutenant Colonel Gheel. Seeing that the British and French battleships inside the Straits sometimes manoeuvred off Eren Keui Bay, he correctly gambled that a line of mines moored there might pay handsome dividends. On the night of 8 March the Turkish steamer Nousret laid a new line of twenty mines parallel to the shore. Marder noted that four of the mines were destroyed by sweepers on the nights of the 15th and 16th. However, perhaps because this line was moored at right angles to all the other lines, the commander of the minesweepers declared the waters clear on the morning of the 18th.

The failure to detect Line 11 of the minefields in Eren Keui Bay was by no means the fault of the minesweepers alone. Minefield reconnaissance by Ark Royal's seaplanes were carried out daily between 13 and 17 March, inclusive, and none of these flights reported mines much west of Kephez Bay. Indeed, the system of training devised for this work, while visionary, was inherently flawed in an important respect. Prior to setting out on their mine-searching missions, the seaplane crews tested the visibility of mines - moored near the carrier's anchorage at depths of five, ten, and eighteen feet -

\(^{39}\) Marder, p.15.

\(^{40}\) Churchill, p.224.
from altitudes of 1,000, 1,500, and 3,000 feet. While, according to the official history, the mines were "seen each time quite clearly", Clark-Hall has written that "conditions of light and sea were very favourable."\(^{41}\) It was, in fact, the variations which were apparent between practice and operational conditions that proved the essential flaw in the scheme. Under certain limited conditions - clarity of water, colour of the mines and the ocean floor - the mines were indeed visible. It was a very different thing to be reliably certain that there are none over a wide stretch of sea, especially in waters such as the straits, disturbed by swift-moving currents.\(^{42}\)

If, as Marder suspects, the trial was carried out on mines moored on a sandy sea floor, those laid in Eren Keui Bay, with its strong current and rocky, discoloured bottom, would not have shown up.

The seaplane's minefield reconnaissances, which reported up to 17 March that Eren Keui Bay was free of mines, had in any case come to be relied on. The consequences were catastrophic.

On the morning of 18 March, fourteen battleships and the Queen Elizabeth and Inflexible moved up the Straits and attacked the Narrow’s forts with direct fire. It was not until one hour after the bombardment commenced that a Wight, crewed by Flight Lieutenant R. Whitehead and Lieutenant L. Strain, managed to take off in order to observe the progress of the ships’ fire. They reported by W/T that Forts 13, 16, 17 and 19 were firing rapidly, and that 13, 17 and 19 were being repeatedly hit. A very different report came from Flight Lieutenant Douglas and Petty Officer Brady, who had got aloft in a Sopwith to relieve Whitehead and Strain. Considerable damage to Fort No. 20 was observed, and only No. 19, south of Chanak, was resisting with determined fire.

\(^{41}\) Layman, 'Ark Royal-Pegasus', p.98.

\(^{42}\) Jones, p.19.
Only four of the nineteen heavy guns were, in fact, put out of action by battleship fire - and then only temporarily. Vice-Admiral de Robeck, in his Report of Operations, wrote that:

although the principal forts remained silent for considerable intervals, only a portion of their armaments can be considered disabled.\textsuperscript{43}

Different sources have suggested that the Turks ceased firing owing to a shortage of ammunition, or to clear the dirt and grit from the guns.

At 4:11 pm, Inflexible, after being damaged by gunfire, struck a mine that sent her crawling back to Tenedos. Three minutes later, Irresistible hit a mine and had to be abandoned. The same fate fell upon Ocean at 6:05 pm. The French battleship Bouvet had been the first and costliest victim of the minefield in Eren Keui Bay, when she went down with a loss of over 600 lives.

Profoundly unsettled by the appearance of these mines in an area in which it was believed was clear of them, Vice-Admiral de Robeck decided that the engagement should be broken off. In his subsequent report to the Admiralty on the 18th, Ark Royal's seaplanes did not escape attention:

All ships were manoeuvred in area well below reported minefield. Minesweepers had swept area on several occasions and reported it clear, and seaplanes had not located any mines in it.\textsuperscript{44}

\textsuperscript{43} Marder, p.16.

\textsuperscript{44} Churchill, p.230.
Army's Involvement

Initially, de Robeck seemed undisturbed by the disaster on the 18th. On 20 March he informed Churchill that: "It is hoped to be in a position to commence operations in three or four days."45 A marked turn-around in de Robeck's thinking, however, culminated on the 22nd when he was convinced that a purely naval operation was no longer feasible. Perhaps three factors brought pressure to bear on de Robeck's re-evaluation. The least important consideration was the loss of nearly one-third of his battleships, albeit "intensified by his remaining in the dark as to the precise cause."46

An influence not to be underestimated was the recent availability of troops and the pressure to employ these troops by the army. On 11 March, General Sir Ian Hamilton was appointed to command a military force "to be available in case of necessity to support the naval attack on the Dardanelles."47 Immediately following the failure of the naval bombardment of the 18th, Hamilton perceived an increasingly dominant role to be assumed by the army. He reported to Kitchener from the Dardanelles on 19 March:

I am being most reluctantly driven towards the conclusion that the Dardanelles are less likely to be forced by battleships than at one time seemed probable.... The Army's share will not be a case of landing parties for the destruction of forts, etc., but rather a case of a deliberate and progressive military operation carried out in force in order to make good the passage of the Navy.48

The army's willingness to become involved offered a means of overcoming the dominating consideration in de Robeck's mind. This was his belief that if he reached the

46 Marder, p. 19.
47 Jones, p.22.
Sea of Marmara without the army in control of the Peninsula, his lines of communication would be vulnerable. Hamilton’s assurance at a conference on the 22nd that the army was prepared to land and dominate the forts on both sides of the Straits put de Robeck’s mind at rest.

**Final Operations of the Ark Royal**

While preparations were being made for a troop landing on Gallipoli Peninsula, the Ark Royal “reaping the advantages of seapower, went wandering off ... to distant coasts.”

49 This decision was largely influenced by the arrival of landplanes in the form of 3 Squadron, RNAS, which being necessarily restricted in the distances it could operate, took over the reconnaissance of the Straits. From 12-15 April, Ark Royal accompanied a fleet of battleships to the Gulf of Xeros, where her seaplanes were to direct fire on an ammunition dump near the village of Taifur Keui. On the 15th Lord Nelson’s fire was successfully ranged on the dump, her last shot “hitting the northern section of the target and causing a considerable volume of white smoke.”

50 On the same day, a Sopwith and a Wight tried unsuccessfully to drop bombs on the Turkish battleship Turgud Reis, and on six supply columns seen moving along the coast road towards Bulair. This was the final operation undertaken by Ark Royal’s seaplanes until the ill-fated Gallipoli ground assault on 25 April.

The Ark Royal was assigned to support the troop-landings at the Anzac beachhead “primarily by scouting out enemy artillery positions.”

51 Even in this limited role, the seaplanes were faced with insurmountable difficulties. Observers struggled to locate enemy battery positions in the scrub-covered terrain, and when the pilots chose to

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50 ‘Reports from HMS Ark Royal’.

51 Layman, ‘Over the Wine-Dark Sea’, p.15.
descend to obtain a better view, the slow and structurally-large seaplanes proved susceptible to Turkish ground-fire. Their presence, however, did prove advantageous in an important and unforeseen manner:

The seaplane observers had the greatest difficulty in finding the Turkish batteries, well concealed in the scrub, and so jealous were battery commanders to keep the secret of their positions that, when aircraft were near them, they held back their fire. General Birdwood [Commander of the Anzac force] was quick to take advantage of their sensitivity, and asked that as far as possible the seaplanes should keep in the area of the lines, especially while movements of troops were being made. This was done and the volume of fire kept down, thus easing to some small extent the pressure on the infantry.\[^{52}\]

Their sojourns over the Turkish batteries resulted in the loss of a Wight and a Short, both through ground-fire.

The appearance in the Aegean of German submarine \textit{U-21} at the end of May 1915 signaled the end of \textit{Ark Royal}'s sea-going career. The absence at that stage of the war of any effective anti-submarine measures, together with \textit{Ark Royal}'s slow speed, enforced her retirement - along with the bulk of the Allied heavy vessels - to Imbros. Utilised as a depot ship for newly-arrived aircraft, \textit{Ark Royal}'s seaplanes nevertheless continued for five months to fly reconnaissance, spotting, photographic, and bombing missions.

\textit{Ark Royal} failed in her assigned roles, to spot for indirect fire from ships in order to overcome the high-angle artillery of Turkish forts, and to undertake the detection of mines, because too much confidence was placed in her still experimental seaplanes. To be sure, bombardment utilising aerial observation was a unique development. The basis for the procedure's success lay in mechanically reliable aircraft that could operate under a range of weather and sea conditions. It was equally important that they be able to communicate effectively with the bombarding ships. The seaplane types given to

\[^{52}\] Jones, p.46.
Clark-Hall failed on all counts. They were mechanically fickle, could operate only from water that was neither too rough nor too smooth, and their W/T malfunctioned on several crucial occasions. At times these difficulties were accentuated by Admiralty decisions that were, at best, not thought through. Marder has shown that on one occasion flying hours were squandered to the detriment of the pivotal bombardment on 5 March. Perhaps also, we should question de Robeck's unqualified acceptance of information gathered from seaplane minefield reconnaissances that were based upon faulty trials. In a sense, the pressure of war had stimulated a perceived utilisation of the seaplane in a manner that neither the manufacturers nor the Admiralty were prepared for.
Figure 1.1 Map illustrating the Gallipoli Peninsula and the Asiatic Mainland. Note the five landing beaches employed by the 29th Division on 25 April 1915, and the Turkish minefield defences.
1. HMS Ark Royal at the Dardanelles in early 1915.

2. A Short being hoisted out from Ark Royal.
CHAPTER III
East Indies and Egypt Seaplane Squadron:
Operations, January 1916 - November 1917

On 7 January 1916 the seaplane carrier Ben-my-Chree ("Woman of my Heart" to the Manx people) transferred from the Aegean to the Eastern Mediterranean to form part of the East Indies and Egypt Seaplane Squadron (EI and ESS), then being constituted at Port Said under Commander C. L’Estrange Malone. Following five years of service as flagship of the Isle of Man Steam Packet Company’s fleet, Ben-my-Chree had undergone conversion to an aviation vessel between January and March 1915. This necessitated the replacement of her aft passenger accommodation with a hangar that could house three large and two small seaplanes. Ordered to the Aegean as a replacement for Ark Royal (with a speed in excess of 26 knots, Ben-my-Chree was considered less susceptible to submarine attack), her seaplanes throughout the second half of 1915 provided air support for the British and Anzac forces competing for the Gallipoli Peninsula.

Following the Allied evacuation of the Suvla and Helles beachheads in December 1915 and January 1916, Ben-my-Chree was directed to Port Said to supplement the EI and ESS’s two seaplane carriers, Anne and Raven II. Seized in August 1914, and converted to accommodate one or two seaplanes, the two ex-German merchant vessels had been cruising the Eastern Mediterranean since January 1915 landing and extracting spies, and reconnoitring Turkish communications and troop movements.

By mid-February 1916, the squadron’s administrative and maintenance centre on one of the islands in Port Said Harbour was rapidly taking shape. Flight Lieutenant G. Dacre, one of Ben-my-Chree’s Short Type 184 pilots, was occupied at the seaplane station from 21-24 February. The following extract appeared in his diary:

I busied myself at the new air base where we are getting things into order. Rigging masts for wireless, 2 aeroplane tents, one for the men’s mess, one for officer’s mess, and 5 bell tents were erected. A dark room is being
erected, galley, and a motor ambulance and a motor travelling workshop have been carted to the Island.¹

By 22 February a field bakery had also been established, and work was underway to modify a shed enabling it to accommodate four Short seaplanes. The enormous seaplane crates were then modified for use as living quarters. On 3 March Dacre boasted that his hut (half a seaplane crate) was “rapidly becoming a palacial residence.”²

A New Ideology: Arrival of Commander Charles Samson

“What I noticed particularly was that, whenever there was some extra dangerous flight to be made, or perhaps an extra heavy sea running in which there was a good chance of the plane being smashed after being hoisted out from the ship, the O.C. himself invariably went as pilot, instead of sending one of his officers, which really he should have done.” Captain L. Weldon, and his first impression of new commander, Charles Samson.

Initially, under the command of Malone, the squadron’s work was limited to carrying out reconnaissance for General Maxwell’s and Lieutenant-General Sir Archibald Murray’s Egyptian Expeditionary Force. Dacre noted, albeit bluntly:

The whole show out here depends on our reconnaissance, and the only way to know what the Turks are up to is to find out by either unreliable agents or by our reconnaissance.³

Indeed, from January 1916 reports of a substantial build-up of Turco-German forces in Southern Palestine, together with observations of a steady advance through

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Beersheba and south of Auja of the rail supply line, revealed that the Turkish High Command were preparing for a second raid on the Suez Canal.

Commander Charles Samson, previously commanding officer of RNAS 3 Wing, arrived at Port Said on 14 May 1916 to assume command of the EI and ESS. He brought with him a new offensive spirit which he fought with authorities to manifest in the activities of the squadron. Samson preached the values of extended reconnaissance and offensive operations along the Turkish lines of communication, from the Gulf of Alexandretta in the north to the Gulf of Aden in the south. It is important to remember that much of the Turkish supply line (running from Constantinople via Adana and Chicaldere to Aleppo, and thence south to Beersheba) lay beyond the reach of the land machines of the RFC. The railway, along with the encampments it served, was however well within range of the squadron's seaplanes.

Samson's job description necessitated that he work for the navy as well as the army. Initially, naval requirements were meagre, but with the outbreak of the Arab Revolt in June 1916 operations in the Red Sea increased considerably. The EI and ESS was destined to play an important role in helping the revolt's architects, Sherif Feisal and T.E. Lawrence, gain a foothold on the eastern Red Sea coast in readiness for further operations centring on the Hejaz Railway. A further sphere of activity was to assist the French Eastern Mediterranean Fleet, commanded by Admiral de Spitz, to destroy Turkish supply dhows (which, sailing up and down the Syrian coast helped re-supply the Turkish army in Sinai), and in their operations against German submarines. In fact, there were few enemy submarines active in the area.

Dacre has noted that by 3 March nine seaplanes were present at Port Said - seven of which had arrived factory fresh during the previous ten days. They consisted of two types: the Short 184 was a two-seater, powered by a 225-h.p. Sunbeam engine, and armed with a Lewis machine-gun. The Sopwith Schneider was a single-seater with a 100-h.p. Gnome engine. Anne, however, continued to operate French Nieuport VI
seaplanes until late April. The ship’s commanding officer, Captain Weldon, did not see eye to eye with Malone and by mutual agreement Weldon was appointed Intelligence Officer attached to the French seaplane unit, L' Aviation Maritime Francaise, under the orders of Captain de L' Escaille.

On his arrival in mid-May, Samson found that the squadron’s machines were deficient in both number and in condition. He immediately sent off a telegram requesting reinforcements, which he has stated were duly dispatched by the Admiralty. By 19 May, two Sopwith Baby floatplanes, and an additional two Sopwith Schneiders and Short 184’s had made their first appearance on Ben-my-Chree’s foredeck.

Samson, fully aware of the dangers posed to his ship by the growing enemy aircraft and submarine menace, also took steps to increase Ben-my-Chree’s anti-aircraft defences and the efficiency in the handling of her seaplanes. The EI and ESS’s first encounter with hostile aircraft in Southern Palestine occurred on 16 April 1916. Off Wadi Gaza, Anne and her anti-submarine escort, French Torpedo boat No.250, were bombed and strafed from 2,000 feet by two German landplanes. Neither ship was equipped with anti-aircraft guns, but one round from Anne’s 12-pounder was fired after about half an hour to hasten the enemy’s departure. Nine days later, Flight Sub-Lieutenant R. Clifford, whilst reconnoitring enemy troop movements in an unarmed Schneider near El Arish, noticed a German two-seater astern at 5,000 feet and approximately six miles distant. With a side arm as his only defence, Clifford changed course to seaward and made for the comparative safety of Raven II. The enemy machine gave chase and for fifteen minutes harried Clifford and the low-performance Schneider with fire from a machine-gun mounted in the rear cockpit. A combination of Clifford’s evasive skills and poor shooting ensured that neither the pilot nor his aircraft suffered harm.

These introductory engagements coincided with the arrival in March and April 1916 of the German aviation unit Fliegerabteilung 300 Pasha. This unit, put at the disposal of Turkey for the second raid on the Suez Canal, was equipped with fourteen
high-performance Rumpler C-type two-seater reconnaissance biplanes and two parasol-type Pfalz fighters. Based at Beersheba, with a forward detachment of two machines at El Arish, the unit sought strenuously to oppose the work of the EI and ESS.

In an attempt to counteract the increase in enemy air activity, Samson had a 12-pounder, a pom-pom, and a 3-pounder added to *Ben-my-Chree’s* anti-aircraft armament. *Anne*, also in May, had her 12-pounder modified to allow it to be used against the German Rumpler and Pfalz aircraft.

In the scathing opinion of Captain J. Wedgwood-Benn, Samson’s regular aerial observer, “neither the Navy nor the Army had anything like a true appreciation of what Air Power might achieve in the war against the Turks.” Without a navy, and having at their disposal few aircraft, the Turks “were therefore unable to defend their coastline of thousands of miles, assailable at every point by seaplanes.” Wedgwood-Benn lamented that the poorly-resourced seaplane squadron, “without acknowledged parentage”, occupied “no very definite place in anyone’s schemes.” Indeed, Samson, taking the initiative, frequently sought to proffer schemes for the squadron’s employment: “The Admiral [Wemyss] at first was extremely doubtful of the efficiency of aerial bombing”, Samson wrote, “but by steady persistence, and by producing photographic results of our work, I gradually converted him, if not into a whole-hearted believer, yet into an impartial accepter of the proceedings.” By contrast, Samson could count on the enthusiastic support of Admiral de Spitz, who it invariably fell upon to provide ships for anti-submarine escort.

The wider offensive role pushed for by Samson was evident during *Ben-my-Chree’s* first period of activity, between 18 and 27 May 1916. Singular

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accomplishments, however, were offset by a veritable host of difficulties - the fractious engines of the seaplanes, rough seas, and enemy air activity - all of which served to place strict limitations on the squadron’s performance throughout our period. On the morning of 18 May, Samson was hoisted out in a W/T equipped Short 184 to direct the fire of monitors M15 and M26 on to the forts and aerodrome at El Arish. The realisation that the squadron’s underpowered and inadequately-armed experimental Short, Schneider, and Baby seaplanes were no match for the Rumpler and Pfalz machines of the Germans precipitated a new approach: the enemy’s aircraft would be dealt to before they left the ground. After spotting for six rounds, Samson was forced to return with an overheating engine, and his place was taken by two Babies. This was a common fault, especially with the Short’s unreliable Sunbeam engine. The torrid heat often caused the water in the radiator to boil, and the increasing engine temperature could prevent the machine from gaining sufficient altitude, or it might seize the engine altogether. On their return, Ben-my-Chree’s two Babies reported several air-directed hits on the fort and a hangar at El Arish.

Five days later, amidst very heavy seas and a stiff breeze, Samson teamed up with Wedgwood-Benn for the first time in an attempt to reconnoitre the Jaffa and Ramleh area. Expert opinion, which advised against sending a plane away in the conditions, was soon entirely vindicated: during one of the numerous attempts to get clear of the water, the Short’s floats smashed into a wave and collapsed. To Wedgwood-Benn’s disgust, “the whole seaplane suddenly dived, leaving the commanding officer and me floundering in the water.”6 The Short was unable to be salvaged.

On 27 May Samson and Wedgwood-Benn, in company with a Schneider piloted by Flight Sub-Lieutenant J. Bankes-Price, made a more successful attempt to reconnoitre Jaffa. A military post south of the town was attacked with two 65-lb. bombs and

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6 Wedgwood-Benn, p.86.
machine-gun fire. Bankes-Price flew on to Ramleh, where he dropped five 20-lb. bombs. Ben-my-Chree subsequently steamed south, and the day's hostilities were continued off Gaza, where Flight Lieutenant T. England dropped two 65-lb. bombs and one incendiary on a camp, and off El Arish. While the Short was away reconnoitring and dropping bombs on El Arish aerodrome and the camps, Ben-my-Chree was set upon by a cross-raiding machine from 300 Pasha. The German fliers dropped four bombs from 5,000 feet, two of which straddled the seaplane carrier; they then descended to 4,000 feet and strafed the ship with machine-gun fire.

**In the South of Arabia**

It being evident that there were no immediate plans for the utilisation of the squadron on the Sinai front, at the instigation of Samson Ben-my-Chree spent the second week of June in the Yemen. A Turkish force, commanded by Said Pasha, had occupied Lahej and was threatening the British and Indian troops garrisoning Aden, 25 miles to the south. Pasha's men, however, were cut off from the main body of Turkish troops, and for supplies had to depend largely on the goodwill of local Arab chiefs. Wedgwood-Benn has written that:

> The Arabs were not patient of the Turkish yoke, and would have been glad to throw it off if a suitable opportunity appeared to offer, which circumstance made it important for Said Pasha to keep up a strong show of authority.  

> Since the intense summer heat ruled out infantry operations, it was left to Samson and his seaplanes to weaken this authority and to keep the Turco-Arab alliance on shaky ground.

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7 Ibid., p.89.
Under the most adverse of flying conditions, Samson unleashed an intensive bombing offensive against camps at Lahej and Subar, and trench and gun sites at Darb, Waht and Fiyush. The only chance of being able to operate the three water-cooled Shorts was early in the morning or late in the afternoon: even then, hot weather caused turbulence problems and chronic engine overheating. On the morning of 9 June, Samson and Wedgwood-Benn were forced to curtail a flight after the Short’s radiator dried up completely. During five days operations, between 8 and 12 June, Ben-my-Chree’s seaplanes dropped three 112-lb., three 65-lb., seventeen 20-lb., and four 16-lb. bombs, killing over forty Turkish officers and men. The Shorts, generally unable to ascend above 1,500 feet without overheating, were frequently hit by field-gun fragments and rifle and machine-gun fire from the ground. “Far from constituting a serious menace to the invaders”, a contemporary military observer commented:

the improvised anti-aircraft defences became in Turkish hands a rather perilous weapon. Eight Turks were reported killed by one of their own shells, and one of the guns which had been put on the top of a palace fell through the roof.8

Ben-my-Chree then steamed westwards - destined to strike an important blow in support of the Arab Revolt - in full confidence that the will of Arabs to assist Turkish forces had been seriously eroded in the Yemen.

A Promising Beginning

“One evening, as I was standing on the bridge, a couple of bullets whizzed by close to my ear, and I heard a couple of bangs on shore, followed immediately by loud shouts for a boat. We sent a cutter, and brought off an Arab who had a message for me. I asked him why we had been fired at, and he replied simply that the shots had only been

8 C. Hughes, Above and Beyond Palestine: An Account of the work of the East Indies and Egypt Seaplane Squadron 1916-1918 (Ernest Benn, London, 1930) p.96.
intended to attract our attention. Nice people, the Arabs!" Weldon, aboard Anne, the Hejaz 1916.

On 5 June 1916 Sherif Hussein, Amir of Mecca, and his third son, Feisal, made the initial moves in their quest for an independent Hejaz when they led coordinated attacks on Mecca and Medina, respectively. As part of this opening offensive, Hussein also planned for 4,000 Harb warriors to capture the strategically important Red Sea port of Jiddah - gateway to the Moslem holy city of Mecca and to the entire Hejaz province. When Ben-my-Chree arrived off the coast of Jiddah on the morning of 15 June, the Arabs had for six days been held at bay by a Turkish force of 1,500, who were holding a perimeter of about half a mile wide around the town. A naval fleet, consisting of HMS Fox, HMS Perth, RIMS Hardinge, and RIMS Dufferin had for several days been frustrated in their attempt to bombard the Turkish trenches: the trenches were invisible from the ships, and because the Arabs objected to observers landing, accurate fire could not be attained. It was, in the words of Samson, "obviously a case for seaplanes."9

That evening, Samson and the Senior Naval Officer, Captain Boyle, arranged for three machines to carry out reconnaissance and bombing flights over the entrenched Turkish positions. Flight Lieutenant England, in the first Sopwith Schneider, was detailed to breach the east wall of the town with a 65-lb. bomb. It narrowly missed, and the Arab attack which the action had hoped to stimulate did not materialise. Flight Lieutenant J. Bankes-Price, in another Schneider, was more successful in his attack on the trenches south of Jiddah. He badly shook up the Turkish defenders, letting go from just 100 feet a 65-lb. bomb and then strafing until his ammunition had been exhausted.

Meanwhile, a Short flown by Samson with Wedgwood-Benn as observer flew over the town taking a series of photographs before attacking the northern trenches. Amidst

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9 Samson, p.312.
a furious volley of ground fire, Samson let go a 112-lb. bomb on two field guns, and then descended to enable Wedgwood-Benn to strafe the soldiers in the trenches with his Lewis gun. The Short - hardly a formidable target flying below 500 feet at 60 miles-per-hour - was frequently hit, and Samson himself was fortunate to escape serious injury when a bullet removed the heel of his right shoe. A severe blow to the engine, which caused it to vibrate badly, finally convinced the airmen to make for home. Subsequent inspection revealed that the propeller had been pierced twice, the elevator control wire was almost severed, and there were a further nine holes in the fuselage. Later in the evening, whilst the delighted crew of Ben-my-Chree formulated plans for the following morning, the 1,500 strong Turkish force decided that they had taken punishment enough. At dawn Jiddah hoisted the white ensign and surrendered to the Arabs. With the words, "probably the seaplanes decided the matter", Captain Boyle gave notification of both a decisive air result and a promising beginning to the Arab Revolt.\footnote{Ibid., p.314.}

Between 24 and 26 July Ben-my-Chree was off the Syrian-Palestine coast reconnoitring for the army the northern approaches to the Suez Canal (from El Shallal, Beersheba, and El Arish), and the environs of the Coast Road, between Bir El Mazar and Haifa, in an attempt to gauge Turkish preparations for a second attack on the Canal. During the afternoon of the 25th, three Turkish schooners suspected of carrying contraband were sighted, and the Ben-my-Chree, along with her French escort Arbalette, eagerly gave chase. Samson, seeing the sailing ships making for shore, sent away a seaplane to block their passage if possible by dropping bombs and by strafing. The largest of the targets, a red-painted schooner of 250 tons, was well-known to the squadron as a runner of contraband and its destruction had been specifically requested. One shell, fired across the schooner's bow, sent the crew sprawling towards their boats. As soon as they were clear, Samson opened fire: "The red schooner was evidently
carrying ammunition, as a big explosion resulted from the first shell that struck her."11 Between them, the Arbalette and Ben-my-Chree’s seaplane accounted for the two remaining schooners.

Sharing none of Ben-my-Chree’s success was Raven II. On 9 August she sailed with orders to spot for Monitor M21 on the defeated Romani forces who were retreating about Bir El-Mazar. Using 16-lb. bombs to mark the target for M21’s fire, Flight Lieutenant A. Clemson and Second Lieutenant K. Williams were over the troop concentrations for an hour frantically signalling to the monitor. Unfortunately, M21 failed to receive the signals, and managed only one round. Worse was to follow for the second Short, crewed by Flight Lieutenant J. Brooke and Flight Lieutenant D. Smith, which assumed the spotting duties. Just as the signal to commence fire was tapped out, a German aircraft emerged from underneath the Short and let fly with accurate bursts of machine-gun fire. The seaplane, in the words of Samson, “suffered severely”, receiving hits in the petrol tanks, the radiator and the floats, before the enemy sheered off.12 In sinking condition, the Short was in the process of being salvaged when a further two German machines appeared and dropped five bombs on Raven II and M21, fortunately without result.

Samson Targets Turkish Communications

“We all used to go up in our best coats with all badges of rank showing, and those who had them were very careful to wear their decorations. This, it was thought, would ensure at any rate courteous treatment from the Turk, whose reputation for being a gentleman appears to be based on his abstaining from ill-treating those who seem able or likely to retaliate.” Captain Weldon.

11 Hughes, p.64.
12 Samson, p.324.
An intensive period of operations, planned for 24-29 August, aimed to deliver a rapid series of attacks on enemy communications with their army on the Sinai front, and to reconnoitre the whole of the lines of approach from Adana. With enemy sea transport under the thumb-screw of the French navy (and more recently, suffering from the unwelcome attention of Ben-my-Chree), the Turkish army in Southern Palestine had to rely almost wholly for supplies and for reinforcements on the railway running from the north via Aleppo. For the EI and ESS, the most attractive means of interdicting the supply line was to attack the junction at El Afule. The station was a veritable hub of activity, serving the Turkish stronghold of Beersheba to the south, and providing access east and west - to Deraa (in the Hejaz) and Haifa (on the coast), respectively. Most importantly, being out of range of the landplanes of the RFC, El Afule could be approached by the squadron’s seaplanes through a narrow valley between the Carmel and Nazareth ranges. This meant a risky forty-mile inland flight amidst heavily-prepared anti-aircraft defences. A contemporary observer has noted:

Serious engine trouble ... whether accidental or caused by enemy action, meant almost certainly that the machine must come down on solid earth with only its floats and no such wheeled undercarriage as aeroplanes have to land upon.... if the machine did get badly hit, it was a poor outlook for both pilot and observer.\textsuperscript{13}

The two slower seaplane carriers, Anne and Raven II, left Port Said on the morning of 24 August, escorted by the French destroyer Hache and by the French trawler Paris II, respectively. The Ben-my-Chree, in company with Arbalette, sailed in the late afternoon, and all three EI and ESS ships rendezvoused off Haifa at dawn on the 25th. On a somewhat humorous note, it was customary for Ben-my-Chree’s brass band to perform a rendition of either “The Green Grass Grew all Round” or “Keep the Home Fires Burning” when the vessel passed HMS Hannibal - which apparently never went to sea.

\textsuperscript{13} Hughes, p.69.
Samson issued orders for Ben-my-Chree's three Shorts and two Schneiders to attack El Afule Station and rolling stock. The two Shorts and one Baby from Raven II were to bomb and strafe the main line three miles south of the junction. Anne, carrying one Short and one Schneider, was to attack the buildings and stores at the station. Once in the air, the ten seaplanes formed a starboard quarter line (a naval term requiring pilots to keep a straight line to the right and rear of the leading machine) off Samson's Short, and proceeded at varying altitudes inland. Throughout the twenty-minute flight the formation was subjected to heavy rifle, machine-gun and artillery fire: over El Afule, Wedgwood-Benn recalled that "something resembling a barrage was put up".  

On approaching El Afule, Raven II's three machines altered course and made off south in accordance with the plan. Ignorant of the flight's southern objective, a goods train in the station steamed off in the same direction, hoping to escape the impending air assault. Furnished with this most opportune of targets, the Baby and two Short seaplanes scored with their bombing runs two direct hits on the fleeing locomotives, and landed a further three bombs plumb on the line. Meanwhile, over the junction, Anne's two machines had commenced their attack on the station buildings, and in concert with Ben-my-Chree's flight, caused extensive damage to the permanent way and buildings with high explosive and incendiary bombs. Samson capped off what was an impressive display of low-level bombing when he neatly placed a 65-lb. bomb between two trains standing parallel to each other on a siding. In all, approximately 1,500 pounds of bombs had been dropped in the space of fifteen minutes. Of course, by modern standards this is a ridiculously small amount. But for the poor-performance seaplanes of that date - frail in construction, restricted in their bomb-carrying capacity, and equipped with only

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14 Wedgwood-Benn, pp.123-124.
rudimentary bombsights - the results were without precedent: the raid, it was reported, caused railway traffic to be suspended for five days.

The Trials of an Observer

Squadron Leader A.A. Walser, an observer with 3 Squadron, RNAS, in 1916, has noted that in his experience as both pilot and observer, the latter was “more trying to the nerves.”15 Wedgwood-Benn, who had the unenviable task of observing for the squadron’s temperamental commander, could no doubt relate to Walser’s judgement. With a multitude of tasks to perform in a restricted space, and generally unable to fulfill them all, Wedgwood-Benn frequently roused the ire of his commanding officer. “The wretched observer”, as Wedgwood-Benn wrote:

was accustomed to sit with his camera, note-book, map, Verey pistol, etc., scattered on the floor or in his lap; in addition to which he would perhaps have half-a-dozen 15-lb. bombs tied with string to the longerons or clamped with the rest of his ‘mixed bag’ on his knees. Samson, who had a real eagle-vision, was always pointing out this or that minute object to be noted and was subject to sudden spasms of desire for a bomb to be thrown (bomb sights were not heard of then) or a photograph to be taken. At first I would, in response to the multiple orders hurled at me, attempt to do all processes at once, but I soon learned that calm was necessary to prevent the bomb being launched complete with safety pin, so that it would never explode, the note being taken at the wrong place, or the photographic plate being exposed with the cap still left on the lens.16

Apparently, Wedgwood-Benn never flew in the squadron’s Schneiders. Contrary to his remark about the absence of bombsights, the Sopwith was equipped with a bomb-aiming aperture in the cockpit floor.

On the afternoon of the 25th, the squadron’s ships were off Askalon, whence attacks were to be carried out on a large camp at Bureir and the railway viaduct over the

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16 Wedgwood-Benn, p.124.
Wadi El Hesy, and a general reconnaissance made in the Gaza-Beersheba region. The raid, in which seven seaplanes participated, inflicted some casualties at the camp, and although the viaduct was not destroyed, serious damage was caused to the embankment and the line. The reconnaissance programme entailed making a survey of the permanent way, as it wound south towards Beersheba. The afternoon’s work was marred by the loss of Flight Lieutenant Dacre, arguably the squadron’s most accomplished pilot, after suffering engine failure on a flight to Bureir. Dacre survived the crash-landing, and spent many months as a prisoner of war.

On the 26th, the squadron’s sphere of activity shifted to enemy communications in the north. Arriving at dawn off Nahr El Kebir, a river mouth fifteen miles north of Tripoli, Ben-my-Chree’s two Shorts were hoisted out for a reconnaissance of the railway between Homs and Tripoli. In exceedingly poor weather conditions, Samson in the first machine failed to negotiate the Lebanon Mountains. Flight Commander England and Flight Lieutenant E. King, in the second Short, braved a strong head-wind, low cloud, and fierce rumours to reach Homs after a 45-mile flight. The reconnaissance, in Samson’s expert opinion, was one of the finest he had ever seen, and furthermore it procured important notes and photographs.

Anne, off Jaffa on the morning of the 26th, sent a Short away with orders to bomb Tul Keram and to survey the line running inland to Nablus. Flight Lieutenant Brooke, with Second Lieutenant Williams as observer, bombed Tul Keram Station from 5,200 feet and returned with intelligence regarded with extreme interest by Headquarters. C. Hughes, a military observer attached to the squadron, later commented that the reconnaissance revealed considerable railway construction activity, especially about Samaria. In the afternoon, Flight Lieutenant Brooke and Lieutenant Williams concluded Anne’s northern sojourn with a flight to the Turkish camp at Ramleh, where they dropped one 112-lb. and four 16-lb. bombs.
The Demise of Captain Woolley

Captain Weldon, commanding officer of Anne, was sad to hear on his return to the seaplane base that Captain Woolley, Military Intelligence Officer at Port Said, had been killed. Woolley’s demise, as told by Weldon, makes sadistically humorous reading:

For some time previously he [Woolley] had been making an elaborate plan to mislead the Turks into thinking that we meant to land a large force in Alexandretta Bay. To this end he had plastered the country in Cyprus with notices such as ‘This way to the camp’, ‘This way to the aerodrome’, Speed of army lorries not to exceed 8 miles an hour’, ‘Gun park’, etc.

Woolley also asked military personnel to spread the word that Cyprus was to be the jumping-off base for the landing at Alexandretta. “The idea”, Weldon continued:

was that the Turks would bring back some of their troops from the Sinai and Mesopotamian front to oppose our landing. Of course, very naturally the Turks mined Alexandretta Bay, and when Woolley went there in the Yacht [the Zaida] to see what they were doing, he promptly found out by being blown up.17

Interestingly, the scheme for severing Turkey’s main line of eastward communication by a landing in the Gulf of Alexandretta was proposed initially by T.E. Lawrence. His rationale was that a landing of Anzac forces in the early months of 1915 would have permitted the establishment of local Arab governments in the regions of Syria and Mesopotamia - thereby diverting to these areas the bulk of the Turkish armed forces. This, according to Lawrence, would have been the time for the Dardanelles naval effort. While the scheme was accepted, and actually ordered by Lord Kitchener, Secretary of State for War, long-standing French territorial interests in Syria/Palestine ultimately saw the project set aside.

Ben-my-Chree completed the combined programme on 29 August, when two Shorts were sent away off Karatash Burnu (the headland between Mersina and the Gulf of Alexandretta) with the object of making flights over Adana Station. One machine failed to gain sufficient height, but the second, piloted by Samson, battled treacherous air currents to reach the target at only 700 feet altitude. One 65-lb. bomb and one 16-lb. bomb were let go on a troop train in the station, and a similar load released at the railway bridge over the river. Unfortunately, the extraordinarily bumpy conditions militated against accuracy, and both sets of bombs missed.

To help in the training of observers, Samson wrote a number of useful notes. One of these warned the observer against worrying "the pilot on a bumpy day." 18 Seemingly unfazed either by this instruction, or by the bumps during the Adana flight, Wedgwood-Benn decided to share his observations with the commanding officer. Of this incident, Samson later wrote:

In the middle of one bad spasm, when, as the saying goes, 'all hands man the pump', Benn lent over me and shoved a bit of paper into my mouth. Thinking he had seen something highly important, I let go of the wheel with one hand, and after some struggle managed to spread out the paper and decipher what he had written. It read ... 'Aren't the shadows on the mountains lovely?' I never felt nearer killing anyone in my life. 19

The enemy lines of communication, thought inaccessible by the Turkish authorities, had from the extreme northern point of the railway at Adana down as far south as Rafa been for five intensive days reconnoitred, photographed, and bombed - more often than not to good effect. The Turks, for the first time doubtful of the security of their communications, were obliged to draw additional guns and troops away from their advanced positions in the south.


19 Samson, p.331.
In Support of the Arabs

Prior to leaving for operations off the Hejaz coast, Raven II was anchored at Port Said on 31 August when she was crippled by an air raid. Weldon, who at the time of the attack was on Anne’s bridge and just thirty yards distant from Raven II, saw three German aircraft fly over the harbour and drop twelve bombs. One bomb hit the water and burst twenty feet off Anne’s stern. A second bomb struck Raven II’s foredeck, blowing a large hole in her deck, badly damaging her seaplanes, and killing twelve of her native crew. With Raven II out of action, Anne was ordered to sail for the Red Sea that evening under the command of L’Estrange Malone. “He carried out most useful work with his seaplanes”, Samson noted, “and greatly assisted the Arab Army in their war against the Turks.”

The work of most service to the Arab cause occurred whilst Anne was off Wejh, between 13 and 16 September. The Turkish-held port-town of Wejh, situated 150 miles south of the Gulf of Akaba, was important as a ready point of access to the Hejaz Railway. At dawn on the 13th Anne sent away a Short, crewed by Flight Sub-Lieutenant H. Smith and Second Lieutenant Williams, to spot for the bombardment of Wejh by Fox and Hardinge. After two hours they were replaced by Flight Lieutenant A. Clemson and Captain V. Millard, who performed a similar task. At daybreak, 14 September, Clemson and Millard were again sent away and reported that the town was deserted, but nevertheless Fox continued the bombardment all morning. Further reconnaissance flights over Wejh on the 15th and 16th confirmed that the Turkish force had been withdrawn.

Raven II, her bomb damage now repaired, arrived at the friendly Red Sea port of Rabegh on 26 October to relieve Anne. Raven II hoisted aboard both of Anne’s Short 184’s and after a brief return to Port Said proceeded under Captain Boyle’s orders to

20 Ibid., p.333.
Sherm Yembo, some 200 miles south of Wejh. The garrison port of Yembo, where Raven II remained for the first two weeks of December, had surrendered to a local Arab revolt at the end of July 1916. By November, it was operational base to Feisal (with a variable force of 2-8,000) and his younger brother, Zeid.

Preparatory to the Sherifan’s plans for an extension of the Arab Revolt northwards to Wejh, it was deemed necessary to consolidate the Arab position in the hills west of Medina. Feisal and a large part of his army were to trek northwards from Wadi Safra to Wadi Yembo to take up a new position at Kheif Hussein. Under Zeid, the remainder of the force was to hole Bir Said and protect the route from Wadi Safra to Yembo. These moves would prevent any Turkish advance from Medina towards Yembo, Rabegh, or while it was being moved on, Wejh.

At the beginning of December 1916, on his second visit to the Hejaz, T.E. Lawrence took up a temporary liaison posting at Yembo. To his dismay he found on arrival at Nakhl Mubarak on 2 December that the Sherifan plan to strengthen the Arab front in the hills west of Medina had failed miserably, and as a result the Arab Revolt in its entirety was teetering on collapse. The Arab forces under Zeid had been out-maneuvered in the Wadi Safra by a Turkish mounted patrol. Hearing news of the enemy in their rear, Zeid’s men fled for Yembo. The astonished Turks occupied Hamra and Bir Said unopposed. While Feisal struggled in vain to plug the breach at Nakhl Mubarak (the only obstacle to a direct Turkish advance from Wadi Safra to Yembo), Lawrence returned to Yembo so that he could organise the port’s defence with Captain Boyle, Senior Naval Officer, Red Sea. Boyle, who had fortunately arrived in Yembo aboard HMS Suva, set about obtaining for Lawrence added firepower in the form of warships, and air support, to reconnoitre the area around Wadi Safra and Bir Said. The Turks, meanwhile, had thrown a strong force against Nakhl Mubarak, and by the morning of 9 December the remnants of Feisal’s army - approximately 1,500 men - had retired on Yembo. Boyle’s five vessels, including the monitor M31 and Raven II, formed the only serious defence against a Turkish advance on Yembo or Rabegh.
Boyle arranged for Raven II’s two Shorts to bomb the Turkish positions inland, and to help with direction the pilots were provided with rough maps of the area sketched by Lawrence. On 7 December a Turkish force of 400 men was discovered entrenched 24 miles north-east of Yembo (probably at Nakhl Mubarak). In the face of heavy ground fire, both seaplanes attacked and dropped 20 bombs. During the 8th, 9th, and 10th, daily reconnaissances were combined with two bombing attacks on a camp in the foothills east of Yembo.

On the night of 11 December, the Turks came closest to launching an attack on the port. This incident was reported by Sir Ronald Storrs, Oriental Secretary in Cairo, and has been quoted in a recent biography of Lawrence:

the Turks were within fifteen miles of the town, and might have attacked that very night. Monitor M31 ... was standing close in to bombard them in case of necessity. The aircraft vessel Raven [II] was at Sherm Yembo and the seaplanes had been quite recently bombing the Turks.... By the 12th there was a regular panic ashore, and many notables including Feisal had boarded HMS Hardinge.21

In the event, the Turkish force lost its nerve. Confronted on that night by the blaze of lighted ships in the harbour, the eerie beams of the searchlights revealing several miles of openess that would have to be traversed, and the prospect of naval artillery, the Hejaz Expeditionary Force turned back; “and that night”, in Lawrence’s opinion, “the Turks lost their war.”22 Until 16 December, when aerial reconnaissance revealed a Turkish withdrawal from the approaches to Yembo, both of Raven II’s Shorts maintained reconnaissance and bombing flights on inland targets.


During her return to Port Said, Raven II stopped at dawn on the 19th off Wejh. The port’s Turkish occupiers, who three months earlier had been the target of the air-directed fire of Fox and Hardinge, were dealt a reminder by Raven II’s Shorts that Wejh was still very much part of Arab plans. In an attack lasting four hours, six sorties were flown and the substantial total of nine 65-lb. and fifty 16-lb. bombs were dropped on the fort and an entrenched camp one mile north of the town.

El Arish: The ‘Hun’s Nest’

Conscious of the increased activity of German aeroplanes operating from the airfield’s at Ramleh and El Arish, Samson began training his pilots to fly in fighting formations whereby each reconnoitring or spotting Short was to be escorted by two Sopwiths. Samson realised that, singly, neither type of seaplane could match it with a high performance German machine. However, in a strong, well-drilled formation there was at least a possibility of being able to operate in enemy danger-zones. El Arish, described by Flight Lieutenant Dacre in July 1916 as “the Hun’s nest which is the worst part of our work”, was the focus of the air-directed fire of Espiegle and monitors M15 and M31 on 17 September. 23 Samson’s request that Ben-my-Chree’s seaplanes concentrate on one target, thus providing better protection for the Shorts, was over-ruled, and he was ordered to divide his small force into two parts and spot simultaneously for targets ten miles apart.

‘A’ Flight (a Short crewed by Flight Lieutenant A. Maskell and Second Lieutenant J. Kerry, and escorted by a Baby flown by Flight Lieutenant Bankes-Price, and a Schneider piloted by Second Lieutenant A. Nightingale) was to spot for the monitors at El Arish. ‘B’ Flight, unable to find any targets of worth, turned to reinforce those spotting for the monitors. Second Lieutenant W. Man, in a Schneider, suffered engine

23 Cronin, p.332.
trouble and on touch-down collapsed the under-carriage. Man was picked up by a trawler, but the Schneider sank. Samson, finding that the monitors were not firing, flew inland to search for ‘A’ Flight, but returned to the ship having seen nothing.

Flight Lieutenant Maskell’s flight had spotted for just one round when it was attacked by a German aeroplane, which separated the Short from its two escorts. Bankes-Price attempted to engage the enemy but his Baby, for no apparent reason, burst into flames and the pilot was killed after he jumped to escape the inferno. Second Lieutenant Nightingale was soon forced to alight after the enemy’s fire shattered the Schneider’s fuel tank. Flight Lieutenant Maskell, by skillful flying, managed to get in position below the German aircraft, and the observer got in a long and accurate burst from the Short’s Lewis gun before the enemy turned for home. Three more German aeroplanes, meanwhile, had appeared over Ben-my-Chree, dropping three bombs. Samson, in a despondent frame of mind, left for Port Said feeling that two seaplanes had been lost and his best Sopwith pilot sacrificed in an engagement that need not have produced such a rout. With no work to do, and very few seaplanes to do it with, Ben-my-Chree remained at Port Said for the next six weeks.

**Chicaldere Bridge**

The Turkish forces in Palestine/Syria, and in Mesopotamia, depended for supplies and reinforcements on the railway running south and east from Aleppo. But to reach Aleppo they had first to travel the Asia Minor railway between Tarsus and Alexandretta. On either side of the Cape of Karatash Burnu the rivers Jeihan and Seihan flowed into the sea, and across these two rivers by long girder bridges passed the railway from Tarsus to Alexandretta. Samson, who had for some time been endeavouring to gain permission to attack the railway bridge at Chicaldere, finally received the go-ahead on 24 December, and two days later Ben-my-Chree sailed to rendezvous in the Gulf of Alexandretta with Raven II.
The attack on Chicaldere bridge was carried out in three phases. In the first phase Ben-my-Chree hoisted out a Short 184 (crewed by Second Lieutenant Smith and Wedgwood-Benn), two Schneiders (piloted by Samson and Flight Lieutenant A. Clemson), and a Baby (flown by Flight Lieutenant J. Brooke) to bomb the bridge and to engage any anti-aircraft defences. The two-seater dropped one 65-lb. bomb at the bridge and two 16-lb. bombs at a moving train, but all three bombs failed to explode. Smith then positioned the Short to within a few hundred feet of the bridge’s guard, who promptly fled under a hail of incendiaries from Wedgwood-Benn’s Lewis gun. The Schneiders and the Baby had an undisturbed approach to the bridge, obtaining one direct hit and causing significant damage to the embankment. The second phase, involving two Shorts from Raven II, scored a further hit. Finally, in the third phase, Second Lieutenant F. Henderson in one of Ben-my-Chree’s Schneiders secured direct hits with both his 16-lb. bombs. Damage to the single lines of railway had been considerable, and reports later showed that the bridge had been put out of action for one week.

In spite of two raids on what was undoubtedly a vital link in the Turkish communications (on 20 August 1915 three seaplanes from Raven II bombed Chicaldere bridge with unknown results) Turkish authorities had made negligible progress in strengthening the bridge’s anti-aircraft defences. This realisation led Wedgwood-Benn to conclude in a broader context that Allied commanders “overlooked the fact that really effective air warfare was a thing the Turks were unprepared to meet.” Further to his argument, Wedgwood-Benn has written:

had the Naval aircraft in the Mediterranean been properly organised under some general plan so that a considerable force could have been concentrated at a given point ... the Turk’s task of reinforcing and supplying their armies, or indeed maintaining any proper communication with Constantinople, would have been rendered very difficult.24

24 Wedgwood-Benn, p.142.
Wedgwood-Benn blames inadequate organisation for the absence of a concentrated air offensive. However, the workings of the EI and ESS - rightly or wrongly - was not a priority for Middle East commanders. The Allied policy throughout 1915 and 1916 was to hold the enemy: little thought had yet been given to winning the territories of Syria and Palestine by a northward advance. To achieve this goal, authorities looked predominately to the EEF. The EI and ESS had proven its worth in reconnaissance duties especially, but authorities were hesitant to entrust the still experimental seaplanes with a wider role. The meagre resources devoted to the seaplane squadron reflected the dominant attitude that it was up to the army to play the central role in the defence of the Suez Canal.

A change of attitude may have been justified after Samson, with only limited resources, began to obtain significant results with his sustained offensive against Turkish communications. Samson showed that a viable alternative to a purely ground defence was to employ seaplanes to sever the enemy’s lifeline with Constantinople - the railway nexus. The feeble status of Turkish anti-aircraft defences, witnessed for example at Chicaldere, suggested that the railway’s defenders were surprised that aircraft could have sufficient range to reach inland targets.

**Loss of the Ben-my-Chree**

"The ship’s company was split up between the airmen and the seamen. It is surprising, although we were a naval unit, how distinct, even divisive, was the class-consciousness of these two groups; though nothing in the least disturbed the magnificent esprit de corps which made the old Ben-my-Chree an imperishable memory for those who ever had the privilege of sailing in her." Captain J. Wedgwood-Benn.

Any impetus for the EI and ESS to further expand its interdiction campaign was lost when Ben-my-Chree became the prized victim of Turkish land artillery. During the afternoon of 9 January 1917, while anchored in Castelorizo Harbour (about 300 miles
west of the Gulf of Alexandretta), there was an explosion fifteen yards off Ben-my-Chree’s port side. It was initially thought that the ship was under air attack, but Samson soon realised that she was being shelled from the mainland - in fact from a battery which Wedgwood-Benn and Lieutenant P. Woodland had failed to locate on 4 November the previous year. A disconsolate Wedgwood-Benn looked on as a barrage of 6-inch and 17-pounder shells rained down on the hapless vessel:

We were, of course, an actual ‘sitter’ for the Turks. Direction and range offered no difficulty to their gunners; they could see us and our position relative to the town and could measure us off to a millimetre, and shoot simply from the map.25

By contrast, Ben-my-Chree’s gunners could do nothing given that the enemy was found to be firing from a position protected by the heights of the hills and at 8,000 yards range. The third round started a petrol fire in the hangar which was soon out of control, and as further hits destroyed the steering gear and made the engine room untenable, the order was given to abandon ship. The crew left in relative calm, most in the remaining boats, while some chose to swim the fifty yards to shore. One crew member, it is interesting to note, refused to budge from the ship’s sick bay, thinking it was a sanctuary where, according to the rules of the Hague Convention, he was immune from enemy attack! In what was a sad and undignified ending to an exemplary civil and military career, Ben-my-Chree’s charred and blackened hulk lay partially submerged in Castelorizo Harbour for the remainder of the war.

The Capture of Wejh

During the final days of 1916, Feisal and Lawrence conceived of a plan to attack the Turkish lines of communication. If the port of Wejh could be captured the Arab Revolt would be extended into the Northern Hejaz. Moreover, Wejh lay north-west of

25 Ibid., p.147.
Turkish-held Medina: a large scale offensive against the railway might sever Medina’s lifeline with Turkish occupied Palestine/Syria. In accordance with the plan, Boyle arranged naval support for Feisal: 450 Arabs were to be put aboard HMS Hardinge and landed north of the port. Their role was to prevent the Turks escaping northwards while Feisal’s 10,000-strong force attacked from the south. Meanwhile, Fox, Espiegle, and Hardinge were to open proceedings by bombarding Wejh, with Anne’s seaplanes spotting the fall of shot.

On the morning of 21 January, Flight Lieutenant E. Burling and Second Lieutenant Williams were hoisted out of Hassani Island to direct the fire of Hardinge and Espiegle. Unfortunately, the fall of shot from Espiegle was difficult to pick up, owing to the high trajectory of the shell and its insignificant burst on impact. Early on the 22nd, Burling took up Captain Boyle in the two-seater to make a reconnaissance of Wejh preparatory to the attack, and to locate Feisal’s main army who were late for the intended 21 January rendezvous. The Arab force was nowhere to be found, and the difficulties of keeping the 450 Arabs on board Hardinge finally convinced Admiral Rosslyn Wemyss to go ahead with the landing irrespective of Feisal’s presence.

Off Marduna Island on the morning of the 23rd, Anne sent away Flight Sub-Lieutenant E. King and Lieutenant N. Stewart to bomb enemy trenches if inhabited, and to spot for Fox. All trenches were empty, but enemy refuges were attacked with six 16-lb. bombs. After directing the fire of Fox, the Short was subject to rifle fire from Wejh, and on being hoisted back aboard it was discovered that Stewart was dead. By a cruel twist of fate, he had been hit by a bullet while leaning forward to transmit a wireless message.

The assault party, meanwhile, had been landed north of Wejh, and under the cover of the ships’ vigorous fire were able to advance on the town. Of this engagement, The Times later recorded:
The naval force had a quite difficult fight, but eventually carried their points without undue loss... The Turks entrenched themselves in the town, and fought from street to street, while the Arabs cleared the houses both of Turks and of all movable property.\[26\]

Arab footmen were in possession of Wejh by the time Feisal's main army arrived on the evening of the 23rd.

**Samson Departs the Eastern Mediterranean**

During the next six months or so the operational role and composition of the EI and ESS underwent an enforced transformation. To replace the loss of Ben-my-Chree the seaplane carrier Empress was transferred from the Eastern Mediterranean Squadron in the Aegean to the EI and ESS at Port Said. Just one month after Empress arrived in February 1917, Anne made her last operational sortie. From the first day of 1915 the ex-German vessel had served her adopted Allied master with distinction. In August 1917, to replace Anne, the kite-balloon ship City of Oxford underwent conversion and joined Raven II and Empress at Port Said.

The loss felt most keenly, however, was that of Samson. He was succeeded in command of the EI and ESS by Wing Commander C.E. Risk. Ordered back to England in May 1917, Samson had in the proceeding two years fashioned a remarkable career in the "Side- Shows". It encompassed ten months as commander of 3 Wing, RNAS, in the Aegean, during which time Samson was appalled by the horrors he witnessed over the Gallipoli Peninsula. Although initially disappointed over being assigned to what was a minor command, the irrepressible Samson led the charge to introduce a new offensive spirit into the operations of the EI and ESS. Samson was epitomised by his daring, his dedication, and his never-say-die attitude. Above all, he twice displayed the unique ability of being able to mould a heterogeneous collection of personnel and ramshackle...\[26\] The Times, 26 November 1918.
aircraft into a close-knit, hard-working, and effective air unit that was prepared to carry out its work unfailingly.

Operations Over Beirut

Intelligence reports received at the beginning of 1917 confirmed that the coast town of Beirut was playing a part in supporting the operations of the Central Powers. It was, in the first instance, a port of embarkation for the dhows which we have seen were supplementing the railway supplies for the Sinai front. Moreover, it was strongly suspected that Beirut was being used as a base for German submarines, to replenish their stores of fuel and food. Consequently, on 13 May 1917 three Shorts from the Empress dropped one 500-lb. and four 65-lb. bombs on targets in the harbour environs, but with disappointing results.

A second attack by Empress’s seaplanes was planned for 17 August, using reconnaissance photographs taken during the raid in May to identify the bombing objectives. The two Shorts piloted by Flight Lieutenant Burling and Flight Sub-Lieutenant King, both without observers, had as their target the store sheds sited on a pier at the eastern end of the harbour. Their bombs pierced the roof of one shed, starting a fire, and hit rolling stock on the railway line outside the sheds. After taking photographs of the damage, Short No. 8022, crewed by Flight Lieutenant H. Worrall and Wing Commander Risk, and Short No. 8004, with Flight Lieutenant C. Bronson and Second Lieutenant G. Pakenham-Walsh, bombed the railway offices and store sheds on the harbour foreshore. Hughes later commented on the results of this attack:

Numerous hits were obtained on the sheds at the water’s edge, causing internal explosions and fires which were blazing fiercely before the machine came away. In the largest of these sheds there was hardly a whole tile remaining on the roof and through the gaps the flames could be plainly observed inside.27

27 Hughes, p. 198.
Prompted by information that Beirut Harbour was still being used as a submarine supply base, Empress arranged to rendezvous with the cruiser Graffon on 27 September for a third attack on the port. Flight Lieutenant Worrall and Second Lieutenant Pakenham-Walsh were sent away in a Short to direct the fire of Graffon - positioned east of Beirut - on to the store sheds. With her 9.2 and 6-inch guns, Graffon obtained several direct hits on the sheds, and those that missed passed harmlessly into the water beyond. The railway offices, which escaped the attention of Graffon’s fire because of their proximity to the residential quarter, were bombed to good effect by Flight Sub-Lieutenant King.

Third Gaza: Seaplanes Provide Direct Support

“I was always very keen on doing all we could for the Army, as General Sir Archibald Murray, whom I knew before the War, was always interested in our work, and would immediately supply me with observers whenever I asked for more.... I never think sufficient credit was given to Sir Archibald for the tremendous amount of organisation and elaborate preparations he carried out for the hoped-for advance against the Turk.... he produced water in Sinai from the Nile, and made Lord Allenby’s task far easier than it would have been.” Commander Samson.

From the end of 1916 the EEF had gradually been pushing forward its front: El Arish fell into Allied hands on 22 December 1916, followed by Rafâ on 9 January 1917, and Khan Yunus in late February. Concerned only with areas out of reach of the RFC (north of Jaffâ), the part played by the seaplanes during these operations was purely indirect. Towards the end of 1917, however, the role of the EI and ESS changed to direct support of the army’s advance northwards in Palestine. The turn-around stemmed from the problems associated with the capture of Gaza. Forming the northern-most
stronghold of the Turkish Gaza-Beersheba lines, Gaza commanded the Old Coast Road and the eastern divergence of roads into all of Southern Palestine. The First and Second Battles of Gaza, in March and April 1917, both ended in defeat for the EEF. For the following six months the positions of the opposing forces remained static, with each side bringing up reinforcements preparatory to the Third Battle of Gaza.

The third Gaza attack precipitated a change of strategy, in both army and naval circles. In order to avoid the type of siege which developed in the First and Second Battles of Gaza, General Sir Philip Chetwode, commanding the 20th Corps, in conjunction with Brigadier Guy Dawnay, formulated a plan to attack the weak point of the 30-mile long defences which was at the southern end of Beersheba. The three-phased plan can be summarised as follows. In the first phase, the Desert Mounted Corps and the 20th Corps would attack and capture Beersheba from the south. During the second phase, the 21st Corps would move from a south-westerly direction and take the front-line in the Gaza sector. Finally, in the third phase, the Desert Mounted Corps and the 20th Corps would hit the centre-line hard near Tel es Sheria and force the Turkish flank back towards Gaza. The strategy was endorsed by General Edmund Allenby, who at midnight on 28-29 June 1917 succeeded General Sir Archibald Murray as Commander-in-Chief of the EEF.

There were two critical hingepins on which the plan depended. In the first instance, it was essential that the water sources at Beersheba were captured on the first day. The second determining factor was what a recent historian has labeled, the "secrecy of concentration and intent".28 The EEF were to transfer six divisions to the Beersheba sector. To surprise the enemy, they planned to conceal the assembling of the force prior to the offensive, while diverting the Turk's attention to Gaza.

The night of 28-29 October saw the bulk of 45,000 infantry, 11,000 mounted troops, and approximately 200 artillery pieces moved under the cover of darkness to the Beersheba region. At the same time, a series of elaborate steps were taken to draw Turkish attention to the Gaza sector. Forces from the 21st Corps were moved forward along the line in the north, and an artillery bombardment commenced and was gradually intensified until 21st Corps initiated the second phase. There was also a subtle dimension to the deception plan, the so-called Haversack Ruse. Twenty days prior to the offensive Major Meinertzhagen, who conceived the idea, planted a haversack bearing spurious material near the Turkish lines. It contained, among other things, documents from headquarters indicating that the main offensive would be launched against Gaza, while the preparations in Beersheba were only a feint. Prevailing historical opinion is that the British plan of deception greatly reinforced the belief, formulated by the German commanding officer of the Turkish 8th Army, Colonel Baron Kress von Kressenstein, that the main attack would be directed against the Gaza sector.

The naval force which assembled was assigned the task of menacing the Turkish lines of communication about the coastal environs of Gaza. A newly-constructed branch railway from the Turk’s main Beersheba line, and a coastal road running parallel to it, provided the only means of supply for the Turkish right flank, and the single avenue of escape should an enveloping move develop from the east. The vulnerable point of the coastal communications was the village of Deir Sineid, situated six miles north of Gaza, where both road and rail crossed the Wadi el Hesi by separate bridges. At Deir Sineid, too, there was a secondary branch line running to Huj, the centre of supplies for the Turkish right-centre.

The proximity of Gaza’s road and rail communications to the coast meant a naval bombardment could be extended much farther north than would have been possible by means of land artillery. Lying close inshore, battleships could range in and sever the vulnerable Turkish points of supply and retreat, using seaplanes to direct their fire.
City of Oxford arrived off Wadi el Hesi on the morning of 30 October and closed with the monitor Raglan - which had aboard a Short 184 and the seaplane’s crew (Flight Lieutenant Burling and Captain W. Kempson), together with six mechanics. Raglan’s machine was sent away at 10:00 am to direct the fire of her 6-inch and 14-inch guns on to the railway station south of Deir Sineid. Several direct hits had been scored when the Short’s observer, Kempson, signalled that there was an ammunition dump near the station. The 6-inch gun was ranged on the new target, and the eighth round exploded the stored ammunition, demolishing the railway station and destroying many yards of line. To cap off an outstanding morning’s work, Raglan’s 14-inch gun registered a direct hit on the railway bridge crossing the Wadi el Hesi, leaving only the pillars standing. Dick Cronin has commented:

The bridge was so vital to the Turkish line of communication that within two days they had built a sand embankment across the Wadi and relaid the track upon it.29

In the afternoon City of Oxford hoisted out a Short, again crewed by Flight Lieutenant Burling and Captain Kempson, to direct Raglan’s fire onto the railway south of Deir Sineid and the road bridge crossing the Wadi. The seaplane successfully spotted for several direct hits, and was returning to Raglan when it was set upon by a German fighter. Burling put the nose of the Short down, and at a height of 800 feet Kempson in the observer’s cockpit fired two trays from his Lewis gun at close range. Nearing Raglan, Burling banked sharply away to enable the Ship’s anti-aircraft gunners to open up and drive off the enemy scout. On examination, the Short was found to have been hit in 36 places, and one elevator control was shot away.

On the evening of 31 October Major-General H.G. Chauvel’s Desert Mounted Corps completed phase one of the strategy, when Brigadier W. Grant’s 4th Light Horse Brigade captured the town of Beersheba and its water sources. In accordance with the

29 Cronin, p.255.
second phase, the 21st Corps stepped up pressure on Gaza during the first two days of November, supported by all three seaplane carriers of the EI and ESS.

*Raven II* sailed from Port Said on 31 October and proceeded to a rendezvous off the Wadi el Hesi with the French battleship *Requin*, which she reached on the morning of 1 November. Within thirty minutes of her arrival, *Raven II* had sent away a Short, crewed by Flight Lieutenant Bronson and Second Lieutenant Pakenham-Walsh, to direct the fire of *Requin* on the railway north and south of the station at Deir Sineid. The following day, *Raven II* closed with *Raglan* and hoisted out a Short to spot for the monitor's fire on the newly-constructed railway embankment crossing the Wadi: her 14-inch gun inflicted considerable damage on the target, obtaining several direct hits.

While *Raven II* and *Raglan* were doing their utmost to interdict communications on the Turkish right and right-centre flank, *Empress* was off the coast of El Haram looking to sever from the north the entirety of the enemy's 30-mile long defences. Approximately 20 miles north-east of Jaffa the main line running to Beersheba bridged at Juljulie a branch of the Nahr el-Auja River, which proceeded inland from the coast. On 2 November *Empress* hoisted out four of her single-seater seaplanes, two Babies and two Hamble Babies, for an attack on the Juljulie bridge, with a view to impeding the movement of supplies south to the Turkish front. Unfortunately, the Baby piloted by Flight Lieutenant G. Smith began to sink by the tail and became water-logged. Efforts to salvage the machine had to be abandoned owing to the possibility that the bombs which it carried might explode. The three remaining seaplanes, after a very bumpy flight to the target, found that the prevailing cross-wind was not conducive to accurate bombing. All six 65-lb. bombs missed the bridge, although damage was caused to the railway line.

By 4 November the 21st Corps had, with the excellent support given them by the union of naval guns and seaplanes, countered the main forces at Gaza and captured Sheikh Hasan. News, however, that Turkish batteries situated around El Nezele were impeding the steady advance of the left up the coast towards the Wadi el Hesi
precipitated a further spell of activity for the City of Oxford. The newest member of the seaplane squadron closed with Raglan early on 4 November, and Flight Lieutenant Burling and Captain Kempson were sent away to direct the monitor’s guns on to the batteries at El Nezele. An effective and rapid fire was maintained, which was repeated during the afternoon on the newly-constructed railway embankment and sections of the line either side of the bridge crossing the Wadi. On the 5th, Flight Lieutenant A. Popham and Captain V. Millard spotted the fire of the monitor M29 on the trenches west of El Nezele, obtaining a number of direct hits.

On the night of 5-6 November the Desert Mounted Corps and 20th Corps initiated the third phase of the Gaza offensive when they advanced on the Turkish centre at Tel es Sheria. At dawn on the 6th, Sheria Mound was in EEF hands, and the retreating Turkish forces were reported to be moving northwards along the increasingly congested road leading through Deir Sineid. In an attempt to impede their progress, spotting flights for Requin were undertaken throughout 6 November by City of Oxford’s Short 184. The slow-flying Short, given no escort and sporting a Lewis gun with a limited field of fire as its only defence, was during two of the three sorties flown opposed by German aircraft. In spite of this unwelcome attention, Flight Lieutenant Popham and Second Lieutenant A. Ferguson managed to direct Requin’s guns onto the Wadi el Hesi railway embankment and the road bridge. The day’s final flight saw further hits obtained on Deir Sineid Junction and the line just north of it.

On the evening of 5 November Colonel Kress von Kressenstein was given permission to evacuate Gaza to the northern side of Wadi el Hesi. In the following 24 hours, as the 21st Corps were moving through the rubble of the former enemy stronghold, the Turks positioned their field guns north of Deir Sineid, and occupied a line of trenches previously prepared south of Askalon. City of Oxford’s seaplanes were now called on to dislodge the entrenched Turkish forces. On the morning of 7 November, Second Lieutenant King and Captain Millard directed Requin’s fire on to the trenches south-east of Askalon. During the forenoon, Flight Lieutenant Burling and
Captain Kempson, and later Flight Lieutenant Popham and Second Lieutenant A. Ferguson, spotted for monitor M15's 9.2-inch guns onto Julis, a station south-east of Askalon, as an accumulation of transport was reported there. Many hits on the junction were observed.

The EI and ESS completed its work off the Southern Palestine coast on 8 November, when City of Oxford was called on to assist the northward movement of British cavalry and guns. Turkish troops occupied positions five miles inland up the Wadi, and their fire threatened the right flank of the EEF's advance up the coast. All ships took up firing positions between the Wadi el Hesi and a few miles north of Askalon to force the Turks further inland. City of Oxford's three Shorts spotted for the monitors M15 and M31, and Requin onto elevated ground north-east of the Wadi, entrenched positions north-east of Askalon, and onto the railway line running north-east and west through Bruberah. By 2:00 pm, the EEF had advanced close to Askalon.

In the period January 1916 to November 1917, the EI and ESS looked to attack Turkish lines of communication, both in direct and indirect support of the EEF, and to assist Feisal and Lawrence in their quest for an independent Hejaz. The nature of the work was inherently suited to the seaplane: although their slow speed made the type susceptible to air and ground attack (and it cannot be denied that the squadron's Short 184's and Sopwith Schneider's and Babies were given a veritable pasting by the German Rumpler and Pfalz aircraft), the seaplane alone had sufficient range to reach coastal and inland targets. The EI and ESS, in the first instance, made a highly significant contribution in helping first to nurture and then to sustain the Arab Revolt. Naval firing officers attached to the Red Sea Patrol, unable to see their target, looked to the seaplane force at Jiddah and at Wejh to direct and to extend the ships' bombardment onto entrenched Turkish positions. As part of the flotilla defending a Turkish advance on Yembo and Rabegh in December 1916, Raven II and her two Shorts carried out reconnaissance and bombing missions to stave off attack.
The ongoing campaign waged against Turkish lines of communication was a product of Samson’s offensive spirit, and the realisation that the squadron could best assist the EEF by interdicting the transport of enemy reinforcements and supplies south to advanced Turkish positions east of the Suez Canal. With only a limited number of machines available to Samson, the EI and ESS could not realistically have been expected to maintain a strangle-hold on the communications. However, the successful bombing raids undertaken against El Afule and Chicaldere bridge especially - inland targets previously thought inaccessible by Turkish High Command - inflicted damage and enforced delays of sufficient length to necessitate that the enemy strengthen his defences.

In the opinion of Wedgwood-Benn, a stranglehold may have been applied to the Turkish communications had the EI and ESS been given a definite place in the activities of the EEF (as opposed to Samson having to proffer schemes), and had a large enough force been concentrated at a given target. Allied commanders, in the short term, looked to the army to enact the prevailing policy, - the defence of the Suez Canal. From the latter part of 1916, however, the EEF began to push north. When the advance faltered at the enemy’s strongly-held Gaza-Beersheba line, the EI and ESS was at last given the opportunity to occupy a place in the EEF’s strategy, and to concentrate an attack at one point of the enemy’s communications. All three of the squadron’s seaplane carriers enjoyed success, giving support to the 21st Corps, and effectively severing the Turkish right flank’s means of supply and retreat at Deir Sineid.
Map to illustrate operations by seaplanes of E.I. & E.S.S. against Turkish railway communications 1915 - 1917

Figure 1.2
Map to illustrate operations by seaplanes of E.I. & E.S.S. against Turkish forces in Hejaz 1915-1918.

Figure 1.3
3. HMS Ben-my-Chree at Mudros. Inside the hangar are two Short seaplanes.

4. Short 846 alongside Ben-my-Chree in 1915. The long padded poles were used to fend off the seaplane from the ship's side.

7. A Schneider, flown by Samson in September 1916. The upper longerons were rotten, and on landing the engine fell out of its mountings.

8. Ben-my-Chree, repeatedly hit by shell-fire from the Turkish batteries, reels in Castelorizo Harbour.
CHAPTER IV

Number 3 Squadron, Royal Naval Air Service:
Dardanelles/Gallipoli, 1915-1916

Number 3 Squadron, Royal Naval Air Service (RNAS), arrived at the Dardanelles at a time when the faith held by the Admiralty and the War Office in the capabilities of air power had been considerably diminished. This discontent derived from the inability of Ark Royal's seaplanes to significantly help the Allied battleships to overcome Turkish high-angle artillery which presided over the Dardanelles Straits. It was, however, an attitude which manifested itself predominantly as a bias against the seaplane type. The landplane, by contrast, lent itself from the very beginning to a more favourable perception. Certainly, for Vice-Admiral John de Robeck, Commander of the Eastern Mediterranean Squadron, the arrival of 3 Squadron's landplanes on 23 March 1915 served to offset in some small way the intense disappointment which resulted from the failed bombardment five days previously. According to 3 Squadron's commander, Charles Samson, de Robeck "was delighted to have aeroplanes at his disposal, as the seaplanes which were available had a very poor performance."1

The question arises as to why the landplane was perceived to be inherently more suitable for the varied tasks which centred around supporting the troop landings on Gallipoli Peninsula. In terms of mechanical reliability and the functioning of aircraft W/T, it can be argued that the landplanes of 3 Squadron were only marginally superior in performance to Ark Royal's float biplanes. Certainly, the land-based aircraft were no more successful (prior to and during the troop landings) in the work of spotting for ships' fire on Turkish batteries than were the seaplanes. The one great advantage of landplanes which may have appealed to de Robeck was their ability to fly on days when sea and weather conditions meant seaplanes could not. We also need to think about the

capacity of the two types of machines, and their respective aircrews, to meet expectations and complete their given tasks. For the experienced airmen of 3 Squadron, singular accomplishments in the fields of reconnaissance, photography, air-directed fire, and offensive bombing proved more manageable than did the specific and untried work of aircraft spotting, which was perhaps unjustifiably allotted to the still-experimental seaplanes.

**From the Continent to the Aegean**

On 26 February 1915, the newly-designated 3 Squadron, RNAS, was ordered by Captain Murray Sueter, Director of the Air Department, to augment the seaplane contingent in the Aegean. The nucleus of the squadron had served in the Eastchurch Aeroplane Squadron - the first naval aeroplane unit to go overseas. From 1 September 1914, under Wing Commander Charles Samson (one of the four original Royal Naval officers who trained as pilots), the squadron had operated from Dunkirk with the object of making bombing raids on Zeppelin sheds, and of attacking Zeppelins in the air before they left the Continent.

**Flying Training at Eastchurch**

"Back at Eastchurch, at the end of September [1913] we heard that the First Lord, Mr. Winston Churchill, was taking a great interest in aviation and had sent the Admiralty yacht *Enchantress* to Sheerness so that he could live in her when he came down. He usually came to Sheerness for the week-end and he spent several Saturdays at Eastchurch learning to fly in No.1 Short with Samson as instructor. He also took a great interest in the seaplanes at the station in the Isle of Grain. Up to this time, aeroplanes on floats had been called hydro-aeroplanes, but I heard Winston Churchill say, 'That's a beastly word. Let's give them a better name; let's call them seaplanes.' And seaplanes they have been ever since." Richard Bell-Davies.
Vice-Admiral Richard Bell-Davies, a squadron commander in 3 Squadron in 1915, joined the Eastchurch Naval Flying School in mid-February 1913, where his commanding officer was Samson. He described Samson as strong-willed and gutsy: "His manners were brusque, he was quite frequently rude and had no tact, but as a friend he was absolutely loyal." Bell-Davie's memoirs offer an interesting insight into these pioneering days of British naval aviation.

At a time when notions about the intended use of aircraft in naval warfare were "entirely nebulous", Admiralty policy dictated that pre-war aeroplanes of nearly every type be purchased and trialed. The machines present at Eastchurch in 1913 had only one common factor: practically every engine - Gnome, Renault, Anzani, and Canton-Unné - was of French manufacture.

Having two years previously undertaken private flying instruction at Grahame White's Flying School at Hendon, Bell-Davies quickly progressed within one week at Eastchurch from the introductory Farman and Bristol-Boxkites, to a Maurice Farman, and thence to a Short and an Avro. In the absence of strictly laid down guidelines, to achieve the grade of flying officer, Royal Flying Corps, depended on the recommendation of the commanding officer, which normally involved as many as 100 hours as pilot and satisfactorily completing at least two cross-country flights.

If, as Bell-Davies has suggested, the best aeroplane at the flying-school was a French-built Deperdussin monoplane, perhaps the ignominy of least popular machine fell to either the "double-dirty" or "Rickety Anne". The latter was a Short monoplane with one tractor engine and one pusher. The pilot sat between the engines "in a constant bath.

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of lubricating oil.”4 Rickety Anne, originally designed as a seaplane, had been accepted by the Admiralty as a land-plane since she was too heavy to leave the water. A land undercarriage was designed, but being too narrow to support her in a vertical position when stationary, wing-tip skids were fitted: “at rest she put one wing tip on the ground and raised the other high in the air, which gave her an appearance of drunken abandon.”5

Major Hugh Trenchard would no doubt have concurred with this verbal portrait on the day that Rickety Anne decided to join King George V on his visit to the Central Flying School at Upavon:

All the aircraft were ranged in lines and all officers and men arrayed in their Sunday best when Rickety Anne descended. The turf was fairly soft and she made her usual landing; that is to say the narrow-tread wheels bit into the turf, which produced a sharp breaking effect and caused her long tail to rise high into the air, the nose of the central skid prodded into the ground bringing her to an abrupt halt, the tail with its steel-clad rudder then came down like an executioner’s axe, she tipped on one wing and lay there, dripping black oil. Trenchard at once gave orders to have the eyesore removed, but everyone was in their best clothes and to touch Rickety Anne meant being smothered in oil. At that moment the King arrived.6

Work of Preparing for Service in the Dardanelles

An aviation advance party, consisting of Squadron Commander Samson, four officers (Wing Commander C. Collet, Flight Sub-Lieutenant C. Butler, Lieutenant B. Samson, and Lieutenant Osmond), and 27 men, was ordered to cross the Channel and thence to proceed by lorry to the French port of Marseilles. Here, they embarked, along with B.E.2a No.50 (Samson’s favourite machine), two 100-h.p. Maurice Farman Shorthorns, and eight 80-h.p. Henri Farmans, on the steamer Abda for Imbros. The remainder of the personnel and aircraft - a Canton-Unne engined Maurice Farman

4 Ibid., p.72.
5 Ibid., p.74.
6 Ibid., pp.74-75.
one B.E.2a, two B.E.2c’s, two Sopwith Tabloid single-seaters, and a 200-h.p. Breguet pusher - were directed by Bell-Davies to Plymouth, where they boarded the transports Imkosi and Moorgate.

After reporting to de Robeck off Imbros on 23 March, Abda was ordered to proceed that night to Tenedos (30 miles south of Imbros) where Commander Robert Clark-Hall had organised the establishment of a flying field. A band of Greek labourers had cleared and smoothed out a vineyard (oil drums filled with cement were used to roll the ground) to create “an excellent aerodrome”, and connected the field by way of a roughly-constructed road to the beach. The difficult operation of off-loading Abda’s eleven aircraft required a combined effort and considerable improvisation. Ark Royal’s cranes were employed to hoist the aeroplane crates off the Abda onto a platform, which had been erected over a launch and a pinnance lashed together. The ships’ boats were towed to the beach, the cases manhandled ashore by planks and rollers, and finally hauled by labourers along the newly-constructed road to the aerodrome. The 47-foot long packing crates of the Farmans were transformed into “splendid houses” for the men.

The balance of personnel and equipment, which arrived aboard Imkosi and Moorgate at the beginning of April, buttressed the total strength of 3 Squadron to 102 men, 18 officers, one searchlight lorry, and a heterogeneous collection of 18 aeroplanes. Of the aircraft, Samson declared that “only five ... were really of practical use.”7 The eight Henri Farman pushers, fitted with 80-h.p. Gnome engines, proved badly underpowered and flimsy in construction:

Under strong sun they warped; the fabric slackened and soon rotted. Proving incapable of carrying a passenger to a safe height, they were used for photography which could be done by the pilot alone.8

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7 Samson, p.224.

8 Bell-Davies, p.119.
The two single-seater Sopwith Tabloids were, in large part, useless. At a time when enemy air strength at the Dardanelles consisted of one unarmed Rumpler BI and an antiquated Bleriot, and when Allied commanders were desperate for aircraft that could accomodate an observer in order to carry out important reconnaissance and fire-control duties, the requirement for single-seaters with the disconcerting “habit of shaking out their engines” can perhaps accurately be guaged as nill. The Breguet, “a huge and horrible affair constructed of steel and powered by a 200-h.p. Canton Unné engine”, experienced severe engine troubles and managed only three flights.9 As for the two B.E.2c’s, H.A. Jones - the official British air historian - has noted that their 70-h.p. engines were often unable to take an observer high enough for spotting purposes.

Only the two Maurice Farman S11 Shorthorns, the Canton Unné engined Maurice Farman pusher (which had already flown for 120 hours in France), and the B.E.2a’s proved adequate for their tasks. The Maurice Farman aircraft were particularly valued for their versatility. In May Samson wrote:

These Maurice Farmans can do 75 m.p.h., carry wireless and two 100-lb. bombs, therefore they can spot, reconnoitre or attack, whatever is wanted. They can also fight.10

Remarkably, B.E.2a No.50, Samson’s personal machine, was first flown in January 1914, saw five months of service on the Continent, and operated throughout the Dardanelles campaign until 3 Squadron returned to England in January 1916.

Work Prior to the Landings

In preparation for the troop landings on 25 April, 3 Squadron’s aircraft:

9 Ibid., p.117.

were over the peninsula at every opportunity which the trying weather afforded. Systematically the officers plotted the enemy positions; they controlled a part of the ships' fire against enemy batteries, especially those in the difficult country on the Asiatic side; they procured some crude but useful photographs of the landing beaches and the ground in their immediate neighbourhood, and they wrote descriptions of the beaches as they appeared from the air; they corrected the inaccurate maps; and they dropped bombs on the batteries and camps. All the information that was brought in was passed on to head-quarters at once.  

During the three weeks prior to the troop landings, Flight Lieutenant C. Butler in a Henri Farman carried out eighteen photographic flights utilising his own German-made Goertz-Anschütz camera. This was a fine achievement, since it was as recent as February, in preparation for the British offensive at Neuve Chapelle, that photography had first been employed for map-making purposes. Up until the end of June, when he was hit in the foot by a rifle bullet, Butler had developed and printed approximately 700 photographs. Information from the plates, including the lay-out of the landing beaches and the positioning of Turkish trenches, together with the excellent maps based on them, formed "the basis not only for the landings but for many ground operations later in the entire campaign."  

Meanwhile, the remainder of 3 Squadron's airmen were pre-occupied with the essential work of reconnaissance, and of directing ships' fire on to Turkish shore batteries. The spotting procedure was initially complicated by inaccurate maps, by the fickle nature of the experimental wireless instruments, and - on the ships' part - by a total lack of experience of air fire-control or of signalling to aircraft by searchlight. On take-off, the observer was required to run out the aerial and send a trial message to the aerodrome station to ensure his W/T was working correctly. Once in position, the map square number of the target was signalled to the respective ship. The ship's firing

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officers, trailing the machine with the vessel's searchlight so that the observer's corrections could be confirmed, established a compass bearing by the map, and selected a visual shore target on that bearing. It was then over to the aerial observer to note the fall of shot, and correct for line (right or left), and when that was right, for range (over or short).

With experience, some excellent results were obtained. Still, it could not reasonably be expected to dominate Turkish shore artillery. The rugged and scrub-covered terrain was eminently suited to the concealment of batteries. A further difficulty, to which Major R.E.T. Hogg - a military observer assigned to 3 Squadron - attached particular emphasis was the high incidence of jamming. This was reported to occur when a large number of ships and land stations were transmitting simultaneously, and when the German gunners sought to evade the ships' bombardment. The German gunners, Hogg has written:

got very tired of one of our ships with prefix A.K. which made particularly good shooting at the Turkish guns in Asia [Asiatic mainland], and used to send 'A.K. Schweinhund' when she started firing.\(^\text{13}\)

On occasions, moreover, there were variations in the readiness of ships' firing officers to act upon the incoming air signals. Leading Mechanic Arthur Beeton recorded one such instance:

Captain Collett he was going round and round in circles over the top there. He didn't dare go too high or he'd have got in the way of the shells. He was firing Verey lights to indicate where the shells were going. Green was right on target, red was too far and so on. After about two hours he came down. He said, 'The Navy don't like us, they're not taking a damn bit of notice of me at all.'\(^\text{14}\)

\(^\text{13}\) 'Reports of Major Hogg; Gallipoli and Asiatic Mainland, May-July 1915' (Microfilm, Australian Joint Copying Project; Air Ministry/Air Historical Branch: National Library of Australia, Canberra, PRO 6882, Piece 2119, File 207/72/2).

Beginning in mid-April 1915, Ottoman Fliegerabteilung (aviation unit) 1, based at Chanak-Kale, inaugurated their bombing campaign on 3 Squadron’s aerodrome at Tenedos. Samson reported that on the 18th an enemy aeroplane came over and dropped three 16-lb. bombs, but they failed to explode. Fliegerabteilung 1’s aerodrome had been discovered just three days prior to this attack, and Samson was now given the opportunity to initiate his own offensive policy:

I always made it a rule ... that if anybody bombed my aerodrome we always returned the visit immediately, and gave them worse than they gave us.

Hence, on the same day, Samson in company with Bell-Davies and Wing Commander Collet, dropped six 100-lb. bombs on the enemy’s aerodrome north-east of Chanak-Kale, causing damage to the main hangar.

The Landings

Vice-Admiral de Robeck, a chief player in the Admiralty decision to abort the solely naval campaign and enlist the help of the army, looked with a renewed enthusiasm toward Samson and his assortment of landplanes to assume a key role in support of the troop landings on 25 April. Samson, sharing none of his superior’s convictions, believed that “the Navy had not, up to date, taken enough risk in trying to force the Straits, and ... had stood aside too readily to let the Army have a try.” He went into the 25th thinking that the ground attack was premature, and would in all likelihood fail. In spite of heavy casualties the troops did get ashore - and they did so in large part with negligible assistance from 3 Squadron’s aircraft.

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15 This unit’s air strength comprised one Rumpler B.I in March, but increased to three machines by late June with the arrival of an unspecified number of Albatros B.I aircraft.

16 Samson, p.229.

17 Ibid., p.232.
Three Squadron airmen were found over both the French and British landings on the morning of 25 April. Bell-Davies, in a B.E.2c, assisted with some success the French subsidiary landing at Kum Kale on the Asiatic side. The air-directed fire of the battleship Prince George, which was in Bell-Davie's words "most effective", helped achieve the capture of the Turkish garrison by nightfall.

The success of the operation at Kum Kale was in marked contrast to the heavy casualties which the British troops suffered while attempting to establish a foothold at Cape Helles. There, the 29th Division was to make five separate landings around the toe of the Peninsula (four beaches lettered from east to west 'S', 'V', 'W', and 'X', as well as 'Y' beach, about four miles up the coast on the western side of the Peninsula) in the vicinity of Sedd el Bahr. Samson had orders for his aircraft to direct the fire of certain battleships on to any Turkish land artillery (or large bodies of troops) that was firing on the ships' lighters. The scale of the carnage indicated that there was a veritable feast of targets for the airmen to choose from:

The ships were firing at the beaches and beyond on to various positions that were thought to be held by troops or occupied by guns. I saw the tows leave the ships, and then finally break off from the steamboats and row for the shore. Just before the tows were slipped the Turks started firing, and I saw Hell let loose. The sea was literally whipped into foam by the hail of bullets and small shells. It seemed practically impossible that the boats could get in through the tornado of fire.18

It was indeed unfortunate for the fliers and troops alike that, as Samson wrote:

in those early days of aeroplane wireless and general lack of experience on both sides in aerial fire control, the ships generally paid little attention to our signals.19

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18 Ibid., p.233.
19 Ibid., p.237.
Samson’s first flight, in a Maurice Farman, with Lieutenant Osmond as observer, is a case in point. Having located near the beach a body of enemy troops and land artillery, Osmond signalled by W/T their position and instructions to commence bombardment. The ship’s firing officers disregarded the message, and continued to fire too far inland – probably because they feared shelling their own forces. H.A. Jones has further suggested that a lack of response to the signals from the air observers was a result of “the overworked covering ships” and the sheer number “of targets staring them in the face.”

Owing to the problems associated with air observation, the ships’ fire was in any case generally ineffective. Captain A.A. Walser, an observer in 3 Squadron, has written:

The rugged nature of the ground and the deep ravines and gullies which were a feature of the Peninsula, made the observation of shell bursts extremely difficult.

This posed a double dilemma for observers: they could not see from where enemy artillery fire was emanating, nor could they report the results of the battleships’ counter-fire. Samson confirmed that in most cases the ships’ fire was causing little hindrance to the defenders:

as I saw afterwards, having been shown by a Turkish officer the actual positions they held, they were practically untouched by the shells, as their trenches were sited just below the sky-line and perfectly invisible from either the air or sea.

Flying over the stalled landing at ‘V’ beach, where Commander E. Unwin (commanding the River Clyde) was at that precise moment heroically struggling to position the lighters to form a causeway between the ship and the shore, Samson was suddenly only too well aware of the deficiencies in attempting to provide aerial support:

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20 Jones, p.44.

21 A. Walser, ‘Memories of Gallipoli 1915’ (Air Ministry, 1924).

22 Samson, p.235.
The River Clyde was fast ashore; but the lighters ahead of her were not in the right position, apparently, and gaps occurred. These lighters were full of corpses; the beach and water close to the shore were strewn with bodies. It was an appalling sight for us to look at from our safe position in the air, and made one think that we were not doing our bit.\textsuperscript{23}

In hindsight, Samson came to believe that low-level bombing, instead of air-directed fire, might have allowed the squadron to assist the landing to a greater extent.

**Aircraft Spotting Assumes a Key Role**

The official history has recorded that once the troops were established ashore, the ships had more time to respond to aircraft signals. In a letter dated 2 May, Samson reported:

Aeroplane spotting I really consider has helped a devil of a lot, as now we can get batteries silenced right away. Practically always now the batteries cease fire when an aeroplane gets over the top of them. I honestly believe that our aeroplanes have given the Turks a healthy feeling of dread.\textsuperscript{24}

Certainly, Samson and Bell-Davies proved more successful in their post-landing artillery spotting endeavours. On 29 April, to the obvious delight of the squadron’s commanding officer, the air-directed fire of *Prince George* obtained direct hits on an Asiatic battery. A fortnight later Bell-Davies had an interesting time spotting for the fire of *Agamemnon*. The trajectory of her 12-inch guns proved too flat to get at the original target, so the sights were set on two camouflaged camps and associated ammunition dumps. The map square number was passed to the ship, and following various corrections, the “rapid fire” signal was given:

\textsuperscript{23} Ibid., p.234.

\textsuperscript{24} Roskill, p.206.
The whole valley and camp disappeared in smoke and dust out of which shot a stream of little black dots going full speed. They did not look like stopping short of Constantinople. We let the ship continue firing for some minutes until everything in the camp seemed to be on fire, when we made 'cease fire' and 'change target', repeating the performance on the second camp.  

In the weeks following the troop landings, 3 Squadron's aircraft had a multitude of tasks to perform. In the words of H.A. Jones:

They spotted ... for shore artillery with Very lights, as the batteries, in the beginning, were unable to take in wireless messages. The effectiveness of their fire-control was apparent before the week following the landings had ended, when there was a marked decrease in the Turkish fire, especially from the Asiatic side. The aeroplanes also bombed guns, camps, and troops, took photographs of the important inland positions, and reconnoitred the whole peninsula as far as Balair.  

The most sought-after job was the early morning reconnaissance, which was carried out daily to ascertain whether any changes had been made during the night to the location of Turkish batteries. Walser chose to undertake his reconnaissance at about 11:00 am, when the sun was overhead and light filtered down into the gullies and ravines. Bell-Davies, who was perhaps more interested in the opportunities offered for bombing, liked to be over the peninsula at dawn when camel transports were on the move and when the Turkish camp fires gave notification of an enemy presence:

We started the dawn flight ... carrying as many 20-lb. bombs as possible. Wherever we saw cooking fires we dropped a bomb and the fires were at once put out.  

Perhaps Bell-Davies hoped to gain a psychological edge by making the Turkish soldiers start out their day with cold coffee!

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25 Bell-Davies, p.123.
26 Jones, pp.44-45.
27 Bell-Davies, p.122.
The Cape Helles Gamble

By the end of April the British troops had progressed far enough inland to allow an airfield to be established at Cape Helles. This enabled observers to land and report urgent information to VIII Corps Headquarters without delay, rather than having to fly nearly eighteen miles back to Tenedos, and thence transmit the intelligence by wireless. The downside was that the airfield lay within full view and range of Turkish field-guns, which opened up whenever an aircraft landed. Hence, on touch-down, it was necessary to taxi at full speed to the shelter of a small hill, and stow the aeroplane out of sight. Bell-Davies has described the hazardous task of landing at Helles during the prevailing strong north-easterly winds. It was:

something of an adventure as the wind stirred up a great cloud of dust which trailed away to leeward as a yellow fog. On approaching, it was necessary to plunge into the fog and turbulent air to leeward of the Cape and skim over the cliff edge. At the landing ground, one had to turn without being blown over and taxi hastily down-wind to the spot behind the mound before Turkish shells arrived.28

For 3 Squadron air mechanics, news of a forced-landing at Helles Aerodrome was far from warmly received. Arthur Beeton quickly discovered that the Cape was no place to carry out repairs:

The news came that one of the B.E.2c’s had come down with the engine seized up. The machine wasn’t damaged. The job was to get a fresh engine out to it. My mate was a devil, go anywhere anytime, he says we’ll go. The navy sent this little Greek steamer. They picked up the engine, George Lacey and I and our tools. The Aegean Sea that day was a bit nasty, rolling and pitching, and I didn’t feel to good so I laid down on the deck. I must have napped off because when I woke up we were passing through the fleet all firing at Achi Baba. I went up to the front and I said: ‘Whereabouts is the aerodrome?’ ‘Aerodrome’, he said. ‘What’s that?’ ‘Where the machines land’. ‘Oh’, he said, ‘that’s just over ...’ and he pointed with his finger. Just as he pointed a great cloud of red fire and smoke went up. He said: ‘Do you see where that shell just burst, that must be right on it’. Oh it was awful!29

28 Ibid., p.124.
29 Steel and Hart, p.348.
Aerial Bombing

"I really believe we could have starved out the Turks, given a modern fighter squadron and a modern day bomber squadron, which we could have used by night as well as day." Samson, writing in 1930.

Three Squadron's aerial bombing campaign was perhaps most effective when directed at interdicting Turkish overland and sea lines of supply and communication to the Peninsula. The sea route, running south-west from Constantinople through the Sea of Marmara and ending at the various ports situated towards the opening of the Dardanelles Straits, was virtually closed to the passage of large vessels by British submarines. Bell-Davies, it is interesting to note, played a minor role in this route's curtailment. In mid-May, Lieutenant Commander Martin Nasmith, commander of submarine E-11, was flown by Bell-Davies in a Maurice Farman to the Narrows in order to observe where the Turkish defenders had attempted to lay anti-submarine obstructions. The transportation of Turkish troop reinforcements and supplies necessarily shifted to small steamers and dhows, and their landing places (Maidos, Kilia Liman, and Ak Bashi Liman especially) became the target of 3 Squadron bombing raids.

On 23 April, five aeroplanes dropped seven 100-lb. and six 20-lb. bombs on Maidos, killing twenty Turks and starting several fires. The official history claimed that the attack was so effective that it forced Turkish authorities to issue orders suspending the movement of transport during daylight hours. "The after-results", in the opinion of Samson, "were even better as the Turks left the town, and camped in the hills."30 In fact, the two reserve battalions which Samson referred to were transferred closer to

Anzac beachhead - and hence more readily placed to confront the Allied invasion just two days later.

The Turkish port of Ak Bashi Liman was a scene of greatly increased activity on the morning of 17 May. This was the conclusion of Flight Commander R. Marix, based on his observation of four transports, several smaller craft disembarking troops and supplies, and a large new camp already populated by soldiers. Armed with this information, which indicated the arrival of a fresh division, Marix loaded the Breguet with one 100-lb. and fourteen 20-lb. bombs and left that afternoon with Samson to attack the port. The bombs inflicted considerable casualties (thirteen killed and forty-four wounded), and may have halted work for up to two days. More importantly, their observations confirmed the arrival of reinforcements.

On receiving these air reports, General Sir William Birdwood, Commander of the Anzac forces, warned his divisional commanders to expect an attack that night. At 3:00 am the following morning, half an hour before the usual stand to arms order, the Anzac soldiers assumed their positions on the firing steps. Alan Moorehead, an historian writing forty years later, described the scene:

Hardly five minutes had gone by when a shout of warning went up from one of the outposts.... Everywhere along the lines the Turks jumped up from their hiding places and in a dark cloud swept forward over the broken ground.... At most places the oncoming enemy had to cross two or three hundred yards before they reached the Anzac entrenchments, and so there was half a minute or more when they were exposed in the open and quite defenceless. Very few of them survived even that amount of time. There was a kind of cascading movement in the battle; directly one line of soldiers had come over the parapet and been destroyed another line formed up, emerged into view and was cut down. For the first hour it was simply a matter of indiscriminate killing.\textsuperscript{31}

The initial waves of relentless and frenzied Turkish charges progressively declined as the morning passed into feeble attempts to make the smallest of headway. When the action was broken off at midday, 10,000 Turkish men had fallen, "and of these some 5,000, dead, dying and wounded, were lying out in the open between the trenches."\(^{32}\) In the prophetic words of H.A. Jones, "the air had robbed the assault of surprise, [and] the defenders could not be shaken."\(^{33}\)

On 30 August, two steamers and twenty dhows busily unloading at Ak Bashi Liman were subjected to the air-directed bombardment of monitor M15 firing across the Peninsula at 18,000 yards range. Samson, and his observer Captain A.H. Keith-Jopp, spotted for two hits, on each of the steamers, and may have caused one of them to sink. Indeed, the British official history has recorded that in the course of 1915, seventy air attacks were made by sea and landplanes on Turkish surface craft, with two large vessels and a tug damaged, and a lighter and six dhows wrecked. The Gallipoli flour mills and the coal depot at Nagara were also the targets of aerial and air-directed naval bombardment. Richard Layman claimed that damage to the flour stores interrupted the supply of rations to the Turkish troops on several occasions.

The Turkish overland supply route, which comprised 160 miles of railway from Constantinople to Uzun Keupri, and thence 100 miles of road running via Keshan and Bulair through the narrow neck of Gallipoli Peninsula, was similarly harassed from the air. Three Squadron alone made 35 bombing attacks on land convoys during 1915. While it proved beyond the capacity of the squadron's few aircraft to close the road, their offensive endeavours:

forced the enemy to split up his columns into sections of five carts or twenty pack-animals, marching at intervals of a mile apart, with orders to halt and

\(^{32}\) Ibid., p. 180.

\(^{33}\) Jones, p. 51.
take cover whenever an aeroplane was seen. But even this did not suffice, and movements by day soon came to be made only when absolutely necessary.\textsuperscript{34}

The Suvla Bay Offensive

"I don't think any of my squadron ever got adequate reward for the work they did; but I don't think that ever worried them very much. As a general rule the man who sits at Headquarters gets more ribbons than the men who do the fighting." Samson.

By the end of June plans were well advanced for a new landing on the Gallipoli coast. The main battle was to be fought over the Sari Bair ridge, in the centre of the Peninsula. In order to assist the assault, there was to be a simultaneous landing at Suvla Bay, just north of Anzac. It was planned that the 25,000-strong Suvla force would quickly push inland to provide support for General Birdwood’s fight for Sari Bair, and, once the hills were captured, the combined divisions would advance to the Narrows about four miles distant. Bell-Davies, who had assumed command of newly-designated 3 Wing while Samson was on leave, was informed of the Suvla Bay plan on 31 July, one week prior to the landings. Control of the Wing was to be transferred to Sir Ian Hamilton, Commander-in-Chief of the Gallipoli Expedition, and to ensure that it was in close communication with Army Headquarters, it was decided that the Wing should operate from the airship ground at Imbros providing it was found suitable.

What in fact lay behind the decision to relocate 3 Wing to Imbros was the recommendation of Lieutenant Colonel Frederick Sykes, in a report of 9 July, that centralisation of all naval air units on the island would allow better communication between them and the naval and military headquarters. Sykes, who had been requested by the Admiralty to inspect RNAS units and operations in the Aegean, further recommended the creation of three squadrons (36 standardized aircraft, plus 18 in

\textsuperscript{34} Ibid., pp.70-71.
reserve) equipped with cameras, machine-guns and wireless sets. The aircraft requested were Maurice Farmans and B.E.2c's.

None of the reinforcements recommended by Sykes arrived in time for the Suvla Bay offensive. During the preceding months, additions had in fact been limited to eight Henri Farmans, fitted with 80-h.p. Gnome engines, and five Voisins with 140-h.p. Canton Unne engines. The Voisins, according to the official history, "did good work before their early ends" - which were pre-empted by Turkish shell fire at Helles aerodrome and by crashes into the sea. The Henri Farman F.20's, a type which had previously been found ineffective, were at the persuasion of Samson returned without ever having left their packing cases. Of this incident, Samson later wrote:

These eight aeroplanes absolutely vanished into the blue; they certainly never arrived home. The Admiralty Air Department kept on asking me about them; but I always denied knowledge of them. The eight Henri Farmans may develop into a sort of lost tribe. I suppose some accountant at the Admiralty still regards me with evil intent.\(^{35}\)

The claims of a lack of adequate aerial observation support must be considered commensurate to the deterioration in number and especially in quality of 3 Wing's air complement. Bell-Davies told de Robeck on 31 July that the state of the unit's machines was "definitely bad". A number of aircraft had been grounded for renewal of their fabric. Moreover, the lack of usefulness of the majority of the squadron's machines (the Breguet, the Sopwith Tabloids, and the Henri Farmans especially), forced the better-performed aircraft to be flown much more, and the added strain kept maintenance crews constantly busy. The limited spare parts, and the absence of interchangeable parts from even the same type of engine, further hampered the air arm.\(^{36}\)

\(^{35}\) Samson, p.249.

The desperate need for aircraft was alleviated to a slight extent with the arrival, in late July and in time for the Suvla operation, of six Nieuport Type 10 two-seaters (80 h.p. Le Rhone engines), two Maurice Farmans, and four Henri Farmans. The Nieuports, although fast, proved underpowered as two-seaters. Bell-Davies later wrote:

We therefore cowedled in the passenger seat and made single-seater fighters of them, with a tubular mounting on the top plane in which a Lewis gun could be hinged. It could fire over the airscrew disc and could be swung down on its hinge to change ammunition trays.\textsuperscript{37}

The newly-established aerodrome at Imbros, from where 3 Wing became fully operational on 4 August, had as an important advantage reduced flying time to the Peninsula. This benefit, however, was largely offset by the choice of the airfield site. Besides being narrow, it was bordered on three sides by high cliffs that produced treacherous wind currents, and on the fourth by sand dunes. On 19 August Flight Commander Collet, one of the Wing's experienced Eastchurch pilots, was caught with engine failure in an eddy and killed when his aeroplane crashed. Arthur Beeton witnessed the tragedy:

He [Collet] picked up George Lacey and took off over the cliffs. There was always an undercurrent on the cliffs you had to watch. He hit this undercurrent and instead of going forward he turned and came back, lost flying speed and crashed. George saw it coming and he was in the seat under the engine. On these B.E.2c [machines] if they hit the ground the engine dropped on top of you. When he saw they were crashing he got half way out and it threw him, ooh fifty yards away - compound fractures of both legs but he got no burns. There was Collett trapped in this damned machine. In between where he came down and where we were there was a ravine about seventy feet deep. We had to go down it and up the side, a difficult thing to do. When we got to the other side we saw it was on fire and there was Collett trapped in this damned machine. We tried to get him out but we couldn't; we got our hands and faces scarred. This chap Mick Keogh [Chief Petty Officer M.S. Keogh] saw what had happened and he had picked up a big black tarpaulin and he wrapped that round himself and went in and pulled him out. He got the George medal for that. But Collett was so badly burned when you'd catch hold of him, you got handfuls of flesh. He was still alive,

\textsuperscript{37} Bell-Davies, p.131.
he said to the doctor: ‘Put me out, put me out’. We buried him and put his propeller up on the hill there.\textsuperscript{38}

Aerial reconnaissance of the Suvla area, prior to the troop landings on the night of 6-7 August, were carried out in a manner as to avoid alerting the enemy of the impending offensive. On 4 August Bell-Davies and Captain Walser were informed by General Headquarters that an examination of the existing trenches and gun emplacements could be made providing it was accompanied by a bombing feint:

We both hung over the side looking for new earthworks but saw none. There were old trenches which had been dug before the April attacks, but they were overgrown with scrub and there was no sign of new work anywhere. Beyond the Salt Lake plain lay the ridge called Chocolate Hills [one of the day’s first objectives] on the reverse slope of which existed a line of gun emplacements, but there were no guns and they too were overgrown. On our return Walser reported to military H.Q. that there were no new preparations by the Turks in the Suvla area. We both felt anxious in case we had missed something.\textsuperscript{39}

In fact, the very light casualties sustained during the landings of the inexperienced 11th Division at Suvla in the early morning of 7 August confirmed the airmen in their observations. Only three weak Turkish battalions, approximately 1,800 men, were stationed in the Suvla area. One can appreciate the fliers’ frustrations when, at dawn on 7 August, Bell-Davies and Second Lieutenant M.H.R. Knatchbull-Hugessen made a reconnaissance over Suvla Bay:

The troops appeared to be successfully ashore with no apparent infantry opposition or heavy artillery fire, though we saw a few shrapnel bursts over the beaches. However, we could see no forward movement of our troops across the dry Salt Lake. We examined the old gun emplacements in the Chocolate Hills but they were still empty with no sign of activity there.\textsuperscript{40}

\textsuperscript{38} Steel and Hart, pp.349-350.

\textsuperscript{39} Bell-Davies, p.126.

\textsuperscript{40} Ibid., pp.128-129.
Of course, in order for the Suvla troops to assist Birdwood and the Anzac forces in their struggle for Sari Bair, everything depended on the speed with which Sir Frederick Stopford, Commander of the Suvla Bay landing, got his forces to move inland. The delay, observed by Bell-Davies and Knatchbull-Hugessen, was a result of profound breakdowns in both communication and organisation. By his own admission, General Sir Ian Hamilton left it to Stopford’s discretion as to how far he got inland in the opening assault. This proved a calamitous error of judgement. As a result, the instructions which were progressively passed down - From Stopford to Major General Hammersley, who was to lead the 11th Division, to his divisional commanders - contained no emphasis on speed. Brigade commanders were ordered to reach the hills “if possible”. In fact, Hammersley:

seems to have gone into action in complete misunderstanding of his role in the battle; instead of regarding himself as a support to Birdwood’s main attack from Anzac he thought - and actually stated in his orders - that one of the objects of the Anzac attack was to distract the Turks from Suvla Bay while the 11th Division was getting ashore.41

The failure of the Suvla force to advance inland on 7 August, where it was known that there were a number of wells, led to a serious deficiency in water supply. This situation was exasperated when two of the water-lighters were grounded offshore in the bay. The necessity for the troops to come down to the shore in order to get water caused much confusion, and further held up the advance.

The sum total of this unhappy picture of mismanagement and organisational mayhem was an extraordinary situation in which:

1,500 Turks with a few howitzers and not a machine-gun among them were harrying an army of 20,000 men backwards and forwards across the empty plain.42

41 Moorehead, p.245.

42 Ibid., p.268.
Indeed, flying over the Suvla position on the afternoon of the 7th, Knatchbull-Hugessen, piloted by Bell-Davies, reported that the gun emplacements were still unmanned and:

the only sign of enemy infantry that we could find was a small party sheltering from ships’ gun-fire behind a little mound to the south of Salt Lake.43

Of concern, however, was their observations of large encampments near Bulair and a number of smaller ones along the Uzun Keupri road. The Turkish Bulair force, commanded by Feizi Bey, was sending reinforcements!

With the capture of Chocolate Hill at 5:30 pm on the 7th, the British were just one or two miles away from the main heights and the objective of the landings. In a continuation of the ineptitude thus far shown, none of the brigadiers had accompanied the leading troops, and, having received no further instructions, they simply sat down and awaited nightfall. Consider for a moment Hamilton’s consternation on being told by Stopford at mid-morning on 8 August that he “must now consolidate” owing to the lack of adequate artillery support. Remember, Bell-Davies and Knatchbull-Hugessen had reported that there was no serious opposition ahead, but that reinforcements were pouring down from Bulair. It was truly perplexing that Stopford, fully realising the importance of moving quickly in support of Birdwood’s Anzac force, should decide and rest his men and await more guns. Perhaps he would advance tomorrow. At dawn on the 9th, when the Suvla attack re-commenced, the Turkish reinforcements were in position.

43 Bell-Davies, p.129.
2 Wing Provides Little Relief

"We had a certain amount of shooting at Kephalo [Imbros], at which Captain Edwards was the most successful. At first the Navy got in the habit of poaching on our preserves; but after I had posted a sentry at the landing-place to say that no guns were allowed on our side owing to the dangers of hitting aeroplanes, a bluff which worked like magic, we had the whole area to ourselves. I have the game-book still, and we bagged snipe, duck, red-leg partridge, woodcock, hares, teal, plover, and some doubtful birds marked as various; we got 105 head altogether." Samson.

At the end of August the reinforcements requested by Sykes arrived in the form of No. 2 Wing, commanded by Wing Commander E.L. Gerrard. The unit's aircraft, however, were with the exception of six B.E.2c's not of the type recommended by Sykes. They comprised four Bristol Scouts and six 80-h.p. Morane Saulnier parasols. The latter proved ticklish in their handling and their rotary engines were constantly troubled by sand. The Moranes were in fact grounded following two fatalities, and their place taken by some Voisins supplied by Samson. Two Wing brought out sixteen pilots, all but three of whom were young and inexperienced.

The circumstances of 2 Wing's arrival was unfortunate in the sense that 3 Wing had been struggling for several months for suitable aircraft and experienced pilots. From August, with an average strength of only seven pilots, the wing was required to carry out reconnaissance, frequent spotting for ships' fire, co-operation with the troops ashore at Helles, Suvla, and Anzac, as well as anti-submarine and anti-aircraft patrols. In the words of Samson:

The situation would have been improved if I had had more aeroplanes, also of more suitable type for the work in hand.44

44 Samson, p.259.
Since the aircraft were kept pegged out in the open, their engines were continually troubled by the choking effects of dust and sand. A forced landing, under the most favourable circumstances, meant "a dip into the ditch". Captain Walser had one particularly close call:

we landed some miles out to sea in an old Voisin. My petrol tin [utilised as a lifebuoy] went down in the wreck, which only floated a few minutes. We were not picked up for a long time and I was very nearly drowned. I record the fact merely because I went through all the sensations of drowning and remember that they were not at all as unpleasant as is generally supposed.\(^{45}\)

There were at least two similar incidents: Bell-Davies lost a Nieuport, five miles off the coast of Imbros, after being forced down by engine failure. The same fate fell upon Lieutenants Bill Wilson and Bill Samson, both of who were invalided home after their Henri Farman crashed into the sea. Charles Samson recorded:

They had four hours in the water with the wreckage only able to support one. Bill Wilson, being a good swimmer, made my brother, whose leg was damaged in the crash, take his Gieve waistcoat and hold on to the wreckage, whilst he kept swimming. Fortunately, one of our patrol trawlers came up and picked them up just as my brother was practically all in.\(^{46}\)

It was an altogether more hazardous proposition having to make a forced landing on the Peninsula. On 19 August, Samson and Keith-Jopp had their engine damaged by shrapnel and were forced down just south of Salt Lake. In a remarkably similar occurrence, Walser and Newton-Claire, flying over Teursten Keui in a Maurice Farman on 13 October, suffered aileron damage and also crashed on Salt Lake. They, like Samson and Keith-Jopp, were fortunate to escape injury, and both crews were harried by Turkish artillery fire in their endeavours to reach cover.

\(^{45}\) Walser, pp.6-7.

\(^{46}\) Samson, p.254.
Not only the aircraft, but aircrew alike suffered from a high attrition rate. Most of the senior pilots either became casualties, or, feeling the strain of constant flying, were invalided home. Having flown for 180 hours since 1 April, Samson admitted to feeling “quite played out”. Unfortunately, reinforcements offered little respite:

many of the pilots that came out to us were not sufficiently trained, and some of them had only done about ten hours solo on any type of machine.47

**Enemy Air Activity**

In the weeks that followed the Suvla Bay landings, there was a noticeable increase in enemy air activity. On 10 August Bell-Davies and Keith-Jopp in a Henri Farman met a German “Ettrich Taube” over the Anzac beachhead. The aircraft encountered was in all probability one of three 100-h.p. Gotha seaplanes of the German naval Wasserfliegerabteilung, which operated from July out of the seaplane station at Chanak.

The performance of the Gotha seaplanes was very poor. Major Erich Serno, Commander of the Ottoman Air Force 1915-1918, noted that they were underpowered (the Gothas had a service ceiling of just 1,000 metres), were unarmed, and could only avoid an enemy attack by going into a steep dive. This was precisely the manoeuvre which allowed the Gotha to escape the rigors of Keith-Jopp’s rifle fire on 10 August. Bell-Davies later wrote:

The pilot did not see us and I was able to come close behind him. Jupp, who had a rifle, started shooting and must have made good practice for at about the fifth shot I saw the pilot’s face as he turned to look behind before going into a vertical dive.48

At about the same time, Bell-Davies, flying one of the converted Nieuports, took off in pursuit of a German landplane which had bombed the ships in Kephalo Harbour,

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47 Walser, p.6.

48 Bell-Davies, p.129.
Imbros. The aircraft, probably an armed Albatros C.I from Ottoman Fliegerabteilung 1, was engaged by Bell-Davies at 8,000 feet on reaching the Peninsula:

He did not see me. I managed to approach just behind and below him and started shooting with the pistol. After about four rounds the pistol jammed, but one of the bullets must have gone near enough to attract attention for he turned and let fly with an automatic weapon of sorts from the back seat. Then he was joined by a pal who also started to shoot. I put the Nieuport into a vertical dive and escaped.\(^{49}\)

It was not until the end of 1915, with the arrival of three Fokker E. monoplanes, that aerial combat would assume a decisive offensive role.

Cross-raiding on aerodromes, by day and during the summer months by night, was a regular and seemingly enjoyable experience. Captain Walser, utilising a 200-h.p. Canton Unné engined Henri Farman, carried out frequent bombing missions during summer evenings - targeting either the German aerodrome at Galata or the Chanak seaplane base. Retaliatory raids were undertaken by both the Gotha seaplanes, and Albatros and Rumpler aircraft. In early October, a stick of bombs dropped across 3 Wing’s camp at Imbros - wounding two men and killing Samson’s steward - engendered a response that while suitably evil in theory, proved entirely negligible in practice:

In order to pay them out for this outrage, we decided to construct a bomb ourselves and did so, out of small bombs, ammunition, petrol, etc. I really forget what it was made of; but it was very large and ugly, and no one liked the look of it. Commander Samson took it, on a large Henry, and dropped it into Kota Dere. It certainly made a lot of smoke and caused us some amusement.\(^{50}\)

Indeed, in Walser’s opinion, the cross-raiding was more haphazard then serious. Retaliatory fire could in fact cause more problems than the German bombs, which mostly failed to detonate:

\(^{49}\) Ibid., p.132.

\(^{50}\) Walser, p.8.
Whenever a Turkish aeroplane came over, the scene which ensued was really laughable. Everyone would seize the nearest weapon to hand and blaze away. The ships in the harbour [Kephalo] would cock up all available guns and fire, regardless of consequences. The result, naturally, was that our few hangars were hit by falling fragments.\textsuperscript{51}

\textbf{Attention Shifts to Enemy's Communications}

In September, Bulgaria joined hostilities on the side of the Central Powers. This nation’s subsequent advance into Serbia opened up a direct rail supply route to Turkey from Germany (Berlin-Constantinople Railway), allowing for the first time in the war a steady supply of German aircraft and munitions to its ally. In order to sever this line it was decided to attack the railway at its two most vulnerable points: where the line bridged the Maritza River (south of Kuleli Burgas), and at the nearby rail junction at the town of Ferejik.

Between 8 and 16 November four raids were made on the Maritza bridge by 2 and 3 Wings, in which seaplanes from \textit{Ben-my-Chree} also took part. The Turkish anti-aircraft defences, which progressively became more formidable, ensured that the two foremost raids would have the best opportunity to inflict substantial damage on the target. On 8 November a Maurice Farman (fitted with an extra fuel tank for the 180-mile round trip) piloted by Samson, with Captain I.A. Edwards as observer, arrived over the bridge at 700 feet. Their two 100-lb. bombs fell just five yards south of the target, causing enough damage to one of the piers to put the bridge out of action for 48 hours.

Two days later, Bell-Davies and Walser battled heavy rain and low cloud to attack the Maritza Bridge with two 112-lb. bombs and two 20-lb. bombs. Confronted by heavy

\textsuperscript{51} \textit{Ibid.}, p.10.
anti-aircraft fire, the airmen missed the target, and were left with a difficult journey home. Walser has written:

In coming down low to bomb the bridge our throttle wire snapped or was shot away. The result was that the 200-h.p. Canton Uni [Unne] engine was jambed right open and the only way by which we could prevent racing was by climbing steeply.... the distance back was about 90 miles, a third of which was over the sea. Every time we climbed to 13,000 feet, Davies switched off and, on gliding down to ground level, switched on again with a shock that made it seem as if engine and aeroplane were about to part company.  

The attacks of 13 and 16 November were received with very heavy fire from the Anti-aircraft guns, and the Maritza Bridge again escaped damage. This lack of success forced Samson to take a conciliatory view of proceedings:

Even if we were doing no actual material harm, we were making them withdraw a large number of guns and personnel from other spheres of action. I now decided to cease the bridge attacks ... and let the Turk’s guns remain there practically out of action, whilst we devoted ourselves with our limited resources to other fields.  

Attention was hence diverted to Ferejik Junction, where raids on 13, 16, 18, and 19 November, and 1 December, inflicted considerable damage on the railway line, rolling stock, and on the station buildings. The attack on the 19th was notable for an act of extreme gallantry which saw Squadron Commander Bell-Davies win the Victoria Cross. Flight Sub-Lieutenant G. Smylie, flying a Henri Farman, had his engine damaged by rifle fire and was forced to land on the far side of the Maritza River in Bulgarian territory. Smylie, seeing a party of Bulgarian troops approaching, set fire to his machine and made off in the hope of reaching Turkish territory (the airmen believed that the Bulgarians would treat prisoners less kindly than the Turks). Meanwhile, Bell-Davies, returning from the attack in one of the converted Nieuports saw the Farman burning and came down low to inspect. Smylie, on seeing Bell-Davies, immediately realised the danger

52 Ibid., p.6.

53 Samson, p.279.
posed by a bomb still on board the grounded aircraft and exploded it with his pistol. Climbing away after this explosion, Bell-Davies "saw Smylie emerge from a little hollow in which he had been lying and wave".\textsuperscript{54} Showing a total disregard for the approaching troops, Bell-Davies landed and managed to stow Smylie under the cowl where he crouched for the 45-minute return journey "on all fours between the rudder bar and the engine bearers with his head bumping on the oil tank."\textsuperscript{55}

On 16 October General Hamilton learned that he was to be replaced as overall Allied commander. General Sir Charles Monro, Hamilton’s successor, arrived at Imbros on 28 October and within the space of 48-hours had decided to recommend the evacuation of Gallipoli Peninsula. In spite of his devastating prediction that losses in the withdrawal might reach 30-40\% (some 40,000 men), the British War Cabinet agreed on 7 December to evacuate Anzac and Suvla. Between 15 and 20 December, approximately 80,000 men were withdrawn from the two beaches in complete secrecy, with only two casualties. H.A. Jones attributed a good deal of the success to the work of the RNAS:

"By constant patrol, the two aeroplane wings prevented any hostile aircraft from flying over these two beaches during the whole week which preceded our coming away."\textsuperscript{56}

Bell-Davies thought the weather was in most part responsible for the absence of enemy aircraft: "By great luck a low cloud layer formed and made enemy reconnaissance useless."\textsuperscript{57}

\textsuperscript{54} Bell-Davies, p.134.

\textsuperscript{55} Ibid., p.135.

\textsuperscript{56} Jones, p.74.

\textsuperscript{57} Bell-Davies, p.137.
Three Wing completed its work at Gallipoli during the following few days, carrying out numerous bombing raids on Turkish transport seen moving along the roads. Throughout the evacuation of Helles, between 28 December 1915 and 9 January 1916, 2 Wing assumed the responsibility of concealing preparations for the withdrawal. The appearance, for the first time in the campaign, of three Fokker monoplanes from the newly-established Galata Fokker Staffel (fighter unit) did not bode well for 2 Wing’s task. On 11 January, Flight Sub-Lieutenant C. Brinsmead and Lieutenant N. Boles were brought down and killed by two Fokkers. On the following day, Flight Sub-Lieutenant J. Bolas and Midshipman D. Branson similarly became victims of the Fokker scourge. Among the victorious German pilots were Hauptmann Hans Joachim Buddecke and Hauptmann Schuz.

Three Squadron’s landplanes were expected to significantly support the ground troops during the landings and in their intended advance across the Gallipoli Peninsula by reconnoitring, directing the fire of ships’ guns on to Turkish positions, and by bombing. Reconnaissance, both visual and photographic, served a number of important purposes. The entrenched Turkish positions and the layout of the Gallipoli beaches - systematically plotted and photographed by the airmen - was an important consideration when planning for the troop landings. The photographs taken by Flight Lieutenant C. Butler, moreover, formed the basis for the correction of inaccurate maps.

The air-directed spotting for ships’ fire, prior to and during the 25 April landings, proved wholly ineffectual. Turkish land artillery, expertly hidden by their minders amongst the Peninsula’s deep gullies and rugged ravines, was perfectly invisible from the air. Furthermore, ships’ firing officers - besieged by aircraft signals - were reluctant to fire on artillery situated close to the shore for fear of shelling their own troops. Gradually, however, spotting techniques were refined, and given the right conditions (accurate maps, clear weather, and sufficient time), air-directed fire could snuff out Turkish attacks, and inhibit the transportation and off-loading of troop reinforcements and supplies at Turkish ports.
As for the offensive bombing role, 3 Wing’s aircraft were lacking in both performance and number in order to inflict serious damage on Turkish lines of supply. The official historian, H.A. Jones, concluded:

Had it been possible to close the road [via Keshan and Bulair], especially at night, by aircraft attack, and ships’ fire, the Turks on the peninsula must quickly have exhausted their stocks and could hardly have withstood Sir Ian Hamilton’s attacks.58

In a broader sense, the destruction of the bridge crossing the Maritza River - a vulnerable link in the Berlin-Constantinople Railway - would have meant a serious delay in the transportation of aircraft, troops, and munitions to the fronts in Mesopotamia and Palestine/Syria.

The failure of the Gallipoli campaign must reflect negatively on the air arm in the sense that 3 Wing proved unable to offer the army important help in achieving its objective - which was to capture Constantinople. However, Richard Layman is correct in his thinking that valuable contributions by the RNAS did sustain the troops in their endeavours longer than might otherwise have been the case.

58 Jones, p.71.
Figure 1.4: Map illustrating area of operations, 3rd Squadron, RNAS, the German Wasserfliegerabteilung, and Ottoman Fliegerabteilung.

10. Commander Charles Samson with the two converted Nieuport 10 two-seaters.
CHAPTER V
Ottoman Aviation, 1911-1916

The Italians Lead The Way

When Turkey entered the War on 3 November 1914 her military aviation was in a feeble condition. But this had not always been the case. When we consider that the first wars which made direct use of the air weapon (Italian-Turkish War 1911-1912, and the Balkan War 1912-1913) both involved Turkey as a major belligerent, it should come as no surprise that by the end of 1912 the Turkish Army possessed an aviation force comprising seventeen aircraft.

The first stimulus to the development of Turkish military aviation came in September 1911 when Italy declared war on the Ottoman Empire and dispatched an expeditionary force to occupy Tripoli in North Africa. Accompanying Italian ground and cavalry units was a small aeronautical section, the First Aeroplane Flotilla, which consisted of nine machines and eleven pilots. During the course of the conflict, the Flotilla carried out numerous reconnaissance flights, often returning with photographs of enemy positions and useful information detailing Turkish troop movements. The airmen, moreover, dropped grenades and bombs to good effect. The groundwork of modern aerial warfare was rapidly being established.

Having experienced at first-hand the tremendous military value of aircraft, Mahmut Sevket Pasha, the Turkish Minister of Defence, took steps towards the creation of an aircraft station and school dedicated to training military men in aviation. Towards the end of 1911 the Army acquired their first machine, a Deperdussin monoplane (70-h.p. Gnome engine). Shortly after, the Turkish Ambassador in Paris ordered two more Deperdussins, one a 70-h.p. Gnome and the other a training machine with a 25-h.p. Anzani engine. Throughout the new year there was a notable drive on the part of the
Turkish military to strengthen their air resources. In the early months of 1912, seven R.E.P.'s (Robert Esnault Pelterie of France) were purchased, followed in October by two Bristol biplanes (70-h.p. Gnome), two Mars biplanes (100-h.p. Mercedes-Daimler), and two Harlan monoplanes from Germany. A Bleriot monoplane (80-h.p. Gnome) was presented to the Army at about the same time. By the end of 1912, the total number of aircraft on hand had risen to seventeen.

An Aviation Commission, attached to the Technical Troops and Fortified Locations Inspectorate, was set up under the watchful eye of Colonel Sureyya Bey, Turkish General Staff. He oversaw the establishment of an aircraft station and air school at San Stefano, located 25 kilometres west of Constantinople. Inaugurated in early 1912, the airfield comprised just two hangars and a runway.

In the meanwhile, Engineer Lieutenant Kenan and cavalry Captain Fesa, both of whom had been selected from the armed forces and sent for training to the Bleriot Aviation School in France, returned to San Stefano in March 1912. Including Kenan and Fesa, the Turkish Army had eight trained pilots by the end of the year. However, there was no attempt to ship either the airmen or any of the seventeen machines to North Africa to oppose the Italians.

**Balkan League Takes A Heavy Toll On Turkish Military Aviation**

In the course of the Balkan War:

little effective use was made of aeroplanes by the Turkish Forces. Lack of training, defective material, the ignorance of inexperience and incompetent advisers, all acted against any possibility of reasonable efficiency. One or two excellent reconnaissances were made, and were widely advertised, but the real work done was negligible.¹

¹ W. Whittaker, 'The Turkish Aeronautical Service' in *The Aeroplane* (October 1913) p.452.
Mario Scherff was one of a number of foreign pilots who were hired for the Turkish Army to fly reconnaissance during the Balkan conflict. On 7 April 1913 Scherff, with observer General Staff Captain Gazi Mustafa Kemal (later to achieve fame as Atatürk, or Foremost Turk, first president of the Turkish Republic) made a harrowing reconnaissance over Bulgarian-occupied Adrianople in a Mars biplane. Scherff was initially unable to coax the Mars above 300 feet altitude, and at this alarmingly low height the two airmen apprehensively approached the enemy defences. Scherff recalled:

Suddenly, the Bulgarian batteries open fire on us. Kemal Bey, much excited and striving to make his voice heard above the noise of the engine and the explosions, shouts, 'Higher, higher! Bulgarians! Bang, bang!' and demonstrates his perturbation by hitting my shoulder with his riding whip. As if I had not noticed the Bulgarian artillery!... I notice, with some misgivings, that we are now being fired upon by friend and foe alike. Everynow and then, a particularly close explosion throws our plane up sixty or seventy feet, and then we plunge down again.... Kemal Bey busily takes photographs and then releases our tiny bombs which we see fall directly upon the Bulgarian encampment, raising clouds of dust as large as houses.²

The success of the reconnaissance was assured shortly after when Bey discovered that the Bulgarians were bringing up heavy artillery from Adrianople.

The Balkan War took a heavy toll on the aviation resources of the Turkish military. The losses incurred, however, came not from the rigours of service, but were brought about by confiscations, as Salonika (8 November 1912) and Adrianople (26 March 1913) fell to the Balkan League of Serbia, Montenegro, Bulgaria and Greece. An aviation article dated 23 October 1913, five months after the Treaty of London ended the first Balkan War, reported that the number of machines possessed by the Turkish Army had fallen to two, one R.E.P. and one Bleriot.

Serno Charged With Reinvigorating Turkish Air Service

Turkey declared war on Allied nations on 29 October 1914 by bombarding the cities of Odessa, Sevastopol and Theodosia on the Russian Black Sea Coast. In the seventeen months which had lapsed since the Treaty of London, the Turks’ precious few aircraft had inexplicably fallen into complete disrepair. In October a young German officer pilot, Oberleutnant Erich Serno was transferred from service with Fliegerabteilung 2 (Aviation Unit) on the Western Front to the German Military Mission in Constantinople. Initially given the task of organising a flying school for training Turkish flying personnel, and of advising Turkish High Command on aviation matters, Serno was informed that in addition he had been chosen “to bring an independent Turkish air arm into existence.”

Serno had as an important starting point the airfield at San Stefano: the site of Turkey’s first military aviation school, in recent times San Stefano had played host to a band of mercenary pilots employed by the Turkish Army during the Balkan War. When Serno arrived at the military installation to take up his duties on 3 February 1915, all that remained were two primitive frame shacks and a dilapidated dirigible shed. A German officer, who had visited San Stefano one month earlier, found “among the vast quantity of unserviceable rubbish in the shape of aeroplanes” only two machines that were flyable, a Deperduassin and a Bleriot.

Serno focused on providing the infrastructure necessary for the establishment of a military air arm. Given the under-developed status of Turkish industry, it was a task

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fraught with difficulties. A total absence of mechanical transport necessitated the use of horse-drawn wagons and ox-carts. Great problems were experienced in the procurement of basic hand tools and machine tools of any type. A shortage of basic building materials, wood and nails especially, delayed the construction of aircraft hangars and barracks. With aviation still very much in its infancy, Serno was particularly hard-pressed to find suitable technical personnel. Qualified tradesmen in the form of automobile mechanics, blacksmiths, coppersmiths, carpenters and cabinet-makers were detailed to be trained as aircraft craftsmen.

The remains of three Bleriot XI-2’s were discovered in the old dirigible shed. Two of these machines were made serviceable, as was the previously mentioned Deperduassin. Also housed at San Stefano were two Nieuport “Hydro” seaplanes.

In spite of technical difficulties, and problems with personnel, a letter written by Serno on 5 March indicates that a good deal of progress was being made:

Am working hard to build barracks, sheds and an aircraft repair hangar; six sheds and the repair hangar completed in five weeks [and I have] got 226 workers. There is no wood or bricks, which for the most part are stolen. One can do anything here as long as there is no cost to the government. There are no trucks or anything similar here; I have 48 buffalo-drawn carriages and 42 horses. Am starting to make my own propellers. I have already rebuilt two Bleriots [with] 80-h.p. Gnome [engines] that were already here. The day after tomorrow I am supposed to receive the first German equipment, [which] I can well use against the British at the Dardanelles. The Turkish officers cannot be compared to ours, [as] when they are ordered to report for duty, half of them don’t even bother to come, [of those who do] most are too late. Reprimands do no good at all; they fear physical punishment most of all. The Turkish soldiers, however, are good!5

As Serno’s letter indicates, it was the pending Allied naval offensive in the Dardanelles that was most pressing in terms of the need to organise an aerial defence.

As early as November 1914 the Nieuport "Hydro", named Mahmud Sevket Pasha, had been transported from San Stefano to Chanak-Kale, Headquarters of the Strait Fortification Command, to carry out some limited reconnaissance flights. A lack of serviceable aircraft, however, meant that it was not until January 1915 that flights could again resume. These reconnaissances were of the utmost importance to Fortress Command staff, who were pressed for reliable information about the Allied Fleet then gathering for an attempt to force the Dardanelles Straits.

**Confirmation Of Pending Allied Offensive**

By the first days of January 1915 the wreck of a Bleriot XI-2 had been rebuilt and the machine was readied for flight to Fortress Command Headquarters. The aircraft, named Ertugrul, twice returned with engine trouble before her crew, Captain Cemal and German Captain Bomer, finally reached Chanak-Kale on the 18th. The growing Allied naval presence was confirmed on 6 February, when Cemal took the Bleriot on a ninety minute flight towards Tenedos, and reported a number of ships anchored south of the island. On the 27th, Ertugrul struck the first offensive blow delivered by the Turkish Aeronautical Service with a grenade attack on the British ship Majestic.

**Transport Difficulties**

A short time following the Turkish declaration of war General von Falkenhayn, Chief of the German General Staff, made available to the Ottoman Ally twenty-four Rumpler and Albatros B-type aircraft, of which twelve were promised immediately. Five months later, not withstanding the increasing threat posed by the Allied naval flotilla, (on 19 and 25 February the fleet bombarded the four outer Turkish forts at the entrance to the Dardanelles), not a single German machine had reached Constantinople.

The shipment of the German aircraft had been frustrated by the neutral status of
Rumania and Bulgaria, who prohibited the throughfare of war materials. It was, however, possible to bribe Bulgarian military authorities, and arrangements were made whereby the German machines would fly individually from Czernaheviz, in Southern Hungary, over the Serbian and Rumanian border zones to Bulgaria, landing at Lom Palanka. From Lom, declared as Red Cross or circus supplies, the aircraft would continue by railroad to Turkey.

The first aircraft for the Turks, three Albatros BI's and a single Rumpler BI, arrived via this route in early March 1915. But it was to prove a costly venture: of the eight aircraft transported by way of Czernaheviz and Lom in February and March, half of them were confiscated.

**Aircraft Raise The Alarm**

Owing to the urgent need for aerial reconnaissance reports, one of the three machines designated for service at the Dardanelles was immediately dispatched by boat to Chanak-Kale. Serno accompanied the Rumpler, along with naval Captain Lieutenant Schneider, pilot Seidler and several mechanics. On the evening of 17 March, while the Rumpler was being assembled, Serno piloted the Bleriot to the opening of the Dardanelles Straits, with an artillery officer in the passenger seat, in order to range Turkish fortress guns.

Allied hopes of capturing the Turkish capital by a purely naval action culminated on the morning of 18 March when fourteen battleships, coupled with *Queen Elizabeth* and *Inflexible*, moved up the Dardanelles Straits with their guns ranged on the Narrows' forts. In the proceeding hours the French battleship *Bouvet* was sunk, and in turn, *Inflexible, Irresistible*, and *Ocean* were sent reeling by a line of undetected Turkish mines. The disasters of that morning reflected negatively on the fire-control and
minefield reconnaissance work carried out during the previous month by seaplanes operating from **Ark Royal**.

By contrast, the morning of the 18th signalled the first important success for the Turkish Aeronautical Service. Serno and Schneider left at dawn in the Rumpler to reconnoitre the Allied flotilla gathered off Tenedos, then awaiting orders to move up the Strait. Schneider was able to plot, and in some cases identify, eighteen major warships from an altitude of 1,600 metres: six British and four French battleships were observed about to depart from the port entrance at Tenedos, and closer to the island eight battleships lay at anchor. In a memorable passage, Serno recalled:

> Fast as lightning, the German officers comprehended the situation. After the enemy naval fleets had been reconnoitred in all particulars, the airplane, followed by anti-aircraft fire from several ships’ guns, sped back to Chanak-Kale. After landing, both fliers leaped on horses and delivered their report to Admiral von Usedom [Senior Officer of Chanak-Kale Fortification Command].

6 The alarm was immediately sounded, and the defence fortifications of the Dardanelles readied for action with the closing Allied naval flotilla.

The Bleriot was ordered up twice on the 18th. Cemal and Lieutenant Osman Tayyar were able to report soon after 11:00 am that several ships had been struck by artillery, and at 4:00 pm the same crew observed that **Bouvet** had been sunk. In the evening a final reconnaissance was flown by Seidler and Turkish observer Huseyin in the Rumpler. The airmen flew 80 kilometres to Lemnos in order to gauge what remained of the Allied naval flotilla.

During the remainder of March and for most of April operations were limited to occasional reconnaissance and bombing flights. On the afternoon of 26 March, Seidler

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6 Serno, p.107.
and Lieutenant Commander Hussein reached Lemnos, spotting the entire Allied fleet in Moudros Harbour. The arrival on the same day of reinforcements for the unit at Chanak-Kale, two Albatros BI’s complete with fresh crews, rendered the Bleriot surplus to needs. On its return to San Stefano, however, Ertugrul’s engine failed and Cemal force landed in the Sea of Marmara. Further misfortune followed when it was discovered that the propellers of the new Albatros machines were defective. With only the Rumpler serviceable, flights were few and far between. Most notably, on 28 March Squadron Commander Robert Clark-Hall reported that a German machine had dropped two bombs on Ark Royal, one of which landed just ten feet on the ship’s port side adjacent to the main hatch, causing minor damage to a seaplane.

**German Support: The Dardanelles, April - November, 1915**

"Turkey’s entire organization of technical as well as personnel resources depended entirely upon German support". Robert Holtzmann, 1915.

From the three German aircraft present at Chanak-Kale in March 1915, two Albatros BI’s and a Rumpler BI, the Dardanelles Fliegerabteilung was formed. The unit’s first commanding officer was a German civilian pilot enlisted in the Turkish Army, Lieutenant Ludwig Preussner. At his disposal was a heterogeneous collection of German and Turkish military and civilian flying personnel. Pilots active during the first part of 1915 included First Lieutenants Cemal and Mehmet Ali, and Lieutenants Seidler and Garber. The unit was gradually reinforced with a number of Turkish and German observers: Naval Lieutenant Huseyin Sedat, Lieutenant Osman Tayyar, German observer Captain Bomer, and Lieutenant Captain Schneider. The Abteilung’s aircraft remained under the control of Fortress Command, headed by Colonel Djevd Bey, until late June.

For General Liman von Sanders, German officer commanding the Turkish Fifth Army, and officer responsible for the defence of the Dardanelles, the Allied troop
landings on 25 April 1915 were not unexpected. The magnitude of the landings, however, was cause for concern, and shortly after dawn on the 25th von Sanders ordered an air reconnaissance. The German pilot Garber, with Huseyin Sedat as observer, examined the coastal area stretching from the Gulf of Saros in the north to parts of Anatolia in the south. A Turkish source has noted that: “After the flight during which two bombs were dropped and which established the position of 45 transport ships the crew was able to issue a report giving a detailed picture of the landings.” Two days later, on one of the scheduled daily reconnaissances, Garber and Huseyin were able to establish Allied troop dispositions at Sedd el Bahr and Ari Burnu.

In May the aircraft unit at Chanak-Kale became the Turkish Fliegerabteilung 1 (Lnci Tayyare Boluk, or First Aircraft Company). With its complement of two flights each of two aircraft, the Abteilung continued to fly reconnaissance and bombing missions over the Peninsula and offshore islands. Writing of his infantry experiences at Gallipoli, Flight Lieutenant J.R. Bell, later an observer in 3 Squadron, Australian Flying Corps, recalled several instances of German bombing sorties. On 23 May a bomb dropped from an enemy aircraft fell in one of the latrines, killing one man. On 31 July three bombs landed in close proximity to an Indian Mountain Battery, killing two mules. At other times steel darts were directed at trenches and camps, although Bell never heard of anyone being hit. Private Edward Robinson has reported otherwise:

There was an aircraft came over and dropped two boxes of aerial darts rather like crossbow arrows, steel, about a foot long. It pinned through men on the floor, pinned through horses, screams of agony, some were killed, some weren’t.

Twice a week flights were made over Tenedos and Imbros, and on each occasion a

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7 O. Nikolajsen, *Ottoman Aviation 1911-1919* (Manuscript at Australian War Memorial: no place or date of publication available).

small load of hand-dropped bombs and darts were carried to be dropped. For the personnel of 3 Squadron, RNAS, Turkish bombing raids were a regular occurrence. Wing Commander Charles Samson reported that on 18 April an enemy aeroplane appeared over Tenedos aerodrome and dropped three 16-lb. bombs that failed to explode.

From 20 May a number of reconnaissance flights were made over the Aegean Sea to hunt out victims for German submarine U-21, which reached the Dardanelles on the 25th under the command of Lieutenant Commander Otto Hershing. Within two days of her arrival, U-21 had sent Triumph and Majestic reeling to the sea’s bottom.

More Aircraft Desperately Required

A letter written by Serno from the Dardanelles, dated 16 May 1915, is clear evidence that the problems associated with transporting aircraft, parts, and supplies through the neutral Balkan nations was having a profound impact on the Abteilung’s effectiveness:

The flying works well, [given] the circumstances of what one can do with three airplanes; the enemy has at least 30 airplanes [to use] against us. My aircraft have become very rickety, as I have no spare parts for the engines on hand.... All [new or replacement] aircraft are still in Hungary or Sofia [Bulgaria]. The Bulgarians and especially the Romanians, those Hundeseelen [sons of bitches], will not let anything go through!9

At the end of June the unit was transferred from Chanak-Kale, and the control of the Fortress Command, across the Strait to the Turkish Fifth Army under Liman von Sanders. Newly located at Galata airfield, the Abteilung continued to fly reconnaissance to islands in the Aegean. In his memoirs, Lieutenant Emil Meinecke has described flying

9 Holtzmann, p.199.
with his observer, Prince Hohenlohe von Oeringer, from Galata to Smyrna, and thence by night to the island of Mitylene to drop bombs on the Allied airfield.

With the Gallipoli campaign looking increasingly like a bloody stalemate, the need to transport the German machines that were already in Czernaheviz into service in the Dardanelles became imperative. This requirement was greatly intensified following a series of mishaps which saw all four of the Abteilung's aircraft wiped out in the space of two weeks. On 22 June Captain Charles Collett and Major R.E.T. Hogg, flying one of 3 Squadron's Voisin machines, engaged the German Rumpler at an altitude of 7,500 feet. Collett kept the labouring Voisin 200-300 feet beneath the Rumpler, and in a fight lasting twenty minutes used rifle fire to force the enemy machine down near Achi Baba. Whilst the crew escaped, artillery from a French aircraft wrecked the veteran German machine. It was subsequently retrieved, repaired, and later employed by the flying school at San Stefano. The three Albatros BI's met their end on 5 July, when a combined raid by British and French machines destroyed the hangar at Galata.

In a desperate effort to acquire more aircraft, it was ordered that henceforth the machines would be flown all the way from Czernaheviz, over the Serbian and Bulgarian territories, to Adrianople. The mission assigned for the transportation of German aircraft, as well as spare parts, personnel and machine-guns, was the German-Turkish Aviation Auxiliary Command, which later became the German-Turkish Flying Section at Czernaheviz. The first machine was dispatched in mid-June. In the place of the observer, auxiliary fuel tanks were installed to cover the 500 kilometre or 6-8 hour direct flight to Adrianople. Ahead lay the Balkan Mountains, with peaks as high as 2,000 metres, which proved strenuous to traverse in the heavily-laden aircraft.

In late July Robert Holtzmann, head of the Aviation Auxiliary Detachment at Czernaheviz, was assigned to convey a detachment of three machines and required personnel by air to Turkey. Holtzmann later recalled:
At the end of August 1915, we took off under a clear blue sky, three aircraft all in a row: two Albatros C-types with 160-h.p. engines and a Fokker single-seat fighter. At 2,000 metres altitude we flew over the Danube near Orsova and were soon greeted by Serbian artillery; [but] their rounds could not hit us.... At first we flew over Serbian territory, later over the monotonous Romanian lowlands we crossed the Danube for the third time, near Rahova, and found ourselves over Bulgarian sovereign territory, which was always a ray of hope, as, in the event of a forced landing, Bulgaria was still then still neutral. With uneasiness we saw that a deep dark cloud bank hung along the horizon above the Balkan Mountains: as we had already passed more than one-third of the entire distance, we decided to keep on flying.... As we went on, the terrain became even more mountainous and the clouds came closer and closer. We had to hang on. We were thrown back and forth in rain and hail. We could barely see what was in front of us; often, we just slipped by some cliffs, [as] we literally could no longer tell up from down. A deep sense of resignation took hold of us, as we feared that- at any second- we would crash into some mountain; as forced landing on this rocky terrain was simply impossible. At an altitude of about 200 metres we flew over the Sipka Pass, [and] it was as if we had passed into another world.... Above Tarnovo, we headed for our primary objective of Adrianople, where we made a smooth landing after a six-hour and 20-minute flight and were heartily welcomed and cheered by a crowd of people.10

The following day Holtzmann and the detachment flew the remaining 200 kilometres from Adrianople to Constantinople, landing at San Stefano airfield. Given the hazards of a mountainous region, and the absence of accurate maps, for the pilots and machines alike the flights made to Adrianople represented an extraordinary achievement. The two Albatros aircraft, and three of the same type which were later transported in similar fashion, reinforced the seriously depleted Dardanelles unit in September 1915.

On 6 September Bulgaria signed a secret agreement to join the Central Powers. With the transportation problem now alleviated, Ottoman air strength could at last pick up. Two 100 h.p. Gotha WD.2 seaplanes arrived that month to supplement the three existing Gothas of the German naval Wasserfliegerabteilung. Since July the unit had been carrying out reconnaissance and bombing flights from a seaplane station established on the south shore of the Straits near Chanak-Kale. At dawn on 27 July a Gotha flew a

10 Ibid., pp.200-201.
reconnaissance towards Lemnos, counting 87 ships, 13 of which were concentrated in the Bay of Moudros. The warships and transports were bombed by three Rumplers in the afternoon. On the night of the 31st two Gochas in concert with two Rumplers raided 3 Squadron’s airfield at Tenedos, dropping by hand five bombs and 500 darts.

During September and October six experienced German flying officers, including the Abteilung’s new commanding officer, Captain Korner, were seconded to the Turkish High Command to be used in part with the Dardanelles unit. Ludwig Preussner, the Abteilung’s first commanding officer, was among the civilian pilots who were sent back to San Stefano to act as flying instructors. Preussner met a sad end on 2 May 1916, when he and a student crashed and were burned to death in the resultant fire.

Now that experienced crews were available, and the High Command had five seaplanes from the German naval Wasserfliegerabteilung, and armed Albatros C.I aircraft with Fliegerabteilung 1, an air offensive was planned for September. Throughout the month an average of five sorties a day were flown by landplanes and two by the seaplanes. Besides reconnaissance and bombing missions over the offshore islands, Tenedos, Imbros and Lemnos, the naval unit regularly patrolled the sea of Marmara to protect Turkish shipping from attacks by British and French submarines. Korner, the only German observer, flew a series of photographic reconnaissances during October and November, and was able to establish the forward enemy trench lines on the Gallipoli Peninsula.

The withdrawal of the Allied forces from Gallipoli in December 1915 and January 1916 coincided with a marked turn around in the effectiveness of Ottoman air strength. Serno, convinced of the need of air support for the defence of Gallipoli Peninsula, overcome enormous odds to procure a nucleus of aircraft and personnel capable of essential reconnaissance duties. From an Allied perspective, an important contributing factor in the failure of the Dardanelles naval enterprise was the inability of Ark Royal’s seaplanes
to carry out essential spotting duties. For the airmen of 3 Squadron, singular accomplishments in the fields of reconnaissance, photography, air-directed fire and offensive bombing could not compensate for the general mismanagement witnessed in many of the Allied ground operations. By contrast, the Ottoman Air Service and it’s German support nexus progressively gained in strength and confidence from the tenacious defence exhibited by the Turkish defenders.
Figure 1.5 Supply routes between the Central Powers and Turkey.
CHAPTER VI

"Beyond The Boxtite":

Genesis Of The Australian Half Flight, Point Cook, Melbourne, 1911-1915

"The School seemed to have no other aim than to teach us to fly the Boxtite": Richard Williams, an officer in the inaugural course at the Central Flying School, and later commander of No.1 Squadron, Australian Flying Corps.

As early as September 1909, just six years after Orville Wright had made the world’s first controlled flight in a 25 h.p. Flyer biplane at Kitty Hawk in North Carolina, defence planners in distant Australia were thinking boldly about the military potential of aviation. In that month the Federal Government offered the substantial sum of 5,000 pounds to the designer of an aircraft best suited for military purposes. In the event, the competition’s rigid design specifications (aircraft had to carry sufficient fuel to remain aloft for five hours, and were to develop a speed of not less than twenty miles per hour) proved beyond the capabilities of all entrants.

The decisive step by the government came in 1911, when Senator G. Pearce, the Minister for Defence, returned from the Imperial Conference in London convinced of the urgent need for a military air arm in Australia. On 30 December 1911 the Commonwealth Gazette sought the appointment of “two competent mechanists and aviators” for the establishment of a flying school.\(^1\)

Henry Petre (pronounced Peter), an Englishman experienced in flying Deperdussin aircraft, and Eric Harrison, an Australian who was working for the Bristol Aeroplane Company in England, were selected from a host of applicants in August and September 1912. Also chosen were four experienced aircraft mechanics - R. Chester, an Australian, and three Englishmen, G.Fonteneau, C.Heath and A.Shorland. Meanwhile, the Defence Department, having failed to inspire from Australian inventors a successful aircraft

design, looked to available types overseas. In July 1912 orders were placed in England for two Royal Aircraft Factory B.E.2a two-seater biplanes and two Deperdussin Type A single-seater monoplanes. On 6 December an additional order was placed for a Bristol Boxkite, which was required as an elementary trainer.

Petre arrived in Australia in January 1913 and immediately set about selecting a site for a flying school. He later recalled:

I rode about on a motor cycle and inspected sites at Longwarrin, Cribb Point, Altona, and Point Cook, all in Victoria, and at Canberra. Initially, I rejected them all for various reasons, but finally selected Point Cook as it was not far from the Army headquarters in Melbourne and, being on the coast, had access by the sea as well as land.\(^2\)

On 7 March 1913 the government announced the formation of the Central Flying School (C.F.S.) and the Australian Aviation Corps.

There followed a frustrating one year’s delay between the public announcement about the C.F.S. and the first test flights at Point Cook on 1 March 1914. The Melbourne Argus of 3 March 1914 reported that aircraft had been stored away at Victoria Barracks for up to six months, pending the erection of hangars at the new military aerodrome. Between March and August 1914 the buildings required for housing flying school personnel, and the five machines, gradually took shape: a corrugated iron shed for the Bristol Boxkite, temporary canvas hangars for the B.E.2a and Deperdussin aircraft, and tents for the officers. Later, Petre designed and had constructed two wooden hangars, and other wooden buildings - barracks and administrative offices - were also erected.

On 15 August 1914 Lieutenant Richard Williams, a permanent army officer, learned that his application to train as an aeroplane pilot at a course of instruction of three month’s duration at Point Cook had been successful. The criteria for selection demanded that applicants have two years’ commissioned service with rank not above

\(^2\) Ibid.
captain, be aged between 20 and 26, and be unmarried. Joining Williams in the inaugural course at the C.F.S. were three officers of the Citizen Forces, Captain T.W. White, Lieutenant D.T.W. Manwell and Lieutenant G.P. Merz.

**New Zealand Officers Not Wanted**

It is noteworthy that a request from the Prime Minister's office in Wellington for New Zealand officers to be considered for flying instruction at Point Cook met with a cautious response. A minute from the Australian Department of Defence, dated March 1914, emphasised that the flying establishment was still in its preliminary stages, but with difficulty provision might be made to train four officers from New Zealand over the next two years. There is, however, no indication that any such instruction took place.

**Disappointing Standard Of Training**

In his autobiography Williams has noted that the purpose of the C.F.S. was to instruct the officers in: (a) the art of flying (b) meteorology (c) observation from the air (d) air navigation- flying by compass (e) photography from aircraft (f) signaling by all methods as applied to aircraft. In practice there was a considerable divergence between the stated objects of the course and the instruction which Williams, White, Manwell and Merz actually received. "The school", Williams recalled, "seemed to have no other aim than to teach us to fly the Boxkite." Certainly there was a notable lack of resolve on the part of both Petre and Harrison to impart any advanced level of training. As a case in point, neither instructor looked to compensate for the deficiencies in the Boxkite's performance by aiming to quickly graduate their pupils to the more advanced B.E.2a machine.

Bristol Boxkite C.F.S. 3, a lightly-constructed pusher biplane powered by a 50 h.p. Gnome engine, was the mainstay of elementary flying instruction at Point Cook until

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3 Sir Richard Williams, *These Are Facts* (Australian War Memorial, Canberra, 1977) p.27.
1917. Known affectionately as the "Beginner's Bus", C.F.S. 3 was so low in performance that in the opinion of Captain White it permitted only a primitive standard of training. With a speed of only 45 m.p.h. the Boxkite, in the first place, was at the mercy of adverse winds. As a result, flying was limited to early morning and, under favourable circumstances, to the evening. Williams noted that:

It was the duty of the orderly officer to test the air at daybreak. He did so by holding his handkerchief in the air by one corner; if it did not hang still there was no flying that morning. If the air was calm enough for flying in the early morning a breeze usually ended it soon after 8 o'clock if not before. Very occasionally the breeze fell to a calm just before sunset and there was then some flying. ⁴

Conditions were such that Williams managed only two flights exceeding twenty minutes in duration during the three month course.

Equipped with neither cockpit nor fuselage, and lacking the advantage of dual controls, the Boxkite was far from an ideal instructional tool. A former student has testified to the uncertainty of the C.F.S.'s training regime:

In the case of the Boxkite the instructor sat in a movable seat (we had no seat bolts) at the leading edge of the lower wing with a rudder bar and control stick attached to booms in the open in front of him. The pupil sat as close as possible to him behind with one leg each side of him and leaning forward to place his hand on the instructor's on the control stick - he had no contact with the rudder bar. These positions were reversed when the instructor thought the pupil good enough. ⁵

Remarkably, the Boxkite had only one instrumental aid - a glass tube to enable the pilot to observe the flow of oil from the pump to the engine. "The senses", White recalled, "took the place of instruments." ⁶ The rush of air on the pilot's face indicated

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the angle of climb or descent, and as there was no revolution counter or air speed gauge, one had to judge by ear whether the engine was running at full power.

During the first course at C.F.S. only the Boxkite was available for flying instruction. On 9 March 1914 the short-lived flying career of C.F.S. 4, the School-Type Deperdussin, came to an abrupt halt when Petre experienced engine failure on take-off. The machine was written off, but with little regret, "as it had a lot of vices and we referred to it as the Dirty Dustbin." The second Deperdussin, C.F.S. 5, also powered by a 35 h.p. Anzani engine, was purchased as a Taxi Type for engine-starting practice and taxiing. With the B.E.2a machines off-limits to students, a crash in the Boxkite meant all flying was postponed until the machine was repaired. On one occasion White struck the hangar after attempting to recover from a close-in landing, leaving a mangled heap of wires and struts in the hangar doorway. The procedure was for students to help the mechanics repair the aircraft. Williams has written:

Fortunately the Boxkite, being made of wood, linen and wire, was not difficult to repair and once the carpenter had completed the framework of the wings the pupils gave a hand in sewing on the linen and doping it with boiling sago, to shrink it.  

In spite of his persistent requests, for three months Williams was unable to convince either Petre or Harrison to provide flying instruction in the B.E.2a. Williams, in his autobiography, hinted at what lay behind this refusal:

It was apparent to all of us that we were not adding to our knowledge or skill by simply going on flying the Boxkite in flat calm and I could not avoid the thought that if persons holding honorary commissions (and whose only qualification for such commissions was their ability to fly an aeroplane) were thinking of a career in the army, it might reasonably occur to them that it was not in their own interests to exert any particular energy in helping others already holding a commission in the permanent forces (or even in the Citizen Forces) to acquire aviation skill equal to their own.

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8 Williams, p.27.

9 Ibid., p.28.
The stated objects of the course, it is true, were at variance with what could be achieved flying the Bozkite. The aircraft was totally unsuited to cross-country flying, which was laid down in Military Order (a). Lacking that most basic of instrumental aids, the compass, it was impossible for pilots to adhere to Military Order (d). As to the remaining criteria - photography, observation from the air, and signalling - neither the personnel nor equipment were available for any such training.

Only by his continued pressure on the instructors did Williams finally receive a clearance to take up the B.E.2a on the final day of the extended course. The performance of the machine came as a revelation after three months on the labouring Bozkite: it was easier to fly, more powerful, and quicker in responding to the controls. The B.E.2a, furthermore, was equipped with an altimeter, a speed gauge, a compass, and an engine revolution counter. During a cross-country flight lasting 35 minutes, Williams attained the considerable height of 3,750 feet.

Williams, having acquired over three months a total solo flying time of 5 hours and 13 minutes, was first to qualify as a pilot at Point Cook. The practical test demanded that pilots perform figures of eight within a set radius, as well as successfully land the Bozkite and come to rest within a circle of 50 yards diameter marked on the airfield. On 11 November White was first to attempt the test, but failed to stop within the circle. Ironically, in the same month exactly one year later White would again overshoot a landing - during a mission in occupied Baghdad - which on that occasion would cost him his freedom.

On completion of the written and practical tests, all four graduating pilots were supplied with an aviator’s certificate by the Royal Aero Club - which was in fact an international civil aviation licence. There being no immediate prospect of active service in a flying capacity, the airmen returned to their respective units. As White recalled:

The great part aviation was to play in the war was not yet foreseen. For though we had developed pilot’s wings on our chests after completing the tests required by the Royal Aero Club, we could find no active service
openings where we might be usefully employed, as our Government at that
time had no intention of sending a flying unit overseas. ¹⁰

A Call For Help

Quite unexpectedly, on 8 February 1915 the Commonwealth Government received
a cable from the Viceroy of India, Viscount Hardinge, asking if:

You could provide any trained aviators for service in the Tigris Valley? All
our trained officers are in Egypt or England. If Officers are available, can
you also send machines, complete with motor transport, spares, mechanism,
personnel, etc. ¹¹

The Australian Government responded that although aircraft were unavailable, it
could furnish a half flight comprising airmen, mechanics and transport. New Zealand
volunteered one trained pilot, Lieutenant W. Burn.

Captain Petre, who was selected to command the force, had placed at his disposal
three Australian pilots - Captain White (adjutant), and Lieutenants Merz and W.H.
Treloar, an infantry officer who had learned to fly in England. Besides the four officers,
a total of 41 other ranks, including 18 air mechanics, were chosen. Transport took the
form of two repair-shop lorries - a metal-workshop Commer and a wood-workshop
Daimler - both of which had been modified at the Newport Railway Workshops. The
bulk of the personnel sailed with Treloar and White for Bombay on 20 April.

Mesopotamia: A Land Of Contrasts

The geography and climate of Mesopotamia, the Greek word for "between the
rivers", was to prove as much the enemy of the Indian Expeditionary Force as was the
Turkish Army. Since the thirteenth century, when the Mongols destroyed an ancient
system of dikes used to control flooding, any invasion of Mesopotamia had by necessity
to follow the course of the Tigris and Euphrates. In the season April to June, as a result

¹⁰ White, p.13.

¹¹ The Mesopotamian Half Flight, Australian Flying Corps. (No more information
available).
of snows melting in the Caucasus, the rivers overflowed their banks. During these floods, the alluvial plain of the Tigris and Euphrates was totally impassable to wheeled transport. Of course, in 1914-1915 there were neither roads nor railroads. During the dry season, away from the rivers there was no drinking water to be found. Water, moreover, "could be a problem even during the wet season, when wind might shift cholera-infected pools for miles, contaminating seasonal wells."\(^{12}\) The middle stretches of the Euphrates, broad and shallow, prevented river transport from bringing up supplies to advancing British forces. The Tigris, therefore, was the only throughfare to Baghdad open to General Sir John Nixon, Commander of the Indian Expeditionary Force. In the event, a profound administrative breakdown in the area of logistics meant the great need for river transport was not fully grasped until 1916, and by then it was too late.

If geography dictated the perimeters of battle, climate governed who was to take part. In winter the nights were cold - often below freezing point; in summer the temperature rocketed to 130 degrees in the shade. In the infernal heat and pestilential swamps malaria and other tropical ailments reached frightening proportions: sun-stroke and heat-stroke were common, fever, dysentery and paratyphoid were rife, yet the medical services were never adequately supplied to deal with the increasing numbers of sick.

**Mesopotamia: No Man’s Child**

"It was believed to be a sideshow and no man’s child": Mesopotamia Commission Report.

In August 1914, three months prior to Turkey’s declaration of war, the Admiralty voiced particular concern over the security of the Persian Gulf. The Admiralty, aware of the importance of fuel for the Royal Navy’s new oil-driven warships, purchased a

controlling interest in the Anglo-Persian Oil Company, which worked considerable oilfields in Southern Persia. A pipeline tapped oil from the rich deposits in Arabistan, which lay in the Sheikdom of Mohammerah (under the suzerainty of Persia), down to the island of Abadan in the mouth of the Shatt-al-Arab at the head of the Persian Gulf. Turkish territory, including the whole of Mesopotamia, lay just a half mile away on the opposite bank of the Shatt-al-Arab.

On 25 August 1914 the Admiralty asked the India Office to station troops in the Persian Gulf to guard against any Turkish attempt to interfere with the Abadan oil refinery. (The War Office, pressed by commitments elsewhere, readily agreed that operations in the Persian Gulf should be controlled by the India Office—the department of the home government responsible for India affairs.) No decision was reached, although in the India Office there was concern about the political effects of leaving the head of the Persian Gulf unguarded. Indeed, reports from Mesopotamia that 2,000 Turkish troops were gathering at Basra did not bode well for Britain’s Arab allies, the Sheikdoms of Mohammerah and Kuwait.

The British War Cabinet, aware of the need to concentrate resources on the campaign in Europe, was hesitant to commit Indian troops to the Persian Gulf. A note by Winston Churchill, First Lord of the Admiralty, of 1 September commenting on the question of dispatching troops to defend the Abadan oil refinery best indicates the attitude of authorities: “There is little likelihood of any troops being available for this purpose. Indian forces must be used at the decisive point. We shall have to buy our oil from elsewhere.”

The turning point came on 26 September when Major-General Barrow, Military Secretary at the India Office, issued a document advocating a troop landing at Abadan “ostensibly to protect the oil installation, but in reality to notify to the Turks that we

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meant business and to the Arabs that we were ready to support them."\(^{14}\) What, in fact, lay behind this new appreciation was the increasing probability of hostilities with Turkey. Of particular concern was the menace to the security of India presented by the actions of Turkish agents bent on winning over Muslim tribes of the North-West Frontier preparatory to the proclamation of a Jehad. On 2 October the British Government decided to send the 16th Infantry Brigade of the 6th (Poona) Division, commanded by Brigadier-General W.S. Delamain, to the Shatt-al-Arab. Viscount Hardinge received the following instructions from the Earl of Crewe, Secretary of State for the India Office, on the 5th:

The force under orders is only intended to occupy Abadan, protect oil tanks and pipeline, cover landing of reinforcements if these should be necessary and show Arabs that we intend to support them against Turks.... Should Turkey become a belligerent, management of expedition will devolve on you, but instructions as to scope of operations will of course come from me.\(^{15}\)

Exactly one month later, Turkey, by way of her navy's bombardment of the Russian Black Sea ports, did assume belligerent status. Delamain, furnished with orders to clear Turkish infantry forces from the Shatt-al-Arab as far as Mohammerah, successfully led the 16th Brigade against the enemy fort at Al Faw on 6 November. On the 13th, the Mesopotamian force - officially called Indian Expeditionary Force D - was bolstered by the arrival of a second infantry brigade, and new divisional commander, Lieutenant General Sir Arthur Barrett. The 6th Division pushed north-west to capture Basra on 21 November, and three weeks later the Turks evacuated their entrenched position at Kurna. For the next four months the front remained quiet.

In accordance with the instructions issued to Barrett, which contemplated the occupation of Basra and any movement beyond deemed necessary to safeguard the town, the 30th Brigade was sent in April 1915 to attack the Turks at Shaiba, ten miles

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\(^{14}\) Gregory Blaxland, 'Mesopotamia; The Advance To Basra' in Purnell's History Of The First World War, Vol.1, p.446.

\(^{15}\) Moberly, Vol.1, pp.92-93.
south-west of Basra, completely defeating them. On the eve of the Shaiba battle Nixon assumed from Barrett command of Force D, and simultaneously Major-General Charles Townshend was appointed to command the 6th Division. This change of leadership would exert a profound influence on the future conduct of operations in Mesopotamia. The cable sent by the Earl of Crewe on 5 November, previously referred to, reflected the prevailing policy: the management (logistics) of the various operations were to be overseen by the Viceroy, but the scope (strategical considerations) of Force D’s involvement were to be defined by none other than the India Office. Without reference to either the India Office in London, or the Indian Viceroy, however, Nixon had been issued with a fresh set of instructions by the Army Headquarters in Delhi. The revised orders, a copy of which did not reach Whitehall until 2 May, increased the scope of the campaign in Mesopotamia to the extent that the safety of the oilfields was no longer the primary consideration. Nixon was informed that his first task was “to retain complete control of the lower portion of Mesopotamia, comprising the Basra vilayet [province] and all outlets to the sea, and such portions of neighbouring territories as may affect your operations.”

Significantly, the Basra vilayet encompassed An Nasiriyah, Al Amarah, and came within close proximity of Kut-Al-Amara.

A situation developed where Nixon, left more or less to his own devices, bit off more than he could chew. A recent historian has commented:

Unfortunately those who were running the campaign in this third priority theatre were to be encouraged by success after success steadily to extend the operations, at the same time without increasing the means of doing so.

Nixon, for instance, knew from orders given him in April that Force D might have to advance as far as Nasiriyah on the Euphrates and Al Amarah on the Tigris, yet, inexplicably, he did nothing for three months about securing essential river transport.

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Although privately critical of Nixon’s efficiency regards logistics, Townshend, perhaps motivated by the lure of promotion, refrained from pressing his objections. Meanwhile, the British Government, looking to concentrate its resources on Western Europe, the planned Gallipoli landings and the defence of the Suez Canal, turned a blind eye. For what it was worth, the government’s representative at the India Office, Lord Crewe, continued to advocate a policy marked by caution.

**Aircraft: Reconnaissance Value Only**

Amidst this unhappy picture of administrative chaos and misunderstanding of military objectives, the S.S. Bankura, carrying the officers and mechanics of the Australian flying unit, chugged along the Shatt-al-Arab and reached Basra, the base of operations in Mesopotamia, on 26 May 1915. “The place”, Lieutenant Colonel J. Tennant wrote of Basra in 1920:

> is famous at least for its climate; the humid heat hangs heavy on the lungs, everything is saturated, ink runs on the paper, and matches will barely strike. Endure the day, but the night brings no relief. There is no freshness in a Busrah summer, and the ravages of prickly heat, mosquito, and sand-fly combine to shrivel all impulse and desire. The town and its surroundings are intersected by canals and lagoons, and densely sown with date palms, their ‘feet in water and their heads in hell’, as the Arab saying goes.\(^{18}\)

At Basra, the Australians joined up with members of the Indian Flying Corps, Captain P. Broke-Smith and Major H. Reilly, Second-Lieutenant Wills, and six Indian mechanics. “For convenience”, White recalled, “we were grouped together, gazetted temporarily to the Indian Army, and known thereafter as the Mesopotamia Flight, Royal Flying Corps.”\(^{19}\)

As far as the Australian contingent was concerned, linking up with the Indian Flying Corps was perhaps less a matter of convenience than a necessity. Petre, who left

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\(^{19}\) White, p.21.
Australia on 14 April as advance officer, found on arrival at Bombay that the arrangements made by the Indian Government for the formation of the flying corps were less advanced than had been conveyed by their cablegrams. "The organisation aimed at", Petre wrote from Basra on 14 June:

was a base for supplies and repairs including a workshop, and stores, this base being under the command of [Captain] Broke-Smith, and a squadron of one flight at first, afterwards to be enlarged to its full establishment of three flights under Major Reilly.\(^{20}\)

At the time of writing, however, the Indian Army airmen possessed only two motor-lorries, along with stores, a few spare aeroplane parts and tools, which, in the words of Petre were "very inadequate".\(^{21}\) Although the personnel, stores and transport furnished by Australia were intended only for one half flight, these came to be relied on almost wholly to form the larger organisation outlined above. As a result, the flight was left insufficiently provided for during its numerous operations from advanced aerodromes.

White was put in charge of the Aircraft Park, and the flight’s first aerodrome, at Ma’gil, an Arab cemetery located three miles north of Basra. Because the Tigris and Euphrates flooded twice annually, the Arabs buried their dead on high ground; but this was also a requirement for the aerodrome, since the period April to June experienced the greatest flooding and much of the Basra environs at the time of the Australian’s arrival was under water. White claimed that the Aircraft Park at Ma’gil housed two Maurice Farman Longhorns and one Shorthorn. F.M. Cutlack, the official historian of the Australian Flying Corps in World War One, over-ruled this assessment and listed two Maurice Farman Shorthorns and one Longhorn. We do know that one Longhorn had already been flown for a considerable period in Egypt, and as a result spent most of it’s

\(^{20}\) ‘First Half Flight in Mesopotamia - Reports by Commanding Officer Henry Petre’ (Australian Archives, Canberra, Series A2023/1, Item A38/8/202).

\(^{21}\) Ibid.
time in the workshop under repair. The two remaining Farmans were equipped with second-hand engines of doubtful history.

The British Royal Commission on Mesopotamia, conducted in 1917, found that among the defects in equipment one of the most serious was the want of efficient aircraft. The Commission, while conceding that Europe had first claims upon the resources of the Royal Flying Corps, was nonetheless at a loss to explain:

why a large number of aeroplanes of a type not sufficiently fast for service in France should not have been available for the advance on Baghdad, nor why those which were sent were not equipped for photography and wireless telegraphy.\(^{22}\)

The consequences, at least, were amply clear: "the lack of a sufficient supply of aeroplanes of any kind in the operations which led to the Battle of Ctesiphon [22 November] seriously hindered our troops in the task they had to perform."\(^{23}\)

The aircraft supplied by the Indian Government were totally unsuited to war service in Mesopotamia, least of all for war in such a climate. Conditions of extreme heat and dust were a constant source of trouble for the Maurice Farman’s 70 h.p. air-cooled Renault engines. In the first week of June Petre experienced an engine failure caused by the oil losing its lubricating qualities on account of the prolonged heat! The arrival in July of two Caudron G III machines gave no respite, as their Gnome rotaries proved to be even more inappropriate than the Renults. White reported that in one month’s flying he had no less than five engine failures. A scarcity of hangars meant the aircraft were left out in the open, and at the mercy of the intense humidity which warped and rotted the wood and fabric. Nor did the machines arrive adequately equipped: lacking bomb racks, wireless telegraphy, aerial cameras, and machine-guns, it was also discovered that the 20-lb. aeroplane bombs shipped out from England were defective,

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\(^{23}\) Ibid., p.39.
having been damaged en route. Reconnaissance, therefore, was the only possible service to which these discrepit aircraft could be put. And given that the 70 h.p. Renaulsts could generate a flying speed of only 50 m.p.h., in the face of a Shamal (a strong seasonal wind which blew from the north), a Maurice Farman simply moved backwards instead of forwards.

If the machines were susceptible to the harsh Mesopotamian climate and environs, so too was the growing RFC contingent. The stifling heat, leading to innumerable instances of heat-stroke and fostering malaria and its associated diseases, placed a terrible strain on flying and ground personnel. Corporal Jim Sloss, like all of the air mechanics sent out from Australia, found it was necessary to confine hours of work to early morning and late afternoon: the fierce midday heat, Sloss reported, rendered the aircrafts’ cylinders almost too hot to handle! Dressed in a khaki drill jacket, a thin cotton shirt, shorts and tropical helmet, the pilots could fly at all hours of the day. Armed only with revolvers, the airmen’s preeminent fear was the very real possibility of engine failure over no-man’s land - territory outside one’s own camp roamed over by merciless Arabs. White recalled that:

these treacherous marauders hovered round the camps like jackals and spared neither Britisher, Indian nor hapless Turk who fell into their hands.... Assisted by the antiquity of our aeroplanes and the strong winds, against which our archaic planes could only make headway at a low altitude, the Arabs amply compensated for any thrills that may have been lacking through the absence of enemy aircraft.²⁴

Tragically set upon by Arabs after a forced landing on 30 July, Merz and Burn will be remembered as the first airmen from their respective countries to be killed in World War One.

Townshend's Regatta

Australian members of the Mesopotamian Half Flight arrived at Basra in sufficient time to participate in the first step of Nixon's offensive up the Tigris; a drive towards Al Amarah, 87 miles beyond Qurna, planned for 31 May. The action, referred to as Townshend's Regatta, derives its name from the unique tactics employed by General Townshend to move his forces to their objectives. The whole country north of Qurna was flooded, so the infantry had to attack in bellums, or Arab war canoes, with artillery support provided by a flotilla comprising three sloops, four armed launches, and two gun-barges. During the first day of operations, 31 May, Reilly and Broke-Smith (observer), and Petre and Burn (observer) rendered most useful service to the naval fleet. Reconnoitring from a landing ground at Sherish, just south of Qurna, the airmen reported that the Turks were evacuating their entrenched positions north of this town. Lieutenant Treloar acted as officer in charge of the advanced aerodrome, and it was his duty to forward the reconnaissance information to headquarters, and to ensure that the two machines, one Shorthorn and a Longhorn, were refueled.

The next morning, as 500 bellums and accompanying naval ships progressed cautiously up the Tigris for a frontal attack on the Turkish main position at Abu Aran, Reilly and White (observer) left Basra for the two hour flight to Sherish. Here they refueled, and flew on to Abu Aran, where a general state of panic was observed. White, in his autobiography, described the scene:

The Turks, surprised by a concentration of superior artillery, and bewildered by what appeared to be an extensive enveloping attack, coupled with the first appearance of aircraft, were leaving elaborate positions that they had held for five months, with only the merest pretence of a fight. As we progressed northwards, we saw broad-decked paddle steamers, tugs with lighters alongside crammed with troops, mahallas, bellams, and every kind of craft that could be sailed or paddled, moving up-stream with the greatest possible speed, while a modern gun-boat stood by as rear-guard. Following the course of the river to see if the alternative positions at Rotah and Maziblah were also being evacuated, and to locate the head of the retiring
fleet, we found that as far as the vicinity of Ezra’s Tomb, the whole Turkish Army was in retreat.  

Townshend, who learned of the Turkish retirement from a message dropped by Reilly and White over the flagship H.M.S. Espiegle, now undertook to go all out in pursuit of the fleeing enemy. Clio, Odin, and Espiegle led the charge, and finally caught up with the Turkish convoy in the late evening near Ezra’s Tomb. The sloops’ 4-inch guns opened fire in succession on the river steamer Mosul and the Turkish gun-boat Marmaris. Earlier in the day, the Maurice Farman crewed by Reilly and White had similarly annoyed the Turkish retreat: one fleeing launch, full of Turkish troops, which narrowly escaped being hit by a 20-lb. bomb dropped by the airmen, took this misdirected shot as a warning to submit and obligingly ran ashore to surrender!

As the chase continued on the 2nd, a reconnaissance flown by Petre and Burn revealed that a number of Turkish troops were evacuating Al Amarah by barge. Buoyed by the Turk’s apparent lack of resolve, Townshend, his fleet of bellums now 50 miles behind, boldly decided to press on to Al Amarah. From a further air reconnaissance carried out next morning by Treloar and Reilly (observer) came an encouraging report that east of the objective three weak Turkish battalions (approximately 3,000 men) were retiring from Arabistan, and that the remainder of this force was passing through Al Amarah. In the afternoon the town, it’s 20,000 inhabitants, its garrison and a battalion of the crack infantry regiment, the Constantinople Fire Brigade, was bluffed into surrender by the small British flotilla: the Turks were cajoled into thinking that the expeditionary force was just around the next bend in the Tigris, when in fact it was still 24 hours steaming distance away.

Nasiriyah: A Hollow Victory

The flying corps detachment transferred to Al Amarah on 9 June, and in preparation for Nixon’s planned advance along the Euphrates to Nasiriyah preliminary

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25 Ibid., p. 23.
air reconnaissances were made over the western end of the marshes. A Shorthorn, crewed by Petre and Burn, developed engine trouble returning from a flight over the Hammar lake district on 19 June. Reilly and Treloar, in a second Farman, experienced the same misfortune the following day during a reconnaissance of Nasiriyah. The two airmen were forced to spend a day in the simmering desert heat awaiting the arrival of a new condenser for the magneto. It being decided that the Farman machines should return to the Aircraft Park for a refit, two recently arrived Caudron GIII aircraft, powered by 80 h.p. Gnome rotary engines, were ordered up from Basra. The Caudrons were piloted by Reilly and Merz, who had arrived from Australia on 13 June. The machines' Gnome rotaries proved troublesome to service in the high temperatures, and the Shamal played havoc with the air-cooling. As a result of frequent engine failures, the two Caudrons were in due course responsible for the deaths of Merz and Burn, and the capture of Treloar and Captain B. Atkins.

On 21 and 22 July Merz and Reilly piloted the Caudrons over Nasiriyah, where Turkish trenches were sketched from the air and the general positions plotted on a map. For Major General G.F. Gorringe, who was entrusted with the command of the operation, these reports were invaluable in that they provided the first accurate picture of enemy dispositions and the local topography. General Nixon, in a later dispatch, singled out for particular praise the work of aerial reconnaissance:

I would also place on record my high opinion of the excellent work performed by the officers and men of the Royal Flying Corps, whose valuable reconnaissances so materially assisted in clearing up the situation before the battle of 24th July.26

On the morning of the 24th, after some fierce resistance, the British and Indian troops captured the first line of trenches at Nasiriyah. A second entrenched position was captured one mile further on, and by late afternoon the Turks were fleeing across the marshes. For Gorringe's men, the action ended an arduous three weeks of moving and

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26 Moberly, Vol.1, p.298. Note: not until the following month was the Mesopotamia Flight officially gazetted to the RFC.
fighting, in which they had endured difficult terrain, incessant Turkish fire, and battle temperatures often reaching 113 degrees in the shade.

On his first flight towards Nasiriyah during the battle Reilly was forced by engine trouble to land in the flood waters near Suq ash Shuyukh. Corporal Sloss, in company with Sergeant Palmer (an Englishman in the RFC who had been sent to India to train aircraft mechanics), was called on to help salvage the Caudron: "We took a new 80 h.p. engine which we put into the machine in terrific heat. We were upset out of a bellam with the used engine. We had to bang the bellam wallahs, who would not unload the bellams."[27]

Sloss received orders to accompany Merz on the homeward flight to Basra planned for 30 July, but by a twist of fate the directive was countermanded and the New Zealander Burn joined Merz instead. Accompanied by Reilly and Palmer in the second Caudron, the pilots had agreed to keep together, but they lost touch soon after take-off. As anticipated, Reilly was forced down by engine trouble (diagnosed as a weakened inlet valve spring) half-way between Nasiriyah and Basra. Fortunately the Arabs in the area proved friendly, and Reilly and Palmer were able to rectify the fault and fly on to the refilling depot at Abu-Salibiq, where Petre was waiting. Meanwhile, just 20 miles from the safety of Abu-Salibiq, Merz and Burn had also been forced to land after experiencing engine failure. At this juncture the Arabs were not so accommodating. According to native eyewitnesses questioned later, the officers were attacked by a band of well-armed Zobaab tribesmen. Equipped only with revolvers, the two airmen kept the Arabs at bay in a running fight towards Abu-Salibiq. They killed one and wounded five of their adversaries, and had retired a distance of five miles, when one of them was wounded. His companion refused to escape alone, and together they died fighting. The bodies of Merz and Burn were never recovered.

Not until the evening of 1 August, while still at Abu-Salibiq, did Petre learn that Merz’s and Burn’s machine was missing. (Petre, knowing that Merz had ample petrol, assumed he had gone straight on to Basra.) The next day, in a Maurice Farman, Reilly and Petre made a special reconnaissance to look for the Caudron. It was discovered 25 miles west of Abu-Salibiq. Petre later recalled:

There was absolutely no trace of the officers. The only objects left were a Gnome spanner and one high tension lead and two burnt out smoke bombs. The aeroplane had made a good landing but the planes had been split by knives and the tail and nacelle broken.28

A punitive expedition, which White accompanied on behalf of the AFC, proceeded to the village of Gurmat Ali where the Arab murderers were believed to be residing, but the culprits had fled. By way of vengeance the houses of the Sheikh were burned down.

Following the loss of Merz and Burn, long flights from Basra to the front-line were forbidden pending the arrival of better performed aircraft. Reinforcements arrived on 26 August in the form of four Martinskyde S.1 Scouts, and in the same month the Mesopotamia Flight became a squadron of the RFC - ‘A’ Flight of No. 30 Squadron. The remainder of the unit was based at Ismailia in Egypt. Captain Petre tested the first Martinskyde on 29 August, but it failed to impress: its 80 h.p. Gnome rotary could develop a speed of only 50 m.p.h., and the aircraft laboured for 23 minutes to reach 7,000 feet.

‘A’ Flight Beset By Misfortune

As far as the India Office was concerned, Nixon’s occupation of Al Amarah and Nasiriyyah had ensured the safety of the Persian oilfields, and therefore, brought the campaign in Mesopotamia to a successful conclusion. But Nixon, backed by Indian authorities in Delhi, had made up his mind that Kut-Al-Amara, a town of 6,000 inhabitants located 20 miles up-stream from the advanced British positions at Al Amarah,

could be turned into an ideal stepping stone for an attack on Baghdad. On 1 September Townshend began to move his troops for their forward concentration at Ali Gharbi, more than half-way between Kut and Al Amarah. By the 16th the force had reached Sannaiyat, 20 miles from the Turkish entrenchments at Es Sinn and only 27 miles downstream from Kut. Meanwhile, on 7 September an advanced element of 30 Squadron had flown from Al Amarah to Ali Gharbi, where an aerodrome had been established, with a Shorthorn, a Caudron, and two Martinsydes. Four days later the Farman was destroyed in a bad landing, and similar misfortune followed with two of the other machines. On the 13th a Martinsyde crashed at Ali Gharbi while being tested in a high wind and was never used again. While reconnoitring Es Sinn on the 16th the Caudron flown by Treloar, with Captain B. Atkins of the Indian Army as observer, characteristically experienced engine failure and was forced to land within 100 yards of the Turkish trenches. Townshend described how the events unfolded:

The Naval Flotilla saw the aeroplane come down close to the enemy’s trenches, whence it had been under heavy rifle fire. It had first been seen at a height of at least 4,500 feet, gliding down. As it passed over the trenches on the left bank very heavy fire was opened. Three or four hundred men were seen to rush out of concealed trenches and surround it immediately it landed, which it did without crashing.29

On their capture Treloar and Atkins were sent by river steamer to Baghdad, thence to the prison camp at Mosul, and were later taken to Afion Kara Hissar in the interior of Asia Minor.

To reinforce the remaining Martinsyde at Ali Gharbi, the Ma’gil Aircraft Park packed another Martinsyde in crates and sent it by barge up-river. For a time the barge was stranded on a sand bank near Al Amarah, and it was October before the Scout arrived. White and Petre, subsequently, were ordered up from Basra in a Shorthorn and Martinsyde, respectively. Unfortunately, coming into land outside the prepared strip at

Sannaiyat, Petre hit rough ground and "bent" the machine so that it took several days to repair. This left only the Shorthorn and one Martinsyde for the attack on Es Sinn.

In his book Townshend has described the fine aerial work performed by Reilly preparatory to the Kut offensive. By 17 September Townshend had "an accurate knowledge and sketch of the enemy’s position and its entrenchments, which consisted of up-to-date fire trenches, main fire trenches, wing trenches, and communication ways."30 Map-making duties - flying, sketching, photographing, developing, printing and pasting - were shared by two fresh recruits; nineteen year-old pilot Lieutenant E.J. Fulton of the RFC, and Captain Francis Yeats-Brown, an officer of the 17th Indian Cavalry.

Gazetted to the Flying Corps as an observer, Yeats-Brown, it is interesting to note, arrived at Basra having never seen an aeroplane at close quarters. Desperately in need of aircraft spares, and experienced airmen to replace Merz, Burn, Treloar, and Atkins, Major Reilly was understandably upset and bemused by the arrival of this novice. In *Bengal Lancer*, published in 1930, Yeats-Brown related his first meeting with Reilly:

Had I brought the new Gnomes, he asked? Could I fly a Martinsyde Scout? How did they spot for artillery in France? Could I work a Goerz Graflex camera? Well, I had had a Brownie for years, I answered cautiously. I could develop and print my own photographs. As to the Gnomes (should I say that they had been seasick?) I knew nothing about them. Why are you here? asked Reilly, rather crossly.... Damn it all, I asked for a Martinsyde pilot and two mechanics and two Gnome engines - and all they send me is an observer!31

And unbeknown to Reilly, Yeats-Brown had never flown in his life!

**Kut-Al-Amara: Aircraft Play Prominent Role**

Air reconnaissance had established that the bulk of the Turkish force were strongly entrenched on the left bank of the Tigris in a line of earthworks which extended

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30 Ibid., p.112.

northwest from the river bank for about six miles inland to the Suwada Marsh. On the right bank, at Es Sinn, a smaller force occupied two miles of trenches dug along the site of an ancient canal. The main feature of the Turk’s northern position, and the reason for the strength of the defences, was the marshes. Importantly, Reilly established that there was sufficient dry land between the marshes for Townshend to carry out his battle strategy: this involved making a feint attack on the right bank against the Es Sinn position, while delivering a decisive turning movement against the flank positions nearest the Suwada Marsh.

Townshend, on 27 September, sent his cavalry and the 16th and 17th Infantry Brigades to make a feint at a point two miles from Es Sinn. That night, under the cover of darkness, the majority of the force was moved back across to the left bank. Two columns now prepared for the definitive phase. Brigadier-General W. Delamain was in overall command and part of his Column ‘A’ was to make a demonstration, while Brigadier General F. Hoghton - with his own and the remainder of Delamain’s brigade - was to march north in a flanking movement to capture the redoubt near the Ataba Marsh. Delamain, subsequently, was to lend support. In the meantime, near the river bank, Major General C. Fry’s Column ‘B’ was to continue with a frontal assault. It transpired that Hoghton’s column headed too far north and was forced to march completely round the Ataba Marsh. (Whilst the operational map prepared by aerial reconnaissance accurately indicated topographical features, no magnetic bearings could be provided by the airmen due to the absence of a reliable compass.) Delamain, aware that any delay might result in the Turkish trenches being reinforced, decided to carry on with his attack. Hoghton was able to send back the Oxford and Buckinghamshire Light Infantry, and the 119th Infantry from his own brigade to bolster Delamain’s force. Once they had arrived the Turkish trenches in front of Delamain were quickly captured, and when Hoghton finally managed to get into position the whole of the front line was soon rolled up. In a last supreme effort, late in the afternoon, Delamain’s exhausted troops successfully effected a flanking bayonet charge on to the Turk’s positions to the right of Fry.
Throughout the action on the 28th, Reilly in the single-seater Martinsyde, and Fulton and Yeats-Brown in the Shorthorn played an invaluable role maintaining communication between Townshend’s headquarters and Delamain’s Column ‘A’. A wireless set could not be made available to Delamain for the day’s operations, so the airmen were called on to report his movements and convey Townshend’s instructions. Flying from a landing ground at Nakhailat, a short distance up-stream from Sannaiyat, Fulton and Yeats-Brown began their day rather inauspiciously: the Farman was situated one mile away from their camp astride the Tigris, and after setting out independently at 3:30 am on the 28th both airmen lost their way in the desert scrub. Yeats-Brown recalled that:

hostile Arabs had been reported prowling about the night before, and as I wandered on, cursing myself for not having taken a compass bearing from the ship, I began to realise that I might easily be caught - an ignominious end for I had nothing to defend myself... Eventually I saw a figure, very dim in the darkness, creeping stealthily towards me, and for a moment my fears were confirmed, but it was Fulton, who had covered me with his revolver, thinking I was an Arab.32

Prior to the attack Fulton and Yeats-Brown made a reconnaissance over the northern section of earthworks, and after reporting to Delamain, returned to Townshend’s headquarters. The airmen rejoined the battle just as the northern trenches were captured by Delamain’s troops, and at 10:40 am they hurried back to inform Townshend that the assault had been successful. By 11:00 am Hoghton was at last in position to join the combat for the centre trenches, and Delamain ordered Fulton and Yeats-Brown to report on the attack’s progress. In a letter to his mother, dated 1 October 1915, Yeats-Brown gave details of this reconnaissance:

It was necessary to see exactly what happened, so I wrote to Fulton ‘Go over them, chance the height’ and we sailed over them at a height of 900 feet, whereas, of course, 5,000 feet is the correct height. Some bullets cracked round us, but I thought the Turks would be too busy avoiding being bayonetted to fire very carefully at us. We dived and turned about and saw the Oxfords [Light Infantry] carry the trenches, and I was just going to ask

F. [Fulton] to turn back when he pointed to the back of his neck. I saw a bullet had passed in and out of his shirt collar. I tore this open and tried to get a first field dressing on the wound, but the wind nearly carried it into the propeller. Eventually I held a bit of cotton and gauze on the place (the bullet had just snicked out a bit of flesh half an inch deep and two inches long) until we landed. I rushed to the General [Delamain] to tell him of our success and when I got back F. implored me to tell no one of his wound, in case they should stop him flying.

Next day the two machines were used to bomb the retreating Turks. Townshend, although in possession of Kut, was unable to undertake an effective pursuit due to fatigue among his men and the difficulties of navigating up the Tigris. By 5 October Townshend’s cavalry had reached Aziziya, half way between Kut and Baghdad. The same day, Reilly in a Martinsyde discovered that the Turks had rallied at Ctesiphon, where there were six miles of formidable entrenchments.

**Baghdad: Green Light Given**

At this point of the campaign politics again intervened. Nixon was obsessed with Baghdad, and held firm in his conviction that he had sufficient troops and transport to capture and hold the city. Nixon’s optimism is best summarised in his own words: “unless unfavourable contingencies intervene, the troops at my disposal are sufficient to occupy Baghdad.”

As to the question of river transport, the British Government misconstrued Nixon’s declaration that there would be no “navigation difficulties” as assurance that sufficient transport was in fact available. (This alarming mis-interpretation was complicated by the reality that authorities in Whitehall were unaware of Nixon’s request on 10 July for more steamers.) Townshend doubted whether his force was strong enough to capture Baghdad, and requested that two divisions be available for the advance. He noted in his diary on 3 October:

The Army Commander does not seem to realise the weakness and danger of his line of communications. We are now some 380 miles from the sea and we

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have only two weak divisions, including my own in the country! There is my division to do the fighting, and Gorringe’s to hold the lines of communications from Kut to the sea. Thus there is no possible support to give me if I receive a check.\(^{35}\)

Townshend sent a telegram to this end to Nixon, but received a sharp reply confirming that it was the Army Commander’s intention to open the way to Baghdad, and that a division was expected from France. As the Mesopotamia Commission noted, Townshend did not press his objections very hard.

Meanwhile, back in London, Cabinet was aware that the seizure of Baghdad was an attractive proposition after the withdrawal from Gallipoli. On 24 October Nixon was authorised to advance on Baghdad, and was promised two Indian divisions then serving in France. The green light was given on the understanding “that the existing vessels on the Tigris are sufficient for the advance to be made and to ensure the supply of the advanced troops.”\(^{36}\) The British, of course, were at the end of their logistical chain, and a lack of boats led to the needless sufferings of the wounded after the Battle of Ctesiphon.

**Aircraft Lay The Ground-Work**

Aerial mapping of Turkish positions, along with reconnaissance work and intermittent bombing raids, was in the meantime keeping the three machines moved up to Aziziyah well occupied. On 6 October Petre made the first reconnaissance flight over Baghdad in a Martinsyde, and reported the city almost devoid of troops. On the 22nd a hostile Arab camp at Badrah, located 45 miles north of Kut, was bombed by White in a Longhorn, Fulton in a Shorthorn, and Reilly in a Martinsyde. Two 20-lb., three 30-lb., and sixteen 2-lb. bombs were dropped, causing considerable panic and bringing about the surrender of the tribesmen. Preparatory to the advance on Ctesiphon, White and Fulton carried out daily reconnaissance flights over the ancient city, and the Turkish forward

\(^{35}\) Townshend, p.124.

\(^{36}\) Rich, p.1169.
positions at Zeur and Kutaniyeh. The main duty of these reconnaissances was to supplement existing maps. The shifting course of the Tigris rendered army maps of Mesopotamia useless for tactical purposes. The airmen found that their task was complicated by the absence of an accurate compass, while photographs taken with an ordinary reflex camera lacked the detail necessary for mapping purposes. Petre, after considerable experiment, devised an instrument for correcting maps without a compass. A large tee square was fitted to the forehead, and carefully spaced pegs showed the degrees of distance from the centre. The mean of two bearings upon each of several prominent features was recorded with the implement from over known points behind the British lines. Back bearings were then taken in similar fashion while the machine was over enemy lines. “It was in this way”, White recalled, “that the enemy positions were mapped with the necessary accuracy to eventually enable night marches for the battle to be carried out on compass bearings.”

On one such reconnaissance White and Yeats-Brown were flying over Ctesiphon when, amidst the usual halo of shrapnel bursts, the Renault engine began to miss badly and forced White to land in enemy territory at Zeur. As the engine was still running, albeit feebly, White decided to taxi home, with Yeats-Brown standing up in the observer’s seat poised with a rifle on the look out for the enemy and rough terrain. For 15 miles the aircraft rolled and bumped along, carefully avoiding ridges and cracked earth, steering around sand-hills, and over camel-thorn. Approaching the enemy position at Kutaniyeh, where some 2,000 cavalry and camelry were encamped, White opened the throttle and scurried the Shorthorn through the astonished Turks. At this moment the engine righted itself, and White flew the remaining five miles to Aziziya.

At the end of October reinforcements arrived for the squadron in the form of four B.E.2c two-seater biplanes, fitted with 90 h.p. Royal Aircraft Factory engines, together with pilots, more mechanics, and a complete repair section. The air units were

37 White, p.35.
reorganised, with the Maurice Farmans and Martinsydes allotted to ‘A’ Flight, and the B.E.2c’s formed ‘B’ Flight. Aircraft losses, however, quickly rendered this distinction meaningless.

**Townshend Asks The Impossible**

Townshend, as part of his preparation for the forthcoming attack on Ctesiphon, assigned to the flying corps a task of dubious merit: it entailed landing behind enemy lines and cutting the telegraph wires running west and north from Baghdad in order to isolate the capital from Constantinople and Kifri. Because the Renault engine of their Longhorn had been running reasonably efficiently, and as they were both single men, White and Yeats-Brown volunteered for the perilous mission. The distance to be covered was at least 60 miles each way; as the machine was capable of only three hours flight at 50 m.p.h., the possibility of encountering adverse winds necessitated that the airmen carry extra tins of petrol and oil. On the eve of the mission Yeats-Brown spent time with the engineers, testing detonators and necklaces of gun-cotton. White stripped the Longhorn of all superfluous weight, and carefully checked the engine.

At dawn on Friday 13 November the airmen set all superstition aside and made for the magical city of Baghdad. On arrival over the capital they found that the telegraph wires ran westwards from Baghdad along the main road and not out into the desert as their maps indicated. “Unfortunately the road was the chief throughfare to Baghdad”, White recalled, “and troops of all arms were marching along it towards the city.”

Eight miles from Baghdad White chose to land on a narrow patch of ground, bounded by canals, about 200 yards from the road. Disaster struck as an unexpected tail breeze swept the Farman into a telegraph pole, which badly damaged the left wing and rendered the machine useless for flight. Yeats-Brown has described the ensuing events:

I ran across to another telegraph post, leaving the pilot to ascertain whether by some miracle we might not manage to taxi back to safety in our running partridge of a machine. By the time I had fixed the explosive necklace round

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38 Ibid., p. 47.
the post, a few stray Arabs, who had been watching our descent, began firing at us from horseback. I set the fuse and lit it, then strolled back to the bus, where the pilot confirmed my worst fears. Presently there was a loud bang. The charge had done its work and the post was cut neatly in two... I took another necklace of gun-cotton and returned to my demolition. This second charge I affixed to the wires and insulators of the fallen post, so as to render repair more difficult. While I was thus engaged, I noticed that spurs of sand were kicking up all about me. The fire had increased in accuracy and intensity. So accurate, indeed, that I guessed that the Arabs had been joined by regular troops. I lit the second fuse, then covered the hundred yards back to the machine in my best time, to reach cover and companionship. A heavy fusilade was now being directed on to the machine, at ranges varying from fifty to five hundred yards. Bang! The second charge has exploded. The telegraph wires whipped back and festooned themselves round our machine. The insulators were dust. 39

The second explosion put paid to any ideas White entertained of taxiing to safety as he had done at Zeur. White and Yeats-Brown were seized by ferocious looking Arabs, with shaggy hair and in various stages of nudity, who savagely beat the airmen with clubbed rifles, an empty petrol can, and an adze. Eventually they were taken into custody by the Turks, destined for the prison camps of Mosul and Afion Kara Hissar.

The Ctesiphon Debacle

"Some calls it Tesiphon and some calls it Sestiphon, but we calls it Pistupon."

A fitting comment from a British soldier.

The Battle of Ctesiphon opened on the morning of 22 November. The day before, a serious setback occurred when Reilly was shot down by gunfire in a Martinsyde while returning from a vital reconnaissance flight. The lack of his report was to have far-reaching consequences: Reilly had observed that the Turks had been heavily reinforced at their camp north of the Arch of Ctesiphon. Reilly forced landed with a view to walking back with the information, but he could not avoid capture. A Turkish account of this incident makes interesting reading:

An aeroplane flying at a height of 1,000 metres in a last attempt to examine our line of defence and rear was brought down and captured by means of

39 Yeats-Brown, Bengal Lancer, pp. 146-147.
machine-gun fire from the 51st Division. This little event was taken for a happy omen that the luck of the enemy was about to change.... The presence of the 51st Division, which turned the balance of success against the assailants in this battle [Ctesiphon] was ascertained in this fruitless reconnaissance and was shown on the airmen's map. But the map containing this priceless information fell, not into the hands of the enemy commander ... but into those of the Turkish commander.... Major Reilly's greatest gift to us was the sketch showing the course of the Tigris from the Diyala [River] to Aziziya. This little sketch, probably of small account to the enemy, was an important map in the eyes of the Iraq Command. For at headquarters and with the troops there was not such a thing as a map.40

It is difficult to speculate what difference the information obtained by Reilly would have made to Nixon's plans. The forces were so close that a fighting withdrawal, at least, would have been necessary. Moberly, the official British historian, boldly concluded that it was "improbable" Nixon or Townshend would have persisted in the planned attack had they known the entrenchments were held by a force superior in numbers.41

Townshend, uninformed of the extent of the Turkish defences, launched his assault. By early afternoon the Turks had evacuated their front line, from 'V.P' at the left to 'Water Redoubt' on the right. The Turks, however, continued to counter-attack and British casualties amounted to over 4,000 - more than one-third of the force engaged. The battle raged throughout the 23rd: Townshend's 18th Infantry Brigade occupied 'High Wall', at the extreme of the Turkish right flank, but the British lacked reserves and could neither renew the attack nor counter Turkish moves. On 25 November air reconnaissance indicated that the Turks were advancing, and Townshend decided to withdraw to Lajj, which the remnants of the 6th Division reached on the 26th, and eventually to ill-fated Kut. Of the 6th Division's 8,500 men, more than half had been killed or wounded.

41 Ibid., p.59.
Reporting in 1917, the Mesopotamia Commission severely castigated the inadequate arrangements made for the evacuation and treatment of the wounded and sick following the Ctesiphon rebuff. The casualties' troubles began with the dreaded AT carts, iron contraptions devoid of suspension and drawn by mules, which heaped with wounded bumped and rattled over the rough ground ferrying their agonising occupants to the ships and barges. Crammed aboard these ships, the men faced a tortuous 13 day journey from Lajj to Basra: there were few doctors, dressings, medicine, food and drink were all scarce, and there was scant protection from the rains of the new season. And, as if their misery were not complete, Arab snipers on both banks of the Tigris held at ransom the ships which invariably ran aground. The convoy reached Basra on 7 December: wounds of the seriously ill were found to be in the advanced stages of septic poisoning, and in some cases men with only slight injuries were dying from huge bed-sores.

The flying corps, meanwhile, were lamenting their own misfortune. At Ctesiphon, Fulton, reconnoitring in a Martinsyde, was flying at 5,000 feet when shrapnel punctured his petrol tank, forcing him to land. Fulton was roughly handled by Arabs, but attained a small measure of consolation when one of his captors, while looting the aircraft, was killed after dislodging a bomb. During the action at Ctesiphon, Petre in a Maurice Farman carried out several important reconnaissance flights, and ensured that headquarters was constantly informed of the battle's progress.

As the Turks closed in on the British bastion that was Kut, it was decided that all flyable aircraft should be evacuated. Petre's Shorthorn and one of the B.E.2c's left on 6 December; two damaged B.E.'s and one damaged Martinsyde remained behind, along with most of the flying corp's non-commissioned officers and mechanics, including nine Australians. During December the Turks attempted on several occasions to overwhelm the beleagured town, but suffered heavy casualties. Hence, in the new year, the Turkish divisions settled down to starve the 13,000-strong British garrison into surrender.
In the last days of 1915 the remnants of 30 Squadron, the Shorthorn and the B.E.2c, were moved down-river to Ali Gharbi to cooperate with a new army force called the Tigris Corps, under Sir Fenton Aylmer, which was formed to relieve Kut. Air reconnaissance on 1 January 1916 reported enemy positions at Sheikh Saad, with detachments six miles down-stream. On the 5th, the eve of Aylmer’s advance, the B.E.2c estimated enemy numbers at over 10,000. By the afternoon of 9 January Sheikh Saad was in British hands, but at a terrific cost of 4,000 casualties. Two days later, the B.E. discovered the Turkish forward line along the river Wadi, which was occupied on the 13th. The Turks withdrew three miles to Umm-al-Hamma, a well prepared defence line, which held firm against British attacks on 21 January.

**Air Support For The Turks**

The withdrawal of the Allied forces from Gallipoli in December 1915 and January 1916 allowed Turkish High Command to devote more resources to the battlefronts in Mesopotamia, the Caucasus, and the Hejaz. Erich Serno, Commander of the Ottoman Air Force, worked energetically during this period to organise new units for the air arm. One such formation was Fliegerabteilung 2, which under the command of Hauptmann von Aulock left San Stefano, the Turkish military aerodrome located just west of Constantinople, for service in Mesopotamia on 1 December 1915. Equipped with four Pfalz AII parasol fighter aircraft, together with four pilots and the same number of observers, the unit faced an exceptionally difficult nine week journey. At Haidar Pasha, the railway terminal of the Baghdad Railway on the shore of Asia Minor, the shipment was first loaded on rail freight cars. The two mountain ranges which interrupted the Baghdad Railway as at wound east, the Taurus and Amanus Mountains, had to be traversed using ox-carts and horse-drawn wagons; arrangements were made so that the aircraft rolled on their own wheels, with their tails perched on two-wheeled carts. At the rail junction of Muslemijie, near Aleppo, the formation took three different routes: the flying personnel proceeded via an overland route along the Euphrates to Baghdad. The bulk of supplies and all the machines continued on the Baghdad Railway to Jerablus: here
they were transferred to native rafts, called Schachturs, for transport down-river to the Mesopotamian capital. The wagon train stayed on the rail line to its terminus at Ras el Ain, and thence covered 600 kilometres of desert to Mosul. From there they were shipped down the Tigris on steamers or rafts. Given the arduous nature of the journey, it was not surprising that all four Pfalz machines sustained damage during transit. The first aircraft repaired and assembled, Serial Number P.1., was tested by Captain Mehmet Ali on 2 February. Unfortunately the Pfalz's rotary engine failed, and in the forced landing Mehmet wrote off the machine and broke both his legs.

A Turkish source has noted that in mid-December 1915 Captain Fazil and Captain Fettah (observer), previously attached to the Turkish 4th Army in Palestine, made several reconnaissance flights over Kut in a captured Maurice Farman aircraft. (Serial M.F. 7, and later Indian Flying Corps 7, allegedly captured on 14 October.) In fact, the machine in question remained in British service throughout the campaign. The same author contends that the Caudron GIII machine flown by Treloar and Atkins, which was forced down with engine trouble on 16 September, was captured intact and subsequently flown in January 1916 from an airfield at Shamrund Bend, eight kilometres from surrounded Kut. It is a claim that, while conceivable, must be treated with caution since there are no reports of enemy air activity in British dispatches until the arrival of Fl.Abtl.2 in early February.

Serno has revealed that it was possible to supply the Turkish air units sent to Mesopotamia, the Caucasus, and the Hejaz only very modestly. Leutnant Schuz, a pilot with Fl.Abtl.2, has described how the formation compensated for a lack of resources:

A very large number of propellers were used owing to the enormous heat, which made them split. We even succeeded in cutting and gluing propellers of our own design. Everything that might be turned to account for industrial purposes in Baghdad was made use of for the construction of aeroplanes; an entire machine was actually built, and flew remarkably well. We also carried out successful experiments in connection with petrol distillation. [Serno has written that prior to the establishment of a fuel depot north of Aleppo at the end of 1916, it took three to four months to send fuel to Mesopotamia] One of our greatest difficulties was the manufacture of bombs, but with the assistance of cast-iron pipes inserted one inside the other, filled with high explosives, and detonated by a cartridge, we succeeded in producing an
efficient substitute. The beleaguered [Kut] division ... suffered in morale as a result of the daily bombing.\footnote{Major Georg Neumann (ed.) The German Air Force In The Great War, (Hodder and Stoughton, London, 1930) pp.259-260.}

Indeed, beginning with an attack on 13 February the German Pfalz fighters operating from Shamrud Bend regularly flew missions to drop their improvised bombs on the Kut garrison and Aylmer’s relief force. On the 13th the Turkish pilot \textit{Leutnant} Cemal opened the offensive. Townshend recorded the event in his diary: “A German monoplane came over the town and dropped five bombs in the morning and ten more in the evening on the two trips he made. Several of them fell close to my Headquarters.”\footnote{Townshend, p.278.} Nine more bombing raids followed during February, but the most serious attacks occurred in March. On the 1st, three Pfalz fighters in a combined raid dropped a total of 40 bombs on Kut, killing nine and wounding twenty-eight. Townshend, in his book, dismissed any notion that aircraft raids adversely affected morale:

Our improvised anti-aircraft guns and machine-guns were of practically no use, the aeroplanes flying over us with impunity. The troops were furious with the German aviators, as their especial aim seemed to be the hospital. This was the great covered-in bazaar marked with hospital flags on the roof. If one of the German pilots had fallen into the hands of my troops he would have been torn to pieces. It was not fear of their bombs for everyone treated the aeroplanes as a joke, running to cover at the last moment with shouts of laughter. But the victims were often women and children and our poor wounded in the hospital.\footnote{\textit{Ibid.}, p.286.}

On 18 March a bomb again hit the hospital, passing through the roof and exploding against the wall in the main ward. Six were killed instantly, and of the twenty-six wounded, fourteen later died. The incident excited further debate over whether the enemy airmen were deliberately targeting the garrison’s hospital. Sloss, one of the nine Australian aircraft mechanics invested in Kut, doubted it was German policy:

\begin{quote}
We could hardly blame the pilots, as some of our guns were close to the hospital. After this they were moved just far enough away to minimise as
\end{quote}
much as possible the effect of gunfire and bombing on the hospital. I do not think it was shot at intentionally, but all the same it received a rough handling.\textsuperscript{45}

Townshend, nonetheless, asked the RFC by wireless to retaliate by bombing the German aerodrome. He also requested that they drop a smoke-ball over two big Turkish naval guns, which were being put into position to bombard the town, so that he could estimate their range. This was done, and the garrison's 5-inch artillery successfully knocked the enemy guns out.

By March the garrison's resistance was rapidly dissipating. Food supplies were dwindling, more than half the force was suffering from diarrhea and dysentery, and scurvy was rife. Sloss recalled that:

Vegetables were out. Thistles, although scarce, proved a good substitute for greens. Stews were touched up with grass, but we had to stop using this when a few men died mysteriously. Fat became very scarce, and although horsemeat was plentiful for a time it could not be fried without fat... Before long salt began to run out. Condensed milk brought 47 rupees a tin and often could not be brought for even that sum. Sugar and tea were out; ginger tea became our beverage at meals. We kept in a fair state of health, though after fourteen weeks our faces showed signs of semi-starvation. The strength of the garrison became very limited, but the flying corps and wireless boys were still working night and day at their tasks and they would hang out until they simply had to give up. The general therefore increased our meat ration to 2 lb. per day, which allowed us to keep going as the whole force depended upon us for the grain crushing.\textsuperscript{46}

Indeed, flying corps personnel were given the job of milling the grain so that bread could be baked. The 70-lb. millstone, it is interesting to note, was asked by Townshend to be air-delivered by parachute. Corporal J. Stubbs, one of the eight AFC mechanics still operating with Petre, designed a special parachute which made the drop possible.

An attempt to break through the Hanna line began on 5 April. The action was led by Lieutenant General Gorringe, who in March succeeded Aylmer in command of the


\textsuperscript{46} Ibid., p.26.
Tigris Corps. During three weeks of protracted fighting, the relieving column's casualties amounted to 10,000 men, or 25% of the force. On 22 April Townshend learned that Gorringe's attack on the pivotal Sannaiyat position had been repulsed: surrender was now in sight.

**Enemy Aircraft Hinder Food-Dropping Missions**

A final effort to supply the beleagured garrison began on 15 April. The RFC had indicated to Townshend on the 12th that it ought to be possible to airlift 5,000 pounds of supplies daily into Kut. Every available machine that could be spared from essential reconnaissance and artillery work was modified for dropping supplies: bomb-racks were removed and a quick-release gear substituted. In all, 140 food-dropping flights totalling 19,000 pounds were made between 15 and 29 April. Petre assumed a central role in the operations, flying B.E.2c's and on occasions a Henry Farman. In ideal weather conditions, however, the flying officers managed to put only 3,350 pounds of rations into Kut, well short of the intended mark. The official history noted the airmen's difficulties:

Some of the pilots had had little practice in dropping bombs or other articles, they had not the necessary instruments, and in some of the machines the planes had not been cut away to allow of the necessary view downwards. In consequence it was difficult for the pilots to judge when to drop their loads and some of them fell into the river instead of into the defensive perimeter. Moreover the bulk of the flour, the main commodity required, was so great in comparison to its weight that the machines could not manage to carry as much of it as had at first been supposed; while the dead weights of all loads rendered the aeroplanes extremely difficult to fly.47

Poor weather, engine trouble and interference from enemy aircraft further impaired the arrangements made for dropping food. Townshend, in fact, dismissed the attempt outright: "My anxiety now regarding food was intense, for it was patent to all of us that the air food-supply service was a hopeless failure."48


48 Townshend, p.332.
A German Fokker E1 fighter, fitted with a synchronised machine-gun firing through the propeller arc, made its first appearance on 24 April. The spectacle of aircraft chasing aircraft was not new: on 5 March a Voisin with Captain W. Palmer as observer was shot down by a Pfalz and he was killed. **Leutenant** Schuz, who piloted the Fokker, took it on himself to curtail the British supply flights. On the 26th Schuz succeeded in shooting down a Short seaplane, and a few hours later he forced down Lieutenant D. Davidson in an unarmed B.E.2c.

**Epilogue**

On 29 April, with food and supplies almost exhausted and with dysentery alone causing fifteen deaths a day, Townshend surrendered Kut to the Turks. Of the four Australian pilots only Petre was still alive and at liberty. Petre was posted to an RFC unit in the United Kingdom, and from 1 September 1917 until 27 April 1918 he became the first Commanding Officer of No.29 (Australian Training) Squadron, RFC, - later No.5 (Training) Squadron, A.F.C. The remaining eight Australian mechanics at Ma'gil were transferred to Egypt early in 1916 to join the newly-formed No.67 (Australian) Squadron, RFC.

Of the nine Australian mechanics taken with the 13,000 prisoners in Kut, only two, Flight Sergeant Sloss and Air Mechanic K. Hudson, survived their captivity. Corporal T. Soley and Air Mechanic D. Curran died on the terrible march of over 700 miles to Anatolia in Turkey. The survivors were set to work on the railway in the Taurus Mountains. Here, another five Australians died: Air Mechanics F. Adams, W. Lord, J. Munro, W. Rayment and L. Williams.

In March 1917 Lieutenant W.H. Treloar was sent to Constantinople. He was joined in July of the following year by Captain White, who shortly after succeeded in escaping from custody during a railway crash. White stowed away on several Ukranian ships and eventually arrived at Salonika just one week prior to the armistice with Germany. Sloss and Hudson, meanwhile, were retained by the Germans at a working
camp in the Taurus Mountains to maintain and service their motor vehicles. It has been written that the two managed to adopt a busy-go-slow approach, and on one occasion took over two months to repair a single car. During this time, Sloss, in his second escape attempt, constructed a collapsible boat of canvas and iron in which he hoped to reach Cyprus. Sloss, however, was transferred to another working camp and the plan had to be abandoned.

As for Townshend, he:

travelled by train and arrived at Constantinople on June 3rd, to be met by the G.O.C. of the Turkish Army, his staff, members of the War Office and a crowd of respectable locals ... he felt very flattered: and was even more flattered to be entertained later at Constantinople’s best restaurant, then escorted by a detachment of cavalry ... to the water-front, where a Naval pinnace awaited him. His baggage, Staff and servants aboard, he sailed ten miles down the Sea of Marmara to the fashionable island of Halki, where, high on a cliff, he took up residence in a comfortable villa.... That same day, in the building the Turks called a hospital, those [of Townshend’s troops] still too ill to march from Samarrah [north of Baghdad] were being allowed by their captors to die in agony. There was no treatment for them and very little food, and those who fouled their beds were given an injection of brandy-coloured fluid after which they stopped fouling their beds because they were dead.... By that same day, more than a third of the British troops to whom Townshend had vowed that he was leaving them only to procure their repatriation had died.49


Bristol Boxkite at Point Cook, November 1914. It was the mainstay of elementary flying instruction.
13. A metal-workshop repair lorry which accompanied the Australian contingent to Mesopotamia.

15. One of the Caudron GIII aircraft in a hangar at Ma’gil.

16. A B.E.2c at Ma’gil.
CHAPTER VII

Formation Of Number 1 Squadron, Australian Flying Corps

In 1915 the Military Aeronautics Directorate at the War Office in London addressed the problem of how best to organise flying personnel from overseas dominions. Major-General David Henderson, Director General of Military Aeronautics, laid down policy that the dominions of Australia, Canada and South Africa should not have their own squadrons, but that volunteers should serve in the Royal Flying Corps as members of the corps, and come under the administration of the British Government. Henderson pointed to complications which might arise should squadrons from different dominions be placed under RFC command, and yet still retain their own rates of pay, promotion, discipline, and administration.

In a despatch dated 20 September 1915 the Secretary of State for the Colonies wrote:

It is thought that Dominions might wish to raise complete aviation units. Such units would take their place in the general organisation as units of the RFC, but will be given distinguishing designations. The most convenient unit would be a squadron.¹

Major General Sir Sefton Brancker, Principal Staff Officer in the Military Aeronautics Directorate, and in 1917 Commander of the Middle East Brigade RFC, noted that when this proposal was put to the dominions Australia “revolted at once.”² In reply to the Secretary, Colonel G. Irving, the Temporary Chief of the General Staff, insisted that while Australia wished to co-operate, it was deemed impracticable to organise a whole squadron either in Australia or in conjunction with other


Commonwealth nations. Instead, two complete flights were offered for service, to be equipped and paid by Australia.

The Secretary of State for the Colonies responded in a conciliatory manner on 14 December 1915:

Army Council suggests that if there are difficulties in forming complete squadron due to lack of suitable personnel, officers and men of Australian Expeditionary Force, many of whom have asked for employment in flying corps, could be used, and also some of personnel now in Mesopotamia. In this way Australian unit would be made identical with other units of Royal Flying Corps and could be probably kept wholly Australian.\(^3\)

The Australian General Staff, and subsequently the Australian Government, promptly approved the revised proposal, and a fortnight later sent word to British authorities that a squadron comprising 28 officers and 181 other ranks would be organised for dispatch in February 1916. In order to avoid the British winter, which was a serious handicap at the congested flying training schools, provision was made to instruct Australian squadron personnel in Egypt. An additional advantage was foreseen by the Air Council: it was envisaged that the squadron, once training had been completed, might be employed in the same area as other Australian troops. This would render administrative duties less of a headache.

Major E. Reynolds, Director of Military Operations at Army Headquarters, was promoted Lieutenant Colonel and assigned to raise 28 officers and 181 other ranks. In accordance with RFC guidelines, No.1 Squadron was formed as a twelve aeroplane unit, comprising a Headquarters and three flights ‘A’, ‘B’, and ‘C’ with Captain W. Sheldon, Lieutenant D. Manwell, and Captain R. Williams appointed flight commanders respectively. Graduate pilots from the three courses at Point Cook were supplemented by three civilian pilots, W. Hart, D. Badgery and A. Geare. The latter proved, without

\(^3\) Cutlack, p.423.
exception, ill-suited to war service, and either returned to Australia or were assigned to non-combatant duties. Officers selected to train as observers came predominantly from the permanent Royal Australian Garrison Artillery. As for the 181 other ranks, no difficulty was experienced in obtaining fully qualified A.I.F. men in the trades of fitter, carpenter, driver, electrician, cook and instrument repairer. Of all the trades riggers were the most carefully chosen. The majority of mechanics had no previous experience with aircraft. All were technically efficient, however, and eager to learn.

The squadron embarked from Melbourne aboard the transport Orsaya on 16 March 1916 and proceeded via Colombo and Ceylon to Suez, Egypt, where they disembarked on 14 April. Immediately Reynolds left the squadron for London, and for the last part of the journey to the A.I.F. camp at Tel el Kebir Major H. Macartney assumed command. Macartney gave way several weeks later to Major A. Broun, who on 1 June was in turn succeeded by the squadron’s first regular commanding officer, Major T. Rutledge. Rutledge held the appointment for over twelve months, and “must be credited with the formal establishment of the Squadron and the moulding of the Unit into an efficient fighting force.”

**An Unexpected Arrival**

The existence of 1 Squadron was not known either to the RFC or the A.I.F. Lieutenant L.J. Wackett, the unit’s foremost innovator, recalled that:

The Australian Army authorities in Egypt had no interest in us. They were in the throes of reorganization after the disaster of Gallipoli and did not want to be bothered with the additional worry of a Flying Corps, particularly as it was practically untrained and devoid of equipment. [No technical equipment of any sort, with the exception of two motor cars and seven motor cycles, given by members of the squadron, was brought from Australia.] We were

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4 Mark Lax, *History of Number 1 Squadron, Australian Flying Corps* (currently being edited for publication, Air Power Studies Centre, RAAF Base Fairbairn, Canberra) p. 59.
absorbed into local units of the Royal Flying Corps, being divided into small groups and distributed among various stations.\(^5\)

At this time there were two RFC squadrons in Egypt, forming the 5th Wing: one on the canal at Kantara and Ismailia, and one at Heliopolis for service in Upper Egypt. The detachments were as follows:

No. 1. Under Captain D. Blake to No.14 Squadron at Kantara
No.2. Under Captain R. Williams to 14 Squadron at Ismailia
No.3. Under Captain W. Sheldon to No.17 Squadron at Heliopolis
No.4. Under Captain W. Anderson to 17 Squadron at Heliopolis
No.5. Under Lieutenant R. Ross to ‘X’ Aircraft Park at Abbassia

The Perils of Flight Instruction

"The policy of rushing pupils through and sending them on 'noky' first solos in order to outrival other squadrons and wings, was responsible for numerous crashes, and the loss of many promising pilots. Unfortunately we had one notorious Wing Commander who advocated the policy to excess, and during one month under his command the wing had sixteen deaths and in addition numerous bad crashes." R.S. Brown, selected as an observer in 1 Squadron, AFC, commenting on flying training in England in 1917.

In addition, five of the squadron’s pilots and all of the observers were sent to England to undergo instruction or further instruction in aviation. "The trouble", wrote Lieutenant E. Roberts, a graduate of No.3 course at Point Cook, "was we had not flown sufficient solo hours in Australia to prepare us for combat duties. Our flying hours in Australia had barely reached double figures."\(^6\) Roberts experienced a harrowing

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introduction to flying training in England. During his first three days at Netheravon, an aviation instruction school on Salisbury Plain, five students were killed in flying accidents. Not surprisingly, Roberts began to wonder if he would ever come out of it alive. On the morning of his first solo, in a B.E.2c at Rendcombe in Gloucestershire, Roberts found himself in serious trouble when the machine started a flat spin at only 30 feet altitude. Remarkably, just hours earlier on the way to the new aerodrome the Australian had picked up a leaflet off the floor of the tender headed “Spinning”. It read “If you get into a spin shut your engine off and put your nose down.” On three occasions the B.E.2c went into a spin, and Roberts followed the leaflet’s advice. Roberts managed to put the machine down safely, though visibly shaken.

R.S. Brown, a gunner officer who joined 1 Squadron as an observer, was sent to the School of Military Aeronautics at Oxford to train as a pilot. Brown, like Roberts and the majority of officer pupils, feared for his life:

Flying instruction was not of course satisfactory and did not become so until the Gosport influence made itself felt [the special Aerobatic Flying Training School on the South Coast]. One sometimes wondered whether one was more frightened than the instructor, or vice versa, and the first solo was generally the first occasion when one had an opportunity of really feeling the controls. Looking back it now seems that it became the survival of the luckiest, for if the engine did not stop, or the machine get out of control during the first few solo flights, one usually survived.\(^7\)

**The Hazards Of Reconnaissance**

The various detachments reassembled as a squadron at Heliopolis on 1 June. Here, as aircraft, spares, tools and transport became available, the flights were in turn equipped. ‘B’ Flight, and new flight commander Captain W. Watt, proceeded on 14

June with four B.E.2c’s to Suez and took over that station from a detachment of 17 Squadron. On 9 July ‘A’ Flight and its allotment of three B.E.2c’s relieved a flight also from 17 Squadron at Sherika (Kharga Oasis) in Upper Egypt. This left Headquarters and ‘C’ Flight at Heliopolis. It was not until 17 December, following much disruption, that the flights came together and worked from the same aerodrome (Mustabig).

Early in March 1916, Sir Archibald Murray was given sole command of the newly designated Egyptian Expeditionary Force (EEF). Murray was instructed to “Maintain a defence sufficiently active to ensure that no formed bodies of the enemy should come within artillery range of the [Suez] Canal.”\(^8\) Senussi tribesmen from the Western Desert, urged on by German and Turkish officers, were a possible source of danger. On the eastern side the threat assumed more definite status. The Allied withdrawal from Gallipoli had freed up large numbers of Turkish troops, and Murray expected that an enemy force of up to 100,000 men would advance on the canal via the northern route. The northern highway between Palestine and Egypt ran along the Mediterranean Coast from El Arish to Romani, and thence to Kantara.

Initially, then, the tasks assigned to the Australian flights consisted of reconnaissance of enemy dispositions. Practically all the machines crossing the lines were fitted with an aerial camera, placed in the struts on the side of the fuselage adjacent to the observer. The squadron’s first cameras were equipped with an eight-inch lens, meaning exposures taken at 5,000 feet would cover one square mile of ground and reveal enemy trenches and gun positions with reasonable definition. H. Leckie, a photographer with the AFC, recalled that the observer had first to insert separate loaded slides into the holder on top of the camera. He then operated the lever to expose the plate and take the picture, removed the slide, and repeated the process. The result was

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that frequently a slide was blown out of the observer's hand by the slipstream. The procedure increased in efficiency once the squadron received an improved semi-automatic type camera. Eighteen slides were pre-loaded, and the observer or pilot, by simply pushing and retracting the operating lever, put each plate in position and simultaneously released the shutter and made the exposure.

The four AFC photographers, Leckie, F. Wright, O. Coulson, and N. Clutterbuck, worked independently of the 5th Wing English Photographic Section. Leckie noted that "they had a specially imported and fitted Darkroom sent from England."9 The Australian team, by contrast, worked out of a modified Martinsyde aircraft packing case. It provided scant protection from the sun, and in the fierce summer heat the photographers were compelled to work during the night. The Australians, moreover, lacked the most basic of facilities such as running water for washing negatives and prints. In spite of the challenging conditions, Leckie and his companions could at top speed produce an impressive four prints per minute.

Second Lieutenant R.M. Drummond (an outstanding Australian airman, attached to 1 Squadron's 'C' Flight between September 1916 and July 1917, who later achieved the rank of Air Marshal in the RAF) took every precaution when it came to desert flying:

When we go for a trip over the enemy country the machine resembles a furniture van. We arm ourselves to the teeth with revolvers, rifle and machine-gun, carry two days ration of food and water for both pilot and observer and innumerable signalling apparatus.10

Extreme climatic conditions of heat, dust, sand, humidity, and atmospheric density greatly affected aircraft performance. The principal cause of trouble was engine

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9 H.V. Leckie, First use of Aerial Military Photography by Australia in World War I, 1914-1918 (Australian War Memorial, Canberra, Private Records, 3DRL/4180)

overheating, although the 90 h.p. Royal Aircraft Factory engine - which powered the B.E.2c machines flown by 1 Squadron - proved for the most part reliable, being air-cooled.

Severe sandstorms occurred frequently in the Sinai during the period March to June. "No flying can be done during a bad storm", Drummond warned, "and for many days afterwards there remains in the air a brown haze extending as high as 10,000 feet, through which it is difficult to see for any distance, though observation vertically downwards is unaffected."¹¹ This haze, Drummond continued, was a serious nuisance when flying over the featureless desert plain stretching from the Suez Canal to the mountain range between El Arish and Akaba.

Throughout 1916, 1 Squadron aircraft were detailed to carry out flights of up to six hours' duration over sandy wastelands almost devoid of landmarks. It was impossible to lay down a definite route for pilots to follow, and no certainty of being found should they make a forced landing. Lieutenant Roberts has testified to the difficulties of navigation:

On my first operational flight my observer, when we got to the end of the salt pans and well out into the Sinai desert, sent me back a note saying 'we are lost'! In the desert there are none of the usual ground signs by which you can check your position. Fortunately I have always had a good sense of direction. I concluded that if we flew north-west we would eventually strike the salt pans on the Mediterranean Coast which would lead us back to base.... We eventually got back safely.¹²

¹¹ Squadron Leader R.M. Drummond, 'Air Work on the Sinai-Palestine Front (June 1916-November 1918)', essay written in 1922 at the R.A.F. Staff College, Andover, and published by the Air Ministry in December 1923 (Air Publication 956)

¹² Roberts, p.16.
In addition to the rations and armament cited by Drummond, airmen usually carried gold coins sewn in their clothing for bribing Arabs into assistance, and some learned appropriate native phrases.

Peculiar atmospheric conditions were a feature of the rocky mountainous terrain encountered in Sinai and Palestine. Owing to variations in atmospheric density, the B.E.2c was fortunate to gain half of its 10,000 feet ceiling. This situation was exacerbated by the aircraft's poor performance. The engines, rated at 90 h.p. in cool conditions, could not develop this power in the intense heat of the desert. Reconnaissance over Turkish outposts in the hills east of the canal often meant flirting with disaster. Wackett recalled:

Carrying two men, and loaded with a machine-gun and four 25-pound bombs, and sufficient fuel for four hours, these planes would literally stagger into the air. After a struggle with hot-air currents at low altitude for an hour or so we could just reach a height of 4,000 feet which was sufficient to cross the razor-back mountains through the passes. After the bombs had been released and part of the fuel consumed we could get to 5,000 feet and this facilitated the return flight. But the prevailing westerly winds coming over the ridges produced down-currents which we could not always negotiate, and so we were often obliged to return through narrow passes in the mountains with only the barest margin of safety. Sometimes we would sink about one thousand feet while climbing at full power in a down-current. It produced a sickly feeling to see the rocky ridges below getting nearer and nearer, but just before disaster seemed inevitable the effect of the down-draft would diminish and we would pass over the ridge to better conditions beyond. 13

The maintenance of aircraft was an ongoing problem because the extremes of temperature, both during transit from England and on arrival in Egypt, caused spars and fabric to dry out and warp. Before erecting a new machine, the fitters, riggers and mechanics were called on to strip the whole of the fuselage and planes, tighten every nut and bolt, and retrue the machine throughout. A general shortage of spare parts was aggravated by the frequent loss of cargo ships to enemy action.

13 Wackett, p.46.
Germans Provide Aircraft Support

In mid-April 1916, Colonel Freiherr Kress von Kressenstein, Commander of the Sinai "Desert Force", set out along the northern highway for a second assault on the Suez Canal. German Headquarters placed various technical units, known as Fliegerabteilung 300 Pasha, which had been formed at Doberitz from experienced flying personnel recalled from the Western Front. The German detachment was equipped with fourteen Rumpler C.1 two-seaters (160 h.p. Mercedes engines), each fitted with enlarged radiators to cope with the heat, and two Fokker E fighters complete with forward firing guns. Commanded by Hauptmann von Heemskerck, the advanced part of the Abteilung arrived at the flying field at Beersheba in the beginning of March 1916.

Captain Felmy\textsuperscript{14} wrote a scathing account of the transportation problems encountered during the tiring eight week journey:

The authorities in Constantinople did not seem to appreciate the difficulties of transport, or to take the necessary precautions to meet them, for the foresight which was displayed at the changing places was very limited. At Bozanti, Gelebek Mamoure, Islahije, and Rayak material accumulated in a most disquieting manner, with the result that there was much congestion and confusion. During the rainy season floods caused delays of eight or ten days in our transport system. The lack of rolling stock, the inefficiency of the locomotives, and the difficulty in obtaining fuel owing to the lack of wood and coal were also incessantly causing trouble.\textsuperscript{15}

\textsuperscript{14} There were two Felmy brothers in the German Air Force on the Palestine Front: Captain Felmy, mentioned above, assumed command of 300 Pasha when Heemskerck was called to other duties. Leutnant Gerhardt Felmy, also a member of the unit, was known to 1 Squadron personnel for his skill as an aviator and his chivalry. Leutnant Felmy became head of the provisional fighter squadron Jasta 300 which was formed in January 1918 by assembling all single seaters in Palestine.

\textsuperscript{15} Major Georg Neumann, (ed.) The German Air Force in the Great War (Hodder and Stoughton, London, 1930) pp. 244-245.
On certain stretches of the route, and in particular where the Baghdad Railway was interrupted by the Amanus Mountains, the equipment had to be transported on camel-back.

From an advanced landing ground at El Arish, which lay about 90 miles east of the Canal, two machines of the advanced detachment carried out daily reconnaissance flights in preparation for the attack. A notable success came on the early morning of 23 April, when von Kressenstein led his "Desert Force" against an advanced English post at Katia, completely defeating two squadrons. During this action German aircraft for the first time reached the Suez Canal. Pilots, Leutnant Euringer and Second Leutnant Henckel, and observers, Leutnants Berthold and Salter, reconnoitred the British supply bases at Kantara and Ismailia, and bombed Port Said. Oberst von Kress, Commander of the advanced Turkish posts in the Sinai, issued the following order at the conclusion of the Katia operation:

An especially large share of the success of the recently satisfactorily completed expedition was due to our fliers. They brought in most superior reports which were appreciated all the more since they had no opportunity before this to orient themselves in this difficult land. They inflicted severe damage on the enemy through effective bombing and machine gun fire.\(^\text{16}\)

At the beginning of May 1916 the main shipment of the Abteilung arrived at Beersheba. Along with the work of reconnaissance, the detachment carried out regular bombing attacks against enemy troop positions and the canal fortifications. Judging by subsequent reports, German bombing sorties were most effective when directed against the ANZAC Mounted Division’s horse-lines. These presented an unrivalled target to airmen, as they could not easily be protected by earthworks or other cover. Given their almost total lack of interaction with the new air weapon, infantry and Light Horsemen,

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moreover, had no appreciation of the offensive capabilities of aircraft. "So little was the possibility of air attack realised", W. Bostock, a signaller with the ANZAC Mounted Division has written, "that such an elementary precaution as an air raid warning was not provided." Three factors - a lack of warning against enemy air action, the absence of any sort of organised defence, and a consciousness (at least early on) that one was immune from air bombardment - indicated that there was a definite potential for German airmen to cripple the ANZAC Mounted arm. H.S. Gullett, the official historian of the AIF in Sinai and Palestine, commented that "Had the enemy aircraft been as powerful on this front as it was in France, the achievements of Chauvel's [Major-General H.G. Chauvel, Commander of the ANZAC Mounted Division] might have been entirely different." The following examples lend support to this view.

At 6:30 on the morning of 1 June an enemy aircraft flew over the 1st Light Horse Brigade's encampment at Romani and dropped eight bombs from a height of 8,000 feet. Most of the bombs exploded among the troops and their horse-lines, inflicting severe casualties: eight men were killed, twenty-two wounded, and thirty-six horses slain. The horses, frantic with fear, broke their ropes in large numbers and scattered at the gallop over the sand hills. Some reached Port Said, nearly 30 miles distant, and many were never recovered.

The 2nd Light Horse Brigade, also at Romani, experienced a similar early-morning raid. Remarkably, not a single shot was fired at the intruder. W. Bostock, who later served with No.48 Squadron in France, recalled:

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17 'War Experiences of Flight Lieutenant W. Bostock, 1916-1919', Essay written at RAF Staff College, Andover, 3 September 1926 (Microfilm, National Library of Australia, Canberra, PRO 6883, Piece 2387, File 228/11/54)

Apparently everyone thought it was one of our own reconnaissance B.E.'s coming in to drop a report, and it excited only the usual amount of idle curiosity. Even when the black crosses painted on the lower planes were plainly visible, no one seemed to have thought of bombs. The enemy aeroplane flew leisurely over the hod, and dropped four small bombs, probably about 20-lb., with commendable accuracy. All fell among the horse lines and bivouacs. The result was almost indescribable. A panic ensued among the horses. Practically every animal broke away and stampeded across the desert. The men, completely taken by surprise, dazed and confused by the commotion and uproar of the terrified horses among the trees, made little or no effort at control. In ten minutes there were not a dozen living horses left on the Brigade lines.... The majority of horses were recaptured within a few hours, but the whole Brigade was employed, almost entirely, in rounding up and bringing in the strays for the next two days.\textsuperscript{19}

The effect on morale was out of all proportion to the relatively light casualties sustained - two killed and six wounded. For a week thereafter false alarms up to four times a day would result in a wild rush for horses, which were ridden in confusion all over the surrounding desert.

Bostock, by his own admission, began to re-evaluate the potential of aircraft as an offensive tool: "I do not think it is an exaggeration to say that ... two well handled low flying aeroplanes could have completely dispersed and virtually destroyed the whole Brigade as a fighting force." The incident, although isolated, compelled the Brigade to take measures and divert resources for protection against future air action. Horse-lines and personnel were scattered, machine-guns mounted, raid warning signals arranged, and air-raid drill became part of the regular routine. Wireless stations were sent forward to outpost positions, and arrangements made to send W/T warnings of the approach of hostile aircraft. To ensure correct identification, an RFC officer was attached to each wireless station. The ANZAC Mounted Division, at first indifferent, was now taking the threat posed by enemy aircraft very seriously.

\textsuperscript{19} Bostock; 'War Experiences'.
The Romani Gambit

On 4 August 1916 von Kressenstein, now boasting a force of 16,000, attacked the wells at Romani, 20 miles east of the Canal. From the advanced landing ground at El Arish, a Geschwader (squadron) of up to six Rumplers cooperated with the Expeditionary Force, carrying out bombing and strafing attacks. Bostock, however, was critical of the German air tactics:

Though he had complete freedom of action, as none of our aircraft appeared during the whole morning, he made no attempt at continuous bombing, apparently being satisfied with his initial attack for which he employed four aeroplanes.

The results of the aerial bombing, directed in large part at the British railhead at Romani, were in fact negligible. A more worthwhile target presented itself in the form of a number of strong posts which extended in semi-circular fashion from the railhead. These posts consisted of shallow trenches no more than breast-high. Given the complete absence of anti-aircraft guns, and the poor knowledge of the operation of rifle and machine-gun fire against aircraft, Bostock thought that “a few low flying aeroplanes could have very materially assisted the Turkish troops by cooperation in attack on our strong posts.” As we shall see, this form of air support was used to good effect by 1 Squadron during the fight for Magdhaba.

Romani was a victory for Chauvel’s mounted arm. Thereafter the German detachment, operating from Beersheba, concerned itself mainly with the progress of the British standard-gauge railway, and continued to reconnoitre the various fortifications along the Canal.
German Air Superiority

“If we meet a Hun in these things we have now our only alternative to being shot down is ignominious and speedy flight to earth.” Second Lieutenant R.M. Drummond commenting on the B.E.2c’s offensive failings.

The RFC machines, predominantly B.E.2c’s and Martinsydes, were no match for the German types, and little could be done to prevent German reconnaissance sorties. Drummond noted that “From the beginning of the campaign until October 1917 the enemy’s aircraft enjoyed considerable superiority in performance over our machines.” 20 Drummond is backed by AFC reports. One document, dealing with the work of 1 Squadron up until 31 December 1917, bluntly remarked that the German machines were superior in both climb and speed, “and could do what they wished.” 21 The 5th Wing had one saving grace: The German unit faced enormous difficulties in obtaining replacement aircraft, spare parts and fuel. Though the German pilots crossed the lines with impunity, in view of the supply problems, for the most part they endeavoured to avoid combat. For instance, prior to the establishment of a depot at Aleppo at the end of 1916, fuel had to be sent 900 miles by rail from Constantinople. From Beersheba to the advanced landing ground at El Arish, all the supplies were in turn transported on camel-back. The shortage of petrol meant the German unit could fly only on every second day.

1 Squadron’s B.E.2c’s were not factory-fitted for fighting. Williams recalled that:

We always had to attach our own gun mountings and machine guns the best we could. As the observer sat in front of the pilot, the area through which he

20 Drummond, ‘Air Work on Sinai-Palestine Front’.

21 ‘Report on the work of 1 Squadron up until 31 December 1917’ (Australian War Memorial, Canberra, Series AWM 224, Item MSS 515, Part 1)
could fire and operate his guns was very limited. He had to avoid the propeller, the struts on either side, as well as the pilot and the tail plane.22

Wackett’s response was to construct an elementary form of gun turret, providing all-round fire. The observer would stand on his seat, with head and shoulders above the upper plane, and in this position could obtain a clear field of fire. Wackett’s device was introduced successfully on 11 November during a bombing raid on Beersheba.

Just two days after this attack, on 13 November, the 300th Flight Detachment regained the initiative. A Rumpler flown by Leutnants Schulteheiss and Falke flew via El Arish to Cairo, bombed the railway station, photographed the Pyramids of Gizeh, and returned to Beersheba undisturbed by air or ground fire. The flight, which covered a remarkable 480 miles, caused great consternation among the residents of Cairo. Despite a warning, the RFC and AFC were helpless in the face of superior German arms. Roberts recalled that:

Our Squadron got the alert and several of our planes took off to try and intercept it. We plotted the enemy’s course and knew he would have to fly home over Suez. As I was one of the first off the ground I was lucky because at six thousand feet I actually saw the sun glinting on the German machine. As he was about two thousand feet above me and twenty to thirty miles away I didn’t have a chance of intercepting him.23

The raid caused British authorities to remove four aircraft from the front and keep them standing by at Cairo uselessly for many weeks.


23 Roberts, pp. 22-23.
‘A’ Flight and the Senussi Arabs

Operating out of Sherika, in Upper Egypt, ‘A’ Flight’s work consisted of reconnaissance westward into the desert in search of information or movements of the Senussi Arabs. On account of a very well defined escarpment, which rose to about 1,000 feet along the northern side of the desert, it was comparatively easy for the airmen to judge their position. After the flight had become established the reconnaissance zone was extended, and once a fortnight a sortie was made as far as the western edge of the Dakhla Oasis, 120 miles west of Sherika. This meant a gruelling seven hours in the air, and for refuelling purposes an advanced landing ground was established 45 miles from base.

It is noteworthy that Second Lieutenant H.I. Hanmer, attached to ‘A’ Flight from 6 July to 5 September 1916, was somewhat critical of the detachment’s existence: “The Flight did its work, but its information was invariably no movement and except for supplementing intelligence reports and thereby relieving the H.Q. staff of some anxiety, I do not think it achieved much.”24 Indeed, Hanmer doubted whether any significant Senussi attack could have been delivered as a surprise, regardless of an aircraft presence, considering their base was 100 miles distant over waterless desert.

Some notable flights, nonetheless, were carried out from Sherika. On 7 September information was received that two officers from a British camel patrol had failed to return from a reconnaissance of the Baharia Oasis. On the 8th Captain A. Murray Jones flew from Sherika to Shusha, and next day spent eight hours examining the Baharia region. Murray Jones flew through the heat of the day, a praiseworthy effort given that

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engine failure would almost certainly have meant death. Some months later it was
discovered that the officers had been captured and killed by the Senussi. On 12 October,
upon news that the Senussi were leaving the Dakhla Oasis, the area was reconnoitred by
Murray Jones and Lieutenant A. Adams (observer). At the same time, Lieutenants
Wackett and V. Turner (observer), part of a detachment of two machines with mechanics
and bombs which had arrived from Kantara, reconnoitred the Baharia Oasis to ascertain
whether the Senussi had moved north. Both oases were reported deserted, but further
west towards Siwa Wackett located the Senussi:

We suddenly saw something dark on the tracks which, on coming closer, we
found to be tribesmen with camels. They were heading west, creating a cloud
of dust. We presumed that they were the last of the retreating Senussi and
attacked them with machine-guns. They scattered in all directions and soon
there was no concentrated target. Struggling camels and dead men were
strewn along the tracks.\textsuperscript{25}

\textbf{Romani: 1 Squadron's Contribution}

The air work during the Romani operations was carried out by 14 Squadron at
Kantara and Ismailia, to which were attached pilots of 1 Squadron. Williams, on the
night of 19-20 July, received an urgent message to report to 14 Squadron at Kantara, via
Ismailia. His arrival next morning caused something of a stir, as a large crowd had
gathered in front of the hangars. Williams subsequently learned that “they had come to
see the Australian land, or perhaps crash.”\textsuperscript{26} The ‘C’ Flight Commander, in the event,
made a very satisfactory touch-down. On arrival at Kantara Williams was told that it
was routine for 14 Squadron machines to carry out a reconnaissance over the desert
early each morning. Such an excursion had been carried out on 19 July, but later the
same day Brigadier General E.W.C. Chaytor of the New Zealand Mounted Rifles asked

\textsuperscript{25} Wackett, p.54.

\textsuperscript{26} Sir Richard Williams, \textit{These Are Facts} (Australian War Memorial, Canberra, 1977)
p.44.
to be taken up to get an overview of the operations area. To everyone's surprise, von Kressenstein’s troops were observed on the move and entrenching at places much nearer to the canal than had been previously reported.

Turkish dispositions were confirmed in a further reconnaissance the same evening. Machines reported the advance of a large body of the enemy, estimated at 8-9,000, of whom approximately one-third were at Bir El Abd (just eight miles east of Romani) and the remainder a few miles to the south at Bir Jameil and Bir Bayud. Von Kressenstein, having noted that the British aircraft routinely carried out their reconnaissance in the early morning, simply instructed his expeditionary force to take cover for the few minutes airmen were overhead. In this way, the wily German Colonel had moved a considerable fighting body towards Romani and the canal without being detected. Williams, however, has noted that the practice of making an early morning reconnaissance was influenced by desert flying conditions. Soon after sunrise the air above the sand became turbulent, and later in the morning tended towards violent. The B.E.2c's lacked the climbing ability required to negotiate the turbulence.

Between 20 July and 3 August, as the Turkish column gradually moved forward, the Australian detachment continued with its photographic and reconnaissance duties. Wackett has written that:

On almost every sortie we reported further enemy activity. Tents and large numbers of camels could be seen in all the numerous oases about one hundred miles east of the canal. We dropped bombs on them and fired on them from very low altitudes. A few days later the Turks started shelling Romani camp and the attack began.27

On the night of 3/4 August the Turkish Expeditionary Force attempted to outflank Romani on the coastal side, but met strong resistance from the 1st Australian Light

27 Wackett, p.47.
Horse Brigade. Von Kressenstein's men, in greatly superior strength, forced the 1st Australian Light Horse back but never succeeded in breaking the line. The 2nd Australian Light Horse was also forced to cede ground until the New Zealand Mounted Rifles and the 5th Mounted Brigade, coming up in support in the late afternoon, checked any further Turkish advance. Von Kressenstein withdrew towards El Arish next day, leaving behind half his force of 16,000.

Throughout the engagement Williams and Murray Jones, flying from Kantara and an advanced landing ground established at Mahemdia, took part in tactical and strategical reconnaissances and strafing patrols. Between 4 and 8 August, Lieutenants Wackett, A. Ellis, W. Ashcroft, and S. Muir, cooperating with 14 Squadron from Ismailia, bombed and strafed the retiring Turkish columns. Flying at low altitudes the labouring B.E.2c aircraft formed easy targets. "Nearly all of us", Wackett noted, "were hit by shell fragments and bullets and a few planes were shot down."\(^{28}\) The Australian detachment kept the Light Horse informed of the enemy's movements, and inflicted many casualties by machine-gunning and bombing the retreating columns. The airmen, in addition, took thousands of photographs of the numerous Turkish outposts, enabling Headquarters to estimate the strength by which they were held.

On one of these sorties Wackett had his first encounter with an enemy aircraft. The high-performance machine appeared vertically overhead, delivered a sharp burst of machine-gun fire into the lethargic B.E.2c, and sped out of range before the startled Australian flyers could respond in any effective manner. Aerial combats were both numerous, and typically one-sided, during the Romani operations. The German unit, although out-resourced in aircraft and personnel, retained a qualitative edge by way of their technically superior Rumplers and Fokker E fighters: pilots could initiate and break-off engagement at whim. In the days following the Romani battle, 14 Squadron

\(^{28}\) Ibid., p.47.
suffered a veritable pasting. Captain S. Grant Dalton, flying a Bristol Scout, was set upon by a formation of three German machines. He fought them off, and although seriously hurt, managed to regain his own lines. On 10 August Second Lieutenants L. Hursthouse and G. McDiarmid were wounded in a B.E.2c. The next day 14 Squadron lost an observer, Second Lieutenant J. Brown, after his B.E.2c was hit by anti-aircraft fire and then attacked by two Rumplers. The pilot, Second Lieutenant E. Edwards, had been hit several times but safely reached British territory. Brown, shot in the chest and shoulder, died soon after making his report.

On 20 September 1916 1 Squadron’s Headquarters was transferred from Heliopolis and took over the station at Kantara from 14 Squadron. ‘C’ Flight was transferred to Kantara from Port Said on 27 September, and ‘A’ Flight from Sherika on 8 November. The work from Kantara, as before, consisted of tactical reconnaissance in front of British lines, and strategical reconnaissance, bombing and photography of the Turkish positions at Bir el Mazar, El Arish, Lahfan, and Maghara. There were, however, important variations in the aforementioned work.

The Objectives of Air Power Emerge

Australian Air Power doctrine has gradually learned to recognise three distinct air campaigns: (a) Control of the Air (b) Air Bombardment (c) Air Support for Combat Forces. Hitherto, 1 Squadron’s tasks consisted of reconnaissance (including photography) and to a lesser extent bombing. Reconnaissance was, of course, a cornerstone of the Air Support Campaign (c). Towards the end of 1916, as 1 Squadron’s duties grew in complexity and frequency, Control of the Air (a) and Air Bombardment (b) were increasingly conducted to prosecute the air campaign. An Offensive Counter Air (OCA) role (destruction of enemy air forces on the ground) was devised in order to compete for Control of the Air. A Close Air Support (CAIRS) role (air attack against hostile targets in close proximity to friendly land forces) was conducted as part of the Air Bombardment Campaign. Interdiction (application of air
power against enemy lines of communication, to cut and disrupt the flow of resupply and support assets) similarly emerged as a mainstay of the Air Bombardment Campaign. The emergence of air power doctrine, albeit in a basic form, is best shown in practical terms by looking at the Beersheba raid of 11 November, the Magdhaba operation, and Lieutenant Muir's raid on the Turkish railroad in the Hejaz. There is, perhaps, a further dimension to the development of air power doctrine. As the various air roles became progressively defined and extended, 1 Squadron, simultaneously, came to assume its own identity.

Beersheba

At daylight on the morning of 11 November 1916 nine B.E.2c's and one Martinsyde proceeded from Kantara and Mahemdia and assembled at Mustabig, just west of Bir el Mazar. Loaded with bombs and petrol, the Martinsyde (Lieutenant W. Guilfoyle) and five B.E.2c's (pilots Williams, Murray Jones, Second Lieutenant J. Bell, Roberts, and Wackett with observer Lieutenant Turner) set off for Beersheba - the site of the Turkish Army Headquarters and of the German's chief aerodrome. It was the largest raid yet undertaken by an air squadron in the Middle East, and the furthest over enemy lines that anyone had been. The attack was especially significant in that it signaled a change of policy: the German Air Force, without equal in the air, must be destroyed on the ground.

In the Wadi south of El Arish Williams dropped one 20-lb. bomb on a hostile machine observed on the ground, but it landed 30 yards astray. Over Beersheba aerodrome 75 minutes later Guilfoyle reported that as many as six anti-aircraft guns engaged the formation with high explosives and shrapnel, and the raiders flew through a flurry of white, black and green shell bursts. Williams saw a second German aircraft on the ground and let go his compliment of one 100-lb. and three 20-lb. bombs. The heavier projectile landed on the aerodrome, 150 yards from the hangars, while the remaining cluster fell amongst tents on the northern side of the field. Roberts,
meanwhile, attacked the hangars with four 20-lb. bombs. He obtained a direct hit on one hangar, severely damaged another, and destroyed a workshop at the rear. Over the railway station Roberts again demonstrated uncanny accuracy. His three 20-lb. bombs destroyed a section of the railway line, damaged carriages and trucks on the siding, and exploded a stores dump. Guilfoyle and Bell had moderate success with their bombs, causing further damage to the railway line and rolling stock.

While over Beersheba two Fokkers ascended from the ground to fight. By good fortune they singled out for attention the two Australian machines which were capable of defending themselves against air attack - Guilfoyle's Martinsyde (fitted with a mounting for a Lewis gun to fire forward) and the B.E.2c in which Wackett had fitted a gun turret. The Germans were decisively beaten off and decamped. All machines returned safely, after having spent seven hours in flight. The raid served to heighten the squadron's reputation for determination, initiative and boldness: on this occasion the Commander-in-Chief sent a congratulatory telegram to the Minister of Defence in Australia.

Magdhaba

"During the action our machines descended to low heights and attacked enemy's redoubts and trenches with machine gun fire. They also attacked convoys of camels ... with good effect." Fifth Wing Communiqué, 23 December.

On 20 December 1916 air reconnaissance by Australian airmen revealed that El Arish had been evacuated by the enemy. Next day it was confirmed that the Turkish force was entrenching at Magdhaba, 20 miles down the Wadi El Arish. Moving on the night of the 22nd Chauvel led his ANZAC Mounted Division and the Imperial Camel Brigade into an envelopment of the 27th (Arab) Division, Turkish Expeditionary Force, positioned in a circle of redoubts astride the Wadi El Arish. Water shortages made it imperative that the position be captured before nightfall on the 23rd, and as there was no
possibility of infantry support, it was decided to employ aircraft in a Close Air Support role. Preparatory to the main assault, ten Australian machines dropped 120 bombs totalling over one ton on the Turkish position at Magdhaba. Drummond remarked that “You couldn’t see the place for smoke for a couple of hours after we had left.”

On the afternoon of 23 December the Light Horsemen and Cameliers dismounted and went in with the bayonet. All available machines cooperated by flying contact patrols, dropping bombs, and attacking the enemy with machine-gun fire from the air. Drummond noted that this role, now precisely defined in the RAAF’s Air Power Manual as Close Air Support, was unprecedented: “It is believed that this was the first occasion on which organised machine gun attack from the air on trenches was attempted, and its effect on the enemy was considerable.”

In a letter to his parents dated 8 January 1917, Drummond offered a further insight into the Magdhaba battle:

It was a fine sight to see the lines of men advancing in extended order and to watch the mounted men manoeuvring on the flanks. The Turks were retreating all the time, and we had great sport coming down to about fifty feet and peppering them with machine-guns. At first they were too astonished to do anything, but afterwards they began to be a bit unpleasant with their rifles, and wounded one of the fellows pretty badly. It was a good flat country there, and we landed periodically beside the L.H. and generals to let them know how things were going.

Unfortunately, the B.E.2c was not an ideal type for trench strafing: slow-moving and limited in its field of fire, the machine proved susceptible to the heavy ground barrage.

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29 Firkins, p.69.

30 Drummond, ‘Air Work on Sinai-Palestine Front’.

31 Firkins, p.69.
Bombing reports indicate that 1 Squadron maintained relays of between two and four machines over Magdhaba throughout the action. At 9:15 am on the 23rd Lieutenants J. Bell and H. Bowd (observer) dropped a message to the ANZAC Mounted Division reporting that Turkish troops and camel transports had evacuated Magdhaba and were retiring down the Wadi El Arish. The airmen, prior to this, had bombed and machine-gunned the Magdhaba position with very little in the way of reply. Lieutenants R. Baillieu and W. Hyam (observer), working in tandem with Bell and Bowd, were the target of a much intensified ground-fire, both from machine-guns and anti-aircraft batteries. The next relay, consisting of Lieutenants A. Cole and L. Dawson (observer), and Lieutenant A. Geere and Second Lieutenant J. Glen (observer), concentrated to a greater extent on offensive work. Cole and Dawson opened by dropping three bombs on the fleeing camel transports to good effect. Another cluster of three 20-lb. bombs was directed on a redoubt full of Turks, but all failed to explode. Several more of these redoubts opened up on the B.E.2c with rifle fire, which Dawson replied to with his Lewis Gun. The observer then expended half a drum of ammunition on three guns situated less than one mile from the town. Geere and Glen, last away at 8:59 am, reported that the artillery fire directed against the Magdhaba position appeared to be very accurate. The aircrew bombed and strafed small parties of camels from as low as 100 feet.

A notable feature of the Magdhaba operation was the entire absence of air support for the Turkish ground forces. The German unit, certainly, was forced to give up its forward aerodrome when El Arish was hastily evacuated. Drummond cited this as an example "of the importance of having a hole-proof plan for continuance of air work during a squadron's movement."\(^32\)

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\(^32\) Drummond, 'Air Work on Sinai-Palestine Front'.
On 24 November 1916 two Martinsyde single-seaters, flown by Lieutenant Muir of 1 Squadron, accompanied by Captain Freeman of 14 Squadron, left the advanced landing ground at Mustabig for a daring raid on the Hejaz railway. The attack was made with a two-fold object: to demonstrate to Arabs who had not yet joined in revolt the extent of Allied power. Secondly, to assist the rebel Arabs by pressuring the Turks in Medina, whose sole line of supply was by the Hejaz railway. The flight, which occupied nearly five hours and covered 330 miles, proceeded via El Tafile, at the southern end of the Dead Sea, to Khalat El Hasa and down the Hejaz railway to Jauf El Derwish. Freeman had orders to bomb a railway bridge, located four miles south of Khalat El Hasa station. He dropped two 100-lb. bombs, one of which exploded under the end arch of the structure partially destroying it and displacing the rails. Five minutes later, over Jauf El Derwish station, Muir released his load of four 20-lb. and one 100-lb. bombs, obtaining a direct hit on the railway line. The Martinsyde, bombing at an altitude of just 900 feet, was hit twice by rifle fire.

The raid was a striking example of the growing importance attached to the aircraft interdiction role. Given the vast desert surrounds, a viable alternative to the mobilisation of troops was the use of aircraft to cut lines of supply: airmen could do the job quickly, and with comparatively little risk. Indeed, the lack of an organised air defence at strategically important targets, such as the railroad stations attacked by Muir and Freeman, drastically improved the prospect of a successful result. In 1917 and 1918 raids on the enemy's communications - railroads, rolling stock, roads, bridges, railway stations and army headquarters - became a mainstay of 1 Squadron's air campaign.
Groundwork Now Established For Intensifying Air Campaign

The Australian squadron’s transition into an effective fighting force was far from smooth. Foremost among the obstacles were constant changes in command, inexperienced personnel, a lack of equipment, and the division of the squadron into various detachments eventually to be absorbed by 14 Squadron. Consequently, the activities of Australian flying personnel consisted simply of accompanying RFC machines on reconnaissance sorties. Progressively the various detachments reassembled into flights, and the flights came together at common aerodromes. In turn, ‘A’, ‘B’, and ‘C’ Flights were equipped with B.E.2c machines, and received a further boost when pilots returned from training in England. With experience, 1 Squadron’s tasks grew in frequency and complexity.

The German unit’s Rumpler and Fokker aircraft enjoyed a considerable superiority in performance over the RFC machines. The detachment, however, faced enormous difficulties in obtaining supplies, and more often than not the German pilots chose to avoid combat. Drummond, in this connection, wrote: “The Hun is very shy, and must have orders not to fight, I think, because as soon as he sights one of us in the air he makes for home and beauty without waiting to drop bombs or anything.”\textsuperscript{33} Unable to catch the German machines, 1 Squadron altered its approach, and in order to compete for control of the air an Offensive Counter Air role was devised. Hence the raid on Beersheba aerodrome by six machines on 11 November. Variations in 1 Squadron’s bombing campaign saw the development of a Close Air Support role (Magdhaba) and the emergence of air interdiction. The wait now began in earnest for better performed aircraft. Only then could these newly-developed air roles be carried to an unprecedented and potentially decisive level.

\textsuperscript{33} Firkins, p.69.
Figure 1.7 Map Illustrating Area of Operations, No.1 Squadron, Australian Flying Corps, 1916-1918.
17. Richard Williams, Commander of 1 Squadron, AFC.

18. A B.E.2c of No. 1 Squadron. Observer sat between the top and bottom wing centre sections with the pilot to the rear.
19. Machine-gun Section, 1 Squadron, AFC. Machine-gun rounds are being carefully checked, no doubt to guard against stoppages.

20. Photographic Section.

22. Martinsyde of No.1 Squadron, flown by Captain A. Ellis.
CHAPTER VIII

Number 1 Squadron Operations, 1917:

The Balance Of Power Shifts

Throughout 1917, 1 Squadron’s tasks consisted of strategical reconnaissance, bombing of Turkish columns and communications, raids on enemy airfields, a considerable amount of photography, and hostile aircraft patrols. Until late in the year this work was performed in aircraft inferior to those of the German air units.

In December 1916 one Clerget-engined Bristol Scout per flight had been received, but after three month’s service they were found to be unsuitable for their intended role, hostile aircraft patrol. The 90 h.p. rotary engine was prone to overheating, and the Vicker’s synchronising gear could not be adjusted to fire satisfactorily whilst in the air. British Experimentals, Martinsydes, and the Reconnaissance Experimental Type 8 (R.E.8) therefore remained the mainstay of the squadron’s equipment.

In December 1916 the first B.E.2e’s arrived, and by April 1917 had replaced all the B.E.2c’s. According to Williams, the difference in performance between the two types was not noticeable: the B.E.2e was slightly faster, due to the streamlining of the cross-bracing wires and the re-designing of the wings, but like its predecessor suffered from a lack of armament. The final B.E. type, the B.E.12a, appeared in March 1917. Essentially a single-seat version of the B.E.2e, it was unfortunately too large and heavy to be operated as a fighter, and no use in the squadron’s principal role, strategical reconnaissance. The B.E.12a, however, was employed to good effect for aerial photography.

In March 1917 the squadron was issued with two Martinsydes per flight, instead of one as previously. Martinsyde types G100 and G102 were, in the opinion of a recent historian, “The first aircraft with any performance comparable to the German types
already in service". They had a duration of five hours, could climb to over 20,000 feet, and could carry a reasonable bomb load. Second Lieutenant L.W. Sutherland, nonetheless, noted that "aloft she was sluggish, sloppy on controls, and altogether a horrible machine in which to fight for your life." In October 1917 the B.E.2e’s were replaced by R.E.8’s. Comparitively well armed with a synchronised Vickers in the front, and two Lewis machine-guns in the observer’s seat, the R.E.8 was sent out in pairs for escort purposes.

Rafa: Close Air Support

A reconnaissance on 6 January 1917 found an entrenched enemy force of about 2,000 men at Rafa, some 29 miles east of El Arish. The enemy’s main base, a garrison of 3,200, was at Beersheba, while there were further smaller garrisons at El Auja and at El Kossaima. On the evening of 8 January General Sir Philip Chetwode, Commanding the Desert Column, left El Arish with the ANZAC Mounted Division, the 5th Mounted Brigade, and the Imperial Camel Corps Brigade, for a “cutting-out” operation against Rafa. On the afternoon of the 9th the New Zealand Mounted Brigade, advancing with the bayonet, captured the central position, and the remainder of the defences quickly disintegrated. The Rafa operation, according to a contemporary Australian report, was the first occasion in which aircraft co-operated with the artillery in actual battle. The method employed involved a smokeball, and corrections from the machine in reference to specified targets lettered on a plan. The battery wireless stations, manned by flying corps operators, passed on signals from the machine to the battery commander via telephone.

1 Mark Lax, History of Number 1 Squadron, Australian Flying Corps (currently being edited for publication, Air Power Studies Centre, RAAF Base Fairbairn, Canberra) p.45.

Between 10 and 19 January, in connection with the Rafa operation, the German aerodrome and railway station at Beersheba was bombed successively both during the day and night. The action commenced on the 10th when five machines attacked the flying field: no direct hits were obtained, but one bomb fell between two machines. On the night of the 12th Captain Freeman, from 14 Squadron, attacked from a low height one of the hangars with two 100-lb. bombs. The following night three machines again raided the aerodrome and railway station. Captain Murray Jones, operating out of Kilo 143, obtained a direct hit with a 112-lb. bomb on the main German hangar. On the 16th it was found that the enemy had evacuated Beersheba aerodrome. Although unable to match their technically superior opponents in the air, on this occasion 1 and 14 Squadron's utilised their numerical superiority to nullify his air power on the ground. Prisoners later testified that three German machines were destroyed in these raids.

A Fortunate Escape

Practically all reliable information concerning the enemy during this period was obtained by aircraft despite the fact that the enemy was equipped with machines superior in armament, speed, and rate of climb. British and Australian aircraft had also to contend with an increasingly heavy ground barrage. A reconnaissance on 12 January found a strong system of redoubts and trenches under construction by the Turks at Weli-Sheikh-Nuran, and the presence there for the first time of anti-aircraft guns. Inspection of the Gaza environs, a front the Turks were actively fortifying, was clearly no longer being tolerated.

On 24 January Lieutenant Roberts with Lieutenant George Mills as his observer left Kilo 143 in a B.E.2e to reconnoitre Weli-Sheikh-Nuran. As Roberts descended below the clouds for the first photographic run, the anti-aircraft gunners suddenly let fly. Roberts recalled that:
They had our exact height and track and before we knew where we were we were surrounded by bursting shells. Then quite suddenly and unexpectedly a shell burst alongside us on the left between the wing and the tail-plane. It threw us on our side and I was busy righting the plane when Mills called out "They've got me, Bobs!" The next thing I knew blood was seeping through from the front cockpit. What worried me most of all were the possibilities that Mills would bleed to death and that the plane might not hold together until we got back as it had been hit in so many vital parts.³

Mills calmly administered a tourniquet on his wounded arm, and Roberts agonisingly nursed the B.E.2e for 60 miles back to Kilo 143. On arrival it was found that a piece of shrapnel had entered Mills’ arm near the wrist and exited via the elbow, breaking the bones in two places and tearing the muscles and main artery.

On 29 January Roberts, with a new observer, Lieutenant Ross Smith, located the German aerodrome at Ramleh. On 1 February three Martinsydes and three B.E.2e’s were detailed to bomb the enemy’s new flying field. Roberts, as he knew the exact position of the aerodrome, was chosen to lead the way into the target area. Again Roberts received a veritable pounding from the anti-aircraft batteries, and though he scored a direct hit on the aerodrome, this was to be his final sortie: his nervous system shattered, and still in shock from the Mill’s incident, Roberts was invalided back to Australia and subsequently discharged.

A Peculiar Directive

On 3 February orders were received from General Chauvel of the ANZAC Mounted Division that bombing of the enemy must cease: the German Fliegerabteilung 300 was retaliating against the Egyptian Labour Corps, who were engaged in the construction of the British standard-gauge railway, with disastrous effects on their morale. Of course, the German airmen did not suspend this most rewarding of activities, and it can be argued that the natives had only themselves to blame for their heavy

casualties. Captain O. Teichman, a medical officer with the Worcester Yeomanry, noted on the morning of 7 January that two "aviatiks" paid their usual visit and killed 29 and wounded 30 natives working at the railhead: "Our own men", Teichman nonchalantly reported:

always received orders to spread themselves out and lie down when being bombed; by doing so we had remarkably few casualties. The Egyptian Labour Corps, however, when thoroughly frightened collected into large groups, which were a very easy target for Fritz when he was flying low.4

Exploring Aerial Interdiction

A reconnaissance on 5 March found Turkish positions at Weli-Sheikh-Nuran completely evacuated. During the four days proceeding this withdrawal 1 Squadron was called on to carry out the first sustained offensive against the enemy’s communications in the air campaign. Bombing reports indicate that the Turk’s rolling stock, railway stations, bridges, and horse-lines were constantly attacked with bombs and machine-gun fire by both day and night.5 On 6 March all available machines bombed trains and rolling stock in the vicinity of Tel Esh Sheria and on the railway as far north as Junction Station. The latter, a vital Turkish supply point, was attacked by two machines soon after midday: two 100-lb. bombs were dropped, one of which exploded between the lines damaging the permanent way. A second relay of two machines left Kilo 143 for Junction Station at 1:45 pm. A total of twelve 20-lb. bombs were directed at rolling stock and the line. Over Arak el Menshiye, fifteen miles to the south, a direct hit was obtained on a goods shed. Before returning to base, a train and fourteen trucks in the vicinity of Tel Esh Sheria were strafed and brought to a halt, and horses at Abu Hareira stampeded. A


5 See ‘Reconnaissance and Bombing Reports; Middle East Brigade, March - April 1917’ (Microfilm, Australian Joint Copying Project; Air Ministry/Air Historical Branch: National Library of Australia, Canberra, PRO 6883, Piece 2288, File 209/75/58)
third attack, comprising five machines, let go three 100-lb. bombs and four 20-lb. bombs on a train and the station at Tel El Nejileh. About 1,000 men and the same number of camel transports between Wadi Imleih and Beersheba Road were then attacked with machine-gun fire.

At 9:05 on the night of 8 March six machines left Kilo 143 to raid Junction Station. A total of 1,020 pounds of bombs were dropped, and direct hits obtained on station buildings, transports, and the line. Williams, later the same night, let go 192 pounds of bombs on Tel Esh Sheria Station, but results could not be ascertained owing to the flashes of anti-aircraft fire. On the afternoon of 9 March six machines again made for Junction Station. The bombing report indicates that 1,084 pounds of bombs accounted for two direct hits on the loop line, two on the permanent way near the viaduct, and one each on a station building and on the line in the centre of the station.

In all, 3,864 pounds of bombs were deposited on Turkish communications between 5 and 9 March. Lieutenant L. Heathcote, taken prisoner after a forced landing north of Gaza, was the only casualty. In fact, the non-interference by German airmen during this enterprise was remarkable: only once did enemy aircraft ascend from Ramleh to oppose a bombing sortie, and on this occasion the resolve to fight was questionable. Here, then, was a blue-print for success: could 1 Squadron eliminate, or at least restrict, enemy aerial opposition, the potential to disrupt the flow of Turco-German resupply and support assets was quite significant. This would be proved beyond doubt during Sir Edmund Allenby's great offensive in September 1918.

**Preparations For First Battle of Gaza**

"It is the biggest scrap there has ever been out here and you may imagine we have been doing some flying." Peter Drummond, 27 March 1917.
From 9 to 25 March, in preparation for the first offensive against Gaza, 1 Squadron carried out further bombing attacks on Junction Station, Ramleh, and the railway line north of Wadi el Hesi. Two such raids are perhaps worthy of mention. On the 19th, during a sortie by five machines, five bombs exploded on the line near the Wadi el Hesi, damaging the permanent way and distorting the lines. In this raid a pilot of 14 Squadron was forced down by engine trouble. Lieutenant R. Baillieu, and observer Ross Smith, landed and picked up the pilot in spite of heavy rifle fire.

The following day two B.E.2c’s, piloted by Captain D. Rutherford and Lieutenant R.M. Drummond, were detailed to bomb a section of railway near Junction Station. Two Martinsydes, with Lieutenants F. McNamara and L. Ellis at the controls, provided escort. Each aircraft was loaded with six 4.5-inch howitzer shells modified as bombs. Due to the increased bombing activity in recent weeks the squadron had run out of bombs. “The idea”, recalled Williams:

was that the nose-fuse of the shell be set approximately for the time taken for it to fall from the aircraft to the ground and a pin inserted. The shell was then attached to the bomb rack and the pin tied to the rack so that when the shell was released and dropped away the pin remained and the shell became live.... I did not like these things ... but I had had no experience of artillery shells and we had nothing else.\

Subsequent events would show that William’s reservations were entirely justified.

On arrival over the target area the B.E.’s released their load, followed by Ellis and then McNamara. Sweeping over a train McNamara dropped three of his shell-bombs, then let go two more on the railway line. The last projectile exploded beneath the Martinsyde immediately it left the bomb-rack, and slivers of shell casing penetrated through the aircraft’s fuselage, one jagged chunk tearing McNamara’s right buttock. As

he made for home McNamara noticed that one of the B.E. 's had force landed and that a
formation of Turkish cavalry was rapidly approaching the stranded pilot. So abhorrent
was the prospect of captivity in Turkish hands that whenever possible attempts were
made to rescue any crew forced down in hostile territory. In spite of his painful wound,
McNamara glided down to land.

The B.E. pilot, Rutherford, hauled himself up onto the engine cowling in between
the centre-section struts. McNamara started take-off but he had insufficient strength in
his right leg to control the Martinsyde: the machine dipped its nose as the under-carriage
collapsed, and crashed, shattering the propeller and breaking both left wings.
McNamara, his leg numb from loss of blood, then set fire to the Martinsyde, and both
airmen scrambled back to the B.E.2c under a hail of rifle fire. In landing Rutherford had
ripped off a wheel tyre, broken several centre-section wires, and cracked a lonergon.
From the pilot's seat McNamara called to Rutherford to swing the airscrew, and as the
engine roared into life Rutherford clambered into the observer's cockpit. The overladen
machine achieved flight just in time to avoid the enemy cavalry. Though near fainting
point McNamara managed to reach Kilo 143, seventy miles distant. McNamara, for this
action, became the only member of the Australian Flying Corps to be awarded the
Victoria Cross.

The seat-wound soon healed, but as a result of a medical mishap McNamara spent
the next five months in hospital and on convalescence. He was finally invalided home in
September. Williams later spoke of this incident: McNamara

lost consciousness immediately after landing and was sent off to the hospital.
Whilst en-route, a medical orderly placed hot water bottles around him and a
heated brick was placed at his feet. Somehow, one of his feet came in
contact with the brick and it burnt through the flesh of his heel while he was

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7 This account is based largely on Chaz Bowyer's work, *For Valour: The Air V.C.'s*
unconscious. He succeeded in getting over the shrapnel wound allright, but
the burn to his heel caused him to limp for the remainder of his life.8

As well as bombing attacks, Australian machines reconnoitred tactical areas daily.
Photographs were taken of the Gaza, Hareira, and Beersheba defences, and trench maps
were similarly prepared. Following the first Gaza offensive, Brigadier General W.G.H.
Salmond, General Officer Commanding RFC Middle East, singled out the four members
of 1 Squadron’s Photographic Section “for their magnificent work in turning out such
fine Photography under extraordinarily difficult conditions across the Desert, and thus
greatly facilitating the planning of the Light Horse attacks.”9

Mis-application of the Air Weapon

The attack commenced on the night of 25-26 March, and by evening on the 26th,
after a steady advance under incessant fire, Gaza was surrounded. From their new
aerodrome at Rafa, 1 Squadron’s responsibility during the assault was to reconnoitre in
every direction from which Chetwode’s troops might be threatened. Drummond, in
retrospect, questioned the wisdom of such a role. In his opinion it was of the greatest
importance that contact patrol and artillery co-operation be uninterrupted. Chetwode,
nonetheless, weakened his air strength by demanding hourly reconnaissance reports on
certain points, some of which lay as far as 50 miles from the battle area. To carry out
these orders a flight of three hours duration was required to report what reinforcements,
if any, were being directed towards Gaza. All reconnaissances found very little of
interest; furthermore, considering that the enemy troops which were located could not

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8 Fred Clark, ‘An Interview with Sir Richard Williams’ in Cross and Cockade Journal

9 H.V. Leckie, First use of Aerial Military Photography by Australia in World War I,
1914-1918 (Australian War Memorial, Canberra, Private Records, 3DRL/4180) p.9.
possibly have reached the scene of battle during the day, "it appeared that a considerable amount of flying time was mis-applied."\textsuperscript{10}

The last reconnaissance on the evening of the 26th, carried out by Williams, reported that British infantry were on the eastern outskirts of Gaza, with the 2nd Australian Light Horse Brigade and the New Zealand Mounted Brigade around to the north. At Chetwode's headquarters Williams told the Senior Intelligence Officer that Gaza would fall that night. The officer shared none of this optimism, and instead questioned Williams about Turkish reinforcements: the 'C' Flight Commander had noted small bodies of enemy troops moving from Mejdel, Huj and Hareira towards Gaza. However, they were clearly too far away to affect the battle's outcome.

Dismissing the air intelligence, Chetwode decided to withdraw the mounted troops. General Dobell, in turn, recalled his Desert Column, fearful of its exposed situation. Eastern Force troops queried their orders in disbelief. Sharing this astonishment were the Turkish forces in Gaza, who had dismantled the wireless station in readiness for surrender at daybreak. The disaster, Drummond remarked, served to illustrate the vital need for air forces "to imbue army and navy commanders with an accurate idea of the capabilities and reliability of air work."\textsuperscript{11}

**German Airmen at Peak of Activity**

During the period 28 March to 17 April 1 Squadron aircraft were continually engaged in strategical and tactical reconnaissance, bombing, and the registering of long-range guns on Turkish artillery positions and earth-works. Williams noted German

\textsuperscript{10} Squadron Leader R.M. Drummond, 'Air Work on the Sinai-Palestine Front (June 1916-November 1918)', essay written in 1922 at the RAF Staff College, Andover, and published by the Air Ministry in December 1923 (Air Publication 956).

\textsuperscript{11} Ibid.
aircraft acting for the first time “as though they were really annoyed at what we were doing. Normally they did not appear to be very interested in what was happening to the Turkish front-line troops.”\(^{12}\)

On 28 March, while endeavouring to find targets for British guns, Captain Rutherford and Lieutenant W. Hyam (observer) were attacked from below by an enemy machine. Both pilot and observer were struck by bullets, and Hyam later died of his wounds. On 6 April Lieutenants V. Turner and C. de C. Matulich (observer), escorted by Murray Jones in a Martinsyde, were on the morning strategical reconnaissance when they met a formation of five hostile machines loaded with bombs making for Rafa. Murray Jones fought all five of the enemy, in an engagement lasting 25 minutes, until the whole of his ammunition was expended and his fuel tank shot through, when he was forced to land near Weli-Sheikh-Nuran. The Germans bombed and strafed his aeroplane while it lay on the ground, but Murray Jones escaped unhurt.

Cross-raiding on aerodromes, at the same time, reached new levels of intensity. On the night of 7-8 April nine machines set out to bomb the German aerodrome at Ramleh. In all, 1,400 pounds of bombs were dropped, and three direct hits obtained on the hangars. The Germans replied at 4:35 on the morning of 12 April by attacking the Rafa aerodrome with three machines. Casualties amounted to three wounded, and one officer killed. In retaliation, seventeen machines from the combined squadrons left the aerodrome between 9:15 and 9:20am to bomb Turkish positions at Atwinieh, Tel Esh Sheria, and Beersheba. While these raiders were out, three German machines again bombed the Rafa flying field. One man from 14 Squadron and one Indian guard were killed, and five wounded.

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\(^{12}\) Williams, p.64.
According to Frank Reid, First Battalion, Imperial Camel Corps Brigade, German airmen "now began to take a keen interest in our movements."\footnote{Frank Reid, \textit{The Fighting Cameliars} (Angus and Robertson, Sydney, 1934) p.107.} Whilst camped at Rafa, just prior to the second Gaza offensive, Reid reported that enemy aircraft dropped three bombs on the Cameliars, killing six men and wounding many more. The casualties occurred on the beach, where the men had taken refuge on hearing the aircraft approaching. The German airmen, however, "followed the shoreline, as the edge of the water presented a better target than did the dark clumps of trees surrounding the camp."\footnote{\textit{Ibid.}, p.110.}

Earlier the same day, and again in the evening, an enemy machine bombed Egyptian labourers at El Arish, killing 30 and injuring many others. Reid noted that "the frayed nerves of the dusky labourers could not stand any further aerial raids", and "when dawn broke the following morning some of them were ten miles away, hurrying back towards the Canal."\footnote{\textit{Ibid.}, p.110.} The British railway, now approaching Khan Yunis, was held up for two weeks while replacement labourers were drafted from Egypt.

\textbf{Resourcefulness of the Pro-German Arabs}

The Cameliars thought it uncanny how the German airmen were able to locate the exact whereabouts of troop formations, camps, and concealed guns. One morning suspicions were aroused when a camel corps patrol noticed a spiral of smoke rising in the air from a point where several guns were positioned, and at the same time a German machine hovering over-head. Just hours later another aircraft appeared, and without hesitation made for the same guns, which were bombed. It was subsequently realised that the smoke spirals from Arab fires were informing the German airmen of worthy
bombed targets. A similar practice was going on at Deir el Belah, where many of the ANZAC mounted troops were camped. Here, Arabs would badger the men for empty kerosene or biscuit tins, to be used, apparently, for carrying water. Suspicions grew when one of these tins were noticed perched on top of a tall tree, adjacent to a battery. The tins, it turned out, were attracting the sun’s rays and doing the work of a crude heliograph!

**The Second Gaza Offensive**

"We are all frightfully disgusted at the way the battle of Gaza has been messed up. But for the hopeless mismanagement of the Staff, the campaign here would most probably have been over by now. We have been nearly worked to death in the stunt, and it is most disappointing to find all our efforts have been wasted." Drummond, 29 April 1917.

The second attack on Gaza was launched on 19 April. In the 24 days since the first assault, the Turks had expended considerable effort in bolstering the defences of the Gaza-Beersheba line. "Gaza", in the words of one camelier, "had been turned into a modern fortress." At 7:15am the 53rd Division attacked up the Coastal Road, the 52nd struck at southern Gaza, and the 54th and Imperial Camel Brigade assaulted the ridges further to the right. Though the attacks were pressed with the upmost gallantry, the Eastern Force made little impression. The new shock-weapon introduced by General Murray, eight Mark 1 heavy tanks, proved a disappointment. They gave off clouds of steam, visible from miles away, and were therefore pounded by the enemy's artillery.

In spite of adverse weather conditions, 1 Squadron's machines were employed throughout the hours of daylight on strategical and tactical reconnaissance, and artillery

16 Ibid., p.112.
co-operation. Acting upon an intercepted wireless message, on 20 April Williams led a formation of six machines on a bombing raid of the Turkish cavalry concentrated at Hareira. The Turks, as expected, were found watering their horses, and severe casualties were inflicted. Information was later received that due to this action the attack intended by the Turkish mounted unit could not be carried out. Second Lieutenant N. Steele, flying a Martinsyde, was shot down by anti-artillery fire during this venture, and later succumbed to his wounds.

Third Gaza Preparations

The period April - October 1917 was one of strenuous preparation for yet another assault on the Gaza-Beersheba line. For 1 Squadron this consisted of the whole of the strategical reconnaissance on the front, some of the tactical reconnaissance, occasional bombing, and a considerable amount of photography. Just as the air work was becoming more arduous and important, an administrative shake-up saw the unit lose some of its most experienced personnel. This stemmed from orders published in April that British flying officers attached to 1 Squadron must leave the unit, and that Australians must take their places. Consequently, in May Rutledge (an Australian, but an officer in the RFC) left the squadron and Williams took over command. In June and July, Drummond, Captain W. Guilfoyle, and Second Lieutenant S. Muir similarly departed. A further hindrance to air work came when AIF Headquarters called on 1 Squadron to provide experienced pilots for the three new Australian units being trained in Britain for service on the Western Front. Captain W. Sheldon left 'A' Flight in March 1917, followed in September by Captains A. Ellis and A. MacNaughton, Flight Commanders in 'B' and 'C' Flights, respectively. They were joined by Lieutenant R. Baillieu. In December, Murray Jones and Captain A. Cole also departed for the new Australian Squadrons.

Existing maps had to be corrected, and new maps drawn, and in this work the survey companies of Royal Engineers depended chiefly on 1 Squadron's photographic machines. The technical superiority of the German aircraft rendered photographic
reconnaissance a dangerous practice, and for this reason air escort of all photography patrols was a regular order. The artillery maps of the area from Gaza to Hareira were based almost wholly on photographs taken by 1 Squadron; those from Tel Esh Sheria to Beersheba and east were produced entirely from the unit’s photographs. H. Leckie realised that another attempt to capture Gaza was brewing by the increased number of photographs it was necessary to handle:

We added a tarpaulin covered washing annexe outside to cope with the added space necessary, and we prided ourselves on keeping a steady stream of prints of identical quality going through. Only once did a reconnaissance have to be repeated, on a very dull morning the lens aperture was set well open ... but by the time the photos were taken the sky had cleared resulting in over-exposed plates, but still very printable.17

With the concentration of growing forces on a smaller and more defined front, the accumulation of supply dumps, communication, and transport services, and the requirement for each command to obtain information concerning the other’s preparations, there developed an intense rivalry during air reconnaissances. The advantage, of course, lay firmly in the German court: Williams noted that ‘Whilst the Germans had the performance which enabled them to make or break a fight whenever they wished, our fellows had to stand up to them in order to complete their reconnaissance tasks.’18

Until better machines arrived the Australian airmen invariably had the worst of the air combats.19 Official German records indicate that from April 1916 to September 1917 the German flight detachments downed sixteen RFC aircraft with no loss to

17 Leckie, p.7.

18 Williams, p.70.

19 That the Germans were showing more enterprise in the air was primarily due to the actions of Oberleutnant Gerhardt Felmy, who flew an Albatros DIII. Williams described Felmy as easily the squadron’s most formidable opponent.
themselves. On 11 May Lieutenant J. Tunbridge, flying a Martinsyde, fought a duel with a Fokker, a bullet exploded a Very-light cartridge in the Australian machine, and Tunbridge was forced down with his clothing on fire. Owing to serious burns, he was subsequently invalided home and discharged. On 25 June Lieutenant J. Brasell, while escorting a reconnaissance patrol near Tel Esh Sheria in a B.E.12a, was attacked by three Fokkers, shot through the head, and fell behind Turkish lines. On 8 July a reconnaissance patrol comprising a B.E.2e (Lieutenants T. Taylor and F. Lukis), escorted by Captain C. Brooks in a Martinsyde and Lieutenant C. Vautin in a B.E.12a, was attacked by two German scouts over Gaza. One dived at Brooks, who spun away to avoid the attack, but the wings of his aircraft were seen to fold up and the tail to fall off, and he careened helplessly into the ground. Taylor and Lukis reached home, but Vautin was forced to land and taken prisoner. Further misfortune for the squadron followed on the 13th. Two B.E.2e’s, crewed by Lieutenant A. Searle and G. Paget (observer), and Baillieu and A. Barbe (observer), went out on a photography patrol over Beersheba, but the escort failed to appear. Near Irgeig the B.E.’s were taken by surprise by an enemy machine, and Searle and Paget were shot down in Turkish lines, both killed.

Failing to come to terms with the Germans in the air, 1 and 14 Squadron’s organised further raids on his aerodrome. On 23 June, for instance, seven Australian machines bombed Ramleh, while a formation from a RNAS squadron made a simultaneous attack on the Turkish railway centre at Tul Keram, 25 miles to the north. Intelligence agents reported that two enemy aircraft were destroyed.

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A Good Sport

"Felmy's a sport, all right. He was in the plane that hovered over our headquarters soon after the [Second] Gaza stunt, and dropped a bag with letters from Camelier prisoners, also a list of our men who had been killed in their trenches. You can always tell Felmy's machine. It is a black-tailed Taube. And by cripes, when I spot it hovering over our lines, you can't see me for dust."21 Mick Burke, 1st Batallion, Imperial Camel Corps Brigade.

Throughout the whole of the campaign, wrote Drummond:

very sporting relations were maintained between the German flying corps and the British.... Invariably, when we had lost any machines an enemy pilot would drop a message on our aerodrome giving us news of the crews, and telling us where to drop any letters or kit for the prisoners, and promising that we should not be attacked while doing so.22

For example, on 10 July Felmy sent a letter by aeroplane messenger reporting on the result of the skirmish two days earlier: Brooks was dead, and had been buried with full military honours, and Vautin had been made prisoner but was being well looked after. Felmy requested that Murray Jones, whose fighting qualities he greatly admired, fly Vautin's kit over. Next day Murray Jones flew low over the German aerodrome at Huj, dropping Vautin's clothes, small kit, and home letters. No shots were fired at him. On another occasion, after the German victory in which Searle and Paget were killed, Felmy appeared over 1 Squadron's aerodrome, looped the loop in friendly aerobatic fashion, dropped a message bag and departed. Searle, one letter reported, had been shot through the head, and both airmen were found dead in the wreck of the machine. The

21 Reid, pp.146-147.
22 Drummond, 'Air Work on Sinai-Palestine Front'.
letter also gave definite information that Steele, who was lost on 20 April, had been shot down by anti-aircraft fire and died soon after landing.

Partly in the hope of obtaining intelligence, the German airmen showed the greatest kindness to any of the flying officers they captured. On 27 June 1918 Lieutenants G. Oxenham and L. Smith (observer) were shot down by German pilot Leutnant Victor Haefner. Oxenham was killed, and Smith taken as a prisoner of war by the Bavarian Fliegerabteilung 304b, commanded by Hauptmann Walz. Smith spoke of his experiences 45 years later:

They kept me there at their squadron and every time the Turks came to claim me, the German captors would shove me down into a hole and there I would stay, perhaps for two days. There was always food, water, and reading material, and then after the Turks would leave, I would come up again and we would all go off into Haifa in the buggy ... a railway car powered by an aircraft engine. Finally, I attracted too much attention in Haifa. Thereafter, while on these visits I was given a German uniform to wear. The uniform was always taken back when the return was made to the German camp.23

During this time the Australian was frequently put through the intelligence routine: “If they mentioned the name of an officer in my squadron, I simply had to say that I didn’t know him. I only told them that I had come from Jerusalem. They never found out where I really came from.”24

Organisation of Air Units

General Sir Edmund Allenby replaced Murray as Commander-in-Chief, Egyptian Expeditionary Force, on 28 June 1917. He visited all units, something Murray never did, “and an absence of swank convinced the fighting men that they would get on pretty well


24 Ibid.
with him.\textsuperscript{25} Allenby was said to have told the War Office that he would not move until supplied with either two additional flying corps squadrons or an infantry division. This was the first time Williams "had heard an army commander express an opinion about the value of the Flying Corps in comparison with other arms."\textsuperscript{26}

In response to Allenby's demands two new squadrons, 111 and 113, were formed to reinforce the British and Australian units. All four would comprise the Palestine Brigade, formed under Brigadier-General Salmond. The Brigade consisted of a Corps Wing (5th) and an Army Wing (40th). 1 Squadron, which from 17 September operated out of Weli Sheikh Nuran, was reallocated from the 5th Wing to the 40th (Army) Wing commanded by Lieutenant-Colonel A.E. Borton. Along with 111 Squadron, their duties consisted of strategical reconnaissance, bombing, air fighting, and photography. The two Corps squadrons, 14 and 113, were to work in direct co-operation with units of the army corps to which they were attached, spending most of their time close to the front lines.

**The Final Gaza-Beersheba Assault**

"The Turks are in retreat properly, and our job consists of enormous and frequent bomb raids on the retreating." Drummond, 7 November 1917.

On 28 October operations commenced on the right flank of the Gaza-Beersheba line, which resulted in the capture of Beersheba on the 31st. By 7 November Tel Esh Sheria and the strong Hareira Redoubt were in Allied hands, and Gaza had been evacuated. Harried by the Desert Mounted Corps, during the following eight days the

\textsuperscript{25} Reid, p.149.

\textsuperscript{26} Williams, p.72.
enemy retreated 55 miles. 1 Squadron was henceforth occupied in the bombing of the retreating Turkish columns, as well as the German aerodrome.

**Yilderim**

In mid-1917 Germany and Turkey decided on a daring plan known to the Germans as Army Group F, and to the Turks as *Yilderim*, or Lightning. At inception *Yilderim* aimed to assemble a Turkish army (the III and XV Army Corps, which had been operating against Russia and Rumania) and a special body of German troops (the *Asien Korps*) for the recapture of Baghdad. However, Allenby’s EEF preparations, which hinted strongly at a further offensive against the Gaza-Beersheba line, ensured *Yilderim*’s implementation would devolve against the Palestine Front.

The German *Asien Korps* included an aviation detachment, composed of four observation *Abteilung* (301, 302, 303, and 304b), a *Flugpark* (aviation depot), and an air staff headquarters. In all, 80 flying personnel and approximately 800 enlisted men. The detachment was assigned 40 AEG CIV observation machines, and each *Abteilung* was further equipped with two Albatros DIII single-seaters.

**The Ill-Fated Abteilung**

The shipment of the aviation units met with considerable misfortune. On 6 September 1917, whilst waiting for the required wagons at Haidar Pasha Station, there occurred a catastrophic explosion, and the resulting inferno caused heavy casualties and destroyed several aircraft and trucks. German sources later attributed the disaster to an air raid or to sabotage. Major General Charles Townshend, then a prisoner of the Turks on nearby Prinkipo Island, thought otherwise:

The fire originated by a steam crane lifting bombs out of a lighter on a quay, alongside the railway station, breaking. There was an explosion, and instantly the great station was in flames. Trains loaded with petrol were waiting to
proceed to Aleppo for the Baghdad expedition. About 1,000 people lost their lives. There were great quantities of ammunition and projectiles in the station, and the shells went off like rockets, and the projectiles fell among the shipping in the Bosphorus. The damage done is estimated at five million pounds.  

The accident cost the detachment three valuable weeks, searching for replacement material and reconstructing the destroyed lines.

Further damage was sustained during the 1,500 kilometre journey south via the Baghdad Railway. The tracks frequently reverted to a narrow gauge, and this necessitated a total of five reloadings. Camels and trucks were required in order to traverse the Amanus Mountains. In all, eight machines were lost en-route, largely as a result of flying sparks from the locomotives and the shunting of the trains. The Yilderim Abteilung arrived in Southern Palestine in the middle and end of October 1917: 301 settled at Ramleh, 302 went to El Safid, 303 to Et Tine, and 304b to Arak el Menshiye. The units were just at the point of establishing themselves when the third British offensive on the Gaza-Beersheba line broke.

The German detachments nearest the front were compelled to burn their equipment and evacuate their aerodromes. Owing to an acute shortage of transport - lorries and railway wagons - frustrating delays occurred. 1 Squadron’s morning reconnaissance on 8 November found that while enemy ground troops were everywhere in retreat, the air squadrons on the aerodromes at Arak el Menshiye (304b) and Et Tine (303) gave no hint of a withdrawal: machines were waiting on the ground and many hangars were not dismantled. This afforded an unrivalled bombing opportunity. A raid of thirty machines, nine of them Australian, was promptly organised to attack the largest of the aerodromes, Arak el Menshiye. According to the squadron records of 304b, the raid wrecked two machines and ruined a motor lorry. A second attack, carried out on the afternoon of 8 

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November, set fire to several hangars, and aircraft on the ground were disabled. Serviceable aircraft which escaped Arak el Menshiye were bombed again next day at Et Tine.

When Arak el Menshiye was occupied by mounted troops at midday on 10 November the charred remains of five German aircraft were found. Similarly, at Et Tine several of the hangars, a considerable quantity of stores, and a further three machines had been burnt.

On 29 September 1917 von Kressenstein informed Yilderim Group Headquarters that:

The mastery of the air has unfortunately for some weeks completely passed over to the English. Apart from the withdrawal of some particularly efficient officers from Squadron 300, and apart from numerous cases of sickness in this squadron, frequent damage to material, and the irregular supply of working material, the reason for this sudden change is to be sought in the great numerical superiority of the English. . . . Our aviators estimate the number of the enemy aircraft at from thirty to forty. Against this we have at present two two-seaters and two one-seaters fit for use.  

Worse was to follow for the German air units. On 8 October the Bristol Fighter F2b achieved a notable victory, and for the first time in the campaign the RFC enjoyed a technical superiority:

One memorable morning four Bristols left the ground in response to a hostile aircraft alarm; they met and engaged an enemy formation, and, for the first time on this front, shot down an enemy machine in our lines. The German pilot who was captured stated that he had been taken completely by surprise, never having doubted that his own machine was superior to anything that we had. From that day onwards, the tables were turned in our favour.  

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29 Lax, p.47.
Bristol Fighter: King of the Two-Seaters

The Bristol Fighter, powered by a 190-h.p. Rolls-Royce Falcon engine, had a top speed of approximately 125 mph. The climb to 15,000 feet occupied 21 minutes, which was exceptional given the hot and humid conditions. The B.F. was particularly well-armed, with a pair of Lewis machine-guns mounted on a Scarff (swivel) ring in the rear cockpit, and one Vickers machine-gun firing forward through the propeller. It was 10 m.p.h. faster than the best performed German machine, the Albatros DIII, and carried one and a half times the fire power. The B.F. carried a load of twelve 20-lb. bombs or two 112-lb. bombs on under-wing racks. As far as performance was concerned, there was no machine built by any of the combatant nations more efficient for both reconnaissance and fighting.

The inferiority of the German types was evident in operations during the early days of November. Aircraft of the 40th (Army) Wing were engaged on eighteen separate occasions with formations of the enemy; in practically every instance the German machines were either brought down, driven down over their own lines, or, in the case of the slower B.E.'s, Martinsydes, and R.E.8's, the attacks repulsed. The losses in dead, missing, and severely wounded suffered in the third Gaza-Beersheba Battle amounted to 23 German pilots and observers.

30 Ibid., p.47.
31 Cutlack, pp.405-406.
32 'History of the RFC in Sinai and Palestine During 1917' (Australian War Memorial, Canberra, Series AWM 224, Item MSS 515, Part 4) p.10.
On 12 December Drummond, now a Flight Commander in 111 Squadron, provided a striking example of what could be achieved in an adequately equipped machine. Drummond, flying a Bristol Fighter, was escorting two Australian observation machines when near Tul Keram three German Albatros scouts appeared and moved in to attack. The Australian immediately went on the offensive, and drove one Albatros down. Drawing the remaining enemy machines away from the reconnaissance patrol, Drummond directed at one of these a sustained burst of machine-gun fire: severely damaged, it broke up in the air while manoeuvring to escape. He chased the third scout down very low, and seeking to land in a hurry, the Albatros pilot flew into the side of a hill. For this action Drummond was awarded the Distinguished Service Order.

A Change of Fortunes

Throughout the first nine months of 1917 the Australian squadron had remained firmly on the back foot. The B.E., Martinsyde, and R.E.8 machines lacked the speed, climbing ability, manoeuvrability, and armament which set the German Fokker and Albatros aircraft apart. Simultaneously, the enemy’s anti-aircraft batteries were establishing something of a reputation for both the intensity of their barrage, and their accuracy. An Austrian anti-aircraft battery at Tel Esh Sheria earned the respect of both British and Australian airmen: here the Austrians marked with a rough stone memorial the graves of their victims - twelve officers in all, including seven Australians. 1 and 14 Squadron’s reply amounted to joining forces for a series of raids on the German aerodrome. In a remarkable four day’s activity, between 5 and 9 March, an unprecedented 3,864 pounds of bombs were directed at the enemy’s communications.

In the period from the end of March to mid-July the German Fliegerabteilung 300 was at the peak of its activity. German airmen provided strenuous opposition to 1 Squadron’s strategical and photographic patrols, repeatedly bombed the Australian aerodrome, and inflicted heavy casualties during raids on troop formations and the Egyptian Labour Corps. By the end of September, however, the German flying units
were rapidly feeling the strain of the enemy's numerical superiority. The Yildirim Abteilung arrived just as the Gaza-Beersheba line broke, and two of the units (303 and 304b) were badly mauled during their withdrawal. With the introduction of the Bristol Fighter in October, for the first time in the campaign the RFC denied the Germans control of the air by defeating him in the air.
23. General Sir Edmund Allenby, British Commander in the Middle East.
24. Lieutenant C. Vautin of 1 Squadron who was shot down in a B.E.2a on 8 July 1917 by Oberleutnant Gerhardt Felmy - the Australian’s most formidable opponent. Both are seen at Huj aerodrome.
CHAPTER IX

1 Squadron, AFC, 1918:
Enemy Driven From The Skies

The commencement of the New Year saw General Sir Edmund Allenby’s front line extending from east of Jerusalem, passing through the Judean hills, south of Ramleh, and continuing north-west along the coastal plain to terminate in the Mediterranean Sea. The Jordan Valley and east bank of the Jordan remained under Turkish control: one force of five divisions having halted in the plain to the north of Jaffa. The remainder, approximately six divisions, having retired down the eastern slopes of the mountains of Judea, coming to rest in the Jordan Valley. South of the Dead Sea the Arab forces under Emir Feisal were working northward through the desert.

At the end of January 1918, 1 Squadron was equipped with a heterogeneous collection of nine Bristol Fighters, two R.E.8’s, four B.E.12a’s, five Martinsydes, and one B.E.2e. By the end of March, however, the full establishment of eighteen machines was made up entirely of Bristol Fighters - twelve being fitted with Rolls-Royce Mark I engines, 190-h.p., and the remaining six with Mark III 260-h.p. engines. For eight days, between 5 and 13 December 1917, the squadron operated from Julis - an aerodrome previously used by the Germans. Following the first spell of bad weather, however, the area turned to clay. As Major R. Williams noted, the squadron would not be able to work in wet weather and, unfortunately, would be prone to air attack under such conditions. The Commanding Officer took it upon himself to find a more suitable ground - a sandy gravel area in the low hills adjacent to Mejdel:

it was an area shaped rather like a saucer with a piece broken from one side which gave it a natural drainage. By approaching over one ridge the rise on the other side could be used to slow the aircraft whilst the drop to the middle of the saucer from its outer edge could be used for take-off.1

1 Sir Richard Williams, These Are Facts (Australian War Memorial, Canberra, 1977) p.78.
During the month of January and the early part of February there was comparatively little fighting on the ground. Only a few small raids were carried out. But Allenby’s forces did require air support in an indirect manner. Air reports showed that maps of the territory to the north of Jaffa, Ludd, and Jerusalem were in many respects inaccurate: the positions of important roads and villages were wrongly given, while other points of military significance located by air observers did not appear on existing maps at all. As a result it was decided to obtain an overlapping series of photographs. This involved an area of 624 square miles, extending to a distance of 32 miles behind the enemy’s line. The task, allotted to 1 Squadron, commenced on 15 January and despite unfavourable weather conditions was completed in a fortnight. The five photographic machines - Martinsydes and B.E.12a’s - flew in line 1,000 yards apart, at a constant height of 12,000 feet, thereby ensuring an overlap between each set of exposures as well as a consistent image of ground features.

On the 17th Lieutenant L. Taplin, flying a B.E.12a, was photographing over the Nablus hills when his camera jammed. He proceeded to dismantle the camera whilst flying the machine with the control stick between his knees. While thus engaged the Australian was attacked from the rear by an Albatros scout. Taplin managed just one shot in reply when, to his intense frustration, the Vickers gun also jammed. Confronted by a superior machine, lacking any form of defence, and somewhat distracted by his half-dismantled camera, Taplin’s outlook was indeed bleak! Showing a remarkable deftness, he quickly cleared the stoppage and manoeuvred the B.E. onto the enemy’s tail: a burst of 25 rounds sent the Albatros down in a vertical dive. With minimal fuss Taplin

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then rectified the defect in his camera, reassembled and attached it to the outside of the fuselage, and completed the photography of his allotted strip of territory.

The completion of the task in 14 days was a record for photographic work on the Palestine front: a total of 39 patrols were carried out, 1,616 plates exposed, from which 7,783 prints were produced. From the negatives the Survey Section was able to produce a new series of maps of the whole region, accurate in unprecedented detail. In congratulating the squadron, Brigadier General A.E. Borton, GOC Palestine Brigade, wrote that the photographs "form a very fine achievement, and probably mark the highest point which has yet been reached in map-making photography."3

Throughout January 1 Squadron machines reconnoitred well beyond the area which was being photographed, often sweeping as far as 60 miles behind the enemy’s lines. The whole disposition of the Turkish forces back to a line stretching from the coast to Tul Keram, thence across to Nablus, Jericho, the Jordan Valley and the Dead Sea was actively reconnoitred. New aerodromes - at El Afule for instance - important railway centres, new railway and road works, extensive dumps and ammunition parks, were reported on for the first time. All these 'targets' were in range of 1 Squadron aircraft.

**Australians Register First Victory**

On 3 January Lieutenants A. Brown and O. Lee discovered two aerodromes at El Afule, containing nine and six hangars respectively. There were, in addition, 200 rolling stock in the station, 200 bell tents, and 45 dumps of ammunition and stores. At Jenin, ten miles to the south, they also observed two aerodromes, along with 60 rolling stock,

3 'Congratulatory Messages Received by 1st Squadron, Australian Flying Corps 1918' (Australian War Memorial, Canberra, Series AWM 25, Item 81/49).
90 tents, and 40 large dumps. The same day a combined raid of sixteen machines, eight from 1 Squadron, let go 1,200 pounds of bombs on El Afule aerodrome, with excellent results: one bomb was seen to drop and explode in the cockpit of a two-seater that was standing out in the open. It was subsequently learned that 40 of the enemy were killed during this raid, and an ammunition store dump exploded.

On the homeward flight the formation was attacked by two Albatros scouts. Lieutenants R. Austin and L.W. Sutherland, in an escorting Bristol Fighter, climbed above them and dived on the tail of one of the scouts. Austin observed "tracers going into his fuselage near the centre section and he did a sharp turn to the right and went down in a steep spiral". The second Albatros was driven down by Lieutenants Brown and Lee, flying an R.E.8.

On 4 January a formation of seventeen machines, ten of which were Australian, raided the German aerodrome at Jenin - home to Fliegerabteilung 301 and 303 and the provisional Jasta 300. The raiders dropped 1,600 pounds of explosives, with good effect. The patrol was again attacked by enemy scouts, who used the advantage of broken clouds. One Albatros dived from a cloud on an R.E.8 from 14 Squadron, flown by Captain Hewitt. The machine went into a spin, and in coming down collided with an Australian R.E.8 (Lieutenants J. Potts and V. Parkinson). In the crash that followed Potts was killed instantly and Parkinson severely injured. A photograph of the Australian’s grave was later dropped by a German machine, showing a blade of the propeller of the machine affixed across the headstone.

4 Australian War Memorial Unit War Diaries, 1914-1918, No.1 Squadron, Australian Flying Corps (Series AWM 4, Item 8/4/1: Resume of Operations, 40th Wing, RFC, 28-12-1917 to 3-1-1918).

5 AWM 4, Item 8/4/1: Combats in the Air, 3-1-1918.
Germans Seek Fighter Protection

On 17 January, while out on a reconnaissance south of Nablus, two Australian Bristol Fighters encountered two formations of Albatros scouts - one of five machines 500 feet below them, and the other of three about 1,000 feet above them. In all probability these machines belonged to Jasta 300, a newly-formed fighter unit established to protect German reconnaissance missions. At this time the Palestine Brigade was gradually replacing their poorly-performed B.E.12 aircraft with modern Bristol Fighters and S.E.5a machines. To provide fighter protection for ventures over British lines, each of the Abteilung contributed two of their Albatros DIII machines, plus pilots and personnel, to form a makeshift Jasta. Oberleutnant Gerhardt Felmy was given command.\(^\text{6}\) Contrary to the unit's intended purpose, however, the machines that appeared on the 17th showed little inclination to fight. Lieutenants L. Potts and F. Hancock dived on the rear machine in the lower formation, and after a good burst from the forward gun the enemy machine was seen to turn over on its back and go down out of control. The remaining enemy aircraft quickly broke off the engagement and fled.

In this connection Captain S.W. Addison, "B" Flight Commander and subsequently Commanding Officer of 1 Squadron, noted that the enemy:

was not long in realising the futility of relying upon his flying service to drive off our inquisitive machines, and accordingly resorted to other means in an endeavour to obtain some means of protection against this persistent observation. This took the form of intensified anti-aircraft fire. Several new batteries were brought to the front and installed at various points, while the batteries that were already covering his main defence systems, railway stations and other places of military importance, were noticeably strengthened. In addition, a number of mobile Anti-Aircraft guns, mounted on motor lorries, made their appearance. It was their special duty to patrol the main roads and devote their attention to any of our machines that might

venture along these routes. This new departure was apparently entered upon in the hope of protecting troops on the move against aerial attack; but subsequent events showed that the crews of these mobile guns were no better able to withstand the determined onslaught of our machines, than the men in other arms of the service. On frequent occasions they were observed to abandon their guns and join the other forces attacked, in their search for cover.7

Nonetheless, the enemy’s anti-aircraft batteries, manned in large part by Austrian and German gunners, earned a reputation for their accuracy of fire, especially around Tul Keram. On 10 January Lieutenants A. Tonkin and G. Finlay were heavily shelled whilst reconnoitring over this area. Finlay was struck successively by fragments of anti-aircraft shell - once in the forehead, and in the second instance, more seriously, in the chest. Ten days later, Lieutenants A. Poole and F. Hancock were forced to land after a shell from the Tul Keram or Kalkilieh guns hit their engine. Poole made an effort to glide back to British lines, but failed by a few hundred yards, coming to rest immediately adjacent to the Turkish front-line trenches. Poole and Hancock quickly burned their machine, but were taken prisoner.

Jericho: The First Phase

In February 1918 the Supreme War Council of the Entente in Versailles decided on a war plan for the first half of the year. This had as one keystone the execution of a large-scale offensive in Palestine, with the objective of removing the Turks from the war. Allenby intended to carry out his plan gradually: first, in order to make his right flank safe, he decided to drive the Turks across the River Jordan. The operation would prevent enemy raids into the country west of the Dead Sea, and in addition, would bring about conditions favourable for destroying the Hejaz railway - the artery connecting Arabia to Syria - thereby aiding the Arab revolt.

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7 AWM 224, Item MSS 515, Part 2, p.6-7.
The advance into the Jordan Valley commenced on 19 February. The plan was for the 60th Division to advance directly down on Jericho, while the Anzac Mounted Division worked around the Turkish left, entering the Jordan Valley near Nebi Musa. Fighting took place in a wilderness of deep-cut gorges and barren hills, described in official reports as presenting a “savage and melancholy grandeur”. The enemy was established in force in a series of precipitous hills, divided by deep waddies, which provided effective natural cover for the concealment of large bodies of troops from ground observation. Most tracks ran along the beds of these ravines, and were in many cases exposed to the fire of the enemy. Under these conditions the cavalry was ordered to advance in single file, unable to make any effective reply against incessant and accurate shell and machine-gun fire.

The Jericho operation, F.M. Cutlack has noted, "could scarcely have succeeded without the co-operation of the airmen." 8 Throughout the three days operations 1 Squadron adopted a Close Air Support role: the Australians denied the enemy freedom of movement by bombing and strafing, and furnished frequent reports to headquarters disclosing his strengths and dispositions. Messages were dropped on friendly forces warning of bodies of Turks lurking on opposite hill slopes. In many instances, moreover, airmen "drove the enemy from his hiding place, or so disorganised him with the aid of bombs and machine-gun fire, that the opposition encountered by our advancing troops was considerably weaker than it otherwise would have been." 9 The 1st Australian Light Horse Brigade entered Jericho - which was found vacant of troops and stores - on the morning of 21 February.


9 AWM 224, Item MSS 515, Part 2, p.8.
Major A.J. Evans: An Unwilling Captive

On 13 February the headquarters and a nucleus flight of a new squadron - No.142 - were taken on the strength of the 40th (Army) Wing at Julis. In due course Major A.J. Evans was given command of the unit.¹⁰ Evans had spent the winter of 1917-18 as a flying instructor at Aboukir in Egypt; in this role he later boasted of having taught numerous pilots without a single accident. Indeed, it was a record that evoked much satisfaction given that the training machines, R.E.8’s, were looked on with much suspicion due to the large number of pupils who had been killed on them whilst under instruction. Evans, along with assistant instructor Sidney Baker, came very close to joining these ranks when asked to test a batch of R.E.8’s newly-arrived from Britain. With Baker at the controls, and Evans in the rear cockpit, this first flight proved a terrifying experience. Evans later wrote:

How we got into the air without crashing I can’t imagine. Then he made the most awful flat turn in which we side-slipped appallingly. As he was obviously incompetent I tapped him on the shoulder and shouted, ‘I’ll take over.’ But he shook his head. When teaching I always carried a heavy spanner just in case some pupil lost his nerve and refused to obey my orders. I reached for the spanner but, instead of dotting him on the head, I yelled ‘Land immediately.’ He nodded, made another dreadful turn and finally landed badly without damage.... I told him just what I thought of him and his claims to be a pilot. He waited till I exhausted my whole vocabulary and said quietly, ‘The elevator is on the wrong way round.’ Any pilot will appreciate the result of this - the fore and aft movements of the stick are reversed. Only Sid Baker’s really wonderful quickness of thought and supreme skill had saved us. If we had been killed, as it was odds on we would be, then I think that all R.E.8’s would have been scrapped and Allenby would have been very short of aeroplanes for his great push in Palestine.¹¹

¹⁰ A remarkable character who had been captured while serving with 3 Squadron, RFC, in France, and after many unsuccessful attempts managed to escape. He is author of The Escaping Club and Heir To Adventure.

¹¹ A.J. Evans, Heir To Adventure, (Privately Printed, 1961) p.113.
One morning in mid-March Williams was organising a bomb raid to El Kutrani, east of the Dead Sea, when the irrepressible Evans appeared and requested to take part in one of his Martinsydes. As he did not know the country Williams agreed that a Bristol Fighter could keep a watch over him, "but asked was it wise to do so, seeing that he was sent to a training squadron in the Middle East in order not to fall again into the hands of his previous captors".\(^{12}\) Evans, as fortune would have it, experienced engine failure and once more found himself on the ground in enemy territory. Captain Austin and Lieutenant Lee, in an Australian Bristol Fighter, went down to pick him up but in landing irrevocably damaged their undercarriage and all three were immediately surrounded by a crowd of Arabs. The airmen were subsequently sold by the natives to the Turks, and in turn rescued by German Air Force officers.

Evans, once again, made a bold attempt to flee from his captors:

There was no difficulty in getting away from the stupid Turks so I made my way one night without food or maps, steering South Westwards by the stars across the hills towards the coast.... In two nights I reached the neighbourhood of the coast in very poor condition chiefly from lack of water, for my tongue was sticking to the roof of my mouth. Then it came on to rain, and though this relieved my thirst the stars were hidden by clouds and I lost my way. For hours I struggled on, but walked North East instead of South West. Finally when right at the very end of my strength I knocked at the door of a hut in a Jewish colony hoping that they would hide me for 1 day. They took me in unwillingly, fed me, put me to bed and sent for the Turks.\(^{13}\)

Evans, having at last accepted his fate, saw out the remainder of the war at Afion-Kara-Hissah, a Turkish prisoner of war camp in the middle of Asia Minor.

\(^{12}\) Sir Richard Williams, *These Are Facts* (Australian War Memorial, Canberra, 1977) p.79.

\(^{13}\) Evans, p.114.
At about the same time, February-March 1918, an attempt of some interest was made by 1 Squadron to cut off Turkish grain supplies, which were shipped from the eastern shore of the Dead Sea (El Lissan and El Safiel) to El Bahr at the northern end. At the suggestion of Williams, the wings and tail unit of a Martinsyde were stripped and the fuselage and engine placed on twin floats to form a crude hydroplane. Known as Mimi, Sutherland thought her two most redeeming features were "her noise and her awe-inspiring appearance as, riding on a feet-high, swirling mass of salt foam, she bore down on the enemy."14

The hydroplane was transported by a lorry to a point near Jericho, and thereafter carried to the north shore of the Dead Sea. Before dawn on 1 March the crew – Captains J. Dempsey and P. Drury, RFC, and 1st Air Mechanic Doig, AFC, – made for a group of boats on the eastern shore. It was intended that Drury and Doig, under the covering fire of Mimi's two Lewis guns, should swim to the grain flotilla, cut the boats adrift, and then attach them to the hydroplane which would tow them to the western shore. On the outward journey, however, a broken rudder caused the craft to beach. Ingeniously, Dempsey constructed two boats, each to carry four men, from the floats and the two crews set out on the evening of the 2nd. A strong current carried the boats away from their objective, and the crews finally ran aground five miles north of where the grain flotilla was moored. At dawn the quest was abandoned, and the return journey accomplished. It was a most imaginative failure, and typical of the initiative which the small scale of operations in the Middle East made possible.

The First Trans-Jordan Raid

The second phase of Allenby’s plan began on 21 March. Although the advance to Jericho had made the British right flank secure, Allenby lacked a frontage of sufficient width, clear of the Dead Sea, for operations east of the Jordan. He therefore planned to force the passage of the Jordan, capture Es Salt, and destroy the one really vulnerable point on the Hejaz railway - Amman. Three miles south of Amman station the line traversed a viaduct and ran through a lengthy tunnel. If these works could be demolished the resulting interruption of rolling stock might be so prolonged as to compel the retirement of the whole of the enemy force in the Maan area.

The British raiding force planned for a swift passage of the Jordan at two fording places - Ghoraniye and Makhadet Hilja - and for an immediate advance to the foothills astride the Amman road. Unfortunately, torrential rains had swollen the river and left the country east and west so sodden that a general advance east of the Jordan was impossible until the morning of 24 March. On the 26th the sun broke through, but by then both men and horses were exhausted after continual day and night marches through thick mud and driving rain. An attack on Amman next morning made little impression, although raiding parties cut the railway line to the north and south. Stronger efforts on the 28th and 30th failed to dislodge the Turks from Amman, chiefly because of a lack of artillery support. By this time, it was apparent from air reports that Turkish reinforcements had been moved across the Jordan from Jisr ed Damiye to positions north of Es Salt, where they threatened the raider’s flank. On the night of 31 March orders were issued for a withdrawal. By 2 April, except for those holding a bridgehead on the east bank, all troops had re-crossed the Jordan. The Amman failure, coming at a time of heavy losses in France, was the first setback for British forces in Palestine since the second battle of Gaza, and it did much to restore the confidence of Turkish troops and
give them faith in General Liman von Sanders, the hero of the Gallipoli campaign, and their new German Commander-in-Chief.\textsuperscript{15}

1 Squadron machines co-operated closely with the ground forces throughout the Amman operation: Australian airmen made numerous attacks on the enemy with bombs and machine-gun fire, and frequently reported Turkish movements. Periodically, hostile aircraft patrols were flown over friendly troops in the vicinity of Es Salt. On 24 March two B.E.12a’s and one Martinsyde from 142 Squadron, accompanied by a Martinsyde from 1 Squadron, dropped forty 20-lb. bombs on troops, transports and camps at Shunet Nimrin and on the Nimrin-Es Salt Road. Four direct hits were obtained on tents and shelters, whilst the remainder fell within close proximity of bodies of troops and camps.

By the 24th the first reports of the Jordan crossing had reached the enemy. At Leban station Lieutenants A. Brown and W. Kirk noted a large troop train making towards Amman, ten miles to the north. They attacked the locomotive with machine-gun fire, which subsequently came to a halt. A further 700 rounds were directed at 50 troops who fled in panic, causing significant casualties. A reconnaissance by Addison and Lieutenant H. Fysh at noon on the 27th found at El Kutrani (50 miles south of Amman) and Kerak approximately 750 men and horses assembled and preparing to march north: a direct hit on the largest of the three groups was obtained with a 25-lb. bomb thrown from the cockpit. The airmen then fired 220 rounds into the cavalry unit, causing a general stampede.

Official reports declare that enemy aircraft were exceptionally active during the Amman fighting. But while the S.E.5a scouts of 111 Squadron were involved in numerous air combats, there were only limited encounters between 1 Squadron and the German foe. On 27 March Lieutenants E. Headlam and Kirk, in a Bristol Fighter, met

two AEG reconnaissance aircraft and drove them both down to the aerodrome at Amman. Kirk fired into one of the machines on the ground, "and neither Pilot nor Observer were seen to leave the machine." During this combat Lieutenants J. Walker and Finlay, and Captain D. Rutherford and Second Lieutenant J. McElligott, fought another AEG over Kissir, south of Amman. The enemy was driven down, the machine destroyed by machine-gun fire, and one of the occupants hit as he attempted to flee.

**A Very Unpleasant Experience**

"*During the performance I prayed to God more earnestly than ever in my life before, and I am perfectly certain that it was nothing but Divine interference which saved me, and gave me the courage to keep on trying to escape when I was convinced that I should be killed if I didn’t surrender*“. Drummond, 28 April 1918.

An extraordinary combat took place on the same day in which Captain Drummond and Lieutenant P. Walker, both of 111 Squadron, engaged a total of seven enemy machines in the western sector. The two pilots, flying Nieuport Type 17 single-seaters, took off from Jaffa in response to a hostile aircraft alarm and chased a German reconnaissance machine back to his aerodrome at Tul Keram. Here, Drummond got in a good burst at the enemy’s tail, then stood off as Walker dived from above: the German dropped into a steep dive and crashed into the hills. Meanwhile, Drummond watched in dismay as six Albatros scouts appeared from the north. Walker, having followed the first German down, did not see the enemy formation, and left for home in ignorance of the Australian’s predicament.

Drummond was able to provide his own remarkable account of the ensuing events:

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16 AWM 4, Item 8/4/1: Combats in the Air, 27-3-1918.
I had a stiff fight with the six new enemy scouts, shot down one for certain, and sent another down in a spin. But the remaining four were making the fight too hot, and attacking me from underneath, where I could not get at them with my gun. They forced me down lower and lower, my engine was not working too well, and I was nearly done. I had had no breakfast - it is a bad thing to go up with no breakfast. I dropped towards the enemy aerodrome in a spin, thinking I was beaten, and it was better to be captured than killed. I landed there on their aerodrome, and some men came rushing out. Suddenly I found my engine picking up, and determined to give them another run for it. I took off from the ground and got about half-a-mile's start from the four Germans above, who had also concluded the fight was over. I skimmed the hangars and made for our lines. Here and there infantry tried to shoot at me. I was flying very low, only a few feet above the ground, and simply went straight at any men on the ground, and forced them to lie down. I landed four times altogether in Turkish territory - whenever my engine failed or a hill appeared - once in the middle of a cavalry camp at Mulebbis. Here they came up to take me again, and one fat man actually laid a hand on one of my wings, but again my engine picked up, and I fired a few more frantic shots and flew on, skimming over their heads. I carried away a line full of washing with my undercarriage as I left this camp. The four German machines kept on behind and above me, but at last only one was left in the chase, and he, we found afterwards was [Gerhardt] Felmy. I finally got home and landed just inside the Australian lines on the side of a hill. I fell unconscious when I got out of the machine - an evil effect of no breakfast.\textsuperscript{17}

\textbf{The Ill-Fated Jasta 1 (F)}

According to Addison, it was during this period that the RFC established “absolute” aerial supremacy, and reduced the German Flying Corps to an “impotent force”.\textsuperscript{18} That the British held the upper hand is admitted in German documents which were seized at a later date. In the official diary of the German Flying Corps, found at Nablus in September 1918, the entry for 4 April read: “the situation in the air is still unfavourable for us; the AEG and Rumpler C IV do not satisfy demands any longer.” A short time later the diary noted that the German machines “are no longer a match for the British.”\textsuperscript{19} Fortunately for the German air service, reinforcements were close at hand.

\textsuperscript{17} Peter Firkins, \textit{The Golden Eagles} (St. George Books, Western Australia, 1980) p.79.

\textsuperscript{18} AWM 224, Item MSS 515, Part 2, p.13.

\textsuperscript{19} \textit{Ibid.}, p.13.
On 3 April Captain Ross Smith and Lieutenant E. Mustard, on a reconnaissance mission over Jenin aerodrome, observed that the flying field had greatly increased in size and that there were now seventeen hangars available and fourteen aircraft on the ground. This, a recent historian has noted, probably marked the arrival of Jasta 1 (F). The unit had its origin in the Amerika Programme: it was one of forty Jasta, numbered 41-80, scheduled for formation after June 1917 as part of a programme to defeat the Allies before American strength could be brought to bear on the Western Front. On 1 January 1918 it was selected to go to Palestine under the command of Leutnant Karl Meierdirks - described as a natural fighter pilot with outstanding qualities of leadership. The unit’s designation was then changed from Jasta 55 to Jasta 1 (F). With a complement of sixteen pilots and twenty Albatros D.V machines - fitted with twin radiators to cater for the extreme temperatures - the Jasta reached Jenin at the end of March 1918. According to Major Erich Serno, Commander of the Ottoman Air Force, it was combined with Jasta 300, which in the meantime had been reduced to four serviceable aircraft.

The operational strength of the various German air units peaked at about 35 aircraft during the month of April. Fighter activities, consequently, reached new levels of intensity: in the week beginning 5 April, 111 Squadron alone was engaged in eleven combats in the air. On the 6th, Second Lieutenant H. Walker, flying a Nieuport scout, brought down an Albatros scout intact at Mulibis - just inside the British lines near Jaffa. The pilot, Offizier-stellvertreter (Deputy Officer) Willi Hampel of Jasta 1 (F), was taken prisoner. Curiously, it was not until 15 April that Australian machines met the invigorated Germans in the air. On that day two Bristol Fighters (Lieutenants R. Adair

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20 Flanagan, ‘Palestine Jagdstaffel’, p.46.


and R. Camm, and Lieutenants G. Peters and J. Traill) engaged three Albatros scouts south of Tul Keram. Adair closed in and dived on the centre machine, firing 100 rounds at close range. The enemy dived steeply, with Adair still firing on its tail. The German landed in rough country near Kalkilieh, and tilted over on one wing. Meanwhile, Peters attacked a second Albatros which went into a steep vertical dive and was last seen among gullies close to the ground. Adair dived on the final opponent, but it spun away earthward.

When on reconnaissance and escort duties over Nablus on the 28th, two Bristol Fighters - Lieutenants E. Kenny and F. Hawley, and Stooke and Lieutenant H. Fletcher - fought a similar engagement with four Albatros scouts. Bursts from the guns operated by Hawley and Kenny sent one of the enemy down in a straight dive. Kenny then manoeuvred onto the tail of the second Albatros, and followed him down for 4,000 feet firing steadily from a range of 50 yards. The enemy machine went into a vertical nose dive and crashed on landing. The pilot was probably Leutnant Fritz Botzow, from Jasta I (F), who was reported killed in action on this date.

**The Second Trans-Jordan Raid**

Allenby intended to make a second, and stronger, raid across the Jordan in mid-May. During the last week of April, however, envoys from the powerful Beni Sakr tribe - numbering some 7,000 fighting men - announced that they would co-operate in cutting off the Turkish strongpoint at Shunet Nimrin. The stipulation was that Allenby move before 4 May, when the tribe's dwindling supplies would compel them to disperse. The Commander-in-Chief, therefore, timed the operation to begin on 30 April. Troops of the 60th Division captured the first line of Turkish trenches at Shunet Nimrin, but could make no further progress against the second line. Meanwhile, the 3rd Australian Light Horse Brigade made a dash for Es Salt, which was entered in the evening. The 4th
Brigade had been left to cover Jisr ed Damie bridge - the main route by which von Sanders could move reinforcements from west to east of the Jordan.

On 1 May things went awry. Turkish cavalry and infantry, who had secretly crossed the Jordan at Mafid Jozele, attacked the 4th Brigade causing the men to fall back. As a result, the Turks could move reinforcements across the river without interference. Successive assaults by the 60th Division at Shunet Nimrin made little impression. Furthermore, there was no sign of the Beni Sakr tribe. On 2 and 3 May the Turkish position at Shunet Nimrin held firm. Allenby, knowing from air reports that Turkish auxiliaries were arriving from Nablus via the Wadi Fara Road and along the Amman-Ain es Sir track, gave orders for a withdrawal. This was completed by midnight on the 4th.

Addison noted that:

Effective aerial co-operation went a long way towards enabling [EEF] forces to extricate themselves from this ugly situation. Our machines attacked the enemy from low altitudes with bombs and machine-gun fire, harassing him considerably in his movements and inflicting heavy casualties.  

On 4 May every Australian machine sent out on reconnaissance carried four 20-lb. bombs to harass Turkish reinforcements. ‘C’ Flight’s dawn patrol reported that the Light Horse rearguards were half-way between Es Salt and Umm es Shert. The two Bristol Fighters dropped their eight bombs on the Amman railway station, which was crowded with tents, troops, transports and stores. A second patrol, carried out mid-morning, repeated this performance on cavalry assembled near Amman, and strafed other cavalry advancing from Ain es Sir. The afternoon reconnaissance dropped their

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23 AWM 224, Item MSS 515, Part 2, p.17. Note that from 25 April 1 Squadron was newly-based at Ramleh.
eight bombs to good effect on Es Salt and Amman, whilst the steady stream of cavalry
marching through Ain es Sir again suffered from the airmen's machine-gun fire.\textsuperscript{24}

The Albatros D.V machines of Jasta I (F) took a prominent role in the air fighting
during the Es Salt operations. On 2 May Lieutenants H. Maughan and Fysh, and their
escort, Lieutenants A. Murphy and Camm, fought three Albatros D.V aircraft seen to
take off from the Amman aerodrome. The Bristol Fighters dived together on the enemy
as soon as the Germans had reached 8,000 feet. Murphy engaged two machines in turn,
with Camm able to get in accurate bursts at close quarters on both occasions. Maughan
attacked the third Albatros of the formation and followed it down as it fled through the
clouds. All three enemy aircraft were last seen gliding down towards the Amman
aerodrome.

The same day Lieutenants P. McGinness and Hawley shot down an Albatros D. III
north of Jisr ed Damiye. On 3 May another Albatros two-seater was driven down near
Suweileh. The two Australian machines strafed it from a height of 300 feet, and only
one of the occupants was seen to leave the aircraft. Four days later, Ross Smith and
Mustard, with escort Tonkin and Camm, were flying towards Jenin at 11,000 feet when
they sighted an Albatros D III at about the same altitude. The two Bristol Fighters
chased the enemy down for 9,000 feet, continually firing at close quarters, until it
crashed into the side of a hill and burst into flames.

Jasta I (F), meanwhile, took heart from the fighting qualities of its commanding
officer, Meierdirks. In a letter dated 25 April, Meierdirks reported on an air combat the
previous day in which he shot down an R.E.8, possibly from 113 Squadron:

\textsuperscript{24} Clive Conrick, \textit{The Flying Carpet Men}, edited by Pat Conrick (privately published,
Lucindale, South Australia, 1993) pp. 34-35.
In a very beautiful air battle, I regret to say, I killed the observer, and English Lieutenant [Lieutenant Repton] with two shots, and badly wounded the pilot, a major, with two shots in the leg. He was still able to land the plane in spite of that, even though he made a crash landing. I came down in a meadow nearby. As I arrived at the aircraft, the dead man lay near it. I closed his eyes, covered his face, and made arrangements for him to be removed quickly. The major had already been driven to the military hospital. Around the aeroplane were gathered a thousand people, mostly Turks and Arabs. The latter - among them venerable old Sheikhs - kissed my hand and placed my hand on their foreheads to express their astonishment to me.25

For this action, von Sanders later presented Meierdirks with the Iron Half-Moon.

On 4 May Jasta I (F), and its young commanding officer, met with with disaster. On this date the combined strength of the German Abteilung bombed the retreating EEF column. Meierdirk’s Jasta flew fighter escort. According to one account, Meierdirks was strafing an enemy cavalry section from a height of 100 - 200 metres when the left wing of his Albatros D.V broke off, and the German officer crashed to his death. This was the second fatal accident involving wing collapse. Leutnant Victor Haefner, formally of Fliegerabteilung 304, experienced a similar failure:

I was at about 1,000 metres altitude, between Djenin and Naplouse, when a British fighter attacked me. I was in pyjamas, without ammunition and had to swoop down to escape the enemy. During my descent, I noticed a noise and realised that the end of my upper left wing had given way. Fortunately I was able to land at Afouleh.26

25 Flanagan, Palestine Jagdstaffel, p.49. Note: commentators cannot agree on the date of Meierdirk’s victory. Lieutenant Clive Conrick, an observer attached to 1 Squadron, noted that the R.E.8 was shot down on 28 April. Peter Wright, in a recent article, thought the combat took place on the 25th.

Thereafter, the Albatros D.V machines were grounded until structural changes could be completed. Apparently they re-entered service only one or two at a time - a rate that could not offset the loss of twenty new fighters. Serno lamented that:

The newly-arrived fighter pilots who, thirsty for action had pushed for active service, were crippled. Weeks, if not months, would pass before aircraft would arrive from the homeland. Until then the original Yildirim Staffel [Jasta 300] with their few Albatros D. III machines, which had already been passed by in [aircraft] development, would again be the only ones remaining against the foe. The reconnaissance Abteilung were especially gravely concerned also, as they had hoped for efficient fighter protection. Now, however, they must give up any such hope.27

By May, according to Haefner, only three fighter aircraft were serviceable, and by June, prior to the arrival of the next shipment of single-seaters, only one was fit for duty. Consequently, during May and June fighter activities came almost to a standstill.

Failure Of Air Power

H.A. Jones, the Air Ministry Historian, held the RAF in part responsible for the rebuff at Es Salt.28 At issue was the air arm’s failure to discover the Turkish concentrations on the west bank of the Jordan, near Mafid Jozelê. This detachment, as previously described, was responsible for driving back the 4th Australian Light Horse Brigade, thereby aiding the movement of Turkish reinforcements across the river. During April, according to Addison, “our machines kept a diligent watch over the enemy east of the Jordan... Altogether 47 strategical reconnaissances were carried out, of which 29 were of the country between [Jisr ed] Damie, Amman, Kissir, and Shunet

27 Serno, p.353.

28 With the creation of the Royal Air Force on 1 April 1918, the HQ RFC Middle East became HQ RAF Middle East. About the same time 1 Squadron was officially recognised as 1 Squadron, AFC. Since September 1916 it had been known as 67 (Australian) Squadron, RFC.
Nimrin". Yet, in spite of this coverage, neither the 40th (Army) Wing, nor the 5th (Corps) Wing, reported the Turkish concentration.

In this connection, it is interesting to read an account of a visit to the Mafid Jozele camp made by von Sanders:

When I hunted for the first time for the camp ... I found it with difficulty. Nowhere was there a place looking like a camp. Scattered over the country were some individual tents and brush huts, such as the Bedouins use. No horses were in sight. On close inspection it turned out that the stables had been put underground wherever pits or ditches were not available. All were surrounded with oblique standing branches which also gave protection against the sun. No flier would here suspect a cavalry camp.  

**Prelude To A Victory**

"I now belong to the Royal Air Force, but the new uniform has not come up to expectations. It is an attempt to mix the naval and military, and the result is ghastly. We look very like 'throwers-out' at a picture show now, as the cap is all covered in gold braid and bars. A brand new 2nd Lieutenant arrived here the other day complete and the first sentry he met fell in the guard and presented arms, mistaking him for an admiral, but the next one stopped him and told him no foreigners were allowed on the aerodrome." Drummond, 19 June.

Writing in the latter part of June, German air staff noted that:

The enemy, who possesses in his Bristol Fighter an exceptionally fine machine, has made himself lately very redoubtable. Nearly always flying in

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29 AWM 224, Item MSS 515, Part 2, p.16.

two's the Bristol Fighters present an extraordinary fighting force, and their harrassing of our activities becomes more and more felt.\textsuperscript{31}

Given that I Squadron was the only unit equipped with Bristol Fighters on the front, this may be taken as direct reference to the work of the Australian airmen. As for the German Abteilung, their fliers were making a bold effort to continue with reconnaissance duties. A supply shipment of observation machines that arrived at the beginning of May 1918 certainly enhanced their cause. It consisted of only eight machines, but they were modern 260-h.p. Rumpler C.IV and LVG C.V aircraft: the performance of both types was comparable to the Bristol Fighter and the Martinsyde G.102.\textsuperscript{32}

\textit{Jasta} 1 (F) received its first replacement aircraft in mid-June. Serno noted that the machines were "the obsolete type D III", and a disappointment.\textsuperscript{33} Victor Haefner reported that seven Pfalz fighters arrived in June. According to Addison, however, it was not until 4 August that this type of machine was met on the front. Moreover, in combat reports for June and July only Albatros scouts are mentioned. On this evidence "it would seem most probable that the eight new fighters were Albatros D.Va machines."\textsuperscript{34} In any event, by the end of June 1918 some twenty machines - thirteen two-seaters and seven fighters - were held on strength.

Now that the new Rumpler C IV and LVG CV machines were on hand, the four Abteilung were able to intensify their surveillance of the EEF's front lines and

\textsuperscript{31} AWM 224, MSS 515, Part 2, p.13.

\textsuperscript{32} See Mark Lax, Relative Performance Chart. He used climb performance verse time to indicate technological superiority. The Rumpler C.IV, for example, could climb to 18,000 feet altitude in 37 minutes. By comparison, it took the Bristol Fighter 31 minutes to reach the same height.

\textsuperscript{33} Serno, p.354.

\textsuperscript{34} Flanagan, Palestine Jagdstaffel, p.53.
communications. In May and June, according to Serno, approximately 2,500 aerial photographs were completed per month.\textsuperscript{35} Lacking adequate fighter support, on such ventures the Germans adopted new tactics - referred to by Addison as the "tip and run" principle:

When seeking a reconnaissance of our line, they would approach it from the coast, and at an altitude of from 16,000 to 18,000 feet, having apparently gained this height over the sea. They would sweep along our line, taking photographs, and having the advantage of this height when first observed, they were often able to make a hurried exit before our machines could get up to their level.\textsuperscript{36}

According to 1 Squadron records, during one week in June 100 hostile aircraft crossed British lines.

"Such flights by the Germans", Williams determined, "had to be stopped".\textsuperscript{37} It was deemed impracticable, from the outset, to maintain a two aircraft patrol at 18,000 feet to ensure interception: not only was it too cold, but aircrews were not accustomed to operating above 14,000 feet, especially given the uncertainty about the effect of heights on the performance of men and machine alike. Further, Williams thought it unlikely that "the Germans would continue to send a reconnaissance aircraft ... over the same route and at about the same time fairly regularly".\textsuperscript{38} In fact, it turned out that German airmen appeared every two or three days - and always between midday and 2:00 p.m. Henceforth, 1 Squadron maintained a patrol of two Bristol Fighters at 18,000 feet at that time, and ensured that two additional machines were left out in the open where they

\textsuperscript{35} Serno, p.354. Note: 1 Squadron, at the equivalent time, was equipped with eighteen Bristol Fighters. During the month of June, fourteen photographic reconnaissances were carried out and 4647 prints produced. This was almost double the German output.

\textsuperscript{36} AWM 224, MSS 515, Part 2, p.21.

\textsuperscript{37} Williams, p.89.

\textsuperscript{38} Ibid., p.90.
could easily be seen. These took to the air as the hostile aircraft approached, hoping to divert the German's attention from the Bristol Fighters already at a sufficient height to attack. The efforts of the Australian squadron to combat the German menace is reflected in the frequency of hostile aircraft patrols: these increased four-fold, from 32 in May to 133 in June.39

While flying a hostile aircraft patrol on 26 June, Lieutenants Murphy and A. Farquhar engaged over Ramleh a Rumpler C IV which came in from the sea at 17,000 feet. An exciting combat ensued, during which the enemy machine was driven down to 5,000 feet. The Rumpler pilot - his observer by this time out of action - fired a Verys light and made for the Australian aerodrome evidently with the intention of landing. Murphy, at this point, noticed that his observer had sunk into the cockpit, and as his own gun had jammed he broke off the engagement. The enemy pilot made a bolt for German territory and made good his escape. On landing, Farquhar was found to be dead from bullet wounds.

A Dispirited Mob

Similar exertions on the part of the German flyers - to oppose Australian ventures over the lines - clearly lacked determination and real aggressive spirit. A report, furnished by the German Air Service at the end of May 1918, seemingly intended to prepare Turkish High Command for further diminution in air co-operation:

As long as the English use two seaters which are superior to our machines in climbing capacity, successful activity on our part is very much in question owing to the impossibility of the single seater even to attempt to make an attack on higher flying and better climbing two seaters.40

The German airmen's unwillingness to take on the Australian Bristol Fighters was evident during two engagements in late June.

On the 23rd, Addison and Fysh attacked a formation of four Albatros scouts over Bireh. Addison dived successively on the rear machine, firing over 100 rounds, which eventually reeled over and spun into low lying clouds. The Australian pursued two of the remaining machines, but they escaped through a gap in the clouds into a deep gully. According to enemy documents discovered later, in this combat "one machine broke up, another was shot up and had to break off the combat; the remaining two landed damaged by machine gun fire. One pilot was wounded." 41

Five days later, Lieutenants S. Nunan and G. Finlay, with Lieutenants Adair and C. Vyner as escort, met six Albatros D.Va scouts while on reconnaissance over Amman. Adair immediately fired a Verys light to warn Nunan, and flew directly at one of the enemy aircraft, opening fire at 300 yards range. It went into a vertical dive, and then fell out of control and careered into the ground. Adair then sighted two scouts about to dive on the reconnaissance machine. He broke off their attack, and harried the demoralised Germans towards Amman aerodrome with Vyner shooting into them at every opportunity. Meanwhile, Nunan had his sights set on two of the enemy which, at the opening of the engagement, had fled northward. "I fired a burst into one", Nunan later reported, "and following him close to the ground enabled my observer to get a long burst into him. The EA [enemy aircraft] crashed into an orchard and burst into flames". 42 When the two Bristols broke off engagement only two German machines were still in the air.

41 Ibid., p.20.

42 AWM 4, Item 8/4/1: Combats in the Air, 28-6-1918.
The Pressure Mounts

"During the hot months the German pilots and observers had had a sorry time. Ill-equipped, remote from their sources of supply, attached to a neglected Turkish army whose morale was weakening, they had to meet aeroplanes superior in performance and number, piloted by officers imbued almost to the point of recklessness with the offensive spirit."43

In July came the first real signs that the Australian air offensive was causing serious disruption to the air work of the enemy: hostile aircraft patrols peaked at 140 for the month, in the course of which five German machines were destroyed and ten driven down. On the morning of the 16th, Brown and Finlay, escorted by Peters and Traill, encountered four Albatros scouts, and drove them down on to the aerodrome at Tul Keram. German records later revealed that all four enemy machines were damaged by machine gun fire. On the same day Lieutenants Tonkin and A. McCann fought three more scouts, forced them all down to the Balata aerodrome, and fired into them on the ground.

An even worse disaster for Jasta I (F), however, came the next day when two of its D.Va scouts tangled with Ross Smith and Lieutenant W. Kirk over the Wadi el Auja. The enemy immediately turned tail and dived for their lines. Smith followed, and at only 50 feet from the ground opened up with his gun at close range into one scout, which spiraled earthward and crashed. Smith then pursued the second German machine through the Wadi at low level: "I fired a burst at very close range", the Australian later reported, "and EA dived into the ground and crashed on the Nablus Road, turning on his

43 Jones, p.207.
back. 44 Lieutenant Swinburn, of 111 Squadron, accounted for an Albatros scout the same day. In all, three of the Jasta's fighters were shot down, and according to Serno five more returned to Jenin aerodrome shot to pieces and unfit to fly. 45 In one day the Jasta had again been reduced to one or two serviceable machines. In the next three weeks 1 Squadron records only one contact with an enemy fighter. 46

The German Abteilung was increasingly an impotent force, and its flyers could seldom take to the air without being challenged by the Australian squadron's roaming Bristol Fighters. On 17 July Lieutenants D. Dowling and E. Mulford, escorted by Lieutenants G. Sheppard and L. Kreig, attacked two Rumplers near Amman. They killed the observer in one machine, and forced both aircraft to land. On the 22nd, Tonkin and Sutherland, while on dawn patrol, sighted a Rumpler flying towards Jisr ed Damiye. The enemy immediately made for Balata aerodrome, but Tonkin turned to intercept him. The Australian managed to manoeuvre the Bristol under the Rumpler's tail, allowing Sutherland to get in a series of bursts. "By this time", Tonkin noted:

the EA was very low and was flying up the Wadis. I kept turning and side slipping and gave my observer opportunity to fire. When the EA was about 10 feet from the ground the machine appeared to drop out of control but the pilot regained control and attempted to land; he crashed badly in the Wadi. I then circled in front of the machine and allowed my observer to fire about 100 rounds... One man got out of the machine and walked slowly round to the front, apparently wounded. 47

On 24 July, Lieutenants Peters and Traill, and Lieutenants Walker and Letch, destroyed a Rumpler south of Haifa. The German pilot fought courageously until his

44 AWM 4, Item 8/4/1: Combats in the Air, 17-7-1918.
45 Serno, p.358.
46 Flanagan, Palestine Jagdstaffel, p.53.
47 AWM 4, Item 8/4/1: Combats in the Air, 22-7-1918.
observer was put out of action. On the 28th, another Rumpler, which crossed the lines near Jericho, kept up a hot duel against the Bristol Fighters of Lieutenants Paul and Weir, and Brown and Finlay. The Australians chased the German machine from near Jerusalem to the upper Wadi Fara, a distance of twenty miles. During the combat Finlay fired off 800 rounds, while Brown expended all of his ammunition. The German observer matched them round for round all the way, and the Rumpler eventually landed in the Wadi. At this point both pilot and observer left the machine and made for the safety of a nearby village; but their escape was thwarted by Paul, who opened up from a height of 50 feet. "Both [German airmen] fell in the grass alongside the track", Paul later recorded, "and I could see my bullets chipping up dust all round them. We were in sight of them for some time after but neither moved and I am convinced that both were either killed or wounded". 48 Two days later Kenny and Sutherland shot down a Rumpler while patrolling in the Jordan Valley. Only one man, the pilot, was seen to leave the aircraft.

An Alarming Decline

According to von Sanders, the Germans lost 59 pilots and observers between the spring and autumn of 1918. 49 No replacement aircrews were forthcoming because of the German offensives on the Western Front. As for aircraft reinforcements, two shipments sent to Palestine that summer were too damaged in transit to be used. One of the problems of supply in the Middle East was that the standard gauge (58 inch) rail lines ended at Rayak (between Beirut and Damascus), and south of that point all lines were 42 inch gauge, necessitating a change in freight cars. The Turks employed British prisoners to handle cargo at Rayak, and whenever opportunity offered, deliberate damage was done. To add to the German's distress, the Abteilung personnel experienced during the

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48 Ibid., Combats in the Air, 28-7-1918.

49 Liman von Sanders, p.272.
summer of 1918 a severe epidemic of illness. By the end of July, Serno reported, “a large portion of the flying personnel had fallen out permanently”.\textsuperscript{50} The cumulative effect of the shortage of serviceable machines, and the high number of casualties, came to a head in late July when two of the reconnaissance \textit{Abteilung} - 300 and 302 - were compelled to suspend flying operations.

\textsuperscript{50} Serno, p.358.
25. General Liman von Sanders, Commander-in-Chief of the Turkish-German forces in Palestine

26. Albatros DIII single-seater. This well-performed fighter was employed by the makeshift Jasta 300 from January 1918.
CHAPTER X

Armageddon

On 1 August 1918 General Allenby outlined a general scheme for the destruction of the Turkish armies in Palestine. He planned to attack in force the left flank of the enemy on the coastal plain, to move a mounted force quickly through this gap northwards, and to outflank the enemy disposition by bearing eastwards deep into its rear. The main thrust on the left was to be made by XXI Corps under Lieutenant General E.S Bulfin (supported by 113 Squadron), and by the Desert Mounted Corps under Lieutenant General Sir H.G Chauvel (supported by 142 Squadron, less its ‘C’ Flight). Meanwhile, Lieutenant General Sir Philip Chetwode’s XX Corps, supported by 14 Squadron, was to advance astride the Nablus Road. In the Jordan Valley a task force commanded by Major General Sir E.W. Chaytor (including ‘C’ Flight of 142 Squadron) was to induce the Turks to expect an attack east of the river. Further to the east, Emir Feisal’s Arabs were to concentrate at Azrak, 60 miles east of Amman, for raids against the railway north, south, and west of Deraa.

During August 1918 the 40th (Army) Wing was reinforced by 144 and 145 Squadrons. Once the fighting began, 1 Squadron was to carry out strategical reconnaissance and bombing, while 111 and 145 Squadrons flew offensive patrols over German airfields, particularly the main aerodrome at Jenin. The D.H.9’s of 144 Squadron were to bomb El Aful railway station and the Turkish 7th Army Headquarters at Nablus.

Allenby wanted to conceal the concentration and preparations in the western sector, and simultaneously, divert the enemy’s attention to his eastern flank. Hence, in the Jordan Valley and Samaria deserted camps were left standing and dummy horses placed in them. Wooden sledges and branches dragged about by mules raised clouds of dust to make observation difficult, and simulated the routine activity of an occupied camp. At the same time, two cavalry divisions, two infantry divisions, and a number of
artillery battalions were to assemble gradually in the coastal plain. To guard against German air reconnaissance sorties, the forces moved only at night and without lights. The olive woods and orange groves north of Jaffa were used to hide the increase of troops. All day-time movement and activity was forbidden by military police. To solve the problem of smoke-betraying fires, all cooking was carried out by means of solidified alcohol.

**Importance of Air Superiority**

The element most likely to reveal Allenby’s preparations was German reconnaissance and photographic flights. It was, therefore, “vital to achieve maximum air superiority”. Indeed, as early as 2 August Williams demanded from 1 Squadron airmen greater efforts to obtain control of the air. They did not disappoint. During one week in June the Germans sent 100 sorties over Allenby’s lines. By the last week of August the visits had decreased to eighteen, and in the three following weeks were further reduced to a total of four. Significantly, the only reconnaissance that was carried out was done at altitudes over 16,000 feet, where no accuracy of detail could be assured.

A remarkable share of the aerial kills that summer went to 1 Squadron’s Bristol Fighters: “Whether they were engaged on strategical reconnaissance, bombing attacks, or offensive patrols”, H.A. Jones remarked, “the Australian flying officers never let pass an opportunity to seek out and fight enemy aircraft, usually pursuing their quarry to the

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ground where the destruction was often completed.⁴ Such was the Australian’s ascendancy that in the two months prior to Allenby’s September offensive, 1 Squadron accounted for every hostile aircraft shot down on the front.⁵ In August alone, the unit destroyed ten German machines and drove down eleven. The impact on German morale was so pronounced that on 3 September Oberst von Oppen, Commander of the Asien Korps, asked von Sanders to cease all reconnaissance because the continual loss of German machines was too disheartening for his troops.⁶

Of course, the RAF’s superiority in the air allowed for unrestricted reconnaissance over Yilderim’s lines. Thanks to the photographs, and the testimony of Turkish deserters, Allenby could boast prior to the offensive an accurate knowledge of the enemy’s dispositions.⁷ The Turkish forces in Palestine were organised into three armies, of which the 7th and 8th lay west of the river Jordan, and the 4th on the east. At the beginning of his secretive concentration Allenby opposed 2,000 Turkish cavalry, 32,000 infantry, and 402 guns with 12,000 cavalry, 57,000 infantry, and 540 guns. He thus had a superiority of about two to one in total forces.⁸ By the end of the concealed movements, however, Allenby’s advantage had reached overwhelming proportions. He had massed on the crucial fifteen mile front near the coast 35,000 infantry, 9,000 cavalry, and 383 guns. The unsuspecting Turks had only 8,000 infantry with 130 guns.

⁴ Ibid., p.208.

⁵ Major S.W. Addison, “Review of Operations From 1 January 1918 Till Return to Australia, March 1919” (Australian War Memorial, Canberra, Series AWM 224, Item MSS 515, Part 2) p.28.


Collapse of Jasta 1 (F)

In early August a shipment of Pfalz D IIIa machines reached Jasta 1 (F), newly-commanded by Leutnant Gerhard Flechen. Lieutenants P. McGinness and H. Fysh, and Lieutenants W. Thompson and M. Lees, all of 1 Squadron, first encountered these new aircraft over Jenin aerodrome on the 14th. In the ensuing combat the two Bristol Fighters split the six-strong formation, and forced them all to the ground. Ten days later, on 24 August, Jasta 1 (F) made a final desperate attempt to revive the morale of its flying officers. Taking off in response to a hostile aircraft alarm, Lieutenants G. Peters and J. Traill, and Lieutenants McGinness and H. Fletcher encountered an LVG two-seater over Jelil at 9,000 feet. As the Bristol Fighters approached, the enemy turned north and fired several Verys lights. A formation of six Pfalz scouts, obviously in response to the signal, suddenly appeared from over the coast. As an outcome of this skirmish, described by Addison as the greatest aerial battle fought on the Palestine front, the fighters of Jasta 1 (F) were seldom seen again during the campaign.

Peters attacked the two-seater, leaving his observer to keep the scouts at bay. He opened fire at 100 yards range, forcing the LVG to go down in a slow spin. Peters then dived below the German and delivered a further burst of 80 rounds: the machine dropped out of control and crashed near Bir el Hanuta. Two of the Pfalz fighters immediately dived on Peters, but Traill shot at both in turn, and each went into spins. One disappeared into cloud; the second the Australians followed down, firing continuously, until it hit the ground and rolled onto its back. McGinness, meanwhile, dived after three scouts, selecting the centre machine of the trio for close attention. “He kept turning under me”, McGinness later reported:

but I eventually got straight behind his tail and opened fire at a range of 50 yards, getting off a good burst. The EA dived straight on, emitting a long trail of smoke, and ultimately burst into flames as he struck the ground. I then saw another EA flying towards Messudieh and about 800 yards distance. I succeeded in overtaking him and pursued him down to within 200 feet from the ground. HA attempted to land on Messudieh - Nablus Rd., and,
as he flattened out to land he turned and my observer fired a burst, whereupon the scout crashed into a motor lorry and went up onto its nose. The pilot attempted to get out but my observer again opened fire from about 200 feet and EA pilot fell back into his seat, and did not move again. 9

This was probably Vizerfeldwebel (Technical Sergeant) Siegfried Walther, who was reported killed that day near Tul Keram.

Intelligence files captured during the final advance showed that of the seven enemy machines engaged in this combat, only one scout returned to its aerodrome. By this time, moreover, the unbearable summer heat and its associated diseases (typhoid and malaria) were taking a heavy toll of the Jasta pilots. At the end of August, according to Serno, only three or four pilots were sufficiently well to undertake operations. A combination of sickness, and the disastrous events of 24 August, meant the dissolution of Jasta 1 (F) was contemplated. 10

Continued Air Dominance

Like their Jasta counterparts, the German Abteilung pilots were effectively subdued by 1 Squadron’s Bristol Fighters in the six weeks leading up to Allenby’s September offensive. On 3 August Lieutenants E. Kenny and L. Sutherland, with McGinness and Fysh, met four Albatros two-seaters whilst reconnoitring over El Afule. Kenny chased one down to a landing near the railway north-west of El Afule, and then climbed to attack another; Sutherland fired a burst of 100 yards at close range, and the enemy went down in a spin completely out of control. By this time McGinness had

9 Australian War Memorial Unit War Diaries, 1914-1918, No.1 Squadron, Australian Flying Corps (Series AWM 4, Item 8/4/1). Combats in the Air, 24-8-1918.

10 It is unclear whether this was carried out. Australian airmen did not encounter another German fighter in the air until 22 September. On 27 August, however, Lieutenant C. Conrick saw seven scouts on Jenin airfield during a strafing raid.
joined the action. Both he and Fysh fired heavily into a third Albatros, which was at the top of a loop, sending it crashing into the ground.

On the 16th, Lieutenants C. Paul and W. Weir, responding to a hostile aircraft alarm, encountered a Rumpler flying at 10,000 feet making for home. The ensuing combat went decisively in the Australian’s favour. To quote Paul:

I observed a suspicious looking machine several thousand feet lower flying north with nose down. I dived on its tail, saw it to be a Rumpler 2-seater and when immediately behind and on same level opened fire at 150 yards. EA observer threw up his hands and fell back in the cockpit on first burst. He had not previously fired. I maintained position immediately behind and continued firing till about 50 yards range. Then the Rumpler’s right wing collapsed and machine went down in pieces from a height of about 6,000 feet.\footnote{AWM 4, Item 8/4/1: Combats in the Air, 16-8-1918.}

By attacking the two-seater from above, Paul exposed his machine to the fire of the enemy observer.\footnote{A two-seater, attacking from below, would secure full use of the observer’s armament, and simultaneously, counter the enemy observer’s guns.} Just six days later, similar tactics were employed by Lieutenant J. Walker, with Lieutenant H. Letch in the observer’s cockpit, when an LVG two-seater appeared over the Australian aerodrome at Ramleh. Much of the squadron witnessed the unfortunate turn of events. The Australian machine, Williams later reported:

dived on the German from above and behind, which is a very risky position from which to attack a two-seater, and one found oneself yelling ‘No’. The German was using a percentage of incendiary bullets, as we were also, and soon the Bristol Fighter was alight... The main petrol tank in the Bristol Fighter was under the pilot’s seat and the observer was immediately behind it, so both were at once faced with death by fire if they remained in the aircraft or by contact with the earth if they jumped. They jumped, and it was a trying experience to see one’s own fellows faced with such a decision.\footnote{Sir Richard Williams, \textit{These Are Facts} (Australian War Memorial, Canberra, 1977) p.90.}
Another Bristol Fighter, crewed by Captain A. Brown and Lieutenant G. Finlay, carried on the combat and drove the LVG down to a bad landing: this was the first enemy machine shot down in British lines by the Australian squadron.

By the month’s end, a further two LVG machines had fallen victim to the unit’s Bristol Fighters. The enemy two-seaters were destroyed in aerial combat on the 31st, by McGinness and Fysh. Both were shot down by the rear guns, one crashing in British lines and the other near Kalkilieh. “McGinness put me in a good position”, Fysh later recalled:

and one long burst was sufficient to send one of the Hun two-seaters down in a vertical dive to crash head on in our lines a few miles from our aerodrome. Our escort Bristol Fighter broke off with engine trouble and we then followed the second machine in its dash back for home and safety. A long chase, again a perfect position, and two bursts shot the LVG asunder in the air: it was a fantastic sight as the fuselage with the wings on the port side gyrated down while the two starboard wings with interplane struts attached floated off in another direction.\(^{14}\)

The two German officers shot down in British lines - *Unter Offizier* (Non-commissioned Officer) H. Vesper and *Leutnant* Haendly - both of Fl. Abt. 301, were buried in Ramleh cemetery next day.

For Fysh, this engagement had special significance and importance. In the first place, it avenged the loss of Walker and Letch, who had plummeted to earth to the horrified gaze of squadron personnel. Secondly, it occurred a few days before Allenby’s big push, when it was vital to stop information concerning EEF troop movements leaking to the enemy. This combat - a culmination of the steady pressure exerted by 1 Squadron throughout the summer - had the desired effect: from the end of August, according to

Serno, the German reconnaissance of the 8th Army front - the crucial coastal sector - had to be discontinued.  

**Success of the Air Offensive**

Von Sanders and his staff were completely surprised by the distribution of the EEF forces when Allenby's offensive opened on 19 September, and had absolutely failed to discover the systematic transfer of troops to the left.  

As Colonel A.P. Wavell - who was Chief of Staff to XX Corps concluded - “it was above all the dominance secured by our Air Force that enabled the concentration to be concealed.”  

In fact, the German airmen were interfered with and deceived to such an extent that the information obtained on reconnaissance sorties proved altogether erroneous. Referring to observations taken of movements and dispositions of EEF forces from 1-16 September, the following extracts were found in the German Flying Corps diary: “no changes of importance have occurred; traffic on roads and railways in the long distance reconnaissance centre were small, only unimportant regrouping of troops without change of strength”.  

These refer to the period when three complete divisions and many batteries and other units were on the move to the coastal area. Von Sanders, perhaps in defence, has drawn particular attention to the weakness of his air force at this time: “Air reconnaissance against the enemy ceased almost completely in September. As soon as a German machine appeared, it was attacked by such superior British air forces that reconnaissance became

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16 Yigal Sheffy, who has written extensively on deception operations initiated by the British in Palestine, attributed the Turco-German failure to locate the movement of the 4th Cavalry Division and the Australian Mounted Division to the western sector to the success of the deception plan.

17 Wavell, p.201.

18 Addison, p 27.
impossible.”19 Such was the German commander’s testimony to the effectiveness of the Australian air offensive.

**Multi-Dimensional Air Strategy**

The squadrons of the 5th (Corps) Wing and 40th (Army) Wing, once Allenby’s offensive had commenced, were to assume a prominent role in the rout of the three Turkish armies. General W.G.H. Salmond and his air staff carefully planned and implemented a multi-dimensional air strategy. The air roles encompassed: (a) Interdiction. The object of a preliminary air bombardment was the destruction and disorganization of Yilderim’s communications at El Afule, Nablus and Tul Keram. (b) Counter Air. By maintaining a blockade over the German aerodromes, enemy aircraft were prevented from taking any part in the battle. (c) Air Support. Valuable assistance was to be given by the corps squadrons - attacking ground objectives, bringing in speedy tactical information, and directing artillery. (d) Land Strike and Strategical Reconnaissance. EEF planning staff had established five lines of retreat which would be open to the Turkish 7th and 8th Armies, and those defiles in which bombing attacks would be most effective were noted. These were: (1) Tul Keram to Samaria to Nablus (2) Samaria to Jenin to El Afule (3) Anebta, on the Tul Keram Road, to Jenin to El Afule (4) Nablus - Wadi el Fara - Jisr ed Damiye (5) Balata - Wadi el Fara - Khurbet Ferweh - Beisan. In addition to special watch over these routes, general strategical reconnaissances were to be carried out at regular intervals. (e) Nullifying Enemy Air Attacks. There is evidence that nine German machines were transferred from Jenin to Deraa on 17 September. Their bombing activities generated much anxiety, and T.E. Lawrence requested air support to bolster the morale of his irregulars.20

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19 von Sanders, p.272.

20 A reactive measure, and not part of the planned air strategy.
Yilderim’s Communications Shattered

At 1:15 am on 19 September, Captain Ross Smith with observers Lieutenants E. Mulford, M. Lees, and A. McCann, set out in a Handley Page 0/400 heavy bomber to attack the central telephone exchange at El Afula.\textsuperscript{21} The Australians dropped sixteen 112-lb. bombs, and were followed at 6:30 am by five D.H.9’s of 144 Squadron which let go a further four 112-lb. and thirty-two 20-lb. bombs. A third wave of eight machines attacked El Afula at 11:25 am. An inspection of the target after the EEF advance revealed the majority of the telephone wires lying severed in bomb craters.\textsuperscript{22} 144 Squadron also bombed the Turkish 7th Army Headquarters and communications at Tul Keram. “In the entire section between Coast and Jordan”, von Sanders could well lament, “we had but the two anti-aircraft guns of the Eighth Army, so that the task of the enemy fliers was an easy one.”\textsuperscript{23}

By 7:00 am von Sanders had lost contact by telephone and by wireless with 7th and 8th Army Headquarters. He did not know that the EEF had broken through in the coast sector, and that the 8th Army was retreating in hopeless confusion. The wreckage of Yilderim’s communications also ensured that the Turkish 4th Army, east of the river Jordan, would remain in complete ignorance of Allenby’s success for at least 48 hours.

\textsuperscript{21} The largest aircraft to serve in Palestine, the Handley Page had been flown out from England at the end of July by Brigadier-General A.E. Borton, accompanied by Major A.S.C. Maclaren. Powered by two 2,375 h.p. Rolls Royce Eagle VIII engines, the bomber had an endurance of eight hours and could carry a load of sixteen 112-lb. bombs.

\textsuperscript{22} Squadron Leader R.M. Drummond, ‘Air Work on the Sinai-Palestine Front (June 1916 - November 1918)’, essay written in 1922 at the RAF Staff College, Andover, and published by the Air Ministry in December 1923 (Air Publication 956) p.126.

\textsuperscript{23} Von Sanders, p.275.
Counter Air

“Our job for the start was to sit over the Hun’s aerodromes all day and keep them from getting into the air, so they could not get any information as to what was happening after we had broken through the front line. We did this so successively that the Turks did not know they were surrounded or what places we held.” Drummond, Commanding Officer of 145 Squadron, 3 October 1918.

Von Sanders was unable to look to his air service to remedy the communications void: “Since early morning”, the German Commander-in-Chief noted, “we had sensibly felt as a drawback that our fliers were unable to observe and report events on the battle fields and on the lines of retreat”.24 Indeed, pairs of S.E.5a’s from 111 and 145 Squadrons flew continual counter air sorties over Jenin throughout the day. Writing in 1923, Drummond attributed the upmost importance to this blockade. He pointed to the danger posed by German bombing missions, given that pre-dawn two of Allenby’s cavalry divisions were concentrated in dense formation along the Mediterranean coastline awaiting orders to advance.

William Lighthall, of 111 Squadron, was first over Jenin airfield on the morning of the 19th. Engine trouble forced his S.E.5a. partner to return to Ramleh, leaving Lighthall to initiate the blockade alone. He later wrote of:

waiting very uneasily for the longest hour of my life, expecting to have to take on an ascending cloud of Fokker D.VII’s which, fortunately failed to materialize. Later we were told by captured Germans that they thought that I was a decoy, with waiting patrols ready to spring on any plane that took to the air. My relief finally arrived and I was free to go ground-strafing the retreating Turks as soon as I could refill my tanks, guns and bomb racks which I had emptied on the hangars of Jenin before I left.25

24 Ibid., p.280.

Twelve pairs of S.E.5a's were so engaged from dawn to dusk, and each pilot carried four 20-lb. bombs and a surplus supply of machine-gun ammunition. Only one German machine managed to escape from Jenin that day.26

The Corps Squadrons

At 4:45 am on 19 September, following an intense fifteen minute bombardment, the XXI Corps assaulted with three infantry divisions and quickly fulfilled their task of shattering the Turkish 8th Army, and clearing the way for Chauvel's Desert Mounted Corps. El Afule and Beisan were the escape exits for the enemy, and the severance of these rear arteries was the task of the mobile force. By midday, the 5th Cavalry Division (Major General H. MacAndrew) was well across the Nahr Iskanderune stream (west of Tul Keram) still heading north. The 4th Cavalry Division (Major General Sir G. Barrow), further inland, was making equally good progress.

From dawn onwards the corps squadrons were in close co-operation with their respective EEF corps. Number 142 Squadron, attached to the Desert Mounted Corps, was to keep cavalry and general headquarters informed of the progress of the leading cavalry divisions. Chauvel, it is interesting to note, initially looked to a special force of Light Horse and Yeomanry liaison officers to act as gallopers between the divisions and corps headquarters. But owing to the pace of the advance, by the end of the first day the officers had ridden their horses to a standstill, and their service was limited.27 By the use


27 Gullett, p.697.
of wireless and airmen, however, Chauvel was able to keep in touch with his advanced troops.

Number 113 Squadron, working with the XXI Corps, were to drop their messages at divisional and brigade headquarters, and had arranged to receive messages by way of a Popham signalling panel. Contact was made via Klaxon horn from a contact-patrol machine, and an infantry flare on the ground. As for support of the artillery, relays of three artillery machines patrolled the front of XXI Corps. A total of 32 active batteries were reported - practically all of which had been located and registered in the weeks prior to the offensive. One pilot, in a patrol lasting three and a half hours, spotted for six corrections with the result that on each occasion the battery was silenced. The infantry were also instructed to light flares if in the early stages of the advance shells were found to be falling short: aircraft observers could use a special wireless warning to the respective corps artillery. A noteworthy feature of the support given by 113 Squadron was the employment of a smoke curtain on the front of the XXI Corps. An apparatus had been designed by the RAF in the Middle East by means of which sixty candles could be dropped successively to create a smoke screen 400 yards long. In the event, the infantry advance proved so swift that the screen was put down only twice.

**El Afule and Jenin**

The 14th Brigade of the 5th Cavalry Division swept down on El Afule at 8:00 am on the 20th, taking the town and aerodrome completely by surprise. Both were captured without serious resistance. Three aircraft, two Albatros D.V machines and a DFW C.V, were found intact on the aerodrome. So ignorant were the enemy of the situation that within minutes of the airfield’s occupation a DFW CV flew in from Rayak carrying two

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28 Jones, p.217.

29 Drummond, 'Air Work on Sinai-Palestine Front', p.126.
bags of mail for the headquarters at Nazareth. Only after the two-seater had touched down did its occupants realise that the aerodrome was in British hands. The pilot tried to escape, but an armoured car opened fire, wounding both airmen, and the Germans were forced to give themselves up. The tents of Fl.Abt.304 had been struck in the dawn of 20 September, and most of the equipment and personnel were heading northwards towards Nazareth as El Afule was captured behind them. When confronted by British cavalry, the personnel made off eastwards on foot, but it is doubtful that many made good their escape.

Leaving the 5th Division in occupation of El Afule, the 4th cavalry Division turned south-east for Beisan, which was captured with little fighting late in the afternoon. In thirty-four hours, Barrow’s men had ridden seventy miles. Meanwhile, the 13th Brigade of the 5th Cavalry Division had made a bold dash for Yilderim headquarters at Nazareth. The cavalry entered the town shortly before dawn, but had not been given the exact location of von Sander’s headquarters. Street fighting temporarily arrested the brigade’s advance, and this enabled von Sanders and his staff to escape via the back road leading to Tiberias.

The 3rd Light Horse Brigade of the Australian Mounted Division next moved south-east from El Lajjun to take Jenin. The previous night, and in the small hours of the 20th, Ross Smith, in the Handley Page, had dropped two tons of bombs on the town’s station and aerodrome. Inside Jenin, in the late afternoon, the mounted troops made light work of the demoralised garrison. At Jenin aerodrome, the troops found three two-seaters, eight Pfalz single-seaters, all burned, eight damaged engines, a quantity of damaged stores and thirty undamaged aircraft machine-guns. Three of these machines had been destroyed by the Handley Page night-bombing raid, while the others had been rendered unflyable by the strafing activities of 111 Squadron.

By the evening of 20 September, only thirty-six hours after the opening of Allenby’s offensive, Chauvel had already achieved his purpose. The Turkish 8th Army had ceased to exist as a coherent force. The Turkish 7th Army was astir, but its lines of retreat to the north - via El Afule and Beisan - were in the hands of the cavalry. The only way of escape lay in an easterly direction across the river Jordan; these were to be closed in dramatic fashion by the air arm.

Cavalry of the Clouds

"We blew them to blazes. Then zoomed on the infantry and chopped them to ribbons with our guns. We couldn’t miss. Emptied our belts and drums." Sutherland, recording the slaughter of the Turkish columns, 19 September.

From 19 September, 1 Squadron’s Bristol Fighters, equipped with long-range wireless sets, kept under constant observation the avenues of retreat open to the remnants of the Turkish 8th Army, and to the Turkish 7th Army. At about midday on the 19th, air reconnaissance revealed that large bodies of enemy troops, cavalry, horse transports, motor transports, gun carriages and camels, were retreating along the road running east from Tul Keram through Anebta and Samaria to Nablus.31 A study of aeroplane photographs showed that for two miles the road ran along the bottom of the Wadi Zeimer, with steep hills on each side, which would prevent vehicles leaving the defile.32 All available machines were diverted to attack the column, and the Turks were given their first real demonstration of the destruction that could be wrought by organised bombing. According to H.A. Jones, six 112-lb. and more than 300 20-lb. or 25-lb. bombs were dropped, and 1 Squadron alone fired 16,900 rounds of machine-gun

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31 Route 1: The columns, estimated by Sutherland at 6,000 men, were Turkish 8th Army remnants.

32 Conrick, p.129.
ammunition on ground targets that day. A Light Horseman later wrote of the chaos and slaughter:

As we rode over the plain of Sharon we could see the Turkish column, like a huge snake, winding its sinuous way amongst the foothills towards Nablus. And in the air we saw the Australian planes, like hawks circling aloft ready to swoop... One after the other the pilots flew eastward, following the course of the Valley, till they reached the head of the doomed column. Then they rained wrack and ruin from the sky. Bomb after bomb crashed with deadly precision on the cavalcade, blocking the road and throwing the retreating army into inextricable confusion. Then the airmen turned, and flying low, loosed off their machine-guns and poured a withering fusilade into the writhing mass below. Time and again they streaked along the stricken line till the last cartridge had been expended. Then, with all their guns and transport abandoned, those who survived the ordeal fled to the hills of Samaria, and hid amongst the ruins till nightfall. Next day the Light Horsemen rode through the defile, and we called it "The Valley of Death".33

The bombardment so utterly destroyed the morale of the Turks that when Chauvel's cavalry entered the fray, the enemy surrendered with little or no resistance. As von Sanders noted: "The repeated attempts of officers to rally some of the uncurbed troops were in vain, as the men were completely indifferent and thinking only of their own salvation."34

During the night of the 19th a long column of the survivors of the 8th Army - some 10,000 men - sought escape by the Dothan road. They were safe at night, but at dawn of the 20th Lieutenants S. Nunan and C. Conrick, and Brown and Finlay, reported the rabble streaming north up the road - from Messudieh station towards Jenin (where routes 2 and 3 join). At 9:00 am five Bristol Fighters dropped forty bombs and fired 4,000 machine-gun rounds in order to delay the column until the cavalry could arrive at El Afula. The Australians took a terrible toll, as nearly every bomb fell among the Turks.

33 *The Kia Ora Coo-Ee*, 15 December 1918 (Held by the RNZAF Museum, RNZAF Base, Wigram, Christchurch).

34 Von Sanders, p.280.
This attack was repeated at noon. On this day 1 Squadron mechanics - keen to share in the Turkish rout - fastened empty cartridge cases to the bomb fins, so that in their flight earthwards the ordinary whirr became a terrifying scream. The enthusiasm of the ground crews was in marked contrast to the mood which pervaded in the mess that evening. The excitement of days earlier had given way to gloom. "We were weary of slaughter", Sutherland lamented, and the dreadful anticipation of further butchery meant only the lucky slept that night.

**Wadi El Fara**

"Perhaps nowhere else in the war was the efficacy of the air force, as a sheer fighting agency against troops on the ground, so convincingly demonstrated". H.S. Gullett, official historian of the Australian Imperial Force in Sinai and Palestine.

The Turkish 7th Army had been slow to take alarm and by the evening of the 20th found its lines of retreat northwards in Chauvel’s hands, and was forced to retire eastwards, hoping to escape across the Jordan. Flying low over the Wadi Fara area on the early morning of the 21st, Nunan and Conrick and Brown and Finlay discovered a huge column of enemy transport and troops following the Balata - Khurbet Ferweh - Ain Shibleh - Jordan road. The road ran north-east from Balata along the Wadi Beidan, with steep hills on one side and a sheer precipice into the Wadi on the other. It crossed the Upper Wadi Fara at Khurbet Ferweh, and followed this Wadi as far as Ain Shibleh; there it turned off the Wadi Fara, and struck in a north-easterly direction towards the Jordan.

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The Australian patrol reported 600 horse transports and guns packed into the four mile stretch of road between Balata and Khurbet Ferweh. In Khurbet Ferweh, and for a mile or two beyond it, were over 200 more horse transport. In effect, the Turkish 7th Army forces were trapped along the Wadi Beidan and Wadi Fara defiles, and with some swift action by the air arm could practically be wiped out. Using his long-range wireless, Finlay passed the information back to the aerodrome at Ramleh, where formations of Bristol Fighters and S.E.5a's loaded with bombs, and the airmen standing by, were ready to move. Meanwhile, the two Australian machines attacked the head of the column on the precipice road between Balata and Khurbet Ferweh: "I was more successful than I hoped", Conrick later reported, "as I had direct hits on some large motor-transport, which for the time at least, effectively blocked the road into Khurbet Ferweh. The rest of my bombs fell along the road among Horse-transport". Finlay bombed in the same area, and then both aircraft proceeded to strafe the whole road back to Balata, causing an immense amount of confusion and destruction. To Sutherland, the column looked like a "giant, greyish-black snake, nine miles in length." It had come to a grounding halt.

At 6:30 am the first three Australian Bristol Fighters, sent out in response to Finlay's wireless message, attacked the reptile's tail. Thereafter, with the head and tail of the snake pinned down, the formations pounded the body. Air staff planned for two bombers to arrive over the Balata-Ferweh-Ain Shibleh road every two minutes, and in addition a bombing formation of six every half hour. The major attacks were made by the Australians and the other army squadrons, but the three corps squadrons also took part. Throughout the day, more than nine tons of bombs were dropped and 56,000 rounds of machine-gun fire aimed at the demoralised Turks. Gestures of surrender - white cloths and flags - were simply ignored.

37 Conrick, p.138.

38 Sutherland, p.253.
Contemporary accounts convey the same appalling picture of panic, death, and destruction. Sutherland was in the first formation:

As our bombs rained down, scores, hundreds of motor lorries, guns and wagons were literally lifted off the road and smashed to pieces. Our guns sprayed lead, never ceasing until a belt or a drum was empty. Frantic groups were all the time rushing from the road, milling about, striving to get anywhere that might give some protection against the rain of death. Many did get away from the road, but from upstairs we could see every movement. We would dive, guns blazing or the Coopers hurtling.39

At 2:00 pm Conrick left on his third and final bombing raid:

While I kept on firing my guns I had to close my mind to all that I could see, to the abject terror on the faces of the Turks, to the dead piling up along the road, to the burning transports, to horses stampeding over the cliff edge or being crippled and trying to stand up again and again and always falling back until they too died in the heat and the dust, and the flies alongside the roadside.40

When British troops rode forward the next day they found abandoned and wrecked 87 guns, 55 lorries, 4 motor-cars, 75 carts, 837 four-wheeled wagons, and 20 water-carts and field-kitchens. The infantry took 100 or so prisoners - all that were left. Salmond also visited the area, and was so appalled that he asked Williams to discourage his pilots and observers from going to see what they had done.41

In bombing and checking the columns, and scattering the troops, the airmen had taken all the fight out of the Turks before they reached the EEF cavalry cordon beyond. Not only did the bombardment remove the possibility of any serious attempt to engage

39 Sutherland, p.255.

40 Conrick, p.140.

41 Williams, p.96.
Barrow’s 4th Division at Beisan, but in addition, to oppose Chaytor’s advance north in the Jordan valley. Indeed, while the 7th Army column was being destroyed in the Wadi Beidan and Wadi Fara defiles, Barrow, advised of its approach, waited anxiously to act: in the event his troops had only to collect panic-stricken stragglers. That night, Chaytor’s Force advanced north on the west bank of the Jordan. Very early on the morning of the 22nd two British West Indian battalions seized the bridge at Jisr ed Damieh, and so closed the retreat in that quarter.

Arab Co-operation

On the afternoon of 22 September Australian reconnaissance machines found that east of the Jordan the whole of the Turkish 4th Army was astir, with large volumes of transport retiring north-east to Es Salt and east to Amman. The Arab army, prior to the opening of Allenby’s offensive, had been detailed to destroy the Hejaz railway about Deraa, thereby cutting the Turkish way of retreat. On the 16th, Lawrence’s Arab irregulars - supported by a number of British armoured cars, a detachment of the Egyptian Camel Corps specially trained for demolition work, and a detachment of Ghurkas - blew up a bridge and destroyed a section of railway fifteen miles south of Deraa. Large-scale demolitions on further sections north and west of the junction continued next day, despite bombing and machine-gun attacks from the German aircraft based at Deraa. Of the two aircraft (one Bristol Fighter and a B.E.12) allocated to the Arab operations, the Bristol Fighter had already been damaged and rendered unfit for service. The B.E.12, piloted by Lieutenant H. Junor, boldly attempted to dispel the air threat on the 17th, when the Arabs were being bombed at Tell Arar, five miles north of Deraa. Lawrence wrote in *Seven Pillars of Wisdom*:

42 Addison, p.35.

43 Consisting of three Pfalz D IIIa fighters and three two-seaters transferred from west of the Jordan on the 17th. These were added to the four machines of Fl_Abt. 305 stationed at Deraa.
We watched with mixed feelings, for his hopelessly old-fashioned machine made him cold meat for anyone of the enemy scouts or two-seaters: but at first he astonished them, as he rattled in with his two guns. They scattered for a careful look at this unexpected opponent. He flew westward across the line, and they went after in pursuit, with that amiable weakness of aircraft for a hostile machine, however important the ground target. We were left in perfect peace.\textsuperscript{44}

When Junor reappeared his petrol was nearly finished, and three enemy machines were closing in and subjecting him to a raking fire. Lawrence, in the faint hope he might get down intact, rushed to get a ‘T’ landing signal, whilst Arab, British, and French alike worked feverishly at getting the worst of the boulders off the only available strip of landing ground. On touching down Junor lost his undercarriage and crashed into one of the few remaining boulders, crumpling up his machine, but escaping with only a few scratches.

By the morning of 19 September the demolition parties were safely back in the Arab camp at Umtaiye, having accomplished their task of cutting the Hejaz railway between Amman and Deraa, and Deraa and Damascus. Umtaiye, however, was proving to be very vulnerable to air attack. A British officer attached to the Arab army recorded one such raid on the 21st: "We had just finished breakfast ... when an enemy plane appeared and subjected us to a rather bad bombing, killing some animals and wounding two Arab officers and a French gunner."\textsuperscript{45} Lawrence took very seriously the consequences of continued air impotence:

Our business was to hold on to Umtaiye. Strategically it was a wonderful place, which gave us command at will of Deraa’s three railways. If we held it another week we would have strangled the Turkish armies by our own efforts, whatever fate Allenby was having in the west. Yet tactically Umtaiye was a dangerous place, only four miles from the railway, and an easy march.

\textsuperscript{44} T.E. Lawrence, \textit{Seven Pillars of Wisdom}, (Jonathan Cape, London, 1935) p.596.

\textsuperscript{45} 'Arabian Days and Nights' in \textit{Blackwood's Magazine} (April-June 1920, pp.585-608 and 750-768) p.605.
from Deraa. A force made up of regulars without a guerilla screen could not safely hold it: and yet to that we would shortly be reduced, if our air helplessness continued.... We were camped twelve miles from their aerodrome, in the open desert, about the only possible water-supply, with great herds of camels and many horses necessarily grazing round us. The Turks had found us out, and had made a beginning of bombing, enough to disquiet the regulars.... Unless they could be delivered from overhead risk, they would break up and go home, and our usefulness would be ended.46

On 21 September Lawrence flew to Allenby’s headquarters in a Bristol Fighter, piloted by Lieutenant G. Peters, to arrange for air cover and to receive further instructions. Meanwhile, the Arabs retreated to Um el Surab, a ruined village just south of Umtaiye, in order to escape the incessant bombing. Ross Smith and Mustard, and Lieutenant E. Headlem and W. Lilly, were dispatched with Peters to nullify the German detachment at Deraa.47 The three Bristol Fighters arrived at Um el Surab in the early morning of the 22nd. In addition, Salmond arranged that the Handley Page bomber would fly across on the 23rd, bringing petrol and spares. Its exact consignment, according to Addison, was “40 tins of aviation spirit, 8 25-lb. Coopers bombs, several tins of oil, spare wheels and bomb racks for the Bristol Fighters and rations for six officers and four mechanics for six days, together with their kits.”48

Shortly after the arrival of the Bristol Fighters at Um el Surab enemy aircraft were reported to be making straight for the Arab encampment. Smith and Headlam, each with their observers, took off immediately and sighted two Pfalz scouts and a DFW two-seater. The enemy fled, but the Australians shot down the two-seater near Mafrak, killing one of its occupants. The Australians had not long returned to their breakfast


47 Curiously, H.A. Jones, the official British air historian, and Lawrence in Seven Pillars, claimed that two Bristol Fighters and one D.H.9 were sent out to Deraa. Cutlack and Addison rightly specify that the detachment consisted of three Bristol Fighters. For confirmation see Mark Lax (Annex D: No.1 Squadron Successful Combats, 1917-1918).

48 Addison, p.63.
when a further warning of hostile aircraft was issued. Smith and Mustard again flew out and found three Pfälz scouts - the same that had escorted the destroyed DFW. "The swine, although 3 to 1, would not fight", Smith reported, and all three quickly descended to land.\(^49\) In the afternoon a DFW bombed Um el Surab camp, but was chased and driven down by Peters and Traill near Derra aerodrome. Peters flew low over the two-seater as it lay on the ground, and Traill raked it with machine-gun fire, killing both pilot and observer. On 23 September there appears the last mention of German aircraft in the Derra sector: a DFW two-seater was sighted flying near the aerodrome, and Lieutenant E. Kenny and Sutherland drove the machine down. The Bristol Fighters remained with the Arab army for a total of five days, and were thereafter engaged in making frequent attacks on enemy outposts along the Hejaz railway, and in bombing and strafing Turkish repair parties. The Handley Page returned to Ramleh on the 22nd, from where it undertook night raids on the Derra and Mafrak railway stations.

On 22 September von Sanders instructed Djemal Pasha Kuchuk to withdraw his 4th Army without delay. When the commander learned of the menace to his communications with the north, he sought to break away from Chaytor, fall back on Es Salt and Amman, and then march by road to Damascus. Brown and Finlay, reconnoitring at 5:00 am on the 23rd, reported a column of all arms moving down the road from Es Salt to Amman and various bodies of troops making for Amman from the hills to the south-west. Once Finlay had transmitted news of the target back to Ramleh, the airmen proceeded to bomb the thickest part of the column and strafe the streaming masses. The ensuing concentrated bombardments - begun by six Bristol Fighters of 1 Squadron - produced a rout reminiscent of the sufferings of the two Turkish armies west of the Jordan. The first wave of machines dropped 48 bombs into the traffic, scoring eight direct hits on lorries or horse-drawn wagons. The pilots and observers then fired

7,000 rounds of ammunition into the terrified columns. During the remainder of the day the squadron concentrated its attacks on Amman. Here, the Australian machines expended three tons of bombs and 15,000 machine-gun rounds.

After a lull in the air attacks on the 24th, a new bombing target appeared on the 25th. The dawn reconnaissance located a mixed column at Mafrak station, comprising 300 horse-transport and guns, 600 camels, and 3,000 infantry and cavalry. Twenty-three flights were made during the day by pilots from 1 Squadron, and a total weight of 4,470 pounds of bombs dropped and 13,200 machine-gun rounds fired. The damage caused at Mafrak was immense: a number of storage dumps were blown up, and a long train, which was loading troops, sustained several direct hits. On that afternoon, Chaytor’s Force occupied Amman.

Unfinished Business

On 25 September Allenby issued orders for a general advance by the Desert Mounted Corps on Damascus. Barrow, with the 4th Division, was to move east from Beisan to Deraa with instructions to intercept remnants of the Turkish 4th Army in co-operation with the Arab forces. The Australian Division from about Tiberias, followed by the 5th Cavalry Division at Nazareth, was to make for Damascus by the road round the northern end of Lake Tiberias and through Kuneitra. The movement was undertaken with such speed that 20,000 of the enemy troops making for the safety of Damascus were overtaken and killed or captured before they reached the city. At dawn on 1 October Damascus was entered by the Third Australian Light Horse, and soon after

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50 Conrick, p.145.
51 Addison, p.37.
52 Conrick, p.147.
53 Jones, p.235.
by the Arab army. Only a rabble of some 17,000 Turkish men managed to escape north, via the Beirut Road. Nunan and Conrick - in close co-operation with the Light Horse advance - added significantly to this group's plight. Conrick, seemingly devoid of compassion, wrote:

When we caught up with the first of them they sat on the road with their heads bowed, thinking perhaps that we would let them be, but they soon got a move on when our bullets started smashing into them. I know that some of our blokes had had enough of the slaughter, but for me the war wasn't finished as I knew that, until they surrended, one Turk left alive could mean another Australian Light Horse Casualty. Since I had landed at Gallipoli, I had seen enough casualties to last me a lifetime but to me they weren't beaten soldiers down there, they were the enemy who had to be destroyed before we could go home and get on with our own lives.\(^54\)

On 3 October, headquarters and 'A' and 'B' Flights of 1 Squadron moved from Ramleh to join 'C' Flight at Haifa. Detachments from 'A' Flight operated in turn from Homs, Hama, and Rayak. The rapid movements in pursuit of the Turkish remnants made it necessary for the Bristol Fighters to cover an exceptionally wide area of country. In assistance of the cavalry and armoured cars, the Australian airmen reconnoitred Rayak, Homs, Beirut, Tripoli, Hama, and Aleppo. Few enemy machines were seen in the air, but bombing continued against the last of the German aerodromes. On 2 October Lieutenant McCann, while on a bombing raid of the German Flugpark at Rayak, counted twenty-four machines on the aerodrome.\(^55\) Over a ton of bombs were dropped, leaving a large proportion of the machines either burning or damaged.

On 19 October Ross Smith and McCann were flying 25 miles south-west of Aleppo when they encountered a DFW two-seater, the first German seen in the air for many days. They forced it to land, and the German pilot and his observer left the

\(^{54}\) Conrick, p.152.

\(^{55}\) These were part of a big supply shipment that had just arrived from Germany. There had been no time to ready these machines for flight, and many had to be burned - some still in their crates.
machine and stood with their hands above their heads. Smith landed nearby, and McCann fired a very light into the DFW, setting it ablaze. The Australians were compelled to leave the two Germans behind. The German aerodrome at Muslimie Junction (twelve miles north of Aleppo), from where the DFW had been operating, was discovered by special patrol three days later. On the early morning of the 23rd, Lieutenants S. Harper and Lilly met two DFW’s and forced them down onto the German aerodrome. There were four other two-seaters, apparently just preparing to depart. Harper descended to 200 feet, and attacked the enemy machines with bombs and machine-gun fire. Serno has written that two of the DFW machines were severely damaged during this raid, and these were discovered when Muslimie was occupied a day later. The four remaining machines of the German Pasha units fled for Islahije: as if indicative of the Turco-German plight in the past month, three of the two-seaters crashed on landing.

An armistice on 31 October 1918 ended the war with Turkey. The Australian squadron was relieved by 111 Squadron early in February 1919, and on the 7th the whole of the personnel moved to Kantara. There, on 19 February, Allenby, who travelled from Haifa to Kantara for this special purpose, addressed the officers and men of the unit in a farewell speech. Allenby said:

Major Addison, Officers and men. It gives me considerable pleasure to have this opportunity of addressing you prior to your return to Australia. We have just reached the end of the greatest war known to history. Today we see our enemies so thoroughly beaten that it will not be possible for them to renew hostilities against us. The operations in this theatre of the war have been an important factor in bringing about this victorious result. The victory gained in Palestine and Syria has been one of the greatest in the war and undoubtedly hastened the collapse that followed in other theatres. This Squadron played an important part in making this achievement possible. You gained for us absolute supremacy of the air enabling my cavalry, artillery and

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56 Their destination, according to Serno, was Islahije on the eastern edge of the Amanus Mountains, where a new aerodrome had been established.

57 Serno, p.363.
infantry to carry out their work on the ground practically unmolested by hostile aircraft. This undoubtedly was a factor of paramount importance in the success of our arms here. I desire therefore to personally congratulate you on your splendid work. I congratulate not only the Flying Officers, but also your mechanics for although the Officers did the work in the air, it was good work on the part of your mechanics that kept a high percentage of your machines serviceable. I wish you all ‘bon voyage’ and trust that the peace now attained will mean for you all future happiness and prosperity. Thank you and good-bye.58

On 5 March the squadron embarked on H.M.A.T. Port Sydney, and sailed for Australia.

58 Addison, p.41.
27. Bristol Fighter F2b. Seen here at Mejdel in February 1918 with pilot Lieutenant F. Haig and observer Lieutenant R. Challinor.

28. Another 1 Squadron Bristol Fighter, sporting a black and white colour scheme.
29. Captain S.W. Addison, pilot, and Lieutenant H. Fysh, observer. Addison was later to become Commanding Officer of 1 Squadron. After the war Fysh started the Queensland and Northern Territory Aerial Services Ltd., which later enabled him to become one of the co-founders of Qantas.

30. Handley-Page 0/400. The largest aircraft to serve in Palestine.
CONCLUSION

The British aviation industry, in the years prior to the outbreak of war in August 1914, was very much under-developed in comparison with its German counterpart.¹ In explanation, Michael Paris has pointed to the unwillingness of military and naval authorities in Britain to learn from the experience of the first air wars which made direct use of the air weapon; the Italian-Turkish War of 1911-1912 and the Balkan War of 1913. During the Balkan campaign, the Italian Army made good use of aircraft for reconnaissance, directing artillery fire, and bombing. The Italians took a considerable number of aerial photographs, and also carried out extensive field trials of wireless communications.² Aircraft were not too unreliable or fragile for military service - as some contemporaries argued - and could even be operated in extreme climates. In the space of two years the aeroplane had developed from a novelty to an established weapon of war.

British theorists, unfortunately, entirely dismissed these lessons of aerial warfare. General Sir Ian Hamilton, for instance, regarded air reconnaissance as “deceptive” and of “little value”.³ The War Office, Paris has concluded, “learned little from these first air wars of the necessity for a sophisticated industrial base for aerial operations, little about the need for well-trained pilots and observers and little about the stress of combat flying”.⁴

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¹ The English industry produced 100 aeroplanes annually by 1914. In that year alone, German aircraft factories were to deliver 1,348 machines. J. Morrow, German Air Power in World War I (University of Nebraska Press, 1982) p.11. See also M. Cooper, The Birth of Independent Air Power (Allen and Unwin, London, 1986) p.9.


⁴ Ibid., p.107.
By contrast, the pressure of the Balkan crisis created a situation in Germany where the foundations for aircraft to realise their potential as a weapon of war were already firmly laid by August 1914. In Prussia, the rapid growth of aviation had as its basis the partnership of military and private enterprise. Since the civilian market was small, and the army’s orders sizeable, the military largely dictated the type of aircraft that would be built.\(^5\) As the army gained more technological expertise, it established increasingly stringent guidelines and standards for the construction of military aeroplanes.\(^6\) This control not only stimulated improved aircraft performance, but saw the Prussian Army’s procurement of machines increase from 28 in 1911, to 139 in 1912, and 401 in 1913. By early 1914, it received aircraft from eleven manufacturers including Albatros, Aviatik, LVG, Rumpler, DFW, Gotha, and AEG. Two world records, set in trials just weeks before the outbreak of war, testified to the superiority of German biplanes.\(^7\) These achievements, John Morrow has written, “are indisputable evidence that the [German] army had succeeded in its aim of developing a rugged, dependable two-seat reconnaissance craft with a reliable water-cooled in-line engine.”\(^8\)

At the equivalent time, between 1912 and 1914, serious damage was being done to Britain’s aviation industry. This was related to shortcomings in the aircraft procurement policy, and in particular the army’s reluctance to depend on private aircraft companies for production. The RFC’s Royal Aircraft Factory at Farnborough held a near monopoly on aircraft design and development, but this served to stifle technological innovation. “The factory”, Malcolm Cooper has written, “remained largely an experimental and repair centre, building only forty-eight aeroplanes between 1911 and 1914”.\(^9\)

\(^5\) Kennett, p.97.

\(^6\) Morrow, p.6.

\(^7\) An Aviatik biplane recorded a non-stop flight of 24 hours and 12 minutes on 11 July 1914. Three days later, a DFW biplane reached an altitude of 25,000 feet.

\(^8\) Morrow, p.8.

\(^9\) Cooper, p.4.
The B.E.2c was the RFC’s standard model throughout 1915 and 1916. They proved solid and workmanlike, but uninspired. One airman recalled that “the factory machines were beautiful aeroplanes, but bad war craft, owing to their inherent stability, which detracted from their maneuverability”. 10 Ease of production, supply, and repairs were the advantages of such a design. However, there was a price to pay: given rapid wartime technological progress, the B.E.2c was approaching obsolescence by 1916. The RFC’s manufacturing system - generated towards maintaining a standard model - could not easily be redirected, and as a result, derivatives of the pre-war design (the B.E.2c for instance) were still arriving at the front in 1917. 11

RFC policy - dictating that aircraft design and construction should remain in military hands - drove the more creative private aircraft companies to the Royal Navy. The Admiralty, headed by an enthusiastic air-power advocate in Winston Churchill, envisaged a wide-ranging role for the air weapon. Whereas the army regarded aircraft as a reconnaissance tool only, the navy viewed aeroplanes as a possible form of defence against enemy airships, and potentially offensive, in anti-submarine and bombing roles. Such a policy, no doubt, encouraged a high degree of experimentation in aircraft design. Indeed, at the outbreak of war the RNAS held on strength a heterogeneous collection of 40 aeroplanes of 20 different types, and 31 seaplanes of 12 types. 12 Be that as it may, in Britain, France and Germany maritime aviation was hardly out of the experimental phase. Persistent limiting factors in the usefulness of seaplanes included the lack of sufficiently

10 Kennett, p.98.

11 Cooper, p.34.

powerful and reliable engines, and inefficient floats. This lack of performance - as far as the Allied nations were concerned - was to have far-reaching consequences.

**Seaplane Disappointments**

Seaplanes were expected to play an active role in the defence of that vital artery for supplies of men and material, the Suez Canal. Early in 1915, Captain L. Weldon had been put in charge of the ex-German merchant vessel, Aenue Rickmers, which had been converted to carry seaplanes. The machines were to fly inland reconnaissance, thereby keeping General Sir John Maxwell, Officer Commanding in Egypt, informed of Turkish troop movements. The British garrison was additionally supported by an assortment of five obsolete landplanes, but they were limited to a 45 mile radius centring on Ismailia. The Nieuport VI seaplanes enjoyed intermittent success, most notably in January 1915 when airmen revealed enemy columns crossing the Sinai Desert preparatory to the first Turkish offensive against the Canal.

On account of their underpowered engines and inefficient floats, however, the machines were frequently unable to unstick from the water’s surface. Weldon could well lament the lash-up administrative understanding, whereby the British Army, Royal Navy and French Navy all claimed a measure of responsibility for operations. Unfortunately, none saw fit to devote adequate resources to the arrangement: Aenue Rickmers, for instance, remained entirely unarmed in spite of a known enemy submarine menace and occasional air attacks.

The War Council’s concern over the safe-guarding of the Suez Canal eventually gave rise to a bold strategy: Winston Churchill envisaged a purely naval action to force the Dardanelles Straits, with Constantinople as the ultimate objective. Seaplanes - previously entrusted with reconnaissance duties only - were to assume a key role in the plan’s viability: aircraft were to provide the gun-fire direction which it was hoped would nullify the advantages which land-based high-angle artillery possessed over
low-trajectory ship-mounted guns. It was an ill-conceived expectation. Authorities placed too much faith in the still-experimental seaplanes. The British Short, Wight and Sopwith aircraft shared with the French Nieuports of the Aenne Rickmers a record of severe mechanical unreliability. In the crucial month of March, a staggering 48% of all flights were subject to engine failure. A second common problem was the machines' underpowered engines and inefficient floats, which frequently combined to prevent take-off. It was equally important that the seaplanes be able to communicate with the bombarding ships. In the event, the arrangement was complicated by W/T malfunctions, which in part stemmed from the lack of pre-war experimentation in the control of ship's gun-fire.

In view of the seaplane failings, one question uppermost in the minds of army authorities - once the decision had been made to attempt a troop landing on Gallipoli Peninsula - was whether landplanes could provide an adequate measure of support. Vice-Admiral John de Robeck, Commander of the Eastern Mediterranean Squadron, made no secret of his preference for landplanes, and a certain optimism marked the arrival in the Aegean of No.3 Squadron. Indeed, during the weeks prior to the landings the squadron’s motley collection of machines carried out a series of reconnaissance flights, providing important information on entrenched Turkish positions and the topography of the Gallipoli beaches. Photographs taken by Flight Lieutenant C. Butler proved instrumental for correcting the army’s inaccurate maps.

Landplanes Found Wanting

On 25 April 1915, the squadron’s aircraft had orders to direct the fire of battleships onto Turkish shore artillery (or large bodies of troops) that were bent on scuttling the ships’ lighters. Sadly, the covering ships for the most part failed to respond to the airmen’s signals. Firing officers, it was discovered on one shoot, continued to fire too far inland because they feared shelling their own troops. In hindsight, Samson came to believe that low-level bombing may have allowed the squadron to better assist the
landings. In this regard, however, Samson had access to only five machines of any possible use - two Maurice Farman S.11 Shorthorns, a Canton-Unne engined Maurice Farman pusher, and two B.E.2a’s. This was hardly a formidable force. Slow-flying, and bombing at low level, they would have provided an easy target for Turkish ground fire. Besides, their bomb loads were hardly devastating.

Lack of firepower was an important limiting factor when it came to the squadron’s attempts to disrupt the Turkish overland line of supply to the peninsula. Between 8 and 16 November, 3 Squadron carried out four bombing raids on the Maritza Bridge near Adrianople - a vulnerable link in the Berlin-Constantinople Railway. Only one machine, a Maurice Farman, was entrusted to complete the 180 mile round trip. Apart from slight damage to one of the piers, the bridge escaped damage. Attention was diverted to the nearby rail junction at the town of Ferejik, where eleven raids between 13 November and 1 December inflicted a good deal of damage on the railway lines and buildings. Being closer than the Maritza Bridge, these raids were undertaken by formations of up to five machines.

Samson, invested with a war-like nature, believed that war should be carried to the enemy at all times, with the greatest possible vigour. In aerial bombing, he found an effective means of adhering to this belief. While Commanding Officer of 3 Squadron, however, Samson had neither the mandate nor the resources to develop anything approaching an interdiction campaign. There was, in the first place, always too much to do in support of the ground forces. In August, the squadron was required to work for the ships firing at shore targets, in co-operation with the troops at Helles, Anzac, and Suvla, on frequent anti-submarine and aircraft patrols, and on reconnaissance. When the opportunity did arise, such as the November raids on the Maritza Bridge, the squadron’s landplanes were found lacking in both performance and number in order to inflict serious damage.
Samson hoped all this would change when he took over command of the East Indies and Egypt Seaplane Squadron, and of the seaplane carrier Ben-my-Chree. Prior to his arrival in May 1916, the squadron’s work had been limited to carrying out reconnaissance for the EEF. In fact, Captain Wedgwood-Benn thought the inadequately-resourced squadron occupied “no very definite place in anyone’s schemes.” In a sense, this lack of leadership worked in Samson’s favour: left more or less to his own devices, he worked actively to introduce a new offensive spirit into the squadron’s operations. Samson realised that the one great advantage of seaplanes - as opposed to landplanes of the RFC - was their range, and that this was best utilised in an interdiction capacity. It could not realistically be expected to apply a stranglehold to the Turkish communications; however, given that aerial bombing on inland targets was something the Turks were entirely unprepared to meet, there was definite scope to cause serious damage and disruption. The squadron’s Sopwith and Short floatplanes were offensively very poor machines. Nonetheless, the one tremendous advantage of the EI and ESS, as opposed to the bombing campaign waged by 3 Squadron, was the number of aircraft that Samson could call on. A formation of ten machines raided the railway junction at El Afule on 25 August, while a force of seven attacked Chicaldere Bridge late in December. Both raids enjoyed outstanding success.

The “Side Shows”

Australian military planners were thinking about the military potential of aviation as early as 1909. On 30 December 1911, the Commonwealth Gazette sought the “Appointment of Two Competent Mechanists and Aviators” for the establishment of a flying school.13 This was the first definite step towards the creation of the AFC. Henry Petre later selected Point Cook as home to the Central Flying School. The standard of training was poor - a consequence of the non-supply of modern aircraft by Britain and a

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lack of personnel trained in the modern methods, some of which had evolved in the first air wars. Captain T.W. White and Second Lieutenant G.P. Merz, graduates from the first course of instruction, sailed for Mesopotamia with their flying hours still in single figures. The bulk of the mechanical personnel had no previous practical knowledge of aircraft or aircraft engines, and their training had to be combined with practical work both in the field and the Aircraft Park.

The want of efficient aircraft, the Mesopotamia Commission concluded in 1917-1918, “seriously hindered our troops in the task they had to perform”. Initially airmen were required to reconnoitre the enemy’s dispositions and provide information on the local topography. From sketches and photographs taken from the air, the fliers were to supplement existing maps. In these tasks, the Mesopotamia Flight enjoyed a good deal of success. Aircraft were an unknown quantity, and in this respect had a significant effect on the enemy’s morale. Petre wrote:

As regards the Arabs they are completely cowed by the very sight of an aeroplane of which they evidently had no previous knowledge. As regards the Turks they take the use of aircraft as a sign of a completely equipped and organized army and are inclined to give in.

As the campaign grew in a complex and unforeseen manner, however, the difficulties experienced by the airmen mounted in concomitant fashion. General John Nixon, armed with a fresh set of instructions that permitted the occupation of the Basra vilayet, looked to his air service to extend its air support. Besides reconnaissance, the unit found itself having to spot for artillery fire, carry out bombing raids and fly contact patrol. Faced with a multitude of air work, the Mesopotamia Flight was frequently

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14 Ibid., p.129.

15 'Extract From Report on Aviation in Mesopotamia for the Period May 1915-June 1916 by the G.O.C. Indian Expeditionary Force "D".' (PRO, AIR 1/504/16/3/23).

16 'First Half Flight in Mesopotamia - Reports by Commanding Officer Henry Petre' (Australian Archives, Canberra, Series A2023/1, Item A/38/8/202).
passed over in the allocation of resources. Ill-equipped for these new demands, the frail aircraft simply could not cope.

The aircraft supplied by the Indian Government were totally unsuited to war service in Mesopotamia. Up until the end of August, the unit had been provided with three Maurice Farmans, two Caudron GIII's, and four Martinsyde S.I scouts; in all cases, aircraft long obsolete on the Western Front. The intensely dry and dusty heat of Mesopotamia caused severe maintenance problems. One airman recalled:

There was for much of the time no shelter for the aircraft, and they stood out in blistering heat; their spars warped, the fabric deteriorated quickly and the wooden aircrew blades split. Dust and sand penetrated every part and ruined the engines. Valves and piston heads burst out, induction joints melted and water in the radiators boiled. The heat thinned the oil and made it almost useless for lubrication, so that often the engines seized.\(^\text{17}\)

The fractious Gnome rotary engines of the Caudron GIII machines were in due course responsible for the deaths of Merz and Lieutenant W. Burn, and the capture of Lieutenant W. Treloar and Captain B. Atkins. There was a great deal of sickness among the men too, caused partly by sandfly and mosquito, and partly by the strain of operating under pressure in the confined working hours permitted by the stifling heat.\(^\text{18}\)

Nor were the machines adequately equipped for the tasks expected of them. The aircraft were not fitted with machine-guns, and the bomb racks supplied from Britain proved either the wrong types, or were unserviceable; some bombs even had to be dropped through a hole cut in the cockpit floor. When the 20-lb. aerial bombs arrived, many were found to have been damaged en route. The Mesopotamia Commission further lamented that the machines were not equipped for photography and wireless


telegraphy. Major Reilly felt keenly the absence of W/T during the operations against Nasiriyah:

I think on the whole we were distinctly useful, though we were not able to do much during the battle, as the whole show lasted such a short time. There was no time for artillery observation, which is rather a lengthy process. It was a pity we had no wireless - we could then have given the artillery some very useful information about their fire. But we had only smoke balls, and they can only be used to signal results if the artillery are prepared to cease fire and then let us have one round at a time on previously selected targets.¹⁹

Inadequate organisation was certainly a factor when considering the contribution of the air arm. The personnel, stores, and transport provided by Australia were intended only for one half-flight. However, they came to be relied on to a large extent for the entire Mesopotamia Squadron - comprising one flight as well as the Aircraft Park. The functions of this unit were to receive all personnel and equipment, and to keep the flight supplied, and to undertake all overhauls and reconstructions of aircraft and their engines. Unfortunately, the stores, spare parts, tools, and transport provided by the Indian Government for this purpose were found inadequate.

The Eastern theatre had always been considered less important by British war authorities, and this was reflected in the quality and quantity of the machines that were allotted to the Mesopotamia Flight. Similarly, British forces in Egypt had to rely on machines long obsolete in Europe. British disasters suffered in 1915 - the failed Dardanelles/Gallipoli venture, and the siege and fall of Kut - put pressure on the War Office to bolster forces in the east. But with the Western Front consuming tremendous military resources, the British Government sought from the Dominions personnel to fly and service their discrepit machines. In June 1916, 1 Squadron AFC replaced 17

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Squadron RFC in Egypt, but it was not until 1917 that the air arm was again reinforced.20

1 Squadron’s arrival in Egypt was greeted with a certain reservation by army authorities. Untrained, and practically devoid of equipment, AFC personnel were in the meantime divided into small groups and absorbed into various detachments of the two RFC squadrons. As equipment became available, and flying personnel returned from training in Britain, the detachments reassembled into flights and came together at common aerodromes. The tasks assigned to the Australians consisted predominantly of reconnaissance.

In Sinai and Palestine the British cavalry was restricted in the gathering of intelligence not by a well-defended front-line, but by the vast desert surrounds. Horses, on account of their need for rest and sustenance, were necessarily restricted in the distances they could cover. Aircraft, by contrast, could make an in-depth reconnaissance of Turkish outposts in a round trip lasting only a few hours.

The desert theatre had its own unique climatic conditions, and these often served as a test of the pilots’ skills. Lieutenant L.J. Wackett pointed to the variations in atmospheric density in the hills east of the Canal, and the problems he encountered with down-drifts and up-currents. In the desert plain, a brown haze appeared as an after-affect of seasonal sand-storms; this haze, Second Lieutenant Drummond noted, was a serious nuisance when it came to air reconnaissance.

The B.E.2c and Martinsyde machines flown by the Australians lacked the performance of the German Rumpler biplanes. German air superiority made life difficult.

20 Mark Lax, History of Number 1 Squadron, Australian Flying Corps (currently being edited for publication, Air Power Studies Centre, RAAF Base, Fairbairn, Canberra) pp.20-21.
for the EEF troops. The diary of Ion Idriess, a trooper in the 5th Light Horse, is littered with references to being bombed. Perhaps the most serious incident occurred on 1 June 1916, when a German machine attacked the 3rd Light Horse Regiment at Romani. Idriess recalled:

The first bomb smashed the wireless, the second the wireless lieutenant, while other bombs killed eight men and wounded fifteen. Thirty-four horses were also killed. The taupe then circled low and turned its machine-guns on the camp. The horses stampeded into the desert. Three hundred got away. Most of them were caught at El Katia.21

Of course, until the troopers were reunited with their mounts, the entire regiment was rendered inoperative.

Prompted by this raid, a host of new measures were enacted for protection against future air action. “When a Taube approaches us”, Idriess wrote on 2 July, “the phone immediately sounds away back in Kantara, on the Canal, and the whole army for a hundred miles knows the enemy planes are on the war-path. Our own planes rush out - but don’t always win.”22 In fact, such raids often served to break the monotony of the troopers’ daily grind.

As 1917 progressed, 1 Squadron’s tasks increased in frequency and complexity. Between 5 and 9 March, nearly four tons of bombs were deposited on Turkish communications in the vicinity of Tel Esh Sheria and on the railway as far north as Junction Station. Frequent raids on the enemy’s aerodrome were found a semi-effective means of countering his superiority in the air. Preparatory to the successive Gaza attacks, Australian machines carried out a large share of the strategical reconnaissance.

21 Ion Idriess, The Desert Column (Angus and Robertson, Sydney, 1951) p.72.

22 Ibid., p.77.
Trench and artillery maps of the Gaza, Hareira, and Beersheba areas were produced almost entirely from the unit's photographs.

It was also a time of frustration, not least of all because the Australians were still flying inferior Martinsyde, B.E.2c and B.E.2a machines. The Germans had the performance which enabled them to make or break a fight whenever they wished. Airmen and ground forces alike, had also reason to lament the general lack of faith shown in the air arm during the First Gaza offensive. On the evening of 26 March, victory had seemed assured when it was reported that mounted troops were entering Gaza from the north and east, while the infantry had carried the key of the enemy's main defences at Ali Muntar. General Chetwode, however, displayed particular concern over air reports showing Turkish reinforcements were moving from Mejdal, Huj, and Hareira towards Gaza. In consultation with General Dobell, he issued orders for a general withdrawal. This was despite assurances from the airmen that the enemy forces could not have reached Gaza in time to help. Indeed, Kress von Kressenstein, in his account of the battle, noted that when darkness came on the 26th, the reinforcements were hardly half-way to Gaza.23 Idriess wrote:

Never will I forget the utter amazement of all troops - we simply stood gazing down the streets of Gaza - officers shrieking for signallers to confirm the order lest it be the work of spies. The sun was right down - repeated signal after signal came: 'Retire! Retire! Retire!'24

A Change of Fortune

General Allenby took over as Commander of the EEF on 28 June 1917, and immediately moved to up-grade the status of the RFC. Two new squadrons - 111 and


24 Idriess, p.197.
113 - were added to the strength of the Middle East Brigade, which now became Headquarters RFC, Middle East. 1 Squadron, designated 67 Squadron RFC, was reallocated from the 5th Wing to the new 40th Army Wing, where it was joined by 111 Squadron. Bristol Fighters were sent to reinforce the RFC, and these proved superior to anything the Germans possessed. By autumn 1917, the British had wrestled from the enemy control of the air.

The declining German effectiveness was in part due to a crisis in aircraft procurement. The operational strength of the German air units - Jasta 1 (F) and the five observation Abteilung - peaked at about 35 in the month of April 1918. By the end of June, some 20 machines - 13 two-seaters and 7 fighters - were held on strength. According to Victor Haefner, the total number of German aircraft available on the eve of the September offensive was just 8 for observation and 5 for fighting.25 In explanation, we might look first to the effectiveness of the Australian air offensive; during the eight weeks immediately preceding Allenby's assault, 1 Squadron destroyed 15 German machines and drove a further 27 down.26 Aircraft reinforcements, moreover, were found inadequate, both in quantity and quality. German aircraft production in the last two years of the war did not keep pace with that of the Entente. The German aviation industry, John Morrow has shown, was nearing exhaustion with regard to the supply of skilled labour and raw materials. At the same time, the British were finally beginning to capitalise on the benefits of harsh experience, a strong industrial base and the encouragement of imaginative designers, to produce superior machines.27 The Albatros


26 Major S.W. Addison, 'Review of Operations from 1 January 1918 Till Return to Australia March 1919' (Australian War Memorial, Canberra, Series AWM 224, Item MSS 515, Part 3) p.28.

27 Morrow, pp.190-191.
D.V machines assigned to Jasta 1 (F) proved structurally defective, and were responsible for at least two fatalities.

Owing to casualties and sickness, the Germans were plagued by a flier shortage. Haefner has recorded that the Germans lost 60 pilots and observers between January and September 1918. Replacement aircrews were not available because of increasingly desperate requirements for the Western Front. Sickness took a heavy toll on both the Abteilung and Jasta pilots. Captain Felmy has written:

The rapid changes in temperature, cold nights and hot days, resulted in all sorts of chills, owing to the primitive shelters with which we were provided, and a chill almost always ended in dysentery. A large number of men became infected with malaria when travelling, but in the desert itself, when far away from all water, there were no germs. The strain upon the personnel was such that, as a rule, they had to be sent home after nine months.28

No such flier shortage existed in the RAF. The Training Brigade of the Middle East, commanded by Brigadier General P.L.W. Herbert, constituted a reserve of pilots and observers for Headquarters.29 For the September offensive, excess fliers were attached for liaison with the ground staffs. Military commanders, as a result, “had an experienced air arm opinion at hand to give suggestions for the best means of cooperating with the RAF”.30

There was no doubt an element of bad luck when it came to accounting for Yilderim’s poor performance. The shipment of the observation Abteilung met with considerable misfortune on 6 September 1917, when an explosion at Haidar Pasha

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Station caused heavy casualties and destroyed several aircraft. Moreover, the aviation units arrived in Southern Palestine just as the British forces broke through the Gaza-Beersheba line. In the subsequent retreat “seventeen pilots and seven observers were put out of combat, among whom nine pilots and two observers were killed or made prisoner.”

In addition, Squadron’s 303 and 304b were compelled to burn their equipment.

Notwithstanding the impact of the Bristol Fighter, Ross Smith credited the Australian squadron’s success in 1918 to the offensive spirit of the pilots: “Our men are always looking for fights whereas their [the German] airmen always avoid them if they possibly can.”

Many of the successful airmen of 1 Squadron - Captain Ross Smith, Lieutenants Hudson Fysh, A. McCann, W. Weir, and H. Letch - came from the Australian Light Horse. Fysh has noted that his experience in the Sinai Desert gave him an appreciation of the hardships endured by the “ordinary” trooper. This sense of comraderie proved a great incentive when it came to providing air support for the ground forces. German airmen, on the whole, demonstrated remarkably little emotional attachment to their Turkish allies. Leutnant Felmy commented distastefully about the “Oriental character, and the easy corruptibility of the Turkish mind.” Likewise, Haefner thought that the German campaign ended on “ungrateful soil” amidst the “persistent hassles of Turkish incomprehension and inertia.” Time and time again, when confronted by the Australian Bristol Fighters, German airmen chose to land and risk being taken prisoner, rather than risk life and limb fighting for their ungrateful Turkish ally.

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31 Haefner, p.8.


33 H. Fysh, Qantas Rising (Angus and Robertson, Sydney, 1965) p.42.

34 Neumann, p.245.

35 Haefner, p.13.
Aircraft played a pivotal role in the success of Allenby’s Megiddo campaign. The air dominance, secured in large part by the Australian squadron, enabled the elaborate preparations to be concealed. It also allowed Allenby to extensively map the enemy’s position. In the dawn of 19 September, Ross Smith deposited nearly two tons of bombs on Yilderim’s central telegraphic and telephonic exchange at El Afule. Within a few hours 144 Squadron bombed Turkish 7th Army Headquarters and communications at Nablus, and 142 Squadron hit 8th Army Headquarters at Tul Keram. RAF counter air prevented German airmen at Jenin aerodrome from taking to the air. At the outset, then, the enemy’s command structure was seriously impaired.

Between 19 and 25 September the RAF exacted on the retreating Turks a terrible vengeance. Turkish columns, caught in defiles marked by precipitous cliffs, could find no respite from the incessant air bombing. The EEF, instead of having to confront large bodies of the enemy in difficult fighting terrain, had only to collect the fleeing remnants. Aircraft had at last demonstrated that they could have a decisive impact on the conduct of operations. But this dominance had been a long time in coming. In the eastern theatre aircraft served a long and often painful apprenticeship. Seaplanes, with their advantage of range, were employed to good effect for the reconnaissance of in-land enemy positions. However for the all-important task of directing ships’ fire - a hingepin of the Dardanelles naval venture - they proved inadequate. In Mesopotamia, landplanes were instrumental for correcting inaccurate maps and reconnoitring the enemy’s dispositions. But here their usefulness ended. As far as the ordinary soldier was concerned, these decrepit machines were not helping to defeat the Turk. Lacking W/T they could not spot for artillery on to Turkish batteries. Their bomb loads, moreover, remained meagre and were rarely delivered with accuracy. But in Palestine, the appearance at the end of 1917 of high-performance machines, and their judicious employment by air and ground staffs, meant aircraft could routinely provide direct as well as indirect support. This transition was demonstrated in remarkable fashion during the Battle of Armageddon. The air dominance, secured in large part by the Australians,
blinded the enemy from EEF preparations, effectively knocked out his communications, and destroyed his forces on the ground in a display of aerial bombardment unrivaled throughout the four years of conflict. It was a fitting testimony to the emergence of the aeroplane as a weapon of war in its own right.
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